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Attachment 1

Haddam Neck Plant
Radiological Assessment Report for the Western Section
of the Excavation Associated with the Northeast Protected Area Grounds,
CY-HP-0206, Revision 0

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CONNECTICUT YANKEE ATOMIC POWER COMPANY

Connecticut Yankee Decommissioning

Health Physics Department Technical Support Document

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Radiological Assessment Report for the Western Section of the Excavation Associated with the Northeast Protected Area Grounds

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1. INTRODUCTION

1.1 Purpose of Technical Support Document (TSD)

To describe the methodology and means used to perform the radiological assessment of remaining soil; subsurface structures and footings; and exposed bedrock in the area of interest. The discussion will include an evaluation of survey and sampling results relative to the expectations established during survey design. The output of this product will be a determination of a bounding concentration of residual radioactivity in the media of interest. This bounding concentration will in turn be used to calculate the future groundwater dose resulting from residual radioactivity in soil, subsurface structures and footings and bedrock. The radiological assessment establishes the final radiological condition of the area prior to backfill as described by the License Termination Plan (LTP) (Reference 4.1).

2. DISCUSSION

2.1 Background

The general approach to decommissioning the site was changed in 2003 as described in Section 3 of the LTP. The previous plan was to decontaminate, perform Final Status Survey (FSS) and then demolish the System, Structures and Components (SSCs) as appropriate. The revised strategy is to decontaminate to levels permitting demolition using appropriate controls and dispose of the majority of the SSCs at regulated disposal sites. Radiological assessment and backfill complete the decontamination and demolition activities.

The scope of work for this radiological assessment included the open excavation following demolition of the Health Physics (HP) Facility (Structure 221) (Reference 4.2), Primary Auxiliary Building (PAB) (Structure 118) (Reference 4.2) and the Waste Disposal Building (WDB) (Structure 188)

(Reference 4.2). These structures were generally demolished to bedrock and the waste materials were shipped off-site to a licensed disposal facility. The radiological assessment was performed on remaining soil, subsurface structures and footings, and exposed bedrock in the excavation. An overall depiction of the affected SSCs is provided in Attachment 5.1.

The characterization phase of the radiological assessment was conducted during 2004 and 2005 and included evaluation of the extent and physical condition of exposed bedrock, remaining subsurface structures and footings and remaining soil. The radiological assessment phase terminates with a report that focuses on the data that has been collected and evaluated up to May 2005. The survey and sampling data presented in this report represent the final as-left radiological condition of the excavation and surrounding soil. Survey and sample measurement locations used to support this radiological assessment report are shown on Attachment 5.2.

2.2 Data Quality Objectives

The Data Quality Objectives (DQO) process described by the Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM) (Reference 4.3) is a series of planning steps found to be effective in establishing criteria for data quality and in developing survey and sampling plans associated with this radiological assessment report. The DQO process allows for systematic planning and is particularly useful in addressing problems requiring a decision between two (2) alternatives. The DQO process is flexible, in that the level of effort associated with planning a survey and sampling regimen is based on complexity and the nature of the constituents of concern. Finally, the DQO process is iterative, that is, the output of one planning step could lead to repeating a previous planning step. For example, when determining the boundaries of survey and sampling it becomes apparent that the design should

include both surface soil and subsurface soil sample media. This could lead to repeating a previously performed planning step to identify the decision or possible solution to the study problem. Iteration therefore results in a more effective survey and sampling design.

The DQO process was used throughout the design and development of the survey and sampling plans supporting this radiological assessment. The DQOs clearly identified the media of concern (e.g., soil, bedrock, concrete), the radionuclides of concern, the action levels for radionuclide specific analyses and the required sensitivity for analysis. The output of the DQO process included the selection of appropriate instrumentation to meet the survey and sampling design objectives, the number and location of samples, and the required radionuclide specific analyses. The use of the DQO process supported the purpose of this TSD and is consistent with the approach used for characterization, remedial action and FSS survey and sampling design.

The end product of the DQO process was an integrated survey plan which included scanning for elevated areas of activity, direct measurements and sampling. The survey and sampling design and implementation was performed using approved procedures (References 4.4 through 4.14).

2.3 Data Quality Assessment

The Data Quality Assessment (DQA) process is an evaluation method used during the assessment phase to ensure the validity of results and demonstrate achievement of the survey and sampling objectives. The use of DQA, like the DQO process, is described by the MARSSIM and is a critical component of the radiological assessment.

The DQA process was used throughout the evaluation of the survey and sampling data supporting this radiological assessment. The DQA process included verification and validation of data as well as a preliminary data

review. A statistical test was not required since the decision was based on direct comparison to the action levels specified by the survey and sampling plan. The data was assessed using an approved procedure (Reference 4.15). The extent of the DQA was consistent with the type and objectives of this survey (i.e., radiological assessment).

2.4 Historical Assessment

A review of the historical files indicates a number of operational events to have impacted the area of interest. Operational events were considered to be spills and leakage from contaminated systems for the purpose of this radiological assessment report. These events would have had the most impact on subsurface structures and footers; and underlying soil and bedrock.

The review of historical files was comprehensive and included several sources (refer to References 4.16 through 4.21). Most of the operational events were confined to the Radiologically Controlled Area (RCA). Table 2.1 provides a summary of operational events known, or suspected, to have been associated with the area of interest.

Table 2.1 –Summary of operational events potentially impacting, or relating to, the area of interest. Some leaks appear to originate from the same source.

Date	Reference Document	Brief Description Of Event
5/13/1976	PIR 76-66	Leak in Steam Generator and Test Tank Discharge line under Drumming Room floor.
5/22/1976	LER 76-13/990	Tritium identified in leak through Safety Injection Pump wall.
12/1/1976	PIR 76-233	Backed up floor drains contaminate floors.
12/14/1976	PIR 76-138	Leak in Steam Generator and Test Tank Discharge line under Drumming Room floor.
1/14/1977	LER 77-1/3L	Increase in Tritium activity in Containment External Sump.
7/29/1977	PIR 77-82	Increase in background detected above Chemistry Weir box.
3/17/1978	PIR 78-33	Leak in Steam Generator and Test Tank Discharge line under Drumming Room floor.

Table 2.1 –Summary of operational events potentially impacting, or relating to, the area of interest. Some leaks appear to originate from the same source.

8/10/1979	PIR 79-92	Release of contaminated water from drain line.
9/29/1979	PIR 79-105	Radioactive spill to RCA Yard.
2/14/1980	PIR 80-26	Activity found in yard storm drain near the Drumming Room overhead door.
2/28/1980	PIR 80-34	Soil under drumming room found shifted, wet and contaminated.
3/25/1980	LER 80-07/3L	A drain line was found to be cracked allowing water to leak into the area under the Drumming Room.
4/29/1980	PIR 80-58	Sample of yard drain near Drumming Room found to contain activity.
4/18/1983	PIR 83-42	Flooding of drain line to yard drain.
5/25/1984	PIR 84-72	Over flow of drain to RCA yard.
3/20/1985	PIR 85-51	Yard drains found to contain activity.
3/25/1985	PIR 85-52	Drain culvert overflows to RCA yard and yard drain.
5/17/1985	PIR 85-74	Yard drains show activity.

PIR – Plant Information Report
LER – Licensee Event Report
ACR – Adverse Condition Report

The majority of the events listed above refer to an area of the PAB identified as the Drumming Room. The Drumming Room was located in the southwest corner of the PAB. Discussions with CY personnel indicate the area was used to compact solid waste into fifty-five (55) gallon drums and to solidify liquid waste.

As previously discussed, review of historical documents shows the below floor area to have been affected by radioactive contaminated liquid spills and leaks. Soil was found to have been contaminated by some of these events and was removed. The following paragraphs describe in more detail the major events impacting this area.

In May 1976 a small leak of water through the wall into the safety injection cubicle indicated tritium at 8.23E-02 microcuries per millimeter (μCi/ml). Several days later, another leak through the wall to the lower level of the Waste Disposal Building indicated tritium at 1.00E-01 μCi/ml. The source of the water was determined to be a fracture in the piping junction where the Steam Generator Blowdown Tank line tied into the Service Water Effluent line.

In December 1976 the junction was again found to be leaking, but in a different location. Records show that sand was collected underneath the leak and an isotopic analysis was performed. Historical records report Cs-137 at 7.44E-05 μCi/ml, Co-58 at 2.23E-05 μCi/ml and Co-60 at 1.16E-05 μCi/ml. These concentrations are at least and order of magnitude above our current site release criteria specified by the LTP. The record also reports that the soil in the immediate area was removed.

In March 1978 a visual observation of the area during a routine surveillance identified a leak at the junction. Historical records indicate the intent to relocate the junction downstream from the original point. An analysis was performed at the time to ensure structural integrity of the line after rerouting.

In 1980 visual inspection found sand in the vicinity of the junction to have been shifted. The soil was found to have been contaminated from a broken drain. The drain was not intended for contaminated liquids, but was being used since the normal floor drains in the Drumming Room were plugged. The record reported long lived fission and corrosion products which ranged in activity from 3E-03 μCi/ml to 6E-03 μCi/ml. The sand was removed according to the historical records.

2.5 Demolition and Remediation Activities

Demolition and remediation activities began with the erection of a large tent on the east end of the excavation for engineering controls over the tank farm area. The tent was completed and in service in August 2002. Removal of contaminated materials was performed to ensure contamination levels were below levels acceptable for controlled demolition. Confirmatory radiological surveys were performed using approved procedures. Tank Farm demolition began in November 2002. Removal of contaminated materials was performed in the HP Facility, PAB and WDB to ensure contamination levels were below levels acceptable for controlled demolition. Confirmatory radiological surveys were performed using approved procedures. No tent was required as contamination levels were low enough to support open air demolition. Demolition of the HP Facility and the WDB began August 2004. Demolition of the PAB began September 2004. Soil remediation began in the area under the former Drumming Room during the demolition of the PAB and continued throughout 2004 and into 2005 until bedrock was exposed.

2.6 Initial Characterization of the Excavation for the Western Section of the Northeast Protected Area Grounds

Survey and sampling was conducted on October 27, 2004 and again during the period of January 10, 2005 through January 13, 2005. Additional bedrock samples were collected between January 31, 2005 and February 2 2005. Additional soil samples were collected on February 8, 2005. All characterization was performed under a survey and sampling plan using approved procedures. Several survey and sampling plans were required given the scope and complexity of the characterization and the different sampling involved. Weather and field conditions were acceptable to access the excavation and perform survey and sampling. Survey and sampling was

performed by qualified senior health physics technicians or under the direction of an FSS Engineer. Instrumentation used in the field was in calibration and in good working order. Detailed field notes and observations were documented during survey and sampling.

Survey and sampling consisted of radiation scans of available subsurface structures and footings and exposed bedrock and soils, soil collection, cores of concrete in the Service Building, PAB remnant wall, Cable Vault wall, cores of bedrock, and gamma measurements using a Canberra In-Situ Object Counting System (ISOCS®). These data are summarized and explained in a comprehensive report that was issued in February 2005 (Reference 4.22).

2.7 Excavation Condition at the Time of the Radiological Assessment

The demolition contractor continued demolition and removal of soils and debris in the east side of the overall excavation. Hay bales and green rope with postings delineated the west side from the east side. Isolation and controls were instituted in the west side.

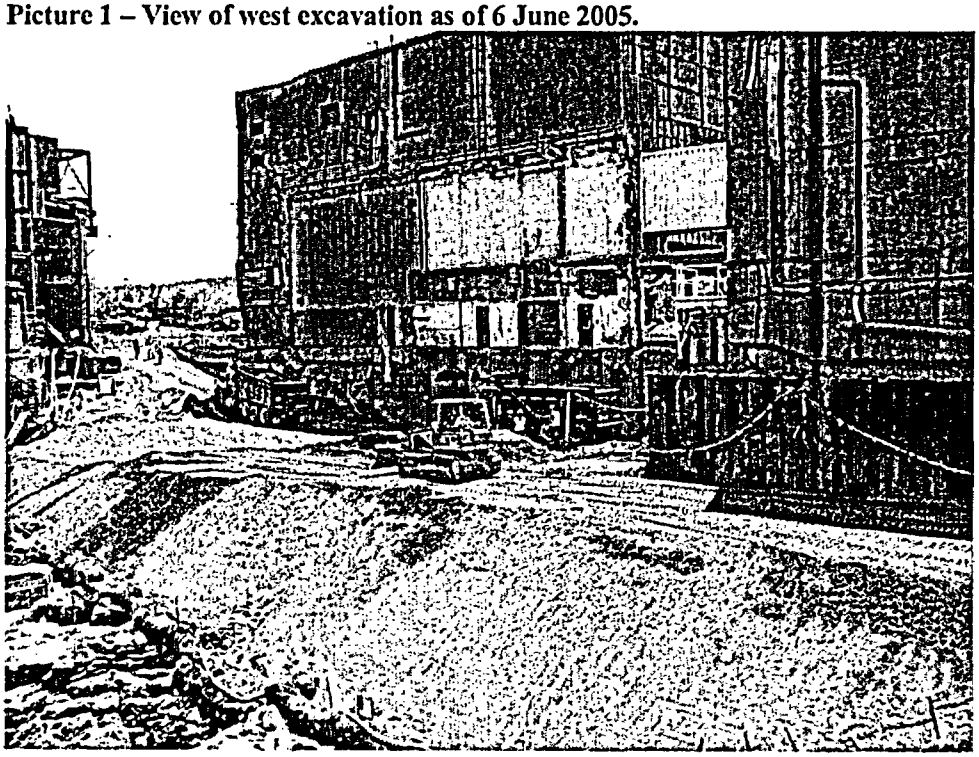
Workers in the area were made aware of the physical conditions in the area, the work to be performed, the expectations with regards to changing conditions, the caution of working near moving equipment, the required personnel protective equipment (e.g., high visibility vests, hard hats, safety shoes, etc.), and the person in charge at the work site. Daily briefings also included requirements for maintaining isolation and control of the west side. Daily inspections were performed to evaluate hazardous conditions and atmospheres. Access to the excavation was from the south down a ramp sloped to 1 ½ to 1 (slope trench back 1 ½ foot for every 1 foot of depth).

The remaining subsurface structures and footing included the Service Building east wall, a remnant of the PAB northwest wall, Cable Vault wall, WDB footing and miscellaneous fragments of footings and slabs on the bedrock.

Bedrock was exposed in the area and the intrusion of groundwater was controlled by suppressing the water table using a series of pumps. Standing water was limited to the northwest corner of the excavation but was removed for the radiological assessment. Some residual soil remained by the Cable Vault near the excavation access point in the southeast corner. This radiological assessment report includes pictures of the excavation during survey and sampling as well as the present condition (Attachment 5.3).

The excavation is currently being backfilled with clean fill from an off-site source (refer to Picture 1).

Picture 1 – View of west excavation as of 6 June 2005.



2.8 Radiological Dose Assessment Process

The primary objective of the radiological assessment is to determine the level of residual radioactivity in the area of interest in order to demonstrate through

appropriate dose pathway modeling that the release criteria specified in the LTP is met as well as the administrative levels established to ensure compliance with criteria agreed to with the State of Connecticut Department of Environmental Protection (CT DEP). The LTP criteria apply at the time of license termination or removal of the area from the license. The LTP criteria include a maximum dose to the average member of the selected critical group of 25 millirem (mrem) in a year Total Effective Dose Equivalent (TEDE) from all pathways. The CT DEP criteria apply at the transfer of property and include a commitment to a remediation standard of 19 mrem in a year TEDE from all pathways. Additionally, Connecticut Yankee (CY) has committed to the CT DEP to achieve the Maximum Contaminated Levels (MCL) as established by the United States Environmental Protection Agency (USEPA).

Two (2) documents have been generated by CY to provide direction and basis for meeting these criteria. The first document is CY memo ISC 04-049, Initial Target Operational DCGLs for CY (Reference 4.23). This memo provides target values to be used for designing survey and sampling plans. These target values or Operational DCGLs are based on the exposure from three (3) potential media. The Operational DCGLs are typically below the established criteria described above. These media consist of residual activity in soil, existing groundwater (GW) radioactivity and future GW radioactivity from subsurface structures and concrete debris. The survey and planning design for the area of interest associated with this excavation considered all three (3) media when determining compliance with the criteria previously described. In addition to the above criteria, the survey and sampling design also required a need to address bedrock radiological assessment.

Bedrock radiological assessment is described by the second CY document, HP CY-HP-0190, Technical Basis for Performing Radiological Assessments of Bedrock, Soil and Subsurface Concrete Using an Inventory-Based Approach

(Reference 4.24). The LTP requires that a radiological assessment of bedrock areas be performed prior to backfill.

The TSD (CY-HP-0190) describes a process using an approach which will use radioactivity inventories when calculating future groundwater dose. The TSD methodology explains the post-remediation field assessment and dose assessment described in the LTP (refer to LTP Section 5.7.3.2.5) and is similar to that proposed in a license amendment request to modify the current "Buried Concrete Debris Model" to a "Basement Fill Model". The Basement Fill Model, applied to the area of interest, uses the quantity of radioactivity released to the saturated zone (i.e., the volume below the water table) to calculate the resulting GW concentration. A more conservative assumption than the proposed license amendment request is that radiological release is not controlled by diffusion over time; rather, radiological release occurs instantly. The resulting GW contamination is determined from the equilibrium between GW and the backfill soil. The equilibrium GW concentration associated with the saturated zone is based on the principles of linear sorption theory and is expressed by Equation 6.1 in the LTP. The process is relatively straightforward and may be explained as follows:

- An assessment of the media (e.g., remaining subsurface structures and footings, bedrock and residual soil) will determine the radionuclides and their respective average concentration (i.e., surface in disintegrations per one hundred centimeters squared (dpm/100 cm^2) or volumetric in picocuries per gram (pCi/g)).
- The surface area or volume of media.
- The total inventory of radioactivity to be released to the saturated zone.

- Calculating the equilibrium concentration between GW and the backfill soil using the results of a Brookhaven National Laboratory distribution coefficient (K_d) study of backfill (Reference 4.25).
- Comparing the GW concentration to the MCL.
- Comparing the GW concentration to the DCGL.

The three (3) referenced documents are included in this characterization report as attachments (refer to Attachments 5.4, 5.5 and 5.6).

2.9 Radiological Assessment Results

2.9.1 Radiation Scans

Radiation scans were performed to determine areas of elevated activity warranting additional evaluation. The radiation scans were performed by trained FSS technicians or trainees under the direction of FSS Supervision using approved survey and sampling plans and procedures. Scanning was performed using gamma and beta radiation sensitive portable instrumentation. The use of two (2) types of instrumentation was determined during the DQO process based on initial characterization results.

Scanning was performed over 100% of the available bedrock, soil and exposed concrete footings and slabs of the WDB using an E-600 digital survey meter with a SPA-3 2-inch x 2-inch sodium iodide detector. The instrument was operated in the rate meter mode with audio output enabled. This instrument was determined suitable for the type and energy of radiation expected (i.e., Cs-137 and Co-60). Prior to the scan survey ambient background was determined and the criterion for an elevated area established. An elevated reading was defined as twice ambient background for the scan survey.

Ambient radiation background ranged from about 8 kilocounts per minute (kcpm) to 13 kcpm. The average was around 9 kcpm which is low enough to achieve a Minimum Detectable Activity (MDA) of about 5.94 pCi/g for Cs-137 and 1.56 pCi/g for Co-60 at a scan rate of twenty (20) inches a second (Reference 4.26). The highest ambient radiation background was observed above a section of bedrock. This section of bedrock had a large, wide vein of light colored mineral running throughout the rock. A response of 17 kcpm was observed at waist level at this location.

Several areas meeting the elevated criterion were identified on bedrock. Visual inspection of the bedrock at these locations identified veins of light colored mineral. A ten (10) minute count was started with the Exploranium in direct contact with the bedrock at these locations. The Exploranium identified K-40 and/or progeny associated with the decay of Naturally Occurring Radioactive Material (NORM) on the bedrock. The Exploranium, in some cases, did not identify any radionuclides as being present. However, field evaluation of the reported gamma energy peaks by the FSS Engineer indicated K-40 or progeny (i.e., Pb-214, Bi-214) associated with NORM. The field evaluations were later confirmed by the FSS engineer using standard technical reference (Reference 4.27). Several samples were collected from the elevated locations. The results for these samples and a detailed discussion of the bedrock geology will be provided in a later section of this radiological assessment.

Additional scanning was performed over 100% of the available bedrock, soil and exposed concrete using a NE Electra portable rate meter with a one hundred (100) cm^2 dual scintillation detector. The Electra was operated in the β mode with the audio output enabled. This

instrument was determined suitable for the type and energy of radiation expected (i.e., Sr-90). Tritium was considered to be uniformly distributed making areas of elevated activity unlikely. Prior to the scan survey ambient background was determined and the criterion for an elevated area established. An elevated reading was defined as twice ambient background for the scan survey.

Ambient radiation background was performed at waist level away from the surface to be surveyed. The ambient radiation background ranged from about 400 cpm to 600 cpm. Typical efficiency for the probes was nearly 30% for Cs-137. Ambient radiation background was low enough to achieve an MDA of <1000 dpm for Cs-137 at a scan rate of two (2) inches a second (Reference 4.28). A lower MDA would be expected for Sr-90, which should be in transient equilibrium with Y-90, given the higher expected efficiency of the instrument to the SrY-90 betas.

During the scan survey one (1) area meeting the elevated criterion was identified on the bedrock. Visual inspection of the bedrock identified the same type of light colored mineral at this location as was observed during the gamma scans.

Additionally, scanning was performed over 100% of the available Service Building east wall, PAB northwest wall remnant, Cable Vault Footing and Cable Vault Outer wall surfaces up to a height of two (2) meters using the NE Electra portable rate meter with a 100 cm^2 dual scintillation detector. Scanning was also performed on the remaining concrete footing for the WDB. Scanning was performed from bedrock level. This provided scan coverage of roughly two-thirds ($^2/_3$) of the area of concrete in the saturated zone. The mode of operation,

applicability of use, establishment of elevated criterion and method of use were the same as previously discussed. No areas meeting the elevated criterion were identified.

2.9.2 Soil that Surrounds and Bounds the Excavation

Soil forming the borders along the side walls of the excavation are not included in the future groundwater calculation described by Section 2.8 above. These soils include the south ramp access point, soil behind the Service Building east wall, soil behind the Cable Vault wall footer and the north slope abutting B Switchgear (Structure 139) (Reference 4.2). The doses from these soils are accounted for in separate land area and subsurface FSS.

A total of twenty-nine (29) samples were collected from twenty-one (21) biased locations along the sides of the excavation. The locations for the samples were defined by the survey and sampling plan and at other locations as specified by the field FSS Engineer using observation and process knowledge as the basis for professional judgment. Some samples, for example sample number 192 (refer to Attachment 5.2), were obtained after core boring through concrete footings and walls. All soil samples were collected by trained FSS technicians or trainees under the direction of FSS Supervision using approved survey and sampling plans and procedures. The soil samples were maintained under COC until turned over to the off-site laboratory for analysis.

Radionuclide specific analyses of soil were performed to determine whether soil concentrations met the Operational DCGLs set by Reference 4.23. The Operational DCGLs for soil were radionuclide specific and were set to achieve a dose limit of eight (8) mrem in a year TEDE. These Operational DCGLs were well below the LTP and CT

DEP criterion previously specified. The Operational DCGLs were used to determine radionuclide specific MDCs to ensure adequate sensitivity during analysis.

The soil samples are depicted with this symbol on Attachment 5.2.

All samples were analyzed using gamma spectroscopy. Most samples were analyzed for tritium and all were analyzed for Sr-90. One (1) of the twenty-nine (29) samples was analyzed for all the radionuclides listed in LTP Table 2-12. All radionuclides were analyzed to the specific sensitivities specified by the Statement of Work (SOW) (Reference 4.29). Calculated results were reported instead of <MDC. The sample report summaries included unique sample identification, analytical method, radionuclide, calculated result and uncertainty of two (2) standard deviations (2□□ data qualifiers, and quality control data.

The off-site laboratory certificate of analysis reported Cesium-137 in concentrations that met the accepted criterion for detection (i.e., a result greater than two (2) standard deviations uncertainty) in eight (8) of the twenty-nine (29) analyzed samples. Cobalt-60 was reported in concentrations that met the accepted criterion for detection in four (4) of the twenty-nine (29) analyzed samples. Strontium-90 was reported in concentrations that met the accepted criterion for detection in six 6) (6) of the twenty-nine (29) analyzed samples. The highest Sr-90 result was for soil behind the east Service Building wall (i.e., sample 104).

Table 2.2 summarizes the data for soil surrounding and bounding the excavation.

Table 2.2 – Basic statistical quantities for Cs-137 and Co-60 from the population data set associated with soil surrounding and bounding the excavation.

Quantity:	Cs-137 [1]	Co-60 [1]
Operational DCGL:	2.53E+00	1.22E+00
Minimum Value:	-1.23E-02	-1.99E-02
Maximum Value:	1.73E-01	5.64E-02
Mean:	3.22E-02	9.32E-03
Median:	7.55E-03	5.71E-03
Standard Deviation:	5.37E-02	1.65E-02

[1] All concentration results in pCi/g

The data indicate that the soil surrounding and bounding the excavation contains Cs-137, Co-60, and Sr-90. Some of the other radionuclides listed in Table 2-12 of the LTP were identified with reported concentrations that met the accepted criterion for detection. However, all individual sample results, including Sr-90, were below the Operational DCGLs and the summation of radionuclide results met the unity rule (i.e., the sum of the fractions was less than one (1)).

2.9.3 Soil Assessment

There is very little soil remaining in the excavation, however, there is one (1) location by the Cable Vault that could not be removed due to limited accessibility. The soil will be included in the radiological assessment given the small volume and constraints with removal. One (1) sample was collected from the low point of the depression between the Cable Vault footer and bedrock. The location was specified by the field FSS Engineer using observation and process knowledge as the basis for professional judgment. The soil sample was collected by a trained FSS technician under the direction o f FSS Supervision using approved survey and sampling plans and procedures. The soil sample was maintained under COC until turned over to the off-site laboratory for analysis.

The soil samples are depicted with this symbol on Attachment 5.2.

The sample was analyzed using gamma spectroscopy and was also analyzed for tritium and for Sr-90. All radionuclides were analyzed to the specific sensitivities specified by the SOW. Calculated results were reported instead of <MDC. The sample report summary included unique sample identification, analytical method, radionuclide, calculated result and uncertainty of two (2) standard deviations (2□□ data qualifiers, and quality control data.

The off-site laboratory certificate of analysis reported Cs-137 and Co-60 in concentrations that met the accepted criterion for detection (i.e., a result greater than two (2) standard deviations uncertainty) in the analyzed sample. Tritium was also reported in concentrations that met the accepted criterion for detection.

Table 2.3 summarizes the data for soil inside the excavation.

Table 2.3 – Basic statistical quantities for Cs-137 and Co-60 from the result associated with soil inside the excavation. These radionuclides will be included in the radiological assessment for the excavation using the inventory approach described previously. The Operational DCGL for soil based on 8 mrem a year TEDE is provided for comparison.

Quantity:	Cs-137 [1]	Co-60 [1]
Operational DCGL:	2.53E+00	1.22E+00
Maximum Value:	2.24E+00	4.53E-01

[1] All concentration results in pCi/g

Several additional samples were collected from this depression and were analyzed on-site using gamma spectroscopy. All radionuclides were analyzed to the same (or lower) specific sensitivities as was required of the off-site laboratory. Calculated results were reported

instead of <MDC. All analyzed results were in agreement with the off-site laboratory result.

The data indicates that the soil inside this small area of the excavation contain Cs-137, Co-60, and tritium. One (1) of the other radionuclides listed in Table 2-12 of the LTP was identified with reported concentrations that met the accepted criterion for detection (Cs-134). However, the Cs-134 result is not expected to contribute significantly to future groundwater dose (i.e., less than 5%). Therefore, the Cs-134 result may be de-selected and disregarded during the radiological assessment.

The area and volume of the remaining soil in the depression is conservatively estimated at thirty (30) square feet and ten (10) cubic feet respectively. The concentrations and the amount of total inventory available to be released are low enough to project meeting the acceptance criteria of the radiological assessment using the methodology described by Reference 4.24.

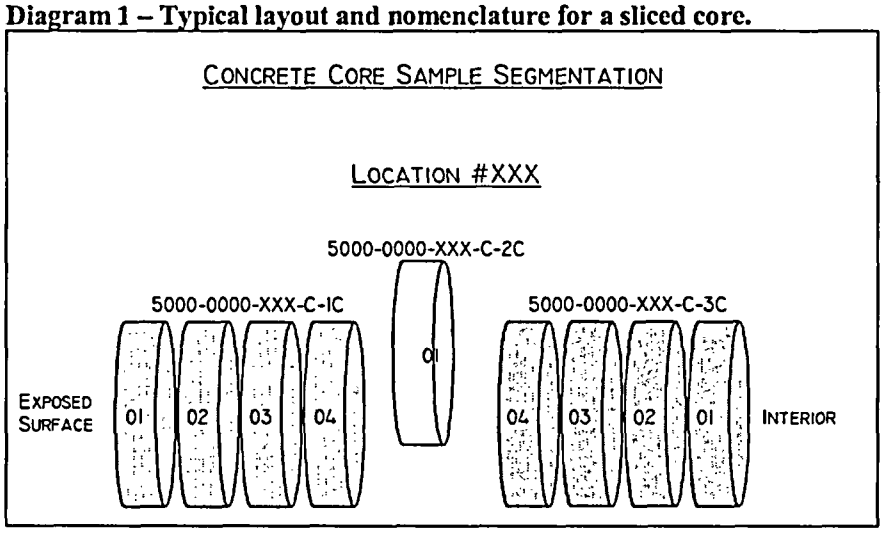
2.9.4 Service Building and PAB Remnant Wall Cores

The survey and sampling plans specified concrete core collection through the Service Building and PAB remnant walls. Cores were the appropriate choice for characterization of the walls given the potential for tritium and Sr-90 diffusion into the concrete. The core locations were biased by the FSS Engineer using observation and process knowledge as the basis for professional judgment. The cores were all within the saturated zone in order to be conservative when determining the total radioactivity remaining after backfill. The total number of biased core locations was eight (8).

Mobile direct-rotary drilling was used to drill through the concrete. Direct-rotary drilling was to continue until soil was obtained, when possible. This could not be done at one (1) location (location 106, refer to Attachment 5.2). The total core lengths ranged from 24" to 60" depending on location.

Cores were cut into 1" to 2" thick wafers on-site using a standard brick saw with a diamond tipped blade. Selected wafers were given special sample nomenclature and were designated for off-site analysis. Experience with core analysis from previous characterization campaigns has shown that only a few wafers are necessary to evaluate the quantity and extent of contamination. The FSS Engineer selected wafers from the beginning, middle, and end of the total core length. Diagram 1 depicts an exploded view of a typical core after cutting.

Diagram 1 – Typical layout and nomenclature for a sliced core.



All core samples were collected and cut by trained FSS personnel or trainees under the direction of FSS Supervision using approved survey and sampling plans and procedures. The wafers were maintained under COC until turned over to the off-site laboratory for analysis.

The concrete core samples are depicted with this symbol on Attachment 5.2.

A total of fifty-two (52) wafer samples from the eight (8) core locations were processed off-site using approved procedures and methodologies. All samples were analyzed using gamma spectroscopy. All samples were analyzed for tritium and Sr-90. The first wafer (i.e., the closest to the exposed surface) from six (6) of the eight (8) core locations was analyzed for all the radionuclides listed in LTP Table 2-12. All radionuclides were analyzed to the specific sensitivities specified by the SOW. Calculated results were reported instead of <MDC. The sample report summaries included unique sample identification, analytical method, radionuclide, calculated result and uncertainty of two (2) standard deviations (2□□ data qualifiers, and quality control data.

The off-site laboratory certificate of analysis reported tritium in concentrations that met the accepted criterion for detection (i.e., a result greater than two (2) standard deviations uncertainty) in forty (40) of the fifty-two (52) analyzed samples. Strontium-90 was reported in concentrations that met the accepted criterion for detection in fourteen (14) of the fifty-two (52) analyzed samples. Several radionuclides listed in Table 2-12 of the LTP were reported in concentrations that met the accepted criterion for detection. For example, Ni-63 was reported in three (3) of the six (6) HTD results; Co-60 was reported in six (6) of the fifty-two (52) reported results.

Table 2.4 summarizes the data.

Table 2.4 – Basic quantities from the population data set associated with the Service Building and PAB Remnant wall core samples.

Radionuclide	Mean of All Samples [1]	Mean of All First and Last Samples [1]	Mean of All First Two (2) and Last Two (2) Samples [1]	Ratio of Reported Results to Total Results [1]
Am-241	1.18E-02	2.07E-02 [2]	1.90E-02	4 : 52
Cs-134	1.99E-02	2.39E-02 [2]	2.15E-02	15 : 52
Cs-137	5.67E-04	3.23E-03 [2]	2.04E-03	1 : 52
Co-60	4.12E-03	8.63E-03 [2]	6.31E-03	6 : 52
Eu-152	7.60E-03	8.45E-03	1.17E-02 [2]	1 : 52
Eu-154	-2.03E-03	-8.81E-03	-6.16E-03	0
Eu-155	2.35E-02	3.66E-02 [2]	2.23E-02	4 : 52
Mn-54	3.24E-03	3.10E-03	4.86E-03 [2]	3 : 52
Nb-94	2.08E-03	2.96E-03	3.40E-03 [2]	1 : 52
Ag-108m	1.46E-03	8.66E-04	3.11E-03 [2]	0
Sr-90	2.49E-02	5.62E-02 [2]	3.35E-02	14 : 52
H-3	1.49E+01 [2]	1.12E+01	1.32E+01	40 : 52
Cm-243/244	4.88E-03	-----	-----	0 : 6
Pu-238	6.65E-03	-----	-----	0 : 6
Pu-239/240	3.66E-03	-----	-----	0 : 6
Pu-241	1.08E-01	-----	-----	0 : 6
C-14	-1.70E-02	-----	-----	1 : 6
Fe-55	-2.09E+00	-----	-----	0 : 6
Ni-63	1.26E+00	-----	-----	3 : 6
Tc-99	-4.04E-01	-----	-----	0 : 6

[1] All concentration results in pCi/g
[2] Emphasis added to identify highest mean

The data indicates that the Service Building and PAB remnant walls contain Sr-90 and tritium diffused volumetrically to some extent. The

data supports, with the exception of tritium, the assumption of residual contamination on either side of the Service Building and PAB remnant walls that tapers off with increased depth into the concrete. The concentrations and the amount of total inventory available to be released are low enough to project meeting the acceptance criteria of the radiological assessment using the methodology described by Reference 4.24.

2.9.5 Cable Vault Wall Cores

The survey and sampling plans specified concrete core collection through the Cable Vault wall. Cores were the appropriate choice for characterization of the walls given the potential for tritium and Sr-90 diffusion into the concrete. The core locations were biased by the FSS Engineer using observation and process knowledge as the basis for professional judgment. One (1) core was collected during an in-process Nuclear Regulatory Commission (NRC) inspection. A detailed discussion of the NRC in-process inspection will be provided in a later section of this radiological assessment. The cores were all within the saturated zone in order to be conservative when determining the total radioactivity remaining after backfill. The total number of biased core locations was nine (9).

Mobile direct-rotary drilling was used to drill through the concrete. Direct-rotary drilling was to continue until soil was obtained, when possible.

Cores were cut into 1" to 2" thick wafers on-site using a standard brick saw with a diamond tipped blade. Selected wafers were given special sample nomenclature and were designated for off-site analysis. Experience with core analysis from previous characterization

campaigns has shown that only a few wafers are necessary to evaluate the quantity and extent of contamination. The FSS Engineer selected wafers from the beginning, middle and end of the total core length.

All core samples were collected and cut by trained FSS personnel or trainees under the direction of FSS Supervision using approved survey and sampling plans and procedures. The wafers were maintained under COC until turned over to the off-site laboratory for analysis.

The concrete core samples are depicted with this symbol on Attachment 5.2.

A total of forty-two (42) wafer samples from the nine (9) core locations were processed off-site using approved procedures and methodologies. All samples were analyzed using gamma spectroscopy. All samples were analyzed for tritium and most for Sr-90. The first wafer (i.e., the closest to the exposed surface) from two (2) of the nine (9) core locations was analyzed for all the radionuclides listed in LTP Table 2-12. All radionuclides were analyzed to the specific sensitivities specified by the SOW. Calculated results were reported instead of <MDC. The sample report summaries included unique sample identification, analytical method, radionuclide, calculated result and uncertainty o f t wo (2) standard deviations (2□□ data qualifiers, and quality control data.

The off-site laboratory certificate of analysis reported tritium in concentrations that met the accepted criterion for detection (i.e., a result greater than two (2) standard deviations uncertainty) in thirty-three (33) of the forty (42) analyzed samples. Strontium-90 was reported in concentrations that met the accepted criterion for detection in thirty

(30) of the forty-two (42) analyzed samples. Several radionuclides listed in Table 2-12 of the LTP were reported in concentrations that met the accepted criterion for detection. For example, Ni-63 was reported in two (2) of the two (2) HTD results; Co-60 was reported in one (1) of the forty-two (42) reported results.

Table 2.5 summarizes the data.

Table 2.5 – Basic quantities from the population data set associated with the Cable Vault wall core samples.

Radionuclide	Mean of All Samples [1]	Mean of All First and Last Samples [1]	Mean of All First Two (2) and Last Two (2) Samples [1]	Ratio of Reported Results to Total Results [1]
Am-241	-9.32E-03 [2]	-3.12E-02	-2.13E-02	1 : 42
Cs-134	2.20E-02 [2]	2.11E-02	1.88E-02	13 : 42
Cs-137	-7.31E-03	-5.41E-03	-4.04E-03 [2]	1 : 42
Co-60	8.01E-03 [2]	7.81E-03	5.91E-03	1 : 42
Eu-152	-1.18E-02	-8.98E-03 [2]	-1.22E-02	0
Eu-154	-1.87E+00	-1.36E-03 [2]	-1.45E-03	0
Eu-155	2.01E-02	2.85E-02 [2]	2.20E-02	6 : 42
Mn-54	1.78E-03	5.76E-03 [2]	3.47E-03	1 : 42
Nb-94	4.26E-03 [2]	3.30E-04	3.20E-03	0
Ag-108m	1.08E-03	4.63E-03 [2]	1.59E-03	0
Sr-90	5.05E-01	6.87E-01 [2]	6.25E-01	30 : 42
H-3	3.90E+00 [2]	3.90E+00	3.86E+00	32 : 42
Cm-243/244	1.87E-02	-----	-----	0 : 2
Pu-238	-6.33E-03	-----	-----	0 : 2
Pu-239/240	2.55E-03	-----	-----	0 : 2
Pu-241	3.23E-01	-----	-----	0 : 2
C-14	2.02E-01	-----	-----	1 : 2

Table 2.5 – Basic quantities from the population data set associated with the Cable Vault wall core samples.

Radionuclide	Mean of All Samples [1]	Mean of All First and Last Samples [1]	Mean of All First Two (2) and Last Two (2) Samples [1]	Ratio of Reported Results to Total Results [1]
Fe-55	-2.17E+00	-----	-----	0 : 0
Ni-63	2.25E+00	-----	-----	2 : 2
Tc-99	-5.40E-01	-----	-----	0 : 0

[1] All concentration results in pCi/g
[2] Emphasis added to identify highest mean

The data indicates that the Cable Vault wall contains Sr-90 and tritium diffused volumetrically to some extent. The data, with the exception of tritium, support the assumption of residual contamination on either side of the Cable Vault wall that tapers off with increased depth into the concrete. The concentrations and the amount of total inventory available to be released are low enough to project meeting the acceptance criteria of the radiological assessment using the methodology described by Reference 4.24.

2.9.6 WDB Footing Cores

The survey and sampling plans specified concrete core collection through the WDB footing. Cores were the appropriate choice for characterization of the walls given the potential for tritium and Sr-90 diffusion into the concrete. The core locations were biased by the FSS Engineer from the remaining fragment of the WDB. The cores were all within the saturated zone in order to be conservative when determining the total radioactivity remaining after backfill. The total number of biased core locations was four (4).

Mobile direct-rotary drilling was used to drill through the concrete. Direct-rotary drilling was to continue until soil was obtained, when possible.

Cores were cut into 1" to 2" thick wafers on-site using a standard brick saw with a diamond tipped blade. Selected wafers were given special sample nomenclature and were designated for off-site analysis. Experience with core analysis from previous characterization campaigns has shown that only a few wafers are necessary to evaluate the quantity and extent of contamination. The FSS Engineer selected wafers from the beginning, middle and end of the total core length.

All core samples were collected and cut by trained FSS personnel or trainees under the direction of FSS Supervision using approved survey and sampling plans and procedures. The wafers were maintained under COC until turned over to the off-site laboratory for analysis.

The concrete core samples are depicted with this symbol on Attachment 5.2.

A total of twenty (20) wafer samples from the four (4) core locations were processed off-site using approved procedures and methodologies. All samples were analyzed using gamma spectroscopy. All samples were analyzed for tritium and for Sr-90. All radionuclides were analyzed to the specific sensitivities specified by the SOW. Calculated results were reported instead of <MDC. The sample report summaries included unique sample identification, analytical method, radionuclide, calculated result and uncertainty of two (2) standard deviations (2□□ data qualifiers, and quality control data.

The off-site laboratory certificate of analysis reported tritium in concentrations that met the accepted criterion for detection (i.e., a result greater than two (2) standard deviations uncertainty) in one (1) of the twenty (20) analyzed samples. Strontium-90 was reported in concentrations that met the accepted criterion for detection in ten (10) of the twenty (20) analyzed samples. Several radionuclides listed in Table 2-12 of the LTP were reported in concentrations that met the accepted criterion for detection. For example, Cs-134 was reported in one (1) of the twenty (20) analyzed results; Co-60 was reported in one (1) of the twenty (20) analyzed results.

Table 2.6 summarizes the data.

Table 2.6 – Basic quantities from the population data set associated with the WDB footing core samples.

Radionuclide	Mean of All Samples [1]	Mean of All First and Last Samples [1]	Mean of All First Two (2) and Last Two (2) Samples [1]	Ratio of Reported Results to Total Results [1]
Am-241	9.60E-03 [2]	-2.05E-02	-2.06E-02	2 : 20
Cs-134	1.16E-02	9.09E-03	1.23E-02 [2]	1 : 20
Cs-137	3.10E-02	6.44E-02 [2]	3.79E-02	2 : 20
Co-60	6.84E-03	9.29E-03 [2]	8.46E-03	1 : 20
Eu-152	2.55E-03	1.09E-02 [2]	3.78E-04	0
Eu-154	1.05E-02	1.53E-02	2.09E-02 [2]	0
Eu-155	8.46E-03	2.40E-02 [2]	9.28E-03	0
Mn-54	2.92E-03	1.03E-03	3.76E-03 [2]	0
Nb-94	1.59E-03	1.24E-03	4.67E-03 [2]	0
Ag-108m	-1.34E-03	1.77E-03 [2]	1.03E-03	0
Sr-90	2.31E-02	4.38E-02 [2]	2.63E-02	10 : 20
H-3	3.44E+00	4.40E+00 [2]	3.55E+00	1 : 20

Table 2.6 – Basic quantities from the population data set associated with the WDB footing core samples.

Radionuclide	Mean of All Samples [1]	Mean of All First and Last Samples [1]	Mean of All First Two (2) and Last Two (2) Samples [1]	Ratio of Reported Results to Total Results [1]
Cm-243/244	-----	-----	-----	-----
Pu-238	-----	-----	-----	-----
Pu-239/240	-----	-----	-----	-----
Pu-241	-----	-----	-----	-----
C-14	-----	-----	-----	-----
Fe-55	-----	-----	-----	-----
Ni-63	-----	-----	-----	-----
Tc-99	-----	-----	-----	-----

[1] All concentration results in pCi/g
[2] Emphasis added to identify highest mean

The data indicates that the WDB footing contains trace amounts Sr-90 and tritium diffused volumetrically to some extent. The concentrations and the amount of total inventory available to be released are low enough to project meeting the acceptance criteria of the radiological assessment using the methodology described by Reference 4.24.

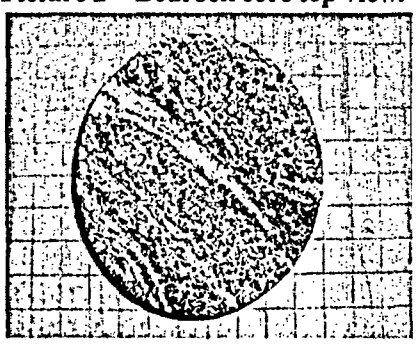
2.9.7 Bedrock Cores

The survey and sampling plans specified bedrock core collection. Cores were the appropriate choice for characterization of the bedrock given the potential for tritium and Sr-90 diffusion into fissures. The core locations were biased by the FSS Engineer to include areas identified as having elevated radioactivity during scanning. The total number of biased core locations was twenty-two (22).

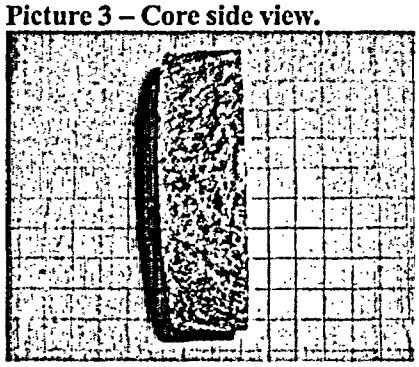
Mobile direct-rotary drilling was used to drill through the bedrock. Cores were generally collected to a depth of eight (8) to twelve (12) inches

Cores were cut into 1" to 2" thick wafers on-site using a standard brick saw with a diamond tipped blade. Selected wafers were given special sample nomenclature and were designated for off-site analysis. Experience with core analysis from previous characterization campaigns has shown that only a few wafers are necessary to evaluate the quantity and extent of contamination. Pictures 2 and 3 show views of a typical core after cutting.

Picture 2 – Bedrock core top view.



Picture 3 – Core side view.



All core samples were collected and cut by trained FSS personnel or trainees under the direction of FSS Supervision using approved survey and sampling plans and procedures. The wafers were maintained under COC until turned over to the off-site laboratory for analysis.

The bedrock core samples are depicted with this symbol on Attachment 5.2.

A total of forty-eight (48) wafer samples from the twenty-two (22) core locations were processed off-site using approved procedures and methodologies. All samples were analyzed using gamma spectroscopy.

All samples were analyzed for tritium and for Sr-90. One (1) core was analyzed for all the radionuclides listed in Table 2-12 of the LTP; two (2) cores were analyzed for selected radionuclides from Table 2-12 of the LTP (e.g., Pu-238). All radionuclides were analyzed to the specific sensitivities specified by the SOW. Calculated results were reported instead of <MDC. The sample report summaries included unique sample identification, analytical method, radionuclide, calculated result and uncertainty of two (2) standard deviations (2□□ data qualifiers, and quality control data.

The off-site laboratory certificate of analysis reported tritium in concentrations that met the accepted criterion for detection (i.e., a result greater than two (2) standard deviations uncertainty) in one (1) of the twenty (20) analyzed samples. Strontium-90 was reported in concentrations that met the accepted criterion for detection in ten (10) of the twenty (20) analyzed samples. Several radionuclides listed in Table 2-12 of the LTP were reported in concentrations that met the accepted criterion for detection. For example, Cs-134 was reported in one (1) of the twenty (20) analyzed results; Co-60 was reported in one (1) of the twenty (20) analyzed results.

Table 2.7 summarizes the data.

Table 2.7 – Basic quantities from the population data set associated with the bedrock core samples.

Radionuclide	Mean of All First Samples [1]	Mean of All Samples [1]	Mean of All First Two (2) Samples [1]	Ratio of Reported Results to Total Results [1]
Am-241	2.07E-02 [2]	1.78E-02	2.78E-03	1 : 48
Cs-134	1.80E-02	1.81E-02 [2]	6.09E-03	5 : 48
Cs-137	-1.01E-03	-1.97E-03	2.36E-04 [2]	1 : 48

Table 2.7 – Basic quantities from the population data set associated with the bedrock core samples.

Radionuclide	Mean of All First Samples [1]	Mean of All Samples [1]	Mean of All First Two (2) Samples [1]	Ratio of Reported Results to Total Results [1]
Co-60	5.48E-03	4.52E-03	5.57E-03 [2]	5 : 48
Eu-152	7.13E-03 [2]	4.17E-03	5.32E-03	1 : 48
Eu-154	6.79E-03	7.85E-03 [2]	2.34E-03	1 :48
Eu-155	2.68E-02 [2]	2.33E-02	3.91E-03	3 : 48
Mn-54	6.11E-03 [2]	4.83E-03	2.16E-03	1 : 48
Nb-94	1.81E-03	3.35E-03 [2]	5.96E-04	0
Ag-108m	-1.47E-03	-7.37E-04 [2]	-9.74E-04	1 :48
Sr-90	4.56E-02	4.17E-02	6.28E-02 [2]	40 : 48
H-3	1.38E+00	1.62E+00 [2]	5.50E-01	5 : 48
Cm-243/244	-----	1.28E-01	-----	0
Pu-238	-----	-3.97E-02	-----	0
Pu-239/240	-----	1.27E-02	-----	0
Pu-241	-----	-2.96E+00	-----	0
C-14	-----	-3.23E-02	-----	0
Fe-55	-----	3.19E+00	-----	0
Ni-63	-----	-1.09E+01	-----	0
Tc-99	-----	5.96E-02	-----	0

[1] All concentration results in pCi/g
[2] Emphasis added to identify highest mean

The data indicates that the bedrock contains trace amounts Sr-90 and tritium diffused volumetrically to some extent. The concentrations and the amount of total inventory available to be released are low enough to project meeting the acceptance criteria of the radiological assessment using the methodology described by Reference 4.24.

2.9.8 In-Situ Measurements using ISOCS®

The ISOCS® system is a commercially available combination hardware/software system that is designed to perform gamma spectroscopy analysis of various media utilizing a geometric relationship to the detector. This method of measurement was intended to augment scanning that had been performed in the excavation. In addition, bedrock cores were also obtained for comparison to ISOCS® analysis results and to identify and quantify those radionuclides ISOCS® cannot detect (e.g., Sr-90).

The ISOCS® hardware is comprised of a 40% relative efficiency P-type coaxial germanium detector in a dual port MAC dewar, an analog Inspector and two Panasonic Toughbook notebook computers connected using Windows Remote Desktop software and Linksys wireless PC Cards (802.11g protocol). The software is the Genie 2000 Gamma Acquisition and Analysis version 3.0 and Geometry Composer version 4.1a.

Collimation is available for the ISOCS® system in two thicknesses, 25-mm and 50-mm. The collimation used for this assessment was 50-mm thick stainless-steel encased lead that provides a choice of end apertures. This collimation effectively provides approximately two tenth-value layers of attenuation. Available apertures are 0°, 30°, 90°, and 180°. The collimation ratings correspond to the available, unobstructed Field Of View (FOV) for the detector when that collimation is in place. For example, the 50-mm thick, 0° collimator has no end opening, thus totally encasing the detector in 50-mm of shielding whereas the 90° collimator has an end opening that allows the detector face an unobstructed conical field of view that totals 90°.

The ISOCS® detector undergoes a process known as detector characterization at the Canberra facility. This process uses a Monte Carlo modeling code to generate a characterization file which contains the detector point source efficiency data and validation data. The detector efficiency is plotted and evaluated for various gamma energies and circular source diameters. Numerous counts are then performed to validate the Monte Carlo derived efficiency values which are evaluated for accuracy. This characterization data is loaded into the local computer system for use in the field. The characterization data encompasses the standard Canberra collimation equipment.

A software component of the ISOCS® system, 'Geometry Composer', combines the detector characterization with parameters of individual measurements taken with the ISOCS® system to provide both qualitative and quantitative results for that measurement.

Nine (9) locations were selected for evaluation by the field FSS Engineers using observation and process knowledge as the basis for professional judgment. Locations included areas of exposed bedrock exhibiting elevated radioactivity during radiation scanning. Other locations included the concrete footprint of the WDB and footings of the PAB.

The ISOCS® locations are depicted with this symbol ○ on Attachment 5.2. Note, the size of the symbol represents the FOV for the ISOCS® measurement at that location. A total of twelve (12) biased ISOCS® measurements were performed at the nine (9) locations.

All measurements identified NORM. In addition, several radionuclides listed in Table 2-12 of the LTP were reported in concentrations that met the accepted criterion for detection. For example, Cs-137 was reported in seven (7) of the twelve (12) measurements; Co-60 was reported in two (2) of the twelve (12) measurements.

Table 2.8 summarizes the data and includes naturally occurring K-40 results.

Table 2.8 – Basic quantities from the population data set associated with the ISOCS® measurements and related bedrock core samples.

Radionuclide	Mean of All ISOCS® Measurements [1]	Mean of All Related Bedrock Samples [1]	Ratio of Bedrock Results to ISOCS® Measurements [1]
Cs-137	2.39E-01	2.36E-04	1 : 1000
Co-60	6.98E-02	5.57E-03	1 : 13
Sr-90	-----	6.28E-02	-----
K-40	2.32E+01	6.14E+01	1 : 4

[1] All concentration results in pCi/g

There was insufficient data to correlate with any degree of certainty the ISOCS® measurements with bedrock core results. The sample data from bedrock core analyses shows K-40 to be non-uniformly distributed through the bedrock. The sample data indicates discrete locations of higher natural radioactivity in veins of mineral intruded throughout the bedrock. A detailed discussion of bedrock geology will be provided in a later section of this radiological assessment. The higher K-40 results for the ISOCS® measurements might be attributed to the large FOV inherent with the measurement process which could detect one or more spots of elevated radioactivity. The data does indicate that gamma emitting radionuclides associated with plant operation will not be present in significant quantities relative to future

groundwater concentrations. Again, the higher Co-60 and Cs-137 results for the ISOCS® measurements are probably attributable to the large FOV where radionuclides in nearby soil are included in the measurement.

2.10 NRC In-Process Inspection

Connecticut Yankee (CY) participated in an in-process inspection of FSS activities in the excavation from April 12, 2005 through April 13, 2005. Oak Ridge Institute for Science & Education (ORISE) performed independent survey and sampling work under government contract with the NRC. Four (4) areas requiring additional information were identified by ORISE during the inspection. These included evaluation of two (2) elevated spots of concrete on the Cable Vault wall and two (2) elevated spots on bedrock.

A concrete core was collected from the concrete location yielding the highest elevated reading. The core was processed and sent to the off-site laboratory and analyzed as discussed in a previous section. The Sr-90 result was the highest reported for the Cable Vault wall, 3.31 pCi/g which is about twelve (12) times the average for that population data set. The projected future groundwater dose from the groundwater in the PAB excavation using an inventory approach in the proposed LTP amendment and assuming the Cable Vault wall is uniformly contaminated at the maximum reported concentration is 9.9E-02 mrem in a year TEDE. This result is a very small fraction of the LTP release criteria NRC License Termination Rule. The result was included in the Cable Vault wall data to determine the mean concentrations provided by Table 2.5 which is conservative. No core was deemed necessary at the other location since the higher elevated area was shown not to significantly impact future groundwater dose. The evaluation of the Cable Vault wall elevated areas is complete.

The two (2) elevated spots on the bedrock were addressed in the following manner.

An FSS engineer performed in-situ measurement of the two (2) elevated areas using an Exploranium miniSPEC, model GR-130 to identify the radionuclides of concern. The Exploranium was stabilized (i.e., an energy calibration was performed) with a cesium-137 source prior to use in the field. A ten (10 minute count was performed with the detector in contact with the discrete locations identified previously by ORISE. No gamma energy lines associated with cesium-137 (i.e., 661 keV) or cobalt-60 (i.e., 1173 kev and 1332 kev) appeared on the spectrums. A distinct peak or region of elevated count rate was identified at energies associated with K-40 or NORM (Attachment 5.3). The Exploranium results, although qualitative, are supported by the ISOCS® measurements which identified the same naturally occurring radionuclides.

Furthermore, the observed concentrations of Sr-90 in bedrock are not expected to produce an instrument response above detection capabilities. Simple calculation shows that 10 pCi/g of Sr-90 conservatively assumed to be uniformly distributed to a depth of 1 centimeter (cm) in bedrock would be expected to yield a maximum surface contamination concentration of 5,800 dpm/100cm^2 (further assuming no shielding or source-to-detector effects). That amount of residual activity (10 pCi/g) is two (2) orders of magnitude above the maximum reported Sr-90 result for bedrock.

The question then remains "Is the amount of K-40 in the bedrock yielding radiation of sufficient energy to produce positive instrument response in gamma and beta sensitive detection devices used by FSS and ORISE and, if so, can the energy of the detected radiation be approximated?".

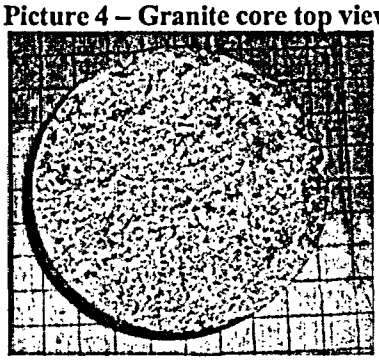
The first part of the question can be answered by geology. Microcline-quartz pegmatite, a coarse grained rock of granitic composition has been identified on CY property (Reference 4.30). Uranium is included with the minerals associated with this pegmatite. A primary component of pegmatite intrusives is the mineral orthoclase, a potassium-alumino-silicate with the chemical formula of $KAlSi_3O_8$. In this chemical formula the potassium constitutes approximately 18% of the total weight. The potassium isotopes distributions are generally 93.08% for K-39; 0.012% for K-40 and 6.9% K-41 of the total potassium content. Although the radioactive component is relatively small compared to the other isotopes, it is enough to register during a survey considering the fact that the pegmatites are extensively injected into the bedrock in the excavation.

The pegmatites identified contain orthoclase in amounts up to 50+% of the total amount of intrusive, and locally as much as 65% of the total which is exhibited in crystals up to four (4) inches by five (5) inches on the exposed surfaces. Within the exposed areas of the excavation, the pegmatites may be 15%, or more, of the total rock mass exposed.

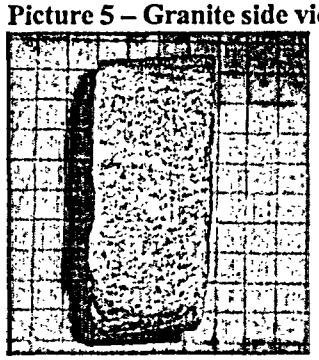
The gneissic components of bedrock also contain lesser amounts, compared to the pegmatites, of potassium as orthoclase and other minerals in the mineral suite, particularly in those rocks identified as granitic gneiss. Part of the definition of granite is the total amount of orthoclase and other felsic (light colored) minerals compared to the darker (mafic) minerals constituting the rock.

Pictures 4 and 5 show views of a typical granite core after cutting.

Picture 4 – Granite core top view.

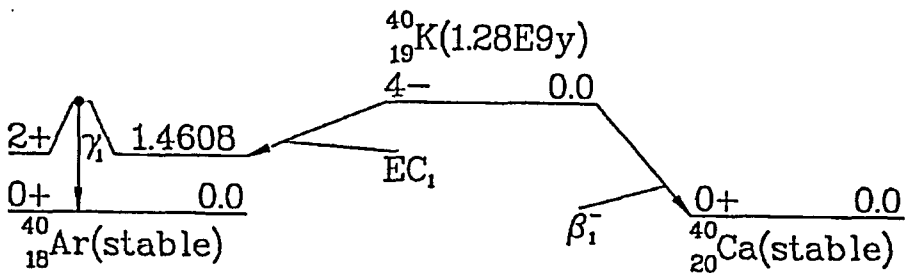


Picture 5 – Granite side view.



The next step to answering the question is to study the processes by which K-40 decays.

Figure 1 – Decay scheme of K-40 (Reference 4.31)



RADIATION	y(i) (Bq-s)$^{-1}$	E(i) (MeV)	Y(i) x (E(i)
□ 1	8.93E-01	5.850E-01	5.22E-01
γ 1	1.07E-01	1.461E+00	1.56E-01

The figure shows two (2) radioactive transformations or modes of decay for K-40. One mode, Electron Capture (EC) occurs infrequently, about 10% of all radioactive transformations. Sometimes gamma rays are emitted following EC. In this case the familiar 1.461 MeV gamma is emitted 10% of the time after the EC. The primary mode of decay is beta minus decay with a maximum energy of 1.31 MeV nearly 90% of all K-40 radioactive transformations (Reference 4.32). The decay scheme gives the average beta energy at 0.585 MeV.

So, K-40 emits beta and gamma radiation as a by-product of radioactive decay. Survey instruments used by ORISE could identify this radiation as an elevated reading above ambient background. Unfortunately the survey instrument is incapable of determining the radionuclide emitting the radiation (or the approximate energy for that matter). Additionally, ORISE uses a single three-eights ($^3/_8$) inch thick Lucite shield to establish whether an elevated beta reading appears to be from a radionuclide like Sr-90 (Sr-90 is assumed in transient equilibrium with progeny Y-90 which yields a highly energetic beta). The use of a single shield does not provide conclusive evidence that the response was from an energetic beta. The response could have been from attenuated gamma radiation (all beta radiation being stopped by the shield).

Further evaluation was performed at bedrock locations #2 and #15. These evaluations consisted of attenuation measurements using a beta sensitive device and multiple shields of uniform absorber thickness. The attenuation measurements are then used to approximate beta endpoint energy.

The evaluation used an NE Electra portable rate meter with a one hundred (100) cm^2 dual scintillation detector. The Electra was operated in the β mode with the audio output enabled. Multiple counts were performed using a succession of one-sixteenth ($^1/_{16}$) inch plastic sheets to absorb the beta particles. Counting continued until six (6) plastic sheets were used which is consistent with the total thickness used by ORISE (i.e., three-eights ($^3/_8$) inch thickness). Evaluation of the results using EXCEL and an empirically derived formula give the endpoint maximum beta energy at about 0.545 MeV or less. Had Sr-90 been present in sufficient quantities and in transient equilibrium with Y-90 then the expected maximum endpoint beta energy would likely have been much higher (about 2.281 MeV) (Reference 4.33).

All of the data and evaluations support the conclusion that the ORISE elevated beta response was due to naturally occurring K-40 or progeny from naturally occurring radionuclides in the bedrock. The evaluation of bedrock elevated areas is complete.

3. CONCLUSION

The expectations of the survey design were to obtain ample and defendable radiological data for remaining concrete, soil and bedrock in the excavation. These data would be used later to demonstrate compliance with the acceptance criteria discussed in Section 2.8. In addition, soil surrounding the excavation was to be shown to be less than the Operational DCGL based on a dose of 8 mrem TEDE in a year.

Survey and sampling in the excavation had taken place over a period of several months. A large amount of data has been obtained for the remaining concrete, soil and bedrock inside the excavation and surrounding soil (Attachment 5.8). The survey design included an integrated approach of scanning for elevated areas of radioactivity and performing direct measurements and sample collection. Survey and sampling was conducted using approved procedures. Samples were maintained under COC and were analyzed by approved laboratories to the desired specifications.

Survey and sampling in the excavation identified low-levels of residual activity in concrete, soil and bedrock. The radionuclide mix and variability was found to vary according to sample type, depth and location. Bounding concentrations were determined for the various remaining concrete walls and footers, soil and bedrock. These will be used to calculate the dose from future groundwater inside the excavation.

Soil sampling outside the excavation has identified low-levels of residual activity. These have been shown to be less than the Operational DCGL previously discussed.

The west excavation is currently under isolation and control. Access through the area and all work activities are closely monitored by Site Closure personnel. Site Closure personnel frequently perform walk downs of the excavation to ascertain the physical condition and verify adequate isolation and controls with regard to demolition activities in adjacent areas (e.g., east excavation and Tank Farm areas).

The expectations of the survey design have been met. Quality radiological data has been obtained as an output of implementation. The final radiological condition of the area has been adequately determined.

4. REFERENCES

4.1 Haddam Neck License Termination Plan (LTP). Revision 2. August 2004.

4.2 Connecticut Yankee (CY) Drawing SK-16112-10032 sheet 2.

4.3 Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM). NUREG-1575, revision1. EPA 402-R-97-016, revision 1. DOE/EH-0624, revision 1.

4.4 Final Status Survey Quality Assurance Plan.

4.5 Health Physics Radiation Protection Manual (RPM) 5.1-00 "Final Status Survey Program".

4.6 RPM 5.1-2 "Preparation of Characterization, Remedial Action and Turnover Survey Plans".

4.7 RPM 5.1-3 "Collection of Sample Media for Final Status Survey (FSS)".

4.8 RPM 5.1-4 "Control and Accountability of Portable Survey Instruments for Final Status Surveys".

4.9 RPM 5.1-5 "Chain of Custody for Final Status Survey Samples".

4.10 RPM 5.1-16 "Area Preparation for Final Status Survey Activities".

4.11 RPM 5.2-1 "Setup And Operation of The E-600 Digital Survey Instrument For Scoping, Characterization and Final Status Surveys".

4.12 RPM 5.2-2 "Operation of the Exploranium GR-130 Minispec".

4.13 RPM 5.2-3 "Operation of the Canberra Portable Gamma Spectroscopy System".

4.14 RPM 5.4-00 "Site Closure Training Program".

4.15 RPM 5.1-23, "Data Quality Assessment (DQA)".

4.16 Working files maintained under Station Administrative Control Procedure (ACP) 1.2-2.87 "NRC Regulation 10CFR50.75 (g) Decommissioning Records."

4.17 Historical Review Team Report. March 1998.

4.18 Results of Scoping Surveys. September 1998.

4.19 Augmented Characterization Survey Report. January 1999.

4.20 Characterization Report. January 2000.

4.21 Historical Site Assessment. June 2000.

4.22 Health Physics Department Technical Support Document CY-HP-0171, "Characterization Report for the West Section of the Excavation Associated with the Northeast Protected Area Grounds". Revision 0.

4.23 Initial Target Operational DCGLs for CY. CY memo ISC 04-049. November 23 2004.

4.24 Technical Basis for Performing Radiological Assessments of Bedrock, Soil and Subsurface Concrete Using an Inventory-Based Approach. February 2005. Revision 1.

4.25 Health Physics Technical Support Document CY-HP-0185, "Kd Values of Backfill Material for Connecticut Yankee". November 2004. Revision 1.

4.26 Health Physics Technical Support Document B CY-HP-0081, "Scan MDC of Land Areas Using a 2-inch by 2-inch sodium Iodide Detector". February 2003. Revision 4.

4.27 The Gamma Rays of the Radionuclides. Erdtmann and Soyka. 1979.

4.28 Health Physics Instrument Use Sheet 001. Revision 4.

4.29 Statement of Work (SOW) for Environmental, Bioassay and Waste Characterization Analytical Services CY-ISC-SOW-001. August 27 2003.

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4.31 Annals of the ICRP. ICRP Publication 38. Radionuclide Transformations Energy and Intensity of Emission. Volumes 11-13 1983.

4.32 General Information About K-40. Paul Frame, Oak Ridge Associated Universities. http://www.orau.org/ptp/collection/consumer%20products/potassiumgeneralinfo.htm.

4.33 Nuclides and Isotopes. Chart of the Nuclides. Fourteenth Edition.

5. ATTACHMENTS

5.1 Connecticut Yankee Plot Plan (2 pages including cover)

5.2 Survey and Sample Measurement Locations (2 page including cover)

5.3 Photographs of Project and Survey and Sampling (41 pages including cover)

5.4 Initial Target Operational DCGLs for CY (7 pages including cover)

5.5 Technical Basis for Performing Radiological Assessments of Bedrock, Soil and Subsurface Concrete Using an Inventory-Based Approach (8 pages including cover)

5.6 Health Physics Technical Support Document CY-HP-0185, "Kd Values of Backfill Material for Connecticut Yankee" (14 pages including cover)

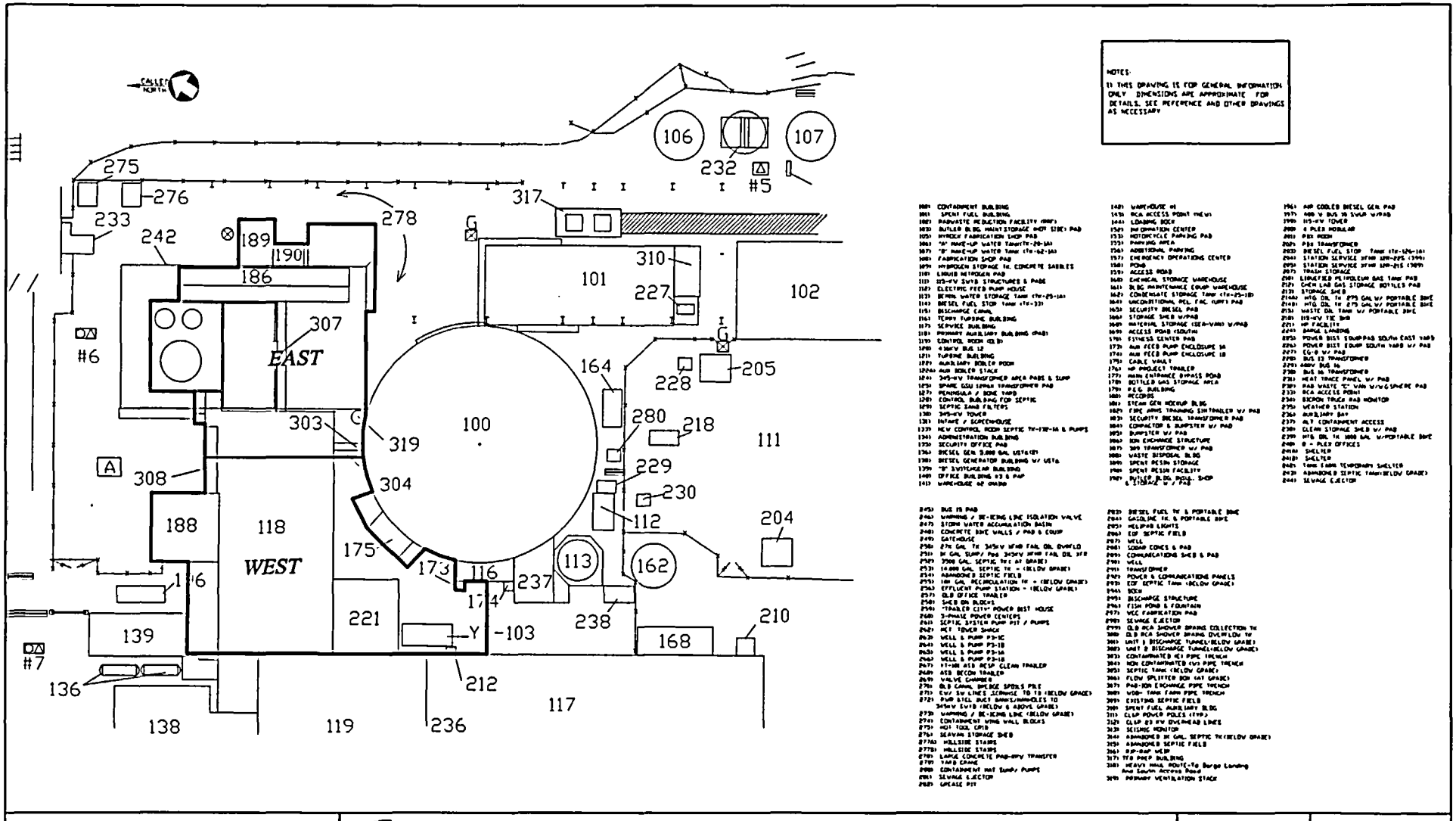
5.7 Area Preparation and Isolation and Controls (3 pages including cover)

5.8 Supporting Data (975 pages including cover)

Attachment 5.1

Connecticut Yankee Plot Plan

(2 pages including cover)

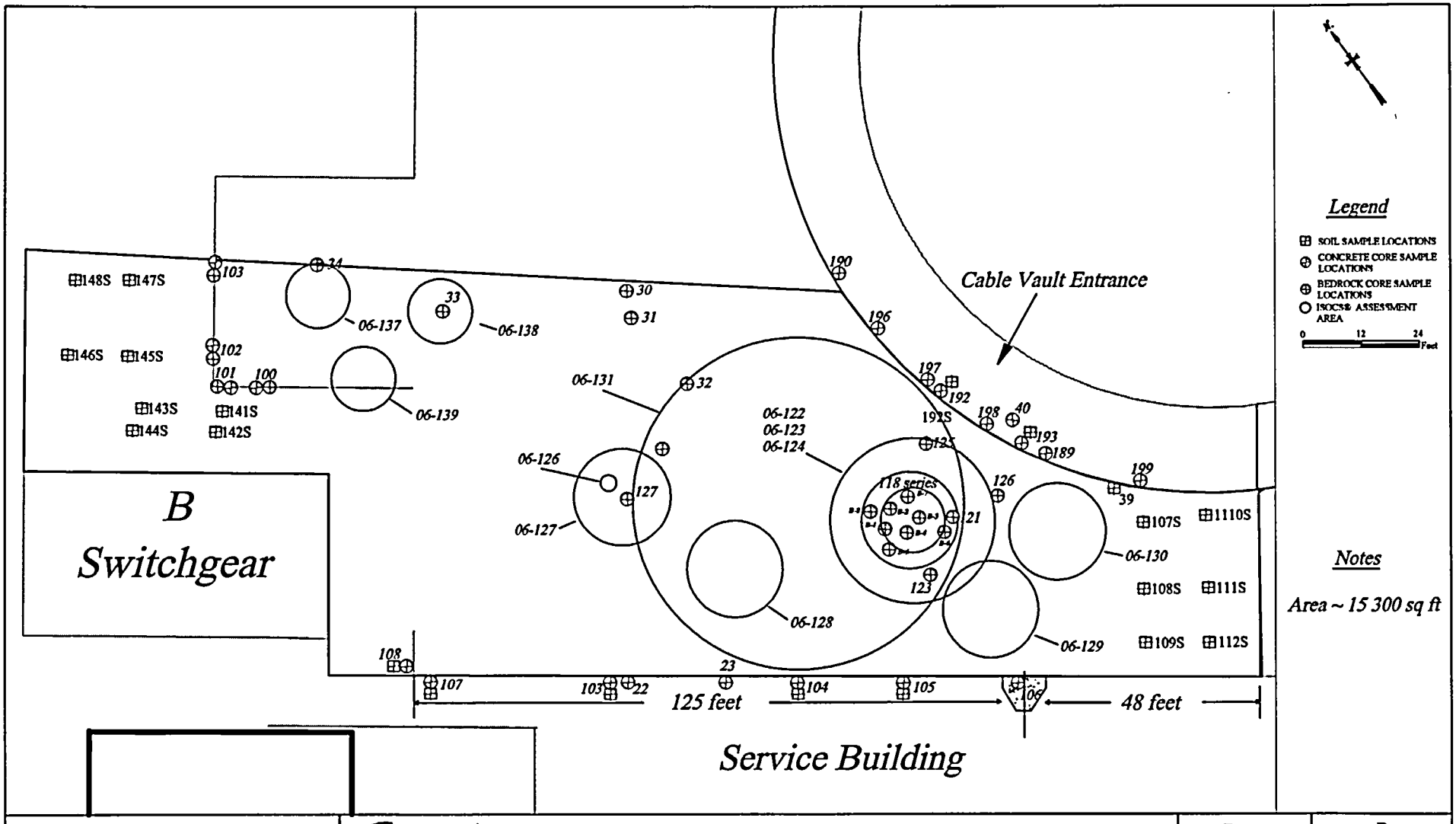


Attachment 5.1	Connecticut Yankee Atomic Power Company Connecticut Yankee Plot Plan	Date May 2005	By J McCarthy

Attachment 5.2

Survey and Sample Measurement Locations

(2 pages including cover)

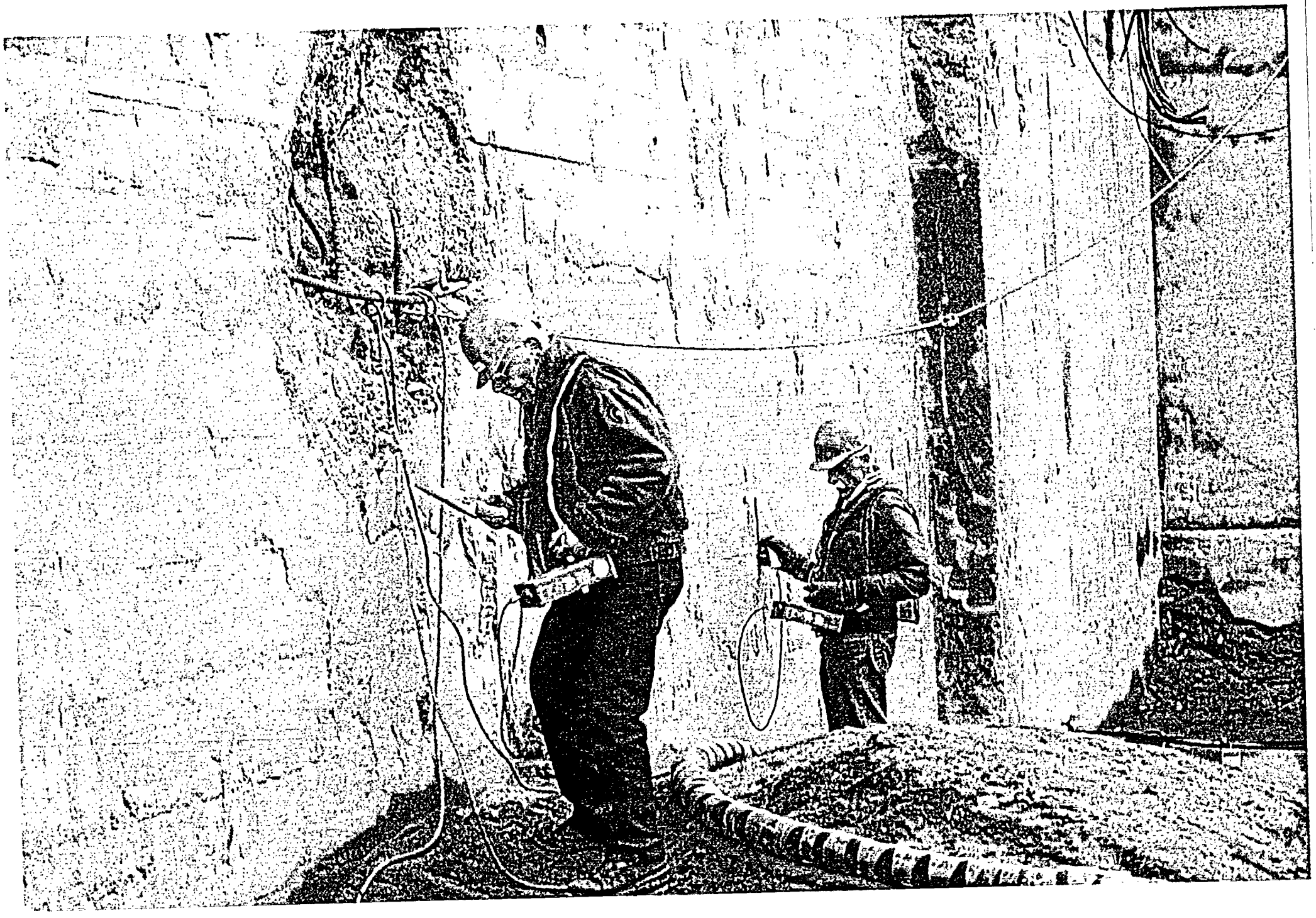


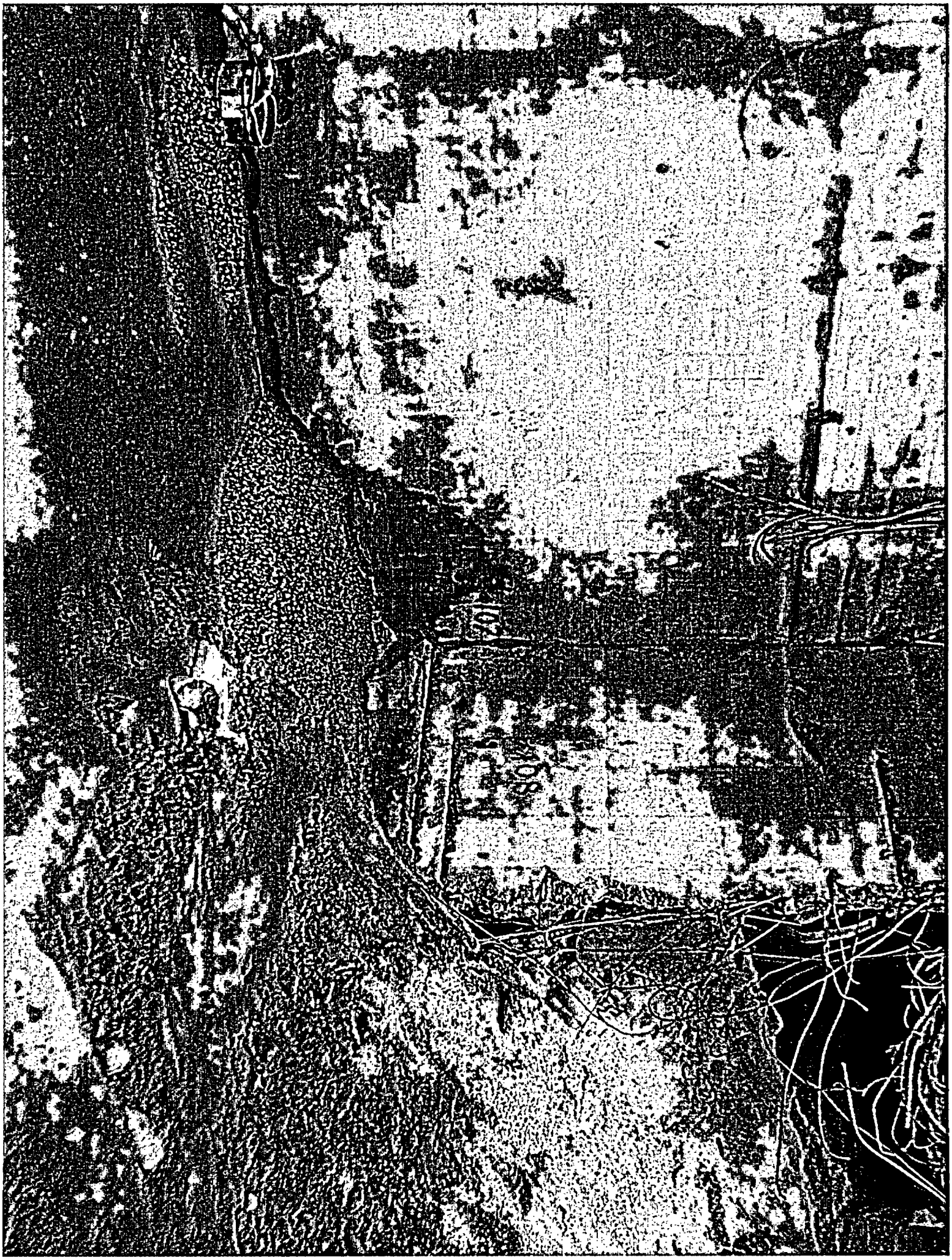
Attachment 5.2	Connecticut Yankee Atomic Power Company Survey and Sample Measurement Locations	Date	By
		May 2005	P Hollenbeck J McCarthy

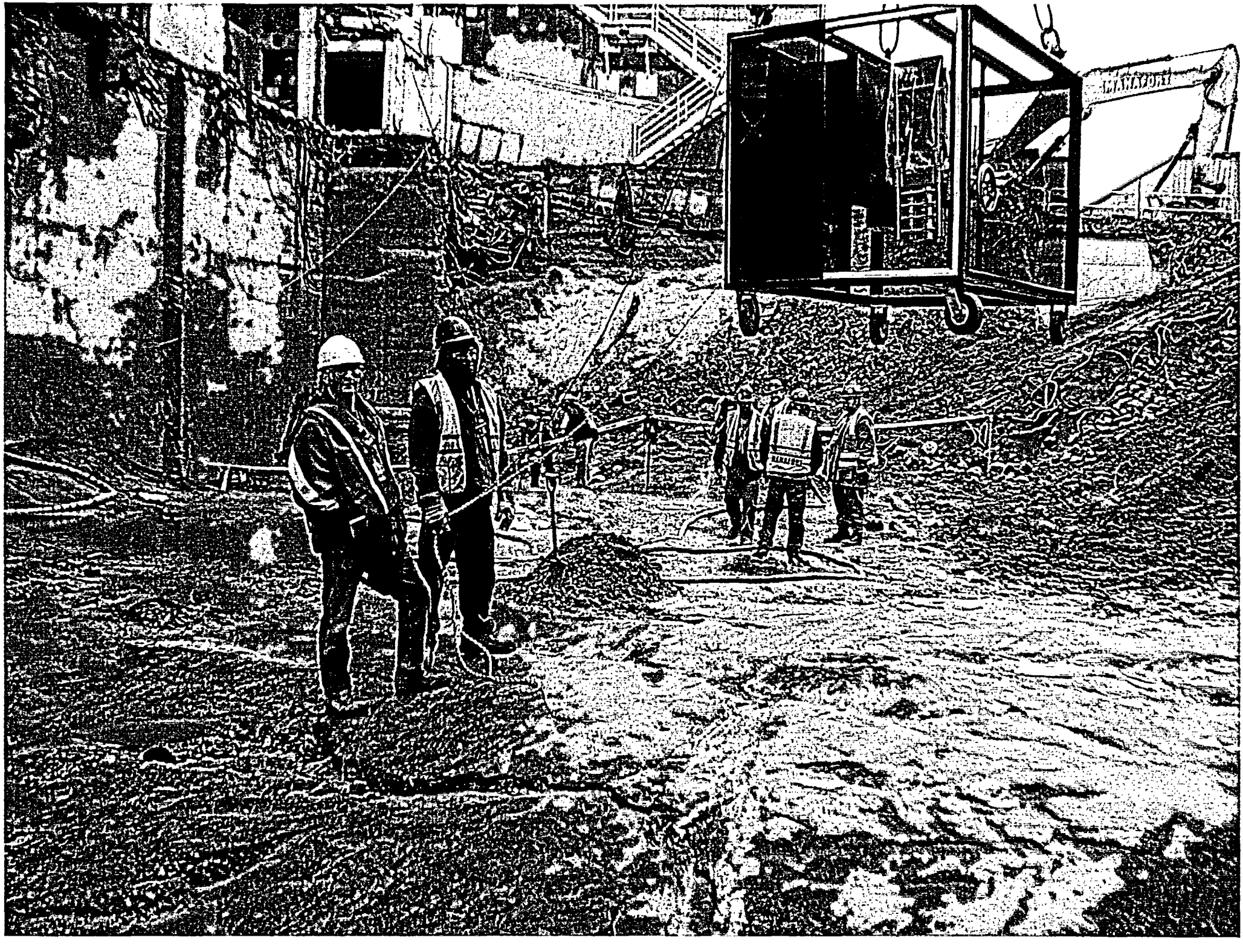
Attachment 5.3

Photographs of Project and Survey and Sampling

(41 pages including cover)







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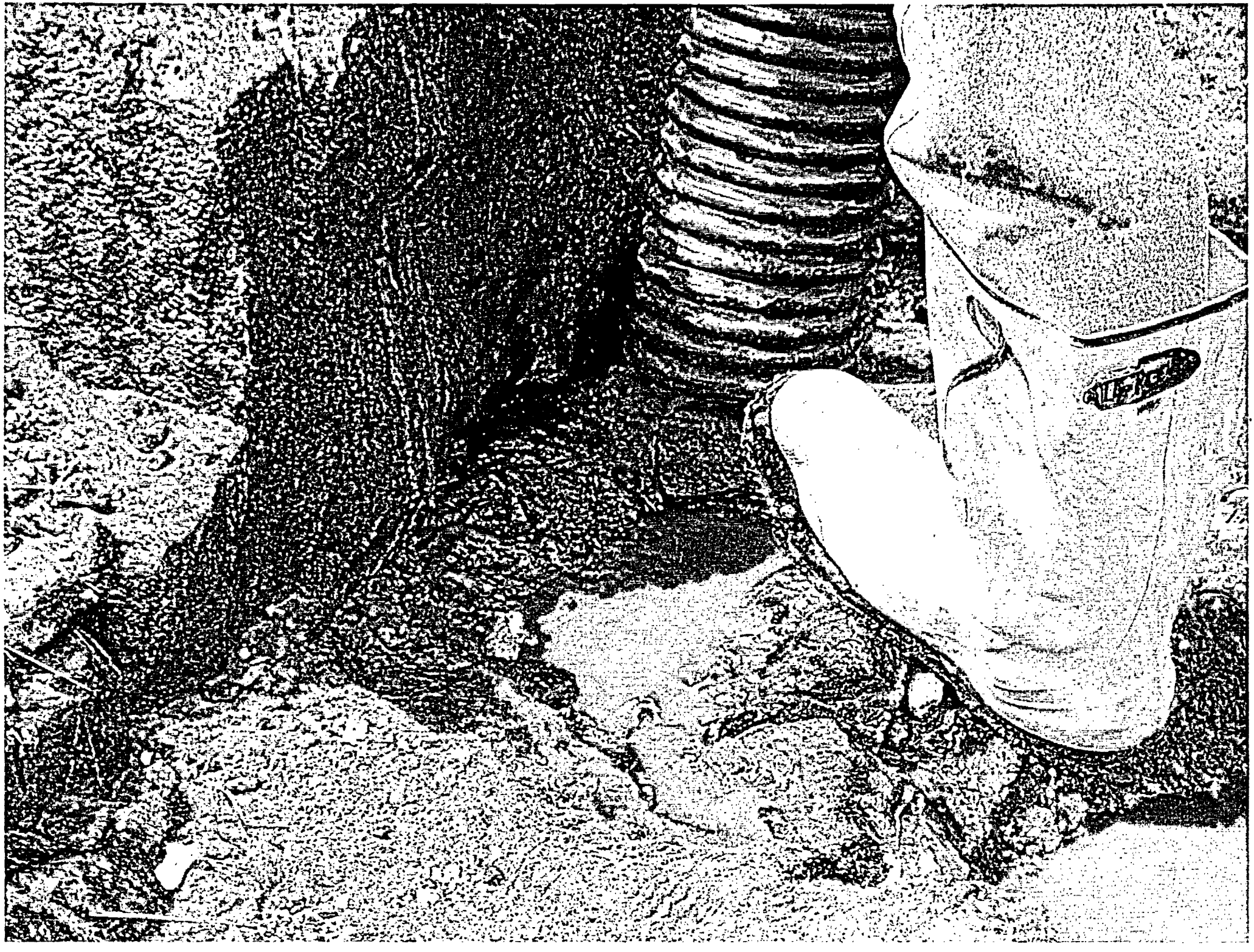

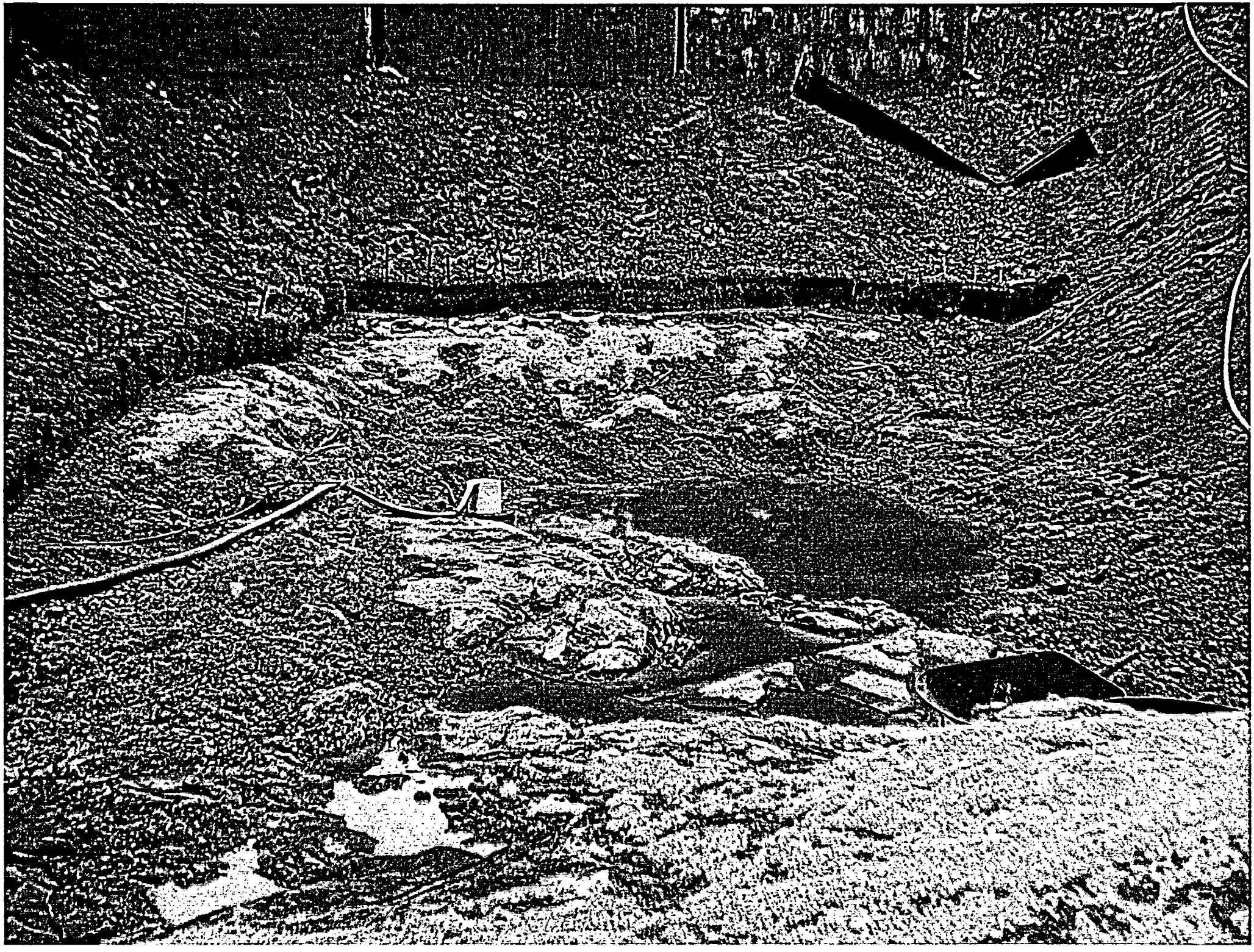

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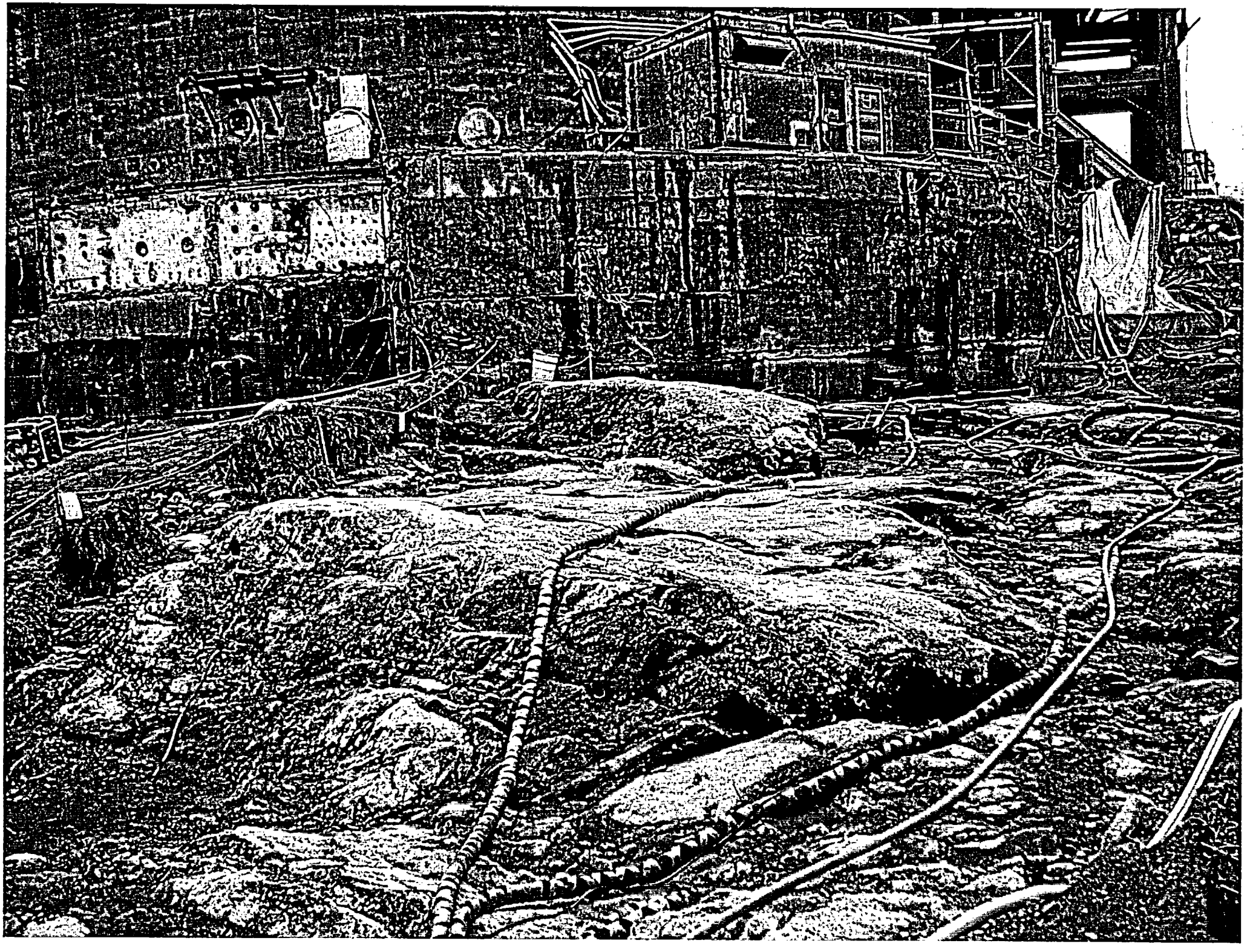

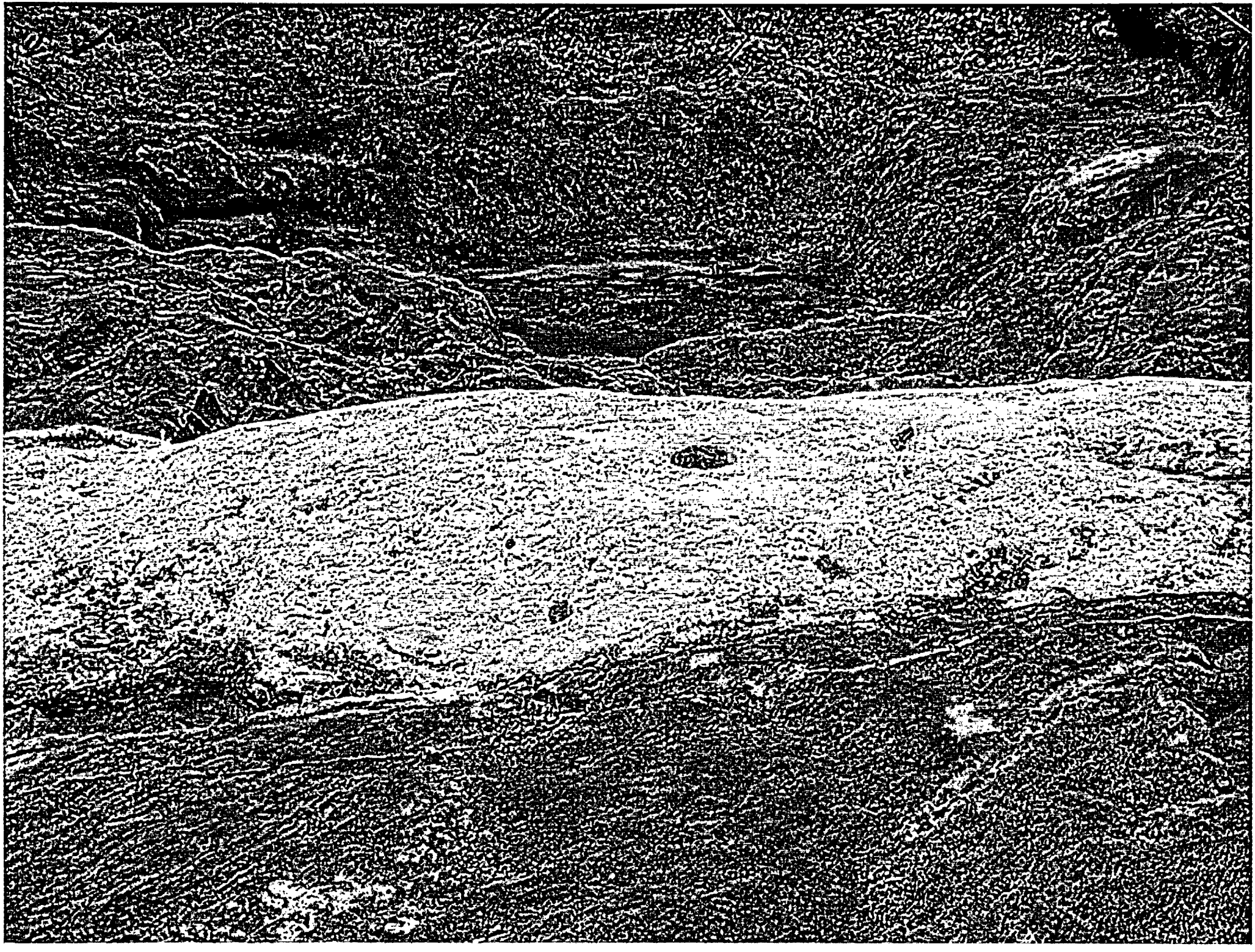

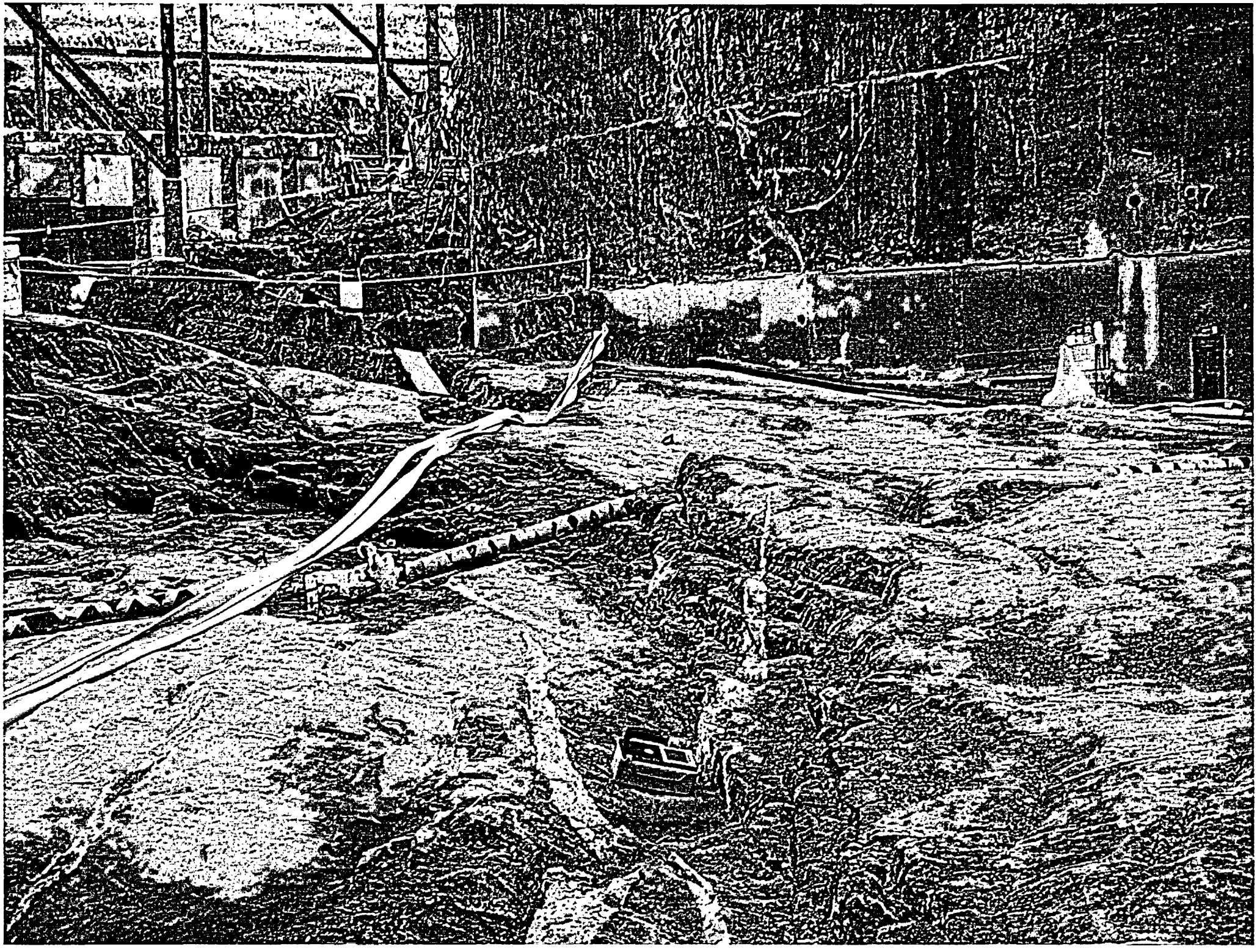

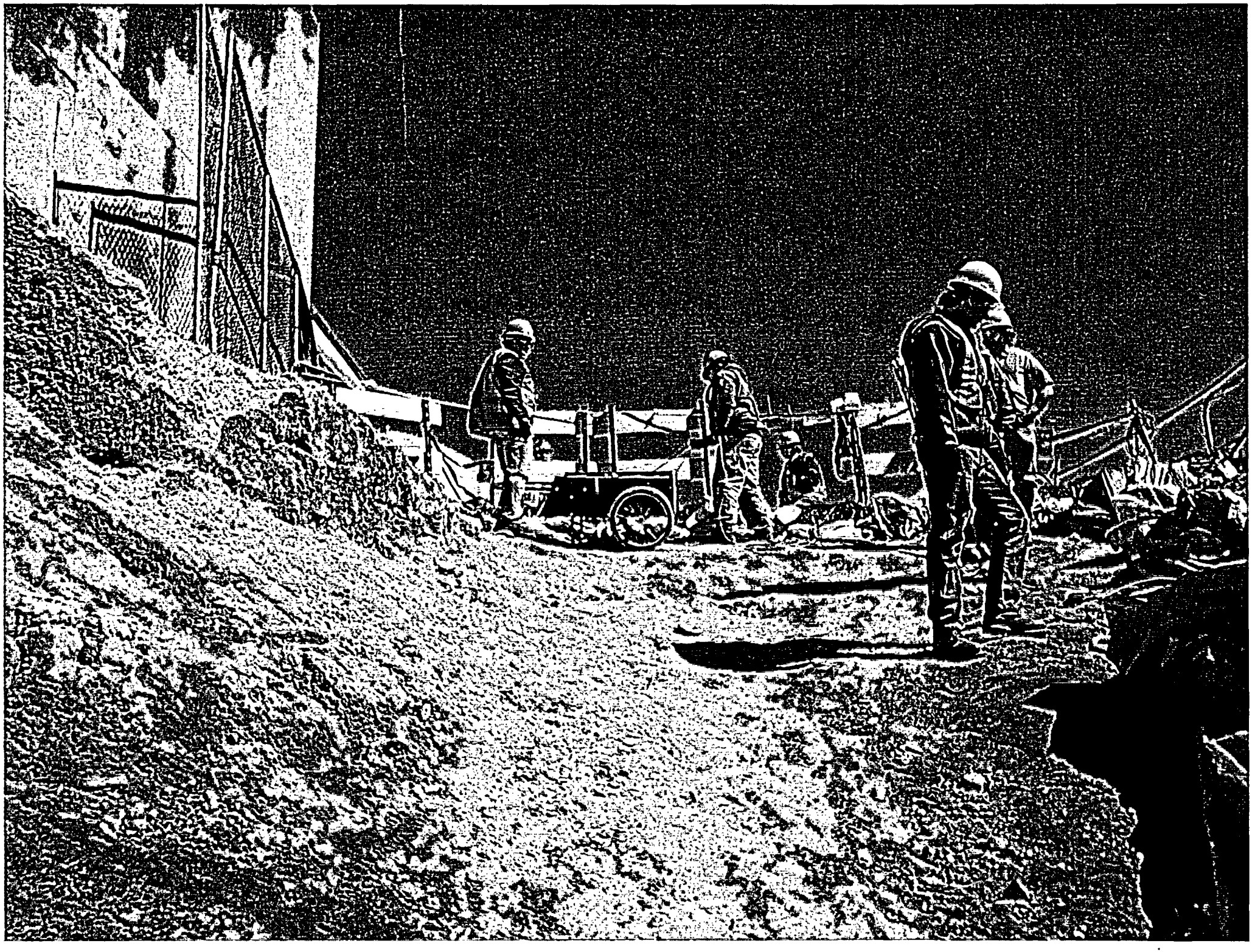

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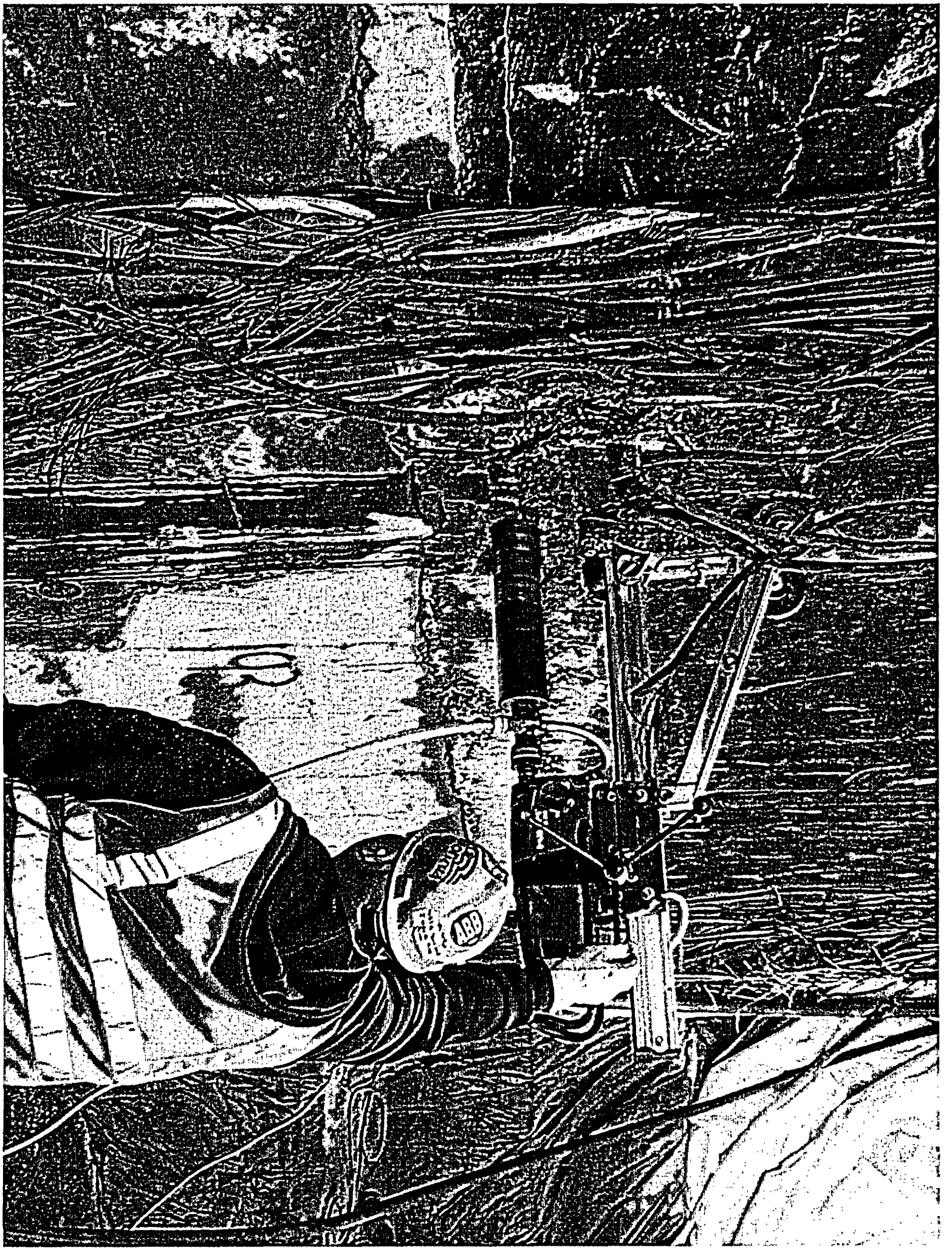
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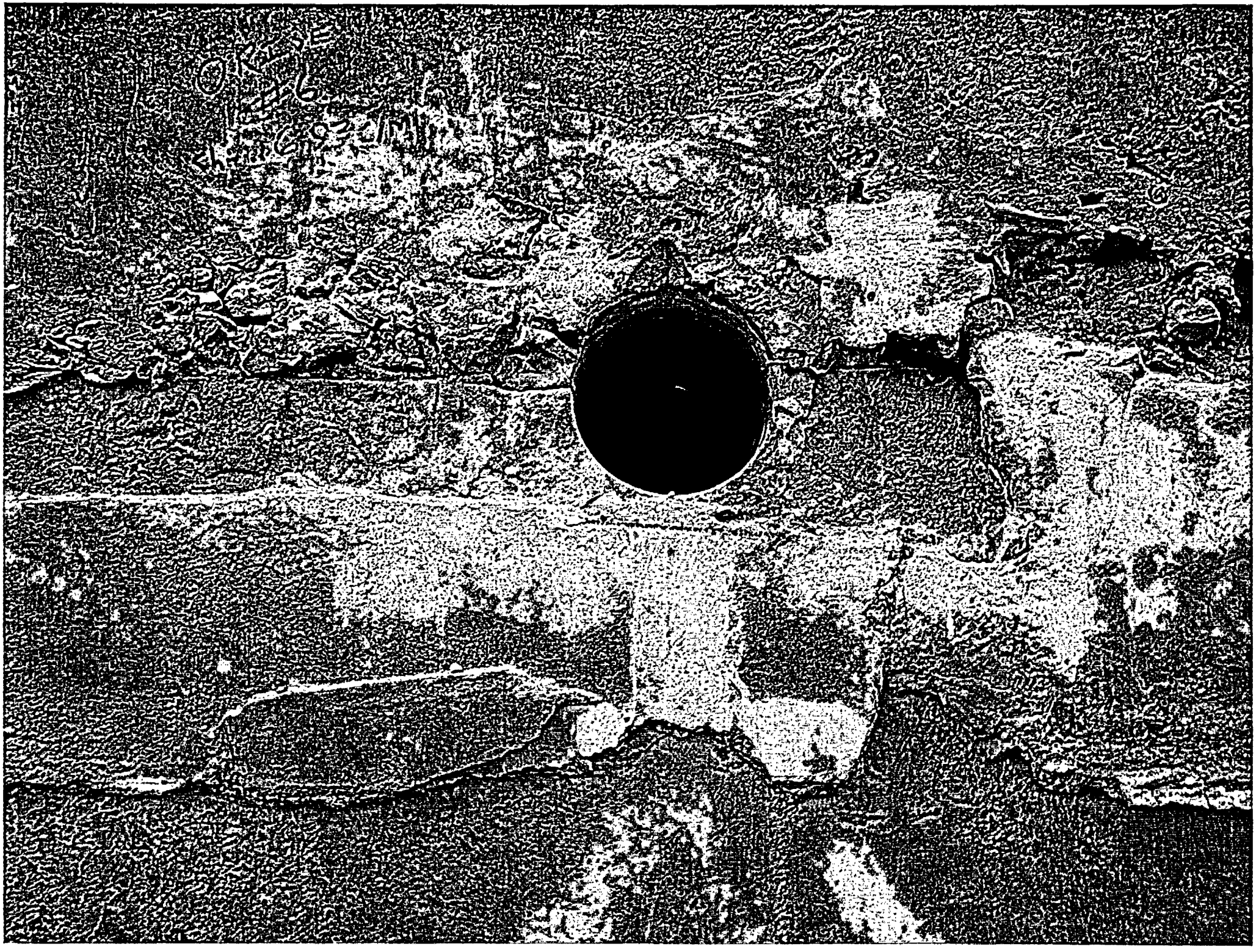
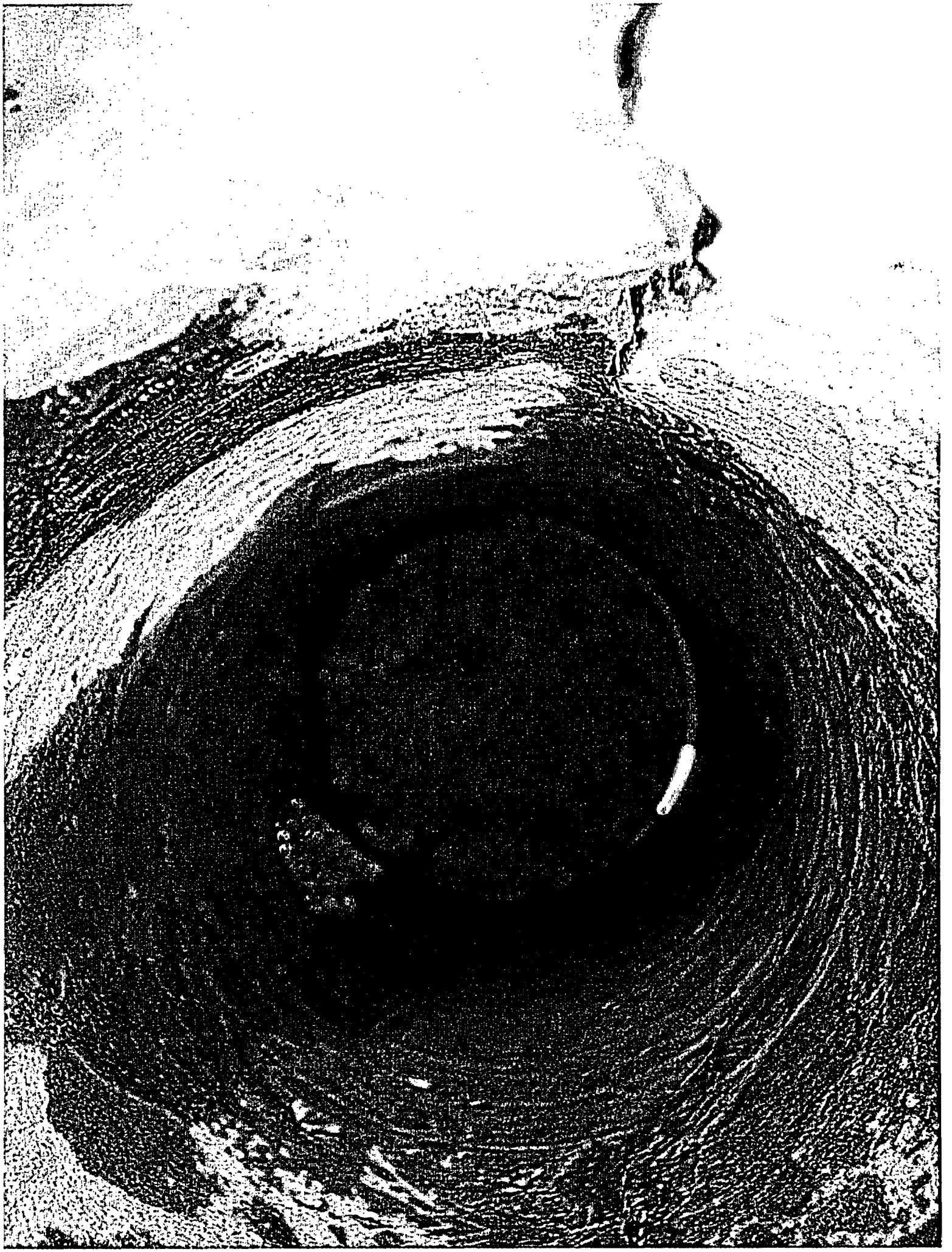
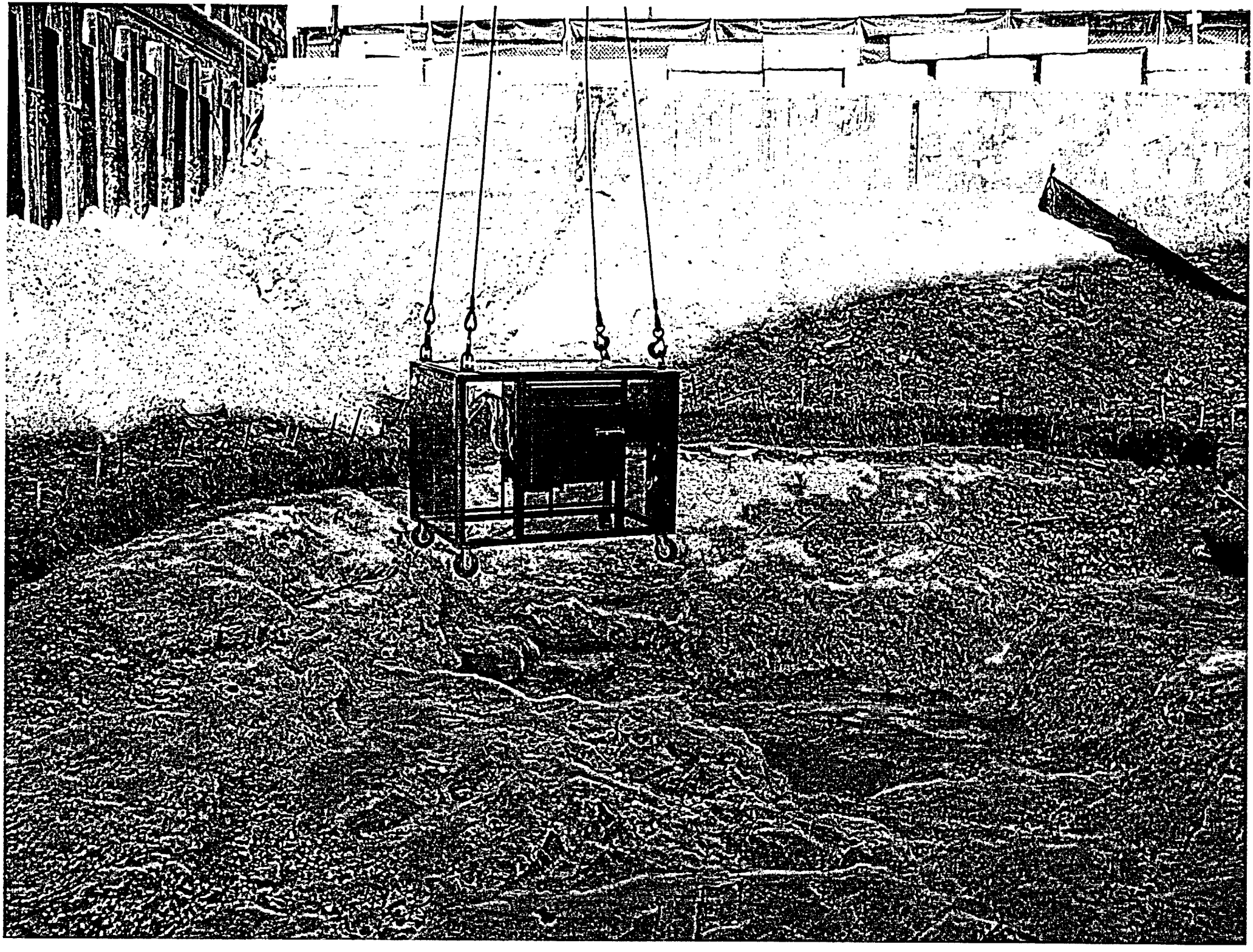
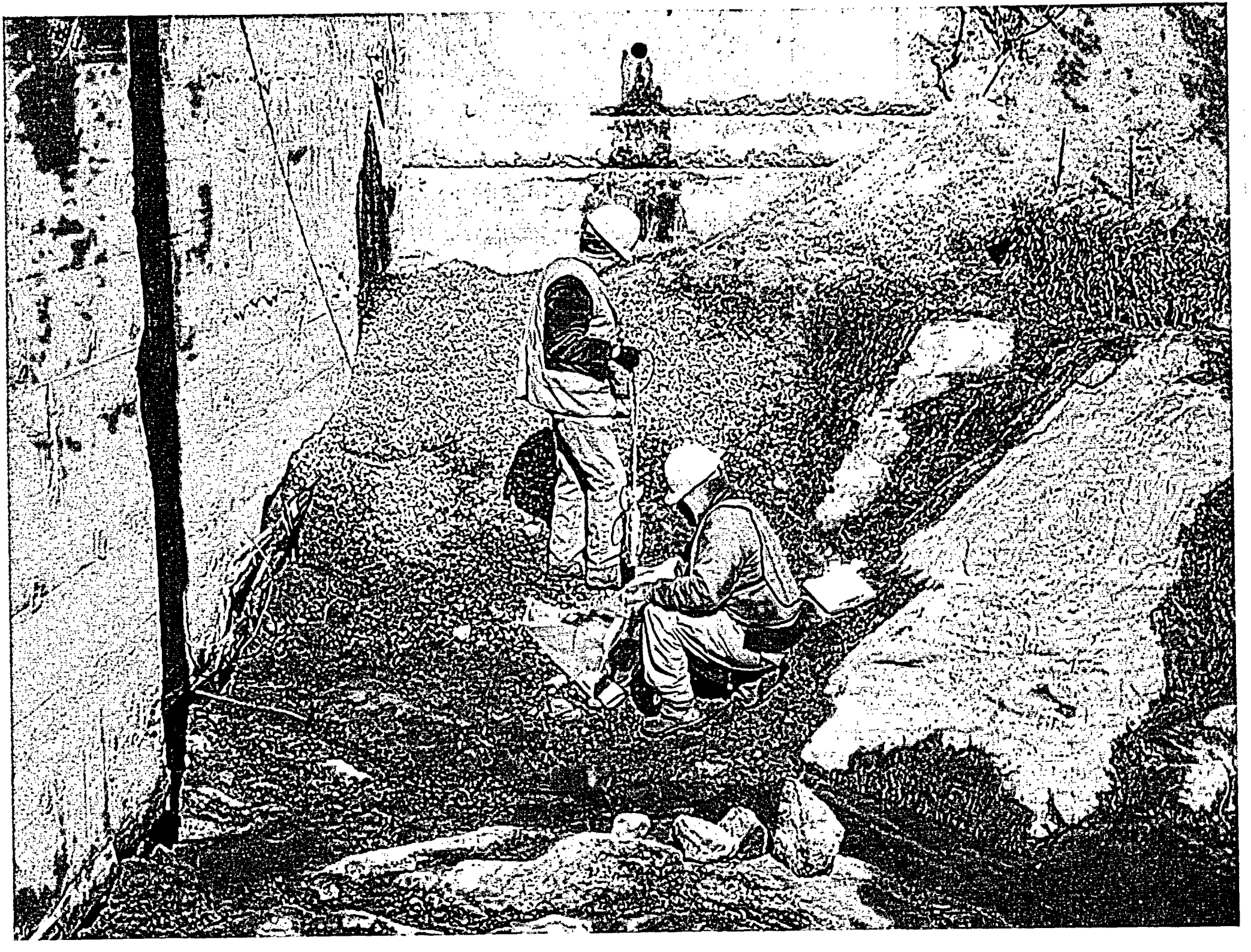
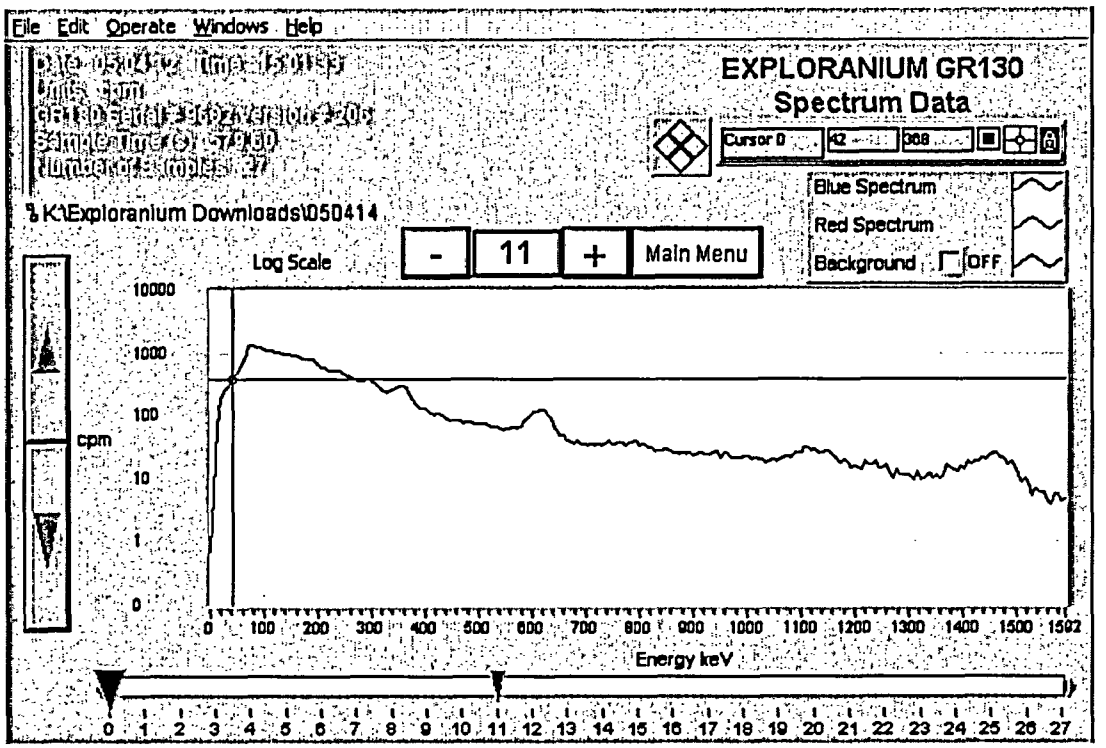








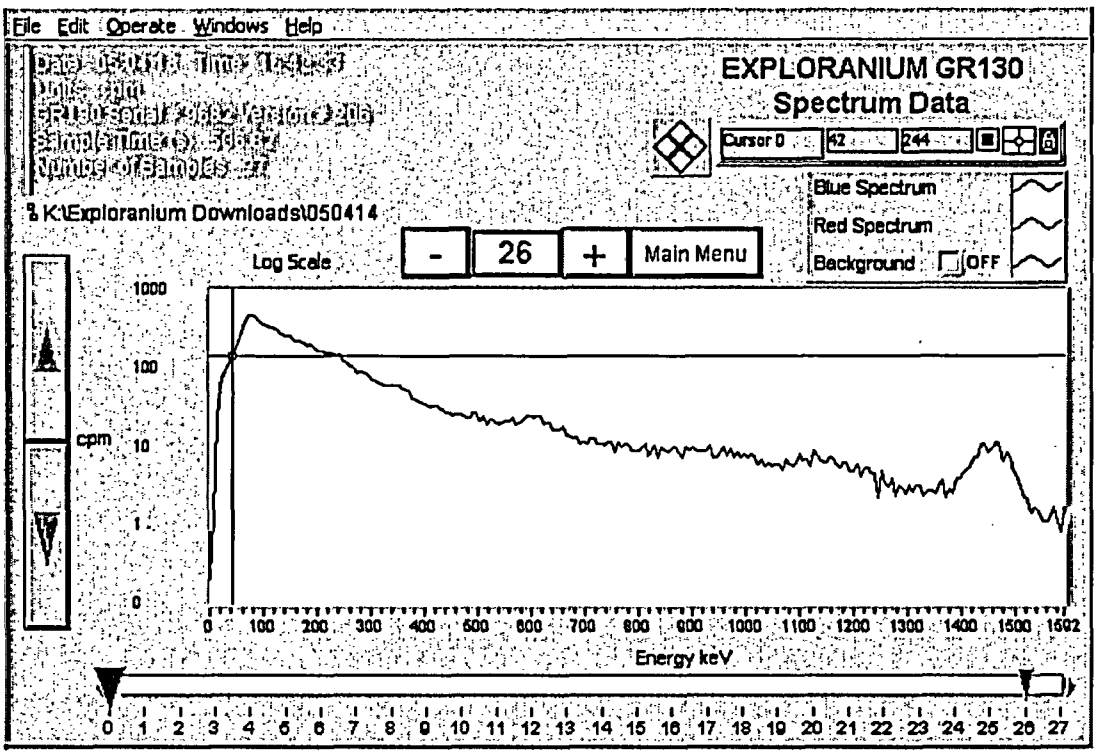
ORISE Location Bedrock #2



Peak Energy Line:	352 keV	609 keV	1120 keV	1461 keV
Number of Counts:	5115	5664	1098	1477
Associated Radionuclide [1]:	Pb-214	Bi-214	Bi-214	K-40

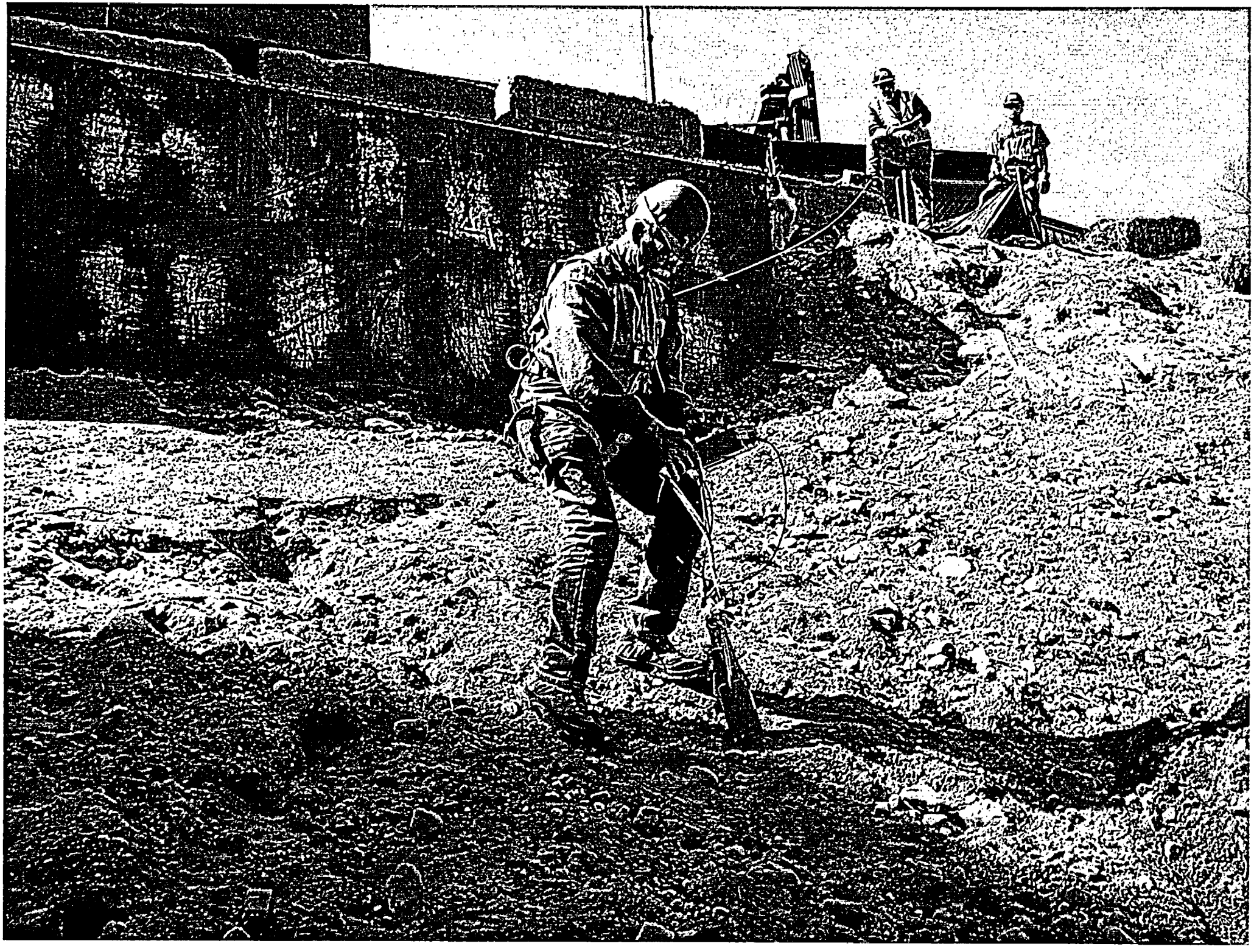
[1] Reference: Gerhard Erdtmann, Werner Soyka – The Gamma Rays of the Radionuclides

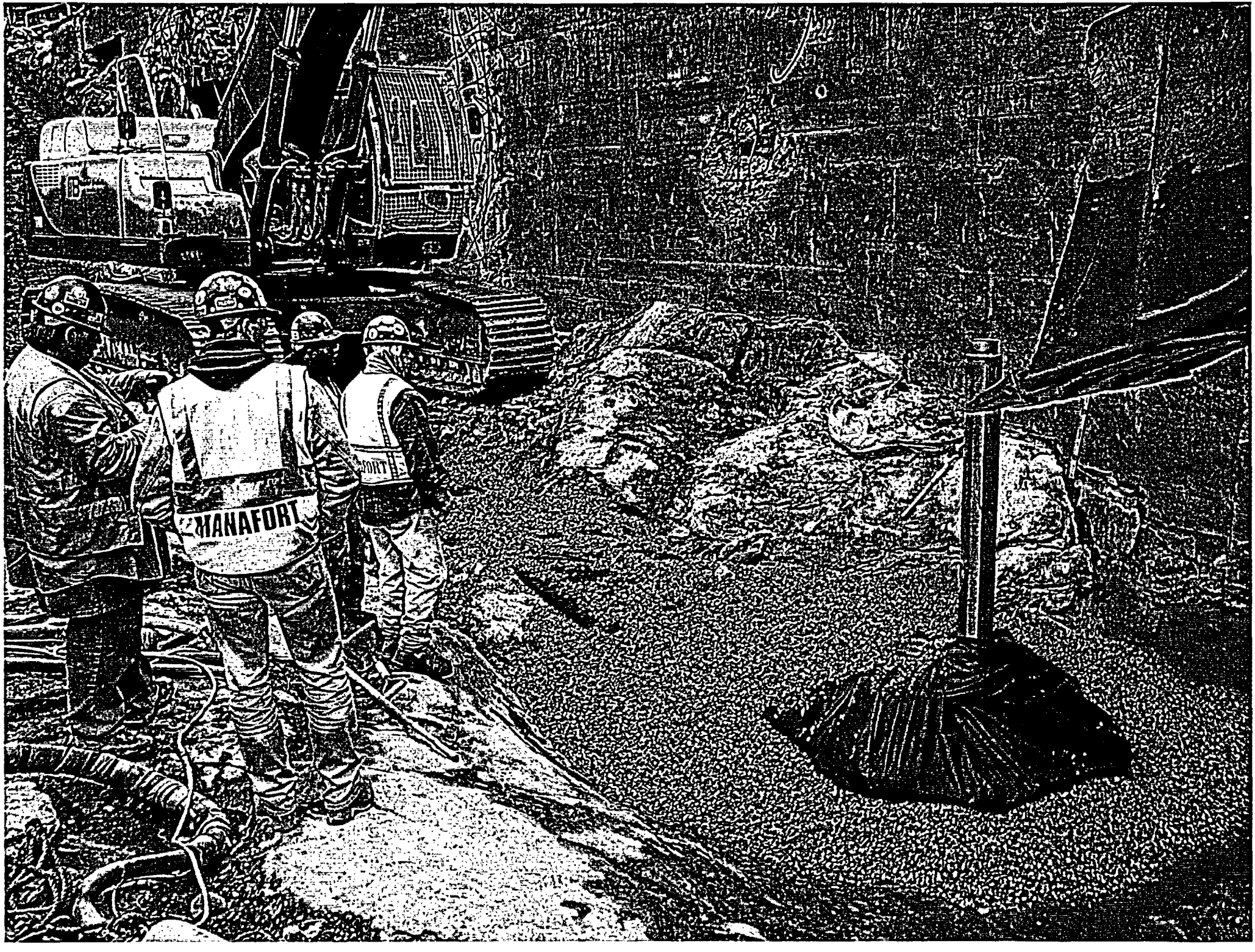
ORISE Location Bedrock #15



Peak Energy Line:	352 keV	609 keV	1120 keV	1461 keV
Number of Counts:	-----	424	-----	876
Associated Radionuclide [1]:	Pb-214	Bi-214	Bi-214	K-40

[1] Reference: Gerhard Erdtmann, Werner Soyka – The Gamma Rays of the Radionuclides

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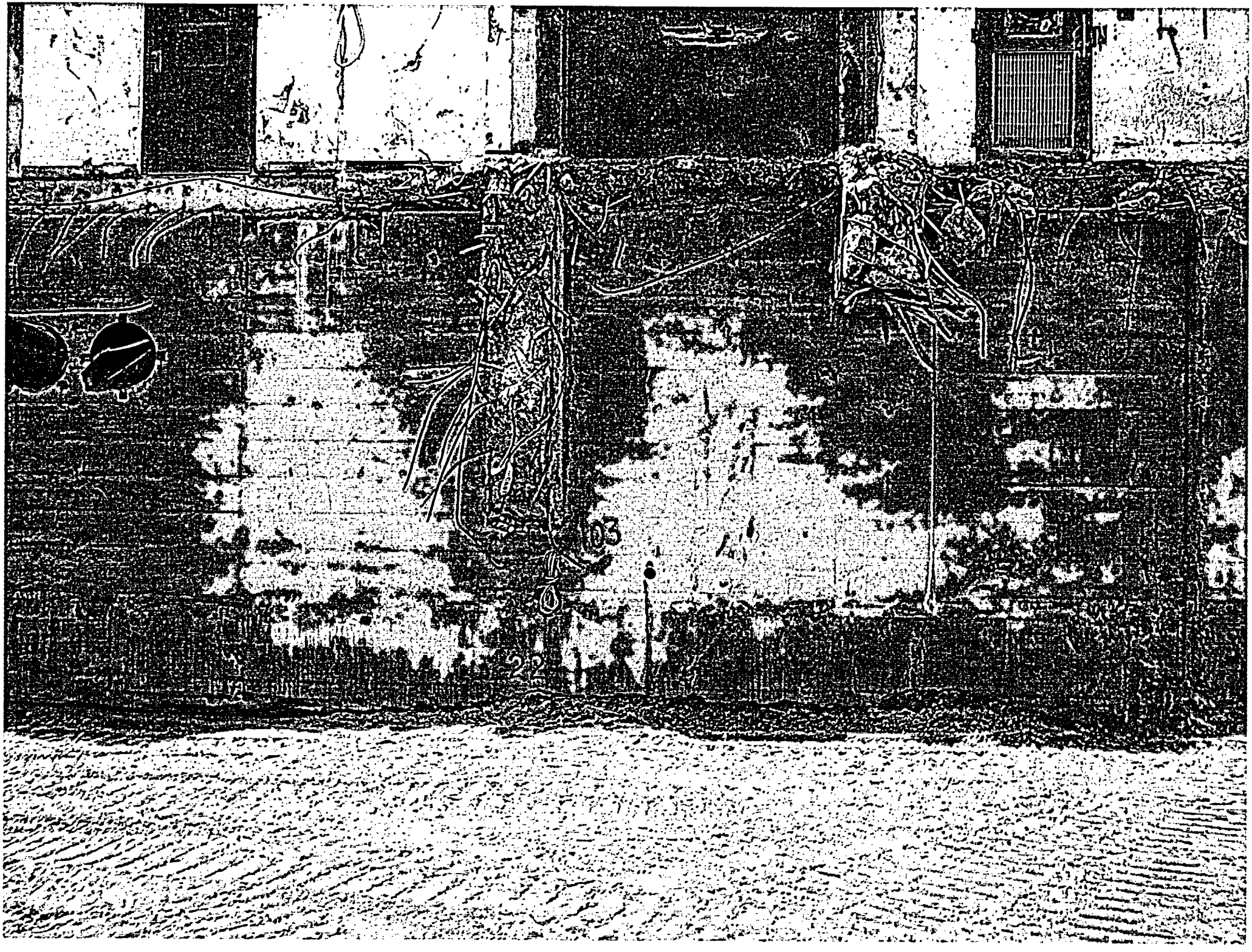
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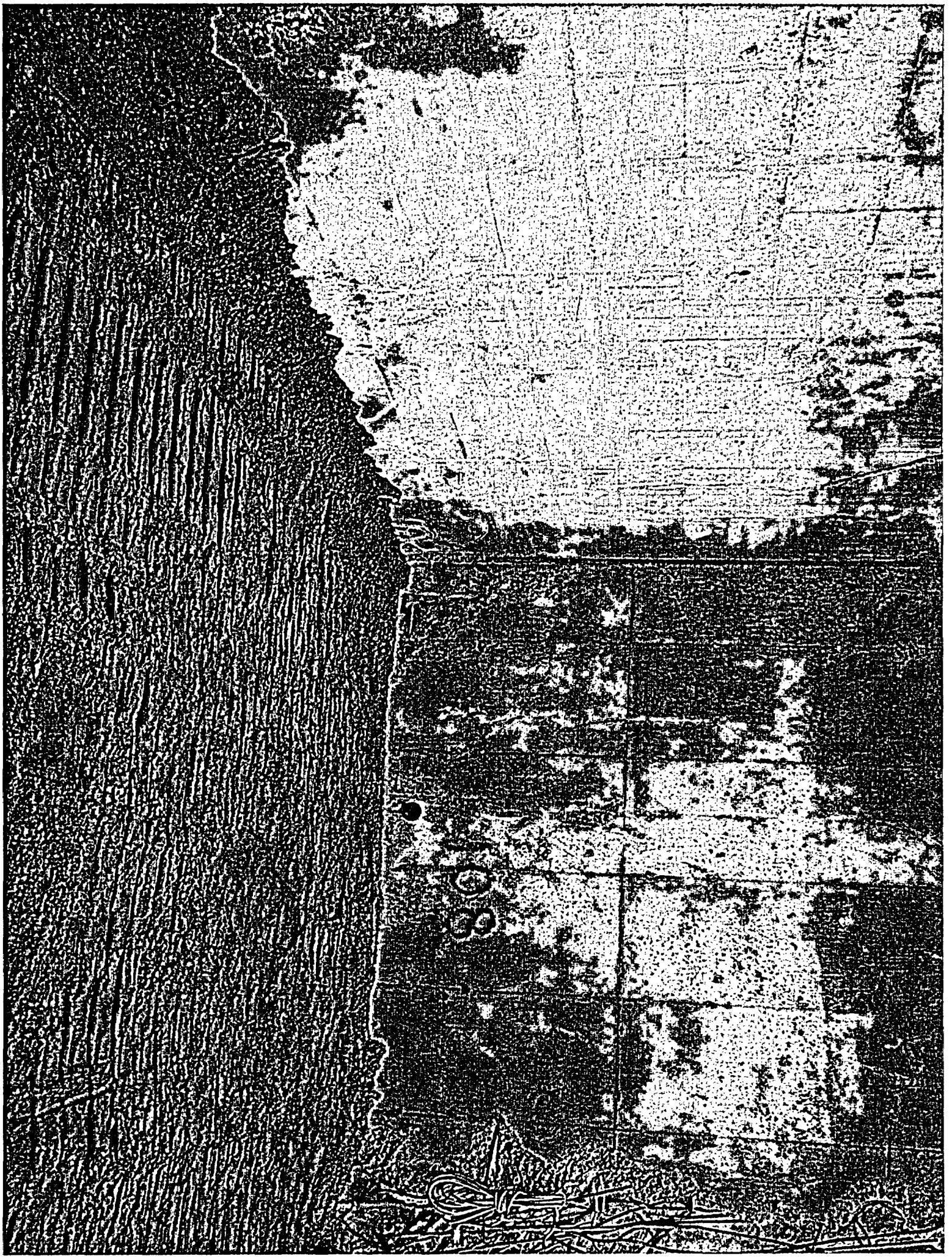

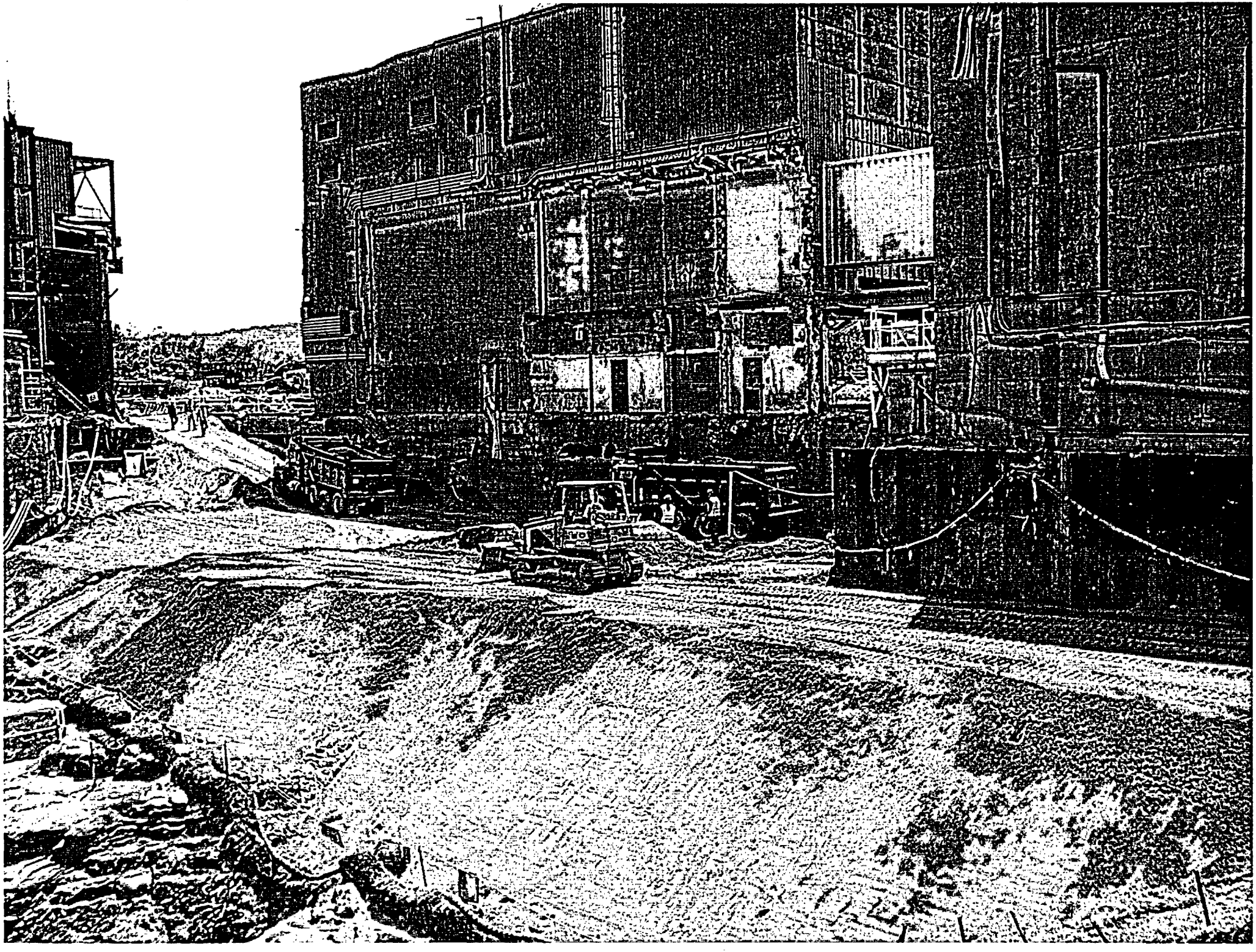

Attachment 5.4

Initial Target Operational DCGLs for CY

(7 pages including cover)

CONNECTICUT YANKEE ATOMIC POWER COMPANY
HADDAM NECK PLANT
362 INJUN HOLLOW ROAD • EAST HAMPTON, CT 06424-3099

November 23, 2004
ISC 04-049

TO: File

FROM: R. McGrath

SUBJECT: Initial Target Operational DCGLs for CY

The purpose of this memo is to establish Initial Target Operational Derived Concentrations Guideline Levels (DCGLs) for use in Final Status Survey (FSS) design at CY. Operational DCGLs are needed when a Final Status Survey is to be conducted in areas potentially affected by existing groundwater contamination or containing contaminated structures in addition to soil contamination. All Final Status Surveys conducted on site to date have been in areas with the potential of only soil contamination. As the near term FSS schedule includes areas potentially affected by existing groundwater and contaminated structures, target operational DCGLs are needed at this time.

Background

Equation 5-1 of the CY LTP presents the framework for setting operational DCGLs. Equation 5-1 is as follows ("Dose" substituted for "H" in this equation as discussed in the text of LTP section 5.4.7.1):

$$\text{Dose}_{\text{Total}} = \text{Dose}_{\text{Soil}} + \text{Dose}_{\text{Existing Groundwater}} + \text{Dose}_{\text{Future Groundwater}}$$

Definitions of the terms of equation 5-1 are as follows:

$\text{Dose}_{\text{Total}}$: The combined TEDE dose to the average member of the critical group due to residual radioactivity above background from all dose pathways.

$\text{Dose}_{\text{Soil}}$: The portion of the dose from all pathways that is contributed by the soil related pathways.

$\text{Dose}_{\text{Existing Groundwater}}$: The portion of the dose from all pathways that is due to residual radioactivity currently in groundwater on site that is still present within the capture zone of a survey area at the time of release of the survey area from the CY NRC license. In the case of the CT DEP criteria discussed below, this criteria applies at the time of property transfer.

Dose Future Groundwater: The portion of the dose from all pathways due to residual radioactivity that is projected to be present in groundwater due to the leaching of residual radioactivity from concrete debris from CY buildings that are buried on site at the time of removal of a survey area from the license. Although the LTP is silent on the topic of buried concrete basements and foundations this criteria is being taken to apply to this type of buried concrete in addition to "debris".

Per the NRC regulation and the CY LTP, "Dose Total" can be no more than 25 mrem/yr TEDE from all pathways. This requirement applies at the time of removal of a survey area from the CY part 50 license. Additionally, the Connecticut DEP in a letter dated November 20, 2002 adopted a radiological remediation standard of 19 mrem/yr TEDE to the average member of the critical group. Whereas, the CT DEP standards are applicable under the Connecticut Property Transfer Act, they apply at the time of property transfer. Both the NRC and CT DEP standards require an ALARA evaluation to determine if additional remediation is justified. It should be noted that CY has proposed to the CT DEP that the Maximum Contaminated Levels (MCLs) defined by the US Environmental Protection Agency for groundwater contamination will be achieved at CY at the time of property transfer.

There is an additional operational DCGL that needs to be set for use in the FSS of buildings that will remain after license termination. This is the Building Occupancy DCGL. This DCGL is independent of soil, existing groundwater and future groundwater.

Effect of Changes to Demolition Approach

CY has changed its planned approach to decommissioning from that described in CY LTP Revision 1a. We no longer plan on using concrete debris from the demolition of buildings to backfill the basements of those buildings. All concrete above 4 ft below grade will be removed from site and dispositioned at an appropriate disposal site. Many internal concrete structures such as those inside the containment liner will also be disposed of of-site. In lieu of concrete debris, clean backfill material from off-site locations will be utilized for backfill of basements.

To define further the earlier compliance equation, the different dose components that make up the total dose from the applicable pathways are stated as follows in the CY LTP.

$$1 \geq f^{l}_{Soil} + f^{l}_{ExistingGW} + f^{l}_{w} f^{l}_{ConcreteDebris}$$

Where each of the terms (or product) represents a fraction of the 25mrem/yr maximum dose. The term f_w represents the fraction of the total dose determined to apply to "concrete debris" that is from water dependent pathways as described in the CY LTP. The last term of the above equation is also called "future groundwater".

Whereas concrete debris will no longer be used for building backfill, a proposed license amendment to the CY LTP has been prepared to reflect the current decommissioning approach. The last factor of above equation is being replaced with a dose component that corresponds to the dose from water dependent pathways that are the result of the

leaching of radionuclides from basement concrete, footings, liner surfaces and any piping that contacts groundwater after the completion of remediation and the backfilling of basements. Based on characterization data and expected modeling results the estimated dose for the last factor in the above equation has been calculated. For the expected worst case area (containment basement) the estimated dose is approximately 1 mrem/yr. Characterization results also indicate that if the difficult remediation of the concrete surrounding the In Core Sump is performed, a 2 mrem/yr future groundwater dose is achievable without the changes contained in the proposed LTP amendment. Although no data has been obtained for the spent fuel pit, options are available to achieve a 2 mrem future groundwater dose for that building. It is therefore proposed that the initial value for the trigger for the "future groundwater" dose term of the compliance equation be set at 2 mrem/yr until additional characterization data is available and the status of NRC approval of the proposed license amendment is clarified at which point this target value possibly could be reduced slightly.

Additional Considerations

Soil: CY has been utilizing an administrative value 10 mrem/yr for the conduct of all final status surveys to date. As mentioned before, none of the FSS survey areas to date have been impacted by existing groundwater or contaminated concrete. It is desirable to maintain this administrative value for the sum of the soil and future groundwater dose components of the compliance equation (i.e. Dose for Existing Groundwater not included). With this in mind the Target Operational DCGL for soil is set at 8 mrem/yr when the future groundwater target value is subtracted from the administrative dose value (i.e. 10 minus 2).

Note that remediation to lower levels may be required in areas that exhibit measurable concentrations of certain relatively mobile radionuclides. This is due to the commitment to CT DEP to achieve the EPA MCLs as discussed above. Sr-90 is the primary radionuclide to which this will apply. Sr-90 is relatively mobile and has a relatively low MCL. After characterization has been performed and remediation or final status survey planning is in progress, the Site Closure Technical Support Manager (SCTSM) and/or the Groundwater Program Lead (GPL) should be consulted to review the characterization data. The consultation will determine the need for lower remediation target levels in order to facilitate the achievement of the MCLs in the future.

Existing Groundwater: Another consideration is the criteria for dose from "existing groundwater" contamination. The value to be used in the compliance equation will depend on the groundwater monitoring sample results at the time that release is being requested. In the case of the NRC license, that time is the submittal of the request to remove the affected area from the NRC license. Concerning the State of Connecticut this time is when CY requests approval to transfer the property.

There is no need to set a target value for groundwater for NRC compliance as this value could be impacted downward by a revision of soil and future groundwater target values. It is also possible that the request to NRC for release of an area from the NRC license will need to wait for groundwater monitoring sample results to show compliance with the NRC release criteria.

CY has proposed a standard of the EPA Maximum Contaminant Levels (MCLs) for compliance with the State of Connecticut Remedial Standard Regulations. Compliance with the EPA MCLs would result in a "Existing Groundwater" dose component factor slightly less then 1 mrem/yr TEDE. Compliance with the MCL would be required at the time of property transfer which occurs after termination of the NRC license for a particular area of the site. Although this is the final target for "existing groundwater" dose component, it need not be required as a near term target except for determining the maximum target for the other dose components. That is to say, CY also needs to comply with the State of Connecticut Radiological Remediation Standard of 19 mrem/yr TEDE from all pathways. Therefore, the sum of the soil and future groundwater components can be no more then 18 mrem/yr at the time of property transfer, allowing for an existing groundwater dose of 1 mrem/yr. Considering the above discussion, the establishment of a groundwater target is not required.

Implementation Considerations

Among the challenges involved in the use or the proposed operational DCGLs are those associated with the implementation of the target soil DCGL in areas potentially impacted by "future groundwater". The attached graph illustrates the effect of area background radiation levels on the number of soil samples that are required in Class 1 areas. The number of samples required when background is at or below approximately 10,000 cpm corresponds to the normal level of approximately 20 samples. It can also be seen that when background levels exceed 20,000 cpm, the number of samples required increases dramatically even at our administrative dose level of 10 mrem/yr for some background levels. Recently conducted background surveys of the CY industrial area have shown the background levels currently exceed 10,000 cpm even in areas well away from areas containing source material. Although these levels will decrease as decommissioning continues, it is likely that remedial action surveys and final status surveys will need to be conducted in areas where background exceed 10,000 cpm. In order to achieve the target operational soil DCGLs of 8 mrem/yr in these areas, the use of alternative methods such as In-situ Gamma Spectroscopy (Trade name "ISOCS") may be justified to offset the expense of a greater number of soil samples. Experience at Maine Yankee has shown that the use of ISOCS in lieu of scanning in high background areas has kept the number of soil samples required in Class 1 areas to a reasonable value.

Initial Operational DCGL Target Values

The following summarizes the various initial target values:

Dose $_{Soil}$ (Areas with no potential for future groundwater dose): 10 mrem/yr (Subject to SCTSM and/or GPL review of characterization data)

Basis: To continue current 10 millirem/yr administrative limit when "existing" groundwater dose is not included.

Dose $_{Soil}$ (Areas potentially impacted by "future" groundwater): 8 mrem/yr (Subject to SCTSM and/or GPL review of characterization data)

Basis: To continue current 10 millirem/yr administrative limit when "existing" groundwater dose is not included and the future groundwater target has been subtracted.

Dose $_{Existing\ Groundwater}$: Not required until time of Release from NRC license or Property Transfer

Basis: The allowable dose for "existing" groundwater will be determined by the actual dose values for the other components of the compliance equation.

Dose $_{Future\ Groundwater}$: 2 mrem/yr

Basis: Conservatively set at this value to cover potential dose from contamination leaching from concrete and released from metal surfaces that will be in contact with groundwater after site closure

Dose $_{Soil\ plus\ Future\ Groundwater}$: 18 mrem/yr (Note: Exceeding individual target values is allowed only after Site Closure Manager Approval as described below)

Basis: Assures achievement of State of Connecticut release limit of 19 mrem/yr when groundwater dose due to MCL concentrations are included.

Operational Building Occupancy DCGL: 10 mrem/yr

Basis: As this criteria is independent of the soil, existing and future groundwater criteria, it can be set at the administrative site release dose limit.

Approval Process for Exceeding Individual Operational DCGL Target Values

The Target Operational DCGLs for soil and future groundwater can be used at this time without further approvals. There is some flexibility in the target values that can be set for individual DCGLs while maintaining compliance with the applicable regulations and requirements. This flexibility is due to the differences in the applicable criterion and in the point in time that the criterion is invoked.

Considering the above, changes can be made to the Operational DCGL Target Values with the approval of the Site Closure Manager. This approval will be based on a cost analysis sufficient to justifying the higher DCGL target. Situations may emerge where significant costs could be saved on certain activities by using a higher administrative operational DCGL for soil plus future groundwater than 10 mrem/yr. Use of higher values should be evaluated on a case-by-case basis, considering project economics. The target level may be increased based on economic evaluations that consider the savings from reduced labor, waste disposal, and final status survey costs.

Please contact me with any questions on this memo.

Cc: T. Peacock
C. Miller
R.Yetter
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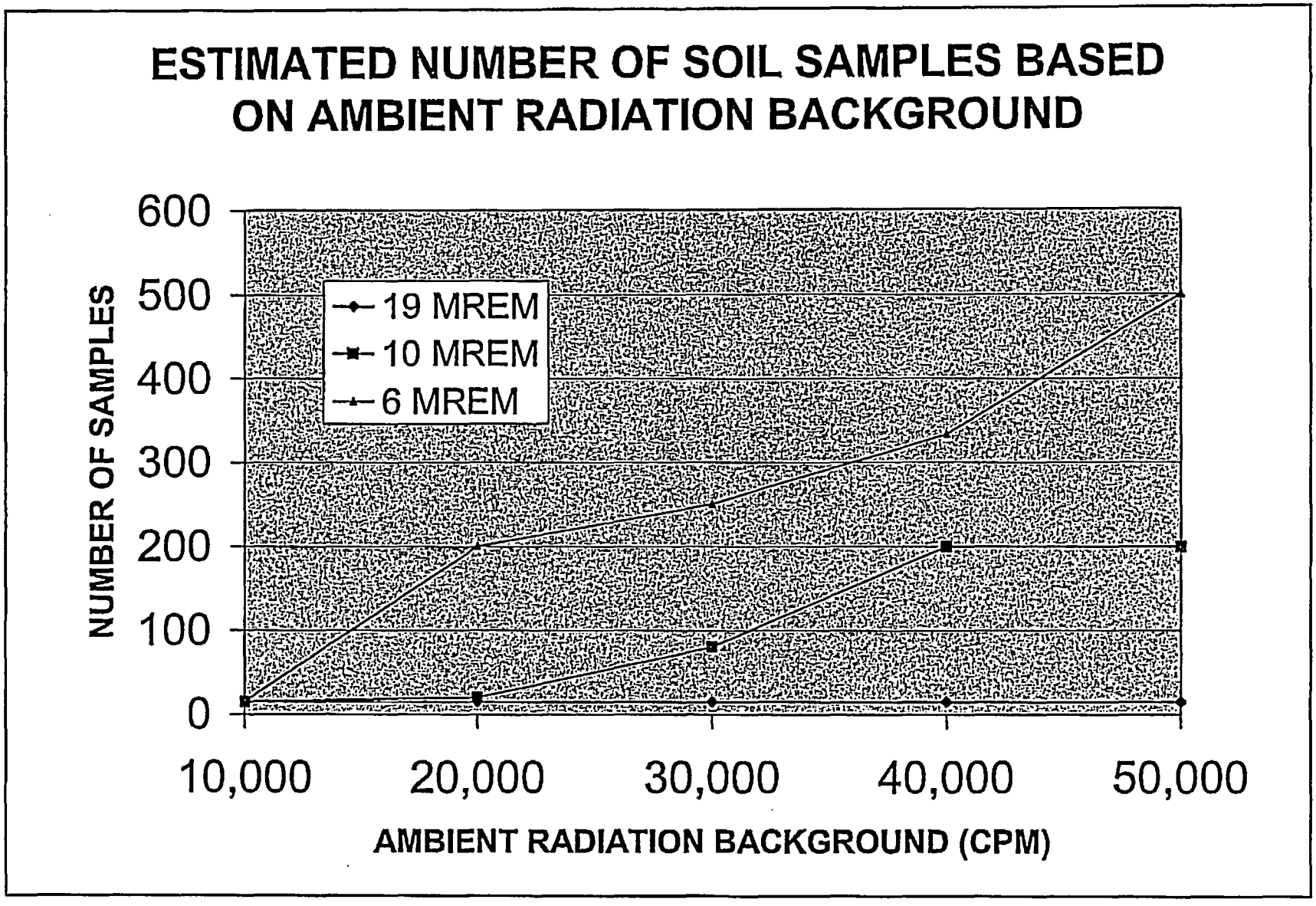
ESTIMATED NUMBER OF SOIL SAMPLES BASED ON AMBIENT RADIATION BACKGROUND
NUMBER OF SAMPLES
600
500
400
300
200
100
0
19 MREM
10 MREM
6 MREM
10,000
20,000
30,000
40,000
50,000
AMBIENT RADIATION BACKGROUND (CPM)

Attachment 5.5

Technical Basis for Performing Radiological Assessments of Bedrock, Soil and Subsurface Concrete Using an Inventory-Based Approach

(8 pages including cover)

CY HEALTH PHYSICS
TECHNICAL SUPPORT DOCUMENT

Connecticut Yankee Decommissioning

Health Physics Department Technical Support Document

HP Number: CY-HP-0190 Revision #: 1

Subject: Technical Basis for Performing Radiological Assessments of Bedrock, Soil and Subsurface Concrete Using an Inventory-Based Approach

Date: 2/15/05

Performed By: Richard N. McGrath Date: 2/15/2005

Reviewed By: Jack McCarthy Date: 2/15/05

Approved By: Terrance R. Rebrock Date: 2/15/05

Technical Basis for Performing Radiological Assessments of Bedrock, Soil and Subsurface Concrete Prior to Performing Backfill

1.0 Introduction

The CY LTP requires that excavations resulting in exposed bedrock be radiologically assessed prior to backfill. The objective of this radiological assessment is to determine the potential impact of any residual radioactivity contained in or on bedrock or subsurface concrete surfaces to potential future groundwater contamination. An additional case is included to allow an assessment of excavations that include areas of soil in addition to bedrock. This document provides the basis and general methodology for performing these assessments.

2.0 Analysis and Discussion

2.1 General Model

The soil excavations performed to support the decommissioning will result in exposed bedrock areas. These areas may be in areas that have been designated as Radiological Control Areas (RCAs) and adjacent areas to the PAB, Containment, Tank Farm, and Spent Fuel Building. The CY LTP requires that these exposed bedrock areas be assessed to determine the magnitude of contamination and its potential impact on possible future groundwater contamination.

It should be noted that the general model describes the case where the excavation is bounded by only bedrock and/or concrete. There is an additional case where the surfaces of the excavation include bedrock and/or concrete and additionally a relatively shallow layer of soil covering the bedrock that has been shown to meet the CY LTP Derived Concentration Guideline Levels (DCGLs). The model for this additional case is described in Section 2.3.

Reference 4.1 represents a request from CY to the NRC to amend the LTP to use an inventory based approach to calculate the future groundwater dose component for buried subsurface structures. This approach employs the following expression to calculate the future groundwater concentration, $C_{w,i}$, from nuclide i:

$$C_{w,i} = \frac{B_i \sum_{s=1}^{N} CFR_{s,i} A_{s,i}}{R_i V} \quad \text{(eq 1)}$$

Where:

- $CFR_{s,i}$ is the cumulative fractional release for each subsurface structure, s, and each radionuclide, i,

- $A_{s,i}$ is the total activity of radionuclide i contained in the subsurface structure s,
- B_i is the radionuclide specific buildup factor (this accounts for an increase in groundwater concentrations for radionuclides that diffuse relatively slowly compared to tritium) in years following the first,
- V is the dilution water volume, and
- R_i is the radionuclide specific retardation factor (this accounts for the adsorption of radionuclides on the backfill material in the basement, calculated from the backfill soil distribution coefficients (K_d) determined in the Brookhaven National laboratory study of K_d values for CY backfill soil (Ref 4.2 except for H-3 and Eu-152 which are from the CY LTP and taken to apply to both soil B and soil A/B)), the soil density (ρ, from the CY LTP), and the soil porosity (η also from the CY LTP) as:

$$R = 1 + \frac{\rho K_d}{n} \quad \text{(eq 2)}$$

From the CY LTP, the soil density and porosity have values of 1.56 and 0.35 respectively. The distribution coefficient values are dependent on the soil types used to backfill the excavations. Three types of soil have been evaluated for backfill in reference 4.2, soil A, soil B and soil A/B mix. This evaluation concludes that two possible backfill soils will be used: Type B, and Type A/B mix. The values of Kd for selected radionuclides are taken from reference 4.3 and are provided in Table 1.

In order to determine the dilution water volume, V, in equation 1, the physical volume of an area, V_a, must be corrected using the soil porosity η as:

$$V = \eta V_a \quad \text{(eq 3)}$$

Table 1 also provides values for the retardation factor, R, (from reference 4.3) for selected radionuclides.

Table 1: Parameter Values In Support of Excavation Assessments

Radionuclide	K_d (Soil B)	K_d (Soil A/B)	R (Soil B)	R (Soil A/B)
H-3	0.06	0.06	1.26	1.26
Fe-55	1200	1200	5350	5350
Co-60	220	22	982	99
Sr-90	10	44	46	197
Cs-137	149	45	665	202
Eu-152	825	825	3678	3678

2.2 Implementation of the General Model

In applying equation 1 to an area and volume of an excavation that contains exposed bedrock and/or concrete building foundations, the Cumulative Fractional Release (CFR) and Buildup factors (B) are set to 1.0. These conservative values assumes that 100% of the radioactivity will be liberated from all surfaces (bedrock and the subsurface concrete) and enter the groundwater volume in the first year following the backfill. A value of 1 for the buildup factor is appropriate for this assumption (CFR=1) since no activity would be available on the surface to increase groundwater concentrations in subsequent years.

The total activity available from the surfaces within the excavation, A_i, is calculated from the surface activity, S_i, and the area of the surface, a, as:

$$A_i(pCi) = \frac{S_i(dpm/100cm^2) \times a(cm^2)}{100 \times 2.22 dpm/pCi} \quad \text{(eq 4)}$$

Therefore, for CFR and B values of 1.0 and substituting equations 3 and 4 into equation 1, the future groundwater concentration from a single excavation area in pCi/L is expressed as:

$$C_{w,i} = 4.505\left(\frac{S_i}{R_i}\right)\frac{a}{V_a \eta} \quad \text{(eq 5)}$$

Where:

S_i is the surface contamination level of nuclide i, in dpm/100cm,
R is the retardation factor for nuclide i,
a/V_a is the surface area to volume ratio for the excavation in cm^{-1}, and
η is the soil porosity.

In cases where a/V_a is expressed in $ft^{-1}(ft^2/ft^3)$, equation 5 becomes:

$$C_{w,i} = 0.1478\left(\frac{S_i}{R_i}\right)\frac{a}{V_a \eta} \quad \text{(eq 6)}$$

2.2 Example Case

Consider an excavation where Sr-90 is the nuclide of concern, where the backfill will be a mix of A/B soil types and the area to volume ratio has a value of approximately 1/8 ft^{-1}. This example corresponds to the excavation that is currently being performed in the area of the west end of the former Primary Auxiliary Building. In this assessment it is assumed that the excavation is totally isolated from the flow of water. Actually there are areas on the sides of the excavation that consist of soil that meets the Operational DCGLs for soil. The

calculation that follows is conservative as these openings allow the passing of radiologically clean groundwater through the excavation. Credit is not taken for the dilution that would result from this groundwater flow. The radionuclide content of any soil that makes up the side walls of the excavation does not need to be accounted for in the assessment of the excavation as all the dose from this material is accounted for in the separate land area final status survey performed for this soil.

This excavation has a total surface area (for bedrock, and concrete side walls) of approximately 11,000 ft^2 (bedrock surface area is approximately 8,900 ft^2). The average depth of groundwater above bedrock (with no area dewatering in progress) in this area is 10 feet. This yields a total volume of saturated soil/backfill of 89,000 ft^3. In this case, R has a value of 197.11, the soil porosity η is 0.35, and the target groundwater concentration $C_{w,l}$ is ½ of the MCL for Sr-90, or 4.0 pCi/L. Substituting into Equation 6 is illustrated by the following:

$$4\text{pCi/L} = 0.1478\left(\frac{S_l}{197.11}\right)_{Sr\text{-}90}\frac{11{,}000\,ft^2}{89{,}000\,ft^3 \times 0.35}$$

Solving for S_l results in an average surface activity concentration of 15,106 dpm/100cm^2 for Sr-90.

This areal activity concentration is converted into a volumetric concentration by assuming that the density of the bedrock is 2.65 g/cm^3 and that 100% of the activity is contained within the first inch. Assuming the target contamination on a 100 cm^2 surface area is converted to an equivalent activity for a volume of 100 cm^2 area to a volume of 1 inch is performed as follows(this calculation results in the lowest target concentration as concrete, having a lower density, would result in a higher concentration):

- The volume corresponding to a 100 cm^2 surface area is:

  100 cm^2 X 2.54 cm(for the 1 inch depth) = 254 cm^3

- The mass corresponding to this volume of bedrock is:

  254 cm^3 X 2.65 g/cm^3 = 673.1 g

- The total activity corresponding to the target contamination level is:

  15,106 dpm/100cm^2 X 0.45 pCi/dpm = 6,798 pCi

- The concentration in the volume of bedrock at the target contamination level is:

  6,798 pCi/673.1g = 10.1 pCi/g

With these assumptions, the volumetric activity concentration from an areal activity concentration of 15,106 dpm/100cm^2 is 10.1, or 10 pCi/g.

2.3 Special Case – Soil Remaining in the Excavation

There may be situations where the excavation being evaluated has areas of exposed bedrock along with areas that contain soil above the bedrock that has been shown to have radionuclide concentrations that are below the Operational DCGLs for soil for the survey unit. It is expected that the total soil volume to remain above will be less then 10% of the total saturated volume of the excavation. In this case, the assessment of the excavation will be performed as follows:

2.3.1 Using soil characterization sample results, a depth and radionuclide concentration profile will be determined for the soil that is above the bedrock that is to remain inside the excavation (this area does not include any side walls of the excavation as discussed in the Section 2.2 example).

2.3.2 These profiles will be used to calculate the volume of contaminated soil above the bedrock and the total radionuclide inventory of that soil.

2.3.3 This radionuclide inventory in the soil will be assumed to be released to the groundwater in the excavation within the first year after backfilling and securing of excavation dewatering.

2.3.4 Equation (1) above will now be used to calculated the resulting groundwater concentration due to the soil as follows (B, Buildup Factor and CFR are assumed to be 1 as previously discussed for bedrock):

$$C_{w,i} = \frac{\sum_{s=1}^{N} A_{soil,i}}{R_i V} \quad \text{(eq 7)}$$

Where:

- $A_{soil,i}$ is the total activity of radionuclide i contained in the soil s,
- V is the dilution water volume, and
- R_i is the radionuclide specific retardation factor (shown in Table 1)

To continue the example in Section 2.2, it is assumed that 50% of the bedrock in the floor of the excavation (4,450 ft^2) is covered with 2 foot of soil (this volume is 10 % of the saturated volume of the excavation). The radionuclide concentration of the soil is assumed to be the CY LTP Soil DCGL concentration for Sr-90 (1.55 pCi/g). The components of Equation 7 are calculated as follows:

- The total activity, $A_{soil,Sr\text{-}90}$ is calculated as follows:

  4,450 ft^2 x 2 ft x 28317 cm^3/ft^3 x 1.56 g/ cm^3 x 1.55 pCi/g = 6.09 E8 pCi

- V, dilution volume is calculated by:

  89,000 ft^3 x 28.317 liters/ft^3 x 0.35 (porosity) = 8.82 E5 liters

- Substituting into Equation (7):

$$C_{sw} = \frac{6.09E8}{(197)(8.82E5)} = 3.5 pCi/L$$

This resulting groundwater concentration will be added to the other groundwater concentrations calculated for the other sources to the excavation (bedrock and/or concrete) to determine the total future groundwater concentration.

There is a difference in the Kd factors for the soil to be used for backfill (Kd = 44 for Sr-90) compared to the Kds used in the CY LTP table F-1(Kd = 32 for Sr-90) for the soil at the site. The use of the above method is limited to cases where the quantity of soil to remain in the excavation is no more then 10 % of the saturated soil volume to ensure that the effect of difference in soil Kds is within the error of the calculation. If larger quantities of original soil are to remain in the excavation, a more detailed equilibrium calculation will be performed.

3.0 Conclusions:

The methodology for determining a basis for performing radiological assessments of excavations bounded by various combinations of bedrock, concrete and/or contaminated soil using an inventory-based approach has been provided. This method provides for determining a conservative estimate of potential future groundwater concentration from bedrock and/or subsurface concrete surface activity, with any soil that may remain in the excavation above the bedrock. Also provided is the general approach for determining the volumetric concentration from the area concentration.

4.0 References

4.1 Letter from CY to NRC re: LTP Amendment Dated December 1, 2004, CY Letter CY-04-131

4.2 Technical Support Document CY- HP - 0185, Rev. 0, Kd Values of Backfill Material for Connecticut Yankee; Mark Fuhrmann Environmental Sciences Dept. Brookhaven National Laboratory, November 9, 2004

4.3 Technical Support Document CY - HP - 0184, Rev. 0, Estimates for Release of Radionuclides from Potentially Contaminated Concrete At the Haddam Neck Nuclear Plant; Terry Sullivan, Brookhaven National Laboratory Environmental Waste Technology Center, October 2004.

Attachment 5.6

Health Physics Technical Support Document CY-HP-0185, "Kd Values of Backfill Material for Connecticut Yankee".

(14 pages including cover)

CONNECTICUT YANKEE ATOMIC POWER COMPANY

Connecticut Yankee Decommissioning

Health Physics Department Technical Support Document

HP Number: CY-HP-0185 Revision #: 0

Subject: K_d Values of Backfill Material for Connecticut Yankee

Date: 11/17/04

Performed By: Clyde T. Newson Clyde T. Newson Date: 11/17/04

Reviewed By: R.N. McGrath R.N. McGrath Date: 11/17/04

Approved By: Terance R. Peacock Date: 11/17/04

1.0 INTRODUCTION

The purpose of this Technical Support Document (TSD) is to incorporate a technical document into the Health Physics Department administration and control program.

The attached document calculates the K_d values for different soils to be used as backfill material at the Haddam Neck Plant Site.

The attached study will be used to provide technical support for a License Termination Plan (LTP) amendment submittal to the Nuclear Regulatory Commission (NRC).

2.0 DISCUSSION

Connecticut Yankee has contracted the Department of Energy, Brookhaven National Laboratory, Environmental Sciences Department, to perform the attached study to provide K_d values for different soils to be used as backfill material at the Haddam Neck Plant Site in preparation for releasing the grounds and structures from the NRC license.

The document, Attachment 1, **K_d Values of Backfill Material for Connecticut Yankee**, is being incorporated into the Health Physics Department administration and control program through reference 1.

The document has been reviewed and accepted for accuracy.

3.0 CONCLUSION

Attachment 1 provides the technical information needed to support the CYAPCO LTP amendment request.

The document has been reviewed for accuracy and is accepted to become Attachment 1 of this Technical Support Document.

4.0 REFERENCES

4.1 RPM 1.1-3, Health Physics Department Self Assessments and Technical Support Documents, 24265-000-GPP-GGGR-R1100-002-Rev. CY-000

5.0 ATTACHMENTS

5.1 K_d Values of Backfill Material for Connecticut Yankee, CY-HP-0185, Rev. 0.

ATTACHMENT 1

K_d Values of Backfill Material for Connecticut Yankee

K_d Values of Backfill Material for Connecticut Yankee

Final Report

November 9, 2004
Revision 0

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K_d Values of Backfill Material for Connecticut Yankee

Methods

Two soil samples were received from Connecticut Yankee for use in K_d experiments. These are prospective backfill materials that are gravelly sands, labeled Butler 081204-A1, and Butler 081304-B1. They are referred to below as Soil A and Soil B. About 0.5 kg of each damp soil was oven dried at 60°C. They were sieved through a number 12 (1.7 mm) mesh, and each fraction was weighed. The fines were used for the K_d experiments. The calculated K_d was adjusted by multiplying by the fraction of fines in the material. This adjustment assumes a K_d of zero for the coarse fraction.

Groundwater from the site was filtered through a 0.7 micrometer filter. Aliquots of 55 g of water were weighed into sample cups, radioactive tracer (after dilution and pH adjustment) was added to each cup (typically 0.5 mL). An aliquot of each was withdrawn into a plastic syringe, filtered through a 0.2 micron Surfactant Free Cellulose Acetate (SFCA) syringe filter. For gamma emitters, 5 mL were pipetted into plastic sample vials for radionuclide analysis on a HPGe gamma-ray detector connected to a Canberra spectroscopy system. For Fe-55, with no gamma ray, 1 mL of the filtered sample was pipetted into 18 mL of Ultima-Gold liquid scintillation cocktail. These were the References used to determine the original concentration of each solution. Two grams of the dried and sieved soil were then added to each experiment. The "Mix" samples were 1g of each soil, combined. All initial K_d experiments were conducted in triplicate.

After reacting, pH was measured and samples were withdrawn and filtered in the same way as the references. Gamma-emitters were counted on an HPGe gamma-ray detector, always in the same geometry. Count times varied from 1000 to 30000 seconds. For Fe-55 Liquid Scintillation Counting was done on a Wallac Model 1414 instrument. For short half-life isotopes, the sample and the reference were counted sequentially. The difference in count rates between the reference and the sample was determined for each specimen. From this the K_d (concentration on solid / concentration in liquid) (in mL/g) was calculated based on the quantity of activity removed from the solution. This value was

corrected for gravel content by multiplying by the decimal fraction of fines present in the material.

In order to better define the K_d at specific pH values, several sets of experiments were run in which the pH of the K_d experiments were manipulated with either NaOH (1M or 0.1 M) or HCl (0.15M). After addition of the reagent, the samples were allowed to sit overnight for the pH to reach steady-state, and were then sampled as described above.

Results

Gravel and fine fractions were separated at 1.7 mm. Results are shown in table 1, along with the pH of the groundwater – soil mixture. The size fractions may differ somewhat from the actual content of bulk material since they were taken from about 0.5 kg samples.

Table 1. Gravel, Fines and pH

	% fines	% gravel	pH
Soil A	61.9	38.1	3.6
Soil B	80.9	19.1	5.5
Mix	71.4	28.6	4.5

The best value of K_d for each element tested is given in Table 2. It became apparent from initial experiments that Soil B generally has the most sorption ability. Soil A has exceptionally low values which appear to be related to its' very acidic nature. K_d of these materials varies with pH, as one would expect. Consequently, subsequent experiments focused on refining the K_d value for Soil B at the pH of the ground water in contact with that soil. For Soil B the best K_d values are based on pH of 5.5 ± 0.3, while those of the Mix are for pH of 4.5 ± 0.3. pH of Soil A in the different sorption experiments varied from 3.9 to 2.6 but because the natural pH of this material is so acidic, and the K_ds are so low, few refinements of these values were conducted. The exceptions are for Co and Sr as discussed below. In Table 2, when experimental pH values were sufficiently close to the desired value (see Table 1) the average K_d and one standard deviation distribution are

given. If the best value was obtained from interpolation of pH adjusted experimental data, then just the value is reported.

Table 2. K_d values averages of triplicate experiments (± one standard deviation) adjusted for gravel content

	Co-57	Cs-137	Am-241	Fe-55	Sr-85
Soil A	2 ± 0.08	23 ± 0.7	18 ± 0.2	160 ± 3.8	15 ± 0.7
Soil B	220 ± 31	149 ± 9	1550	1200	10
Mix	22	45 ± 4.4	200	1200	44

Cobalt. Figure 1 is a plot of Co K_d as a function of pH for all soil types. At pH values below 5 (Soil A) there was little removal of Co from solution, but above pH 5 (Soil B) Co was effectively removed from solution. This can be attributed either to adsorption or precipitation, perhaps with an iron mineral. The mixture does fall between the two, but not half-way between. This is because sorption is a non-linear function of pH, which is typically a major factor controlling sorption. An experiment was conducted on Co samples of Soil A in which NaOH was added to the soil – water mixture to adjust the pH. This material is strongly buffering, but as the pH was increased, so too was the K_d for Co. The adjusted K_d follows the curve for the unadjusted samples of the Mix and Soil B, indicating that the materials are similar and that pH is a major control on quantity of Co in solution. Figure 2 shows the Co K_d values for each of the triplicate samples, unadjusted for pH. The best value for Co sorbed on Soil B is at least 220 mL/g.

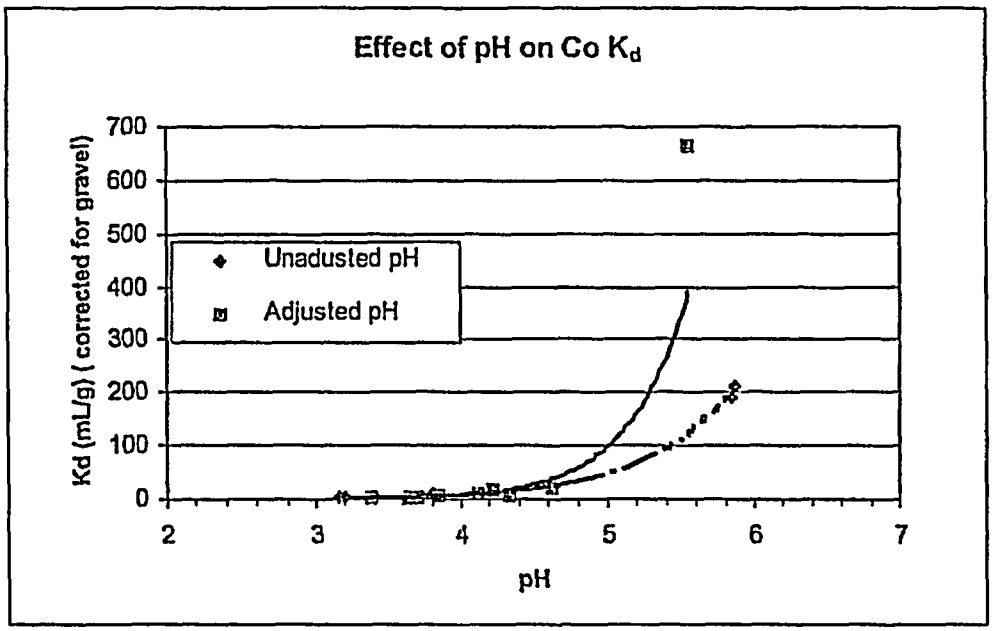

Figure 1. Effect of pH on Co sorption on backfill materials.

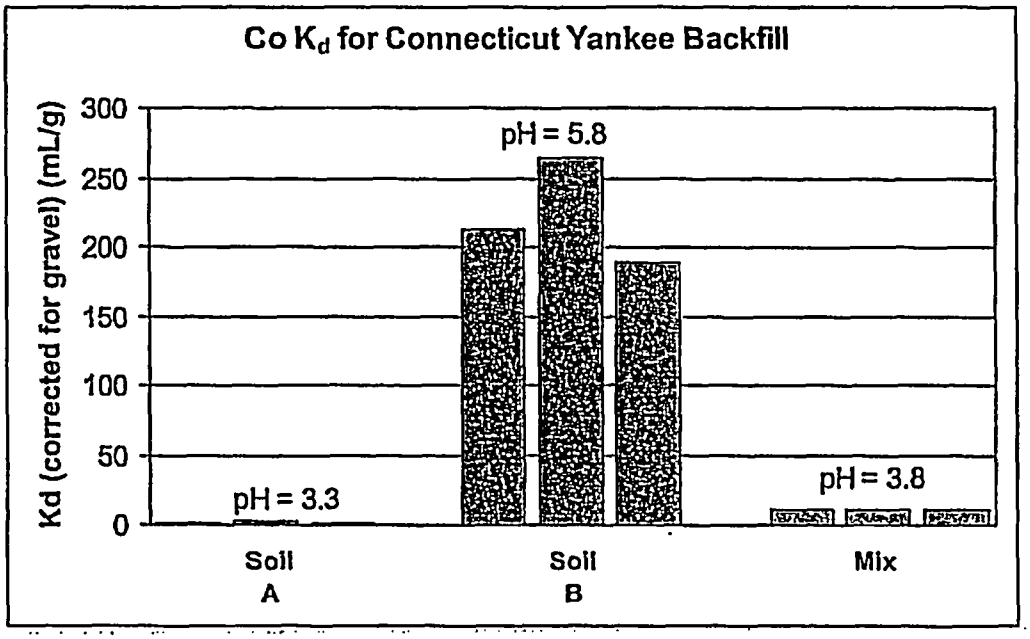

Figure 2. K_d values of Co on backfill materials, unadjusted for pH.

Cesium. Values of K_d for Cs-137 on the backfill materials are shown in Figure 3. The best value for Cs sorbed onto Soil B is 150 mL/g.

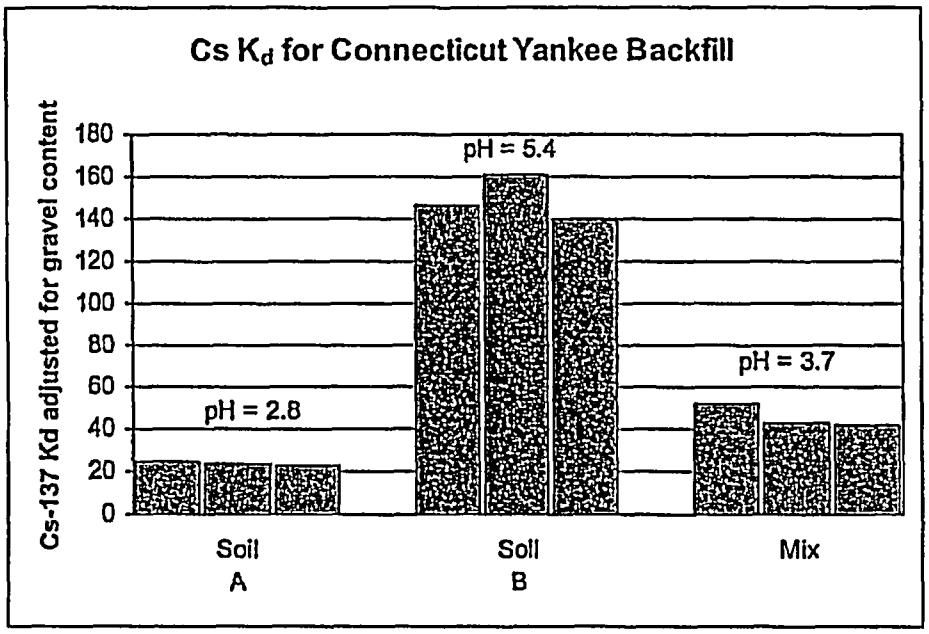

Figure 3. K_d of Cs on backfill materials.

Iron. The sorption (or precipitation) of Fe on the backfill materials is shown, in Figure 4, as a function of pH. Above pH 4.5, Fe-55 is completely removed from solution. The K_d values around 1200 represent a detection limit. This group of samples contains both Soil B and the Mix, so the best value K_d for Fe-55 in both materials is at least 1200 ml/g.

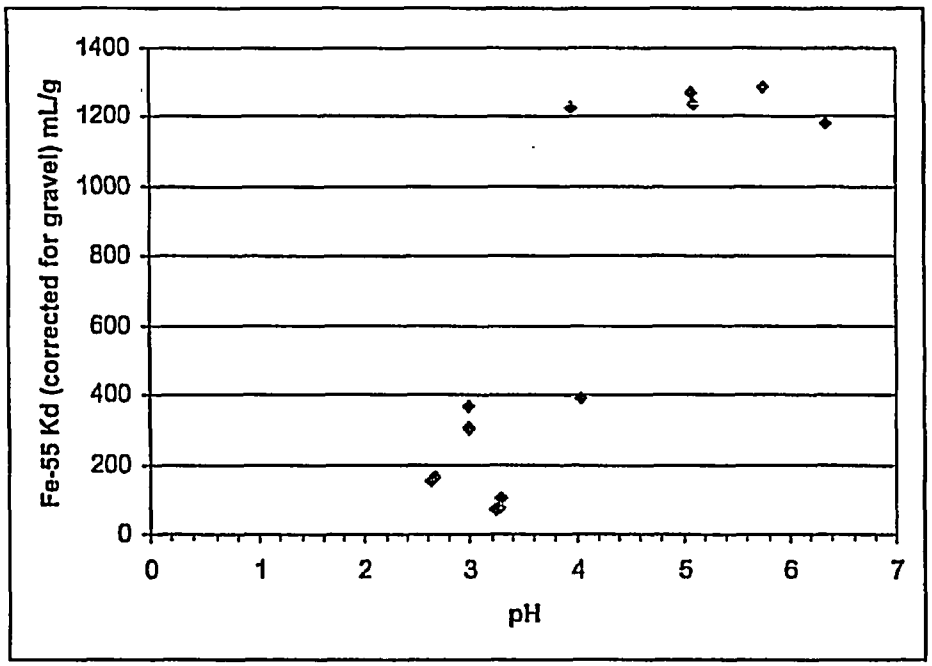

Figure 4. Fe-55 K_d values are strongly controlled by pH. Around pH 4.5 and above Fe-55 is completely removed from solution.

Americium. K_d values for Am-241 are given in Figure 5. Soil B had the highest, averaging 335 mL/g. With a minor addition of NaOH (after the original neutralization of the tracer) the pH changed very little, from 5.3 to 5.5, however the K_d increased to 1550 mL/g. The best value for Am on Soil B is 1550 mL/g. However, for the Mix soil, with its' lower pH, the best value is about 200 mL/g at pH = 4.5. This is interpolated from Figure 5. Figure 6 shows the values for Am in the samples with unadjusted pH.

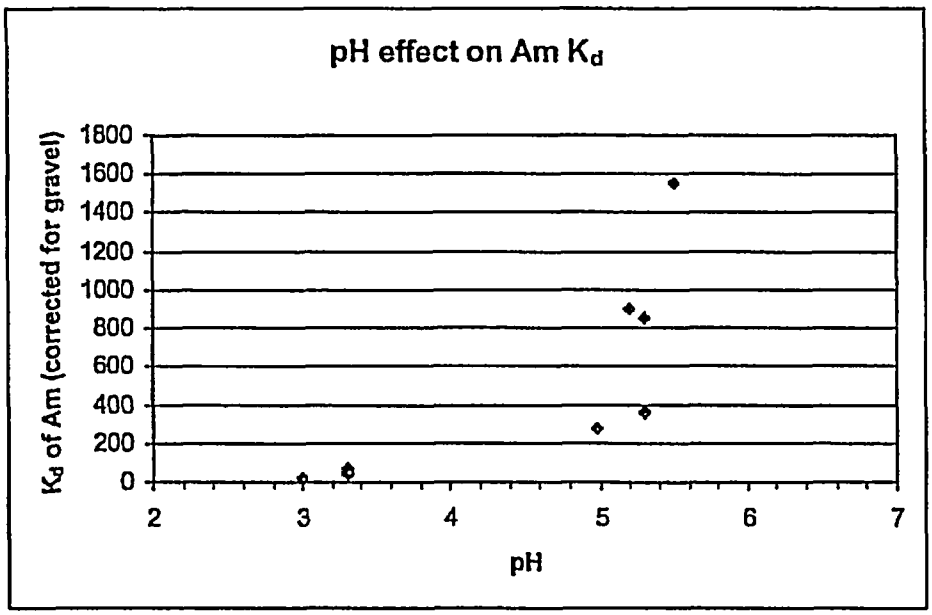

Figure 5. Effect of pH on Am K_d.

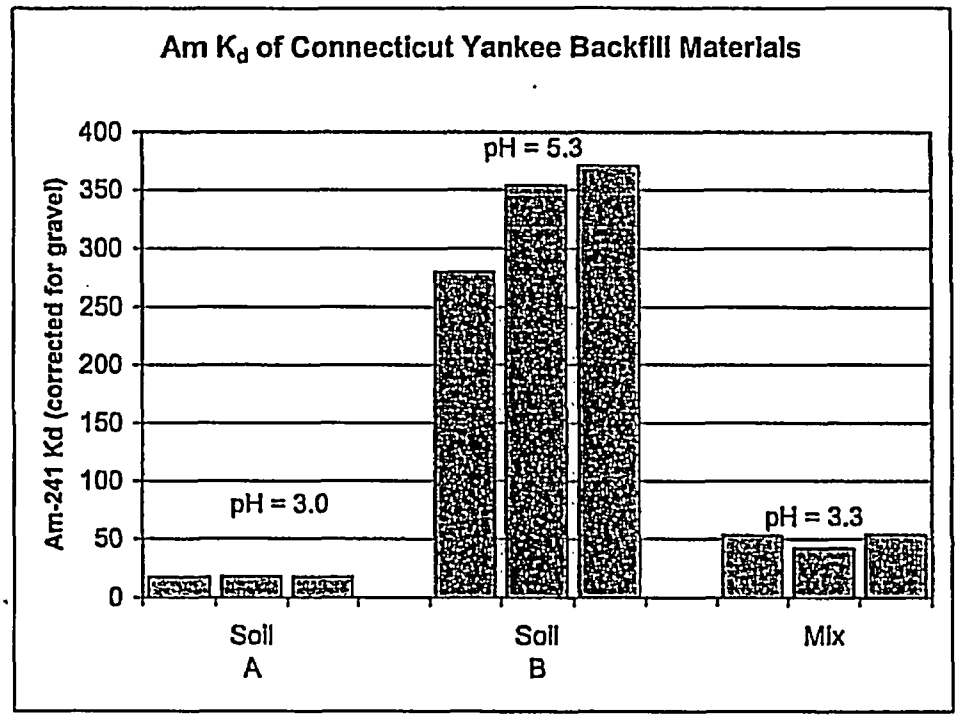

Figure 6. K_d values for Am on backfill soils, unadjusted pH.

Strontium. K_d values for Sr-85 are shown in Figure 7 as measured in samples with uncorrected pH. These pH values are slightly higher than desired because the tracer, as received from the supplier was alkaline instead of being in 0.5 M HCl. Of interest here is that the Mix soil has a higher K_d than does either of its components. This anomalous behavior could only occur if the K_d of Soil A increased dramatically with increasing pH. Because of the relatively low K_d value for Sr, and the low drinking water limits for Sr-90, it was decided to assess this behavior in detail in order to provide the best K_d value for Sr. Consequently, a series of pH adjustments were made to track the evolution of K_d with pH.

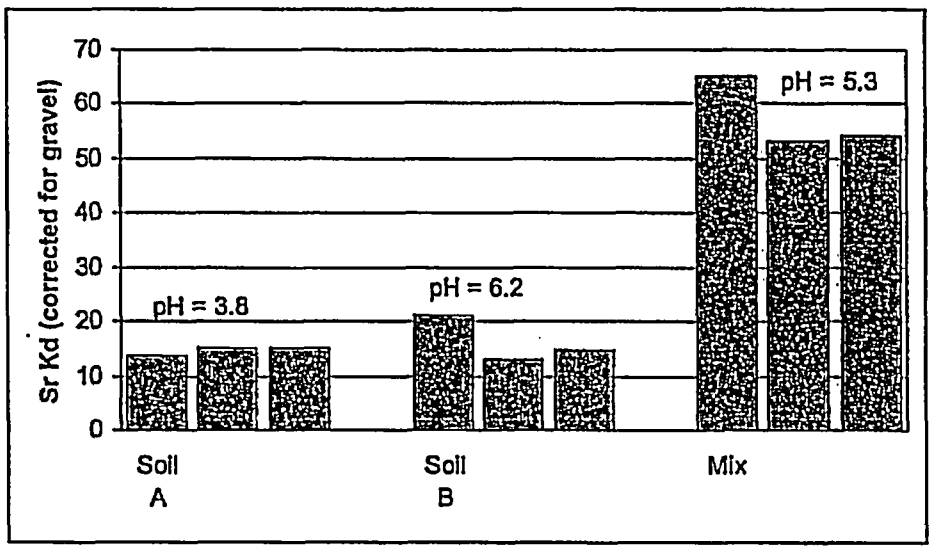

Figure 7. K_d values for Sr on Connecticut Yankee backfill material, uncorrected for pH.

The uptake of each soil was determined over a range of pH, as shown in Figure 8. Soil B is relatively unresponsive to pH, with respect to Sr sorption. It ranges from a low with K_d = 5.4 at pH = 4.5 to a high at pH = 6.1 of 21. The best value, at pH = 5.5, is 10 mL/g. Soil A, while not applicable as backfill, because of its' low sorption coefficients for other elements, was included in these experiments to assess the behavior of the Mix soil. The K_d of Soil A increased significantly as pH was increased, from a low of 13.8 at pH = 3.7 to a high of 55 at pH = 5.4. The Mix soil has relatively high K_ds for Sr, with little

change over the short range of pH tested. The best value for the Mix at pH = 4.5 is 44 mL/g.

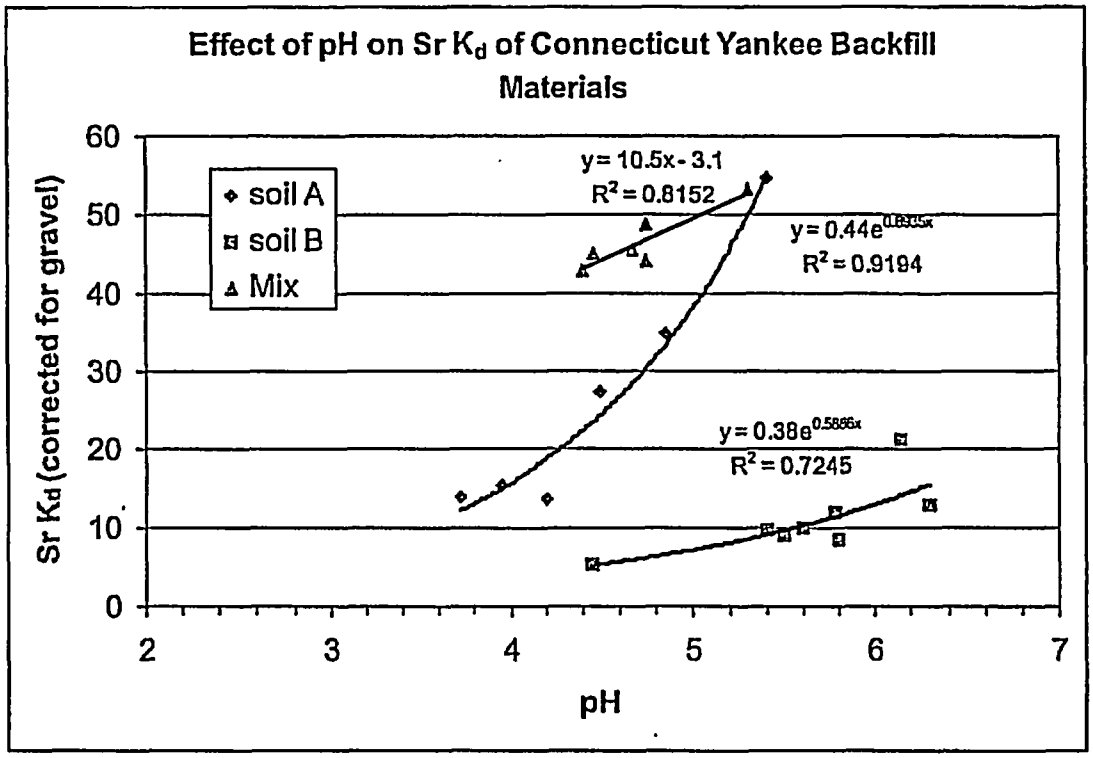

Figure 8. Effect of pH on Sr K_d of Connecticut Yankee backfill material.

Attachment 5.7

Area Preparation and Isolation and Controls

(3 pages including cover)

ATTACHMENT A
AREA PREPARATION FOR FSS ACTIVITIES

Area/Structure: Excavation associated with Northeast Protected Area Grounds

Planned Decommissioning Activities Complete

Planned decommissioning have been completed in this area. The potential for cross-contamination is low or engineering controls, as necessary, have been instituted to prevent contamination by adjacent decommissioning activities. All tools, equipment, waste, and materials not required for survey performance have been removed. The area is considered ready for FSS activities.

Field Engineer — Date: 4.5.5

RCA/BOP Project Coordinator — Date: N/A

Site Closure Acceptance of Area

The Final Status Survey group accepts this area.

Final Status Survey Engineer — Date: 4/5/05

Access Controls

Access controls have been instituted to adequately protect the area.

Final Status Survey Engineer/Implementation Coordinator — Date: 4/5/05

Access Controls Utilized

minor remediation and pumping may take place during the Radiological assessment

- Barricades
- posting
- hay bales

RADIOLOGICAL SURVEY PLAN TO PERMIT PERSONNEL ACCESS TO THE WEST EXCAVATION AND THE MOBILIZATION OF EQUIPMENT TO SUPPORT THE RESIDUAL HEAT REMOVAL (RHR) PIPE DECONTAMINATION EFFORT

1.0 ITEMS TO BE EVALUATED:

1.01 Personnel hands and feet.

1.02 Equipment entering west excavation.

1.03 Equipment staged in west excavation (e.g., hoses).

2.0 RADIOLOGICAL HISTORY:

2.01 The west excavation has completed radiological assessment and is under isolation and controls. Survey of personnel and equipment is necessary to prevent radiological cross-contamination of the west excavation. The east excavation has not been radiologically assessed and demolition work is currently in progress. The equipment used to perform decontamination is likely to be radiologically contaminated.

3.0 PREREQUISITES:

3.01 All instruments used will be verified within calibration and will have a valid source or response check.

3.03 All Health Physics (HP) Technicians assigned to this project will have the requisite training on documenting surveys and instrument usage. At least one HP Technician will be qualified in Final Status Survey (FSS) procedures.

4.0 SURVEY PLAN:

4.01 Personnel will perform a hand and foot frisk when accessing the west excavation from the east.

4.02 All equipment transported through, or staged in, the west excavation will be surveyed for loose surface contamination. Any equipment having detectable radioactivity will be wiped down until free of residual radioactivity. As an alternative, equipment may be bagged, sleeved or otherwise contained to prevent the spread of contamination. Visual inspection and a survey for loose surface contamination of bags, sleeves or containers will be performed by the HP Technician prior to entry. Any item having detectable radioactivity will not be allowed into the area without the permission of FSS Supervision.

4.03 A radiation scan using an E-600 with a SPA-3 2" by 2" probe will be performed daily along the travel path by an FSS Technician. The action level will be determined by FSS Supervision prior to the scan survey.

4.04 Period inspections will be performed by FSS supervision. The integrity of equipment staged in west excavation (e.g., hoses and couplings) will inspected at least once a day, at a minimum.

5.0 REVIEW AND APPROVAL:

5.01 All radiological survey documentation will be reviewed and approved by FSS Supervision.

Preparer: Jack McCarthy / _____ Date: 4/23/2005
(Print Name) / (Signature)

Reviewer: Jeff Wagner _____ Date: 4/25/05
(Print Name) / (Signature)

Radiological Assessment Report for the West Section of the Excavation Associated with the Northeast Protected Area Grounds

Attachment 5.8

Supporting Data

(975 pages including cover)

GENERAL ENGINEERING LABORATORIES, LLC
a Member of THE GEL GROUP, INC.
Meeting Today's Needs with a Vision for Tomorrow

November 4, 2004

Mr. Pete Hollenbeck
Connecticut Yankee Atomic Power
Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424

Re: Concrete PO# 002337
Work Order: 124488
SDG: MSR#04-3731

Dear Mr. Hollenbeck:

General Engineering Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on October 29, 2004. This data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4243.

Sincerely,

Cheryl Jones
Project Manager

Purchase Order: 002337
Chain of Custody: 2004-00250, 2004-00251
Enclosures

P.O. Box 30712 • Charleston, SC 29417 • 2040 Savage Road (29407)
Phone (843) 556-8171 • Fax (843) 766-1178 • www.gel.com

CONNECTICUT YANKEE
RE: CONCRETE
PO# 002337
Work Order: 124488

124488001	2228-0000-023-C-1C-01
124488002	2228-0000-023-C-1C-02
124488003	2228-0000-023-C-1C-03
124488004	2228-0000-023-C-1C-04
124488005	2228-0000-023-C-1C-05
124488006	2228-0000-023-C-2C-01
124488007	2228-0000-023-C-3C-01
124488008	2228-0000-022-C-1C-01
124488009	2228-0000-022-C-1C-02
124488010	2228-0000-022-C-1C-03
124488011	2228-0000-022-C-1C-04
124488012	2228-0000-022-C-1C-05
124488013	2228-0000-022-C-2C-01
124488014	2228-0000-022-C-3C-01

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GENERAL NARRATIVE

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Concrete
PO# 002337
Work Order: 124488

November 4, 2004

Laboratory Identification:
General Engineering Laboratories, LLC

Mailing Address:
P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:
2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:
(843) 556-8171

Summary:

Sample receipt
The samples arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina October 29, 2004. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures except in items of note located below.

The laboratory prepared the following sample(s):

Sample ID	Client Sample ID
124488001	2228-0000-023-C-1C-01
124488002	2228-0000-023-C-1C-02
124488003	2228-0000-023-C-1C-03
124488004	2228-0000-023-C-1C-04
124488005	2228-0000-023-C-1C-05
124488006	2228-0000-023-C-2C-01
124488007	2228-0000-023-C-3C-01
124488008	2228-0000-022-C-1C-01
124488009	2228-0000-022-C-1C-02
124488010	2228-0000-022-C-1C-03
124488011	2228-0000-022-C-1C-04
124488012	2228-0000-022-C-1C-05
124488013	2228-0000-022-C-2C-01
124488014	2228-0000-022-C-3C-01

2

Items of Note:
There are no items to note.

Case Narrative:

Sample analyses were conducted using methodology as outlined in General Engineering Laboratories (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are listed below by analytical parameter.

Analytical Request:

Fourteen samples were analyzed for CHGAM, H-3, and SR-90.

Internal Chain of Custody:

Custody was maintained for all of these samples.

Data Package:

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Laboratory Certifications, and Radiochemistry.

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Cheryl Jones
Project Manager

CHAIN OF CUSTODY

Chain of Custody Form

No. 2004-00251

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407
Sarah Kozlik

Priority: ☐ 30 D. ☐ 14 D. ☐ 7 D.
Other: 3 day TAT

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	Sr-90	H-3				Comment, Preservation	Lab Sample ID
2228-0000-023-C-1C-01	10/27/04	1355	CT	CR	PB	X	X	X					
2228-0000-023-C-1C-02	10/27/04	1355	CT	CR	PB	X	X	X					
2228-0000-023-C-1C-03	10/27/04	1355	CT	CR	PB	X	X	X					
2228-0000-023-C-1C-04	10/27/04	1355	CT	CR	PB	X	X	X					
2228-0000-023-C-1C-05	10/27/04	1355	CT	CR	PB	X	X	X					
2228-0000-023-C-2C-01	10/27/04	1424	CT	CR	PB	X	X	X					
2228-0000-023-C-3C-01	10/27/04	1430	CT	CR	PB	X	X	X					

NOTES: PO #: 002337 MSR #: 04-3731 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

NOTE: 3 day TAT

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7919668734 77
Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
J. Cernucky	10/28/04 @ 1055	M. Mitchell	10-29-04 09:50
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Connecticut Yankee Atomic Power Company

362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Chain of Custody Form

No. 2004-00250

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407
Sarah Kozlik

Priority: ☐ 30 D. ☐ 14 D. ☐ 7 D.
Other: 3 day TAT

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	Sr-90	H-3				Comment, Preservation	Lab Sample ID
2228-0000-022-C-1C-01	10/27/04	1500	CT	CR	PB	X	X	X					
2228-0000-022-C-1C-02	10/27/04	1500	CT	CR	PB	X	X	X					
2228-0000-022-C-1C-03	10/27/04	1500	CT	CR	PB	X	X	X					
2228-0000-022-C-1C-04	10/27/04	1500	CT	CR	PB	X	X	X					
2228-0000-022-C-1C-05	10/27/04	1500	CT	CR	PB	X	X	X					
2228-0000-022-C-2C-01	10/27/04	1515	CT	CR	PB	X	X	X					
2228-0000-022-C-3C-01	10/27/04	1525	CT	CR	PB	X	X	X					

NOTES: PO #: 002337 MSR #: 04-3731 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

NOTE: 3 day TAT

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
791966873477
Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
J. Garney	10/28/04 @ 1055	M. Mitchell	10:29:04 0950
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

COOLER RECEIPT CHECKLIST

Figure 1. Sample Check-in List

Date/Time Received: 10/29/04 0950

SDG#: MSR# 04-3731

Work Order Number: 124488

Shipping Container ID: 7919 6687 3477 Chain of Custody # 2004-00251

1. Custody Seals on shipping container intact? Yes [X] No [ ]
2. Custody Seals dated and signed? Yes [X] No [ ]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 20 °C
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] N/A
6. Number of samples in shipping container: 14 CT pucks (wafers)
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:

____tape ____hazard labels

____custody seals X appropriate sample labels

9. Samples are:

X in good condition ____leaking

____broken ____have air bubbles

10. Were any anomalies identified in sample receipt? Yes [ ] No [X]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: M. Mitchell Date: 10-29-04 0950

Telephoned to: _____ On _____ By _____

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
SDG MSR#04-3731

Method/Analysis Information

Product:	Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	377467
Prep Batch Number:	377367

Sample ID	Client ID
124488001	2228-0000-023-C-1C-01
124488002	2228-0000-023-C-1C-02
124488003	2228-0000-023-C-1C-03
124488004	2228-0000-023-C-1C-04
124488005	2228-0000-023-C-1C-05
124488006	2228-0000-023-C-2C-01
124488007	2228-0000-023-C-3C-01
124488008	2228-0000-022-C-1C-01
124488009	2228-0000-022-C-1C-02
124488010	2228-0000-022-C-1C-03
124488011	2228-0000-022-C-1C-04
124488012	2228-0000-022-C-1C-05
124488013	2228-0000-022-C-2C-01
124488014	2228-0000-022-C-3C-01
1200731237	Method Blank (MB)
1200731239	Laboratory Control Sample (LCS)
1200731238	124488001(2228-0000-023-C-1C-01) Sample Duplicate (DUP)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 124488001 (2228-0000-023-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Additional Comments
The U-238 and U-235 activity concentrations in sample 124488014 (2228-0000-022-C-3C-01) are above naturally occurring concentrations and were added to the list of target analytes.

Qualifier Information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to interference.	Europium-155	124488012
UI	Data rejected due to low abundance.	Actinium-228	124488001
		Cesium-134	1200731238
			124488012
UI	Data rejected due to no valid peak.	Potassium-40	1200731237

Method/Analysis Information

Product:	GFPC, Sr90, solid 24Hr TAT
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	377485
Prep Batch Number:	377368
Dry Soil Prep GL-RAD-A-021 Batch Number:	377367

Sample ID	Client ID
124488001	2228-0000-023-C-1C-01
124488002	2228-0000-023-C-1C-02
124488003	2228-0000-023-C-1C-03
124488004	2228-0000-023-C-1C-04
124488005	2228-0000-023-C-1C-05
124488006	2228-0000-023-C-2C-01
124488007	2228-0000-023-C-3C-01
124488008	2228-0000-022-C-1C-01
124488009	2228-0000-022-C-1C-02
124488010	2228-0000-022-C-1C-03
124488011	2228-0000-022-C-1C-04
124488012	2228-0000-022-C-1C-05

124488013	2228-0000-022-C-2C-01
124488014	2228-0000-022-C-3C-01
1200731296	Method Blank (MB)
1200731299	Laboratory Control Sample (LCS)
1200731297	124488001(2228-0000-023-C-1C-01) Sample Duplicate (DUP)
1200731298	124488001(2228-0000-023-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 124488001 (2228-0000-023-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	377502

Sample ID	Client ID
124488001	2228-0000-023-C-1C-01
124488002	2228-0000-023-C-1C-02
124488003	2228-0000-023-C-1C-03
124488004	2228-0000-023-C-1C-04
124488005	2228-0000-023-C-1C-05
124488006	2228-0000-023-C-2C-01
124488007	2228-0000-023-C-3C-01
124488008	2228-0000-022-C-1C-01
124488009	2228-0000-022-C-1C-02
124488010	2228-0000-022-C-1C-03
124488011	2228-0000-022-C-1C-04
124488012	2228-0000-022-C-1C-05
124488013	2228-0000-022-C-2C-01
124488014	2228-0000-022-C-3C-01
1200731320	Method Blank (MB)
1200731323	Laboratory Control Sample (LCS)
1200731578	124488008(2228-0000-022-C-1C-01) Sample Duplicate (DUP)
1200731579	124488008(2228-0000-022-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 124488008 (2228-0000-022-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier information
Manual qualifiers were not required.

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:
GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.
The following data validator verified the information presented in this case narrative:

Reviewer: Heather G Crouch 1/13/04

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-023-C-1C-01	Project:	YANK01304
Sample ID:	124488001	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	7.24%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228	U	0.00	+/-0.160	0.132	+/-0.156	0.277	pCi/g		AKB	11/01/04	1337	377467	1
	UI												
Americium-241	U	-0.00349	+/-0.161	0.129	+/-0.158	0.270	pCi/g						
Bismuth-212	U	0.259	+/-0.226	0.132	+/-0.221	0.289	pCi/g						
Bismuth-214		0.421	+/-0.0843	0.0356	+/-0.0826	0.0768	pCi/g						
Cesium-134	U	0.0121	+/-0.0223	0.0201	+/-0.0219	0.044	pCi/g						
Cesium-137	U	0.0233	+/-0.0238	0.0222	+/-0.0233	0.0477	pCi/g						
Cobalt-60	U	0.0075	+/-0.0208	0.0168	+/-0.0204	0.0389	pCi/g						
Europium-152	U	-0.0231	+/-0.0536	0.0435	+/-0.0525	0.0936	pCi/g						
Europium-154	U	0.0102	+/-0.0605	0.0527	+/-0.0593	0.120	pCi/g						
Europium-155	U	0.0585	+/-0.0562	0.0553	+/-0.0551	0.116	pCi/g						
Lead-212		0.495	+/-0.0629	0.0343	+/-0.0616	0.0517	pCi/g						
Lead-214		0.429	+/-0.0968	0.0332	+/-0.0949	0.0712	pCi/g						
Manganese-54	U	0.00473	+/-0.017	0.0148	+/-0.0166	0.0331	pCi/g						
Niobium-94	U	-0.00108	+/-0.0174	0.0147	+/-0.017	0.0323	pCi/g						
Potassium-40		8.61	+/-0.904	0.145	+/-0.886	0.344	pCi/g						
Radium-226		0.421	+/-0.0843	0.0356	+/-0.0826	0.0768	pCi/g						
Silver-108m	U	0.0104	+/-0.0169	0.0159	+/-0.0165	0.0342	pCi/g						
Thallium-208		0.122	+/-0.0379	0.0152	+/-0.0371	0.0333	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90		0.0628	+/-0.0341	0.0292	+/-0.0369	0.0605	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		32.3	+/-2.17	1.06	+/-3.00	2.12	pCi/g		DAJ1	11/01/04	1838	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-023-C-1C-01
Sample ID: 124488001

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	106	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain Identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

11/3/04

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-023-C-1C-02	Project:	YANK01304
Sample ID:	124488002	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	6.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.592	+/-0.160	0.0716	+/-0.157	0.158	pCi/g		AKB	11/01/04	1130	377467	1
Americium-241	U	-0.066	+/-0.0973	0.0782	+/-0.0953	0.165	pCi/g						
Bismuth-212		0.590	+/-0.245	0.135	+/-0.240	0.300	pCi/g						
Bismuth-214		0.389	+/-0.0946	0.0367	+/-0.0927	0.0797	pCi/g						
Cesium-134	U	0.0446	+/-0.0258	0.0257	+/-0.0253	0.0558	pCi/g						
Cesium-137	U	-0.0166	+/-0.0244	0.0188	+/-0.0239	0.0413	pCi/g						
Cobalt-60	U	-0.0115	+/-0.0168	0.0111	+/-0.0165	0.0279	pCi/g						
Europium-152	U	-0.0199	+/-0.054	0.0467	+/-0.0529	0.100	pCi/g						
Europium-154	U	-0.001	+/-0.0696	0.0497	+/-0.0682	0.115	pCi/g						
Europium-155	U	0.0607	+/-0.0597	0.0574	+/-0.0585	0.120	pCi/g						
Lead-212		0.406	+/-0.0625	0.0288	+/-0.0612	0.0608	pCi/g						
Lead-214		0.456	+/-0.0999	0.0356	+/-0.0979	0.0762	pCi/g						
Manganese-54	U	0.0341	+/-0.0342	0.0175	+/-0.0335	0.0388	pCi/g						
Niobium-94	U	0.00652	+/-0.0208	0.018	+/-0.0204	0.0393	pCi/g						
Potassium-40		7.71	+/-0.912	0.200	+/-0.894	0.458	pCi/g						
Radium-226		0.389	+/-0.0946	0.0367	+/-0.0927	0.0797	pCi/g						
Silver-108m	U	-0.00895	+/-0.0182	0.0151	+/-0.0178	0.0329	pCi/g						
Thallium-208		0.142	+/-0.0651	0.0178	+/-0.0638	0.039	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90	U	0.0474	+/-0.0423	0.0375	+/-0.0446	0.0776	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		55.7	+/-2.73	1.05	+/-4.43	2.10	pCi/g		DAJ1	11/01/04	1910	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-023-C-1C-02
Sample ID: 124488002

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	79	(25%-125%)

Notes:
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- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-023-C-1C-03	Project:	YANK01304
Sample ID:	124488003	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	6.15%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.586	+/-0.159	0.0602	+/-0.156	0.134	pCi/g		AKB	11/01/04	1131	377467	1
Americium-241	U	0.0123	+/-0.0239	0.0212	+/-0.0234	0.0443	pCi/g						
Bismuth-212		0.512	+/-0.317	0.125	+/-0.310	0.274	pCi/g						
Bismuth-214		0.371	+/-0.082	0.031	+/-0.0803	0.0674	pCi/g						
Cesium-134	U	0.0193	+/-0.0233	0.0217	+/-0.0229	0.0471	pCi/g						
Cesium-137	U	0.000901	+/-0.0206	0.018	+/-0.0202	0.0392	pCi/g						
Cobalt-60	U	-0.022	+/-0.0223	0.0154	+/-0.0218	0.0358	pCi/g						
Europium-152	U	0.0538	+/-0.0653	0.041	+/-0.064	0.0878	pCi/g						
Europium-154	U	0.0299	+/-0.0792	0.0698	+/-0.0776	0.153	pCi/g						
Europium-155	U	0.0349	+/-0.0409	0.0391	+/-0.0401	0.0817	pCi/g						
Lead-212		0.464	+/-0.0667	0.0254	+/-0.0654	0.0534	pCi/g						
Lead-214		0.507	+/-0.0817	0.0285	+/-0.0801	0.0611	pCi/g						
Manganese-54	U	0.00781	+/-0.0212	0.0187	+/-0.0208	0.0409	pCi/g						
Niobium-94	U	-0.00684	+/-0.0186	0.0155	+/-0.0183	0.0338	pCi/g						
Potassium-40		7.30	+/-0.924	0.151	+/-0.905	0.351	pCi/g						
Radium-226		0.371	+/-0.082	0.031	+/-0.0803	0.0674	pCi/g						
Silver-108m	U	-0.026	+/-0.0175	0.0127	+/-0.0171	0.0276	pCi/g						
Thallium-208		0.150	+/-0.0417	0.0172	+/-0.0409	0.0373	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90	U	0.00661	+/-0.031	0.0287	+/-0.031	0.0592	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		50.8	+/-2.66	1.08	+/-4.29	2.16	pCi/g		DAJ1	11/01/04	1942	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-023-C-1C-03
Sample ID: 124488003

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	108	(25%-125%)

Notes:
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- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

11/4/04

Reviewed by

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-023-C-1C-04
Sample ID: 124488004
Matrix: CT
Collect Date: 27-OCT-04
Receive Date: 29-OCT-04
Collector: Client
Moisture: 7.52%

Project: YANK01304.
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.424	+/-0.144	0.0566	+/-0.141	0.126	pCi/g		AKB	11/01/04	1131	377467	1
Americium-241	U	-0.069	+/-0.144	0.111	+/-0.141	0.234	pCi/g						
Bismuth-212		0.278	+/-0.169	0.125	+/-0.166	0.274	pCi/g						
Bismuth-214		0.383	+/-0.0928	0.0285	+/-0.0909	0.0623	pCi/g						
Cesium-134	U	0.0144	+/-0.0198	0.019	+/-0.0194	0.0417	pCi/g						
Cesium-137	U	0.0165	+/-0.0198	0.0186	+/-0.0194	0.0402	pCi/g						
Cobalt-60	U	0.00581	+/-0.0205	0.0181	+/-0.020	0.0413	pCi/g						
Europium-152	U	-0.0061	+/-0.0517	0.0438	+/-0.0507	0.0938	pCi/g						
Europium-154	U	-0.00241	+/-0.0595	0.0503	+/-0.0583	0.114	pCi/g						
Europium-155	U	0.00511	+/-0.0502	0.0476	+/-0.0492	0.100	pCi/g						
Lead-212		0.424	+/-0.0574	0.0245	+/-0.0562	0.052	pCi/g						
Lead-214		0.392	+/-0.0853	0.0275	+/-0.0836	0.0595	pCi/g						
Manganese-54	U	0.00115	+/-0.0195	0.0165	+/-0.0191	0.0364	pCi/g						
Niobium-94	U	0.00982	+/-0.0112	0.0117	+/-0.011	0.0261	pCi/g						
Potassium-40		7.38	+/-0.837	0.130	+/-0.821	0.310	pCi/g						
Radium-226		0.383	+/-0.0928	0.0285	+/-0.0909	0.0623	pCi/g						
Silver-108m	U	2.140E-05	+/-0.0158	0.0142	+/-0.0155	0.0309	pCi/g						
Thallium-208		0.141	+/-0.0409	0.0194	+/-0.040	0.0416	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90	U	0.067	+/-0.0483	0.0426	+/-0.0518	0.0878	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		59.6	+/-2.75	1.01	+/-4.63	2.01	pCi/g		DAJ1	11/01/04	2014	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-023-C-1C-04
Sample ID: 124488004

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	82	(25%-125%)

Notes:
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- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
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11/8/04

Reviewed by

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-023-C-1C-05	Project:	YANK01304
Sample ID:	124488005	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	8.48%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.437	+/-0.192	0.0737	+/-0.188	0.165	pCi/g		AKB	11/01/04	1144	377467	1
Americium-241	U	0.00452	+/-0.0305	0.0284	+/-0.0299	0.0595	pCi/g						
Bismuth-212	U	0.263	+/-0.330	0.165	+/-0.323	0.363	pCi/g						
Bismuth-214		0.345	+/-0.0902	0.0402	+/-0.0884	0.0874	pCi/g						
Cesium-134	U	0.037	+/-0.0355	0.0275	+/-0.0347	0.0598	pCi/g						
Cesium-137	U	-0.00644	+/-0.0255	0.0218	+/-0.025	0.0477	pCi/g						
Cobalt-60	U	-0.000147	+/-0.0339	0.0252	+/-0.0332	0.0569	pCi/g						
Europium-152	U	-0.0155	+/-0.0541	0.0461	+/-0.053	0.0996	pCi/g						
Europium-154	U	0.0257	+/-0.0707	0.0642	+/-0.0693	0.146	pCi/g						
Europium-155	U	0.0301	+/-0.0493	0.0454	+/-0.0483	0.0954	pCi/g						
Lead-212		0.463	+/-0.059	0.0266	+/-0.0578	0.0564	pCi/g						
Lead-214		0.456	+/-0.106	0.0369	+/-0.104	0.0792	pCi/g						
Manganese-54	U	-6.740E-05	+/-0.0253	0.0216	+/-0.0248	0.0476	pCi/g						
Niobium-94	U	0.0151	+/-0.0263	0.0241	+/-0.0258	0.052	pCi/g						
Potassium-40		6.91	+/-0.978	0.166	+/-0.958	0.399	pCi/g						
Radium-226		0.345	+/-0.0902	0.0402	+/-0.0884	0.0874	pCi/g						
Silver-108m	U	0.00536	+/-0.0198	0.0175	+/-0.0194	0.0378	pCi/g						
Thallium-208		0.186	+/-0.0502	0.0204	+/-0.0492	0.0445	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90	U	0.0451	+/-0.0309	0.0268	+/-0.0326	0.0556	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		36.9	+/-2.26	1.04	+/-3.26	2.07	pCi/g		DAJ1	11/01/04	2046	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJI	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-023-C-1C-05
Sample ID: 124488005

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	105	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-023-C-2C-01	Project:	YANK01304
Sample ID:	124488006	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	7.21%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.464	+/-0.161	0.0525	+/-0.158	0.119	pCi/g		AKB 11/01/04	1225	377467	1
Americium-241	U	0.00843	+/-0.0346	0.0655	+/-0.034	0.138	pCi/g					
Bismuth-212	U	0.239	+/-0.287	0.136	+/-0.281	0.299	pCi/g					
Bismuth-214		0.382	+/-0.0939	0.0274	+/-0.092	0.0606	pCi/g					
Cesium-134	U	0.0184	+/-0.0261	0.0193	+/-0.0256	0.0425	pCi/g					
Cesium-137	U	0.00525	+/-0.0182	0.0163	+/-0.0178	0.036	pCi/g					
Cobalt-60	U	0.0062	+/-0.0193	0.0175	+/-0.0189	0.0404	pCi/g					
Europium-152	U	0.0249	+/-0.0451	0.0408	+/-0.0442	0.0879	pCi/g					
Europium-154	U	0.0325	+/-0.161	0.057	+/-0.157	0.129	pCi/g					
Europium-155	U	0.00925	+/-0.0519	0.0488	+/-0.0509	0.102	pCi/g					
Lead-212		0.433	+/-0.0622	0.0236	+/-0.0609	0.0501	pCi/g					
Lead-214		0.426	+/-0.0936	0.0329	+/-0.0917	0.0703	pCi/g					
Manganese-54	U	0.0281	+/-0.0203	0.0199	+/-0.0199	0.0434	pCi/g					
Niobium-94	U	0.0027	+/-0.019	0.0166	+/-0.0186	0.0362	pCi/g					
Potassium-40		8.21	+/-1.07	0.158	+/-1.04	0.370	pCi/g					
Radium-226		0.382	+/-0.0939	0.0274	+/-0.092	0.0606	pCi/g					
Silver-108m	U	0.00121	+/-0.0165	0.0139	+/-0.0162	0.0304	pCi/g					
Thallium-208		0.144	+/-0.0423	0.0141	+/-0.0414	0.0312	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid 24Hr TAT												
Strontium-90	U	0.044	+/-0.0335	0.0295	+/-0.0349	0.061	pCi/g		JMB1 11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		3.77	+/-1.14	1.08	+/-1.17	2.15	pCi/g		DAJ1 11/01/04	2117	377502	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJI	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-023-C-2C-01
Sample ID: 124488006

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	107	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
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Certificate of Analysis

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Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-023-C-3C-01	Project:	YANK01304
Sample ID:	124488007	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	7.4%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.411	+/-0.162	0.0531	+/-0.159	0.120	pCi/g		AKB	11/01/04	1225	377467	1
Americium-241	U	-0.0701	+/-0.113	0.095	+/-0.111	0.201	pCi/g						
Bismuth-212		0.480	+/-0.182	0.117	+/-0.178	0.261	pCi/g						
Bismuth-214		0.430	+/-0.0861	0.0305	+/-0.0844	0.0666	pCi/g						
Cesium-134	U	0.0321	+/-0.0265	0.0203	+/-0.026	0.0445	pCi/g						
Cesium-137	U	0.0204	+/-0.0198	0.0176	+/-0.0194	0.0384	pCi/g						
Cobalt-60	U	0.0206	+/-0.0171	0.0171	+/-0.0167	0.0396	pCi/g						
Europium-152	U	-0.00769	+/-0.0519	0.0435	+/-0.0508	0.0935	pCi/g						
Europium-154	U	-0.036	+/-0.0623	0.0473	+/-0.061	0.109	pCi/g						
Europium-155	U	0.0303	+/-0.0581	0.056	+/-0.0569	0.117	pCi/g						
Lead-212		0.498	+/-0.0609	0.0236	+/-0.0596	0.0502	pCi/g						
Lead-214		0.415	+/-0.0888	0.0315	+/-0.0871	0.0678	pCi/g						
Manganese-54	U	-0.00181	+/-0.0226	0.0163	+/-0.0221	0.036	pCi/g						
Niobium-94	U	-0.019	+/-0.0224	0.0144	+/-0.022	0.0318	pCi/g						
Potassium-40		8.17	+/-0.830	0.180	+/-0.814	0.414	pCi/g						
Radium-226		0.430	+/-0.0861	0.0305	+/-0.0844	0.0666	pCi/g						
Silver-108m	U	0.00287	+/-0.0167	0.0151	+/-0.0163	0.0328	pCi/g						
Thallium-208		0.108	+/-0.0421	0.0159	+/-0.0413	0.0349	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90		0.360	+/-0.0489	0.0325	+/-0.105	0.0674	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		22.3	+/-1.91	1.09	+/-2.40	2.18	pCi/g		DAJ1	11/01/04	2149	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-023-C-3C-01
Sample ID: 124488007

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	91	(25%-125%)

Notes:
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- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by 11/3/04

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-022-C-1C-01	Project:	YANK01304
Sample ID:	1244888008	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	5.61%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-OAH2,ALL2 (CT)													
Actinium-228		0.503	+/-0.136	0.0548	+/-0.134	0.123	pCi/g		AKB	11/01/04	1226	377467	1
Americium-241	U	-0.00231	+/-0.0962	0.0769	+/-0.0942	0.161	pCi/g						
Bismuth-212		0.340	+/-0.260	0.135	+/-0.254	0.297	pCi/g						
Bismuth-214		0.530	+/-0.0972	0.0293	+/-0.0952	0.0643	pCi/g						
Cesium-134	U	0.0154	+/-0.0211	0.0194	+/-0.0207	0.0427	pCi/g						
Cesium-137	U	0.00239	+/-0.0184	0.016	+/-0.0181	0.0354	pCi/g						
Cobalt-60	U	-0.00682	+/-0.018	0.0138	+/-0.0176	0.0329	pCi/g						
Europium-152	U	-0.0281	+/-0.0514	0.041	+/-0.0503	0.0884	pCi/g						
Europium-154	U	-0.0376	+/-0.0581	0.043	+/-0.057	0.100	pCi/g						
Europium-155	U	0.0431	+/-0.0514	0.050	+/-0.0504	0.105	pCi/g						
Lead-212		0.485	+/-0.0711	0.0264	+/-0.0697	0.0559	pCi/g						
Lead-214		0.617	+/-0.0957	0.0286	+/-0.0937	0.0618	pCi/g						
Manganese-54	U	-0.00803	+/-0.0199	0.0157	+/-0.0195	0.0348	pCi/g						
Niobium-94	U	0.00672	+/-0.0207	0.0182	+/-0.0203	0.0394	pCi/g						
Potassium-40		7.48	+/-0.938	0.130	+/-0.919	0.312	pCi/g						
Radium-226		0.530	+/-0.0972	0.0293	+/-0.0952	0.0643	pCi/g						
Silver-108m	U	0.0057	+/-0.0173	0.0159	+/-0.017	0.0342	pCi/g						
Thallium-208		0.150	+/-0.0406	0.0185	+/-0.0398	0.0401	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90		0.266	+/-0.0523	0.0382	+/-0.100	0.0792	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		8.20	+/-1.34	1.06	+/-1.44	2.12	pCi/g		DAJ1	11/01/04	2221	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-022-C-1C-01
Sample ID: 124488008

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	72	(25%-125%)

Notes:
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- B Target analyte was detected in the sample as well as the associated blank.
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
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Reviewed by

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Certificate of Analysis

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Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-022-C-1C-02	Project:	YANK01304
Sample ID:	124488009	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	5.45%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.594	+/-0.155	0.059	+/-0.152	0.132	pCi/g		AKB	11/01/04	1226	377467	1
Americium-241	U	0.089	+/-0.107	0.0954	+/-0.105	0.199	pCi/g						
Bismuth-212		0.409	+/-0.233	0.126	+/-0.229	0.279	pCi/g						
Bismuth-214		0.459	+/-0.0983	0.0368	+/-0.0964	0.0796	pCi/g						
Cesium-134	U	0.0421	+/-0.0332	0.0247	+/-0.0325	0.0533	pCi/g						
Cesium-137	U	-0.0156	+/-0.0214	0.0173	+/-0.021	0.038	pCi/g						
Cobalt-60	U	-0.0102	+/-0.0259	0.0207	+/-0.0253	0.0465	pCi/g						
Europium-152	U	-0.00553	+/-0.0566	0.0495	+/-0.0555	0.106	pCi/g						
Europium-154	U	-0.006	+/-0.0659	0.0554	+/-0.0645	0.125	pCi/g						
Europium-155	U	-0.00103	+/-0.0696	0.0629	+/-0.0682	0.131	pCi/g						
Lead-212		0.521	+/-0.0697	0.0329	+/-0.0683	0.0691	pCi/g						
Lead-214		0.524	+/-0.105	0.0379	+/-0.103	0.0809	pCi/g						
Manganese-54	U	0.0139	+/-0.0226	0.0206	+/-0.0222	0.0447	pCi/g						
Niobium-94	U	0.0183	+/-0.0206	0.0194	+/-0.0201	0.0418	pCi/g						
Potassium-40		8.36	+/-0.891	0.190	+/-0.874	0.430	pCi/g						
Radium-226		0.459	+/-0.0983	0.0368	+/-0.0964	0.0796	pCi/g						
Silver-108m	U	0.0155	+/-0.0191	0.0178	+/-0.0187	0.0382	pCi/g						
Thallium-208		0.131	+/-0.040	0.0199	+/-0.0392	0.043	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90		0.0507	+/-0.0254	0.0213	+/-0.0276	0.0444	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		27.4	+/-1.95	0.989	+/-2.55	1.98	pCi/g		DAJ1	11/01/04	2253	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1016	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-022-C-1C-02
Sample ID: 124488009

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	114	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

11/3/04

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-022-C-1C-03	Project:	YANK01304
Sample ID:	124488010	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	4.01%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.264	+/-0.107	0.0545	+/-0.105	0.120	pCi/g		AKB	11/01/04	1229	377467	1
Americium-241	U	-0.0099	+/-0.0748	0.0632	+/-0.0733	0.132	pCi/g						
Bismuth-212	U	0.109	+/-0.177	0.100	+/-0.174	0.223	pCi/g						
Bismuth-214		0.274	+/-0.0577	0.0258	+/-0.0565	0.0563	pCi/g						
Cesium-134	U	0.0261	+/-0.028	0.0144	+/-0.0274	0.032	pCi/g						
Cesium-137	U	-0.00879	+/-0.0173	0.0138	+/-0.017	0.0305	pCi/g						
Cobalt-60	U	-0.008	+/-0.0155	0.0115	+/-0.0152	0.0273	pCi/g						
Europium-152	U	-0.0329	+/-0.0438	0.0371	+/-0.0429	0.0797	pCi/g						
Europium-154	U	0.00349	+/-0.0538	0.0458	+/-0.0528	0.104	pCi/g						
Europium-155	U	0.00435	+/-0.0482	0.0446	+/-0.0472	0.0934	pCi/g						
Lead-212		0.299	+/-0.0462	0.0222	+/-0.0453	0.047	pCi/g						
Lead-214		0.275	+/-0.066	0.0316	+/-0.0646	0.067	pCi/g						
Manganese-54	U	-0.000622	+/-0.0169	0.0148	+/-0.0165	0.0325	pCi/g						
Niobium-94	U	-0.0132	+/-0.016	0.0122	+/-0.0157	0.0269	pCi/g						
Potassium-40		5.62	+/-0.620	0.112	+/-0.608	0.267	pCi/g						
Radium-226		0.274	+/-0.0577	0.0258	+/-0.0565	0.0563	pCi/g						
Silver-108m	U	0.00796	+/-0.015	0.014	+/-0.0147	0.0301	pCi/g						
Thallium-208		0.100	+/-0.0273	0.0159	+/-0.0268	0.0343	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90	U	0.0474	+/-0.0329	0.0286	+/-0.0349	0.0594	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		28.3	+/-2.10	1.10	+/-2.81	2.19	pCi/g		DAJ1	11/01/04	2325	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-022-C-1C-03
Sample ID: 124488010

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	93	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-022-C-1C-04	Project:	YANK01304
Sample ID:	124488011	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	4.65%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.476	+/-0.106	0.0436	+/-0.103	0.0948	pCi/g		AKB	11/01/04	1230	377467	1
Americium-241	U	0.119	+/-0.122	0.0862	+/-0.120	0.179	pCi/g						
Bismuth-212		0.269	+/-0.230	0.103	+/-0.225	0.221	pCi/g						
Bismuth-214		0.299	+/-0.0744	0.0252	+/-0.0729	0.0538	pCi/g						
Cesium-134	U	0.0264	+/-0.0241	0.0159	+/-0.0236	0.0341	pCi/g						
Cesium-137	U	-0.0218	+/-0.0154	0.0116	+/-0.0151	0.025	pCi/g						
Cobalt-60	U	0.0123	+/-0.0315	0.0157	+/-0.0309	0.0343	pCi/g						
Europium-152	U	-0.013	+/-0.0507	0.0375	+/-0.0497	0.0791	pCi/g						
Europium-154	U	0.00669	+/-0.0469	0.0404	+/-0.046	0.0887	pCi/g						
Europium-155	U	0.0065	+/-0.0557	0.0492	+/-0.0546	0.102	pCi/g						
Lead-212		0.432	+/-0.0513	0.023	+/-0.0503	0.048	pCi/g						
Lead-214		0.395	+/-0.0665	0.0293	+/-0.0652	0.0616	pCi/g						
Manganese-54	U	-0.00553	+/-0.0153	0.0124	+/-0.015	0.0269	pCi/g						
Niobium-94	U	-0.0105	+/-0.0135	0.0108	+/-0.0133	0.0233	pCi/g						
Potassium-40		7.44	+/-0.613	0.103	+/-0.601	0.235	pCi/g						
Radium-226		0.299	+/-0.0744	0.0252	+/-0.0729	0.0538	pCi/g						
Silver-108m	U	-0.00586	+/-0.0141	0.0116	+/-0.0139	0.0247	pCi/g						
Thallium-208		0.127	+/-0.0278	0.0133	+/-0.0272	0.0284	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90	U	0.0412	+/-0.0333	0.0293	+/-0.0348	0.0607	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		50.6	+/-2.63	1.06	+/-4.27	2.13	pCi/g		DAJ1	11/01/04	2357	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-022-C-1C-04
Sample ID: 124488011

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mid.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	94	(25%-125%)

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
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Reviewed by

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-022-C-1C-05	Project:	YANK01304
Sample ID:	124488012	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	6.56%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mid.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.420	+/-0.111	0.0306	+/-0.108	0.065	pCi/g		AKB	11/01/04	1230	377467	1
Americium-241	U	0.000909	+/-0.0424	0.0364	+/-0.0416	0.0748	pCi/g						
Bismuth-212		0.348	+/-0.153	0.0702	+/-0.150	0.148	pCi/g						
Bismuth-214		0.432	+/-0.0708	0.0177	+/-0.0693	0.037	pCi/g						
Cesium-134	U	0.00	+/-0.0233	0.0111	+/-0.0228	0.0232	pCi/g						
	UI												
Cesium-137	U	-0.0126	+/-0.0105	0.00832	+/-0.0103	0.0176	pCi/g						
Cobalt-60	U	0.00483	+/-0.0117	0.0101	+/-0.0115	0.0217	pCi/g						
Europium-152	U	0.00165	+/-0.0317	0.0246	+/-0.0311	0.0512	pCi/g						
Europium-154	U	0.020	+/-0.0407	0.031	+/-0.0399	0.0658	pCi/g						
Europium-155	U	0.00	+/-0.0449	0.0297	+/-0.044	0.0612	pCi/g						
	UI												
Lead-212		0.453	+/-0.0474	0.0164	+/-0.0465	0.0337	pCi/g						
Lead-214		0.461	+/-0.0559	0.0176	+/-0.0548	0.0367	pCi/g						
Manganese-54	U	-0.00877	+/-0.0106	0.00841	+/-0.0104	0.0178	pCi/g						
Niobium-94	U	-0.000797	+/-0.00934	0.00799	+/-0.00915	0.0168	pCi/g						
Potassium-40		8.07	+/-0.717	0.083	+/-0.702	0.180	pCi/g						
Radium-226		0.432	+/-0.0708	0.0177	+/-0.0693	0.037	pCi/g						
Silver-108m	U	-0.00693	+/-0.0101	0.0083	+/-0.00987	0.0173	pCi/g						
Thallium-208		0.149	+/-0.028	0.00844	+/-0.0274	0.0178	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90	U	0.0283	+/-0.0428	0.0389	+/-0.0436	0.0803	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		56.0	+/-2.86	1.14	+/-4.80	2.27	pCi/g		DAJ1	11/02/04	0029	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-022-C-1C-05
Sample ID: 124488012

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	81	(25%-125%)

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-022-C-2C-01	Project:	YANK01304
Sample ID:	124488013	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	4.64%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM1,ALL2 (CT)													
Actinium-228		0.464	+/-0.190	0.0846	+/-0.186	0.191	pCi/g		AKB	11/01/04	1330	377467	1
Americium-241	U	-0.0237	+/-0.0756	0.0609	+/-0.074	0.126	pCi/g						
Bismuth-212	U	0.190	+/-0.326	0.185	+/-0.320	0.412	pCi/g						
Bismuth-214		0.415	+/-0.119	0.0417	+/-0.117	0.0922	pCi/g						
Cesium-134	U	0.00786	+/-0.0417	0.0338	+/-0.0409	0.0737	pCi/g						
Cesium-137	U	0.0434	+/-0.072	0.0246	+/-0.0705	0.0545	pCi/g						
Cobalt-60	U	-0.00482	+/-0.0291	0.0232	+/-0.0286	0.0546	pCi/g						
Europium-152	U	0.0373	+/-0.0816	0.0667	+/-0.080	0.142	pCi/g						
Europium-154	U	-0.0362	+/-0.0838	0.0633	+/-0.0821	0.149	pCi/g						
Europium-155	U	-0.0236	+/-0.0772	0.0675	+/-0.0756	0.141	pCi/g						
Lead-212		0.342	+/-0.0984	0.0456	+/-0.0964	0.0952	pCi/g						
Lead-214		0.509	+/-0.123	0.0493	+/-0.121	0.105	pCi/g						
Manganese-54	U	0.0268	+/-0.0315	0.0298	+/-0.0308	0.0651	pCi/g						
Niobium-94	U	0.0243	+/-0.0299	0.0237	+/-0.0293	0.0522	pCi/g						
Potassium-40		7.84	+/-1.24	0.220	+/-1.22	0.522	pCi/g						
Radium-226		0.415	+/-0.119	0.0417	+/-0.117	0.0922	pCi/g						
Silver-108m	U	-0.018	+/-0.0249	0.0199	+/-0.0244	0.0434	pCi/g						
Thallium-208		0.180	+/-0.0664	0.0256	+/-0.065	0.0559	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90	U	0.055	+/-0.040	0.0353	+/-0.0429	0.0729	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	1.27	+/-1.03	1.11	+/-1.03	2.21	pCi/g		DAJ1	11/02/04	0101	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
GL-RAD-A-026	Laboratory sample composite				377365

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-022-C-2C-01
Sample ID: 124488013

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	84	(25%-125%)

Notes:
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- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
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- E Concentration of the target analyte exceeds the instrument calibration range.
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- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

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Certificate of Analysis

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Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID:	2228-0000-022-C-3C-01	Project:	YANK01304
Sample ID:	124488014	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	27-OCT-04		
Receive Date:	29-OCT-04		
Collector:	Client		
Moisture:	5.57%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.801	+/-0.240	0.0954	+/-0.235	0.205	pCi/g		AKB	11/01/04	1333	377467	1
Americium-241	U	-0.0345	+/-0.409	0.282	+/-0.400	0.571	pCi/g						
Bismuth-212		0.888	+/-0.414	0.223	+/-0.405	0.473	pCi/g						
Bismuth-214		0.615	+/-0.133	0.0487	+/-0.130	0.103	pCi/g						
Cesium-134		0.0809	+/-0.0613	0.036	+/-0.0601	0.0759	pCi/g						
Cesium-137	U	-0.00818	+/-0.0334	0.0277	+/-0.0327	0.0588	pCi/g						
Cobalt-60	U	0.0241	+/-0.0275	0.0255	+/-0.0269	0.0563	pCi/g						
Europium-152	U	0.00884	+/-0.0771	0.070	+/-0.0755	0.146	pCi/g						
Europium-154	U	0.0637	+/-0.0903	0.0813	+/-0.0885	0.177	pCi/g						
Europium-155	U	0.149	+/-0.164	0.136	+/-0.161	0.277	pCi/g						
Lead-212		0.759	+/-0.0941	0.0434	+/-0.0923	0.0898	pCi/g						
Lead-214		0.593	+/-0.124	0.0496	+/-0.121	0.104	pCi/g						
Manganese-54	U	-0.0223	+/-0.0323	0.0267	+/-0.0316	0.057	pCi/g						
Niobium-94	U	0.00757	+/-0.0346	0.0295	+/-0.0339	0.062	pCi/g						
Potassium-40		21.9	+/-1.41	0.222	+/-1.38	0.498	pCi/g						
Radium-226		0.615	+/-0.133	0.0487	+/-0.130	0.103	pCi/g						
Silver-108m	U	-0.0161	+/-0.0283	0.0242	+/-0.0277	0.0508	pCi/g						
Thallium-208		0.291	+/-0.0595	0.0286	+/-0.0583	0.0603	pCi/g						
Uranium-235		1.35	+/-0.396	0.279	+/-0.388	0.568	pCi/g						
Uranium-238		113	+/-5.51	2.04	+/-5.40	4.14	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid 24Hr TAT													
Strontium-90	U	0.0213	+/-0.0323	0.0292	+/-0.0328	0.0605	pCi/g		JMB1	11/02/04	0359	377485	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		12.4	+/-1.58	1.12	+/-1.79	2.24	pCi/g		DAJ1	11/02/04	0132	377502	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	10/30/04	1143	377368
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	10/29/04	1046	377367
					377365

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 3, 2004

Client Sample ID: 2228-0000-022-C-3C-01
Sample ID: 124488014

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units.	DF	Analyst	Date	Time	Batch	Mtd.
GL-RAD-A-026	Laboratory sample composite												

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid 24Hr TAT	94	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

11/1/04

Reviewed by

QUALITY CONTROL DATA

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: November 3, 2004
Page 1 of 6

Client: Connecticut Yankee Atomic Power
Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut

Contact: Mr. Pete Hollenbeck

Workorder: 124488

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 377467										
QC1200731238 124488001 DUP										
Actinium-228	UUI	0.00		0.466	pCi/g	2		(0% - 100%)	AKB	11/01/04 20:49
	Uncert:	+/-0.160		+/-0.104						
	TPU:	+/-0.156		+/-0.102						
Americium-241	U	-0.00349	U	0.0245	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.161		+/-0.0965						
	TPU:	+/-0.158		+/-0.0945						
Bismuth-212	U	0.259		0.287	pCi/g	11		(0% - 100%)		
	Uncert:	+/-0.226		+/-0.160						
	TPU:	+/-0.221		+/-0.157						
Bismuth-214		0.421		0.357	pCi/g	16		(0% - 100%)		
	Uncert:	+/-0.0843		+/-0.0505						
	TPU:	+/-0.0826		+/-0.0495						
Cesium-134	U	0.0121	UUI	0.00	pCi/g	75		(0% - 100%)		
	Uncert:	+/-0.0223		+/-0.0197						
	TPU:	+/-0.0219		+/-0.0193						
Cesium-137	U	0.0233	U	-0.00668	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0238		+/-0.0135						
	TPU:	+/-0.0233		+/-0.0132						
Cobalt-60	U	0.0075	U	0.00751	pCi/g	0		(0% - 100%)		
	Uncert:	+/-0.0208		+/-0.0126						
	TPU:	+/-0.0204		+/-0.0124						
Europium-152	U	-0.0231	U	-0.00781	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0536		+/-0.0313						
	TPU:	+/-0.0525		+/-0.0307						
Europium-154	U	0.0102	U	-0.0149	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0605		+/-0.0334						
	TPU:	+/-0.0593		+/-0.0327						
Europium-155	U	0.0585	U	0.0302	pCi/g	64		(0% - 100%)		
	Uncert:	+/-0.0562		+/-0.0407						
	TPU:	+/-0.0551		+/-0.0399						
Lead-212		0.495		0.448	pCi/g	10		(0% - 100%)		
	Uncert:	+/-0.0629		+/-0.0378						
	TPU:	+/-0.0616		+/-0.0371						
Lead-214		0.429		0.452	pCi/g	5		(0% - 100%)		
	Uncert:	+/-0.0968		+/-0.0575						
	TPU:	+/-0.0949		+/-0.0563						
Manganese-54	U	0.00473	U	-0.00147	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.017		+/-0.0117						
	TPU:	+/-0.0166		+/-0.0114						
Niobium-94	U	-0.00108	U	-0.00344	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0174		+/-0.0105						
	TPU:	+/-0.017		+/-0.0103						

QC Summary

Workorder: 124488

Parmname		NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec												
Batch 377467												
Potassium-40			8.61		7.56	pCi/g	13		(0% - 20%)			
		Uncert:	+/-0.904		+/-0.497							
		TPU:	+/-0.886		+/-0.487							
Radium-226			0.421		0.357	pCi/g	16		(0% - 100%)			
		Uncert:	+/-0.0843		+/-0.0505							
		TPU:	+/-0.0826		+/-0.0495							
Silver-108m		U	0.0104	U	-0.00191	pCi/g	N/A		(0% - 100%)			
		Uncert:	+/-0.0169		+/-0.0105							
		TPU:	+/-0.0165		+/-0.0103							
Thallium-208			0.122		0.144	pCi/g	16		(0% - 100%)			
		Uncert:	+/-0.0379		+/-0.0255							
		TPU:	+/-0.0371		+/-0.025							
Uranium-235		U	0.163	U	0.0125	pCi/g	171*		(0% - 20%)			
		Uncert:	+/-0.189		+/-0.091							
		TPU:	+/-0.185		+/-0.0892							
Uranium-238		U	-0.134	U	0.727	pCi/g	N/A					
		Uncert:	+/-1.28		+/-0.757							
		TPU:	+/-1.26		+/-0.742							
QC1200731239	LCS											
Actinium-228				U	0.0559	pCi/g					11/01/04	14:56
		Uncert:			+/-0.403							
		TPU:			+/-0.395							
Americium-241		23.4			23.5	pCi/g		101	(75%-125%)			
		Uncert:			+/-1.25							
		TPU:			+/-1.23							
Bismuth-212				U	-0.0582	pCi/g						
		Uncert:			+/-0.825							
		TPU:			+/-0.808							
Bismuth-214				U	0.00397	pCi/g						
		Uncert:			+/-0.151							
		TPU:			+/-0.148							
Cesium-134				U	-0.0579	pCi/g						
		Uncert:			+/-0.0998							
		TPU:			+/-0.0978							
Cesium-137		9.16			9.67	pCi/g		106	(75%-125%)			
		Uncert:			+/-0.362							
		TPU:			+/-0.354							
Cobalt-60		13.6			14.9	pCi/g		109	(75%-125%)			
		Uncert:			+/-0.506							
		TPU:			+/-0.496							
Europium-152				U	0.222	pCi/g						
		Uncert:			+/-0.221							
		TPU:			+/-0.216							
Europium-154				U	0.0409	pCi/g						
		Uncert:			+/-0.200							
		TPU:			+/-0.196							
Europium-155				U	-0.318	pCi/g						
		Uncert:			+/-0.277							

QC Summary

Workorder: 124488

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 377467										
	TPU:			+/-0.271						
Lead-212			U	-0.00791	pCi/g					
	Uncert:			+/-0.125						
	TPU:			+/-0.122						
Lead-214			U	0.0636	pCi/g					
	Uncert:			+/-0.165						
	TPU:			+/-0.161						
Manganese-54			U	-0.0521	pCi/g					
	Uncert:			+/-0.0895						
	TPU:			+/-0.0877						
Niobium-94			U	0.0208	pCi/g					
	Uncert:			+/-0.0792						
	TPU:			+/-0.0776						
Potassium-40			U	0.588	pCi/g					
	Uncert:			+/-0.675						
	TPU:			+/-0.661						
Radium-226			U	0.00397	pCi/g			(75%-125%)		
	Uncert:			+/-0.151						
	TPU:			+/-0.148						
Silver-108m			U	0.0147	pCi/g					
	Uncert:			+/-0.0858						
	TPU:			+/-0.0841						
Thallium-208			U	0.00372	pCi/g					
	Uncert:			+/-0.078						
	TPU:			+/-0.0764						
Uranium-235			U	-0.232	pCi/g			(75%-125%)		
	Uncert:			+/-0.433						
	TPU:			+/-0.425						
Uranium-238			U	-6.31	pCi/g					
	Uncert:			+/-4.31						
	TPU:			+/-4.22						
QC1200731237 MB										
Actinium-228			U	0.0412	pCi/g					11/01/04 13:34
	Uncert:			+/-0.117						
	TPU:			+/-0.114						
Americium-241			U	0.000754	pCi/g					
	Uncert:			+/-0.0265						
	TPU:			+/-0.026						
Bismuth-212			U	-0.0092	pCi/g					
	Uncert:			+/-0.205						
	TPU:			+/-0.201						
Bismuth-214			U	0.0423	pCi/g					
	Uncert:			+/-0.0552						
	TPU:			+/-0.0541						
Cesium-134			U	0.0168	pCi/g					
	Uncert:			+/-0.0249						
	TPU:			+/-0.0244						
Cesium-137			U	-0.000879	pCi/g					

QC Summary

Workorder: 124488

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 377467										
	Uncert:			+/-0.0237						
	TPU:			+/-0.0232						
Cobalt-60			U	-0.0181	pCi/g					
	Uncert:			+/-0.0262						
	TPU:			+/-0.0256						
Europium-152			U	0.00277	pCi/g					
	Uncert:			+/-0.0569						
	TPU:			+/-0.0557						
Europium-154			U	0.025	pCi/g					
	Uncert:			+/-0.0722						
	TPU:			+/-0.0708						
Europium-155			U	0.00948	pCi/g					
	Uncert:			+/-0.0389						
	TPU:			+/-0.0381						
Lead-212			U	0.0392	pCi/g					
	Uncert:			+/-0.0616						
	TPU:			+/-0.0604						
Lead-214			U	0.000121	pCi/g					
	Uncert:			+/-0.0408						
	TPU:			+/-0.040						
Manganese-54			U	0.00116	pCi/g					
	Uncert:			+/-0.0199						
	TPU:			+/-0.0195						
Niobium-94			U	0.0031	pCi/g					
	Uncert:			+/-0.0233						
	TPU:			+/-0.0228						
Potassium-40			UUI	0.00	pCi/g					
	Uncert:			+/-0.441						
	TPU:			+/-0.432						
Radium-226			U	0.0423	pCi/g					
	Uncert:			+/-0.0552						
	TPU:			+/-0.0541						
Silver-108m			U	0.0166	pCi/g					
	Uncert:			+/-0.0211						
	TPU:			+/-0.0207						
Thallium-208			U	0.017	pCi/g					
	Uncert:			+/-0.0243						
	TPU:			+/-0.0239						
Uranium-235			U	0.069	pCi/g					
	Uncert:			+/-0.122						
	TPU:			+/-0.120						
Uranium-238			U	0.0706	pCi/g					
	Uncert:			+/-0.406						
	TPU:			+/-0.398						
Rad Gas Flow										
Batch 377485										
QC1200731297 124488001 DUP										
Strontium-90		0.0628	U	0.0219	pCi/g	97		(0% - 100%)	JMB1	11/02/04 03:59

QC Summary

Workorder: 124488

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 377485										
	Uncert:	+/-0.0341		+/-0.0368						
	TPU:	+/-0.0369		+/-0.0373						
QC1200731299 LCS										
Strontium-90	3.88			4.11	pCi/g		106	(75%-125%)		11/02/04 09:52
	Uncert:			+/-0.302						
	TPU:			+/-1.49						
QC1200731296 MB										
Strontium-90			U	0.00336	pCi/g					11/02/04 03:59
	Uncert:			+/-0.0262						
	TPU:			+/-0.0262						
QC1200731298 124488001 MS										
Strontium-90	7.78	0.0628		7.13	pCi/g		91	(75%-125%)		11/02/04 09:52
	Uncert:	+/-0.0341		+/-0.569						
	TPU:	+/-0.0369		+/-2.69						
Rad Liquid Scintillation										
Batch 377502										
QC1200731578 124488008 DUP										
Tritium		8.20		11.2	pCi/g	31		(0% - 100%)	DAJ1	11/02/04 02:36
	Uncert:	+/-1.34		+/-1.51						
	TPU:	+/-1.44		+/-1.69						
QC1200731323 LCS										
Tritium	3.19			3.18	pCi/g		100	(75%-125%)		11/02/04 03:40
	Uncert:			+/-0.340						
	TPU:			+/-0.402						
QC1200731320 MB										
Tritium			U	0.0118	pCi/g					11/02/04 02:04
	Uncert:			+/-0.190						
	TPU:			+/-0.190						
QC1200731579 124488008 MS										
Tritium	13.5	8.20		24.6	pCi/g		121	(75%-125%)		11/02/04 03:08
	Uncert:	+/-1.34		+/-2.78						
	TPU:	+/-1.44		+/-3.23						

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

QC Summary

Workorder: 124488

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

h Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

GENERAL ENGINEERING LABORATORIES, LLC
a Member of THE GEL GROUP, INC.
Meeting Today's Needs with a Vision for Tomorrow

November 15, 2004

Mr. Pete Hollenbeck
Connecticut Yankee Atomic Power
Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424

Re: Concrete PO# 002337
Work Order: 125333
SDG: MSR#04-3731

Dear Mr. Hollenbeck:

General Engineering Laboratories, LLC (GEL) appreciates the opportunity to provide the following analytical results for the sample(s) we received on October 29, 2004. This data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4243.

Sincerely,

Cheryl Jones
Project Manager

Purchase Order: 002337
Chain of Custody: 2004-00250
Enclosures

P.O. Box 30712 • Charleston, SC 29417 • 2040 Savage Road (29407)
Phone (843) 556-8171 • Fax (843) 766-1178 • www.gel.com

CONNECTICUT YANKEE
RE: CONCRETE
PO# 002337
Work Order: 125333

125333001 2228-0000-022-C-3C-01

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GENERAL NARRATIVE

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Concrete
PO# 002337
Work Order: 125333

November 15, 2004

Laboratory Identification:
General Engineering Laboratories, LLC

Mailing Address:
P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:
2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:
(843) 556-8171

Summary:

Sample receipt
The samples arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina October 29, 2004. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures except in items of note located below. The sample (2228-0000-022-C-3C-01) was relogged for Uranium analysis per the client's request.

The laboratory prepared the following sample(s):

Sample ID	Client Sample ID
125333001	2228-0000-022-C-3C-01

Items of Note:
At the request of Pete Hollenbeck via e-mail on November 10, 2004, sample number 2228-0000-022-C-3C-01 was reanalyzed for Uranium by alpha spec.

Case Narrative:

Sample analyses were conducted using methodology as outlined in General Engineering Laboratories (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are listed below by analytical parameter.

Analytical Request:

One concrete sample was analyzed for U-235 and U-238.

Internal Chain of Custody:

Custody was maintained for all of these samples.

Data Package:

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Laboratory Certifications, and Radiochemistry.

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Cheryl Jones
Project Manager

CHAIN OF CUSTODY

Connecticut Yankee Atomic Power Company

362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Chain of Custody Form

No. 2004-00250

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407
Sarah Kozik

Priority: ☐ 30 D. ☐ 14 D. ☐ 7 D.
Other: 3 day TAT

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	Sr-90	H-3				Comment, Preservation	Lab Sample ID
2228-0000-022-C-1C-01	10/27/04	1500	CT	CR	PB	X	X	X					
2228-0000-022-C-1C-02	10/27/04	1500	CT	CR	PB	X	X	X					
2228-0000-022-C-1C-03	10/27/04	1500	CT	CR	PB	X	X	X					
2228-0000-022-C-1C-04	10/27/04	1500	CT	CR	PB	X	X	X					
2228-0000-022-C-1C-05	10/27/04	1500	CT	CR	PB	X	X	X					
2228-0000-022-C-2C-01	10/27/04	1515	CT	CR	PB	X	X	X					
* 2228-0000-022-C-3C-01	10/27/04	1525	CT	CR	PB	X	X	X					

NOTES: PO #: 002337 MSR #: 04-3731 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

NOTE: 3 day TAT

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7919668 73477
Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y☐ N☐

Custody Seal Intact? Y☐ N☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
J. Carney	10/28/04 @ 1055	M. Mitchell	11:29:04 09:50
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

COOLER RECEIPT CHECKLIST

Figure 1. Sample Check-in List

Date/Time Received: 10/29/04 0950

SDG#: MSR# 04-3731

Work Order Number: 124488

Shipping Container ID: 7919 6687 3477 Chain of Custody #: 2004-00251

1. Custody Seals on shipping container intact? Yes [X] No [ ]
2. Custody Seals dated and signed? Yes [X] No [ ]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 20 °C
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] N/A
6. Number of samples in shipping container: 14 CT pucks (wafers)
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:

____tape ____hazard labels

____custody seals X appropriate sample labels

9. Samples are:

X in good condition ____leaking

____broken ____have air bubbles

10. Were any anomalies identified in sample receipt? Yes [ ] No [X]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: M. Mitchell Date: 10-29-04 0950

Telephoned to: _____ On _____ By _____

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
SDG MSR#04-3731

Method/Analysis Information

Product:	Alphaspec U, Solid
Analytical Method:	DOE EML HASL-300, U-02-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	380860
Prep Batch Number:	380725
Dry Soil Prep GL-RAD-A-021 Batch Number:	380724

Sample ID	Client ID
125333001	2228-0000-022-C-3C-01
1200739292	Method Blank (MB)
1200739295	Laboratory Control Sample (LCS)
1200739293	125333001(2228-0000-022-C-3C-01) Sample Duplicate (DUP)
1200739294	125333001(2228-0000-022-C-3C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 125333001 (2228-0000-022-C-3C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Qualifier information
Manual qualifiers were not required.

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:
GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.
The following data validator verified the information presented in this case narrative:

Reviewer: A Calle G Cuccu 11/17/04

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report for
for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#04-3731 GEL Work Order: 125333

The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.
** Indicates the analyte is a surrogate compound.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: November 16, 2004

Client Sample ID: 2228-0000-022-C-3C-01
Sample ID: 125333001
Matrix: CT
Collect Date: 27-OCT-04
Receive Date: 29-OCT-04
Collector: Client
Moisture: 5.57%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec U, Solid													
Uranium-235/236	U	-0.00861	+/-0.151	0.164	+/-0.151	0.412	pCi/g		JAS1	11/13/04	1730	380860	1
Uranium-238	U	0.513	+/-0.319	0.226	+/-0.327	0.530	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/11/04	1648	380725
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	11/11/04	1647	380724

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, U-02-RC Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Uranium-232	Alphaspec U, Solid	80	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: November 17, 2004
Page 1 of 2

Client: Connecticut Yankee Atomic Power
Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut

Contact: Mr. Pete Hollenbeck

Workorder: 125333

Parameter		NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec											
Batch 380860											
QC1200739293	125333001 DUP										
Uranium-235/236		U	-0.00861	U	0.0579	pCi/g	N/A		(0% - 100%)	JAS1	11/13/04 17:30
		Uncert:	+/-0.151		+/-0.0999						
		TPU:	+/-0.151		+/-0.100						
Uranium-238		U	0.513		0.755	pCi/g	38		(0% - 100%)		
		Uncert:	+/-0.319		+/-0.283						
		TPU:	+/-0.327		+/-0.299						
QC1200739295	LCS										
Uranium-235/236					0.639	pCi/g			(75%-125%)		11/13/04 17:30
		Uncert:			+/-0.237						
		TPU:			+/-0.250						
Uranium-238		9.29			9.27	pCi/g		100	(75%-125%)		
		Uncert:			+/-0.875						
		TPU:			+/-1.46						
QC1200739292	MB										
Uranium-235/236				U	0.00654	pCi/g					11/13/04 17:30
		Uncert:			+/-0.0496						
		TPU:			+/-0.0496						
Uranium-238				U	0.0501	pCi/g					
		Uncert:			+/-0.0767						
		TPU:			+/-0.077						
QC1200739294	125333001 MS										
Uranium-235/236		U	-0.00861		0.536	pCi/g			(75%-125%)		11/13/04 17:30
		Uncert:	+/-0.151		+/-0.219						
		TPU:	+/-0.151		+/-0.229						
Uranium-238		9.56 U	0.513		10.5	pCi/g		104	(75%-125%)		
		Uncert:	+/-0.319		+/-0.932						
		TPU:	+/-0.327		+/-1.59						

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 125333

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

h Sample preparation or preservation holding time exceeded.

N/A Indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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GENERAL NARRATIVE

CASE NARRATIVE
FOR
CONNECTICUT YANKEE
RE: Soil and Concrete
PO# 002337
Work Order: 126304

December 8, 2004

Laboratory Identification:
General Engineering Laboratories, LLC

Mailing Address:
P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:
2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:
(843) 556-8171

Summary:

Sample receipt
The samples arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina November 26,2004. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures except in items of note located below.

The laboratory prepared the following sample:

Sample ID	Client Sample ID
126304001	5000-0000-103-SI
126304002	5000-0000-104-SP
126304003	5000-0000-104-SI
126304004	5000-0000-105-SP
126304005	5000-0000-105-SI
126304006	5000-0000-106-SP
126304007	9312-0003-107-S
126304008	9312-0003-108-S
126304009	9312-0003-109-S
126304010	9312-0003-110-S
126304011	9312-0003-111-S
126304012	9312-0003-112-S
126304013	3107-0000-192-SI
126304014	3107-0000-192-SP

126304015	3107-0000-193-SI
126304016	3107-0000-193-SP
126304017	5000-0000-103-C-1C-01
126304018	5000-0000-104-C-1C-01
126304019	5000-0000-105-C-1C-01
126304020	5000-0000-106-C-1C-01
126304021	3107-0000-192-C-1C-01
126304022	3107-0000-193-C-1C-01
126304023	5000-0000-103-C-1C-02
126304024	5000-0000-103-C-2C-01
126304025	5000-0000-103-C-3C-03
126304026	5000-0000-103-C-3C-04
126304027	5000-0000-104-C-1C-02
126304028	5000-0000-104-C-2C-01
126304029	5000-0000-104-C-3C-03
126304030	5000-0000-104-C-3C-04
126304031	5000-0000-105-C-1C-02
126304032	5000-0000-105-C-3C-01
126304033	5000-0000-105-C-4C-03
126304034	5000-0000-105-C-4C-04
126304035	5000-0000-106-C-1C-02
126304036	5000-0000-106-C-3C-01
126304037	5000-0000-106-C-4C-03
126304038	5000-0000-106-C-4C-04
126304039	3107-0000-192-C-1C-02
126304040	3107-0000-192-C-2C-03
126304041	3107-0000-192-C-2C-04
126304042	3107-0000-193-C-1C-02
126304043	3107-0000-193-C-2C-03
126304044	3107-0000-193-C-2C-04
126304045	5000-0000-103-C-1C-01
126304046	5000-0000-104-C-1C-01
126304047	5000-0000-105-C-1C-01
126304048	5000-0000-106-C-1C-01
126304049	3107-0000-192-C-1C-01
126304050	3107-0000-193-C-1C-01

Items of Note:

There are not any items to note.

Case Narrative:

Sample analyses were conducted using methodology as outlined in General Engineering Laboratories (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are listed below by analytical parameter.

Analytical Request:

Sixteen soil samples were analyzed for CHGAM, H-3, and Sr-90. Twenty-two samples were analyzed for CHGAM, H-3, and Sr-90. One concrete sample was analyzed for CHALL.

Internal Chain of Custody:

Custody was maintained for all of these samples.

Data Package:

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Laboratory Certifications, and Radiochemistry.

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Cheryl Jones
Project Manager

CHAIN OF CUSTODY

126304 1/.

Chain of Custody Form

No. 2004-00272

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments: 94/61

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90	CHALL			Comment, Preservation	Lab Sample ID
5000-0000-103-SI	11/17/04	1035	TS	G	BP	X	X	X					
5000-0000-104-SP	11/17/04	1040	TS	G	BP	X	X	X					
5000-0000-104-SI	11/17/04	1343	TS	G	BP	X	X	X					
5000-0000-105-SP	11/17/04	1300	TS	G	BP	X	X	X					
5000-0000-105-SI	11/17/04	1510	TS	G	BP	X	X	X					
5000-0000-106-SP	11/17/04	1325	TS	G	BP	X	X	X					
9312-0003-107-S	11/17/04	1310	TS	G	BP	X	X	X					
9312-0003-108-S	11/17/04	1334	TS	G	BP	X	X	X					
9312-0003-109-S	11/17/04	1330	TS	G	BP	X	X	X					
9312-0003-110-S	11/17/04	1315	TS	G	BP	X	X	X					

NOTES: PO #: 002337 MSR #: 04-3908 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7913 9801 1270
Bill of Lading #

Internal Container Temp.: 16 Deg. C
Custody Sealed? Y ☑ N ☐
Custody Seal Intact? Y ☑ N ☐

1) Relinquished By: John J. DeGoetis Date/Time 11/24/04 0900	2) Received By: [illegible] Date/Time 11/24/04 1000
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

126303% 126304%

Chain of Custody Form

No. 2004-00273

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments: ~~94 lbs~~ 40 lbs
* in the package

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90	CHALL			Comment, Preservation	Lab Sample ID
9312-0003-111-S	11/17/04	1338	TS	G	BP	X	X	X					
9312-0003-112-S	11/17/04	1325	TS	G	BP	X	X	X					
3107-0000-192-SI	11/18/04	0834	TS	G	BP	X	X	X					
3107-0000-192-SP	11/17/04	1320	TS	G	BP	X	X	X					
3107-0000-193-SI	11/18/04	1015	TS	G	BP	X	X	X					
3107-0000-193-SP	11/17/04	1305	TS	G	BP	X	X	X					
3101-0000-176-B01-01 *	11/15/04	1540	B	C	BP	X	X	X					
3101-0000-176-B01-02 *	11/15/04	1540	B	C	BP	X	X	X					
3101-0000-178-B01-01 *	10/20/04	1110	B	C	BP	X	X	X					

NOTES: PO #: 002337 MSR #: 04-3908 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

NOTE: * BEDROCK SAMPLES HAVE A *30 DAY* TAT.

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7903 4760 8663
Bill of Lading #

Internal Container Temp.: 16 Deg. C
Custody Sealed? Y☑ N☐
Custody Seal Intact? Y☑ N☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	11/24/04 0900	[signature]	11/26/04 1000
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

126304 %

Chain of Custody Form

No. 2004-00274

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
40 lbs

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90	CHALL			Comment, Preservation	Lab Sample ID
5000-0000-103-C-1C-01	11/17/04	1006	CR	C	BP				X				
5000-0000-104-C-1C-01	11/17/04	1100	CR	C	BP				X				
5000-0000-105-C-1C-01	11/17/04	1400	CR	C	BP				X				
5000-0000-106-C-1C-01	11/18/04	1138	CR	C	BP				X				
3107-0000-192-C-1C-01	11/18/04	0818	CR	C	BP				X				
3107-0000-193-C-1C-01	11/17/04	1000	CR	C	BP				X				
5000-0000-103-C-1C-02	11/17/04	1006	CR	C	BP	X	X	X					
5000-0000-103-C-2C-01	11/17/04	1020	CR	C	BP	X	X	X					
5000-0000-103-C-3C-03	11/17/04	1030	CR	C	BP	X	X	X					
5000-0000-103-C-3C-04	11/17/04	1030	CR	C	BP	X	X	X					

NOTES: PO #: 002337 MSR #: 04-3908 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7903 4760 8663
Bill of Lading #

Internal Container Temp.: 16 Deg. C
Custody Sealed? Y☑ N☐
Custody Seal Intact? Y☑ N☐

1) Relinquished By: [signature] Date/Time 11/24/04 0900	2) Received By: [signature] Date/Time 11/24/04 1000
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

1026 3041

Chain of Custody Form

No. 2004-00275

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
40 lbs

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90	CHALL			Comment, Preservation	Lab Sample ID
5000-0000-104-C-1C-02	11/17/04	1100	CR	C	BP	X	X	X					
5000-0000-104-C-2C-01	11/17/04	1330	CR	C	BP	X	X	X					
5000-0000-104-C-3C-03	11/17/04	1340	CR	C	BP	X	X	X					
5000-0000-104-C-3C-04	11/17/04	1340	CR	C	BP	X	X	X					
5000-0000-105-C-1C-02	11/17/04	1400	CR	C	BP	X	X	X					
5000-0000-105-C-3C-01	11/17/04	1440	CR	C	BP	X	X	X					
5000-0000-105-C-4C-03	11/17/04	1500	CR	C	BP	X	X	X					
5000-0000-105-C-4C-04	11/17/04	1500	CR	C	BP	X	X	X					
5000-0000-106-C-1C-02	11/18/04	1138	CR	C	BP	X	X	X					
5000-0000-106-C-3C-01	11/18/04	1207	CR	C	BP	X	X	X					

NOTES: PO #: 002337 MSR #:. 04-3908 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7903 4760 8663
Bill of Lading #

Internal Container Temp.: 14 Deg. C
Custody Sealed? Y ☑ N ☐
Custody Seal Intact? Y ☑ N ☐

1) Relinquished By [signature] Date/Time 11/24/04 0900	2) Received By [signature] Date/Time 11/24/04 1000
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

Chain of Custody Form

No. 2004-00276

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
40 lbs

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90				Comment, Preservation	Lab Sample ID
5000-0000-106-C-4C-03	11/18/04	1225	CR	C	BP	X	X	X					
5000-0000-106-C-4C-04	11/18/04	1225	CR	C	BP	X	X	X					
3107-0000-192-C-1C-02	11/18/04	0818	CR	C	BP	X	X	X					
3107-0000-192-C-2C-03	11/18/04	0830	CR	C	BP	X	X	X					
3107-0000-192-C-2C-04	11/18/04	0830	CR	C	BP	X	X	X					
3107-0000-193-C-1C-02	11/17/04	1000	CR	C	BP	X	X	X					
3107-0000-193-C-2C-03	11/17/04	1012	CR	C	BP	X	X	X					
3107-0000-193-C-2C-04	11/17/04	1012	CR	C	BP	X	X	X					

NOTES: PO #: 002337 MSR #: 04-3908 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7903 4760 8663
Bill of Lading #

Internal Container Temp.: 16 Deg. C
Custody Sealed? Y ☒ N ☐
Custody Seal Intact? ✓ Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
John J. Ordonez	11/24/04 0900	[illegible]	11/26/04 1600
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

COOLER RECEIPT CHECKLIST

Figure 1. Sample Check-in List

Date/Time Received: 11/26/04 1000

SDG#: MSR# 04-3908

Work Order Number: 126304 1.

Shipping Container ID: 7913 9801 1270 7903 4760 8663 Chain of Custody # 2004-00272 thru 00276

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 16.0C
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] N/A
6. Number of samples in shipping container: 47
7. Sample holding times exceeded? Yes [ ] No [✓]

8. Samples have:

✓ tape ____ hazard labels

✓ custody seals ✓ appropriate sample labels

9. Samples are:

✓ in good condition ____ leaking

____ broken ____ have air bubbles

10. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: [signature] Date: 11-26-04 1000

Telephoned to: _____ On _____ By _____

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
SDG MSR#04-3908

Method/Analysis Information

Product:	**Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)**
Analytical Method:	DOE EML HASL-300, Am-05-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	384469
Prep Batch Number:	384228
Dry Soil Prep GL-RAD-A-021 Batch Number:	384227

Sample ID	Client ID
126304045	5000-0000-103-C-1C-01
126304046	5000-0000-104-C-1C-01
126304047	5000-0000-105-C-1C-01
126304048	5000-0000-106-C-1C-01
126304049	3107-0000-192-C-1C-01
126304050	3107-0000-193-C-1C-01
1200748002	Method Blank (MB)
1200748005	Laboratory Control Sample (LCS)
1200748003	126304045(5000-0000-103-C-1C-01) Sample Duplicate (DUP)
1200748004	126304045(5000-0000-103-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304045 (5000-0000-103-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	Alphaspec Pu, Solid-TRU2,ALL2 (CT)
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	384470
Prep Batch Number:	384228
Dry Soil Prep GL-RAD-A-021 Batch Number:	384227

Sample ID	Client ID
126304045	5000-0000-103-C-1C-01
126304046	5000-0000-104-C-1C-01
126304047	5000-0000-105-C-1C-01
126304048	5000-0000-106-C-1C-01
126304049	3107-0000-192-C-1C-01
126304050	3107-0000-193-C-1C-01
1200748006	Method Blank (MB)
1200748009	Laboratory Control Sample (LCS)
1200748007	126304045(5000-0000-103-C-1C-01) Sample Duplicate (DUP)
1200748008	126304045(5000-0000-103-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304045 (5000-0000-103-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Sample 1200748009 (LCS) was recounted due to a peak shift.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Manual Integration
Manual integration of alpha spectroscopy spectrum 126304050 (3107-0000-193-C-1C-01) was performed to fully separate counts in Regions of Interest which would have been biased.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	384471
Prep Batch Number:	384228
Dry Soil Prep GL-RAD-A-021 Batch Number:	384227

Sample ID	Client ID
126304045	5000-0000-103-C-1C-01
126304046	5000-0000-104-C-1C-01
126304047	5000-0000-105-C-1C-01
126304048	5000-0000-106-C-1C-01
126304049	3107-0000-192-C-1C-01
126304050	3107-0000-193-C-1C-01
1200748010	Method Blank (MB)
1200748013	Laboratory Control Sample (LCS)

1200748011	126304046(5000-0000-104-C-1C-01) Sample Duplicate (DUP)
1200748012	126304046(5000-0000-104-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-035 REV# 5.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304046 (5000-0000-104-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information
Product: **Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived**

Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	384321
Prep Batch Number:	384224

Sample ID	Client ID
126304001	5000-0000-103-SI
126304002	5000-0000-104-SP
126304003	5000-0000-104-SI
126304004	5000-0000-105-SP
126304005	5000-0000-105-SI
126304006	5000-0000-106-SP
126304007	9312-0003-107-S
126304008	9312-0003-108-S
126304009	9312-0003-109-S
126304010	9312-0003-110-S
126304011	9312-0003-111-S
126304012	9312-0003-112-S
126304013	3107-0000-192-SI
126304014	3107-0000-192-SP
126304015	3107-0000-193-SI
126304016	3107-0000-193-SP
126304017	5000-0000-103-C-1C-01
126304018	5000-0000-104-C-1C-01
126304019	5000-0000-105-C-1C-01
126304020	5000-0000-106-C-1C-01
1200747611	Method Blank (MB)
1200747613	Laboratory Control Sample (LCS)
1200747612	126304008(9312-0003-108-S) Sample Duplicate (DUP)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304008 (9312-0003-108-S).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Sample 126304008 (9312-0003-108-S) was recounted due to high relative percent difference for PB-212 and PB-214.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information

Qualifier	Reason	Analyte	Sample
UI	The data is rejected due to interference.	Cesium-134	126304005
UI	The data is rejected due to low abundance.	Actinium-228	126304007
		Bismuth-214	126304003
		Cesium-134	126304002
			126304004
			126304006
			126304012
			126304015
		Thallium-208	126304002
UI	The data is rejected due to no valid peak.	Bismuth-212	126304018
		Cesium-137	126304010
			126304018

Method/Analysis Information

Product:	Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	384330
Prep Batch Number:	384230

Sample ID	Client ID
126304021	3107-0000-192-C-1C-01
126304022	3107-0000-193-C-1C-01
126304023	5000-0000-103-C-1C-02
126304024	5000-0000-103-C-2C-01
126304025	5000-0000-103-C-3C-03
126304026	5000-0000-103-C-3C-04
126304027	5000-0000-104-C-1C-02
126304028	5000-0000-104-C-2C-01
126304029	5000-0000-104-C-3C-03
126304030	5000-0000-104-C-3C-04
126304031	5000-0000-105-C-1C-02

126304032	5000-0000-105-C-3C-01
126304033	5000-0000-105-C-4C-03
126304034	5000-0000-105-C-4C-04
126304035	5000-0000-106-C-1C-02
126304036	5000-0000-106-C-3C-01
126304037	5000-0000-106-C-4C-03
126304038	5000-0000-106-C-4C-04
126304039	3107-0000-192-C-1C-02
126304040	3107-0000-192-C-2C-03
1200747615	Method Blank (MB)
1200747617	Laboratory Control Sample (LCS)
1200747616	126304027(5000-0000-104-C-1C-02) Sample Duplicate (DUP)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304027 (5000-0000-104-C-1C-02).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information

Qualifier	Reason	Analyte	Sample
UI	The data is rejected due to interference.	Europium-155	126304029
UI	The data is rejected due to low abundance.	Actinium-228	126304029
			126304036
		Bismuth-214	1200747615
		Cesium-134	126304025
			126304026
		Radium-226	1200747615
		Thallium-208	126304033
UI	The data is rejected due to no valid peak.	Bismuth-212	126304028
			126304038
			126304039

Method/Analysis Information

Product:	**Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	384336
Prep Batch Number:	384230

Sample ID	Client ID
126304041	3107-0000-192-C-2C-04
126304042	3107-0000-193-C-1C-02
126304043	3107-0000-193-C-2C-03
126304044	3107-0000-193-C-2C-04
1200747624	Method Blank (MB)
1200747626	Laboratory Control Sample (LCS)
1200747625	126303001(3101-0000-176-B01-01) Sample Duplicate (DUP)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 126303001 (3101-0000-176-B01-01).

QC Information
The duplicate sample, 1200747625 (3101-0000-176-B01-01), failed relative percent difference.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to low abundance.	Bismuth-214	1200747625
		Silver-108m	126304044

Method/Analysis Information

Product:	**GFPC, Sr90, solid Quick TAT**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	384353
Prep Batch Number:	384225
Dry Soil Prep GL-RAD-A-021 Batch Number:	384224

Sample ID	Client ID
126304001	5000-0000-103-SI
126304002	5000-0000-104-SP
126304003	5000-0000-104-SI
126304004	5000-0000-105-SP
126304005	5000-0000-105-SI
126304006	5000-0000-106-SP
126304007	9312-0003-107-S
126304008	9312-0003-108-S
126304009	9312-0003-109-S
126304010	9312-0003-110-S
126304011	9312-0003-111-S
126304012	9312-0003-112-S
126304013	3107-0000-192-SI
126304014	3107-0000-192-SP
126304015	3107-0000-193-SI
126304016	3107-0000-193-SP
1200747676	Method Blank (MB)

1200747679	Laboratory Control Sample (LCS)
1200747677	126304006(5000-0000-106-SP) Sample Duplicate (DUP)
1200747678	126304006(5000-0000-106-SP) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304006 (5000-0000-106-SP).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Additional Comments
Samples 126304003 (5000-0000-104-SI), 126304014 (3107-0000-192-SP), and 126304016 (3107-0000-193-SP) were verified by recounting at least five days from the separation date.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GFPC, Sr90, solid Quick TAT**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	384363
Prep Batch Number:	384231
Dry Soil Prep GL-RAD-A-021 Batch Number:	384230

Sample ID	Client ID
126304017	5000-0000-103-C-1C-01
126304018	5000-0000-104-C-1C-01
126304019	5000-0000-105-C-1C-01
126304020	5000-0000-106-C-1C-01
126304021	3107-0000-192-C-1C-01
126304022	3107-0000-193-C-1C-01
126304023	5000-0000-103-C-1C-02
126304024	5000-0000-103-C-2C-01
126304025	5000-0000-103-C-3C-03
126304026	5000-0000-103-C-3C-04
126304027	5000-0000-104-C-1C-02
126304028	5000-0000-104-C-2C-01
126304029	5000-0000-104-C-3C-03
126304030	5000-0000-104-C-3C-04
126304031	5000-0000-105-C-1C-02
126304032	5000-0000-105-C-3C-01
1200747686	Method Blank (MB)
1200747689	Laboratory Control Sample (LCS)
1200747687	126304017(5000-0000-103-C-1C-01) Sample Duplicate (DUP)
1200747688	126304017(5000-0000-103-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 126304017 (5000-0000-103-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Additional Comments
Samples 1200747687 (5000-0000-103-C-1C-01), 126304017 (5000-0000-103-C-1C-01), 126304018 (5000-0000-104-C-1C-01), 126304021 (3107-0000-192-C-1C-01), and 126304022 (3107-0000-193-C-1C-01) were verified by recounting at least five days from the separation date.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**GFPC, Sr90, solid Quick TAT**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	384365
Prep Batch Number:	384231
Dry Soil Prep GL-RAD-A-021 Batch Number:	384230

Sample ID	Client ID
126304033	5000-0000-105-C-4C-03
126304034	5000-0000-105-C-4C-04
126304035	5000-0000-106-C-1C-02
126304036	5000-0000-106-C-3C-01
126304037	5000-0000-106-C-4C-03
126304038	5000-0000-106-C-4C-04
126304039	3107-0000-192-C-1C-02
126304040	3107-0000-192-C-2C-03
126304041	3107-0000-192-C-2C-04
126304042	3107-0000-193-C-1C-02
126304043	3107-0000-193-C-2C-03
126304044	3107-0000-193-C-2C-04

1200747700	Method Blank (MB)
1200747703	Laboratory Control Sample (LCS)
1200747701	126304036(5000-0000-106-C-3C-01) Sample Duplicate (DUP)
1200747702	126304036(5000-0000-106-C-3C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304036 (5000-0000-106-C-3C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)**
Analytical Method:	DOE EML HASL-300, Tc-02-RC Modified
Analytical Batch Number:	384420

Sample ID	Client ID
126304045	5000-0000-103-C-1C-01
126304046	5000-0000-104-C-1C-01
126304047	5000-0000-105-C-1C-01
126304048	5000-0000-106-C-1C-01
126304049	3107-0000-192-C-1C-01
126304050	3107-0000-193-C-1C-01
1200747840	Method Blank (MB)
1200747843	Laboratory Control Sample (LCS)
1200747841	126304045(5000-0000-103-C-1C-01) Sample Duplicate (DUP)
1200747842	126304045(5000-0000-103-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-005 REV# 11.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304045 (5000-0000-103-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)
Analytical Method:	DOE RESL Fe-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	384424
Prep Batch Number:	384228
Dry Soil Prep GL-RAD-A-021 Batch Number:	384227

Sample ID	Client ID
126304045	5000-0000-103-C-1C-01
126304046	5000-0000-104-C-1C-01
126304047	5000-0000-105-C-1C-01
126304048	5000-0000-106-C-1C-01
126304049	3107-0000-192-C-1C-01
126304050	3107-0000-193-C-1C-01
1200747853	Method Blank (MB)
1200747856	Laboratory Control Sample (LCS)
1200747854	126304050(3107-0000-193-C-1C-01) Sample Duplicate (DUP)
1200747855	126304050(3107-0000-193-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-040 REV# 2.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304050 (3107-0000-193-C-1C-01).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Samples 1200747854 (3107-0000-193-C-1C-01), 126304045 (5000-0000-103-C-1C-01), 126304046 (5000-0000-104-C-1C-01), 126304047 (5000-0000-105-C-1C-01), 126304048 (5000-0000-106-C-1C-01), 126304049 (3107-0000-192-C-1C-01), and 126304050 (3107-0000-193-C-1C-01) were recounted due to high MDAs.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 164843 was generated due to RDL less than MDA. 1. Samples 126304045, 126304046, 126304047, 126304048, 126304049, 126304050, and 1200747854 did not meet the detection limit due to lower tracer yields. Samples were recounted for 120 minutes. 1. Reporting results.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)**
Analytical Method:	DOE RESL Ni-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	384425
Prep Batch Number:	384228
Dry Soil Prep GL-RAD-A-021 Batch Number:	384227

Sample ID	Client ID
126304045	5000-0000-103-C-1C-01
126304046	5000-0000-104-C-1C-01
126304047	5000-0000-105-C-1C-01
126304048	5000-0000-106-C-1C-01
126304049	3107-0000-192-C-1C-01
126304050	3107-0000-193-C-1C-01
1200747867	Method Blank (MB)
1200747870	Laboratory Control Sample (LCS)
1200747868	126304050(3107-0000-193-C-1C-01) Sample Duplicate (DUP)
1200747869	126304050(3107-0000-193-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-022 REV# 6.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304050 (3107-0000-193-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**LSC, Tritium Dist, Solid-HTD2,ALL FSS**
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	384413

Sample ID	Client ID
126304001	5000-0000-103-SI
126304002	5000-0000-104-SP
126304003	5000-0000-104-SI
126304004	5000-0000-105-SP
126304005	5000-0000-105-SI
126304006	5000-0000-106-SP
126304007	9312-0003-107-S
126304008	9312-0003-108-S
126304009	9312-0003-109-S

126304010	9312-0003-110-S
126304011	9312-0003-111-S
126304012	9312-0003-112-S
126304013	3107-0000-192-SI
126304014	3107-0000-192-SP
126304015	3107-0000-193-SI
126304016	3107-0000-193-SP
1200747813	Method Blank (MB)
1200747816	Laboratory Control Sample (LCS)
1200747814	126304001(5000-0000-103-SI) Sample Duplicate (DUP)
1200747815	126304001(5000-0000-103-SI) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304001 (5000-0000-103-SI).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	384414

Sample ID	Client ID
126304017	5000-0000-103-C-1C-01
126304018	5000-0000-104-C-1C-01
126304019	5000-0000-105-C-1C-01
126304020	5000-0000-106-C-1C-01
126304021	3107-0000-192-C-1C-01
126304022	3107-0000-193-C-1C-01
126304023	5000-0000-103-C-1C-02
126304024	5000-0000-103-C-2C-01
126304025	5000-0000-103-C-3C-03
126304026	5000-0000-103-C-3C-04
126304027	5000-0000-104-C-1C-02
126304028	5000-0000-104-C-2C-01
126304029	5000-0000-104-C-3C-03
126304030	5000-0000-104-C-3C-04
1200747817	Method Blank (MB)
1200747820	Laboratory Control Sample (LCS)
1200747818	126304017(5000-0000-103-C-1C-01) Sample Duplicate (DUP)
1200747819	126304017(5000-0000-103-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304017 (5000-0000-103-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Sample 1200747817 (MB) was recounted due to count room error.
Sample 1200747819 (5000-0000-103-C-1C-01) was recounted due to low/high recovery.
The batch was recounted due to the detector being locked out.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 163681 was generated due to Failed Recovery for LCS/MS/PS. 1. The matrix spike 1200747819 did not meet the recovery requirement. The matrix spike does meet the requirement at 114 percent when the duplicate is used to calculate the recovery. The sample and the duplicate meet the relative percent difference. 1. Reporting results.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)**
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	384419

Sample ID	Client ID
126304031	5000-0000-105-C-1C-02
126304032	5000-0000-105-C-3C-01
126304033	5000-0000-105-C-4C-03
126304034	5000-0000-105-C-4C-04
126304035	5000-0000-106-C-1C-02
126304036	5000-0000-106-C-3C-01
126304037	5000-0000-106-C-4C-03
126304038	5000-0000-106-C-4C-04
126304039	3107-0000-192-C-1C-02
126304040	3107-0000-192-C-2C-03
126304041	3107-0000-192-C-2C-04
126304042	3107-0000-193-C-1C-02
126304043	3107-0000-193-C-2C-03
126304044	3107-0000-193-C-2C-04
1200747836	Method Blank (MB)
1200747839	Laboratory Control Sample (LCS)
1200747837	126304031(5000-0000-105-C-1C-02) Sample Duplicate (DUP)
1200747838	126304031(5000-0000-105-C-1C-02) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304031 (5000-0000-105-C-1C-02).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Samples 1200747837 (5000-0000-105-C-1C-02), 1200747838 (5000-0000-105-C-1C-02), 126304043 (3107-0000-193-C-2C-03), and 126304044 (3107-0000-193-C-2C-04) were recounted due to the quench number being outside the calibration range.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint C14, Solid-HTD2,ALL2 (CT)**
Analytical Method:	EPA EERF C-01 Modified
Analytical Batch Number:	384423

Sample ID	Client ID
126304045	5000-0000-103-C-1C-01
126304046	5000-0000-104-C-1C-01
126304047	5000-0000-105-C-1C-01
126304048	5000-0000-106-C-1C-01
126304049	3107-0000-192-C-1C-01

126304050	3107-0000-193-C-1C-01
1200747848	Method Blank (MB)
1200747851	Laboratory Control Sample (LCS)
1200747849	126304045(5000-0000-103-C-1C-01) Sample Duplicate (DUP)
1200747850	126304045(5000-0000-103-C-1C-01) Matrix Spike (MS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-003 REV# 7.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 126304045 (5000-0000-103-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the

requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:
GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.
The following data validator verified the information presented in this case narrative:

Reviewer: A L Cole 12/10/04

General Engineering Laboratories
Form GEL-XXX
Rev. 06/02

NCR Report No.: 163681
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
06-DEC-04	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LSC	EPA 906.0 Modified	Solid	YANK
Batch ID:	**Sample Numbers:**		
384414	See Below		

Potentially affected work order(s)(SDG): 126304(MSR#04-3908)

Application Issues:

Failed Recovery for LCS/MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The matrix spike 1200747819 did not meet the recovery requirement. The matrix spike does meet the requirement at 114 percent when the duplicate is used to calculate the recovery. The sample and the duplicate meet the relative percent difference.	1. Reporting results.

Originator's Name:
Melanie Aycock 06-DEC-04

Data Validator/Group Leader:
Scott Moreland 06-DEC-04

Quality Review:

Corrective Action:

Director:

Corrective Action ID and Complete Date:

General Engineering Laboratories
Form GEL-XXX
Rev. 06/02

NCR Report No.: 164843
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
10-DEC-04	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LSC	DOE RESL Fe-1, Modified	Solid	YANK
Batch ID:	**Sample Numbers:**		
384424	See Below		

Potentially affected work order(s)(SDG): 126304(MSR#04-3908)

Application Issues:

RDL less than MDA

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Samples 126304045, 126304046, 126304047, 126304048, 126304049, 126304050, and 1200747854 did not meet the detection limit due to lower tracer yields. Samples were recounted for 120 minutes.	1. Reporting results.

Originator's Name:
Melanie Aycock 10-DEC-04

Data Validator/Group Leader:
Scott Moreland 10-DEC-04

Quality Review:

Corrective Action:

Director:

Corrective Action ID and Complete Date:

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#04-3908 GEL Work Order: 126304

The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.
** Indicates the analyte is a surrogate compound.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-103-SI	Project:	YANK01304
Sample ID:	126304001	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	8.51%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived													
Actinium-228		0.582	+/-0.185	0.0698	+/-0.181	0.153	pCi/g		AKB	12/04/04	1247	384321	1
Americium-241	U	0.049	+/-0.103	0.0756	+/-0.101	0.158	pCi/g						
Bismuth-212	U	0.262	+/-0.259	0.127	+/-0.253	0.281	pCi/g						
Bismuth-214		0.468	+/-0.102	0.0348	+/-0.0997	0.0752	pCi/g						
Cesium-134	U	0.0112	+/-0.0239	0.0215	+/-0.0235	0.047	pCi/g						
Cesium-137	U	0.00755	+/-0.0212	0.0191	+/-0.0208	0.0415	pCi/g						
Cobalt-60	U	0.0108	+/-0.0204	0.0198	+/-0.0199	0.0449	pCi/g						
Europium-152	U	-0.0321	+/-0.0556	0.0391	+/-0.0545	0.0844	pCi/g						
Europium-154	U	0.106	+/-0.0718	0.0676	+/-0.0704	0.150	pCi/g						
Europium-155	U	0.0252	+/-0.0539	0.0515	+/-0.0528	0.108	pCi/g						
Lead-212		0.503	+/-0.0697	0.0237	+/-0.0683	0.0503	pCi/g						
Lead-214		0.429	+/-0.0934	0.0336	+/-0.0915	0.0718	pCi/g						
Manganese-54	U	-0.0179	+/-0.0192	0.0141	+/-0.0189	0.0318	pCi/g						
Niobium-94	U	-0.000447	+/-0.0177	0.0152	+/-0.0173	0.0335	pCi/g						
Potassium-40		12.0	+/-1.35	0.156	+/-1.33	0.366	pCi/g						
Radium-226		0.468	+/-0.102	0.0348	+/-0.0997	0.0752	pCi/g						
Silver-108m	U	-0.00403	+/-0.0187	0.0154	+/-0.0184	0.0332	pCi/g						
Thallium-208		0.186	+/-0.0416	0.0167	+/-0.0408	0.0364	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.0356	+/-0.0297	0.0264	+/-0.0314	0.057	pCi/g		JMB1	12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	1.05	+/-5.13	4.26	+/-5.13	8.53	pCi/g		LAG1	12/02/04	1733	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-103-SI
Sample ID: 126304001

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	80	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-104-SP	Project:	YANK01304
Sample ID:	126304002	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	12%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived													
Actinium-228		0.546	+/-0.151	0.0683	+/-0.148	0.149	pCi/g		AKB	12/04/04	1456	384321	1
Americium-241	U	0.0444	+/-0.0784	0.0724	+/-0.0768	0.152	pCi/g						
Bismuth-212	U	0.194	+/-0.186	0.114	+/-0.183	0.253	pCi/g						
Bismuth-214		0.320	+/-0.0818	0.028	+/-0.0801	0.0612	pCi/g						
Cesium-134	U	0.00	+/-0.0323	0.0209	+/-0.0316	0.0455	pCi/g						
	UI												
Cesium-137	U	0.0257	+/-0.0208	0.0203	+/-0.0204	0.0437	pCi/g						
Cobalt-60	U	0.0168	+/-0.032	0.0182	+/-0.0313	0.0413	pCi/g						
Europium-152	U	0.0169	+/-0.0491	0.0439	+/-0.0481	0.0936	pCi/g						
Europium-154	U	-0.00894	+/-0.0688	0.0551	+/-0.0674	0.124	pCi/g						
Europium-155	U	0.0266	+/-0.0499	0.0488	+/-0.0489	0.102	pCi/g						
Lead-212		0.404	+/-0.0645	0.0257	+/-0.0632	0.054	pCi/g						
Lead-214		0.388	+/-0.0929	0.0309	+/-0.0911	0.066	pCi/g						
Manganese-54	U	0.0118	+/-0.0196	0.018	+/-0.0192	0.0393	pCi/g						
Niobium-94	U	0.0174	+/-0.0164	0.0159	+/-0.016	0.0345	pCi/g						
Potassium-40		13.4	+/-1.40	0.117	+/-1.38	0.284	pCi/g						
Radium-226		0.320	+/-0.0818	0.028	+/-0.0801	0.0612	pCi/g						
Silver-108m	U	-0.0015	+/-0.0173	0.0146	+/-0.017	0.0314	pCi/g						
Thallium-208	U	0.00	+/-0.0404	0.032	+/-0.0396	0.0668	pCi/g						
	UI												
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.0293	+/-0.0267	0.0242	+/-0.0276	0.0518	pCi/g		JMB1	12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	-6.08	+/-4.73	4.20	+/-4.74	8.40	pCi/g		LAG1	12/02/04	1805	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

GENERAL ENGINEERING LABORATORIES, LLC
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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-104-SP
Sample ID: 126304002

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	92	(25%–125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-104-SI	Project:	YANK01304
Sample ID:	126304003	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	8.17%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived													
Actinium-228		0.315	+/-0.128	0.0581	+/-0.125	0.128	pCi/g		AKB	12/04/04	1247	384321	1
Americium-241	U	0.0304	+/-0.0795	0.0697	+/-0.0779	0.146	pCi/g						
Bismuth-212	U	0.124	+/-0.171	0.157	+/-0.167	0.338	pCi/g						
Bismuth-214	U	0.00	+/-0.081	0.0643	+/-0.0794	0.134	pCi/g						
	U1												
Cesium-134	U	0.0268	+/-0.0266	0.0202	+/-0.0261	0.0438	pCi/g						
Cesium-137	U	-0.00376	+/-0.019	0.0163	+/-0.0186	0.0355	pCi/g						
Cobalt-60	U	0.0131	+/-0.0204	0.019	+/-0.020	0.0426	pCi/g						
Europium-152	U	0.00173	+/-0.0484	0.0431	+/-0.0474	0.0918	pCi/g						
Europium-154	U	0.0386	+/-0.0759	0.0609	+/-0.0744	0.134	pCi/g						
Europium-155	U	-0.00892	+/-0.0535	0.0485	+/-0.0524	0.101	pCi/g						
Lead-212		0.294	+/-0.0712	0.0335	+/-0.0697	0.0697	pCi/g						
Lead-214		0.368	+/-0.0883	0.0318	+/-0.0865	0.0676	pCi/g						
Manganese-54	U	0.0167	+/-0.023	0.0189	+/-0.0225	0.0409	pCi/g						
Niobium-94	U	-0.00777	+/-0.0164	0.0135	+/-0.0161	0.0297	pCi/g						
Potassium-40		12.3	+/-1.29	0.145	+/-1.27	0.337	pCi/g						
Radium-226		0.268	+/-0.081	0.0291	+/-0.0794	0.0632	pCi/g						
Silver-108m	U	0.0103	+/-0.0261	0.0155	+/-0.0255	0.0331	pCi/g						
Thallium-208		0.101	+/-0.0435	0.0178	+/-0.0426	0.0383	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90		0.160	+/-0.0355	0.0229	+/-0.052	0.0492	pCi/g		JMB1	12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	2.25	+/-4.58	3.76	+/-4.58	7.52	pCi/g		LAG1	12/02/04	1837	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-104-SI
Sample ID: 126304003

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	96	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-105-SP	Project:	YANK01304
Sample ID:	126304004	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	2.48%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived													
Actinium-228		0.515	+/-0.144	0.0687	+/-0.141	0.152	pCi/g		AKB	12/04/04	1247	384321	1
Americium-241	U	-0.00313	+/-0.136	0.108	+/-0.133	0.228	pCi/g						
Bismuth-212		0.559	+/-0.224	0.146	+/-0.219	0.319	pCi/g						
Bismuth-214		0.539	+/-0.0847	0.0322	+/-0.083	0.0704	pCi/g						
Cesium-134	U	0.00	+/-0.0401	0.0244	+/-0.0393	0.053	pCi/g						
	UI												
Cesium-137	U	0.00941	+/-0.023	0.0205	+/-0.0226	0.0445	pCi/g						
Cobalt-60	U	0.00619	+/-0.0448	0.023	+/-0.0439	0.0517	pCi/g						
Europium-152	U	-0.0316	+/-0.0565	0.0451	+/-0.0554	0.0972	pCi/g						
Europium-154	U	0.00614	+/-0.0743	0.0633	+/-0.0728	0.142	pCi/g						
Europium-155	U	0.0183	+/-0.0626	0.059	+/-0.0614	0.124	pCi/g						
Lead-212		0.428	+/-0.0701	0.0423	+/-0.0687	0.0878	pCi/g						
Lead-214		0.581	+/-0.107	0.0362	+/-0.105	0.0773	pCi/g						
Manganese-54	U	0.00864	+/-0.0196	0.0174	+/-0.0192	0.0385	pCi/g						
Niobium-94	U	0.0147	+/-0.0196	0.018	+/-0.0192	0.0391	pCi/g						
Potassium-40		12.7	+/-1.05	0.154	+/-1.03	0.365	pCi/g						
Radium-226		0.539	+/-0.0847	0.0322	+/-0.083	0.0704	pCi/g						
Silver-108m	U	-0.00303	+/-0.0188	0.0164	+/-0.0184	0.0355	pCi/g						
Thallium-208		0.177	+/-0.0438	0.0169	+/-0.043	0.037	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.00464	+/-0.0191	0.0188	+/-0.0191	0.0409	pCi/g		JMB1	12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	0.560	+/-5.12	4.28	+/-5.12	8.56	pCi/g		LAG1	12/02/04	1909	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-105-SP
Sample ID: 126304004

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	99	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h ' Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-105-SI	Project:	YANK01304
Sample ID:	126304005	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	12.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228		0.878	+/-0.196	0.0749	+/-0.192	0.166	pCi/g		AKB 12/04/04	1248	384321	1
Americium-241	U	0.0132	+/-0.0402	0.0359	+/-0.0394	0.0742	pCi/g					
Bismuth-212		0.624	+/-0.384	0.174	+/-0.377	0.380	pCi/g					
Bismuth-214		0.513	+/-0.124	0.0487	+/-0.122	0.104	pCi/g					
Cesium-134	U UI	0.00	+/-0.0391	0.0219	+/-0.0384	0.0485	pCi/g					
Cesium-137	U	-0.0123	+/-0.0256	0.0207	+/-0.0251	0.0454	pCi/g					
Cobalt-60	U	0.0475	+/-0.018	0.0294	+/-0.0176	0.0648	pCi/g					
Europium-152	U	-0.0355	+/-0.0831	0.059	+/-0.0815	0.125	pCi/g					
Europium-154	U	0.063	+/-0.0891	0.0818	+/-0.0873	0.180	pCi/g					
Europium-155	U	0.0133	+/-0.063	0.0584	+/-0.0617	0.121	pCi/g					
Lead-212		0.533	+/-0.0856	0.039	+/-0.0838	0.0812	pCi/g					
Lead-214		0.667	+/-0.148	0.0415	+/-0.145	0.0881	pCi/g					
Manganese-54	U	0.00582	+/-0.0254	0.022	+/-0.0249	0.0482	pCi/g					
Niobium-94	U	0.0159	+/-0.0234	0.0214	+/-0.023	0.0462	pCi/g					
Potassium-40		13.3	+/-1.43	0.204	+/-1.40	0.468	pCi/g					
Radium-226		0.513	+/-0.124	0.0487	+/-0.122	0.104	pCi/g					
Silver-108m	U	0.0458	+/-0.0235	0.0219	+/-0.0231	0.0465	pCi/g					
Thallium-208		0.209	+/-0.0513	0.0212	+/-0.0503	0.046	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90	U	0.0168	+/-0.0255	0.0243	+/-0.0258	0.052	pCi/g		JMB1 12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	1.30	+/-5.32	4.41	+/-5.32	8.83	pCi/g		LAG1 12/02/04	1941	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-105-SI
Sample ID: 126304005

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	93	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-106-SP	Project:	YANK01304
Sample ID:	126304006	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	7.56%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228		0.660	+/-0.166	0.0773	+/-0.163	0.168	pCi/g		AKB 12/04/04	1249	384321	1
Americium-241	U	0.0122	+/-0.092	0.0904	+/-0.0901	0.188	pCi/g					
Bismuth-212	U	0.283	+/-0.270	0.157	+/-0.264	0.340	pCi/g					
Bismuth-214		0.590	+/-0.105	0.035	+/-0.103	0.0755	pCi/g					
Cesium-134	U UI	0.00	+/-0.0403	0.024	+/-0.0395	0.0518	pCi/g					
Cesium-137	U	0.00139	+/-0.0224	0.0193	+/-0.022	0.0417	pCi/g					
Cobalt-60	U	-0.0266	+/-0.0337	0.0203	+/-0.0331	0.0457	pCi/g					
Europium-152	U	0.0252	+/-0.0562	0.0528	+/-0.0551	0.112	pCi/g					
Europium-154	U	-0.0382	+/-0.0749	0.0475	+/-0.0734	0.109	pCi/g					
Europium-155	U	0.0333	+/-0.0606	0.0585	+/-0.0594	0.122	pCi/g					
Lead-212		0.563	+/-0.0639	0.0291	+/-0.0627	0.0611	pCi/g					
Lead-214		0.698	+/-0.0989	0.0346	+/-0.0969	0.0735	pCi/g					
Manganese-54	U	0.00231	+/-0.0267	0.0207	+/-0.0261	0.0448	pCi/g					
Niobium-94	U	0.0204	+/-0.0269	0.0202	+/-0.0264	0.0432	pCi/g					
Potassium-40		10.9	+/-1.05	0.196	+/-1.03	0.441	pCi/g					
Radium-226		0.590	+/-0.105	0.035	+/-0.103	0.0755	pCi/g					
Silver-108m	U	-0.00971	+/-0.0183	0.0156	+/-0.0179	0.0335	pCi/g					
Thallium-208		0.209	+/-0.0488	0.0174	+/-0.0478	0.0379	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90	U	-0.00756	+/-0.0239	0.0252	+/-0.024	0.0542	pCi/g		JMB1 12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	0.447	+/-5.02	4.20	+/-5.02	8.40	pCi/g		LAG1 12/02/04	2014	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-106-SP
Sample ID: 126304006

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	85	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	9312-0003-107-S	Project:	YANK01304
Sample ID:	126304007	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.31%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.00	+/-0.173	0.131	+/-0.169	0.275	pCi/g		AKB 12/04/04	1249	384321	1
	UI											
Americium-241	U	0.00358	+/-0.104	0.0826	+/-0.102	0.173	pCi/g					
Bismuth-212		0.313	+/-0.245	0.113	+/-0.240	0.254	pCi/g					
Bismuth-214		0.403	+/-0.0916	0.0364	+/-0.0898	0.0787	pCi/g					
Cesium-134	U	0.0306	+/-0.0258	0.0244	+/-0.0253	0.0529	pCi/g					
Cesium-137	U	-0.0117	+/-0.0213	0.0169	+/-0.0209	0.0373	pCi/g					
Cobalt-60	U	-0.0199	+/-0.0227	0.0157	+/-0.0222	0.0369	pCi/g					
Europium-152	U	-0.0103	+/-0.0541	0.0446	+/-0.053	0.0959	pCi/g					
Europium-154	U	-0.0277	+/-0.0748	0.0593	+/-0.0733	0.134	pCi/g					
Europium-155	U	-0.00987	+/-0.0604	0.0494	+/-0.0592	0.104	pCi/g					
Lead-212		0.420	+/-0.0685	0.027	+/-0.0671	0.0571	pCi/g					
Lead-214		0.443	+/-0.100	0.0361	+/-0.0982	0.077	pCi/g					
Manganese-54	U	0.014	+/-0.0242	0.0214	+/-0.0237	0.0465	pCi/g					
Niobium-94	U	0.0138	+/-0.0208	0.0188	+/-0.0204	0.0407	pCi/g					
Potassium-40		14.8	+/-1.46	0.127	+/-1.43	0.309	pCi/g					
Radium-226		0.403	+/-0.0916	0.0364	+/-0.0898	0.0787	pCi/g					
Silver-108m	U	-0.0268	+/-0.0169	0.0124	+/-0.0166	0.0273	pCi/g					
Thallium-208		0.115	+/-0.047	0.0177	+/-0.0461	0.0386	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90	U	0.0124	+/-0.0218	0.0208	+/-0.022	0.0448	pCi/g		JMB1 12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-2.5	+/-4.07	3.51	+/-4.07	7.01	pCi/g		LAG1 12/02/04	2046	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 9312-0003-107-S
Sample ID: 126304007

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	98	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	9312-0003-108-S	Project:	YANK01304
Sample ID:	126304008	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	11.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth													
Waived													
Actinium-228		0.855	+/-0.208	0.0678	+/-0.204	0.151	pCi/g		AKB	12/06/04	1414	384321	1
Americium-241	U	-0.0404	+/-0.142	0.131	+/-0.139	0.276	pCi/g						
Bismuth-212		0.585	+/-0.342	0.175	+/-0.335	0.380	pCi/g						
Bismuth-214		0.768	+/-0.114	0.0401	+/-0.112	0.0868	pCi/g						
Cesium-134	U	0.0187	+/-0.0259	0.0219	+/-0.0254	0.0483	pCi/g						
Cesium-137	U	0.00142	+/-0.0229	0.0203	+/-0.0225	0.0443	pCi/g						
Cobalt-60	U	0.0127	+/-0.026	0.0213	+/-0.0255	0.0483	pCi/g						
Europium-152	U	0.0182	+/-0.0755	0.0603	+/-0.074	0.129	pCi/g						
Europium-154	U	0.0265	+/-0.071	0.064	+/-0.0696	0.143	pCi/g						
Europium-155	U	0.0393	+/-0.0892	0.083	+/-0.0874	0.174	pCi/g						
Lead-212		0.752	+/-0.083	0.0345	+/-0.0814	0.0731	pCi/g						
Lead-214		0.756	+/-0.107	0.0428	+/-0.105	0.0914	pCi/g						
Manganese-54	U	0.0238	+/-0.0256	0.0241	+/-0.0251	0.0523	pCi/g						
Niobium-94	U	0.0153	+/-0.0238	0.022	+/-0.0233	0.0474	pCi/g						
Potassium-40		12.2	+/-1.07	0.151	+/-1.05	0.358	pCi/g						
Radium-226		0.768	+/-0.114	0.0401	+/-0.112	0.0868	pCi/g						
Silver-108m	U	0.0019	+/-0.0247	0.019	+/-0.0242	0.0409	pCi/g						
Thallium-208		0.264	+/-0.0602	0.0182	+/-0.059	0.040	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.0245	+/-0.0269	0.0247	+/-0.0276	0.0532	pCi/g		JMB1	12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	-0.809	+/-4.87	4.12	+/-4.87	8.23	pCi/g		LAG1	12/02/04	2118	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 9312-0003-108-S
Sample ID: 126304008

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	87	(25%–125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	9312-0003-109-S	Project:	YANK01304
Sample ID:	126304009	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	8.45%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228		0.669	+/-0.185	0.0664	+/-0.182	0.144	pCi/g		AKB 12/04/04	1249	384321	1
Americium-241	U	0.0564	+/-0.112	0.112	+/-0.110	0.232	pCi/g					
Bismuth-212		0.447	+/-0.273	0.133	+/-0.267	0.286	pCi/g					
Bismuth-214		0.576	+/-0.108	0.0301	+/-0.106	0.0647	pCi/g					
Cesium-134	U	0.0104	+/-0.0248	0.0217	+/-0.0243	0.0466	pCi/g					
Cesium-137	U	-0.0013	+/-0.019	0.0162	+/-0.0186	0.0351	pCi/g					
Cobalt-60	U	0.00795	+/-0.0206	0.0183	+/-0.0202	0.041	pCi/g					
Europium-152	U	0.0117	+/-0.0484	0.0451	+/-0.0474	0.0953	pCi/g					
Europium-154	U	0.00612	+/-0.0667	0.0571	+/-0.0654	0.126	pCi/g					
Europium-155	U	0.076	+/-0.0773	0.0538	+/-0.0757	0.112	pCi/g					
Lead-212		0.618	+/-0.0801	0.0271	+/-0.0785	0.0567	pCi/g					
Lead-214		0.724	+/-0.113	0.032	+/-0.111	0.0676	pCi/g					
Manganese-54	U	-0.0157	+/-0.0221	0.0141	+/-0.0217	0.0311	pCi/g					
Niobium-94	U	-0.00791	+/-0.019	0.0156	+/-0.0186	0.0335	pCi/g					
Potassium-40		12.2	+/-1.29	0.110	+/-1.27	0.263	pCi/g					
Radium-226		0.576	+/-0.108	0.0301	+/-0.106	0.0647	pCi/g					
Silver-108m	U	0.000235	+/-0.0156	0.0141	+/-0.0153	0.0301	pCi/g					
Thallium-208		0.231	+/-0.0481	0.0159	+/-0.0471	0.0342	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90	U	0.00708	+/-0.0233	0.0229	+/-0.0234	0.0493	pCi/g		JMB1 12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-1.65	+/-4.73	4.03	+/-4.73	8.07	pCi/g		LAG1 12/02/04	2150	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 9312-0003-109-S
Sample ID: 126304009

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	96	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	9312-0003-110-S	Project:	YANK01304
Sample ID:	126304010	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	4.95%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived													
Actinium-228		0.374	+/-0.151	0.0769	+/-0.148	0.166	pCi/g		AKB	12/04/04	1250	384321	1
Americium-241	U	-0.0196	+/-0.082	0.0709	+/-0.0804	0.148	pCi/g						
Bismuth-212		0.412	+/-0.270	0.121	+/-0.264	0.266	pCi/g						
Bismuth-214		0.272	+/-0.0886	0.0348	+/-0.0868	0.0749	pCi/g						
Cesium-134	U	0.0368	+/-0.031	0.0199	+/-0.0303	0.0434	pCi/g						
Cesium-137	U	0.00	+/-0.0346	0.0168	+/-0.0339	0.0366	pCi/g						
	UI												
Cobalt-60	U	-0.00273	+/-0.0215	0.0174	+/-0.0211	0.0398	pCi/g						
Europium-152	U	-0.0429	+/-0.0512	0.0397	+/-0.0502	0.0851	pCi/g						
Europium-154	U	-0.00937	+/-0.0712	0.0581	+/-0.0698	0.130	pCi/g						
Europium-155	U	0.0446	+/-0.0493	0.0482	+/-0.0483	0.101	pCi/g						
Lead-212		0.300	+/-0.064	0.0385	+/-0.0627	0.0797	pCi/g						
Lead-214		0.323	+/-0.0756	0.0327	+/-0.0741	0.0696	pCi/g						
Manganese-54	U	-0.0154	+/-0.0216	0.0161	+/-0.0211	0.0356	pCi/g						
Niobium-94	U	0.00576	+/-0.0194	0.015	+/-0.019	0.0328	pCi/g						
Potassium-40		14.1	+/-1.40	0.127	+/-1.38	0.305	pCi/g						
Radium-226		0.272	+/-0.0886	0.0348	+/-0.0868	0.0749	pCi/g						
Silver-108m	U	-0.0115	+/-0.0157	0.0129	+/-0.0153	0.028	pCi/g						
Thallium-208		0.158	+/-0.0423	0.018	+/-0.0415	0.0388	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.0115	+/-0.0271	0.0264	+/-0.0273	0.0566	pCi/g		JMB1	12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	0.575	+/-5.25	4.39	+/-5.25	8.77	pCi/g		LAG1	12/02/04	2222	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 9312-0003-110-S
Sample ID: 126304010

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	88	(25%–125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	9312-0003-111-S	Project:	YANK01304
Sample ID:	126304011	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	12.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived													
Actinium-228		0.801	+/-0.167	0.0632	+/-0.163	0.138	pCi/g		AKB	12/04/04	1250	384321	1
Americium-241	U	0.010	+/-0.0965	0.083	+/-0.0945	0.172	pCi/g						
Bismuth-212		0.662	+/-0.272	0.131	+/-0.267	0.283	pCi/g						
Bismuth-214		0.556	+/-0.0938	0.0346	+/-0.0919	0.0739	pCi/g						
Cesium-134	U	0.0417	+/-0.0252	0.0223	+/-0.0246	0.0479	pCi/g						
Cesium-137	U	0.00296	+/-0.0215	0.0186	+/-0.021	0.0399	pCi/g						
Cobalt-60	U	0.0129	+/-0.0227	0.0205	+/-0.0222	0.0454	pCi/g						
Europium-152	U	0.00521	+/-0.0548	0.0499	+/-0.0537	0.105	pCi/g						
Europium-154	U	0.0205	+/-0.0713	0.0622	+/-0.0699	0.136	pCi/g						
Europium-155	U	-0.02	+/-0.063	0.0573	+/-0.0618	0.119	pCi/g						
Lead-212		0.748	+/-0.0632	0.0291	+/-0.0619	0.0607	pCi/g						
Lead-214		0.628	+/-0.100	0.0355	+/-0.098	0.0749	pCi/g						
Manganese-54	U	0.0047	+/-0.0222	0.0199	+/-0.0217	0.0428	pCi/g						
Niobium-94	U	0.0073	+/-0.0212	0.0165	+/-0.0208	0.0354	pCi/g						
Potassium-40		11.2	+/-0.946	0.149	+/-0.927	0.341	pCi/g						
Radium-226		0.556	+/-0.0938	0.0346	+/-0.0919	0.0739	pCi/g						
Silver-108m	U	-0.00311	+/-0.0182	0.016	+/-0.0178	0.034	pCi/g						
Thallium-208		0.228	+/-0.0417	0.0192	+/-0.0408	0.041	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.00677	+/-0.0301	0.030	+/-0.0301	0.0637	pCi/g		JMB1	12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	3.76	+/-4.72	3.83	+/-4.73	7.66	pCi/g		LAG1	12/02/04	2254	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 9312-0003-111-S
Sample ID: 126304011

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	88	(25%–125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	9312-0003-112-S	Project:	YANK01304
Sample ID:	126304012	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	8.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived													
Actinium-228		0.693	+/-0.184	0.064	+/-0.181	0.140	pCi/g		AKB	12/04/04	1250	384321	1
Americium-241	U	-0.0216	+/-0.0305	0.0289	+/-0.0299	0.0596	pCi/g						
Bismuth-212		0.489	+/-0.276	0.135	+/-0.271	0.294	pCi/g						
Bismuth-214		0.647	+/-0.117	0.0298	+/-0.115	0.0646	pCi/g						
Cesium-134	U	0.00	+/-0.0342	0.026	+/-0.0335	0.0556	pCi/g						
	UI												
Cesium-137	U	0.0238	+/-0.0254	0.0238	+/-0.0249	0.0506	pCi/g						
Cobalt-60	U	-0.00104	+/-0.0241	0.0202	+/-0.0236	0.045	pCi/g						
Europium-152	U	-0.0271	+/-0.0527	0.0454	+/-0.0517	0.0962	pCi/g						
Europium-154	U	0.0109	+/-0.0734	0.0634	+/-0.072	0.139	pCi/g						
Europium-155	U	0.0186	+/-0.0469	0.0444	+/-0.046	0.0922	pCi/g						
Lead-212		0.639	+/-0.0787	0.0262	+/-0.0772	0.0548	pCi/g						
Lead-214		0.660	+/-0.100	0.0334	+/-0.098	0.0708	pCi/g						
Manganese-54	U	0.0263	+/-0.0248	0.0167	+/-0.0243	0.0366	pCi/g						
Niobium-94	U	0.0269	+/-0.0183	0.018	+/-0.0179	0.0386	pCi/g						
Potassium-40		10.7	+/-1.24	0.189	+/-1.22	0.425	pCi/g						
Radium-226		0.647	+/-0.117	0.0298	+/-0.115	0.0646	pCi/g						
Silver-108m	U	0.00681	+/-0.0183	0.0164	+/-0.0179	0.035	pCi/g						
Thallium-208		0.204	+/-0.0499	0.0181	+/-0.0489	0.0389	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.0488	+/-0.0305	0.0266	+/-0.0329	0.0568	pCi/g		JMB1	12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	3.53	+/-5.29	4.31	+/-5.30	8.63	pCi/g		LAG1	12/02/04	2326	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 9312-0003-112-S
Sample ID: 126304012

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	92	(25%–125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC
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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-192-SI	Project:	YANK01304
Sample ID:	126304013	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	9.64%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth													
Waived													
Actinium-228		0.409	+/-0.140	0.048	+/-0.137	0.104	pCi/g		AKB	12/04/04	1251	384321	1
Americium-241	U	0.0699	+/-0.0587	0.0535	+/-0.0575	0.111	pCi/g						
Bismuth-212		0.345	+/-0.172	0.0835	+/-0.169	0.182	pCi/g						
Bismuth-214		0.347	+/-0.0859	0.0256	+/-0.0841	0.0546	pCi/g						
Cesium-134	U	0.005	+/-0.0184	0.016	+/-0.018	0.0341	pCi/g						
Cesium-137	U	-0.000781	+/-0.017	0.0147	+/-0.0166	0.0312	pCi/g						
Cobalt-60	U	0.00571	+/-0.0174	0.0151	+/-0.017	0.033	pCi/g						
Europium-152	U	0.00762	+/-0.0416	0.0369	+/-0.0407	0.0779	pCi/g						
Europium-154	U	-0.0146	+/-0.0547	0.0446	+/-0.0536	0.0969	pCi/g						
Europium-155	U	-0.0224	+/-0.0479	0.0426	+/-0.0469	0.0886	pCi/g						
Lead-212		0.421	+/-0.0589	0.022	+/-0.0577	0.0459	pCi/g						
Lead-214		0.439	+/-0.0793	0.0261	+/-0.0777	0.0552	pCi/g						
Manganese-54	U	0.00525	+/-0.0172	0.0149	+/-0.0169	0.0318	pCi/g						
Niobium-94	U	-0.00158	+/-0.0143	0.0122	+/-0.014	0.0261	pCi/g						
Potassium-40		13.1	+/-1.23	0.132	+/-1.20	0.292	pCi/g						
Radium-226		0.347	+/-0.0859	0.0256	+/-0.0841	0.0546	pCi/g						
Silver-108m	U	0.0167	+/-0.0154	0.0142	+/-0.0151	0.0299	pCi/g						
Thallium-208		0.120	+/-0.0371	0.0138	+/-0.0364	0.0294	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.00144	+/-0.0248	0.0251	+/-0.0248	0.0538	pCi/g		JMB1	12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	-0.138	+/-5.01	4.21	+/-5.01	8.43	pCi/g		LAG1	12/02/04	2358	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0759	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-192-SI
Sample ID: 126304013

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	87	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-192-SP	Project:	YANK01304
Sample ID:	126304014	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	12.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived													
Actinium-228		0.520	+/-0.166	0.0476	+/-0.162	0.108	pCi/g		AKB	12/04/04	1457	384321	1
Americium-241	U	-0.0549	+/-0.101	0.0777	+/-0.0988	0.163	pCi/g						
Bismuth-212		0.433	+/-0.313	0.168	+/-0.306	0.361	pCi/g						
Bismuth-214		0.468	+/-0.094	0.0338	+/-0.0921	0.0732	pCi/g						
Cesium-134	U	0.0188	+/-0.0253	0.023	+/-0.0248	0.0498	pCi/g						
Cesium-137	U	0.0191	+/-0.0231	0.0214	+/-0.0226	0.0459	pCi/g						
Cobalt-60	U	0.00858	+/-0.0277	0.0242	+/-0.0272	0.0536	pCi/g						
Europium-152	U	0.027	+/-0.0547	0.0485	+/-0.0536	0.103	pCi/g						
Europium-154	U	0.029	+/-0.0683	0.061	+/-0.067	0.136	pCi/g						
Europium-155	U	0.0314	+/-0.0541	0.0522	+/-0.053	0.109	pCi/g						
Lead-212		0.461	+/-0.0718	0.0298	+/-0.0703	0.0624	pCi/g						
Lead-214		0.545	+/-0.0944	0.032	+/-0.0925	0.0686	pCi/g						
Manganese-54	U	0.0158	+/-0.0213	0.0194	+/-0.0209	0.0423	pCi/g						
Niobium-94	U	-0.0081	+/-0.0196	0.016	+/-0.0192	0.0348	pCi/g						
Potassium-40		12.2	+/-1.29	0.154	+/-1.26	0.359	pCi/g						
Radium-226		0.468	+/-0.094	0.0338	+/-0.0921	0.0732	pCi/g						
Silver-108m	U	-0.00479	+/-0.0174	0.0152	+/-0.0171	0.0328	pCi/g						
Thallium-208		0.145	+/-0.0438	0.0179	+/-0.043	0.0388	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr-90, solid Quick TAT													
Strontium-90		0.125	+/-0.0355	0.0253	+/-0.0478	0.0542	pCi/g		JMB1	12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	1.24	+/-4.56	3.78	+/-4.56	7.56	pCi/g		LAG1	12/03/04	0030	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0800	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-192-SP
Sample ID: 126304014

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	89	(25%–125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-193-SI	Project:	YANK01304
Sample ID:	126304015	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	10.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228		0.571	+/-0.178	0.0702	+/-0.175	0.155	pCi/g		AKB 12/04/04	1457	384321	1
Americium-241	U	0.0472	+/-0.112	0.0934	+/-0.110	0.194	pCi/g					
Bismuth-212	U	0.306	+/-0.214	0.203	+/-0.210	0.433	pCi/g					
Bismuth-214		0.529	+/-0.136	0.0349	+/-0.133	0.0758	pCi/g					
Cesium-134	U UI	0.00	+/-0.0648	0.0302	+/-0.0636	0.0645	pCi/g					
Cesium-137	U	-0.00715	+/-0.0249	0.0208	+/-0.0244	0.0451	pCi/g					
Cobalt-60	U	-0.00736	+/-0.0285	0.0229	+/-0.0279	0.0515	pCi/g					
Europium-152	U	-0.0362	+/-0.0624	0.0514	+/-0.0612	0.109	pCi/g					
Europium-154	U	0.052	+/-0.077	0.0507	+/-0.0755	0.117	pCi/g					
Europium-155	U	-0.037	+/-0.0682	0.0581	+/-0.0668	0.121	pCi/g					
Lead-212		0.562	+/-0.0838	0.0308	+/-0.0821	0.0647	pCi/g					
Lead-214		0.621	+/-0.103	0.0354	+/-0.100	0.0756	pCi/g					
Manganese-54	U	-0.00823	+/-0.0257	0.0208	+/-0.0251	0.0453	pCi/g					
Niobium-94	U	0.00627	+/-0.0233	0.0204	+/-0.0228	0.0438	pCi/g					
Potassium-40		13.5	+/-1.55	0.175	+/-1.52	0.405	pCi/g					
Radium-226		0.529	+/-0.136	0.0349	+/-0.133	0.0758	pCi/g					
Silver-108m	U	-0.00341	+/-0.0221	0.0184	+/-0.0216	0.0394	pCi/g					
Thallium-208		0.226	+/-0.0576	0.0211	+/-0.0565	0.0454	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90	U	0.0222	+/-0.0301	0.0286	+/-0.0306	0.0608	pCi/g		JMB1 12/01/04	1352	384353	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	1.24	+/-5.06	4.20	+/-5.06	8.41	pCi/g		LAG1 12/03/04	0102	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0800	384224

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-193-SI
Sample ID: 126304015

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	89	(25%–125%)

Notes:
The Qualifiers in this report are defined as follows :

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
B Target analyte was detected in the sample as well as the associated blank.
BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-193-SP	Project:	YANK01304
Sample ID:	126304016	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	13.6%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth													
Waived													
Actinium-228		0.397	+/-0.148	0.0578	+/-0.145	0.129	pCi/g		AKB	12/04/04	1458	384321	1
Americium-241	U	0.0245	+/-0.119	0.0992	+/-0.116	0.209	pCi/g						
Bismuth-212	U	0.170	+/-0.205	0.140	+/-0.201	0.304	pCi/g						
Bismuth-214		0.409	+/-0.072	0.0327	+/-0.0706	0.071	pCi/g						
Cesium-134	U	0.0164	+/-0.0236	0.0216	+/-0.0232	0.0469	pCi/g						
Cesium-137		0.0471	+/-0.0259	0.0151	+/-0.0254	0.0334	pCi/g						
Cobalt-60	U	-0.0106	+/-0.0252	0.0198	+/-0.0247	0.0448	pCi/g						
Europium-152	U	-0.000711	+/-0.0514	0.044	+/-0.0504	0.0943	pCi/g						
Europium-154	U	0.0363	+/-0.0737	0.0663	+/-0.0722	0.147	pCi/g						
Europium-155	U	0.0334	+/-0.055	0.0537	+/-0.0539	0.113	pCi/g						
Lead-212		0.409	+/-0.0592	0.0266	+/-0.058	0.0562	pCi/g						
Lead-214		0.389	+/-0.0924	0.0302	+/-0.0906	0.0649	pCi/g						
Manganese-54	U	0.00811	+/-0.021	0.0185	+/-0.0206	0.0405	pCi/g						
Niobium-94	U	-0.0137	+/-0.0181	0.0141	+/-0.0177	0.0311	pCi/g						
Potassium-40		11.9	+/-1.02	0.149	+/-1.00	0.349	pCi/g						
Radium-226		0.409	+/-0.072	0.0327	+/-0.0706	0.071	pCi/g						
Silver-108m	U	0.00342	+/-0.0155	0.0142	+/-0.0152	0.0308	pCi/g						
Thallium-208		0.138	+/-0.0492	0.0154	+/-0.0482	0.0337	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90		0.198	+/-0.0388	0.024	+/-0.0623	0.0513	pCi/g		JMB1	12/01/04	1707	384353	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	-0.124	+/-4.52	3.80	+/-4.52	7.60	pCi/g		LAG1	12/03/04	0134	384413	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	11/29/04	1647	384225
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	0800	384224

The following Analytical Methods were performed

Method	Description

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-193-SP
Sample ID: 126304016

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	93	(25%–125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-103-C-1C-01
Sample ID: 126304017
Matrix: CR
Collect Date: 17-NOV-04
Receive Date: 26-NOV-04
Collector: Client
Moisture: 7.97%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.450	+/-0.179	0.0665	+/-0.176	0.150	pCi/g		AKB	12/04/04	1458	384321	1
Americium-241	U	0.00586	+/-0.0374	0.0328	+/-0.0367	0.0682	pCi/g						
Bismuth-212	U	0.236	+/-0.344	0.194	+/-0.337	0.420	pCi/g						
Bismuth-214		0.510	+/-0.120	0.0408	+/-0.118	0.0886	pCi/g						
Cesium-134	U	0.0239	+/-0.0325	0.0294	+/-0.0318	0.0636	pCi/g						
Cesium-137	U	0.00727	+/-0.0253	0.0223	+/-0.0248	0.0487	pCi/g						
Cobalt-60	U	0.00254	+/-0.0245	0.021	+/-0.024	0.0483	pCi/g						
Europium-152	U	0.0294	+/-0.0675	0.0592	+/-0.0661	0.126	pCi/g						
Europium-154	U	0.0368	+/-0.0883	0.0701	+/-0.0865	0.158	pCi/g						
Europium-155	U	0.0102	+/-0.0684	0.0553	+/-0.067	0.115	pCi/g						
Lead-212		0.432	+/-0.0779	0.0349	+/-0.0764	0.0732	pCi/g						
Lead-214		0.668	+/-0.121	0.0368	+/-0.119	0.079	pCi/g						
Manganese-54	U	0.0176	+/-0.030	0.0239	+/-0.0294	0.0523	pCi/g						
Niobium-94	U	-0.00564	+/-0.0228	0.0187	+/-0.0223	0.0412	pCi/g						
Potassium-40		7.68	+/-1.13	0.124	+/-1.10	0.312	pCi/g						
Radium-226		0.510	+/-0.120	0.0408	+/-0.118	0.0886	pCi/g						
Silver-108m	U	-0.000299	+/-0.023	0.0202	+/-0.0225	0.0434	pCi/g						
Thallium-208		0.189	+/-0.0575	0.0226	+/-0.0564	0.049	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90		0.0802	+/-0.037	0.0296	+/-0.0445	0.0637	pCi/g		JMB1	12/02/04	1251	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		9.00	+/-2.02	1.37	+/-2.14	2.74	pCi/g		ATH1	12/05/04	2110	384414	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227
GL-RAD-A-026	Laboratory sample composite				384226

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-103-C-1C-01
Sample ID: 126304017

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	74	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-104-C-1C-01	Project:	YANK01304
Sample ID:	126304018	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.65%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.422	+/-0.164	0.0526	+/-0.161	0.119	pCi/g		AKB 12/04/04	1458	384321	1
Americium-241	U	-0.0207	+/-0.0834	0.0715	+/-0.0818	0.150	pCi/g					
Bismuth-212	U	0.00	+/-0.310	0.116	+/-0.304	0.258	pCi/g					
	UI											
Bismuth-214		0.426	+/-0.0768	0.0294	+/-0.0752	0.0645	pCi/g					
Cesium-134	U	0.0261	+/-0.0206	0.0218	+/-0.0202	0.0475	pCi/g					
Cesium-137	U	0.00	+/-0.0314	0.0147	+/-0.0307	0.0327	pCi/g					
	UI											
Cobalt-60	U	0.0116	+/-0.0206	0.0172	+/-0.0202	0.0396	pCi/g					
Europium-152	U	0.00483	+/-0.047	0.043	+/-0.0461	0.0923	pCi/g					
Europium-154	U	-0.012	+/-0.0717	0.0584	+/-0.0703	0.131	pCi/g					
Europium-155	U	-0.000489	+/-0.0496	0.0463	+/-0.0487	0.0974	pCi/g					
Lead-212		0.394	+/-0.0506	0.0251	+/-0.0496	0.0531	pCi/g					
Lead-214		0.394	+/-0.0867	0.0308	+/-0.085	0.0662	pCi/g					
Manganese-54	U	0.0019	+/-0.0217	0.0192	+/-0.0213	0.042	pCi/g					
Niobium-94	U	0.0133	+/-0.0203	0.0183	+/-0.0199	0.0396	pCi/g					
Potassium-40		6.98	+/-0.862	0.146	+/-0.845	0.343	pCi/g					
Radium-226		0.426	+/-0.0768	0.0294	+/-0.0752	0.0645	pCi/g					
Silver-108m	U	0.0105	+/-0.0175	0.0164	+/-0.0172	0.0352	pCi/g					
Thallium-208		0.149	+/-0.048	0.0151	+/-0.047	0.0332	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.090	+/-0.0339	0.0262	+/-0.0413	0.0562	pCi/g		JMB1 12/02/04	1251	384363	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		12.5	+/-2.16	1.37	+/-2.37	2.75	pCi/g		ATH1 12/05/04	2142	384414	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227
GL-RAD-A-026	Laboratory sample composite				384226

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-104-C-1C-01
Sample ID: 126304018

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	87	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-105-C-1C-01	Project:	YANK01304
Sample ID:	126304019	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	4.93%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.305	+/-0.147	0.0487	+/-0.144	0.110	pCi/g		AKB	12/04/04	1749	384321	1
Americium-241	U	0.0256	+/-0.0934	0.0685	+/-0.0916	0.144	pCi/g						
Bismuth-212	U	0.192	+/-0.210	0.103	+/-0.206	0.230	pCi/g						
Bismuth-214		0.487	+/-0.090	0.0238	+/-0.0882	0.0529	pCi/g						
Cesium-134	U	0.00733	+/-0.0241	0.0171	+/-0.0236	0.038	pCi/g						
Cesium-137	U	-0.00452	+/-0.0173	0.0147	+/-0.017	0.0324	pCi/g						
Cobalt-60	U	0.0126	+/-0.026	0.0212	+/-0.0254	0.0473	pCi/g						
Europium-152	U	0.0297	+/-0.0489	0.0446	+/-0.0479	0.0951	pCi/g						
Europium-154	U	0.0339	+/-0.0585	0.0527	+/-0.0573	0.119	pCi/g						
Europium-155	U	0.0642	+/-0.0491	0.0497	+/-0.0481	0.104	pCi/g						
Lead-212		0.343	+/-0.0562	0.0229	+/-0.0551	0.0485	pCi/g						
Lead-214		0.506	+/-0.0837	0.0256	+/-0.082	0.0554	pCi/g						
Manganese-54	U	0.0115	+/-0.0192	0.0176	+/-0.0189	0.0387	pCi/g						
Niobium-94	U	-0.0085	+/-0.017	0.0139	+/-0.0166	0.0306	pCi/g						
Potassium-40		7.97	+/-1.02	0.173	+/-0.999	0.396	pCi/g						
Radium-226		0.487	+/-0.090	0.0238	+/-0.0882	0.0529	pCi/g						
Silver-108m	U	0.00358	+/-0.0166	0.0144	+/-0.0162	0.031	pCi/g						
Thallium-208		0.143	+/-0.0369	0.0159	+/-0.0362	0.0346	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.0103	+/-0.0318	0.0313	+/-0.032	0.0671	pCi/g		JMB1	12/02/04	1251	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	1.21	+/-1.70	1.37	+/-1.70	2.75	pCi/g		ATH1	12/05/04	2214	384414	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227
GL-RAD-A-026	Laboratory sample composite				384226

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-105-C-1C-01
Sample ID: 126304019

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	74	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-106-C-1C-01
Sample ID: 126304020
Matrix: CR
Collect Date: 18-NOV-04
Receive Date: 26-NOV-04
Collector: Client
Moisture: 6.31%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.305	+/-0.133	0.0619	+/-0.130	0.137	pCi/g		AKB	12/04/04	1459	384321	1
Americium-241	U	-0.00231	+/-0.110	0.0926	+/-0.108	0.193	pCi/g						
Bismuth-212	U	0.246	+/-0.262	0.157	+/-0.257	0.340	pCi/g						
Bismuth-214		0.646	+/-0.0991	0.0419	+/-0.0972	0.0895	pCi/g						
Cesium-134	U	0.0261	+/-0.0246	0.0235	+/-0.0241	0.051	pCi/g						
Cesium-137	U	-0.0249	+/-0.0201	0.015	+/-0.0197	0.0333	pCi/g						
Cobalt-60	U	0.00343	+/-0.0269	0.0202	+/-0.0264	0.0455	pCi/g						
Europium-152	U	0.0235	+/-0.0598	0.0545	+/-0.0586	0.116	pCi/g						
Europium-154	U	-0.00435	+/-0.072	0.0609	+/-0.0705	0.136	pCi/g						
Europium-155	U	0.013	+/-0.0695	0.0637	+/-0.0681	0.133	pCi/g						
Lead-212		0.402	+/-0.0605	0.031	+/-0.0593	0.0652	pCi/g						
Lead-214		0.682	+/-0.107	0.0401	+/-0.105	0.0851	pCi/g						
Manganese-54	U	0.00382	+/-0.0226	0.0197	+/-0.0221	0.0429	pCi/g						
Niobium-94	U	-0.00486	+/-0.0211	0.018	+/-0.0207	0.039	pCi/g						
Potassium-40		8.24	+/-0.817	0.142	+/-0.801	0.335	pCi/g						
Radium-226		0.646	+/-0.0991	0.0419	+/-0.0972	0.0895	pCi/g						
Silver-108m	U	0.00853	+/-0.0198	0.0178	+/-0.0194	0.0383	pCi/g						
Thallium-208		0.118	+/-0.0499	0.0191	+/-0.0489	0.0413	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	-0.00086	+/-0.0255	0.0261	+/-0.0255	0.0567	pCi/g		JMB1	12/02/04	1251	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	1.05	+/-1.69	1.38	+/-1.70	2.76	pCi/g		ATH1	12/05/04	2245	384414	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227
GL-RAD-A-026	Laboratory sample composite				384226

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-106-C-1C-01
Sample ID: 126304020

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	74	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-192-C-1C-01	Project:	YANK01304
Sample ID:	126304021	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	18-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	7.6%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.423	+/-0.141	0.0578	+/-0.138	0.128	pCi/g		AKB	12/04/04	1502	384330	1
Americium-241	U	0.0106	+/-0.0297	0.0232	+/-0.0291	0.0481	pCi/g						
Bismuth-212		0.417	+/-0.234	0.129	+/-0.229	0.282	pCi/g						
Bismuth-214		0.716	+/-0.118	0.0297	+/-0.115	0.0643	pCi/g						
Cesium-134	U	0.0432	+/-0.0232	0.0234	+/-0.0227	0.0503	pCi/g						
Cesium-137	U	-0.0021	+/-0.0229	0.0173	+/-0.0225	0.0376	pCi/g						
Cobalt-60	U	0.00176	+/-0.021	0.0179	+/-0.0205	0.0404	pCi/g						
Europium-152	U	0.0122	+/-0.0518	0.0418	+/-0.0507	0.0889	pCi/g						
Europium-154	U	0.0413	+/-0.051	0.0488	+/-0.050	0.110	pCi/g						
Europium-155	U	0.0197	+/-0.0453	0.0432	+/-0.0444	0.0897	pCi/g						
Lead-212		0.381	+/-0.0583	0.0245	+/-0.0572	0.0513	pCi/g						
Lead-214		0.686	+/-0.104	0.030	+/-0.102	0.0638	pCi/g						
Manganese-54	U	0.00553	+/-0.0233	0.0204	+/-0.0228	0.0439	pCi/g						
Niobium-94	U	-0.00253	+/-0.0187	0.0162	+/-0.0184	0.035	pCi/g						
Potassium-40		7.52	+/-0.940	0.111	+/-0.921	0.268	pCi/g						
Radium-226		0.716	+/-0.118	0.0297	+/-0.115	0.0643	pCi/g						
Silver-108m	U	0.00996	+/-0.0155	0.0144	+/-0.0152	0.0308	pCi/g						
Thallium-208		0.130	+/-0.0509	0.0155	+/-0.0498	0.0337	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90		1.09	+/-0.0824	0.0276	+/-0.309	0.0591	pCi/g		JMB1	12/02/04	1251	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		3.76	+/-1.80	1.36	+/-1.82	2.73	pCi/g		ATH1	12/05/04	2317	384414	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227
GL-RAD-A-026	Laboratory sample composite				384226

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-192-C-1C-01
Sample ID: 126304021

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	84	(25%-125%)

Notes:
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- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-193-C-1C-01	Project:	YANK01304
Sample ID:	126304022	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	4.52%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.322	+/-0.129	0.0474	+/-0.127	0.106	pCi/g		AKB	12/04/04	1746	384330	1
Americium-241	U	0.0216	+/-0.0756	0.0644	+/-0.0741	0.135	pCi/g						
Bismuth-212		0.279	+/-0.258	0.113	+/-0.252	0.249	pCi/g						
Bismuth-214		0.399	+/-0.0951	0.0267	+/-0.0932	0.0582	pCi/g						
Cesium-134	U	0.0105	+/-0.0234	0.0206	+/-0.0229	0.0445	pCi/g						
Cesium-137	U	0.00772	+/-0.016	0.0146	+/-0.0157	0.0319	pCi/g						
Cobalt-60	U	0.00688	+/-0.0244	0.0187	+/-0.0239	0.0419	pCi/g						
Europium-152	U	0.0103	+/-0.0428	0.0376	+/-0.042	0.0805	pCi/g						
Europium-154	U	0.00875	+/-0.0666	0.0497	+/-0.0653	0.111	pCi/g						
Europium-155	U	0.0238	+/-0.0415	0.0411	+/-0.0407	0.0861	pCi/g						
Lead-212		0.293	+/-0.0574	0.0319	+/-0.0562	0.0661	pCi/g						
Lead-214		0.445	+/-0.0883	0.027	+/-0.0866	0.0578	pCi/g						
Manganese-54	U	-3.380E-05	+/-0.019	0.0159	+/-0.0186	0.0347	pCi/g						
Niobium-94	U	-0.0064	+/-0.0173	0.0142	+/-0.017	0.0308	pCi/g						
Potassium-40		7.35	+/-0.876	0.114	+/-0.858	0.273	pCi/g						
Radium-226		0.399	+/-0.0951	0.0267	+/-0.0932	0.0582	pCi/g						
Silver-108m	U	0.00842	+/-0.0157	0.0148	+/-0.0154	0.0315	pCi/g						
Thallium-208		0.0992	+/-0.0294	0.0134	+/-0.0288	0.0294	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90		1.07	+/-0.0837	0.0265	+/-0.322	0.0571	pCi/g		JMB1	12/02/04	1251	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	1.14	+/-1.64	1.33	+/-1.65	2.67	pCi/g		ATH1	12/05/04	2349	384414	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227
GL-RAD-A-026	Laboratory sample composite				384226

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-193-C-1C-01
Sample ID: 126304022

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	79	(25%-125%)

Notes:
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- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-103-C-1C-02	Project:	YANK01304
Sample ID:	126304023	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.04%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.369	+/-0.118	0.0604	+/-0.116	0.133	pCi/g		AKB 12/04/04	1747	384330	1
Americium-241	U	0.0295	+/-0.0831	0.0713	+/-0.0814	0.149	pCi/g					
Bismuth-212		0.315	+/-0.273	0.128	+/-0.268	0.279	pCi/g					
Bismuth-214		0.379	+/-0.0793	0.0309	+/-0.0777	0.067	pCi/g					
Cesium-134	U	0.0129	+/-0.0273	0.0213	+/-0.0268	0.0461	pCi/g					
Cesium-137	U	-0.00568	+/-0.020	0.0163	+/-0.0196	0.0357	pCi/g					
Cobalt-60	U	0.00381	+/-0.0441	0.0142	+/-0.0432	0.0331	pCi/g					
Europium-152	U	0.0469	+/-0.0479	0.046	+/-0.047	0.0979	pCi/g					
Europium-154	U	-0.0426	+/-0.0602	0.0445	+/-0.059	0.102	pCi/g					
Europium-155	U	0.00844	+/-0.056	0.051	+/-0.0548	0.107	pCi/g					
Lead-212		0.354	+/-0.0508	0.025	+/-0.0498	0.0527	pCi/g					
Lead-214		0.504	+/-0.0896	0.0292	+/-0.0878	0.0625	pCi/g					
Manganese-54	U	-0.00387	+/-0.0206	0.0176	+/-0.0202	0.0385	pCi/g					
Niobium-94	U	0.00151	+/-0.0184	0.0156	+/-0.018	0.0338	pCi/g					
Potassium-40		6.98	+/-0.772	0.110	+/-0.757	0.268	pCi/g					
Radium-226		0.379	+/-0.0793	0.0309	+/-0.0777	0.067	pCi/g					
Silver-108m	U	-0.0104	+/-0.0161	0.0132	+/-0.0158	0.0287	pCi/g					
Thallium-208		0.101	+/-0.0412	0.0183	+/-0.0404	0.0394	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90	U	0.0264	+/-0.0328	0.0305	+/-0.0338	0.0657	pCi/g		JMB1 12/02/04	1251	384363	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		37.1	+/-2.91	1.35	+/-4.05	2.71	pCi/g		ATH1 12/06/04	0021	384414	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	B J1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-103-C-1C-02
Sample ID: 126304023

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	73	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-103-C-2C-01	Project:	YANK01304
Sample ID:	126304024	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	5.71%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.374	+/-0.149	0.0613	+/-0.146	0.135	pCi/g		AKB	12/04/04	1747	384330	1
Americium-241	U	0.0278	+/-0.0176	0.0204	+/-0.0172	0.0426	pCi/g						
Bismuth-212		0.420	+/-0.253	0.114	+/-0.248	0.252	pCi/g						
Bismuth-214		0.435	+/-0.0941	0.0331	+/-0.0922	0.0713	pCi/g						
Cesium-134	U	0.0249	+/-0.0227	0.0216	+/-0.0222	0.0469	pCi/g						
Cesium-137	U	-0.00526	+/-0.0184	0.0156	+/-0.018	0.0343	pCi/g						
Cobalt-60	U	0.00405	+/-0.0239	0.0206	+/-0.0234	0.0459	pCi/g						
Europium-152	U	-0.0202	+/-0.0472	0.0408	+/-0.0463	0.0869	pCi/g						
Europium-154	U	0.000328	+/-0.0625	0.0531	+/-0.0613	0.119	pCi/g						
Europium-155	U	0.0385	+/-0.0416	0.0404	+/-0.0408	0.0842	pCi/g						
Lead-212		0.402	+/-0.0614	0.0224	+/-0.0602	0.0473	pCi/g						
Lead-214		0.425	+/-0.101	0.0303	+/-0.099	0.0646	pCi/g						
Manganese-54	U	-0.0046	+/-0.022	0.0183	+/-0.0215	0.0399	pCi/g						
Niobium-94	U	-0.00348	+/-0.0185	0.0158	+/-0.0181	0.0343	pCi/g						
Potassium-40		7.84	+/-0.958	0.151	+/-0.939	0.349	pCi/g						
Radium-226		0.435	+/-0.0941	0.0331	+/-0.0922	0.0713	pCi/g						
Silver-108m	U	0.00967	+/-0.0159	0.0146	+/-0.0156	0.0314	pCi/g						
Thallium-208		0.146	+/-0.0451	0.017	+/-0.0442	0.0367	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.015	+/-0.025	0.0239	+/-0.0253	0.0513	pCi/g		JMB1	12/02/04	1252	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		6.38	+/-1.93	1.38	+/-1.99	2.76	pCi/g		ATH1	12/06/04	0052	384414	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-103-C-2C-01
Sample ID: 126304024

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	95	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-103-C-3C-03	Project:	YANK01304
Sample ID:	126304025	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.95%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.484	+/-0.125	0.0462	+/-0.123	0.0995	pCi/g		AKB	12/04/04	1748	384330	1
Americium-241	U	-0.0082	+/-0.0556	0.0479	+/-0.0545	0.0998	pCi/g						
Bismuth-212		0.600	+/-0.191	0.0855	+/-0.187	0.185	pCi/g						
Bismuth-214		0.414	+/-0.0747	0.0241	+/-0.0732	0.0513	pCi/g						
Cesium-134	U	0.00	+/-0.0182	0.0144	+/-0.0178	0.031	pCi/g						
	UI												
Cesium-137	U	-0.00822	+/-0.0161	0.0135	+/-0.0158	0.0287	pCi/g						
Cobalt-60	U	0.00149	+/-0.0148	0.0125	+/-0.0145	0.0278	pCi/g						
Europium-152	U	-0.0153	+/-0.0401	0.0346	+/-0.0393	0.0731	pCi/g						
Europium-154	U	0.0101	+/-0.0457	0.0394	+/-0.0448	0.0862	pCi/g						
Europium-155	U	0.0301	+/-0.0477	0.0422	+/-0.0468	0.0878	pCi/g						
Lead-212		0.414	+/-0.0551	0.022	+/-0.054	0.046	pCi/g						
Lead-214		0.526	+/-0.0804	0.0253	+/-0.0788	0.0533	pCi/g						
Manganese-54	U	-0.00517	+/-0.0149	0.0122	+/-0.0146	0.0264	pCi/g						
Niobium-94	U	0.000308	+/-0.0132	0.0115	+/-0.0129	0.0245	pCi/g						
Potassium-40		8.20	+/-0.842	0.111	+/-0.825	0.249	pCi/g						
Radium-226		0.414	+/-0.0747	0.0241	+/-0.0732	0.0513	pCi/g						
Silver-108m	U	-0.0037	+/-0.0133	0.0113	+/-0.0131	0.024	pCi/g						
Thallium-208		0.164	+/-0.0413	0.0124	+/-0.0405	0.0265	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	-0.00443	+/-0.0292	0.0302	+/-0.0292	0.0646	pCi/g		JMB1	12/02/04	1252	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		31.6	+/-2.74	1.35	+/-3.65	2.70	pCi/g		ATH1	12/06/04	0124	384414	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-103-C-3C-03
Sample ID: 126304025

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	79	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-103-C-3C-04	Project:	YANK01304
Sample ID:	126304026	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.47%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.362	+/-0.124	0.0534	+/-0.122	0.120	pCi/g		AKB 12/04/04	2013	384330	1
Americium-241	U	-0.0178	+/-0.077	0.067	+/-0.0755	0.141	pCi/g					
Bismuth-212	U	0.360	+/-0.173	0.176	+/-0.170	0.377	pCi/g					
Bismuth-214		0.486	+/-0.0982	0.0296	+/-0.0963	0.0646	pCi/g					
Cesium-134	U	0.00	+/-0.0396	0.0213	+/-0.0388	0.0463	pCi/g					
	UI											
Cesium-137	U	0.0094	+/-0.0209	0.0172	+/-0.0204	0.0375	pCi/g					
Cobalt-60	U	0.0229	+/-0.0228	0.0223	+/-0.0224	0.0496	pCi/g					
Europium-152	U	0.011	+/-0.0528	0.0465	+/-0.0517	0.0989	pCi/g					
Europium-154	U	-0.0252	+/-0.057	0.0423	+/-0.0559	0.0983	pCi/g					
Europium-155	U	0.0143	+/-0.0498	0.0479	+/-0.0489	0.100	pCi/g					
Lead-212		0.380	+/-0.060	0.0231	+/-0.0588	0.0489	pCi/g					
Lead-214		0.529	+/-0.0902	0.0293	+/-0.0884	0.0629	pCi/g					
Manganese-54	U	0.0219	+/-0.0137	0.014	+/-0.0135	0.0313	pCi/g					
Niobium-94	U	0.0066	+/-0.0178	0.0161	+/-0.0175	0.035	pCi/g					
Potassium-40		7.90	+/-0.962	0.174	+/-0.943	0.400	pCi/g					
Radium-226		0.486	+/-0.0982	0.0296	+/-0.0963	0.0646	pCi/g					
Silver-108m	U	-0.011	+/-0.0176	0.0139	+/-0.0173	0.0301	pCi/g					
Thallium-208		0.119	+/-0.0419	0.0151	+/-0.041	0.0332	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90	U	0.0168	+/-0.0367	0.0359	+/-0.0371	0.0762	pCi/g		JMB1 12/02/04	1252	384363	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		23.4	+/-2.46	1.32	+/-3.02	2.64	pCi/g		ATH1 12/06/04	0156	384414	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJI	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-103-C-3C-04
Sample ID: 126304026

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	75	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-104-C-1C-02	Project:	YANK01304
Sample ID:	126304027	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	5.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.375	+/-0.160	0.0549	+/-0.157	0.122	pCi/g		AKB 12/04/04	2016	384330	1
Americium-241	U	0.107	+/-0.096	0.0656	+/-0.0941	0.137	pCi/g					
Bismuth-212	U	0.194	+/-0.169	0.161	+/-0.166	0.345	pCi/g					
Bismuth-214		0.445	+/-0.086	0.0274	+/-0.0843	0.0598	pCi/g					
Cesium-134	U	0.0258	+/-0.0353	0.0223	+/-0.0346	0.048	pCi/g					
Cesium-137	U	-0.0118	+/-0.0175	0.0142	+/-0.0172	0.0313	pCi/g					
Cobalt-60	U	-0.00373	+/-0.0196	0.0161	+/-0.0192	0.0368	pCi/g					
Europium-152	U	0.0353	+/-0.0464	0.0437	+/-0.0455	0.0931	pCi/g					
Europium-154	U	-0.00329	+/-0.0818	0.0595	+/-0.0801	0.132	pCi/g					
Europium-155	U	0.0024	+/-0.0514	0.0473	+/-0.0504	0.0988	pCi/g					
Lead-212		0.316	+/-0.0642	0.0358	+/-0.0629	0.0741	pCi/g					
Lead-214		0.425	+/-0.0847	0.0311	+/-0.083	0.0662	pCi/g					
Manganese-54	U	-0.0123	+/-0.0194	0.0153	+/-0.019	0.0338	pCi/g					
Niobium-94	U	0.00974	+/-0.0169	0.0156	+/-0.0166	0.0337	pCi/g					
Potassium-40		6.83	+/-0.883	0.126	+/-0.865	0.299	pCi/g					
Radium-226		0.445	+/-0.086	0.0274	+/-0.0843	0.0598	pCi/g					
Silver-108m	U	0.00811	+/-0.0154	0.0141	+/-0.0151	0.0303	pCi/g					
Thallium-208		0.116	+/-0.0373	0.0172	+/-0.0366	0.0371	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90	U	0.00359	+/-0.0286	0.0287	+/-0.0286	0.0612	pCi/g		JMB1 12/02/04	1252	384363	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		32.2	+/-2.72	1.32	+/-3.62	2.64	pCi/g		ATH1 12/06/04	0228	384414	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-104-C-1C-02
Sample ID: 126304027

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	88	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-104-C-2C-01	Project:	YANK01304
Sample ID:	126304028	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.19%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.479	+/-0.116	0.0473	+/-0.114	0.107	pCi/g		AKB	12/04/04	2016	384330	1
Americium-241	U	-0.0631	+/-0.111	0.0872	+/-0.109	0.185	pCi/g						
Bismuth-212	U	0.00	+/-0.259	0.116	+/-0.254	0.256	pCi/g						
	UI												
Bismuth-214		0.436	+/-0.0805	0.0278	+/-0.0789	0.0609	pCi/g						
Cesium-134	U	0.0329	+/-0.0306	0.0219	+/-0.030	0.0474	pCi/g						
Cesium-137	U	0.0061	+/-0.0184	0.0165	+/-0.018	0.0361	pCi/g						
Cobalt-60	U	-0.00507	+/-0.0177	0.014	+/-0.0173	0.033	pCi/g						
Europium-152	U	0.0221	+/-0.0497	0.0446	+/-0.0487	0.0953	pCi/g						
Europium-154	U	0.0425	+/-0.0599	0.0456	+/-0.0587	0.105	pCi/g						
Europium-155	U	0.0526	+/-0.0511	0.0516	+/-0.0501	0.108	pCi/g						
Lead-212		0.350	+/-0.052	0.0278	+/-0.051	0.0585	pCi/g						
Lead-214		0.463	+/-0.0867	0.0251	+/-0.0849	0.0546	pCi/g						
Manganese-54	U	-0.00716	+/-0.0204	0.0165	+/-0.020	0.0362	pCi/g						
Niobium-94	U	-5.180E-05	+/-0.0172	0.0148	+/-0.0168	0.0323	pCi/g						
Potassium-40		6.41	+/-0.816	0.135	+/-0.800	0.320	pCi/g						
Radium-226		0.436	+/-0.0805	0.0278	+/-0.0789	0.0609	pCi/g						
Silver-108m	U	0.00811	+/-0.015	0.0142	+/-0.0147	0.0308	pCi/g						
Thallium-208		0.106	+/-0.0363	0.0159	+/-0.0355	0.0346	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.0224	+/-0.0301	0.0284	+/-0.0308	0.0609	pCi/g		JMB1	12/02/04	1252	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	-0.158	+/-1.59	1.34	+/-1.59	2.68	pCi/g		ATH1	12/06/04	0300	384414	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-104-C-2C-01
Sample ID: 126304028

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	80	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier—please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-104-C-3C-03	Project:	YANK01304
Sample ID:	126304029	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228	U	0.00	+/-0.140	0.119	+/-0.137	0.252	pCi/g		AKB	12/04/04	2017	384330	1
	U1												
Americium-241	U	-0.00999	+/-0.0353	0.028	+/-0.0346	0.0582	pCi/g						
Bismuth-212	U	0.273	+/-0.239	0.135	+/-0.234	0.297	pCi/g						
Bismuth-214		0.440	+/-0.107	0.0374	+/-0.105	0.0808	pCi/g						
Cesium-134	U	0.0153	+/-0.026	0.0237	+/-0.0255	0.0515	pCi/g						
Cesium-137	U	-0.00294	+/-0.0216	0.0185	+/-0.0211	0.0405	pCi/g						
Cobalt-60	U	0.0123	+/-0.0178	0.0198	+/-0.0174	0.045	pCi/g						
Europium-152	U	0.0807	+/-0.0562	0.0544	+/-0.0551	0.115	pCi/g						
Europium-154	U	-0.0479	+/-0.0686	0.0522	+/-0.0672	0.119	pCi/g						
Europium-155	U	0.00	+/-0.0878	0.0484	+/-0.0861	0.101	pCi/g						
	U1												
Lead-212		0.404	+/-0.0709	0.0271	+/-0.0695	0.0571	pCi/g						
Lead-214		0.576	+/-0.095	0.031	+/-0.0931	0.0667	pCi/g						
Manganese-54	U	0.0241	+/-0.0201	0.0197	+/-0.0197	0.0431	pCi/g						
Niobium-94	U	-0.00076	+/-0.0205	0.0177	+/-0.0201	0.0384	pCi/g						
Potassium-40		7.19	+/-0.897	0.169	+/-0.879	0.392	pCi/g						
Radium-226		0.440	+/-0.107	0.0374	+/-0.105	0.0808	pCi/g						
Silver-108m	U	0.0114	+/-0.0197	0.0186	+/-0.0193	0.0397	pCi/g						
Thallium-208		0.0748	+/-0.0593	0.0221	+/-0.0581	0.0474	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.0148	+/-0.0302	0.0292	+/-0.0305	0.0626	pCi/g		JMB1	12/02/04	1252	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		31.4	+/-2.76	1.36	+/-3.66	2.72	pCi/g		ATH1	12/06/04	0332	384414	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-104-C-3C-03
Sample ID: 126304029

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	80	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-104-C-3C-04	Project:	YANK01304
Sample ID:	126304030	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	5.45%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.438	+/-0.148	0.0528	+/-0.145	0.119	pCi/g		AKB 12/04/04	2018	384330	1
Americium-241	U	0.049	+/-0.0819	0.0751	+/-0.0802	0.157	pCi/g					
Bismuth-212	U	0.0971	+/-0.344	0.111	+/-0.337	0.248	pCi/g					
Bismuth-214		0.344	+/-0.0862	0.0331	+/-0.0845	0.0717	pCi/g					
Cesium-134	U	0.00823	+/-0.024	0.0209	+/-0.0235	0.0456	pCi/g					
Cesium-137	U	-0.0115	+/-0.0187	0.0146	+/-0.0183	0.0324	pCi/g					
Cobalt-60	U	-5.550E-05	+/-0.0227	0.0163	+/-0.0222	0.0376	pCi/g					
Europium-152	U	-0.0121	+/-0.0515	0.0402	+/-0.0505	0.0866	pCi/g					
Europium-154	U	0.0486	+/-0.0669	0.0618	+/-0.0655	0.137	pCi/g					
Europium-155	U	0.0148	+/-0.0503	0.048	+/-0.0493	0.101	pCi/g					
Lead-212		0.366	+/-0.0521	0.0247	+/-0.051	0.0521	pCi/g					
Lead-214		0.416	+/-0.100	0.0307	+/-0.098	0.0658	pCi/g					
Manganese-54	U	-0.0115	+/-0.0204	0.0168	+/-0.020	0.037	pCi/g					
Niobium-94	U	0.0185	+/-0.0193	0.0173	+/-0.0189	0.0375	pCi/g					
Potassium-40		7.86	+/-0.799	0.128	+/-0.783	0.306	pCi/g					
Radium-226		0.344	+/-0.0862	0.0331	+/-0.0845	0.0717	pCi/g					
Silver-108m	U	0.00132	+/-0.0169	0.0151	+/-0.0165	0.0326	pCi/g					
Thallium-208		0.137	+/-0.0441	0.0157	+/-0.0432	0.0344	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90	U	-0.0164	+/-0.0242	0.0262	+/-0.0244	0.0556	pCi/g		JMB1 12/02/04	1252	384363	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		39.6	+/-2.99	1.36	+/-4.25	2.73	pCi/g		ATH1 12/06/04	0403	384414	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-104-C-3C-04
Sample ID: 126304030

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	104	(25%–125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-105-C-1C-02	Project:	YANK01304
Sample ID:	126304031	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	4.66%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.350	+/-0.135	0.0586	+/-0.132	0.129	pCi/g		AKB	12/04/04	2018	384330	1
Americium-241	U	-0.0188	+/-0.0912	0.0744	+/-0.0894	0.155	pCi/g						
Bismuth-212	U	0.199	+/-0.158	0.116	+/-0.154	0.256	pCi/g						
Bismuth-214		0.403	+/-0.0778	0.0264	+/-0.0763	0.0579	pCi/g						
Cesium-134	U	0.00768	+/-0.0189	0.017	+/-0.0185	0.0374	pCi/g						
Cesium-137	U	-0.00308	+/-0.0175	0.0149	+/-0.0172	0.0328	pCi/g						
Cobalt-60	U	0.00962	+/-0.0188	0.0173	+/-0.0184	0.0392	pCi/g						
Europium-152	U	0.0219	+/-0.0497	0.0446	+/-0.0487	0.095	pCi/g						
Europium-154	U	-0.0422	+/-0.0647	0.0399	+/-0.0634	0.0923	pCi/g						
Europium-155	U	0.00934	+/-0.0487	0.0472	+/-0.0477	0.0987	pCi/g						
Lead-212		0.327	+/-0.0509	0.0239	+/-0.0498	0.0504	pCi/g						
Lead-214		0.538	+/-0.0894	0.0304	+/-0.0876	0.065	pCi/g						
Manganese-54	U	-0.00082	+/-0.0204	0.0172	+/-0.020	0.0375	pCi/g						
Niobium-94	U	0.0088	+/-0.0159	0.0146	+/-0.0156	0.0319	pCi/g						
Potassium-40		7.97	+/-0.900	0.121	+/-0.882	0.289	pCi/g						
Radium-226		0.403	+/-0.0778	0.0264	+/-0.0763	0.0579	pCi/g						
Silver-108m	U	0.00794	+/-0.0136	0.0131	+/-0.0134	0.0284	pCi/g						
Thallium-208		0.117	+/-0.034	0.0138	+/-0.0334	0.0303	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	-0.014	+/-0.0181	0.0201	+/-0.0183	0.0433	pCi/g		JMB1	12/02/04	1605	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	2.32	+/-1.50	1.18	+/-1.51	2.36	pCi/g		JLB1	12/03/04	0537	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJI	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-105-C-1C-02
Sample ID: 126304031

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	107	(25%-125%)

Notes:
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- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-105-C-3C-01	Project:	YANK01304
Sample ID:	126304032	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	5.65%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.449	+/-0.174	0.0679	+/-0.170	0.148	pCi/g		AKB	12/04/04	2019	384330	1
Americium-241	U	0.023	+/-0.0953	0.0938	+/-0.0934	0.195	pCi/g						
Bismuth-212		0.402	+/-0.181	0.110	+/-0.178	0.244	pCi/g						
Bismuth-214		0.731	+/-0.0945	0.0346	+/-0.0926	0.0745	pCi/g						
Cesium-134	U	0.0324	+/-0.0452	0.0249	+/-0.0443	0.0534	pCi/g						
Cesium-137	U	0.00966	+/-0.0225	0.0207	+/-0.022	0.0444	pCi/g						
Cobalt-60	U	-0.0132	+/-0.0207	0.0159	+/-0.0203	0.0363	pCi/g						
Europium-152	U	-0.0191	+/-0.0589	0.0519	+/-0.0577	0.110	pCi/g						
Europium-154	U	0.0158	+/-0.0533	0.0479	+/-0.0522	0.108	pCi/g						
Europium-155	U	0.0251	+/-0.0638	0.0608	+/-0.0626	0.127	pCi/g						
Lead-212		0.366	+/-0.0619	0.0334	+/-0.0607	0.0698	pCi/g						
Lead-214		0.861	+/-0.0964	0.0376	+/-0.0945	0.0795	pCi/g						
Manganese-54	U	0.00715	+/-0.0186	0.0175	+/-0.0183	0.0381	pCi/g						
Niobium-94	U	0.0125	+/-0.019	0.0178	+/-0.0186	0.0383	pCi/g						
Potassium-40		7.85	+/-0.830	0.158	+/-0.814	0.360	pCi/g						
Radium-226		0.731	+/-0.0945	0.0346	+/-0.0926	0.0745	pCi/g						
Silver-108m	U	0.00347	+/-0.0197	0.0176	+/-0.0193	0.0375	pCi/g						
Thallium-208		0.101	+/-0.038	0.0199	+/-0.0372	0.0425	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	-0.0161	+/-0.0267	0.0289	+/-0.0271	0.062	pCi/g		JMB1	12/02/04	1605	384363	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	0.140	+/-1.31	1.09	+/-1.31	2.18	pCi/g		JLB1	12/03/04	0609	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

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Address: Haddam Neck Plant
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-105-C-3C-01
Sample ID: 126304032

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	76	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-105-C-4C-03	Project:	YANK01304
Sample ID:	126304033	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	4.92%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.302	+/-0.145	0.0489	+/-0.142	0.109	pCi/g		AKB	12/04/04	2019	384330	1
Americium-241	U	0.0311	+/-0.105	0.0944	+/-0.103	0.197	pCi/g						
Bismuth-212	U	0.253	+/-0.179	0.125	+/-0.176	0.271	pCi/g						
Bismuth-214		0.462	+/-0.0841	0.0318	+/-0.0824	0.068	pCi/g						
Cesium-134	U	0.00262	+/-0.0178	0.0153	+/-0.0174	0.0337	pCi/g						
Cesium-137	U	0.00112	+/-0.0173	0.015	+/-0.0169	0.0326	pCi/g						
Cobalt-60	U	0.0239	+/-0.0254	0.0159	+/-0.0249	0.0361	pCi/g						
Europium-152	U	-0.0145	+/-0.0414	0.0371	+/-0.0405	0.0792	pCi/g						
Europium-154	U	-0.0153	+/-0.0533	0.0431	+/-0.0522	0.0977	pCi/g						
Europium-155	U	-1.130E-05	+/-0.0476	0.0451	+/-0.0467	0.0943	pCi/g						
Lead-212		0.304	+/-0.0515	0.023	+/-0.0505	0.0483	pCi/g						
Lead-214		0.534	+/-0.085	0.0265	+/-0.0833	0.0566	pCi/g						
Manganese-54	U	-0.00594	+/-0.0189	0.0153	+/-0.0185	0.0334	pCi/g						
Niobium-94	U	-0.0101	+/-0.0158	0.0126	+/-0.0155	0.0275	pCi/g						
Potassium-40		6.89	+/-0.936	0.118	+/-0.917	0.278	pCi/g						
Radium-226		0.462	+/-0.0841	0.0318	+/-0.0824	0.068	pCi/g						
Silver-108m	U	0.000917	+/-0.0132	0.0119	+/-0.0129	0.0258	pCi/g						
Thallium-208	U	0.00	+/-0.028	0.0267	+/-0.0275	0.0558	pCi/g						
	UI												
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	-0.0133	+/-0.0254	0.0283	+/-0.0257	0.0614	pCi/g		JMB1	12/02/04	1538	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	1.11	+/-1.36	1.10	+/-1.36	2.20	pCi/g		JLB1	12/03/04	0641	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-105-C-4C-03
Sample ID: 126304033

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	84	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID:	3107-0000-192-C-1C-02	Project:	YANK01304
Sample ID:	126304039	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	18-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	7.33%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.555	+/-0.211	0.0549	+/-0.207	0.122	pCi/g		AKB	12/05/04	2015	384330	1
Americium-241	U	-0.0157	+/-0.0889	0.0744	+/-0.0871	0.155	pCi/g						
Bismuth-212	UUI	0.00	+/-0.221	0.141	+/-0.216	0.306	pCi/g						
Bismuth-214		0.597	+/-0.109	0.031	+/-0.106	0.0671	pCi/g						
Cesium-134	U	0.00181	+/-0.0236	0.0204	+/-0.0231	0.0443	pCi/g						
Cesium-137	U	0.00714	+/-0.0206	0.0186	+/-0.0202	0.0402	pCi/g						
Cobalt-60	U	0.00763	+/-0.0189	0.0171	+/-0.0185	0.039	pCi/g						
Europium-152	U	-0.0752	+/-0.0546	0.0428	+/-0.0535	0.0914	pCi/g						
Europium-154	U	-0.00227	+/-0.063	0.0532	+/-0.0617	0.119	pCi/g						
Europium-155	U	-0.0181	+/-0.0591	0.0528	+/-0.0579	0.110	pCi/g						
Lead-212		0.380	+/-0.0662	0.0288	+/-0.0649	0.0604	pCi/g						
Lead-214		0.699	+/-0.112	0.0353	+/-0.110	0.0748	pCi/g						
Manganese-54	U	-0.00812	+/-0.0213	0.0174	+/-0.0209	0.038	pCi/g						
Niobium-94	U	0.0145	+/-0.0177	0.0166	+/-0.0174	0.0359	pCi/g						
Potassium-40		7.26	+/-0.971	0.166	+/-0.951	0.381	pCi/g						
Radium-226		0.597	+/-0.109	0.031	+/-0.106	0.0671	pCi/g						
Silver-108m	U	-0.00666	+/-0.0193	0.0162	+/-0.0189	0.0346	pCi/g						
Thallium-208		0.127	+/-0.0385	0.0176	+/-0.0377	0.038	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	-0.00532	+/-0.024	0.0256	+/-0.024	0.0551	pCi/g		JMB1	12/02/04	1538	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	0.891	+/-1.29	1.05	+/-1.29	2.10	pCi/g		JLB1	12/03/04	0953	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJI	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	11/29/04	1103	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID: 3107-0000-192-C-1C-02
Sample ID: 126304039

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	98	(25%–125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Results below the MDC or low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value.
- U Target analyte was analyzed for but not detected above the MDL or LOD.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier—please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID:	3107-0000-192-C-2C-03	Project:	YANK01304
Sample ID:	126304040	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	18-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	7.73%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.497	+/-0.158	0.066	+/-0.154	0.147	pCi/g		AKB	12/05/04	2016	384330	1
Americium-241	U	0.137	+/-0.129	0.120	+/-0.127	0.252	pCi/g						
Bismuth-212		0.448	+/-0.265	0.149	+/-0.259	0.327	pCi/g						
Bismuth-214		0.688	+/-0.118	0.0336	+/-0.115	0.0733	pCi/g						
Cesium-134	U	0.0396	+/-0.040	0.025	+/-0.0392	0.0541	pCi/g						
Cesium-137	U	0.00294	+/-0.0207	0.0179	+/-0.0203	0.0394	pCi/g						
Cobalt-60	U	0.0141	+/-0.024	0.022	+/-0.0235	0.0498	pCi/g						
Europium-152	U	0.0493	+/-0.0594	0.0537	+/-0.0582	0.114	pCi/g						
Europium-154	U	0.00469	+/-0.0749	0.0634	+/-0.0734	0.143	pCi/g						
Europium-155	U	0.0393	+/-0.0661	0.0627	+/-0.0647	0.131	pCi/g						
Lead-212		0.548	+/-0.068	0.0303	+/-0.0667	0.0639	pCi/g						
Lead-214		0.831	+/-0.116	0.0338	+/-0.114	0.0727	pCi/g						
Manganese-54	U	0.0223	+/-0.0216	0.0204	+/-0.0212	0.0446	pCi/g						
Niobium-94	U	0.0228	+/-0.0331	0.0186	+/-0.0324	0.0404	pCi/g						
Potassium-40		8.32	+/-0.988	0.151	+/-0.968	0.360	pCi/g						
Radium-226		0.688	+/-0.118	0.0336	+/-0.115	0.0733	pCi/g						
Silver-108m	U	-0.00349	+/-0.0195	0.017	+/-0.0191	0.0367	pCi/g						
Thallium-208		0.172	+/-0.0463	0.0185	+/-0.0453	0.0402	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	-0.00889	+/-0.0246	0.0267	+/-0.0247	0.0576	pCi/g		JMB1	12/02/04	1712	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		7.72	+/-1.71	1.18	+/-1.77	2.36	pCi/g		JLB1	12/03/04	1025	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1103	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID: 3107-0000-192-C-2C-03
Sample ID: 126304040

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	91	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Results below the MDC or low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value.
- U Target analyte was analyzed for but not detected above the MDL or LOD.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-192-C-2C-04	Project:	YANK01304
Sample ID:	126304041	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	18-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	7.84%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.429	+/-0.134	0.0562	+/-0.132	0.125	pCi/g		AKB	12/04/04	1752	384336	1
Americium-241	U	-0.081	+/-0.127	0.0993	+/-0.125	0.209	pCi/g						
Bismuth-212		0.303	+/-0.225	0.125	+/-0.220	0.275	pCi/g						
Bismuth-214		0.459	+/-0.0806	0.0269	+/-0.079	0.0591	pCi/g						
Cesium-134	U	0.0101	+/-0.0198	0.0179	+/-0.0194	0.0395	pCi/g						
Cesium-137	U	-0.00606	+/-0.0181	0.015	+/-0.0177	0.033	pCi/g						
Cobalt-60	U	0.0196	+/-0.018	0.0182	+/-0.0176	0.0413	pCi/g						
Europium-152	U	0.0132	+/-0.0507	0.0446	+/-0.0497	0.0955	pCi/g						
Europium-154	U	0.0307	+/-0.0641	0.0581	+/-0.0628	0.130	pCi/g						
Europium-155	U	0.0592	+/-0.0586	0.0585	+/-0.0574	0.122	pCi/g						
Lead-212		0.462	+/-0.058	0.0253	+/-0.0569	0.0535	pCi/g						
Lead-214		0.540	+/-0.0832	0.0364	+/-0.0815	0.0772	pCi/g						
Manganese-54	U	0.0139	+/-0.0189	0.016	+/-0.0185	0.0353	pCi/g						
Niobium-94	U	-0.00975	+/-0.0184	0.0149	+/-0.018	0.0325	pCi/g						
Potassium-40		6.99	+/-0.895	0.180	+/-0.877	0.410	pCi/g						
Radium-226		0.459	+/-0.0806	0.0269	+/-0.079	0.0591	pCi/g						
Silver-108m	U	0.00651	+/-0.0155	0.0145	+/-0.0152	0.0314	pCi/g						
Thallium-208		0.154	+/-0.0466	0.0156	+/-0.0457	0.034	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr-90, solid Quick TAT													
Strontium-90	U	0.0303	+/-0.0268	0.0241	+/-0.0278	0.0524	pCi/g		JMB1	12/02/04	1712	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		5.21	+/-1.64	1.20	+/-1.67	2.40	pCi/g		JLB1	12/03/04	1057	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1103	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-192-C-2C-04
Sample ID: 126304041

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	93	(25%–125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier—please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-193-C-1C-02	Project:	YANK01304
Sample ID:	126304042	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	4.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.486	+/-0.202	0.0759	+/-0.198	0.166	pCi/g		AKB	12/04/04	1753	384336	1
Americium-241	U	0.00528	+/-0.0343	0.0281	+/-0.0336	0.0583	pCi/g						
Bismuth-212	U	0.157	+/-0.245	0.157	+/-0.240	0.342	pCi/g						
Bismuth-214		0.510	+/-0.119	0.0396	+/-0.117	0.0852	pCi/g						
Cesium-134	U	0.0375	+/-0.0275	0.0242	+/-0.027	0.0525	pCi/g						
Cesium-137	U	-0.00777	+/-0.0207	0.0172	+/-0.0203	0.0379	pCi/g						
Cobalt-60	U	0.0119	+/-0.0232	0.0213	+/-0.0228	0.0479	pCi/g						
Europium-152	U	-0.0116	+/-0.0683	0.051	+/-0.0669	0.108	pCi/g						
Europium-154	U	-0.0244	+/-0.0688	0.0557	+/-0.0675	0.126	pCi/g						
Europium-155	U	0.0228	+/-0.0553	0.0533	+/-0.0542	0.111	pCi/g						
Lead-212		0.454	+/-0.0725	0.0293	+/-0.0711	0.0616	pCi/g						
Lead-214		0.662	+/-0.112	0.035	+/-0.110	0.0747	pCi/g						
Manganese-54	U	0.00792	+/-0.0215	0.0191	+/-0.021	0.042	pCi/g						
Niobium-94	U	0.00546	+/-0.0189	0.0169	+/-0.0186	0.037	pCi/g						
Potassium-40		7.67	+/-1.03	0.176	+/-1.01	0.406	pCi/g						
Radium-226		0.510	+/-0.119	0.0396	+/-0.117	0.0852	pCi/g						
Silver-108m	U	-0.00553	+/-0.019	0.0168	+/-0.0187	0.0361	pCi/g						
Thallium-208		0.145	+/-0.0469	0.0174	+/-0.046	0.038	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.00361	+/-0.0318	0.0327	+/-0.0318	0.0699	pCi/g		JMB1	12/02/04	1712	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	1.24	+/-1.45	1.17	+/-1.45	2.34	pCi/g		JLB1	12/03/04	1130	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJI	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	11/29/04	1103	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-193-C-1C-02
Sample ID: 126304042

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	85	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier--please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-193-C-2C-03	Project:	YANK01304
Sample ID:	126304043	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	5.77%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.401	+/-0.111	0.0629	+/-0.109	0.139	pCi/g		AKB	12/04/04	1753	384336	1
Americium-241	U	0.00694	+/-0.0881	0.078	+/-0.0863	0.163	pCi/g						
Bismuth-212	U	0.250	+/-0.197	0.123	+/-0.193	0.272	pCi/g						
Bismuth-214		0.566	+/-0.0913	0.0306	+/-0.0895	0.0666	pCi/g						
Cesium-134	U	0.00452	+/-0.0226	0.0194	+/-0.0221	0.0425	pCi/g						
Cesium-137	U	0.00519	+/-0.0227	0.0176	+/-0.0223	0.0384	pCi/g						
Cobalt-60	U	-0.00153	+/-0.0223	0.0183	+/-0.0218	0.0416	pCi/g						
Europium-152	U	0.0172	+/-0.0491	0.046	+/-0.0481	0.098	pCi/g						
Europium-154	U	-0.0118	+/-0.0709	0.0579	+/-0.0694	0.129	pCi/g						
Europium-155	U	-0.0208	+/-0.0558	0.0514	+/-0.0547	0.108	pCi/g						
Lead-212		0.356	+/-0.0503	0.0271	+/-0.0493	0.057	pCi/g						
Lead-214		0.607	+/-0.0841	0.0346	+/-0.0824	0.0737	pCi/g						
Manganese-54	U	0.00617	+/-0.0181	0.0165	+/-0.0177	0.0365	pCi/g						
Niobium-94	U	0.0178	+/-0.0187	0.0175	+/-0.0183	0.0379	pCi/g						
Potassium-40		7.57	+/-0.823	0.161	+/-0.807	0.372	pCi/g						
Radium-226		0.566	+/-0.0913	0.0306	+/-0.0895	0.0666	pCi/g						
Silver-108m	U	-0.00241	+/-0.0157	0.0138	+/-0.0154	0.0299	pCi/g						
Thallium-208		0.149	+/-0.0446	0.0166	+/-0.0437	0.0362	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr-90, solid Quick TAT													
Strontium-90	U	-0.0212	+/-0.0249	0.0285	+/-0.0255	0.0614	pCi/g		JMB1	12/02/04	1935	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		3.99	+/-2.18	1.70	+/-2.21	3.39	pCi/g		JLB1	12/04/04	0532	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1103	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-193-C-2C-03
Sample ID: 126304043

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC; Sr90, solid Quick TAT	85	(25%–125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-193-C-2C-04	Project:	YANK01304
Sample ID:	126304044	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	5.78%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.324	+/-0.122	0.051	+/-0.119	0.114	pCi/g		AKB 12/04/04	1754	384336	1
Americium-241	U	0.00759	+/-0.0434	0.0654	+/-0.0426	0.138	pCi/g					
Bismuth-212		0.473	+/-0.272	0.103	+/-0.267	0.229	pCi/g					
Bismuth-214		0.419	+/-0.0759	0.0291	+/-0.0744	0.0632	pCi/g					
Cesium-134	U	0.0384	+/-0.0293	0.0193	+/-0.0287	0.042	pCi/g					
Cesium-137	U	-0.00285	+/-0.0173	0.0147	+/-0.017	0.0324	pCi/g					
Cobalt-60	U	-0.00411	+/-0.0187	0.0152	+/-0.0183	0.035	pCi/g					
Europium-152	U	-0.00528	+/-0.0462	0.0395	+/-0.0452	0.0847	pCi/g					
Europium-154	U	-0.0219	+/-0.0612	0.0492	+/-0.0599	0.111	pCi/g					
Europium-155	U	0.0395	+/-0.0465	0.0466	+/-0.0455	0.0974	pCi/g					
Lead-212		0.362	+/-0.0593	0.0224	+/-0.0581	0.0474	pCi/g					
Lead-214		0.556	+/-0.0939	0.0268	+/-0.092	0.0577	pCi/g					
Manganese-54	U	0.00268	+/-0.0194	0.0167	+/-0.019	0.0365	pCi/g					
Niobium-94	U	0.0211	+/-0.0281	0.017	+/-0.0275	0.0366	pCi/g					
Potassium-40		8.29	+/-0.951	0.121	+/-0.932	0.289	pCi/g					
Radium-226		0.419	+/-0.0759	0.0291	+/-0.0744	0.0632	pCi/g					
Silver-108m	U	0.00	+/-0.0201	0.015	+/-0.0197	0.0321	pCi/g					
	UI											
Thallium-208		0.125	+/-0.0376	0.0156	+/-0.0368	0.034	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90	U	-0.0089	+/-0.0256	0.0279	+/-0.0258	0.0605	pCi/g		JMB1 12/02/04	1934	384365	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		14.6	+/-2.49	1.64	+/-2.76	3.27	pCi/g		JLB1 12/04/04	0604	384419	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJI	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	11/29/04	1103	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-193-C-2C-04
Sample ID: 126304044

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	81	(25%-125%)

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-103-C-1C-01	Project:	YANK01304
Sample ID:	126304045	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	7.97%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)													
Americium-241	U	0.0251	+/-0.0317	0.0225	+/-0.0318	0.0558	pCi/g		JAS1	12/03/04	1728	384469	1
Curium-242	U	-0.0187	+/-0.0172	0.0209	+/-0.0173	0.0535	pCi/g						
Curium-243/244	U	-0.00274	+/-0.0377	0.0347	+/-0.0377	0.0802	pCi/g						
Alphaspec Pu, Solid-TRU2,ALL2 (CT)													
Plutonium-238	U	0.00945	+/-0.0373	0.0321	+/-0.0373	0.0739	pCi/g		JAS1	12/03/04	1728	384470	2
Plutonium-239/240	U	0.00305	+/-0.0152	0.0124	+/-0.0152	0.0347	pCi/g						
Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)													
Plutonium-241	U	0.0634	+/-1.70	1.43	+/-1.70	2.94	pCi/g		JAS1	12/07/04	1233	384471	3
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid-HTD2,ALL2 (CT)													
Carbon-14	U	-0.06	+/-0.280	0.237	+/-0.280	0.487	pCi/g		LAG1	12/01/04	0929	384423	4
Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)													
Iron-55	U	-3.22	+/-2.37	1.75	+/-2.38	3.55	pCi/g		JLB1	12/09/04	1836	384424	5
Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)													
Nickel-63		1.64	+/-0.813	0.646	+/-0.815	1.32	pCi/g		JLB1	12/05/04	1050	384425	6
Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)													
Technetium-99	U	-0.606	+/-0.457	0.400	+/-0.457	0.822	pCi/g		EGD1	12/05/04	1714	384420	7

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EPA EERF C-01 Modified
5	DOE RESL Fe-1, Modified
6	DOE RESL Ni-1, Modified

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Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-103-C-1C-01
Sample ID: 126304045

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
7	DOE EML HASL-300, Tc-02-RC Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid-TRI	90	(25%-125%)
Plutonium-242	Alphaspec Pu, Solid-TRU2,ALL2	96	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-TRU2,/	79	
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-HTD2,Al	34	
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-HTD2,Al	49	
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-HTD2,A	82	

Notes:
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- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier—please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-104-C-1C-01	Project:	YANK01304
Sample ID:	126304046	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.65%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)													
Americium-241		0.0361	+/-0.0275	0.0118	+/-0.0277	0.035	pCi/g		JAS1	12/03/04	1728	384469	1
Curium-242	U	0.00381	+/-0.019	0.0155	+/-0.019	0.0433	pCi/g						
Curium-243/244	U	0.0292	+/-0.0408	0.0312	+/-0.0409	0.0738	pCi/g						
Alphaspec Pu, Solid-TRU2,ALL2 (CT)													
Plutonium-238	U	0.0149	+/-0.0371	0.0303	+/-0.0371	0.0726	pCi/g		JAS1	12/03/04	1728	384470	2
Plutonium-239/240	U	0.00939	+/-0.0231	0.0175	+/-0.0231	0.0469	pCi/g						
Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)													
Plutonium-241	U	-1.1	+/-1.56	1.34	+/-1.56	2.75	pCi/g		JAS1	12/07/04	1305	384471	3
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid-HTD2,ALL2 (CT)													
Carbon-14	U	-0.0334	+/-0.272	0.230	+/-0.272	0.472	pCi/g		LAG1	12/01/04	1001	384423	4
Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)													
Iron-55	U	-4.0	+/-2.43	1.76	+/-2.44	3.57	pCi/g		JLB1	12/09/04	2041	384424	5
Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)													
Nickel-63		1.74	+/-0.858	0.682	+/-0.860	1.40	pCi/g		JLB1	12/05/04	1152	384425	6
Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)													
Technetium-99	U	-0.894	+/-0.477	0.425	+/-0.477	0.873	pCi/g		EGD1	12/05/04	1747	384420	7

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EPA EERF C-01 Modified
5	DOE RESL Fe-1, Modified
6	DOE RESL Ni-1, Modified

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-104-C-1C-01
Sample ID: 126304046

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
7	DOE EML HASL-300, Tc-02-RC Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid-TRI	81	(25%-125%)
Plutonium-242	Alphaspec Pu, Solid-TRU2,ALL2	97	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-TRU2,A	84	
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-HTD2,Al	45	
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-HTD2,Al	46	
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-HTD2,A	78	

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-105-C-1C-01
Sample ID: 126304047
Matrix: CR
Collect Date: 17-NOV-04
Receive Date: 26-NOV-04
Collector: Client
Moisture: 4.93%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)													
Americium-241	U	-0.00128	+/-0.0209	0.0193	+/-0.0209	0.0495	pCi/g		JAS1	12/03/04	1728	384469	1
Curium-242	U	-0.00687	+/-0.018	0.019	+/-0.0181	0.0495	pCi/g						
Curium-243/244	U	0.00128	+/-0.0383	0.0344	+/-0.0383	0.0797	pCi/g						
Alphaspec Pu, Solid-TRU2,ALL2 (CT)													
Plutonium-238	U	-0.000676	+/-0.0156	0.0144	+/-0.0156	0.0403	pCi/g		JAS1	12/03/04	1728	384470	2
Plutonium-239/240	U	0.00355	+/-0.0177	0.0144	+/-0.0177	0.0403	pCi/g						
Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)													
Plutonium-241	U	-0.637	+/-2.08	1.76	+/-2.08	3.63	pCi/g		JAS1	12/07/04	1337	384471	3
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid-HTD2,ALL2 (CT)													
Carbon-14	U	-0.187	+/-0.265	0.228	+/-0.265	0.468	pCi/g		LAG1	12/01/04	1033	384423	4
Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)													
Iron-55	U	-2.47	+/-3.06	2.29	+/-3.06	4.63	pCi/g		JLB1	12/09/04	2246	384424	5
Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)													
Nickel-63		2.66	+/-1.12	0.885	+/-1.13	1.81	pCi/g		JLB1	12/05/04	1254	384425	6
Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)													
Technetium-99	U	-0.689	+/-0.479	0.421	+/-0.479	0.865	pCi/g		EGD1	12/05/04	1819	384420	7

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EPA EERF C-01 Modified
5	DOE RESL Fe-1, Modified
6	DOE RESL Ni-1, Modified

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-105-C-1C-01
Sample ID: 126304047

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
7	DOE EML HASL-300, Tc-02-RC Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid-TRI	85	(25%-125%)
Plutonium-242	Alphaspec Pu, Solid-TRU2,ALL2	98	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-TRU2,/	65	
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-HTD2,Al	27	
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-HTD2,Al	37	
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-HTD2,A	81	

Notes:
The Qualifiers in this report are defined as follows:

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- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	5000-0000-106-C-1C-01	Project:	YANK01304
Sample ID:	126304048	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	18-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.31%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)													
Americium-241	U	0.0269	+/-0.0339	0.024	+/-0.034	0.0597	pCi/g		JAS1	12/03/04	1728	384469	1
Curium-242	U	0.0151	+/-0.0192	0.00909	+/-0.0192	0.0306	pCi/g						
Curium-243/244	U	0.0145	+/-0.036	0.0295	+/-0.0361	0.0706	pCi/g						
Alphaspec Pu, Solid-TRU2,ALL2 (CT)													
Plutonium-238	U	-0.0227	+/-0.0209	0.0251	+/-0.021	0.0606	pCi/g		JAS1	12/03/04	1728	384470	2
Plutonium-239/240	U	0.0169	+/-0.0245	0.0169	+/-0.0245	0.0442	pCi/g						
Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)													
Plutonium-241	U	-1.15	+/-1.62	1.39	+/-1.62	2.86	pCi/g		JAS1	12/07/04	1409	384471	3
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid-HTD2,ALL2 (CT)													
Carbon-14	U	-0.0381	+/-0.275	0.232	+/-0.275	0.476	pCi/g		LAG1	12/01/04	1105	384423	4
Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)													
Iron-55	U	-3.11	+/-2.72	2.04	+/-2.72	4.13	pCi/g		JLB1	12/10/04	0051	384424	5
Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)													
Nickel-63		1.63	+/-0.858	0.685	+/-0.860	1.40	pCi/g		JLB1	12/05/04	1356	384425	6
Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)													
Technetium-99	U	-0.387	+/-0.463	0.400	+/-0.463	0.821	pCi/g		EGD1	12/05/04	1851	384420	7

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EPA EERF C-01 Modified
5	DOE RESL Fe-1, Modified
6	DOE RESL Ni-1, Modified

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 5000-0000-106-C-1C-01
Sample ID: 126304048

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
7	DOE EML HASL-300, Tc-02-RC Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid-TRI	72	(25%-125%)
Plutonium-242	Alphaspec Pu, Solid-TRU2,ALL2	96	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-TRU2,A	82	
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-HTD2,Al	27	
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-HTD2,Al	46	
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-HTD2,A	81	

Notes:
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- H Analytical holding time exceeded.
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- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-192-C-1C-01
Sample ID: 126304049
Matrix: CR
Collect Date: 18-NOV-04
Receive Date: 26-NOV-04
Collector: Client
Moisture: 7.6%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)													
Americium-241	U	-0.0231	+/-0.0392	0.0404	+/-0.0393	0.0946	pCi/g		JAS1	12/03/04	1728	384469	1
Curium-242	U	0.000657	+/-0.0242	0.0216	+/-0.0242	0.058	pCi/g						
Curium-243/244	U	0.0291	+/-0.0363	0.0248	+/-0.0365	0.0634	pCi/g						
Alphaspec Pu, Solid-TRU2,ALL2 (CT)													
Plutonium-238	U	-0.00315	+/-0.0246	0.0231	+/-0.0246	0.0574	pCi/g		JAS1	12/03/04	1728	384470	2
Plutonium-239/240	U	0.0058	+/-0.0224	0.0183	+/-0.0224	0.0477	pCi/g						
Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)													
Plutonium-241	U	1.02	+/-2.17	1.80	+/-2.18	3.69	pCi/g		JAS1	12/07/04	1441	384471	3
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid-HTD2,ALL2 (CT)													
Carbon-14	U	0.389	+/-0.288	0.230	+/-0.288	0.474	pCi/g		LAG1	12/01/04	1137	384423	4
Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)													
Iron-55	U	-2.77	+/-2.76	2.06	+/-2.76	4.18	pCi/g		JLB1	12/10/04	0256	384424	5
Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)													
Nickel-63		2.12	+/-0.887	0.698	+/-0.890	1.43	pCi/g		JLB1	12/05/04	1457	384425	6
Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)													
Technetium-99	U	-0.491	+/-0.474	0.411	+/-0.474	0.845	pCi/g		EGD1	12/05/04	1923	384420	7

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EPA EERF C-01 Modified
5	DOE RESL Fe-1, Modified
6	DOE RESL Ni-1, Modified

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Certificate of Analysis

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-192-C-1C-01
Sample ID: 126304049

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
7	DOE EML HASL-300, Tc-02-RC Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid-TRI	77	(25%-125%)
Plutonium-242	Alphaspec Pu, Solid-TRU2,ALL2	96	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-TRU2,/	63	
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-HTD2,AI	28	
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-HTD2,AI	46	
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-HTD2,A	83	

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID:	3107-0000-193-C-1C-01	Project:	YANK01304
Sample ID:	126304050	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	4.52%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)													
Americium-241	U	0.0218	+/-0.0316	0.0234	+/-0.0317	0.0575	pCi/g		JAS1	12/03/04	1728	384469	1
Curium-242	U	-0.00255	+/-0.0197	0.0188	+/-0.0197	0.049	pCi/g						
Curium-243/244	U	0.00823	+/-0.0307	0.0259	+/-0.0308	0.0625	pCi/g						
Alphaspec Pu, Solid-TRU2,ALL2 (CT)													
Plutonium-238	U	-0.00951	+/-0.027	0.027	+/-0.0271	0.0657	pCi/g		JAS1	12/03/04	1728	384470	2
Plutonium-239/240	U	-0.000691	+/-0.016	0.0148	+/-0.016	0.0412	pCi/g						
Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)													
Plutonium-241	U	-0.375	+/-2.34	1.97	+/-2.34	4.06	pCi/g		JAS1	12/07/04	1513	384471	3
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid-HTD2,ALL2 (CT)													
Carbon-14	U	0.0146	+/-0.275	0.231	+/-0.275	0.474	pCi/g		LAG1	12/01/04	1209	384423	4
Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)													
Iron-55	U	-1.56	+/-2.60	1.87	+/-2.60	3.78	pCi/g		JLB1	12/10/04	0501	384424	5
Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)													
Nickel-63		2.38	+/-1.03	0.812	+/-1.03	1.66	pCi/g		JLB1	12/05/04	1559	384425	6
Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)													
Technetium-99	U	-0.589	+/-0.491	0.428	+/-0.491	0.879	pCi/g		EGD1	12/05/04	1955	384420	7

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	DLD1	11/30/04	1254	384228
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1044	384227

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EPA EERF C-01 Modified
5	DOE RESL Fe-1, Modified
6	DOE RESL Ni-1, Modified

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: December 10, 2004

Client Sample ID: 3107-0000-193-C-1C-01
Sample ID: 126304050

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
7	DOE EML HASL-300, Tc-02-RC Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid-TRI	80	(25%-125%)
Plutonium-242	Alphaspec Pu, Solid-TRU2,ALL2	95	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-TRU2,A	56	
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-HTD2,AI	44	
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-HTD2,AI	39	
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-HTD2,A	78	

Notes:
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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID:	5000-0000-105-C-4C-04	Project:	YANK01304
Sample ID:	126304034	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	17-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	4.92%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.489	+/-0.162	0.0604	+/-0.159	0.132	pCi/g		AKB	12/04/04	2019	384330	1
Americium-241	U	-0.00352	+/-0.0804	0.0662	+/-0.0788	0.139	pCi/g						
Bismuth-212		0.400	+/-0.207	0.120	+/-0.203	0.262	pCi/g						
Bismuth-214		0.446	+/-0.0817	0.0266	+/-0.0801	0.0581	pCi/g						
Cesium-134	U	0.0154	+/-0.0322	0.0199	+/-0.0316	0.0432	pCi/g						
Cesium-137	U	-0.00686	+/-0.0208	0.0148	+/-0.0204	0.0323	pCi/g						
Cobalt-60	U	0.00294	+/-0.0193	0.0165	+/-0.0189	0.0376	pCi/g						
Europium-152	U	0.00626	+/-0.048	0.0415	+/-0.047	0.0883	pCi/g						
Europium-154	U	-0.0495	+/-0.0547	0.0379	+/-0.0536	0.0882	pCi/g						
Europium-155	U	0.0448	+/-0.0456	0.0457	+/-0.0447	0.0954	pCi/g						
Lead-212		0.289	+/-0.0581	0.0321	+/-0.0569	0.0667	pCi/g						
Lead-214		0.498	+/-0.0875	0.0286	+/-0.0858	0.061	pCi/g						
Manganese-54	U	0.0138	+/-0.0193	0.0174	+/-0.0189	0.0379	pCi/g						
Niobium-94	U	0.0111	+/-0.0173	0.0157	+/-0.017	0.034	pCi/g						
Potassium-40		8.03	+/-1.01	0.165	+/-0.987	0.375	pCi/g						
Radium-226		0.446	+/-0.0817	0.0266	+/-0.0801	0.0581	pCi/g						
Silver-108m	U	0.00395	+/-0.0142	0.013	+/-0.0139	0.0281	pCi/g						
Thallium-208		0.132	+/-0.0398	0.013	+/-0.039	0.0285	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	-0.0216	+/-0.0237	0.0275	+/-0.0243	0.0595	pCi/g		JMB1	12/02/04	1538	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	0.664	+/-1.33	1.09	+/-1.33	2.18	pCi/g		JLB1	12/03/04	0713	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJI	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID: 5000-0000-105-C-4C-04
Sample ID: 126304034

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	88	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Results below the MDC or low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value.
- U Target analyte was analyzed for but not detected above the MDL or LOD.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier—please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID:	5000-0000-106-C-1C-02	Project:	YANK01304
Sample ID:	126304035	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	18-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	5.88%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.307	+/-0.134	0.0515	+/-0.131	0.115	pCi/g		AKB	12/04/04	2020	384330	1
Americium-241	U	0.0437	+/-0.0678	0.0662	+/-0.0664	0.138	pCi/g						
Bismuth-212		0.332	+/-0.160	0.124	+/-0.156	0.272	pCi/g						
Bismuth-214		0.416	+/-0.0784	0.0277	+/-0.0768	0.0604	pCi/g						
Cesium-134	U	0.00102	+/-0.0505	0.0208	+/-0.0495	0.045	pCi/g						
Cesium-137	U	0.00302	+/-0.0183	0.0158	+/-0.0179	0.0346	pCi/g						
Cobalt-60	U	-0.00882	+/-0.0225	0.0146	+/-0.022	0.0337	pCi/g						
Europium-152	U	0.015	+/-0.0472	0.0434	+/-0.0463	0.0925	pCi/g						
Europium-154	U	0.0455	+/-0.0531	0.0507	+/-0.052	0.114	pCi/g						
Europium-155	U	-0.0143	+/-0.0517	0.0463	+/-0.0507	0.097	pCi/g						
Lead-212		0.323	+/-0.0482	0.0278	+/-0.0472	0.0582	pCi/g						
Lead-214		0.513	+/-0.0852	0.0276	+/-0.0835	0.0592	pCi/g						
Manganese-54	U	0.00412	+/-0.0185	0.0166	+/-0.0182	0.0364	pCi/g						
Niobium-94	U	-0.00255	+/-0.0167	0.0138	+/-0.0164	0.0302	pCi/g						
Potassium-40		6.69	+/-0.811	0.162	+/-0.795	0.370	pCi/g						
Radium-226		0.416	+/-0.0784	0.0277	+/-0.0768	0.0604	pCi/g						
Silver-108m	U	0.00799	+/-0.0165	0.0151	+/-0.0161	0.0324	pCi/g						
Thallium-208		0.102	+/-0.0395	0.0165	+/-0.0387	0.0357	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.00486	+/-0.0338	0.0346	+/-0.0338	0.0746	pCi/g		JMB1	12/02/04	1538	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	1.08	+/-1.38	1.12	+/-1.38	2.24	pCi/g		JLB1	12/03/04	0745	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJI	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	11/29/04	1102	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID: 5000-0000-106-C-1C-02
Sample ID: 126304035

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	74	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Results below the MDC or low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value.
- U Target analyte was analyzed for but not detected above the MDL or LOD.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID:	5000-0000-106-C-3C-01	Project:	YANK01304
Sample ID:	126304036	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	18-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.06%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228	UUI	0.00	+/-0.173	0.120	+/-0.169	0.252	pCi/g		AKB	12/04/04	2020	384330	1
Americium-241	U	-0.0111	+/-0.0266	0.0225	+/-0.0261	0.0468	pCi/g						
Bismuth-212	U	0.192	+/-0.175	0.166	+/-0.171	0.356	pCi/g						
Bismuth-214		0.355	+/-0.0802	0.0285	+/-0.0786	0.0623	pCi/g						
Cesium-134	U	-0.000462	+/-0.026	0.0192	+/-0.0255	0.0421	pCi/g						
Cesium-137	U	-0.0146	+/-0.0196	0.0156	+/-0.0192	0.0344	pCi/g						
Cobalt-60	U	-0.00406	+/-0.0237	0.0194	+/-0.0232	0.0437	pCi/g						
Europium-152	U	-0.0178	+/-0.0459	0.0394	+/-0.045	0.0843	pCi/g						
Europium-154	U	-0.00833	+/-0.073	0.0608	+/-0.0715	0.135	pCi/g						
Europium-155	U	0.0539	+/-0.0685	0.0378	+/-0.0671	0.0791	pCi/g						
Lead-212		0.350	+/-0.058	0.0223	+/-0.0569	0.0472	pCi/g						
Lead-214		0.465	+/-0.0847	0.0267	+/-0.083	0.0575	pCi/g						
Manganese-54	U	-0.0032	+/-0.0212	0.0177	+/-0.0207	0.0387	pCi/g						
Niobium-94	U	-0.00663	+/-0.019	0.0159	+/-0.0186	0.0345	pCi/g						
Potassium-40		8.57	+/-1.03	0.119	+/-1.01	0.286	pCi/g						
Radium-226		0.355	+/-0.0802	0.0285	+/-0.0786	0.0623	pCi/g						
Silver-108m	U	-0.00426	+/-0.0162	0.0136	+/-0.0158	0.0294	pCi/g						
Thallium-208		0.104	+/-0.035	0.0157	+/-0.0343	0.0342	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	-0.00421	+/-0.0334	0.0353	+/-0.0335	0.0753	pCi/g		JMB1	12/02/04	1538	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	0.116	+/-1.33	1.12	+/-1.33	2.23	pCi/g		JLB1	12/03/04	0817	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1103	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID: 5000-0000-106-C-3C-01
Sample ID: 126304036

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	84	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Results below the MDC or low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value.
- U Target analyte was analyzed for but not detected above the MDL or LOD.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID:	5000-0000-106-C-4C-03	Project:	YANK01304
Sample ID:	126304037	Client ID:	YANK001
Matrix:	CR	Vol. Recv.:	
Collect Date:	18-NOV-04		
Receive Date:	26-NOV-04		
Collector:	Client		
Moisture:	6.14%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.290	+/-0.127	0.0397	+/-0.124	0.087	pCi/g		AKB	12/04/04	2021	384330	1
Americium-241	U	0.0244	+/-0.0527	0.0466	+/-0.0516	0.0972	pCi/g						
Bismuth-212		0.227	+/-0.161	0.0858	+/-0.158	0.187	pCi/g						
Bismuth-214		0.296	+/-0.0697	0.0219	+/-0.0683	0.047	pCi/g						
Cesium-134	U	0.0153	+/-0.0179	0.0162	+/-0.0175	0.0347	pCi/g						
Cesium-137	U	-0.0144	+/-0.0153	0.0121	+/-0.015	0.026	pCi/g						
Cobalt-60	U	0.00253	+/-0.0157	0.0134	+/-0.0154	0.0296	pCi/g						
Europium-152	U	0.0201	+/-0.0419	0.038	+/-0.0411	0.080	pCi/g						
Europium-154	U	0.0231	+/-0.0457	0.0406	+/-0.0448	0.0889	pCi/g						
Europium-155	U	-0.00878	+/-0.0437	0.0395	+/-0.0428	0.0825	pCi/g						
Lead-212		0.297	+/-0.0515	0.0197	+/-0.0505	0.0415	pCi/g						
Lead-214		0.340	+/-0.0662	0.0231	+/-0.0649	0.0491	pCi/g						
Manganese-54	U	-0.00851	+/-0.0156	0.0124	+/-0.0152	0.0268	pCi/g						
Niobium-94	U	-0.0084	+/-0.0134	0.0108	+/-0.0131	0.0234	pCi/g						
Potassium-40		7.70	+/-0.855	0.113	+/-0.838	0.254	pCi/g						
Radium-226		0.296	+/-0.0697	0.0219	+/-0.0683	0.047	pCi/g						
Silver-108m	U	0.00493	+/-0.0133	0.0117	+/-0.013	0.0249	pCi/g						
Thallium-208		0.0934	+/-0.0315	0.0119	+/-0.0309	0.0255	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	-0.0352	+/-0.0288	0.0342	+/-0.0306	0.0734	pCi/g		JMB1	12/02/04	1538	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	-0.452	+/-1.33	1.13	+/-1.33	2.26	pCi/g		JLB1	12/03/04	0849	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1103	384230
GL-RAD-A-026	Laboratory sample composite				384229

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID: 5000-0000-106-C-4C-03
Sample ID: 126304037

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	79	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Results below the MDC or low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value.
- U Target analyte was analyzed for but not detected above the MDL or LOD.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID: 5000-0000-106-C-4C-04
Sample ID: 126304038
Matrix: CR
Collect Date: 18-NOV-04
Receive Date: 26-NOV-04
Collector: Client
Moisture: 5.96%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.382	+/-0.122	0.0564	+/-0.120	0.126	pCi/g		AKB	12/05/04	2015	384330	1
Americium-241	U	0.0749	+/-0.113	0.062	+/-0.111	0.131	pCi/g						
Bismuth-212	UUI	0.00	+/-0.293	0.103	+/-0.287	0.230	pCi/g						
Bismuth-214		0.365	+/-0.0702	0.025	+/-0.0688	0.0552	pCi/g						
Cesium-134	U	0.0207	+/-0.0336	0.0174	+/-0.0329	0.0386	pCi/g						
Cesium-137	U	0.0141	+/-0.0173	0.0166	+/-0.017	0.0363	pCi/g						
Cobalt-60	U	0.00344	+/-0.0219	0.0193	+/-0.0215	0.0436	pCi/g						
Europium-152	U	0.0234	+/-0.0466	0.0423	+/-0.0457	0.0904	pCi/g						
Europium-154	U	-0.0124	+/-0.0584	0.0457	+/-0.0572	0.105	pCi/g						
Europium-155	U	0.0503	+/-0.0445	0.0449	+/-0.0436	0.0943	pCi/g						
Lead-212		0.276	+/-0.0524	0.0217	+/-0.0514	0.0461	pCi/g						
Lead-214		0.394	+/-0.0881	0.029	+/-0.0863	0.0622	pCi/g						
Manganese-54	U	-0.00611	+/-0.0185	0.0151	+/-0.0181	0.0336	pCi/g						
Niobium-94	U	0.00503	+/-0.0154	0.014	+/-0.0151	0.0307	pCi/g						
Potassium-40		7.22	+/-0.942	0.139	+/-0.923	0.327	pCi/g						
Radium-226		0.365	+/-0.0702	0.025	+/-0.0688	0.0552	pCi/g						
Silver-108m	U	-0.00318	+/-0.0166	0.0138	+/-0.0163	0.0299	pCi/g						
Thallium-208		0.128	+/-0.0376	0.013	+/-0.0368	0.0288	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid Quick TAT													
Strontium-90	U	0.010	+/-0.0294	0.0294	+/-0.0295	0.0635	pCi/g		JMB1	12/02/04	1538	384365	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	0.430	+/-1.23	1.01	+/-1.23	2.03	pCi/g		JLB1	12/03/04	0921	384419	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	11/30/04	1424	384231
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	11/29/04	1103	384230
GL-RAD-A-026	Laboratory sample composite				384229

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: May 17, 2005

Client Sample ID: 5000-0000-106-C-4C-04
Sample ID: 126304038

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid Quick TAT	82	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Results below the MDC or low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value.
- U Target analyte was analyzed for but not detected above the MDL or LOD.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: December 10, 2004

Client: Connecticut Yankee Atomic Power
Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut

Contact: Mr. Pete Hollenbeck

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 384469										
QC1200748003 126304045 DUP										
Americium-241	U	0.0251	U	0.00214	pCi/g	169		(0% - 100%)	JAS1	12/03/04 17:28
Uncert:		+/-0.0317		+/-0.0275						
TPU:		+/-0.0318		+/-0.0275						
Curium-242	U	-0.0187	U	0.0125	pCi/g	N/A		(0% - 100%)		
Uncert:		+/-0.0172		+/-0.0222						
TPU:		+/-0.0173		+/-0.0222						
Curium-243/244	U	-0.00274	U	0.0456	pCi/g	N/A		(0% - 100%)		
Uncert:		+/-0.0377		+/-0.0401						
TPU:		+/-0.0377		+/-0.0404						
QC1200748005 LCS										
Americium-241	4.86			4.78	pCi/g		98	(75%-125%)		12/03/04 17:29
Uncert:				+/-0.274						
TPU:				+/-0.537						
Curium-242			U	0.000489	pCi/g					
Uncert:				+/-0.018						
TPU:				+/-0.018						
Curium-243/244	6.05			5.94	pCi/g		98	(75%-125%)		
Uncert:				+/-0.306						
TPU:				+/-0.650						
QC1200748002 MB										
Americium-241			U	0.0438	pCi/g					12/03/04 17:28
Uncert:				+/-0.0417						
TPU:				+/-0.0419						
Curium-242			U	-0.00481	pCi/g					
Uncert:				+/-0.013						
TPU:				+/-0.013						
Curium-243/244			U	-0.00691	pCi/g					
Uncert:				+/-0.0377						
TPU:				+/-0.0377						
QC1200748004 126304045 MS										
Americium-241	5.18 U	0.0251		4.91	pCi/g		94	(75%-125%)		
Uncert:		+/-0.0317		+/-0.265						
TPU:		+/-0.0318		+/-0.533						
Curium-242	U	-0.0187	U	0.0179	pCi/g					
Uncert:		+/-0.0172		+/-0.0204						
TPU:		+/-0.0173		+/-0.0204						
Curium-243/244	6.45 U	-0.00274		5.93	pCi/g		92	(75%-125%)		
Uncert:		+/-0.0377		+/-0.292						
TPU:		+/-0.0377		+/-0.631						
Batch 384470										
QC1200748007 126304045 DUP										
Plutonium-238	U	0.00945	U	0.00914	pCi/g	3		(0% - 100%)	JAS1	12/03/04 17:28

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 384470										
	Uncert:	+/-0.0373		+/-0.0219						
	TPU:	+/-0.0373		+/-0.0219						
Plutonium-239/240	U	0.00305	U	0.0032	pCi/g	5		(0% - 100%)		
	Uncert:	+/-0.0152		+/-0.0159						
	TPU:	+/-0.0152		+/-0.0159						
QC1200748009 LCS										
Plutonium-238			U	0.0128	pCi/g			(75%-125%)		12/06/04 17:05
	Uncert:			+/-0.0559						
	TPU:			+/-0.0559						
Plutonium-239/240	4.26			4.30	pCi/g		101	(75%-125%)		
	Uncert:			+/-0.420						
	TPU:			+/-0.648						
QC1200748006 MB										
Plutonium-238			U	0.00592	pCi/g					12/03/04 17:28
	Uncert:			+/-0.0272						
	TPU:			+/-0.0272						
Plutonium-239/240			U	-0.000623	pCi/g					
	Uncert:			+/-0.0144						
	TPU:			+/-0.0144						
QC1200748008 126304045 MS										
Plutonium-238	U	0.00945	U	0.0197	pCi/g			(75%-125%)		12/03/04 17:28
	Uncert:	+/-0.0373		+/-0.0447						
	TPU:	+/-0.0373		+/-0.0447						
Plutonium-239/240	4.54 U	0.00305		4.70	pCi/g		103	(75%-125%)		
	Uncert:	+/-0.0152		+/-0.259						
	TPU:	+/-0.0152		+/-0.515						
Batch 384471										
QC1200748011 126304046 DUP										
Plutonium-241	U	-1.1	U	-0.581	pCi/g	N/A		(0% - 100%)	JAS1	12/07/04 16:16
	Uncert:	+/-1.56		+/-1.80						
	TPU:	+/-1.56		+/-1.80						
QC1200748013 LCS										
Plutonium-241	34.7			29.1	pCi/g		84	(75%-125%)		12/07/04 17:20
	Uncert:			+/-2.46						
	TPU:			+/-3.56						
QC1200748010 MB										
Plutonium-241			U	-0.0799	pCi/g					12/07/04 15:44
	Uncert:			+/-1.50						
	TPU:			+/-1.50						
QC1200748012 126304046 MS										
Plutonium-241	32.2 U	-1.1		27.0	pCi/g		84	(75%-125%)		12/07/04 16:48
	Uncert:	+/-1.56		+/-2.91						
	TPU:	+/-1.56		+/-4.11						
Rad Gamma Spec										
Batch 384321										
QC1200747612 126304008 DUP										
Actinium-228		0.855		0.782	pCi/g	9		(0% - 100%)	AKB	12/04/04 15:00
	Uncert:	+/-0.208		+/-0.210						
				+/-0.206						

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 384321											
	TPU:	+/-0.204									
Americium-241	U	-0.0404	U	0.00425	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.142		+/-0.0966							
	TPU:	+/-0.139		+/-0.0947							
Bismuth-212		0.585		0.647	pCi/g	10		(0% - 100%)			
	Uncert:	+/-0.342		+/-0.298							
	TPU:	+/-0.335		+/-0.292							
Bismuth-214		0.768		0.722	pCi/g	6		(0% - 100%)			
	Uncert:	+/-0.114		+/-0.119							
	TPU:	+/-0.112		+/-0.116							
Cesium-134	U	0.0187	U	0.0445	pCi/g	82		(0% - 100%)			
	Uncert:	+/-0.0259		+/-0.0379							
	TPU:	+/-0.0254		+/-0.0371							
Cesium-137	U	0.00142	U	0.0152	pCi/g	166		(0% - 100%)			
	Uncert:	+/-0.0229		+/-0.0226							
	TPU:	+/-0.0225		+/-0.0221							
Cobalt-60	U	0.0127	U	0.018	pCi/g	34		(0% - 100%)			
	Uncert:	+/-0.026		+/-0.0215							
	TPU:	+/-0.0255		+/-0.0211							
Europium-152	U	0.0182	U	-0.021	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0755		+/-0.055							
	TPU:	+/-0.074		+/-0.0539							
Europium-154	U	0.0265	U	0.0155	pCi/g	52		(0% - 100%)			
	Uncert:	+/-0.071		+/-0.0686							
	TPU:	+/-0.0696		+/-0.0672							
Europium-155	U	0.0393	U	0.0179	pCi/g	75		(0% - 100%)			
	Uncert:	+/-0.0892		+/-0.052							
	TPU:	+/-0.0874		+/-0.0509							
Lead-212		0.752		0.644	pCi/g	15		(0% - 20%)			
	Uncert:	+/-0.083		+/-0.0827							
	TPU:	+/-0.0814		+/-0.0811							
Lead-214		0.756		0.639	pCi/g	17		(0% - 20%)			
	Uncert:	+/-0.107		+/-0.0951							
	TPU:	+/-0.105		+/-0.0932							
Manganese-54	U	0.0238	U	-0.015	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0256		+/-0.0252							
	TPU:	+/-0.0251		+/-0.0247							
Niobium-94	U	0.0153	U	-0.000663	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0238		+/-0.0202							
	TPU:	+/-0.0233		+/-0.0198							
Potassium-40		12.2		12.2	pCi/g	0		(0% - 20%)			
	Uncert:	+/-1.07		+/-1.32							
	TPU:	+/-1.05		+/-1.29							
Radium-226		0.768		0.722	pCi/g	6		(0% - 100%)			
	Uncert:	+/-0.114		+/-0.119							
	TPU:	+/-0.112		+/-0.116							
Silver-108m	U	0.0019	U	-0.00927	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0247		+/-0.0169							

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 384321										
	TPU:	+/-0.0242		+/-0.0166						
Thallium-208		0.264		0.252	pCi/g	5		(0% - 100%)		
	Uncert:	+/-0.0602		+/-0.0509						
	TPU:	+/-0.059		+/-0.0499						
QC1200747613 LCS										
Actinium-228			U	-0.282	pCi/g					12/05/04 20:12
	Uncert:			+/-0.628						
	TPU:			+/-0.616						
Americium-241	23.4			27.5	pCi/g		118	(75%-125%)		
	Uncert:			+/-1.33						
	TPU:			+/-1.30						
Bismuth-212			U	-0.746	pCi/g					
	Uncert:			+/-0.998						
	TPU:			+/-0.978						
Bismuth-214			U	0.0433	pCi/g					
	Uncert:			+/-0.243						
	TPU:			+/-0.238						
Cesium-134			U	-0.0278	pCi/g					
	Uncert:			+/-0.154						
	TPU:			+/-0.151						
Cesium-137	9.15			11.2	pCi/g		122	(75%-125%)		
	Uncert:			+/-0.514						
	TPU:			+/-0.504						
Cobalt-60	13.5			15.4	pCi/g		114	(75%-125%)		
	Uncert:			+/-0.650						
	TPU:			+/-0.637						
Europium-152			U	-0.179	pCi/g					
	Uncert:			+/-0.380						
	TPU:			+/-0.372						
Europium-154			U	-0.0664	pCi/g					
	Uncert:			+/-0.291						
	TPU:			+/-0.286						
Europium-155			U	-0.0492	pCi/g					
	Uncert:			+/-0.348						
	TPU:			+/-0.341						
Lead-212			U	0.132	pCi/g					
	Uncert:			+/-0.174						
	TPU:			+/-0.170						
Lead-214			U	0.0833	pCi/g					
	Uncert:			+/-0.228						
	TPU:			+/-0.224						
Manganese-54			U	0.0746	pCi/g					
	Uncert:			+/-0.136						
	TPU:			+/-0.133						
Niobium-94			U	-0.00371	pCi/g					
	Uncert:			+/-0.122						
	TPU:			+/-0.120						
Potassium-40			U	1.06	pCi/g					

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 384321										
	Uncert:			+/-0.916						
	TPU:			+/-0.897						
Radium-226			U	0.0433	pCi/g			(75%-125%)		
	Uncert:			+/-0.243						
	TPU:			+/-0.238						
Silver-108m			U	-0.0392	pCi/g					
	Uncert:			+/-0.145						
	TPU:			+/-0.142						
Thallium-208			U	0.114	pCi/g					
	Uncert:			+/-0.131						
	TPU:			+/-0.129						
QC1200747611 MB										
Actinium-228			U	0.00913	pCi/g					12/04/04 14:59
	Uncert:			+/-0.046						
	TPU:			+/-0.0451						
Americium-241			U	-0.031	pCi/g					
	Uncert:			+/-0.0657						
	TPU:			+/-0.0644						
Bismuth-212			U	0.029	pCi/g					
	Uncert:			+/-0.0938						
	TPU:			+/-0.092						
Bismuth-214			U	0.00145	pCi/g					
	Uncert:			+/-0.0288						
	TPU:			+/-0.0282						
Cesium-134			U	0.0095	pCi/g					
	Uncert:			+/-0.0143						
	TPU:			+/-0.014						
Cesium-137			U	-0.011	pCi/g					
	Uncert:			+/-0.0121						
	TPU:			+/-0.0119						
Cobalt-60			U	0.00351	pCi/g					
	Uncert:			+/-0.0136						
	TPU:			+/-0.0134						
Europium-152			U	-0.0294	pCi/g					
	Uncert:			+/-0.0304						
	TPU:			+/-0.0298						
Europium-154			U	0.00475	pCi/g					
	Uncert:			+/-0.0303						
	TPU:			+/-0.0297						
Europium-155			U	-0.0104	pCi/g					
	Uncert:			+/-0.0307						
	TPU:			+/-0.0301						
Lead-212			U	0.00758	pCi/g					
	Uncert:			+/-0.0187						
	TPU:			+/-0.0183						
Lead-214			U	0.0125	pCi/g					
	Uncert:			+/-0.0287						
	TPU:			+/-0.0282						

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 384321										
Manganese-54			U	0.00183	pCi/g					
	Uncert:			+/-0.0113						
	TPU:			+/-0.0111						
Niobium-94			U	0.00967	pCi/g					
	Uncert:			+/-0.00978						
	TPU:			+/-0.00959						
Potassium-40			U	0.218	pCi/g					
	Uncert:			+/-0.236						
	TPU:			+/-0.231						
Radium-226			U	0.00145	pCi/g					
	Uncert:			+/-0.0288						
	TPU:			+/-0.0282						
Silver-108m			U	0.00335	pCi/g					
	Uncert:			+/-0.011						
	TPU:			+/-0.0107						
Thallium-208			U	0.00643	pCi/g					
	Uncert:			+/-0.011						
	TPU:			+/-0.0107						
Batch 384330										
QC1200747616 126304027 DUP										
Actinium-228		0.375		0.405	pCi/g	8		(0% - 100%)	AKB	12/05/04 20:17
	Uncert:	+/-0.160		+/-0.112						
	TPU:	+/-0.157		+/-0.110						
Americium-241	U	0.107	U	0.0239	pCi/g	127		(0% - 100%)		
	Uncert:	+/-0.096		+/-0.0457						
	TPU:	+/-0.0941		+/-0.0448						
Bismuth-212	U	0.194		0.284	pCi/g	38		(0% - 100%)		
	Uncert:	+/-0.169		+/-0.142						
	TPU:	+/-0.166		+/-0.139						
Bismuth-214		0.445		0.469	pCi/g	5		(0% - 100%)		
	Uncert:	+/-0.086		+/-0.0745						
	TPU:	+/-0.0843		+/-0.073						
Cesium-134	U	0.0258	U	0.0148	pCi/g	55		(0% - 100%)		
	Uncert:	+/-0.0353		+/-0.0149						
	TPU:	+/-0.0346		+/-0.0146						
Cesium-137	U	-0.0118	U	0.0052	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0175		+/-0.0161						
	TPU:	+/-0.0172		+/-0.0157						
Cobalt-60	U	-0.00373	U	-0.00227	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0196		+/-0.015						
	TPU:	+/-0.0192		+/-0.0147						
Europium-152	U	0.0353	U	0.0243	pCi/g	37		(0% - 100%)		
	Uncert:	+/-0.0464		+/-0.0383						
	TPU:	+/-0.0455		+/-0.0375						
Europium-154	U	-0.00329	U	0.00597	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0818		+/-0.0464						
	TPU:	+/-0.0801		+/-0.0455						
Europium-155	U	0.0024	U	0.0183	pCi/g	154		(0% - 100%)		

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 384330										
	Uncert:	+/-0.0514		+/-0.0443						
	TPU:	+/-0.0504		+/-0.0434						
Lead-212		0.316		0.349	pCi/g	10		(0% - 100%)		
	Uncert:	+/-0.0642		+/-0.0499						
	TPU:	+/-0.0629		+/-0.0489						
Lead-214		0.425		0.429	pCi/g	1		(0% - 100%)		
	Uncert:	+/-0.0847		+/-0.0759						
	TPU:	+/-0.083		+/-0.0744						
Manganese-54	U	-0.0123	U	0.0109	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0194		+/-0.0148						
	TPU:	+/-0.019		+/-0.0146						
Niobium-94	U	0.00974	U	-0.00316	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0169		+/-0.0121						
	TPU:	+/-0.0166		+/-0.0119						
Potassium-40		6.83		7.63	pCi/g	11		(0% - 20%)		
	Uncert:	+/-0.883		+/-0.800						
	TPU:	+/-0.865		+/-0.784						
Radium-226		0.445		0.469	pCi/g	5		(0% - 100%)		
	Uncert:	+/-0.086		+/-0.0745						
	TPU:	+/-0.0843		+/-0.073						
Silver-108m	U	0.00811	U	-0.00955	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0154		+/-0.0126						
	TPU:	+/-0.0151		+/-0.0124						
Thallium-208		0.116		0.115	pCi/g	1		(0% - 100%)		
	Uncert:	+/-0.0373		+/-0.0355						
	TPU:	+/-0.0366		+/-0.0348						
QCI200747617 LCS										
Actinium-228			U	0.409	pCi/g					12/05/04 20:17
	Uncert:			+/-0.558						
	TPU:			+/-0.547						
Americium-241	23.4			24.7	pCi/g		106	(75%-125%)		
	Uncert:			+/-3.18						
	TPU:			+/-3.12						
Bismuth-212			U	0.0223	pCi/g					
	Uncert:			+/-0.915						
	TPU:			+/-0.897						
Bismuth-214			U	0.0789	pCi/g					
	Uncert:			+/-0.207						
	TPU:			+/-0.202						
Cesium-134			U	0.071	pCi/g					
	Uncert:			+/-0.167						
	TPU:			+/-0.164						
Cesium-137	9.15			9.35	pCi/g		102	(75%-125%)		
	Uncert:			+/-0.787						
	TPU:			+/-0.772						
Cobalt-60	13.5			14.2	pCi/g		105	(75%-125%)		
	Uncert:			+/-1.08						
	TPU:			+/-1.06						

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 384330										
Europium-152			U	0.0999	pCi/g					
	Uncert:			+/-0.271						
	TPU:			+/-0.266						
Europium-154			U	-0.158	pCi/g					
	Uncert:			+/-0.229						
	TPU:			+/-0.224						
Europium-155			U	-0.237	pCi/g					
	Uncert:			+/-0.257						
	TPU:			+/-0.252						
Lead-212			U	-0.115	pCi/g					
	Uncert:			+/-0.168						
	TPU:			+/-0.164						
Lead-214			U	0.0105	pCi/g					
	Uncert:			+/-0.211						
	TPU:			+/-0.207						
Manganese-54			U	0.0636	pCi/g					
	Uncert:			+/-0.126						
	TPU:			+/-0.123						
Niobium-94			U	-0.104	pCi/g					
	Uncert:			+/-0.103						
	TPU:			+/-0.101						
Potassium-40			U	0.449	pCi/g					
	Uncert:			+/-0.917						
	TPU:			+/-0.898						
Radium-226			U	0.0789	pCi/g			(75%-125%)		
	Uncert:			+/-0.207						
	TPU:			+/-0.202						
Silver-108m			U	0.0288	pCi/g					
	Uncert:			+/-0.0969						
	TPU:			+/-0.095						
Thallium-208			U	0.00636	pCi/g					
	Uncert:			+/-0.103						
	TPU:			+/-0.101						
QC1200747615 MB										
Actinium-228			U	0.0173	pCi/g					12/05/04 20:16
	Uncert:			+/-0.0589						
	TPU:			+/-0.0577						
Americium-241			U	0.00554	pCi/g					
	Uncert:			+/-0.0196						
	TPU:			+/-0.0192						
Bismuth-212			U	0.0781	pCi/g					
	Uncert:			+/-0.146						
	TPU:			+/-0.143						
Bismuth-214			UUI	0.00	pCi/g					
	Uncert:			+/-0.0766						
	TPU:			+/-0.0751						
Cesium-134			U	0.00759	pCi/g					
	Uncert:			+/-0.0182						

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 384330										
	TPU:			+/-0.0178						
Cesium-137			U	-0.00386	pCi/g					
	Uncert:			+/-0.0169						
	TPU:			+/-0.0166						
Cobalt-60			U	-0.0133	pCi/g					
	Uncert:			+/-0.0141						
	TPU:			+/-0.0138						
Europium-152			U	0.0367	pCi/g					
	Uncert:			+/-0.0428						
	TPU:			+/-0.0419						
Europium-154			U	-0.0161	pCi/g					
	Uncert:			+/-0.0456						
	TPU:			+/-0.0447						
Europium-155			U	-0.0035	pCi/g					
	Uncert:			+/-0.0347						
	TPU:			+/-0.034						
Lead-212			U	0.0112	pCi/g					
	Uncert:			+/-0.0257						
	TPU:			+/-0.0251						
Lead-214			U	0.0332	pCi/g					
	Uncert:			+/-0.0331						
	TPU:			+/-0.0324						
Manganese-54			U	0.00348	pCi/g					
	Uncert:			+/-0.0164						
	TPU:			+/-0.0161						
Niobium-94			U	-0.00824	pCi/g					
	Uncert:			+/-0.017						
	TPU:			+/-0.0167						
Potassium-40			U	0.205	pCi/g					
	Uncert:			+/-0.183						
	TPU:			+/-0.179						
Radium-226			UUI	0.00	pCi/g					
	Uncert:			+/-0.0766						
	TPU:			+/-0.0751						
Silver-108m			U	0.00176	pCi/g					
	Uncert:			+/-0.0136						
	TPU:			+/-0.0133						
Thallium-208			U	0.0103	pCi/g					
	Uncert:			+/-0.0158						
	TPU:			+/-0.0155						
Batch 384336										
QC1200747625 126303001 DUP										
Actinium-228		0.118		0.0968	pCi/g	20		(0% - 100%)	AKB	12/04/04 17:55
	Uncert:	+/-0.0706		+/-0.0733						
	TPU:	+/-0.0692		+/-0.0718						
Americium-241	U	-0.0168	U	-0.00403	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0538		+/-0.0622						
	TPU:	+/-0.0527		+/-0.0609						

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 384336											
Bismuth-212	U	0.0338	U	0.126	pCi/g	115		(0% - 100%)			
	Uncert:	+/-0.119		+/-0.187							
	TPU:	+/-0.116		+/-0.183							
Bismuth-214		0.102	UUI	0.00	pCi/g	0		(0% - 100%)			
	Uncert:	+/-0.047		+/-0.0426							
	TPU:	+/-0.0461		+/-0.0417							
Cesium-134	U	0.0161	U	0.00284	pCi/g	140		(0% - 100%)			
	Uncert:	+/-0.0149		+/-0.0123							
	TPU:	+/-0.0146		+/-0.012							
Cesium-137		0.0376	U	0.00872	pCi/g	125		(0% - 100%)			
	Uncert:	+/-0.026		+/-0.0136							
	TPU:	+/-0.0255		+/-0.0133							
Cobalt-60		0.0363		0.0522	pCi/g	36		(0% - 100%)			
	Uncert:	+/-0.0247		+/-0.0257							
	TPU:	+/-0.0242		+/-0.0252							
Europium-152	U	0.0486	U	-0.00993	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0448		+/-0.0297							
	TPU:	+/-0.0439		+/-0.0291							
Europium-154	U	-0.00513	U	0.00333	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0366		+/-0.0346							
	TPU:	+/-0.0359		+/-0.0339							
Europium-155	U	0.0102	U	-0.0103	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0354		+/-0.0313							
	TPU:	+/-0.0347		+/-0.0307							
Lead-212	UUI	0.00		0.0564	pCi/g	0		(0% - 100%)			
	Uncert:	+/-0.0321		+/-0.0274							
	TPU:	+/-0.0315		+/-0.0269							
Lead-214		0.132		0.107	pCi/g	21		(0% - 100%)			
	Uncert:	+/-0.0507		+/-0.0462							
	TPU:	+/-0.0497		+/-0.0453							
Manganese-54	U	0.00266	U	0.00211	pCi/g	23		(0% - 100%)			
	Uncert:	+/-0.0127		+/-0.0113							
	TPU:	+/-0.0125		+/-0.0111							
Niobium-94	U	-0.00132	U	0.00412	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0116		+/-0.0123							
	TPU:	+/-0.0114		+/-0.012							
Potassium-40		2.30		1.77	pCi/g	26		(0% - 100%)			
	Uncert:	+/-0.443		+/-0.413							
	TPU:	+/-0.434		+/-0.404							
Radium-226		0.102		0.108	pCi/g	6		(0% - 100%)			
	Uncert:	+/-0.047		+/-0.0426							
	TPU:	+/-0.0461		+/-0.0417							
Silver-108m	U	0.0106	U	0.00675	pCi/g	44		(0% - 100%)			
	Uncert:	+/-0.0209		+/-0.0106							
	TPU:	+/-0.0205		+/-0.0104							
Thallium-208	U	0.0298		0.0402	pCi/g	30		(0% - 100%)			
	Uncert:	+/-0.0274		+/-0.0194							
	TPU:	+/-0.0269		+/-0.019							

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 384336										
QC1200747626 LCS										
Actinium-228			U	0.276	pCi/g					12/06/04 09:33
	Uncert:			+/-0.523						
	TPU:			+/-0.512						
Americium-241	23.4			22.8	pCi/g		97	(75%-125%)		
	Uncert:			+/-2.47						
	TPU:			+/-2.42						
Bismuth-212			U	-0.248	pCi/g					
	Uncert:			+/-0.937						
	TPU:			+/-0.918						
Bismuth-214			U	0.123	pCi/g					
	Uncert:			+/-0.205						
	TPU:			+/-0.201						
Cesium-134			U	0.104	pCi/g					
	Uncert:			+/-0.137						
	TPU:			+/-0.135						
Cesium-137	9.14			9.58	pCi/g		105	(75%-125%)		
	Uncert:			+/-0.768						
	TPU:			+/-0.753						
Cobalt-60	13.5			14.2	pCi/g		105	(75%-125%)		
	Uncert:			+/-1.09						
	TPU:			+/-1.07						
Europium-152			U	0.248	pCi/g					
	Uncert:			+/-0.282						
	TPU:			+/-0.277						
Europium-154			U	0.0933	pCi/g					
	Uncert:			+/-0.330						
	TPU:			+/-0.323						
Europium-155			U	-0.0595	pCi/g					
	Uncert:			+/-0.274						
	TPU:			+/-0.269						
Lead-212			U	0.121	pCi/g					
	Uncert:			+/-0.193						
	TPU:			+/-0.190						
Lead-214			U	0.209	pCi/g					
	Uncert:			+/-0.202						
	TPU:			+/-0.198						
Manganese-54			U	-0.0256	pCi/g					
	Uncert:			+/-0.133						
	TPU:			+/-0.131						
Niobium-94			U	0.0988	pCi/g					
	Uncert:			+/-0.111						
	TPU:			+/-0.109						
Potassium-40			U	-0.0673	pCi/g					
	Uncert:			+/-0.895						
	TPU:			+/-0.877						
Radium-226			U	0.123	pCi/g			(75%-125%)		
	Uncert:			+/-0.205						
	TPU:			+/-0.201						

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 384336										
Silver-108m			U	0.0362	pCi/g					
	Uncert:			+/-0.108						
	TPU:			+/-0.106						
Thallium-208			U	0.0139	pCi/g					
	Uncert:			+/-0.112						
	TPU:			+/-0.110						
QC1200747624 MB										
Actinium-228			U	0.00825	pCi/g					12/04/04 17:54
	Uncert:			+/-0.0641						
	TPU:			+/-0.0628						
Americium-241			U	0.0249	pCi/g					
	Uncert:			+/-0.0549						
	TPU:			+/-0.0538						
Bismuth-212			U	0.0282	pCi/g					
	Uncert:			+/-0.101						
	TPU:			+/-0.0988						
Bismuth-214			U	0.0288	pCi/g					
	Uncert:			+/-0.0312						
	TPU:			+/-0.0306						
Cesium-134			U	0.00551	pCi/g					
	Uncert:			+/-0.0126						
	TPU:			+/-0.0123						
Cesium-137			U	-0.00324	pCi/g					
	Uncert:			+/-0.0131						
	TPU:			+/-0.0128						
Cobalt-60			U	0.00453	pCi/g					
	Uncert:			+/-0.0144						
	TPU:			+/-0.0141						
Europium-152			U	0.0232	pCi/g					
	Uncert:			+/-0.0396						
	TPU:			+/-0.0388						
Europium-154			U	0.019	pCi/g					
	Uncert:			+/-0.0519						
	TPU:			+/-0.0509						
Europium-155			U	0.0391	pCi/g					
	Uncert:			+/-0.0362						
	TPU:			+/-0.0355						
Lead-212			U	0.0102	pCi/g					
	Uncert:			+/-0.0411						
	TPU:			+/-0.0403						
Lead-214			U	0.0296	pCi/g					
	Uncert:			+/-0.0355						
	TPU:			+/-0.0348						
Manganese-54			U	-0.00356	pCi/g					
	Uncert:			+/-0.0169						
	TPU:			+/-0.0166						
Niobium-94			U	0.0121	pCi/g					
	Uncert:			+/-0.0397						

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 384336										
	TPU:			+/-0.0389						
Potassium-40			U	0.215	pCi/g					
	Uncert:			+/-0.202						
	TPU:			+/-0.198						
Radium-226			U	0.0288	pCi/g					
	Uncert:			+/-0.0312						
	TPU:			+/-0.0306						
Silver-108m			U	0.00631	pCi/g					
	Uncert:			+/-0.0132						
	TPU:			+/-0.013						
Thallium-208			U	0.015	pCi/g					
	Uncert:			+/-0.0158						
	TPU:			+/-0.0155						
Rad Gas Flow										
Batch 384353										
QC1200747677 126304006 DUP										
Strontium-90	U	-0.00756	U	0.0271	pCi/g	N/A		(0% - 100%)	JMB1	12/01/04 17:07
	Uncert:	+/-0.0239		+/-0.0271						
	TPU:	+/-0.024		+/-0.0281						
QC1200747679 LCS										
Strontium-90	4.44			4.61	pCi/g		104	(75%-125%)		12/01/04 15:07
	Uncert:			+/-0.251						
	TPU:			+/-1.11						
QC1200747676 MB										
Strontium-90			U	0.00913	pCi/g					12/01/04 17:07
	Uncert:			+/-0.0235						
	TPU:			+/-0.0236						
QC1200747678 126304006 MS										
Strontium-90	9.00 U	-0.00756		9.49	pCi/g		105	(75%-125%)		12/01/04 15:07
	Uncert:	+/-0.0239		+/-0.537						
	TPU:	+/-0.024		+/-2.46						
Batch 384363										
QC1200747687 126304017 DUP										
Strontium-90		0.0802		0.0953	pCi/g	17		(0% - 100%)	JMB1	12/02/04 16:05
	Uncert:	+/-0.037		+/-0.0338						
	TPU:	+/-0.0445		+/-0.0445						
QC1200747689 LCS										
Strontium-90	4.44			4.98	pCi/g		112	(75%-125%)		12/02/04 14:05
	Uncert:			+/-0.282						
	TPU:			+/-1.34						
QC1200747686 MB										
Strontium-90			U	-0.0104	pCi/g					12/02/04 16:05
	Uncert:			+/-0.0243						
	TPU:			+/-0.0244						
QC1200747688 126304017 MS										
Strontium-90	9.05	0.0802		9.72	pCi/g		106	(75%-125%)		12/02/04 14:05
	Uncert:	+/-0.037		+/-0.593						
	TPU:	+/-0.0445		+/-2.92						
Batch 384365										

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 384365										
QC1200747701 126304036 DUP										
Strontium-90	U	-0.00421	U	-0.00314	pCi/g	N/A		(0% - 100%)	JMB1	12/02/04 19:34
Uncert:		+/-0.0334		+/-0.0276						
TPU:		+/-0.0335		+/-0.0276						
QC1200747703 LCS										
Strontium-90	4.55			4.46	pCi/g		98	(75%-125%)		12/02/04 18:04
Uncert:				+/-0.248						
TPU:				+/-1.01						
QC1200747700 MB										
Strontium-90			U	-0.00789	pCi/g					12/02/04 19:34
Uncert:				+/-0.0249						
TPU:				+/-0.0249						
QC1200747702 126304036 MS										
Strontium-90	9.04 U	-0.00421		8.35	pCi/g		92	(75%-125%)		12/02/04 18:04
Uncert:		+/-0.0334		+/-0.525						
TPU:		+/-0.0335		+/-2.38						
Rad Liquid Scintillation										
Batch 384413										
QC1200747814 126304001 DUP										
Tritium	U	1.05	U	2.03	pCi/g	0		(0% - 100%)	LAG1	12/03/04 02:38
Uncert:		+/-5.13		+/-4.78						
TPU:		+/-5.13		+/-4.78						
QC1200747816 LCS										
Tritium	63.5			61.4	pCi/g		97	(75%-125%)		12/03/04 03:43
Uncert:				+/-6.69						
TPU:				+/-7.45						
QC1200747813 MB										
Tritium			U	0.795	pCi/g					12/03/04 02:06
Uncert:				+/-4.48						
TPU:				+/-4.48						
QC1200747815 126304001 MS										
Tritium	69.4 U	1.05		75.8	pCi/g		108	(75%-125%)		12/03/04 03:11
Uncert:		+/-5.13		+/-7.50						
TPU:		+/-5.13		+/-8.51						
Batch 384414										
QC1200747818 126304017 DUP										
Tritium		9.00		12.0	pCi/g	28		(0% - 100%)	ATH1	12/06/04 05:07
Uncert:		+/-2.02		+/-2.24						
TPU:		+/-2.14		+/-2.45						
QC1200747820 LCS										
Tritium	8.84			8.19	pCi/g		93	(75%-125%)		12/06/04 06:11
Uncert:				+/-1.98						
TPU:				+/-2.08						
QC1200747817 MB										
Tritium			U	-1.06	pCi/g					12/06/04 09:14
Uncert:				+/-1.68						
TPU:				+/-1.68						
QC1200747819 126304017 MS										
Tritium	8.85	9.00		22.0	pCi/g		147*	(75%-125%)		12/06/04 12:42

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 384414										
	Uncert:	+/-2.02		+/-2.65						
	TPU:	+/-2.14		+/-3.19						
Batch 384419										
QC1200747837 126304031 DUP										
Tritium	U	2.32	U	1.31	pCi/g	0		(0% - 100%)	JLB1	12/04/04 06:36
	Uncert:	+/-1.50		+/-1.86						
	TPU:	+/-1.51		+/-1.86						
QC1200747839 LCS										
Tritium	7.94			6.45	pCi/g		81	(75%-125%)		12/03/04 14:42
	Uncert:			+/-1.58						
	TPU:			+/-1.63						
QC1200747836 MB										
Tritium			U	-0.353	pCi/g					12/03/04 13:06
	Uncert:			+/-1.10						
	TPU:			+/-1.11						
QC1200747838 126304031 MS										
Tritium	8.59 U	2.32		10.8	pCi/g		118	(75%-125%)		12/04/04 07:08
	Uncert:	+/-1.50		+/-2.30						
	TPU:	+/-1.51		+/-2.46						
Batch 384420										
QC1200747841 126304045 DUP										
Technetium-99	U	-0.606	U	-0.727	pCi/g	N/A		(0% - 100%)	EGD1	12/05/04 20:59
	Uncert:	+/-0.457		+/-0.457						
	TPU:	+/-0.457		+/-0.457						
QC1200747843 LCS										
Technetium-99	36.5			38.2	pCi/g		105	(75%-125%)		12/05/04 22:03
	Uncert:			+/-1.11						
	TPU:			+/-1.46						
QC1200747840 MB										
Technetium-99			U	-0.49	pCi/g					12/05/04 20:27
	Uncert:			+/-0.408						
	TPU:			+/-0.408						
QC1200747842 126304045 MS										
Technetium-99	38.0 U	-0.606		39.6	pCi/g		104	(75%-125%)		12/05/04 21:31
	Uncert:	+/-0.457		+/-1.19						
	TPU:	+/-0.457		+/-1.55						
Batch 384423										
QC1200747849 126304045 DUP										
Carbon-14	U	-0.06	U	0.283	pCi/g	N/A		(0% - 100%)	LAG1	12/01/04 13:13
	Uncert:	+/-0.280		+/-0.284						
	TPU:	+/-0.280		+/-0.284						
QC1200747851 LCS										
Carbon-14	12.5			12.1	pCi/g		97	(75%-125%)		12/01/04 14:17
	Uncert:			+/-0.533						
	TPU:			+/-0.566						
QC1200747848 MB										
Carbon-14			U	0.0338	pCi/g					12/01/04 12:41
	Uncert:			+/-0.266						
	TPU:			+/-0.266						

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 384423										
QC1200747850 126304045 MS										
Carbon-14	12.5 U	-0.06		11.9	pCi/g		96	(75%-125%)		12/01/04 13:45
	Uncert:	+/-0.280		+/-0.536						
	TPU:	+/-0.280		+/-0.567						
Batch 384424										
QC1200747854 126304050 DUP										
Iron-55	U	-1.56	U	-1.69	pCi/g	N/A		(0% - 100%)	JLB1	12/10/04 07:06
	Uncert:	+/-2.60		+/-2.39						
	TPU:	+/-2.60		+/-2.39						
QC1200747856 LCS										
Iron-55	39.8			37.6	pCi/g		95	(75%-125%)		12/07/04 06:09
	Uncert:			+/-2.51						
	TPU:			+/-2.95						
QC1200747853 MB										
Iron-55			U	-0.571	pCi/g					12/07/04 03:01
	Uncert:			+/-1.87						
	TPU:			+/-1.87						
QC1200747855 126304050 MS										
Iron-55	40.2 U	-1.56		30.7	pCi/g		76	(75%-125%)		12/07/04 05:06
	Uncert:	+/-2.60		+/-4.02						
	TPU:	+/-2.60		+/-4.26						
Batch 384425										
QC1200747868 126304050 DUP										
Nickel-63		2.38		2.14	pCi/g	27		(0% - 100%)	JLB1	12/05/04 18:03
	Uncert:	+/-1.03		+/-1.01						
	TPU:	+/-1.03		+/-1.01						
QC1200747870 LCS										
Nickel-63	30.9			34.9	pCi/g		113	(75%-125%)		12/05/04 20:06
	Uncert:			+/-1.14						
	TPU:			+/-1.66						
QC1200747867 MB										
Nickel-63				1.92	pCi/g					12/05/04 17:01
	Uncert:			+/-0.548						
	TPU:			+/-0.552						
QC1200747869 126304050 MS										
Nickel-63	30.9	2.38		32.5	pCi/g		100	(75%-125%)		12/05/04 19:05
	Uncert:	+/-1.03		+/-1.50						
	TPU:	+/-1.03		+/-1.87						

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.

QC Summary

Workorder: 126304

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

H	Analytical holding time exceeded.
J	Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U	Indicates the target analyte was analyzed for but not detected above the detection limit.
UI	Uncertain identification for gamma spectroscopy.
X	Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h	Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

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GENERAL NARRATIVE

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Soil and Concrete
PO# 002337
Work Order: 129311

January 31, 2005

Laboratory Identification:
General Engineering Laboratories, LLC

Mailing Address:
P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:
2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:
(843) 556-8171

Summary:

Sample receipt
The samples arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina January 21, 2005. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures except in items of note located below.

The laboratory prepared the following sample:

Sample ID	Client Sample ID
129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
129311004	5000-0000-108-C-1C-02
129311005	5000-0000-108-C-1C-03
129311006	5000-0000-108-C-1C-04
129311007	5000-0000-108-C-2C-05
129311008	5000-0000-108-C-2C-06
129311009	5000-0000-108-C-2C-07
129311010	5000-0000-108-C-2C-08
129311011	5000-0000-108-C-2C-09
129311012	5000-0000-107-C-1C-02
129311013	5000-0000-107-C-1C-03
129311014	5000-0000-107-C-1C-04

129311015	5000-0000-107-C-2C-01
129311016	5000-0000-107-C-3C-01
129311017	5000-0000-107-C-3C-02
129311018	5000-0000-107-C-3C-03
129311019	5000-0000-107-C-3C-04
129311020	2000-0000-108-SI
129311021	5000-0000-107-SI
129311022	9312-0003-113S
129311023	9312-0003-114S
129311024	9312-0003-115S
129311025	9312-0003-116S
129311026	9801-0000-117S
129311027	9801-0000-122S

Items of Note:
There are not any items to note.

Case Narrative:

Sample analyses were conducted using methodology as outlined in General Engineering Laboratories (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are listed below by analytical parameter.

Analytical Request:

Two concrete samples were analyzed for CHALL. One soil sample was analyzed for CHALL. Sixteen concrete samples were analyzed for CHGAM, Sr-90, and H-3. Eight soil samples were analyzed for CHGAM, H-3, and Sr-90.

Internal Chain of Custody:

Custody was maintained for all of these samples.

Data Package:

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Laboratory Certifications, and Radiochemistry.

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Cheryl Jones
Project Manager

CHAIN OF CUSTODY

Chain of Custody Form

No. 2005-00019

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

129311X

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90	CHALL			Comment, Preservation	Lab Sample ID
001	5000-0000-108-C-1C-01	1/11/05	1055	CT	CR	BP				X				
004	5000-0000-108-C-1C-02	1/11/05	1055	CT	CR	BP	X	X	X					
005	5000-0000-108-C-1C-03	1/11/05	1055	CT	CR	BP	X	X	X					
006	5000-0000-108-C-1C-04	1/11/05	1055	CT	CR	BP	X	X	X					
007	5000-0000-108-C-2C-05	1/11/05	1125	CT	CR	BP	X	X	X					
008	5000-0000-108-C-2C-06	1/11/05	1125	CT	CR	BP	X	X	X					
009	5000-0000-108-C-2C-07	1/11/05	1125	CT	CR	BP	X	X	X					
010	5000-0000-108-C-2C-08	1/11/05	1125	CT	CR	BP	X	X	X					
011	5000-0000-108-C-2C-09	1/11/05	1125	CT	CR	BP	X	X	X					

NOTES: PO #: 002337 MSR #: 05-0189 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

Bill of Lading #
7921-3606-0725

Internal Container Temp.: 16 Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	1-20-05/ 0955	[signature]	1-21-05/1000
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Chain of Custody Form

No. 2005-00018

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

129311%

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90	CHALL			Comment, Preservation	Lab Sample ID
002	5000-0000-107-C-1C-01	1/11/05	1320	CT	CR	BP				X				
012	5000-0000-107-C-1C-02	1/11/05	1320	CT	CR	BP	X	X	X					
013	5000-0000-107-C-1C-03	1/11/05	1320	CT	CR	BP	X	X	X					
014	5000-0000-107-C-1C-04	1/11/05	1320	CT	CR	BP	X	X	X					
015	5000-0000-107-C-2C-01	1/11/05	1340	CT	CR	BP	X	X	X					
016	5000-0000-107-C-3C-01	1/11/05	1350	CT	CR	BP	X	X	X					
017	5000-0000-107-C-3C-02	1/11/05	1350	CT	CR	BP	X	X	X					
018	5000-0000-107-C-3C-03	1/11/05	1350	CT	CR	BP	X	X	X					
019	5000-0000-107-C-3C-04	1/11/05	1350	CT	CR	BP	X	X	X					

NOTES: PO #: 002337 MSR #: 05-0189 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

Bill of Lading #
7921-8606-0725

Internal Container Temp.: 16 Deg. C

Custody Sealed? Y ☑ N ☐

Custody Seal Intact? Y ☑ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	1/20/05 0955	[signature]	1-21-05 1100
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Chain of Custody Form

No. 2005-00020

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

129.311%

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90	CHALL			Comment, Preservation	Lab Sample ID
020	2000-0000-108-SI	1/11/05	1130	TS	CR	BP	X	X	X					
021	5000-0000-107-SI	1/11/05	1355	TS	CR	BP	X	X	X					
022	9312-0003-113S	1/11/05	1343	TS	CR	BP	X	X	X					
023	9312-0003-114S	1/11/05	1345	TS	CR	BP	X	X	X					
024	9312-0003-115S	1/11/05	1408	TS	CR	BP	X	X	X					
025	9312-0003-116S	1/11/05	1412	TS	CR	BP	X	X	X					
026	9801-0000-117S	1/11/05	1435	TS	CR	BP	X	X	X					
027	9801-0000-122S	1/11/05	1435	TS	CR	BP	X	X	X					
003	9801-0000-124	1/11/05	1105	TS	CR	BP				X				

NOTES: PO #: 002337 MSR #: 05-0189 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7921 8606 0903
Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By [signature] Date/Time 1-20-05/ 0955	2) Received By [signature] Date/Time 1-21-05/ 1000
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

COOLER RECEIPT CHECKLIST

Figure 1. Sample Check-in List

Date/Time Received: 1-21-05 1000

SDG#: MSR# 05-0189

Work Order Number: 129311

Shipping Cohtainer ID: _____ Chain of Custody #: _____

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 12 ; 15 (9921 8606 0725)
5. Vermiculite/packing materials is: Wet [ ] Dry [✓]
6. Number of samples in shipping container: _____
7. Sample holding times exceeded? Yes [ ] No [✓]

8. Samples have:

____tape	____hazard labels
✓ custody seals	____appropriate sample labels

9. Samples are:

✓ in good condition	____leaking
____broken	____have air bubbles

10. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: [signature] Date: 1-21-05

Telephoned to: _____ On _____ By _____

SAMPLE RECEIPT & REVIEW FORM

GEN LABORATORIES, LLC

PM use only

ent: Conn. Van Kee	SDG/ARCOC/Work Order: 12931
te Received: 1-21-05	PM(A) Review (ensure non-conforming items are resolved prior to signing):
ceived By: TH	1/25/05

	Sample Receipt Criteria	Conforming	NA	Non-Conforming	Comments/Qualifiers (Required for Non-Conforming Items)
	Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other (describe)
	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		✓		Circle Temp device serial # ice bags blue ice dry ice none other(describe) 15.c
3	Chain of custody documents included with shipment?	✓			
4	Sample containers intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?		✓		Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?		✓		Sample ID's and containers affected:
7	Samples received within holding time?	✓			Id's and tests affected:
8	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
9	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
10	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
11	COC form is properly signed in relinquished/received sections?	✓			
12	Air Bill ,Tracking #'s, & Additional Comments	Internal Samples Fed Ex # 7921 8606 0725			

Radiological Information	Non-RAD	RAD	RADD	RSO RAD Receipt #
What is the radiological classification of the samples?		✓		Comments
Radioactivity Screening Results (maximum observed CPM)	100 cpm			*If > x2 area background is observed on a non-radioactive sample, contact the RSO to investigate.

PM (or PMA) review of Receiving Rad classification: CB Initials 1/21/05 Date

SAMPLE RECEIPT & REVIEW FORM

LABORATORIES, LLC

PM use only

ent: Conn Yankee	SDG/ARCOC/Work Order: 129316
te Received: 1-21-05	PM(A) Review (ensure non-conforming items are resolved prior to signing):
ceived By: TH	1/25/05

	Sample Receipt Criteria	Conforming	NA	Non-Conforming	Comments/Qualifiers (Required for Non-Conforming Items)
	Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other (describe)
	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		✓		Circle Temp device serial # ice bags blue ice dry ice none other(describe) 12
3	Chain of custody documents included with shipment?	✓			
4	Sample containers intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?.		✓		Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?		✓		Sample ID's and containers affected:
7	Samples received within holding time?	✓			Id's and tests affected:
8	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
9	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
10	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
11	COC form is properly signed in relinquished/received sections?	✓			
12	Air Bill ,Tracking #'s, & Additional Comments	Internal Samples Fed Ex# 7921 8606 0703			

Radiological Information	Non-RAD	RAD	RADII	RSO RAD Receipt #
What is the radiological classification of the samples?		✓		Comments:
Radioactivity Screening Results (maximum observed CPM)	CPM 220			*If > x2 area background is observed on a non-radioactive sample, contact the RSO to investigate.

PM (or PMA) review of Receiving Rad classification: CY Initials 1/31/05 Date

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
SDG MSR#05-0189

Method/Analysis Information

Product:	Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)
Analytical Method:	DOE EML HASL-300, Am-05-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	396301
Prep Batch Number:	396346
Dry Soil Prep GL-RAD-A-021 Batch Number:	396344

Sample ID	Client ID
129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
1200776364	Method Blank (MB)
1200776365	128921003(Seep #1 Weathered Rock) Sample Duplicate (DUP)
1200776366	128921003(Seep #1 Weathered Rock) Matrix Spike (MS)
1200776367	Laboratory Control Sample (LCS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 128921003 (Seep #1 Weathered Rock).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Pu, Solid-TRU2,ALL2 (CT)**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	396302
Prep Batch Number:	396346
Dry Soil Prep GL-RAD-A-021 Batch Number:	396344

Sample ID	Client ID
129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
1200776368	Method Blank (MB)
1200776369	128921003(Seep #1 Weathered Rock) Sample Duplicate (DUP)
1200776370	128921003(Seep #1 Weathered Rock) Matrix Spike (MS)
1200776371	Laboratory Control Sample (LCS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 128921003 (Seep #1 Weathered Rock).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	396303
Prep Batch Number:	396353
Dry Soil Prep GL-RAD-A-021 Batch Number:	396351

Sample ID	Client ID
129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
1200776372	Method Blank (MB)
1200776373	128921003(Seep #1 Weathered Rock) Sample Duplicate (DUP)
1200776374	128921003(Seep #1 Weathered Rock) Matrix Spike (MS)
1200776375	Laboratory Control Sample (LCS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-035 REV# 5.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 128921003 (Seep #1 Weathered Rock).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Sample 1200776372 (MB) was recounted due to high MDA.
Sample 1200776374 (Seep #1 Weathered Rock) was recounted due to low/high recovery.
The batch was recounted due to a high background count.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Manual Integration
Manual integration of alpha spectroscopy spectra 1200776374 (Seep #1 Weathered Rock) was performed to fully separate counts in Regions of Interest which would have been biased.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	396375
Prep Batch Number:	396344

Sample ID **Client ID**

129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
129311004	5000-0000-108-C-1C-02
129311005	5000-0000-108-C-1C-03
129311006	5000-0000-108-C-1C-04
129311007	5000-0000-108-C-2C-05
129311008	5000-0000-108-C-2C-06
129311009	5000-0000-108-C-2C-07
129311010	5000-0000-108-C-2C-08
129311011	5000-0000-108-C-2C-09
129311012	5000-0000-107-C-1C-02
129311013	5000-0000-107-C-1C-03
129311014	5000-0000-107-C-1C-04
129311015	5000-0000-107-C-2C-01
129311016	5000-0000-107-C-3C-01
129311017	5000-0000-107-C-3C-02
129311018	5000-0000-107-C-3C-03
129311019	5000-0000-107-C-3C-04
129311020	2000-0000-108-SI
1200776528	Method Blank (MB)
1200776529	129311001(5000-0000-108-C-1C-01) Sample Duplicate (DUP)
1200776530	Laboratory Control Sample (LCS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 129311001 (5000-0000-108-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due low abundance.	Niobium-94	129311001
UI	Data rejected due to low abundance.	Cesium-134	1200776529
			129311006
			129311013
		Cesium-137	129311019
		Niobium-94	1200776529

Method/Analysis Information

Product:	Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	396377
Prep Batch Number:	396351

Sample ID	Client ID
129311021	5000-0000-107-SI
129311022	9312-0003-113S
129311023	9312-0003-114S
129311024	9312-0003-115S
129311025	9312-0003-116S
129311026	9801-0000-117S
129311027	9801-0000-122S
1200776535	Method Blank (MB)
1200776536	129311021(5000-0000-107-SI) Sample Duplicate (DUP)
1200776537	Laboratory Control Sample (LCS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry

All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 129311021 (5000-0000-107-SI).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to low abundance.	Cesium-134	129311022
			129311025

Method/Analysis Information

Product:	**GFPC, Sr90, solid-HTD2,ALL2 (CT)**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	396625
Prep Batch Number:	396353
Dry Soil Prep GL-RAD-A-021 Batch Number:	396351

Sample ID	Client ID
129311020	2000-0000-108-SI
129311021	5000-0000-107-SI
129311022	9312-0003-113S
129311023	9312-0003-114S
129311024	9312-0003-115S
129311025	9312-0003-116S
129311026	9801-0000-117S
129311027	9801-0000-122S
1200777075	Method Blank (MB)

1200777076	129311023(9312-0003-114S) Sample Duplicate (DUP)
1200777077	129311023(9312-0003-114S) Matrix Spike (MS)
1200777078	Laboratory Control Sample (LCS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 129311023 (9312-0003-114S).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)**
Analytical Method:	DOE EML HASL-300, Tc-02-RC Modified
Analytical Batch Number:	396255

Sample ID	Client ID
129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
1200776281	Method Blank (MB)
1200776282	129311003(9801-0000-124) Sample Duplicate (DUP)
1200776283	129311003(9801-0000-124) Matrix Spike (MS)
1200776284	Laboratory Control Sample (LCS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-005 REV# 11.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 129311003 (9801-0000-124).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)
Analytical Method:	DOE RESL Fe-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	396265
Prep Batch Number:	396353
Dry Soil Prep GL-RAD-A-021 Batch Number:	396351

Sample ID	Client ID
129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
1200776305	Method Blank (MB)
1200776308	Laboratory Control Sample (LCS)
1200779499	129311003(9801-0000-124) Sample Duplicate (DUP)
1200779500	129311003(9801-0000-124) Matrix Spike (MS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-040 REV# 2.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 129311003 (9801-0000-124).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)**
Analytical Method:	DOE RESL Ni-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	396266
Prep Batch Number:	396353
Dry Soil Prep GL-RAD-A-021 Batch Number:	396351

Sample ID	Client ID
129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
1200776309	Method Blank (MB)
1200776312	Laboratory Control Sample (LCS)
1200779497	129311003(9801-0000-124) Sample Duplicate (DUP)
1200779498	129311003(9801-0000-124) Matrix Spike (MS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-022 REV# 6.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 129311003 (9801-0000-124).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)**
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	396262

Sample ID	Client ID
129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
129311004	5000-0000-108-C-1C-02
129311005	5000-0000-108-C-1C-03
129311006	5000-0000-108-C-1C-04
129311007	5000-0000-108-C-2C-05
129311008	5000-0000-108-C-2C-06
129311009	5000-0000-108-C-2C-07
129311010	5000-0000-108-C-2C-08
129311011	5000-0000-108-C-2C-09
129311012	5000-0000-107-C-1C-02
129311013	5000-0000-107-C-1C-03
129311014	5000-0000-107-C-1C-04
1200776297	Method Blank (MB)
1200776298	129311001(5000-0000-108-C-1C-01) Sample Duplicate (DUP)
1200776299	129311001(5000-0000-108-C-1C-01) Matrix Spike (MS)
1200776300	Laboratory Control Sample (LCS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 129311001 (5000-0000-108-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)**
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	396644

Sample ID	Client ID
129311015	5000-0000-107-C-2C-01
129311016	5000-0000-107-C-3C-01
129311017	5000-0000-107-C-3C-02
129311018	5000-0000-107-C-3C-03
129311019	5000-0000-107-C-3C-04
129311020	2000-0000-108-SI
129311021	5000-0000-107-SI
129311022	9312-0003-113S

129311023	9312-0003-114S
129311024	9312-0003-115S
129311025	9312-0003-116S
129311026	9801-0000-117S
129311027	9801-0000-122S
1200777112	Method Blank (MB)
1200777113	129311020(2000-0000-108-SI) Sample Duplicate (DUP)
1200777114	129311020(2000-0000-108-SI) Matrix Spike (MS)
1200777115	Laboratory Control Sample (LCS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 129311020 (2000-0000-108-SI).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Samples 129311021 (5000-0000-107-SI) and 129311022 (9312-0003-113S) were recounted due to high MDAs.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint C14, Solid-HTD2,ALL2 (CT)
Analytical Method:	EPA EERF C-01 Modified
Analytical Batch Number:	396263

Sample ID	Client ID
129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
1200776301	Method Blank (MB)
1200776302	129311001(5000-0000-108-C-1C-01) Sample Duplicate (DUP)
1200776303	129311001(5000-0000-108-C-1C-01) Matrix Spike (MS)
1200776304	Laboratory Control Sample (LCS)

SOP Reference
Procedures for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-003 REV# 7.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 129311001 (5000-0000-108-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**GFPC, Sr90, solid-HTD2,ALL2 (CT)**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	396624
Prep Batch Number:	396346
Dry Soil Prep GL-RAD-A-021 Batch Number:	396344

Sample ID	Client ID
129311001	5000-0000-108-C-1C-01
129311002	5000-0000-107-C-1C-01
129311003	9801-0000-124
129311004	5000-0000-108-C-1C-02
129311005	5000-0000-108-C-1C-03
129311006	5000-0000-108-C-1C-04
129311007	5000-0000-108-C-2C-05
129311008	5000-0000-108-C-2C-06
129311009	5000-0000-108-C-2C-07
129311010	5000-0000-108-C-2C-08
129311011	5000-0000-108-C-2C-09
129311012	5000-0000-107-C-1C-02
129311013	5000-0000-107-C-1C-03
129311014	5000-0000-107-C-1C-04
129311015	5000-0000-107-C-2C-01
129311016	5000-0000-107-C-3C-01
129311017	5000-0000-107-C-3C-02
129311018	5000-0000-107-C-3C-03
129311019	5000-0000-107-C-3C-04
1200777071	Method Blank (MB)
1200777072	129311005(5000-0000-108-C-1C-03) Sample Duplicate (DUP)
1200777073	129311005(5000-0000-108-C-1C-03) Matrix Spike (MS)
1200777074	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 129311005 (5000-0000-108-C-1C-03).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 177980 was generated due to RDL less than MDA. 1. Sample fails the required detection limit due to a low carrier yield. Sample volume was limited. Sample was counted for 500 minutes. Project manager was notified. 129311008 1. Reporting results

Qualifier Information
Manual qualifiers were not required.

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:
GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.
The following data validator verified the information presented in this case narrative:

Alcatel G Clou 2/4/05

Reviewer:_____

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
04-FEB-05	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
GFPC	EPA 905.0 Modified	Solid	YANK
Batch ID:	**Sample Numbers:**		
396624	See Below		

Potentially affected work order(s)(SDG): 129311(MSR#05-0189)

Application Issues:

RDL less than MDA

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Sample fails the required detection limit due to a low carrier yield. Sample volume was limited. Sample was counted for 500 minutes. Project manager was notified. 129311008	1. Reporting results

Originator's Name:
Wendy Hicks 04-FEB-05

Data Validator/Group Leader:
Heather Anderson 04-FEB-05

Quality Review:

Corrective Action:

Director:

Corrective Action ID and Complete Date:

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#05-0189 GEL Work Order: 129311

The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details..
- Y QC Samples were not spiked with this compound. .
- h Sample preparation or preservation holding time exceeded.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.
** Indicates the analyte is a surrogate compound.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-108-C-1C-01	Project:	YANK01304
Sample ID:	129311001	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	6.09%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)													
Americium-241	U	0.00	+/-0.027	0.00	+/-0.027	0.0373	pCi/g		JAS1	01/31/05	1019	396301	1
Curium-242	U	0.0114	+/-0.0302	0.0171	+/-0.0303	0.0749	pCi/g						
Curium-243/244	U	-0.00661	+/-0.00917	0.0222	+/-0.00921	0.0817	pCi/g						
Alphaspec Pu, Solid-TRU2,ALL2 (CT)													
Plutonium-238	U	0.00212	+/-0.0306	0.029	+/-0.0306	0.0712	pCi/g		JAS1	01/29/05	1507	396302	2
Plutonium-239/240	U	0.00477	+/-0.0191	0.0161	+/-0.0191	0.0453	pCi/g						
Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)													
Plutonium-241	U	1.50	+/-3.00	2.47	+/-3.00	5.09	pCi/g		JAS1	02/01/05	2138	396303	3
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.415	+/-0.179	0.0627	+/-0.176	0.138	pCi/g		AKB	01/26/05	0948	396375	4
Americium-241	U	-0.013	+/-0.114	0.0751	+/-0.112	0.157	pCi/g						
Bismuth-212		0.310	+/-0.156	0.136	+/-0.153	0.295	pCi/g						
Bismuth-214		0.641	+/-0.122	0.0339	+/-0.120	0.0731	pCi/g						
Cesium-134	U	0.0311	+/-0.0276	0.0213	+/-0.027	0.0463	pCi/g						
Cesium-137	U	0.0203	+/-0.0191	0.018	+/-0.0187	0.0391	pCi/g						
Cobalt-60	U	-0.00473	+/-0.0293	0.0204	+/-0.0287	0.0457	pCi/g						
Europium-152	U	0.0162	+/-0.064	0.0517	+/-0.0627	0.109	pCi/g						
Europium-154	U	0.0349	+/-0.058	0.0531	+/-0.0568	0.119	pCi/g						
Europium-155	U	0.018	+/-0.0577	0.0531	+/-0.0565	0.111	pCi/g						
Lead-212		0.407	+/-0.0655	0.0288	+/-0.0642	0.0605	pCi/g						
Lead-214		0.715	+/-0.112	0.0362	+/-0.109	0.0768	pCi/g						
Manganese-54	U	0.00429	+/-0.022	0.0186	+/-0.0216	0.0405	pCi/g						
Niobium-94	U	0.00	+/-0.0385	0.017	+/-0.0377	0.0367	pCi/g						
	UI												
Potassium-40		6.57	+/-0.947	0.174	+/-0.928	0.396	pCi/g						
Radium-226		0.641	+/-0.122	0.0339	+/-0.120	0.0731	pCi/g						
Silver-108m	U	0.00382	+/-0.0185	0.0165	+/-0.0181	0.0354	pCi/g						
Thallium-208		0.132	+/-0.035	0.0146	+/-0.0343	0.032	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-HTD2,ALL2 (CT)													
Strontium-90	U	0.00481	+/-0.00573	0.00461	+/-0.0059	0.00961	pCi/g		LCW1	02/03/05	1541	396624	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	1.76	+/-1.51	1.19	+/-1.51	2.39	pCi/g		LAG1	01/26/05	2154	396262	6

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-1C-01
Sample ID: 129311001

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Liquid Scintillation Analysis												
Liquid Scint C14, Solid-HTD2,ALL2 (CT)												
Carbon-14	U	0.167	+/-0.166	0.135	+/-0.166	0.277	pCi/g		LAG1 01/26/05	0040	396263	7
Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)												
Iron-55	U	1.51	+/-1.77	1.22	+/-1.77	2.48	pCi/g		DAJ1 02/03/05	0014	396265	8
Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)												
Nickel-63	U	0.101	+/-0.526	0.439	+/-0.526	0.897	pCi/g		DAJ1 02/01/05	0830	396266	9
Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)												
Technetium-99	U	0.232	+/-0.258	0.210	+/-0.258	0.432	pCi/g		EGD1 01/31/05	0239	396255	10
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EML HASL 300, 4.5.2.3
5	EPA 905.0 Modified
6	EPA 906.0 Modified
7	EPA EERF C-01 Modified
8	DOE RESL Fe-1, Modified
9	DOE RESL Ni-1, Modified
10	DOE EML HASL-300, Tc-02-RC Modified
11	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid-TRI	81	(25%-125%)
Plutonium-242	Alphaspec Pu, Solid-TRU2,ALL2	99	(15%-125%)

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-1C-01
Sample ID: 129311001

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
Carrier/Tracer Recovery		Liquid Scint Pu241, Solid-TRU2,/			94						
Carrier/Tracer Recovery		GFPC, Sr90, solid-HTD2,ALL2 ((			78		(25%-125%)				
Carrier/Tracer Recovery		Liquid Scint Fe55, Solid-HTD2,Al			59						
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-HTD2,Al			67						
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-HTD2,A			87						

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Company: Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-107-C-1C-01	Project:	YANK01304
Sample ID:	129311002	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	5.45%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)													
Americium-241	U	0.00	+/-0.0259	0.00	+/-0.0259	0.0359	pCi/g		JAS1	01/31/05	1019	396301	1
Curium-242	U	0.00	+/-0.0283	0.00	+/-0.0283	0.0391	pCi/g						
Curium-243/244	U	-0.00636	+/-0.00882	0.0214	+/-0.00886	0.0786	pCi/g						
Alphaspec Pu, Solid-TRU2,ALL2 (CT)													
Plutonium-238	U	0.0368	+/-0.042	0.0289	+/-0.0422	0.0745	pCi/g		JAS1	01/29/05	1507	396302	2
Plutonium-239/240	U	-0.0157	+/-0.0202	0.027	+/-0.0203	0.0708	pCi/g						
Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)													
Plutonium-241	U	1.97	+/-3.07	2.52	+/-3.08	5.19	pCi/g		JAS1	02/01/05	2210	396303	3
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.393	+/-0.147	0.0519	+/-0.144	0.117	pCi/g		AKB	01/26/05	0949	396375	4
Americium-241	U	0.000449	+/-0.133	0.115	+/-0.130	0.243	pCi/g						
Bismuth-212		0.317	+/-0.286	0.117	+/-0.280	0.261	pCi/g						
Bismuth-214		0.367	+/-0.0738	0.0348	+/-0.0723	0.0753	pCi/g						
Cesium-134	U	0.0161	+/-0.0208	0.0193	+/-0.0204	0.0424	pCi/g						
Cesium-137	U	0.00333	+/-0.0292	0.0182	+/-0.0286	0.0396	pCi/g						
Cobalt-60	U	0.00478	+/-0.0216	0.0189	+/-0.0212	0.043	pCi/g						
Europium-152	U	-0.0283	+/-0.052	0.0415	+/-0.051	0.0897	pCi/g						
Europium-154	U	-0.0538	+/-0.0547	0.0371	+/-0.0536	0.0883	pCi/g						
Europium-155	U	0.0217	+/-0.0657	0.0519	+/-0.0644	0.109	pCi/g						
Lead-212		0.360	+/-0.0634	0.0264	+/-0.0621	0.0559	pCi/g						
Lead-214		0.404	+/-0.0817	0.0339	+/-0.0801	0.0725	pCi/g						
Manganese-54	U	0.00559	+/-0.0234	0.0179	+/-0.0229	0.0392	pCi/g						
Niobium-94	U	0.00438	+/-0.0173	0.0152	+/-0.017	0.0334	pCi/g						
Potassium-40		6.69	+/-0.933	0.148	+/-0.915	0.347	pCi/g						
Radium-226		0.367	+/-0.0738	0.0348	+/-0.0723	0.0753	pCi/g						
Silver-108m	U	0.014	+/-0.020	0.015	+/-0.0196	0.0326	pCi/g						
Thallium-208		0.102	+/-0.0408	0.0152	+/-0.040	0.0335	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-HTD2,ALL2 (CT)													
Strontium-90	U	0.00284	+/-0.00485	0.00394	+/-0.0049	0.00824	pCi/g		LCW1	02/03/05	1541	396624	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		2.67	+/-1.59	1.23	+/-1.60	2.46	pCi/g		LAG1	01/26/05	2226	396262	6
Liquid Scint C14, Solid-HTD2,ALL2 (CT)													

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-1C-01
Sample ID: 129311002

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Liquid Scintillation Analysis												
Liquid Scint C14, Solid-HTD2,ALL2 (CT)												
Carbon-14	U	0.0493	+/-0.166	0.138	+/-0.166	0.284	pCi/g		LAG1 01/26/05	0112	396263	7
Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)												
Iron-55	U	-1.26	+/-2.26	1.60	+/-2.26	3.25	pCi/g		DAJ1 02/01/05	1920	396265	8
Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)												
Nickel-63	U	-0.206	+/-0.462	0.392	+/-0.462	0.800	pCi/g		DAJ1 02/01/05	0932	396266	9
Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)												
Technetium-99	U	-0.0815	+/-0.264	0.224	+/-0.264	0.461	pCi/g		EGD1 01/31/05	0311	396255	10
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EML HASL 300, 4.5.2.3
5	EPA 905.0 Modified
6	EPA 906.0 Modified
7	EPA EERF C-01 Modified
8	DOE RESL Fe-1, Modified
9	DOE RESL Ni-1, Modified
10	DOE EML HASL-300, Tc-02-RC Modified
11	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid-TRI	83	(25%-125%)
Plutonium-242	Alphaspec Pu, Solid-TRU2,ALL2	97	(15%-125%)

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Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-1C-01
Sample ID: 129311002

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
Carrier/Tracer Recovery		Liquid Scint Pu241, Solid-TRU2,/			94						
Carrier/Tracer Recovery		GFPC, Sr90, solid-HTD2,ALL2 ((			87		(25%-125%)				
Carrier/Tracer Recovery		Liquid Scint Fe55, Solid-HTD2,Al			56						
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-HTD2,Al			67						
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-HTD2,A			87						

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	9801-0000-124	Project:	YANK01304
Sample ID:	129311003	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	17.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid-TRU2,ALL2 (CT)													
Americium-241		4.77	+/-0.568	0.0283	+/-0.902	0.104	pCi/g		JAS1	01/31/05	1019	396301	1
Curium-242	U	0.0192	+/-0.0376	0.00	+/-0.0377	0.0519	pCi/g						
Curium-243/244		1.14	+/-0.278	0.0201	+/-0.325	0.0878	pCi/g						
Alphaspec Pu, Solid-TRU2,ALL2 (CT)													
Plutonium-238		2.93	+/-0.272	0.0304	+/-0.384	0.0783	pCi/g		JAS1	01/29/05	1507	396302	2
Plutonium-239/240		1.12	+/-0.168	0.0215	+/-0.197	0.0605	pCi/g						
Liquid Scint Pu241, Solid-TRU2,ALL2 (CT)													
Plutonium-241		31.8	+/-3.82	2.38	+/-4.87	4.91	pCi/g		JAS1	02/01/05	2241	396303	3
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.719	+/-0.361	0.161	+/-0.354	0.329	pCi/g		AKB	01/26/05	0949	396375	4
Americium-241		2.06	+/-0.410	0.245	+/-0.401	0.496	pCi/g						
Bismuth-212	U	0.290	+/-0.304	0.290	+/-0.298	0.595	pCi/g						
Bismuth-214		0.892	+/-0.181	0.0872	+/-0.178	0.178	pCi/g						
Cesium-134		0.263	+/-0.0944	0.0421	+/-0.0925	0.0864	pCi/g						
Cesium-137		56.3	+/-4.73	0.0451	+/-4.64	0.092	pCi/g						
Cobalt-60		13.2	+/-0.857	0.0288	+/-0.840	0.0604	pCi/g						
Europium-152	U	0.130	+/-0.177	0.158	+/-0.173	0.321	pCi/g						
Europium-154		0.512	+/-0.183	0.0777	+/-0.179	0.163	pCi/g						
Europium-155	U	0.164	+/-0.174	0.150	+/-0.171	0.304	pCi/g						
Lead-212		0.649	+/-0.152	0.091	+/-0.149	0.184	pCi/g						
Lead-214		1.05	+/-0.258	0.113	+/-0.252	0.229	pCi/g						
Manganese-54	U	0.0313	+/-0.0456	0.0399	+/-0.0447	0.0817	pCi/g						
Niobium-94	U	0.0275	+/-0.0361	0.0323	+/-0.0354	0.0661	pCi/g						
Potassium-40		12.3	+/-1.25	0.192	+/-1.23	0.412	pCi/g						
Radium-226		0.892	+/-0.181	0.0872	+/-0.178	0.178	pCi/g						
Silver-108m	U	0.0463	+/-0.072	0.063	+/-0.0705	0.128	pCi/g						
Thallium-208		0.191	+/-0.0948	0.0478	+/-0.0929	0.0973	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-HTD2,ALL2 (CT)													
Strontium-90		0.781	+/-0.0191	0.00394	+/-0.193	0.00817	pCi/g		LCW1	02/03/05	1541	396624	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	-0.0766	+/-1.44	1.21	+/-1.44	2.42	pCi/g		LAG1	01/26/05	2258	396262	6
Liquid Scint C14, Solid-HTD2,ALL2 (CT)													

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9801-0000-124
Sample ID: 129311003

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid-HTD2,ALL2 (CT)													
Carbon-14		3.61	+/-0.255	0.131	+/-0.261	0.271	pCi/g		LAG1	01/26/05	0144	396263	7
Liquid Scint Fe55, Solid-HTD2,ALL2 (CT)													
Iron-55		5.57	+/-3.15	2.10	+/-3.15	4.26	pCi/g		DAJ1	02/01/05	2023	396265	8
Liquid Scint Ni63, Solid-HTD2,ALL2 (CT)													
Nickel-63		63.3	+/-1.38	0.419	+/-2.53	0.855	pCi/g		DAJ1	02/01/05	1028	396266	9
Liquid Scint Tc99, Solid-HTD2,ALL2 (CT)													
Technetium-99	U	0.00604	+/-0.277	0.233	+/-0.277	0.478	pCi/g		EGD1	01/31/05	0344	396255	10
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	B J1	01/25/05	1303	396353
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	B J1	01/24/05	1306	396351
GL-RAD-A-026	Laboratory sample composite				396350

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EML HASL 300, 4.5.2.3
5	EPA 905.0 Modified
6	EPA 906.0 Modified
7	EPA EERF C-01 Modified
8	DOE RESL Fe-1, Modified
9	DOE RESL Ni-1, Modified
10	DOE EML HASL-300, Tc-02-RC Modified
11	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid-TRI	63	(25%-125%)
Plutonium-242	Alphaspec Pu, Solid-TRU2,ALL2	98	(15%-125%)

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9801-0000-124
Sample ID: 129311003

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
Carrier/Tracer Recovery		Liquid Scint Pu241, Solid-TRU2,/			102						
Carrier/Tracer Recovery		GFPC, Sr90, solid-HTD2,ALL2 ((			93		(25%-125%)				
Carrier/Tracer Recovery		Liquid Scint Fe55, Solid-HTD2,Al			88						
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-HTD2,Al			72						
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-HTD2,A			81						

Notes:
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- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-1C-02
Sample ID: 129311004
Matrix: CT
Collect Date: 11-JAN-05
Receive Date: 21-JAN-05
Collector: Client
Moisture: 8.53%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.628	+/-0.146	0.0604	+/-0.143	0.129	pCi/g		AKB	01/26/05	0950	396375	1
Americium-241	U	0.0298	+/-0.0704	0.0615	+/-0.069	0.127	pCi/g						
Bismuth-212		0.447	+/-0.209	0.118	+/-0.205	0.252	pCi/g						
Bismuth-214		1.04	+/-0.146	0.0312	+/-0.143	0.0657	pCi/g						
Cesium-134**	U	0.0408	+/-0.0221	0.0208	+/-0.0216	0.0439	pCi/g						
Cesium-137	U	-0.00865	+/-0.0195	0.0161	+/-0.0191	0.0342	pCi/g						
Cobalt-60	U	0.0139	+/-0.0196	0.0174	+/-0.0192	0.0377	pCi/g						
Europium-152	U	0.0177	+/-0.0533	0.0473	+/-0.0522	0.0986	pCi/g						
Europium-154	U	0.00837	+/-0.0593	0.0498	+/-0.0581	0.107	pCi/g						
Europium-155	U	0.053	+/-0.0587	0.0551	+/-0.0575	0.114	pCi/g						
Lead-212		0.485	+/-0.0612	0.0295	+/-0.060	0.0609	pCi/g						
Lead-214		1.31	+/-0.154	0.0309	+/-0.151	0.0649	pCi/g						
Manganese-54	U	0.0107	+/-0.0198	0.0172	+/-0.0194	0.0365	pCi/g						
Niobium-94	U	0.00034	+/-0.0176	0.015	+/-0.0172	0.0317	pCi/g						
Potassium-40		7.31	+/-0.878	0.152	+/-0.860	0.333	pCi/g						
Radium-226		1.04	+/-0.146	0.0312	+/-0.143	0.0657	pCi/g						
Silver-108m	U	0.00596	+/-0.0161	0.0141	+/-0.0158	0.0296	pCi/g						
Thallium-208		0.158	+/-0.0424	0.0163	+/-0.0416	0.0344	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-HTD2,ALL2 (CT)													
Strontium-90	U	-0.00199	+/-0.00446	0.00385	+/-0.0045	0.00807	pCi/g		LCW1	02/03/05	1541	396624	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		12.4	+/-2.06	1.30	+/-2.20	2.59	pCi/g		LAG1	01/26/05	2330	396262	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-1C-02
Sample ID: 129311004

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	77	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-108-C-1C-03	Project:	YANK01304
Sample ID:	129311005	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	7.22%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.468	+/-0.123	0.0515	+/-0.121	0.110	pCi/g		AKB 01/26/05	1122	396375	1
Americium-241	U	0.00311	+/-0.0834	0.0689	+/-0.0817	0.142	pCi/g					
Bismuth-212		0.299	+/-0.215	0.103	+/-0.211	0.221	pCi/g					
Bismuth-214		0.771	+/-0.104	0.0241	+/-0.101	0.0512	pCi/g					
Cesium-134	U	0.0163	+/-0.0176	0.0166	+/-0.0172	0.0353	pCi/g					
Cesium-137	U	-0.00797	+/-0.0161	0.0134	+/-0.0157	0.0285	pCi/g					
Cobalt-60	U	0.0192	+/-0.0179	0.0168	+/-0.0176	0.0365	pCi/g					
Europium-152	U	-0.0147	+/-0.0456	0.0385	+/-0.0447	0.0805	pCi/g					
Europium-154	U	-0.0313	+/-0.0474	0.0372	+/-0.0465	0.082	pCi/g					
Europium-155	U	0.0792	+/-0.0503	0.0414	+/-0.0493	0.0854	pCi/g					
Lead-212		0.433	+/-0.0575	0.0249	+/-0.0563	0.0513	pCi/g					
Lead-214		0.862	+/-0.108	0.0267	+/-0.106	0.0558	pCi/g					
Manganese-54	U	-0.00121	+/-0.0165	0.0138	+/-0.0161	0.0296	pCi/g					
Niobium-94	U	0.00502	+/-0.0148	0.0131	+/-0.0145	0.0278	pCi/g					
Potassium-40		7.39	+/-0.770	0.127	+/-0.755	0.281	pCi/g					
Radium-226		0.771	+/-0.104	0.0241	+/-0.101	0.0512	pCi/g					
Silver-108m	U	0.00925	+/-0.0185	0.0124	+/-0.0182	0.0261	pCi/g					
Thallium-208		0.139	+/-0.0395	0.0135	+/-0.0387	0.0286	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	0.00202	+/-0.00648	0.00535	+/-0.00652	0.0112	pCi/g		LCW1 02/03/05	1542	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		9.55	+/-1.80	1.17	+/-1.88	2.34	pCi/g		LAG1 01/27/05	0002	396262	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-1C-03
Sample ID: 129311005

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	60	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-108-C-1C-04	Project:	YANK01304
Sample ID:	129311006	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	7.46%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.327	+/-0.141	0.0669	+/-0.138	0.148	pCi/g		AKB 01/26/05	1149	396375	1
Americium-241	U	0.0191	+/-0.101	0.0836	+/-0.0992	0.174	pCi/g					
Bismuth-212		0.381	+/-0.248	0.120	+/-0.243	0.266	pCi/g					
Bismuth-214		0.482	+/-0.0936	0.038	+/-0.0918	0.0818	pCi/g					
Cesium-134	U	0.00	+/-0.0291	0.0222	+/-0.0285	0.0485	pCi/g					
	UI											
Cesium-137	U	0.025	+/-0.0275	0.0169	+/-0.027	0.0372	pCi/g					
Cobalt-60	U	0.0293	+/-0.0222	0.0225	+/-0.0218	0.0505	pCi/g					
Europium-152	U	0.0318	+/-0.0535	0.0495	+/-0.0524	0.105	pCi/g					
Europium-154	U	-0.0048	+/-0.0805	0.0579	+/-0.0789	0.131	pCi/g					
Europium-155	U	0.0235	+/-0.0655	0.0591	+/-0.0642	0.123	pCi/g					
Lead-212		0.457	+/-0.0739	0.0284	+/-0.0724	0.0597	pCi/g					
Lead-214		0.606	+/-0.110	0.032	+/-0.108	0.0687	pCi/g					
Manganese-54	U	0.00331	+/-0.0249	0.0209	+/-0.0244	0.0455	pCi/g					
Niobium-94	U	0.00106	+/-0.0186	0.0157	+/-0.0183	0.0345	pCi/g					
Potassium-40		7.77	+/-1.10	0.135	+/-1.08	0.326	pCi/g					
Radium-226		0.482	+/-0.0936	0.038	+/-0.0918	0.0818	pCi/g					
Silver-108m	U	0.00963	+/-0.0179	0.0163	+/-0.0175	0.0351	pCi/g					
Thallium-208		0.168	+/-0.0482	0.0177	+/-0.0473	0.0384	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	-0.000522	+/-0.00428	0.00362	+/-0.00428	0.00754	pCi/g		LCW1 02/03/05	1542	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		11.7	+/-2.04	1.30	+/-2.17	2.60	pCi/g		LAG1 01/27/05	0034	396262	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-1C-04
Sample ID: 129311006

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	98	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-108-C-2C-05	Project:	YANK01304
Sample ID:	129311007	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	6.05%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.425	+/-0.169	0.0733	+/-0.166	0.163	pCi/g		AKB 01/26/05	1149	396375	1
Americium-241	U	-0.305	+/-0.202	0.146	+/-0.198	0.305	pCi/g					
Bismuth-212	U	0.135	+/-0.208	0.191	+/-0.204	0.413	pCi/g					
Bismuth-214		0.552	+/-0.115	0.0389	+/-0.113	0.0848	pCi/g					
Cesium-134	U	0.0164	+/-0.0314	0.0283	+/-0.0308	0.0613	pCi/g					
Cesium-137	U	0.0108	+/-0.0234	0.0213	+/-0.0229	0.0466	pCi/g					
Cobalt-60	U	-0.00117	+/-0.0258	0.021	+/-0.0253	0.0485	pCi/g					
Europium-152	U	-0.0263	+/-0.0694	0.0574	+/-0.068	0.123	pCi/g					
Europium-154	U	0.0593	+/-0.0539	0.0637	+/-0.0528	0.145	pCi/g					
Europium-155	U	0.0544	+/-0.400	0.0717	+/-0.392	0.150	pCi/g					
Lead-212		0.397	+/-0.0769	0.0354	+/-0.0753	0.0744	pCi/g					
Lead-214		0.480	+/-0.111	0.0421	+/-0.108	0.0899	pCi/g					
Manganese-54	U	0.00713	+/-0.0243	0.0214	+/-0.0238	0.0472	pCi/g					
Niobium-94	U	0.0216	+/-0.0223	0.0211	+/-0.0218	0.0458	pCi/g					
Potassium-40		8.07	+/-1.13	0.192	+/-1.10	0.448	pCi/g					
Radium-226		0.552	+/-0.115	0.0389	+/-0.113	0.0848	pCi/g					
Silver-108m	U	-0.0158	+/-0.0238	0.0186	+/-0.0233	0.0403	pCi/g					
Thallium-208		0.187	+/-0.0494	0.0214	+/-0.0484	0.0466	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	-0.00245	+/-0.00515	0.00443	+/-0.0052	0.00926	pCi/g		LCW1 02/03/05	1542	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		4.36	+/-1.78	1.33	+/-1.80	2.65	pCi/g		LAG1 01/27/05	0106	396262	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-2C-05
Sample ID: 129311007

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	75	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-108-C-2C-06	Project:	YANK01304
Sample ID:	129311008	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	6.24%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.320	+/-0.181	0.0683	+/-0.178	0.148	pCi/g		AKB	01/26/05	1150	396375	1
Americium-241	U	0.045	+/-0.0994	0.0708	+/-0.0974	0.148	pCi/g						
Bismuth-212		0.351	+/-0.235	0.131	+/-0.230	0.284	pCi/g						
Bismuth-214		0.514	+/-0.100	0.0358	+/-0.098	0.0766	pCi/g						
Cesium-134	U	0.0338	+/-0.0254	0.0207	+/-0.0249	0.0448	pCi/g						
Cesium-137	U	0.00863	+/-0.0197	0.018	+/-0.0193	0.0388	pCi/g						
Cobalt-60	U	0.0207	+/-0.0195	0.0192	+/-0.0191	0.043	pCi/g						
Europium-152	U	-0.0334	+/-0.0498	0.0418	+/-0.0488	0.0892	pCi/g						
Europium-154	U	-0.017	+/-0.0584	0.0475	+/-0.0572	0.108	pCi/g						
Europium-155	U	-0.0111	+/-0.0577	0.0523	+/-0.0565	0.109	pCi/g						
Lead-212		0.397	+/-0.0659	0.0277	+/-0.0646	0.0581	pCi/g						
Lead-214		0.607	+/-0.0948	0.0321	+/-0.0929	0.0683	pCi/g						
Manganese-54	..U	0.0134	+/-0.0213	0.0193	+/-0.0208	0.0418	pCi/g						
Niobium-94	U	-0.0268	+/-0.0179	0.013	+/-0.0176	0.0287	pCi/g						
Potassium-40		7.66	+/-1.01	0.133	+/-0.991	0.313	pCi/g						
Radium-226		0.514	+/-0.100	0.0358	+/-0.098	0.0766	pCi/g						
Silver-108m	U	-0.0102	+/-0.0165	0.0134	+/-0.0162	0.029	pCi/g						
Thallium-208		0.128	+/-0.0458	0.0157	+/-0.0449	0.0341	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-HTD2,ALL2 (CT)													
Strontium-90	U	0.00176	+/-0.00922	0.00767	+/-0.00926	0.0159	pCi/g		LCW1	02/03/05	1542	396624	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		5.08	+/-1.61	1.16	+/-1.64	2.32	pCi/g		LAG1	01/27/05	0138	396262	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-2C-06
Sample ID: 129311008

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	51	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-108-C-2C-07	Project:	YANK01304
Sample ID:	129311009	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	6.96%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.423	+/-0.167	0.0584	+/-0.164	0.131	pCi/g		AKB	01/26/05	1150	396375	1
Americium-241	U	-0.00135	+/-0.132	0.107	+/-0.129	0.225	pCi/g						
Bismuth-212		0.383	+/-0.304	0.113	+/-0.298	0.254	pCi/g						
Bismuth-214		0.569	+/-0.119	0.0338	+/-0.116	0.0735	pCi/g						
Cesium-134	U	0.0224	+/-0.0247	0.0228	+/-0.0242	0.0496	pCi/g						
Cesium-137	U	-0.0123	+/-0.0213	0.0169	+/-0.0209	0.0371	pCi/g						
Cobalt-60	U	-0.0016	+/-0.0246	0.0202	+/-0.0241	0.0459	pCi/g						
Europium-152	U	0.00476	+/-0.0549	0.0468	+/-0.0538	0.100	pCi/g						
Europium-154	U	-0.0277	+/-0.0748	0.0491	+/-0.0733	0.113	pCi/g						
Europium-155	U	0.0383	+/-0.0613	0.0591	+/-0.0601	0.124	pCi/g						
Lead-212		0.470	+/-0.0833	0.0438	+/-0.0816	0.0906	pCi/g						
Lead-214		0.743	+/-0.122	0.0348	+/-0.120	0.0744	pCi/g						
Manganese-54	U	-0.00389	+/-0.0233	0.0189	+/-0.0228	0.0415	pCi/g						
Niobium-94	U	0.00157	+/-0.0179	0.0153	+/-0.0175	0.0336	pCi/g						
Potassium-40		8.73	+/-1.11	0.145	+/-1.08	0.344	pCi/g						
Radium-226		0.569	+/-0.119	0.0338	+/-0.116	0.0735	pCi/g						
Silver-108m	U	0.000748	+/-0.018	0.0161	+/-0.0177	0.0347	pCi/g						
Thallium-208		0.140	+/-0.0482	0.0185	+/-0.0473	0.0401	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-HTD2,ALL2 (CT)													
Strontium-90	U	-0.00245	+/-0.0054	0.00464	+/-0.00547	0.00969	pCi/g		LCW1	02/04/05	0116	396624	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	1.83	+/-1.54	1.22	+/-1.54	2.44	pCi/g		LAG1	01/27/05	0210	396262	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-2C-07
Sample ID: 129311009

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	65	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-108-C-2C-08	Project:	YANK01304
Sample ID:	129311010	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	6.79%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.485	+/-0.187	0.0877	+/-0.183	0.190	pCi/g		AKB	01/26/05	1151	396375	1
Americium-241	U	-0.0204	+/-0.0574	0.0349	+/-0.0563	0.0721	pCi/g						
Bismuth-212		0.535	+/-0.297	0.182	+/-0.292	0.392	pCi/g						
Bismuth-214		0.949	+/-0.162	0.0418	+/-0.159	0.0897	pCi/g						
Cesium-134	U	0.0408	+/-0.0374	0.0263	+/-0.0367	0.0568	pCi/g						
Cesium-137	U	0.0286	+/-0.0351	0.023	+/-0.0344	0.0496	pCi/g						
Cobalt-60	U	0.00219	+/-0.0254	0.0218	+/-0.0249	0.0491	pCi/g						
Europium-152	U	0.0109	+/-0.0655	0.0575	+/-0.0642	0.122	pCi/g						
Europium-154	U	-0.0139	+/-0.0666	0.0549	+/-0.0653	0.125	pCi/g						
Europium-155	U	-0.0318	+/-0.0602	0.0553	+/-0.059	0.115	pCi/g						
Lead-212		0.512	+/-0.0845	0.032	+/-0.0828	0.0671	pCi/g						
Lead-214		1.11	+/-0.167	0.0402	+/-0.164	0.0852	pCi/g						
Manganese-54	U	-0.0149	+/-0.0257	0.0204	+/-0.0252	0.0446	pCi/g						
Niobium-94	U	-0.0199	+/-0.0231	0.0181	+/-0.0227	0.0395	pCi/g						
Potassium-40		7.80	+/-0.973	0.182	+/-0.953	0.419	pCi/g						
Radium-226		0.949	+/-0.162	0.0418	+/-0.159	0.0897	pCi/g						
Silver-108m	U	-0.00186	+/-0.020	0.0179	+/-0.0196	0.0383	pCi/g						
Thallium-208		0.175	+/-0.0604	0.0206	+/-0.0592	0.0444	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-HTD2,ALL2 (CT)													
Strontium-90	U	-0.00148	+/-0.00437	0.00374	+/-0.00439	0.00782	pCi/g		LCW1	02/04/05	0116	396624	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium	U	1.87	+/-1.70	1.35	+/-1.71	2.71	pCi/g		LAG1	01/27/05	0242	396262	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-2C-08
Sample ID: 129311010

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	74	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-108-C-2C-09	Project:	YANK01304
Sample ID:	129311011	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	6.57%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.385	+/-0.133	0.0566	+/-0.131	0.126	pCi/g		AKB 01/26/05	1438	396375	1
Americium-241	U	0.0293	+/-0.137	0.115	+/-0.134	0.240	pCi/g					
Bismuth-212		0.309	+/-0.285	0.123	+/-0.279	0.271	pCi/g					
Bismuth-214		0.718	+/-0.118	0.0347	+/-0.116	0.0748	pCi/g					
Cesium-134	U	0.0423	+/-0.0309	0.0201	+/-0.0303	0.0439	pCi/g					
Cesium-137	U	0.00707	+/-0.0192	0.0172	+/-0.0188	0.0376	pCi/g					
Cobalt-60	U	0.0305	+/-0.0384	0.0169	+/-0.0376	0.0388	pCi/g					
Europium-152	U	0.0253	+/-0.0532	0.0474	+/-0.0521	0.101	pCi/g					
Europium-154	U	-0.0352	+/-0.0609	0.046	+/-0.0597	0.106	pCi/g					
Europium-155	U	0.00416	+/-0.0599	0.0571	+/-0.0587	0.119	pCi/g					
Lead-212		0.436	+/-0.0701	0.0275	+/-0.0687	0.0579	pCi/g					
Lead-214		0.847	+/-0.131	0.0311	+/-0.129	0.0666	pCi/g					
Manganese-54	U	0.00329	+/-0.0227	0.0193	+/-0.0222	0.042	pCi/g					
Niobium-94	U	0.00595	+/-0.0164	0.0146	+/-0.016	0.032	pCi/g					
Potassium-40		6.83	+/-0.878	0.142	+/-0.861	0.335	pCi/g					
Radium-226		0.718	+/-0.118	0.0347	+/-0.116	0.0748	pCi/g					
Silver-108m	U	-0.0127	+/-0.0165	0.0138	+/-0.0162	0.0299	pCi/g					
Thallium-208		0.158	+/-0.0386	0.0147	+/-0.0378	0.0324	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	0.00269	+/-0.00348	0.00279	+/-0.00354	0.00586	pCi/g		LCW1 02/04/05	0246	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	1.96	+/-1.61	1.28	+/-1.62	2.55	pCi/g		LAG1 01/27/05	0313	396262	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-108-C-2C-09
Sample ID: 129311011

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	92	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-1C-02
Sample ID: 129311012
Matrix: CT
Collect Date: 11-JAN-05
Receive Date: 21-JAN-05
Collector: Client
Moisture: 5.79%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.390	+/-0.131	0.0497	+/-0.129	0.113	pCi/g		AKB 01/26/05	1151	396375	1
Americium-241	U	-0.0022	+/-0.0814	0.0654	+/-0.0798	0.138	pCi/g					
Bismuth-212	U	0.218	+/-0.155	0.152	+/-0.152	0.330	pCi/g					
Bismuth-214		0.301	+/-0.0825	0.0271	+/-0.0808	0.0599	pCi/g					
Cesium-134	U	0.0219	+/-0.0225	0.0211	+/-0.0221	0.0461	pCi/g					
Cesium-137	U	0.00428	+/-0.0154	0.0138	+/-0.0151	0.0308	pCi/g					
Cobalt-60	U	0.0219	+/-0.0181	0.0187	+/-0.0177	0.0426	pCi/g					
Europium-152	U	0.00574	+/-0.0505	0.0433	+/-0.0494	0.093	pCi/g					
Europium-154	U	0.0588	+/-0.0602	0.0582	+/-0.059	0.130	pCi/g					
Europium-155	U	0.0179	+/-0.0532	0.0506	+/-0.0521	0.106	pCi/g					
Lead-212		0.392	+/-0.0626	0.0245	+/-0.0613	0.052	pCi/g					
Lead-214		0.436	+/-0.0991	0.0292	+/-0.0971	0.063	pCi/g					
Manganese-54	U	0.0105	+/-0.0187	0.0169	+/-0.0184	0.0372	pCi/g					
Niobium-94	U	0.0355	+/-0.0316	0.0167	+/-0.031	0.0363	pCi/g					
Potassium-40		7.14	+/-0.987	0.135	+/-0.967	0.322	pCi/g					
Radium-226		0.301	+/-0.0825	0.0271	+/-0.0808	0.0599	pCi/g					
Silver-108m	U	0.00362	+/-0.0161	0.0147	+/-0.0158	0.0319	pCi/g					
Thallium-208		0.0977	+/-0.0336	0.0152	+/-0.0329	0.0334	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	-0.000846	+/-0.00393	0.00333	+/-0.00393	0.00696	pCi/g		LCW1 02/04/05	0246	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	1.49	+/-1.62	1.30	+/-1.63	2.61	pCi/g		LAG1 01/27/05	0552	396262	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-1C-02
Sample ID: 129311012

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	94	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-107-C-1C-03	Project:	YANK01304
Sample ID:	129311013	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	5.26%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)													
Actinium-228		0.751	+/-0.174	0.0722	+/-0.171	0.161	pCi/g		AKB	01/26/05	1155	396375	1
Americium-241	U	0.0771	+/-0.126	0.105	+/-0.123	0.220	pCi/g						
Bismuth-212	U	0.281	+/-0.411	0.174	+/-0.403	0.380	pCi/g						
Bismuth-214		0.615	+/-0.122	0.0419	+/-0.119	0.0909	pCi/g						
Cesium-134	U	0.00	+/-0.0432	0.0295	+/-0.0423	0.0639	pCi/g						
	UI												
Cesium-137	U	0.00943	+/-0.0302	0.0235	+/-0.0296	0.0512	pCi/g						
Cobalt-60	U	-0.0104	+/-0.0313	0.0249	+/-0.0307	0.0562	pCi/g						
Europium-152	U	-0.0209	+/-0.0749	0.0627	+/-0.0734	0.134	pCi/g						
Europium-154	U	-0.0133	+/-0.0844	0.0695	+/-0.0827	0.156	pCi/g						
Europium-155	U	0.0579	+/-0.0836	0.075	+/-0.0819	0.157	pCi/g						
Lead-212		0.545	+/-0.0972	0.0389	+/-0.0952	0.0817	pCi/g						
Lead-214		0.677	+/-0.121	0.0472	+/-0.118	0.100	pCi/g						
Manganese-54	U	0.013	+/-0.0293	0.0257	+/-0.0287	0.0558	pCi/g						
Niobium-94	U	0.00443	+/-0.0254	0.022	+/-0.0249	0.0477	pCi/g						
Potassium-40		9.21	+/-1.41	0.220	+/-1.38	0.503	pCi/g						
Radium-226		0.615	+/-0.122	0.0419	+/-0.119	0.0909	pCi/g						
Silver-108m	U	0.00528	+/-0.0249	0.0213	+/-0.0244	0.0458	pCi/g						
Thallium-208		0.255	+/-0.0558	0.0217	+/-0.0547	0.0472	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-HTD2,ALL2 (CT)													
Strontium-90	U	0.0025	+/-0.00463	0.00377	+/-0.00469	0.00789	pCi/g		LCW1	02/04/05	0246	396624	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)													
Tritium		3.98	+/-1.58	1.17	+/-1.59	2.34	pCi/g		LAG1	01/27/05	0624	396262	3
Solid Preparation													
Laboratory Composite													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-1C-03
Sample ID: 129311013

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	75	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-1C-04
Sample ID: 129311014
Matrix: CT
Collect Date: 11-JAN-05
Receive Date: 21-JAN-05
Collector: Client
Moisture: 6.84%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.413	+/-0.140	0.0373	+/-0.137	0.0869	pCi/g		AKB 01/26/05	1152	396375	1
Americium-241	U	-0.0785	+/-0.112	0.0909	+/-0.110	0.191	pCi/g					
Bismuth-212		0.487	+/-0.226	0.113	+/-0.222	0.249	pCi/g					
Bismuth-214		0.340	+/-0.0888	0.0272	+/-0.0871	0.0595	pCi/g					
Cesium-134	U	0.0208	+/-0.0203	0.0191	+/-0.0199	0.0418	pCi/g					
Cesium-137	U	0.0184	+/-0.0227	0.0165	+/-0.0223	0.0359	pCi/g					
Cobalt-60	U	-0.0109	+/-0.0244	0.0156	+/-0.0239	0.0361	pCi/g					
Europium-152	U	0.0304	+/-0.0429	0.0409	+/-0.0421	0.0875	pCi/g					
Europium-154	U	-0.0276	+/-0.0521	0.0393	+/-0.0511	0.0917	pCi/g					
Europium-155	U	0.0382	+/-0.0545	0.0519	+/-0.0534	0.109	pCi/g					
Lead-212		0.400	+/-0.0646	0.0277	+/-0.0633	0.058	pCi/g					
Lead-214		0.411	+/-0.0888	0.0286	+/-0.087	0.0613	pCi/g					
Manganese-54	U	-0.00199	+/-0.0197	0.0161	+/-0.0193	0.0354	pCi/g					
Niobium-94	U	-0.00528	+/-0.0179	0.0146	+/-0.0176	0.0319	pCi/g					
Potassium-40		7.24	+/-0.899	0.174	+/-0.881	0.397	pCi/g					
Radium-226		0.340	+/-0.0888	0.0272	+/-0.0871	0.0595	pCi/g					
Silver-108m	U	-0.00914	+/-0.0145	0.012	+/-0.0142	0.0262	pCi/g					
Thallium-208		0.118	+/-0.0376	0.0148	+/-0.0368	0.0322	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	0.00289	+/-0.004	0.00323	+/-0.00406	0.00674	pCi/g		LCW1 02/04/05	0423	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		2.67	+/-1.63	1.26	+/-1.64	2.53	pCi/g		LAG1 01/27/05	0656	396262	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-1C-04
Sample ID: 129311014

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	92	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-2C-01
Sample ID: 129311015
Matrix: CT
Collect Date: 11-JAN-05
Receive Date: 21-JAN-05
Collector: Client
Moisture: 5.04%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.494	+/-0.181	0.0669	+/-0.178	0.148	pCi/g		AKB 01/26/05	1153	396375	1
Americium-241	U	0.0569	+/-0.146	0.0923	+/-0.143	0.192	pCi/g					
Bismuth-212	U	0.309	+/-0.228	0.142	+/-0.223	0.312	pCi/g					
Bismuth-214		0.391	+/-0.105	0.0403	+/-0.103	0.0865	pCi/g					
Cesium-134	U	0.0373	+/-0.028	0.0273	+/-0.0275	0.0586	pCi/g					
Cesium-137	U	-0.00311	+/-0.0224	0.0187	+/-0.0219	0.0408	pCi/g					
Cobalt-60	U	0.00943	+/-0.0243	0.0214	+/-0.0238	0.0482	pCi/g					
Europium-152	U	0.0113	+/-0.0576	0.0524	+/-0.0564	0.111	pCi/g					
Europium-154	U	0.00352	+/-0.072	0.0606	+/-0.0706	0.136	pCi/g					
Europium-155	U	-0.0166	+/-0.0598	0.0541	+/-0.0586	0.113	pCi/g					
Lead-212		0.453	+/-0.0781	0.0297	+/-0.0765	0.0625	pCi/g					
Lead-214		0.421	+/-0.101	0.0338	+/-0.0986	0.0723	pCi/g					
Manganese-54	U	0.00746	+/-0.0231	0.0208	+/-0.0227	0.0453	pCi/g					
Niobium-94	U	-0.00675	+/-0.0193	0.0155	+/-0.0189	0.0342	pCi/g					
Potassium-40		8.28	+/-1.08	0.165	+/-1.06	0.383	pCi/g					
Radium-226		0.391	+/-0.105	0.0403	+/-0.103	0.0865	pCi/g					
Silver-108m	U	-0.0139	+/-0.0205	0.017	+/-0.0201	0.0365	pCi/g					
Thallium-208		0.129	+/-0.0449	0.0199	+/-0.044	0.043	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	0.00095	+/-0.00583	0.00486	+/-0.00584	0.0101	pCi/g		LCW1 02/04/05	0423	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	-0.0373	+/-1.76	1.48	+/-1.76	2.96	pCi/g		ATH1 01/28/05	0319	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-2C-01
Sample ID: 129311015

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	73	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-107-C-3C-01	Project:	YANK01304
Sample ID:	129311016	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	6.38%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.365	+/-0.131	0.0566	+/-0.129	0.126	pCi/g		AKB 01/26/05	1156	396375	1
Americium-241	U	-0.0349	+/-0.0846	0.0688	+/-0.0829	0.144	pCi/g					
Bismuth-212		0.411	+/-0.179	0.133	+/-0.176	0.290	pCi/g					
Bismuth-214		0.388	+/-0.0929	0.0268	+/-0.0911	0.059	pCi/g					
Cesium-134	U	0.0178	+/-0.027	0.0216	+/-0.0265	0.0468	pCi/g					
Cesium-137	U	-0.00171	+/-0.0196	0.0164	+/-0.0192	0.0358	pCi/g					
Cobalt-60	U	0.00401	+/-0.0188	0.0163	+/-0.0185	0.0375	pCi/g					
Europium-152	U	-0.0223	+/-0.0498	0.0429	+/-0.0488	0.092	pCi/g					
Europium-154	U	-0.0221	+/-0.0596	0.0469	+/-0.0584	0.107	pCi/g					
Europium-155	U	0.033	+/-0.055	0.0515	+/-0.0539	0.108	pCi/g					
Lead-212		0.443	+/-0.0657	0.0256	+/-0.0644	0.0541	pCi/g					
Lead-214		0.395	+/-0.0924	0.0348	+/-0.0906	0.074	pCi/g					
Manganese-54	U	0.00445	+/-0.0188	0.0161	+/-0.0185	0.0355	pCi/g					
Niobium-94	U	0.00353	+/-0.018	0.0155	+/-0.0176	0.0337	pCi/g					
Potassium-40		6.73	+/-0.964	0.147	+/-0.945	0.342	pCi/g					
Radium-226		0.388	+/-0.0929	0.0268	+/-0.0911	0.059	pCi/g					
Silver-108m	U	0.0105	+/-0.0164	0.0153	+/-0.0161	0.0328	pCi/g					
Thallium-208		0.157	+/-0.0387	0.0179	+/-0.0379	0.0387	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	0.00411	+/-0.00625	0.00509	+/-0.00644	0.0106	pCi/g		LCW1 02/04/05	0432	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		4.13	+/-1.92	1.46	+/-1.94	2.92	pCi/g		ATH1 01/28/05	0351	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-3C-01
Sample ID: 129311016

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	61	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-107-C-3C-02	Project:	YANK01304
Sample ID:	129311017	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	6.4%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.418	+/-0.148	0.0444	+/-0.145	0.0964	pCi/g		AKB 01/26/05	1156	396375	1
Americium-241	U	-0.0355	+/-0.0937	0.0764	+/-0.0918	0.160	pCi/g					
Bismuth-212	U	0.114	+/-0.193	0.0997	+/-0.189	0.215	pCi/g					
Bismuth-214		0.291	+/-0.0809	0.0248	+/-0.0793	0.053	pCi/g					
Cesium-134	U	0.0211	+/-0.0216	0.0148	+/-0.0211	0.0319	pCi/g					
Cesium-137	U	0.00749	+/-0.0158	0.0144	+/-0.0155	0.0307	pCi/g					
Cobalt-60	U	-0.00893	+/-0.0174	0.0114	+/-0.017	0.0256	pCi/g					
Europium-152	U	0.0495	+/-0.042	0.0397	+/-0.0411	0.0836	pCi/g					
Europium-154	U	-0.0171	+/-0.0452	0.0368	+/-0.0443	0.0815	pCi/g					
Europium-155	U	-0.0132	+/-0.054	0.0481	+/-0.053	0.100	pCi/g					
Lead-212		0.401	+/-0.0584	0.0232	+/-0.0573	0.0485	pCi/g					
Lead-214		0.343	+/-0.0738	0.0265	+/-0.0724	0.056	pCi/g					
Manganese-54	U	0.000757	+/-0.0152	0.013	+/-0.0149	0.0281	pCi/g					
Niobium-94	U	0.00631	+/-0.0144	0.013	+/-0.0141	0.0277	pCi/g					
Potassium-40		7.95	+/-0.824	0.107	+/-0.808	0.242	pCi/g					
Radium-226		0.291	+/-0.0809	0.0248	+/-0.0793	0.053	pCi/g					
Silver-108m	U	-0.00902	+/-0.0136	0.0111	+/-0.0134	0.0237	pCi/g					
Thallium-208		0.109	+/-0.0305	0.0135	+/-0.0299	0.0289	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	3.570E-05	+/-0.00315	0.00264	+/-0.00315	0.00554	pCi/g		LCW1 02/04/05	0432	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		8.47	+/-2.12	1.49	+/-2.22	2.97	pCi/g		ATH1 01/28/05	0423	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-3C-02
Sample ID: 129311017

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	101	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-107-C-3C-03	Project:	YANK01304
Sample ID:	129311018	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	5.96%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.326	+/-0.119	0.0431	+/-0.116	0.0929	pCi/g		AKB 01/26/05	1157	396375	1
Americium-241	U	0.0646	+/-0.0563	0.0406	+/-0.0552	0.0849	pCi/g					
Bismuth-212		0.212	+/-0.152	0.0965	+/-0.149	0.207	pCi/g					
Bismuth-214		0.310	+/-0.0745	0.0242	+/-0.073	0.0513	pCi/g					
Cesium-134	U	0.00931	+/-0.0197	0.0154	+/-0.0193	0.0328	pCi/g					
Cesium-137	U	0.0102	+/-0.0197	0.0131	+/-0.0193	0.0279	pCi/g					
Cobalt-60	U	0.00498	+/-0.0148	0.0128	+/-0.0145	0.0281	pCi/g					
Europium-152	U	-0.0219	+/-0.0381	0.0328	+/-0.0374	0.0693	pCi/g					
Europium-154	U	-0.0263	+/-0.0506	0.0329	+/-0.0496	0.0724	pCi/g					
Europium-155	U	0.0165	+/-0.0414	0.0398	+/-0.0406	0.0828	pCi/g					
Lead-212		0.384	+/-0.0533	0.0193	+/-0.0522	0.0403	pCi/g					
Lead-214		0.453	+/-0.0716	0.0256	+/-0.0702	0.0537	pCi/g					
Manganese-54	U	0.00488	+/-0.0147	0.0128	+/-0.0144	0.0274	pCi/g					
Niobium-94	U	-0.0047	+/-0.0132	0.0111	+/-0.013	0.0237	pCi/g					
Potassium-40		7.18	+/-0.764	0.0912	+/-0.749	0.207	pCi/g					
Radium-226		0.310	+/-0.0745	0.0242	+/-0.073	0.0513	pCi/g					
Silver-108m	U	0.0061	+/-0.0127	0.0114	+/-0.0124	0.0242	pCi/g					
Thallium-208		0.112	+/-0.0357	0.013	+/-0.035	0.0275	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	-0.00177	+/-0.00477	0.00408	+/-0.0048	0.00851	pCi/g		LCW1 02/04/05	0432	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		3.25	+/-1.86	1.45	+/-1.88	2.89	pCi/g		ATH1 01/28/05	0454	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJI	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-3C-03
Sample ID: 129311018

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	69	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-107-C-3C-04	Project:	YANK01304
Sample ID:	129311019	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	7.38%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.371	+/-0.244	0.085	+/-0.239	0.192	pCi/g		AKB 01/26/05	1221	396375	1
Americium-241	U	-0.00321	+/-0.0731	0.0594	+/-0.0717	0.124	pCi/g					
Bismuth-212	U	0.351	+/-0.294	0.203	+/-0.288	0.449	pCi/g					
Bismuth-214		0.421	+/-0.127	0.0481	+/-0.124	0.105	pCi/g					
Cesium-134	U	0.0245	+/-0.0334	0.0315	+/-0.0327	0.0695	pCi/g					
Cesium-137	U	0.00	+/-0.0453	0.0447	+/-0.0444	0.0947	pCi/g					
	UI											
Cobalt-60	U	0.00274	+/-0.043	0.0313	+/-0.0422	0.071	pCi/g					
Europium-152	U	0.0561	+/-0.0791	0.0733	+/-0.0775	0.156	pCi/g					
Europium-154	U	-0.103	+/-0.111	0.0571	+/-0.109	0.137	pCi/g					
Europium-155	U	0.0499	+/-0.0752	0.0691	+/-0.0737	0.144	pCi/g					
Lead-212		0.386	+/-0.0938	0.0427	+/-0.0919	0.0894	pCi/g					
Lead-214		0.323	+/-0.126	0.0453	+/-0.124	0.0973	pCi/g					
Manganese-54	U	0.011	+/-0.0321	0.0289	+/-0.0315	0.0636	pCi/g					
Niobium-94	U	0.00721	+/-0.0324	0.0276	+/-0.0317	0.0599	pCi/g					
Potassium-40		7.54	+/-1.15	0.252	+/-1.13	0.589	pCi/g					
Radium-226		0.421	+/-0.127	0.0481	+/-0.124	0.105	pCi/g					
Silver-108m	U	-0.00753	+/-0.028	0.0236	+/-0.0274	0.0509	pCi/g					
Thallium-208		0.190	+/-0.0676	0.0274	+/-0.0662	0.0596	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	0.00964	+/-0.00609	0.00471	+/-0.00698	0.00982	pCi/g		LCW1 02/04/05	0432	396624	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium		9.20	+/-2.09	1.44	+/-2.20	2.88	pCi/g		ATH1 01/28/05	0526	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1256	396346
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	01/24/05	1702	396344
GL-RAD-A-026	Laboratory sample composite				396341

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-C-3C-04
Sample ID: 129311019

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	65	(25%-125%)

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	2000-0000-108-SI	Project:	YANK01304
Sample ID:	129311020	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	10.9%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.378	+/-0.262	0.0892	+/-0.257	0.199	pCi/g		AKB 01/26/05	1425	396375	1
Americium-241	U	-0.0186	+/-0.0741	0.0607	+/-0.0726	0.126	pCi/g					
Bismuth-212	U	0.364	+/-0.427	0.208	+/-0.418	0.454	pCi/g					
Bismuth-214		0.475	+/-0.154	0.0528	+/-0.151	0.114	pCi/g					
Cesium-134	U	0.0174	+/-0.0334	0.031	+/-0.0328	0.0678	pCi/g					
Cesium-137	U	0.0341	+/-0.0567	0.0241	+/-0.0556	0.0531	pCi/g					
Cobalt-60	U	-0.0106	+/-0.0344	0.0271	+/-0.0337	0.062	pCi/g					
Europium-152	U	0.0483	+/-0.0768	0.0716	+/-0.0753	0.152	pCi/g					
Europium-154	U	0.0291	+/-0.101	0.0885	+/-0.0994	0.198	pCi/g					
Europium-155	U	0.000377	+/-0.0789	0.0711	+/-0.0773	0.148	pCi/g					
Lead-212		0.442	+/-0.0922	0.0399	+/-0.0904	0.0836	pCi/g					
Lead-214		0.567	+/-0.138	0.0463	+/-0.135	0.0989	pCi/g					
Manganese-54	U	0.021	+/-0.031	0.029	+/-0.0303	0.0634	pCi/g					
Niobium-94	U	-0.00278	+/-0.0314	0.0261	+/-0.0308	0.0566	pCi/g					
Potassium-40		10.3	+/-1.40	0.271	+/-1.37	0.621	pCi/g					
Radium-226		0.475	+/-0.154	0.0528	+/-0.151	0.114	pCi/g					
Silver-108m	U	-0.00577	+/-0.0232	0.0197	+/-0.0227	0.0429	pCi/g					
Thallium-208		0.119	+/-0.0623	0.0231	+/-0.0611	0.0507	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90	U	0.0048	+/-0.00669	0.00547	+/-0.00679	0.0113	pCi/g		LCW1 02/01/05	0335	396625	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	-0.255	+/-1.79	1.51	+/-1.79	3.03	pCi/g		ATH1 01/28/05	0558	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1303	396353
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	BJ1	01/24/05	1306	396351
GL-RAD-A-026	Laboratory sample composite				396350

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 2000-0000-108-SI
Sample ID: 129311020

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	98	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	5000-0000-107-SI	Project:	YANK01304
Sample ID:	129311021	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	11.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.546	+/-0.189	0.0698	+/-0.186	0.154	pCi/g		AKB 01/26/05	0940	396377	1
Americium-241	U	0.0101	+/-0.246	0.154	+/-0.241	0.320	pCi/g					
Bismuth-212		0.581	+/-0.319	0.155	+/-0.312	0.338	pCi/g					
Bismuth-214		0.425	+/-0.124	0.0394	+/-0.122	0.0848	pCi/g					
Cesium-134	U	0.0195	+/-0.0283	0.0262	+/-0.0277	0.0565	pCi/g					
Cesium-137	U	-0.0103	+/-0.0231	0.0194	+/-0.0226	0.0423	pCi/g					
Cobalt-60	U	0.00294	+/-0.0222	0.0189	+/-0.0218	0.0433	pCi/g					
Europium-152	U	0.0283	+/-0.0658	0.0594	+/-0.0645	0.126	pCi/g					
Europium-154	U	0.00502	+/-0.0653	0.0551	+/-0.064	0.125	pCi/g					
Europium-155	U	-0.00566	+/-0.0769	0.0722	+/-0.0753	0.150	pCi/g					
Lead-212		0.449	+/-0.0801	0.0359	+/-0.0785	0.0751	pCi/g					
Lead-214		0.560	+/-0.118	0.042	+/-0.116	0.089	pCi/g					
Manganese-54	U	-0.0126	+/-0.0254	0.0208	+/-0.0249	0.0454	pCi/g					
Niobium-94	U	-0.00569	+/-0.0232	0.017	+/-0.0228	0.0372	pCi/g					
Potassium-40		13.0	+/-1.36	0.174	+/-1.33	0.405	pCi/g					
Radium-226		0.425	+/-0.124	0.0394	+/-0.122	0.0848	pCi/g					
Silver-108m	U	0.00781	+/-0.0218	0.0194	+/-0.0214	0.0414	pCi/g					
Thallium-208		0.190	+/-0.0464	0.0193	+/-0.0455	0.0419	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90		0.0126	+/-0.00694	0.00542	+/-0.00774	0.0112	pCi/g		LCW1 02/01/05	0335	396625	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	-1.13	+/-1.97	1.18	+/-1.97	2.36	pCi/g		ATH1 01/29/05	1253	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	B J1	01/25/05	1303	396353
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	B J1	01/24/05	1306	396351
GL-RAD-A-026	Laboratory sample composite				396350

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 5000-0000-107-SI
Sample ID: 129311021

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	88	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	9312-0003-113S	Project:	YANK01304
Sample ID:	129311022	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	7.79%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.485	+/-0.163	0.0677	+/-0.160	0.146	pCi/g		AKB 01/26/05	0941	396377	1
Americium-241	U	0.0195	+/-0.130	0.0907	+/-0.127	0.187	pCi/g					
Bismuth-212	U	0.286	+/-0.228	0.140	+/-0.223	0.301	pCi/g					
Bismuth-214		0.432	+/-0.109	0.0416	+/-0.106	0.0878	pCi/g					
Cesium-134	U	0.00	+/-0.0369	0.0286	+/-0.0362	0.0604	pCi/g					
	UI											
Cesium-137		4.81	+/-0.335	0.0214	+/-0.329	0.0454	pCi/g					
Cobalt-60		0.330	+/-0.064	0.0157	+/-0.0627	0.0357	pCi/g					
Europium-152	U	0.0272	+/-0.0778	0.0709	+/-0.0762	0.147	pCi/g					
Europium-154	U	0.0327	+/-0.0707	0.0636	+/-0.0693	0.139	pCi/g					
Europium-155	U	0.0437	+/-0.0706	0.0672	+/-0.0692	0.138	pCi/g					
Lead-212		0.480	+/-0.0708	0.0365	+/-0.0694	0.0755	pCi/g					
Lead-214		0.556	+/-0.130	0.0492	+/-0.127	0.102	pCi/g					
Manganese-54	U	-0.00691	+/-0.022	0.0184	+/-0.0216	0.0397	pCi/g					
Niobium-94	U	-0.00929	+/-0.0196	0.0165	+/-0.0192	0.0355	pCi/g					
Potassium-40		11.3	+/-1.26	0.191	+/-1.23	0.425	pCi/g					
Radium-226		0.432	+/-0.109	0.0416	+/-0.106	0.0878	pCi/g					
Silver-108m	U	-0.0225	+/-0.0308	0.026	+/-0.0302	0.054	pCi/g					
Thallium-208		0.123	+/-0.0487	0.0245	+/-0.0477	0.0514	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90		0.054	+/-0.011	0.0078	+/-0.0231	0.0161	pCi/g		LCW1 02/01/05	0335	396625	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	0.719	+/-1.61	0.947	+/-1.61	1.89	pCi/g		ATH1 01/29/05	1426	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	B J1	01/25/05	1303	396353
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	B J1	01/24/05	1306	396351
GL-RAD-A-026	Laboratory sample composite				396350

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9312-0003-113S
Sample ID: 129311022

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	72	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	9312-0003-114S	Project:	YANK01304
Sample ID:	129311023	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	7.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.478	+/-0.154	0.0667	+/-0.151	0.145	pCi/g		AKB 01/26/05	0941	396377	1
Americium-241	U	0.195	+/-0.182	0.125	+/-0.179	0.261	pCi/g					
Bismuth-212		0.460	+/-0.268	0.122	+/-0.263	0.267	pCi/g					
Bismuth-214		0.324	+/-0.138	0.0408	+/-0.135	0.0866	pCi/g					
Cesium-134	U	0.0402	+/-0.0358	0.0251	+/-0.0351	0.0537	pCi/g					
Cesium-137		3.44	+/-0.270	0.0204	+/-0.264	0.0437	pCi/g					
Cobalt-60		0.253	+/-0.0559	0.0157	+/-0.0548	0.0361	pCi/g					
Europium-152	U	-0.0515	+/-0.0708	0.0585	+/-0.0694	0.123	pCi/g					
Europium-154	U	0.0513	+/-0.0545	0.0616	+/-0.0534	0.136	pCi/g					
Europium-155	U	0.0554	+/-0.0646	0.0648	+/-0.0633	0.134	pCi/g					
Lead-212		0.528	+/-0.0803	0.0342	+/-0.0787	0.071	pCi/g					
Lead-214		0.483	+/-0.114	0.0469	+/-0.112	0.0979	pCi/g					
Manganese-54	U	0.00288	+/-0.022	0.0188	+/-0.0216	0.0408	pCi/g					
Niobium-94	U	0.0162	+/-0.0206	0.0189	+/-0.0202	0.0405	pCi/g					
Potassium-40		13.5	+/-1.35	0.116	+/-1.32	0.279	pCi/g					
Radium-226		0.324	+/-0.138	0.0408	+/-0.135	0.0866	pCi/g					
Silver-108m	U	-0.0104	+/-0.0241	0.0214	+/-0.0236	0.0449	pCi/g					
Thallium-208		0.155	+/-0.0453	0.0204	+/-0.0444	0.0435	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90		0.0473	+/-0.0101	0.00719	+/-0.0188	0.0148	pCi/g		LCW1 02/01/05	0335	396625	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	0.236	+/-1.97	1.65	+/-1.97	3.30	pCi/g		ATH1 01/28/05	0733	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1303	396353
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	BJ1	01/24/05	1306	396351
GL-RAD-A-026	Laboratory sample composite				396350

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9312-0003-114S
Sample ID: 129311023

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	77	(25%-125%)

Notes:
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- B Target analyte was detected in the sample as well as the associated blank.
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9312-0003-115S
Sample ID: 129311024
Matrix: TS
Collect Date: 11-JAN-05
Receive Date: 21-JAN-05
Collector: Client
Moisture: 8.52%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.577	+/-0.175	0.0682	+/-0.172	0.149	pCi/g		AKB 01/26/05	0941	396377	1
Americium-241	U	0.0142	+/-0.0398	0.0376	+/-0.039	0.0773	pCi/g					
Bismuth-212		0.621	+/-0.250	0.151	+/-0.245	0.327	pCi/g					
Bismuth-214		0.533	+/-0.115	0.0489	+/-0.113	0.103	pCi/g					
Cesium-134	U	0.049	+/-0.0421	0.0286	+/-0.0413	0.061	pCi/g					
Cesium-137		3.70	+/-0.409	0.023	+/-0.400	0.0492	pCi/g					
Cobalt-60		0.209	+/-0.0644	0.0171	+/-0.0631	0.0391	pCi/g					
Europium-152	U	0.00582	+/-0.0897	0.0696	+/-0.0879	0.145	pCi/g					
Europium-154	U	-0.0202	+/-0.082	0.0685	+/-0.0804	0.150	pCi/g					
Europium-155	U	0.0399	+/-0.0717	0.0589	+/-0.0703	0.122	pCi/g					
Lead-212		0.450	+/-0.0822	0.0392	+/-0.0805	0.0811	pCi/g					
Lead-214		0.645	+/-0.139	0.0509	+/-0.136	0.106	pCi/g					
Manganese-54	U	0.0174	+/-0.0249	0.0228	+/-0.0244	0.0491	pCi/g					
Niobium-94	U	0.00619	+/-0.0208	0.0187	+/-0.0204	0.0403	pCi/g					
Potassium-40		12.9	+/-1.33	0.145	+/-1.30	0.339	pCi/g					
Radium-226		0.533	+/-0.115	0.0489	+/-0.113	0.103	pCi/g					
Silver-108m	U	-0.00368	+/-0.0297	0.0271	+/-0.0291	0.0564	pCi/g					
Thallium-208		0.170	+/-0.0533	0.0227	+/-0.0522	0.0484	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90		0.0396	+/-0.00996	0.00723	+/-0.015	0.0149	pCi/g		LCW1 02/01/05	0422	396625	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	1.09	+/-1.77	1.44	+/-1.77	2.89	pCi/g		ATH1 01/28/05	0805	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1303	396353
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	BJ1	01/24/05	1306	396351
GL-RAD-A-026	Laboratory sample composite				396350

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9312-0003-115S
Sample ID: 129311024

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	82	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9312-0003-116S
Sample ID: 129311025
Matrix: TS
Collect Date: 11-JAN-05
Receive Date: 21-JAN-05
Collector: Client
Moisture: 10%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.382	+/-0.171	0.0583	+/-0.168	0.128	pCi/g		AKB 01/26/05	0942	396377	1
Americium-241	U	-0.0259	+/-0.104	0.0851	+/-0.102	0.177	pCi/g					
Bismuth-212		0.279	+/-0.251	0.121	+/-0.246	0.264	pCi/g					
Bismuth-214		0.434	+/-0.0849	0.0353	+/-0.0832	0.0756	pCi/g					
Cesium-134	U	0.00	+/-0.0299	0.0235	+/-0.0293	0.0503	pCi/g					
	UI											
Cesium-137		2.85	+/-0.226	0.0193	+/-0.222	0.0414	pCi/g					
Cobalt-60		0.299	+/-0.057	0.0206	+/-0.0559	0.0457	pCi/g					
Europium-152	U	-0.0255	+/-0.0663	0.0561	+/-0.065	0.118	pCi/g					
Europium-154	U	0.0246	+/-0.0622	0.0558	+/-0.061	0.124	pCi/g					
Europium-155	U	0.0247	+/-0.0587	0.0577	+/-0.0575	0.120	pCi/g					
Lead-212		0.461	+/-0.0709	0.0327	+/-0.0694	0.0681	pCi/g					
Lead-214		0.516	+/-0.115	0.0436	+/-0.113	0.0912	pCi/g					
Manganese-54	U	0.0301	+/-0.0249	0.0156	+/-0.0244	0.0343	pCi/g					
Niobium-94	U	0.00996	+/-0.0182	0.0166	+/-0.0178	0.0357	pCi/g					
Potassium-40		11.2	+/-1.19	0.118	+/-1.17	0.281	pCi/g					
Radium-226		0.434	+/-0.0849	0.0353	+/-0.0832	0.0756	pCi/g					
Silver-108m	U	0.00597	+/-0.0234	0.0216	+/-0.0229	0.0454	pCi/g					
Thallium-208		0.159	+/-0.0457	0.021	+/-0.0448	0.0447	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90		0.0487	+/-0.00956	0.00664	+/-0.0165	0.0137	pCi/g		LCW1 02/01/05	0422	396625	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	0.203	+/-2.07	1.73	+/-2.07	3.45	pCi/g		ATH1 01/28/05	0837	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1303	396353
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	BJ1	01/24/05	1306	396351
GL-RAD-A-026	Laboratory sample composite				396350

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9312-0003-116S
Sample ID: 129311025

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	84	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID:	9801-0000-117S	Project:	YANK01304
Sample ID:	129311026	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	11-JAN-05		
Receive Date:	21-JAN-05		
Collector:	Client		
Moisture:	14.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.686	+/-0.165	0.0835	+/-0.162	0.179	pCi/g		AKB 01/26/05	0942	396377	1
Americium-241	U	-0.0135	+/-0.123	0.105	+/-0.120	0.218	pCi/g					
Bismuth-212		0.384	+/-0.262	0.162	+/-0.256	0.348	pCi/g					
Bismuth-214		0.623	+/-0.115	0.046	+/-0.113	0.0973	pCi/g					
Cesium-134	U	0.0179	+/-0.0275	0.0252	+/-0.027	0.054	pCi/g					
Cesium-137		1.70	+/-0.156	0.0241	+/-0.153	0.0514	pCi/g					
Cobalt-60		0.342	+/-0.0665	0.0199	+/-0.0652	0.0444	pCi/g					
Europium-152	U	0.0153	+/-0.071	0.0645	+/-0.0696	0.135	pCi/g					
Europium-154	U	0.00457	+/-0.0692	0.0598	+/-0.0678	0.132	pCi/g					
Europium-155	U	0.070	+/-0.0777	0.0746	+/-0.0761	0.154	pCi/g					
Lead-212		0.659	+/-0.0968	0.0364	+/-0.0949	0.0757	pCi/g					
Lead-214		0.692	+/-0.130	0.0482	+/-0.128	0.101	pCi/g					
Manganese-54	U	-0.00814	+/-0.0242	0.0202	+/-0.0237	0.0436	pCi/g					
Niobium-94	U	0.00589	+/-0.0218	0.0196	+/-0.0214	0.042	pCi/g					
Potassium-40		10.8	+/-1.44	0.185	+/-1.41	0.416	pCi/g					
Radium-226		0.623	+/-0.115	0.046	+/-0.113	0.0973	pCi/g					
Silver-108m	U	-0.0142	+/-0.0257	0.0216	+/-0.0252	0.0456	pCi/g					
Thallium-208		0.222	+/-0.045	0.0215	+/-0.0441	0.0459	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90		0.0847	+/-0.0115	0.00768	+/-0.0261	0.0158	pCi/g		LCW1 02/01/05	0422	396625	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	0.449	+/-1.89	1.57	+/-1.89	3.14	pCi/g		ATH1 01/28/05	0909	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1303	396353
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	BJ1	01/24/05	1306	396351
GL-RAD-A-026	Laboratory sample composite				396350

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9801-0000-117S
Sample ID: 129311026

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery*	GFPC, Sr90, solid-HTD2,ALL2 ((	84	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9801-0000-122S
Sample ID: 129311027
Matrix: TS
Collect Date: 11-JAN-05
Receive Date: 21-JAN-05
Collector: Client
Moisture: 12.8%

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid-GAM2,ALL2 (CT)												
Actinium-228		0.503	+/-0.151	0.0603	+/-0.148	0.132	pCi/g		AKB 01/26/05	0943	396377	1
Americium-241	U	-0.027	+/-0.116	0.0998	+/-0.114	0.208	pCi/g					
Bismuth-212	U	0.243	+/-0.188	0.134	+/-0.185	0.289	pCi/g					
Bismuth-214		0.390	+/-0.0976	0.0274	+/-0.0957	0.0596	pCi/g					
Cesium-134	U	0.0315	+/-0.023	0.022	+/-0.0226	0.0473	pCi/g					
Cesium-137		0.0954	+/-0.0347	0.0141	+/-0.034	0.031	pCi/g					
Cobalt-60		0.158	+/-0.0446	0.0179	+/-0.0437	0.0403	pCi/g					
Europium-152	U	0.0675	+/-0.0543	0.0435	+/-0.0532	0.0925	pCi/g					
Europium-154	U	0.019	+/-0.0612	0.0539	+/-0.060	0.120	pCi/g					
Europium-155	U	0.0678	+/-0.0882	0.0516	+/-0.0865	0.108	pCi/g					
Lead-212		0.427	+/-0.064	0.0243	+/-0.0627	0.0511	pCi/g					
Lead-214		0.488	+/-0.0966	0.0299	+/-0.0946	0.0636	pCi/g					
Manganese-54	U	0.00561	+/-0.0215	0.0185	+/-0.021	0.0399	pCi/g					
Niobium-94	U	-0.0126	+/-0.0192	0.0153	+/-0.0189	0.0331	pCi/g					
Potassium-40		11.7	+/-1.21	0.154	+/-1.18	0.353	pCi/g					
Radium-226		0.390	+/-0.0976	0.0274	+/-0.0957	0.0596	pCi/g					
Silver-108m	U	0.0121	+/-0.0169	0.0159	+/-0.0166	0.0339	pCi/g					
Thallium-208		0.144	+/-0.040	0.0152	+/-0.0392	0.0329	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-HTD2,ALL2 (CT)												
Strontium-90		0.110	+/-0.00999	0.00565	+/-0.0272	0.0116	pCi/g		LCW1 02/01/05	0422	396625	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL2 (CT)												
Tritium	U	-1.33	+/-1.66	1.44	+/-1.66	2.88	pCi/g		ATH1 01/28/05	0941	396644	3
Solid Preparation												
Laboratory Composite												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	01/25/05	1303	396353
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	BJ1	01/24/05	1306	396351
GL-RAD-A-026	Laboratory sample composite				396350

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: February 4, 2005

Client Sample ID: 9801-0000-122S
Sample ID: 129311027

Project: YANK01304
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-HTD2,ALL2 ((	102	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: February 4, 2005

Client: Connecticut Yankee Atomic Power
Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut

Contact: Mr. Pete Hollenbeck

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 396301										
QC1200776365 128921003 DUP										
Americium-241	U	0.00394	U	0.0374	pCi/g	162		(0% - 100%)	JAS1	01/31/05 10:19
	Uncert:	+/-0.0298		+/-0.0951						
	TPU:	+/-0.0298		+/-0.0953						
Curium-242	U	0.0154	U	0.0141	pCi/g	9		(0% - 100%)		
	Uncert:	+/-0.0302		+/-0.0375						
	TPU:	+/-0.0303		+/-0.0376						
Curium-243/244	U	-0.00338	U	0.0238	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.00662		+/-0.0808						
	TPU:	+/-0.00664		+/-0.0809						
QC1200776367 LCS										
Americium-241	5.21			5.56	pCi/g		107	(75%-125%)		
	Uncert:			+/-0.582						
	TPU:			+/-0.989						
Curium-242			U	0.0121	pCi/g					
	Uncert:			+/-0.0322						
	TPU:			+/-0.0322						
Curium-243/244	6.44			7.32	pCi/g		114	(75%-125%)		
	Uncert:			+/-0.667						
	TPU:			+/-1.25						
QC1200776364 MB										
Americium-241			U	0.0586	pCi/g					01/31/05 10:19
	Uncert:			+/-0.0616						
	TPU:			+/-0.0622						
Curium-242			U	-0.0038	pCi/g					
	Uncert:			+/-0.00744						
	TPU:			+/-0.00746						
Curium-243/244			U	-0.00374	pCi/g					
	Uncert:			+/-0.00734						
	TPU:			+/-0.00736						
QC1200776366 128921003 MS										
Americium-241	5.33 U	0.00394		5.83	pCi/g		109	(75%-125%)		01/31/05 10:19
	Uncert:	+/-0.0298		+/-0.560						
	TPU:	+/-0.0298		+/-0.984						
Curium-242	U	0.0154	U	0.0116	pCi/g					
	Uncert:	+/-0.0302		+/-0.0307						
	TPU:	+/-0.0303		+/-0.0307						
Curium-243/244	6.60 U	-0.00338		7.38	pCi/g		112	(75%-125%)		
	Uncert:	+/-0.00662		+/-0.630						
	TPU:	+/-0.00664		+/-1.20						
Batch 396302										
QC1200776369 128921003 DUP										
Plutonium-238	U	-0.0135	U	0.00265	pCi/g	N/A		(0% - 100%)	JAS1	01/29/05 15:07

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 396302										
	Uncert:	+/-0.0175		+/-0.0268						
	TPU:	+/-0.0176		+/-0.0268						
Plutonium-239/240	U	0.0027	U	-5.690E-05	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0159		+/-0.0137						
	TPU:	+/-0.0159		+/-0.0137						
QC1200776371 LCS										
Plutonium-238			U	0.0189	pCi/g			(75%-125%)		
	Uncert:			+/-0.0255						
	TPU:			+/-0.0256						
Plutonium-239/240	4.56			4.76	pCi/g		104	(75%-125%)		
	Uncert:			+/-0.315						
	TPU:			+/-0.599						
QC1200776368 MB										
Plutonium-238			U	-0.000276	pCi/g					
	Uncert:			+/-0.0298						
	TPU:			+/-0.0298						
Plutonium-239/240			U	0.0221	pCi/g					
	Uncert:			+/-0.0254						
	TPU:			+/-0.0256						
QC1200776370 128921003 MS										
Plutonium-238	U	-0.0135	U	0.0326	pCi/g			(75%-125%)		
	Uncert:	+/-0.0175		+/-0.0459						
	TPU:	+/-0.0176		+/-0.0461						
Plutonium-239/240	4.67 U	0.0027		5.19	pCi/g		111	(75%-125%)		
	Uncert:	+/-0.0159		+/-0.346						
	TPU:	+/-0.0159		+/-0.661						
Batch 396303										
QC1200776373 128921003 DUP										
Plutonium-241	U	-1.04	U	0.315	pCi/g	N/A		(0% - 100%)	JAS1	02/01/05 14:16
	Uncert:	+/-3.81		+/-3.44						
	TPU:	+/-3.81		+/-3.44						
QC1200776375 LCS										
Plutonium-241	66.3			54.5	pCi/g		82	(75%-125%)		02/01/05 15:19
	Uncert:			+/-4.93						
	TPU:			+/-7.53						
QC1200776372 MB										
Plutonium-241			U	1.21	pCi/g					02/02/05 11:56
	Uncert:			+/-2.90						
	TPU:			+/-2.90						
QC1200776374 128921003 MS										
Plutonium-241	67.6 U	-1.04		52.8	pCi/g		78	(75%-125%)		02/01/05 23:44
	Uncert:	+/-3.81		+/-5.19						
	TPU:	+/-3.81		+/-7.65						
Rad Gamma Spec										
Batch 396375										
QC1200776529 129311001 DUP										
Actinium-228		0.415		0.512	pCi/g	21		(0% - 100%)	AKB	01/26/05 16:41
	Uncert:	+/-0.179		+/-0.141						
				+/-0.139						

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 396375											
	TPU:	+/-0.176									
Americium-241	U	-0.013	U	-0.000908	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.114		+/-0.0715							
	TPU:	+/-0.112		+/-0.0701							
Bismuth-212		0.310	U	0.0379	pCi/g	156		(0% - 100%)			
	Uncert:	+/-0.156		+/-0.122							
	TPU:	+/-0.153		+/-0.119							
Bismuth-214		0.641		0.632	pCi/g	1		(0% - 100%)			
	Uncert:	+/-0.122		+/-0.100							
	TPU:	+/-0.120		+/-0.0981							
Cesium-134	U	0.0311	UUI	0.00	pCi/g	22		(0% - 100%)			
	Uncert:	+/-0.0276		+/-0.0309							
	TPU:	+/-0.027		+/-0.0303							
Cesium-137	U	0.0203	U	-0.0109	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0191		+/-0.0164							
	TPU:	+/-0.0187		+/-0.0161							
Cobalt-60	U	-0.00473	U	0.0104	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0293		+/-0.0181							
	TPU:	+/-0.0287		+/-0.0178							
Europium-152	U	0.0162	U	0.039	pCi/g	83		(0% - 100%)			
	Uncert:	+/-0.064		+/-0.0469							
	TPU:	+/-0.0627		+/-0.046							
Europium-154	U	0.0349	U	0.00252	pCi/g	173		(0% - 100%)			
	Uncert:	+/-0.058		+/-0.0563							
	TPU:	+/-0.0568		+/-0.0551							
Europium-155	U	0.018	U	0.0381	pCi/g	72		(0% - 100%)			
	Uncert:	+/-0.0577		+/-0.0482							
	TPU:	+/-0.0565		+/-0.0472							
Lead-212		0.407		0.323	pCi/g	23		(0% - 100%)			
	Uncert:	+/-0.0655		+/-0.0604							
	TPU:	+/-0.0642		+/-0.0592							
Lead-214		0.715		0.660	pCi/g	8		(0% - 20%)			
	Uncert:	+/-0.112		+/-0.0924							
	TPU:	+/-0.109		+/-0.0906							
Manganese-54	U	0.00429	U	0.00601	pCi/g	33		(0% - 100%)			
	Uncert:	+/-0.022		+/-0.0164							
	TPU:	+/-0.0216		+/-0.016							
Niobium-94	UUI	0.00	UUI	0.00	pCi/g	0		(0% - 100%)			
	Uncert:	+/-0.0385		+/-0.0203							
	TPU:	+/-0.0377		+/-0.0199							
Potassium-40		6.57		7.05	pCi/g	7		(0% - 20%)			
	Uncert:	+/-0.947		+/-0.735							
	TPU:	+/-0.928		+/-0.721							
Radium-226		0.641		0.632	pCi/g	1		(0% - 100%)			
	Uncert:	+/-0.122		+/-0.100							
	TPU:	+/-0.120		+/-0.0981							
Silver-108m	U	0.00382	U	0.000226	pCi/g	178		(0% - 100%)			
	Uncert:	+/-0.0185		+/-0.0144							

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 396375										
	TPU:	+/-0.0181		+/-0.0141						
Thallium-208		0.132		0.107	pCi/g	21		(0% - 100%)		
	Uncert:	+/-0.035		+/-0.037						
	TPU:	+/-0.0343		+/-0.0363						
QC1200776530 LCS										
Actinium-228			U	-0.0366	pCi/g					01/26/05 10:48
	Uncert:			+/-0.764						
	TPU:			+/-0.749						
Americium-241	23.4			23.0	pCi/g		98	(75%-125%)		
	Uncert:			+/-1.81						
	TPU:			+/-1.78						
Bismuth-212			U	0.723	pCi/g					
	Uncert:			+/-1.24						
	TPU:			+/-1.21						
Bismuth-214			U	0.114	pCi/g					
	Uncert:			+/-0.317						
	TPU:			+/-0.310						
Cesium-134			U	-0.0845	pCi/g					
	Uncert:			+/-0.192						
	TPU:			+/-0.189						
Cesium-137	9.12			9.30	pCi/g		102	(75%-125%)		
	Uncert:			+/-0.942						
	TPU:			+/-0.923						
Cobalt-60	13.2			13.1	pCi/g		99	(75%-125%)		
	Uncert:			+/-1.09						
	TPU:			+/-1.07						
Europium-152			U	0.142	pCi/g					
	Uncert:			+/-0.350						
	TPU:			+/-0.343						
Europium-154			U	-0.267	pCi/g					
	Uncert:			+/-0.361						
	TPU:			+/-0.354						
Europium-155			U	0.0948	pCi/g					
	Uncert:			+/-0.343						
	TPU:			+/-0.336						
Lead-212			U	0.189	pCi/g					
	Uncert:			+/-0.184						
	TPU:			+/-0.180						
Lead-214			U	-0.0401	pCi/g					
	Uncert:			+/-0.251						
	TPU:			+/-0.246						
Manganese-54			U	-0.187	pCi/g					
	Uncert:			+/-0.170						
	TPU:			+/-0.167						
Niobium-94			U	0.0175	pCi/g					
	Uncert:			+/-0.155						
	TPU:			+/-0.151						
Potassium-40			U	0.840	pCi/g					

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 396375										
	Uncert:			+/-1.07						
	TPU:			+/-1.05						
Radium-226			U	0.114	pCi/g			(75%-125%)		
	Uncert:			+/-0.317						
	TPU:			+/-0.310						
Silver-108m			U	0.0813	pCi/g					
	Uncert:			+/-0.145						
	TPU:			+/-0.142						
Thallium-208			U	0.0392	pCi/g					
	Uncert:			+/-0.169						
	TPU:			+/-0.165						
QC1200776528 MB										
Actinium-228			U	0.053	pCi/g					01/26/05 16:24
	Uncert:			+/-0.169						
	TPU:			+/-0.165						
Americium-241			U	0.00567	pCi/g					
	Uncert:			+/-0.133						
	TPU:			+/-0.131						
Bismuth-212			U	0.00142	pCi/g					
	Uncert:			+/-0.249						
	TPU:			+/-0.244						
Bismuth-214			U	0.0482	pCi/g					
	Uncert:			+/-0.083						
	TPU:			+/-0.0813						
Cesium-134			U	0.0188	pCi/g					
	Uncert:			+/-0.0276						
	TPU:			+/-0.027						
Cesium-137			U	0.00694	pCi/g					
	Uncert:			+/-0.0273						
	TPU:			+/-0.0268						
Cobalt-60			U	-0.0118	pCi/g					
	Uncert:			+/-0.0336						
	TPU:			+/-0.033						
Europium-152			U	0.00291	pCi/g					
	Uncert:			+/-0.090						
	TPU:			+/-0.0882						
Europium-154			U	-0.014	pCi/g					
	Uncert:			+/-0.0901						
	TPU:			+/-0.0883						
Europium-155			U	-0.0386	pCi/g					
	Uncert:			+/-0.0729						
	TPU:			+/-0.0714						
Lead-212			U	0.0512	pCi/g					
	Uncert:			+/-0.0598						
	TPU:			+/-0.0586						
Lead-214			U	0.0488	pCi/g					
	Uncert:			+/-0.0613						
	TPU:			+/-0.0601						

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 396375										
Manganese-54			U	0.0153	pCi/g					
	Uncert:			+/-0.0289						
	TPU:			+/-0.0284						
Niobium-94			U	0.0058	pCi/g					
	Uncert:			+/-0.0296						
	TPU:			+/-0.0291						
Potassium-40			U	0.700	pCi/g					
	Uncert:			+/-0.397						
	TPU:			+/-0.389						
Radium-226			U	0.0482	pCi/g					
	Uncert:			+/-0.083						
	TPU:			+/-0.0813						
Silver-108m			U	-0.00164	pCi/g					
	Uncert:			+/-0.0272						
	TPU:			+/-0.0266						
Thallium-208			U	0.000895	pCi/g					
	Uncert:			+/-0.0292						
	TPU:			+/-0.0286						
Batch 396377										
QC1200776536 129311021 DUP										
Actinium-228		0.546		0.473	pCi/g	14		(0% - 100%)	AKB	01/26/05 11:58
	Uncert:	+/-0.189		+/-0.179						
	TPU:	+/-0.186		+/-0.176						
Americium-241	U	0.0101	U	0.043	pCi/g	124		(0% - 100%)		
	Uncert:	+/-0.246		+/-0.129						
	TPU:	+/-0.241		+/-0.127						
Bismuth-212		0.581	U	0.208	pCi/g	95		(0% - 100%)		
	Uncert:	+/-0.319		+/-0.163						
	TPU:	+/-0.312		+/-0.160						
Bismuth-214		0.425		0.496	pCi/g	16		(0% - 100%)		
	Uncert:	+/-0.124		+/-0.113						
	TPU:	+/-0.122		+/-0.110						
Cesium-134	U	0.0195	U	0.0124	pCi/g	45		(0% - 100%)		
	Uncert:	+/-0.0283		+/-0.0226						
	TPU:	+/-0.0277		+/-0.0221						
Cesium-137	U	-0.0103	U	0.0296	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0231		+/-0.0213						
	TPU:	+/-0.0226		+/-0.0208						
Cobalt-60	U	0.00294	U	-0.00314	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0222		+/-0.0217						
	TPU:	+/-0.0218		+/-0.0213						
Europium-152	U	0.0283	U	0.00723	pCi/g	119		(0% - 100%)		
	Uncert:	+/-0.0658		+/-0.0559						
	TPU:	+/-0.0645		+/-0.0547						
Europium-154	U	0.00502	U	-0.0474	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0653		+/-0.059						
	TPU:	+/-0.064		+/-0.0578						
Europium-155	U	-0.00566	U	0.0421	pCi/g	N/A		(0% - 100%)		

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 396377										
	Uncert:	+/-0.0769		+/-0.0585						
	TPU:	+/-0.0753		+/-0.0573						
Lead-212		0.449		0.482	pCi/g	7		(0% - 100%)		
	Uncert:	+/-0.0801		+/-0.0729						
	TPU:	+/-0.0785		+/-0.0714						
Lead-214		0.560		0.535	pCi/g	5		(0% - 20%)		
	Uncert:	+/-0.118		+/-0.0971						
	TPU:	+/-0.116		+/-0.0951						
Manganese-54	U	-0.0126	U	0.0175	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0254		+/-0.0189						
	TPU:	+/-0.0249		+/-0.0185						
Niobium-94	U	-0.00569	U	0.0135	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0232		+/-0.0193						
	TPU:	+/-0.0228		+/-0.0189						
Potassium-40		13.0		12.8	pCi/g	2		(0% - 20%)		
	Uncert:	+/-1.36		+/-1.44						
	TPU:	+/-1.33		+/-1.41						
Radium-226		0.425		0.496	pCi/g	16		(0% - 100%)		
	Uncert:	+/-0.124		+/-0.113						
	TPU:	+/-0.122		+/-0.110						
Silver-108m	U	0.00781	U	-0.0029	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.0218		+/-0.0183						
	TPU:	+/-0.0214		+/-0.0179						
Thallium-208		0.190		0.163	pCi/g	15		(0% - 100%)		
	Uncert:	+/-0.0464		+/-0.0385						
	TPU:	+/-0.0455		+/-0.0377						
QC1200776537 LCS										
Actinium-228			U	0.918	pCi/g					01/26/05 09:44
	Uncert:			+/-1.29						
	TPU:			+/-1.26						
Americium-241	23.4			23.0	pCi/g		98	(75%-125%)		
	Uncert:			+/-1.92						
	TPU:			+/-1.88						
Bismuth-212			U	-0.606	pCi/g					
	Uncert:			+/-1.54						
	TPU:			+/-1.51						
Bismuth-214			U	0.372	pCi/g					
	Uncert:			+/-0.307						
	TPU:			+/-0.301						
Cesium-134			U	-0.135	pCi/g					
	Uncert:			+/-0.177						
	TPU:			+/-0.174						
Cesium-137	9.11			9.56	pCi/g		105	(75%-125%)		
	Uncert:			+/-0.979						
	TPU:			+/-0.960						
Cobalt-60	13.2			13.0	pCi/g		99	(75%-125%)		
	Uncert:			+/-1.12						
	TPU:			+/-1.10						

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 396377										
Europium-152			U	-0.0335	pCi/g					
	Uncert:			+/-0.343						
	TPU:			+/-0.336						
Europium-154			U	0.226	pCi/g					
	Uncert:			+/-0.345						
	TPU:			+/-0.338						
Europium-155			U	-0.0621	pCi/g					
	Uncert:			+/-0.344						
	TPU:			+/-0.337						
Lead-212			U	0.103	pCi/g					
	Uncert:			+/-0.179						
	TPU:			+/-0.176						
Lead-214			U	0.042	pCi/g					
	Uncert:			+/-0.252						
	TPU:			+/-0.247						
Manganese-54			U	0.102	pCi/g					
	Uncert:			+/-0.178						
	TPU:			+/-0.175						
Niobium-94			U	0.0413	pCi/g					
	Uncert:			+/-0.145						
	TPU:			+/-0.142						
Potassium-40			U	0.380	pCi/g					
	Uncert:			+/-1.16						
	TPU:			+/-1.13						
Radium-226			U	0.372	pCi/g			(75%-125%)		
	Uncert:			+/-0.307						
	TPU:			+/-0.301						
Silver-108m			U	0.00745	pCi/g					
	Uncert:			+/-0.140						
	TPU:			+/-0.137						
Thallium-208			U	-0.00224	pCi/g					
	Uncert:			+/-0.164						
	TPU:			+/-0.161						
QC1200776535 MB										
Actinium-228			U	0.0898	pCi/g					01/26/05 09:43
	Uncert:			+/-0.176						
	TPU:			+/-0.173						
Americium-241			U	-0.0868	pCi/g					
	Uncert:			+/-0.138						
	TPU:			+/-0.135						
Bismuth-212			U	0.178	pCi/g					
	Uncert:			+/-0.246						
	TPU:			+/-0.241						
Bismuth-214			U	0.00454	pCi/g					
	Uncert:			+/-0.0669						
	TPU:			+/-0.0656						
Cesium-134			U	-0.00296	pCi/g					
	Uncert:			+/-0.0339						

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 396377										
	TPU:			+/-0.0332						
Cesium-137			U	0.00562	pCi/g					
	Uncert:			+/-0.032						
	TPU:			+/-0.0313						
Cobalt-60			U	-0.0268	pCi/g					
	Uncert:			+/-0.0432						
	TPU:			+/-0.0424						
Europium-152			U	-0.0354	pCi/g					
	Uncert:			+/-0.0908						
	TPU:			+/-0.089						
Europium-154			U	0.0157	pCi/g					
	Uncert:			+/-0.0824						
	TPU:			+/-0.0807						
Europium-155			U	-0.00784	pCi/g					
	Uncert:			+/-0.0738						
	TPU:			+/-0.0724						
Lead-212			U	0.0585	pCi/g					
	Uncert:			+/-0.0465						
	TPU:			+/-0.0456						
Lead-214			U	0.0249	pCi/g					
	Uncert:			+/-0.0551						
	TPU:			+/-0.054						
Manganese-54			U	-0.0253	pCi/g					
	Uncert:			+/-0.0284						
	TPU:			+/-0.0278						
Niobium-94			U	-0.0115	pCi/g					
	Uncert:			+/-0.0279						
	TPU:			+/-0.0273						
Potassium-40			U	0.426	pCi/g					
	Uncert:			+/-0.337						
	TPU:			+/-0.331						
Radium-226			U	0.00454	pCi/g					
	Uncert:			+/-0.0669						
	TPU:			+/-0.0656						
Silver-108m			U	0.00992	pCi/g					
	Uncert:			+/-0.0255						
	TPU:			+/-0.025						
Thallium-208			U	0.0186	pCi/g					
	Uncert:			+/-0.0376						
	TPU:			+/-0.0369						
Rad Gas Flow										
Batch 396624										
QC1200777072 129311005 DUP										
Strontium-90	U	0.00202	U	-0.0349	pCi/g	N/A		(0% - 100%)	LCW1	02/04/05 15:36
	Uncert:	+/-0.00648		+/-0.00671						
	TPU:	+/-0.00652		+/-0.0144						
QC1200777074 LCS										
Strontium-90	1.10			0.911	pCi/g		83	(75%-125%)		02/03/05 11:44

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 396624										
	Uncert:			+/-0.0515						
	TPU:			+/-0.191						
QC1200777071 MB										
Strontium-90			U	-0.00781	pCi/g					02/04/05 15:35
	Uncert:			+/-0.00576						
	TPU:			+/-0.00608						
QC1200777073 129311005 MS										
Strontium-90	2.08 U	0.00202		1.81	pCi/g		87	(75%-125%)		02/04/05 11:53
	Uncert:	+/-0.00648		+/-0.157						
	TPU:	+/-0.00652		+/-1.07						
Batch 396625										
QC1200777076 129311023 DUP										
Strontium-90		0.0473		0.0369	pCi/g	25*		(0% - 100%)	LCW1	02/01/05 04:30
	Uncert:	+/-0.0101		+/-0.00925						
	TPU:	+/-0.0188		+/-0.0143						
QC1200777078 LCS										
Strontium-90	1.19			1.30	pCi/g		109	(75%-125%)		01/31/05 18:46
	Uncert:			+/-0.0749						
	TPU:			+/-0.335						
QC1200777075 MB										
Strontium-90			U	-0.000581	pCi/g					02/01/05 04:30
	Uncert:			+/-0.00703						
	TPU:			+/-0.00703						
QC1200777077 129311023 MS										
Strontium-90	2.39	0.0473		2.76	pCi/g		114	(75%-125%)		01/31/05 18:46
	Uncert:	+/-0.0101		+/-0.167						
	TPU:	+/-0.0188		+/-0.787						
Rad Liquid Scintillation										
Batch 396255										
QC1200776282 129311003 DUP										
Technetium-99	U	0.00604	U	0.0887	pCi/g	0		(0% - 100%)	EGD1	01/31/05 04:48
	Uncert:	+/-0.277		+/-0.274						
	TPU:	+/-0.277		+/-0.274						
QC1200776284 LCS										
Technetium-99	22.1			23.0	pCi/g		104	(75%-125%)		01/31/05 05:53
	Uncert:			+/-0.661						
	TPU:			+/-0.877						
QC1200776281 MB										
Technetium-99			U	0.086	pCi/g					01/31/05 04:16
	Uncert:			+/-0.238						
	TPU:			+/-0.238						
QC1200776283 129311003 MS										
Technetium-99	23.1 U	0.00604		24.2	pCi/g		105	(75%-125%)		01/31/05 05:21
	Uncert:	+/-0.277		+/-0.751						
	TPU:	+/-0.277		+/-0.967						
Batch 396262										
QC1200776298 129311001 DUP										
Tritium	U	1.76		3.82	pCi/g	74		(0% - 100%)	LAG1	01/27/05 08:00

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 396262										
	Uncert:	+/-1.51		+/-1.72						
	TPU:	+/-1.51		+/-1.74						
QC1200776300 LCS										
Tritium	9.34			8.49	pCi/g		91	(75%-125%)		01/27/05 09:04
	Uncert:			+/-1.02						
	TPU:			+/-1.14						
QC1200776297 MB										
Tritium			U	-0.0536	pCi/g					01/27/05 07:28
	Uncert:			+/-0.703						
	TPU:			+/-0.703						
QC1200776299 129311001 MS										
Tritium	9.77 U	1.76		10.7	pCi/g		91	(75%-125%)		01/27/05 08:32
	Uncert:	+/-1.51		+/-1.87						
	TPU:	+/-1.51		+/-1.97						
Batch 396263										
QC1200776302 129311001 DUP										
Carbon-14	U	0.167	U	0.155	pCi/g	0		(0% - 100%)	LAG1	01/26/05 02:48
	Uncert:	+/-0.166		+/-0.170						
	TPU:	+/-0.166		+/-0.170						
QC1200776304 LCS										
Carbon-14	7.46			7.45	pCi/g		100	(75%-125%)		01/26/05 03:52
	Uncert:			+/-0.324						
	TPU:			+/-0.344						
QC1200776301 MB										
Carbon-14			U	0.177	pCi/g					01/26/05 02:16
	Uncert:			+/-0.158						
	TPU:			+/-0.158						
QC1200776303 129311001 MS										
Carbon-14	7.46 U	0.167		8.16	pCi/g		107	(75%-125%)		01/26/05 03:20
	Uncert:	+/-0.166		+/-0.334						
	TPU:	+/-0.166		+/-0.357						
Batch 396265										
QC1200779499 129311003 DUP										
Iron-55		5.57		10.0	pCi/g	57*		(0% - 100%)	DAJ1	02/01/05 22:28
	Uncert:	+/-3.15		+/-3.18						
	TPU:	+/-3.15		+/-3.20						
QC1200776308 LCS										
Iron-55	37.8			44.8	pCi/g		119	(75%-125%)		02/02/05 00:33
	Uncert:			+/-2.68						
	TPU:			+/-3.28						
QC1200776305 MB										
Iron-55			U	-0.0091	pCi/g					02/01/05 21:25
	Uncert:			+/-1.99						
	TPU:			+/-1.99						
QC1200779500 129311003 MS										
Iron-55	39.8	5.57		43.2	pCi/g		95	(75%-125%)		02/01/05 23:30
	Uncert:	+/-3.15		+/-3.29						
	TPU:	+/-3.15		+/-3.73						
Batch 396266										

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 396266										
QC1200779497 129311003 DUP										
Nickel-63		63.3		59.8	pCi/g	6		(0% - 20%)	DAJ1	02/01/05 12:31
	Uncert:	+/-1.38		+/-1.31						
	TPU:	+/-2.53		+/-2.40						
QC1200776312 LCS										
Nickel-63	30.5			30.8	pCi/g		101	(75%-125%)		02/01/05 14:09
	Uncert:			+/-0.905						
	TPU:			+/-1.37						
QC1200776309 MB										
Nickel-63			U	-0.326	pCi/g					02/01/05 11:31
	Uncert:			+/-0.385						
	TPU:			+/-0.385						
QC1200779498 129311003 MS										
Nickel-63	31.7	63.3		95.6	pCi/g		102	(75%-125%)		02/01/05 13:07
	Uncert:	+/-1.38		+/-2.00						
	TPU:	+/-2.53		+/-3.78						
Batch 396644										
QC1200777113 129311020 DUP										
Tritium	U	-0.255	U	-1.42	pCi/g	N/A		(0% - 100%)	ATH1	01/28/05 10:44
	Uncert:	+/-1.79		+/-1.72						
	TPU:	+/-1.79		+/-1.72						
QC1200777115 LCS										
Tritium	17.5			16.4	pCi/g		94	(75%-125%)		01/28/05 11:48
	Uncert:			+/-2.42						
	TPU:			+/-2.74						
QC1200777112 MB										
Tritium			U	-0.581	pCi/g					01/28/05 10:13
	Uncert:			+/-1.76						
	TPU:			+/-1.76						
QC1200777114 129311020 MS										
Tritium	17.5 U	-0.255		16.0	pCi/g		91	(75%-125%)		01/28/05 11:16
	Uncert:	+/-1.79		+/-2.40						
	TPU:	+/-1.79		+/-2.71						

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.

QC Summary

Workorder: 129311

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

h Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Chain of Custody Form

No. 2005-00013

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90	CHALL			Comment, Preservation	Lab Sample ID
9801-0000-118-B4-01	1/13/05	1330	B	CR	BP				X				
9801-0000-118-B4-02	1/13/05	1330	B	CR	BP	X	X	X					
9801-0000-118-B4-03	1/13/05	1330	B	CR	BP	X	X	X					
9801-0000-118-B5-01	1/13/05	1400	B	CR	BP	X	X	X					
9801-0000-118-B5-02	1/13/05	1400	B	CR	BP	X	X	X					
9801-0000-118-B5-03	1/13/05	1400	B	CR	BP	X	X	X					
9801-0000-118-B6-01	1/13/05	1430	B	CR	BP	X	X	X					
9801-0000-118-B6-02	1/13/05	1430	B	CR	BP	X	X	X					
9801-0000-118-B6-03	1/13/05	1430	B	CR	BP	X	X	X					

NOTES: PO #: 002337 MSR #: 05-0165 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7921 8380 2493
Bill of Lading #

Internal Container Temp.: 13 Deg. C
Custody Sealed? Y ☒ N ☐
Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time 1-18-05/0930	2) Received By M. Smith	Date/Time 1-19-05 10:40
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Chain of Custody Form

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

No. 2005-00014

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
GEL-129116

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90	CHALL			Comment, Preservation	Lab Sample ID
9801-0000-118-B7-01	1/13/05	1455	B	CR	BP	X	X	X					
9801-0000-118-B7-02	1/13/05	1455	B	CR	BP	X	X	X					
9801-0000-118-B7-03	1/13/05	1455	B	CR	BP	X	X	X					
9801-0000-118-B8-01	1/13/05	1515	B	CR	BP	X	X	X					
9801-0000-118-B8-02	1/13/05	1515	B	CR	BP	X	X	X					
9801-0000-118-B8-03	1/13/05	1515	B	CR	BP	X	X	X					
9801-0000-125-B-01	1/11/05	1445	B	CR	BP				X				
9801-0000-125-B-02	1/11/05	1445	B	CR	BP	X	X	X					
9801-0000-125-B-03	1/11/05	1445	B	CR	BP	X	X	X					

NOTES: PO #: 002337 MSR #: 05-0165 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

7908 9059 2790
Bill of Lading #

Internal Container Temp.: 13 Deg. C
Custody Sealed? Y ☒ N ☐
Custody Seal Intact? Y ☐ N ☐

1) Relinquished By [signature] Date/Time 1-18-05 / 0930	2) Received By [signature] 1-19-05 Date/Time 10:40
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

Chain of Custody Form

No. 2005-00012

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90				Comment, Preservation	Lab Sample ID
9801-0000-118-B1-01	1/13/05	1010	B	CR	BP	X	X	X					
9801-0000-118-B1-02	1/13/05	1010	B	CR	BP	X	X	X					
9801-0000-118-B1-03	1/13/05	1010	B	CR	BP	X	X	X					
9801-0000-118-B2-01	1/13/05	1050	B	CR	BP	X	X	X					
9801-0000-118-B2-02	1/13/05	1050	B	CR	BP	X	X	X					
9801-0000-118-B2-03	1/13/05	1050	B	CR	BP	X	X	X					
9801-0000-118-B3-01	1/13/05	1125	B	CR	BP	X	X	X					
9801-0000-118-B3-02	1/13/05	1125	B	CR	BP	X	X	X					
9801-0000-118-B3-03	1/13/05	1125	B	CR	BP	X	X	X					

NOTES: PO #: 002337 MSR #: 05-0165 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7921 8380 2493
Bill of Lading #

Internal Container Temp.: 13 Deg. C
Custody Sealed? Y ☐ N ☐
Custody Seal Intact? Y ☐ N ☐

1) Relinquished By [signature] Date/Time 1-18-05 0930	2) Received By M. Smith Date/Time 1-19-05 10:40
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

Chain of Custody Form

No. 2005-00015

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90				Comment, Preservation	Lab Sample ID
9801-0000-126-B-01	1/11/05	1515	B	CR	BP	X	X	X					
9801-0000-126-B-02	1/11/05	1515	B	CR	BP	X	X	X					
9801-0000-126-B-03	1/11/05	1515	B	CR	BP	X	X	X					
9801-0000-127-B-01	1/11/05	1545	B	CR	BP	X	X	X					
9801-0000-127-B-02	1/11/05	1545	B	CR	BP	X	X	X					
9801-0000-127-B-03	1/11/05	1545	B	CR	BP	X	X	X					

NOTES: PO #: 002337 MSR #: 05-0165 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
7908 9059 2790
Bill of Lading #

Internal Container Temp.: 13 Deg. C
Custody Sealed? Y☐ N☐
Custody Seal Intact? Y☐ N☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[illegible]	1-18-05 0930	M. Smith	1-19-05 10:40
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 1-19-05 10:40

SDG#: MSR#05-0165

Work Order Number: 129116

Shipping Cohtainer ID: 7908 9059 2790 Chain of Custody # 2005-00014 & 15

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 13C
5. Vermiculite/packing materials is: Wet [ ] Dry [✓]
6. Number of samples in shipping container: 15
7. Sample holding times exceeded? Yes [ ] No [✓]

8. Samples have:

____tape	____hazard labels
____custody seals	✓ appropriate sample labels

9. Samples are:

✓ in good condition	____leaking
____broken	____have air bubbles

10. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: M. Smith Date: 1-19-05

Telephoned to: _____ On _____ By _____

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B7-01
Sample ID: 129116001
Matrix: B
Collect Date: 13-JAN-05 14:55
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228	U	0.0847	+/-0.103	0.133	0.800	pCi/g		JPH1 01/20/05	1414	395534	1
Americium-241	U	0.00454	+/-0.0492	0.102	0.200	pCi/g					
Bismuth-212	U	0.0697	+/-0.109	0.227	0.500	pCi/g					
Bismuth-214	UUI	0.00	+/-0.0475	0.0525	0.200	pCi/g					
Cesium-134	U	-0.00498	+/-0.0157	0.0291	0.180	pCi/g					
Cesium-137	U	-0.000172	+/-0.0132	0.0261	0.300	pCi/g					
Cobalt-60	U	0.00416	+/-0.018	0.0324	0.150	pCi/g					
Europium-152	U	0.0369	+/-0.0323	0.0701	0.400	pCi/g					
Europium-154	U	-0.00595	+/-0.0463	0.0891	0.350	pCi/g					
Europium-155	U	0.0469	+/-0.0445	0.0783	15.0	pCi/g					
Lead-212		0.0729	+/-0.0415	0.0424	0.100	pCi/g					
Lead-214		0.126	+/-0.0515	0.048	0.100	pCi/g					
Manganese-54	U	-0.00116	+/-0.0136	0.026	0.650	pCi/g					
Niobium-94	U	-0.000471	+/-0.0126	0.0245	0.250	pCi/g					
Potassium-40		3.93	+/-0.658	0.226	1.00	pCi/g					
Radium-226	UUI	0.00	+/-0.0475	0.0525	1.00	pCi/g					
Silver-108m	U	-0.00213	+/-0.0118	0.0223	0.280	pCi/g					
Thallium-208		0.0197	+/-0.022	0.0207	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.0298	+/-0.0151	0.0239	0.100	pCi/g		LCW1 01/25/05	1125	395412	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	6.09	+/-6.19	9.89	15.0	pCi/g		LAG1 01/22/05	0842	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1740	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B7-01
Sample ID: 129116001
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Notes:
The Qualifiers in this report are defined as follows :

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** Indicates the analyte is a surrogate compound.
B Target analyte was detected in the sample as well as the associated blank.
BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis except where prohibited by the analytical procedure.
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B7-02
Sample ID: 129116002
Matrix: B
Collect Date: 13-JAN-05 14:55
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228	U	0.0842	+/-0.0802	0.166	0.800	pCi/g		JPH1 01/20/05	1415	395534	1
Americium-241	U	0.00445	+/-0.0332	0.0454	0.200	pCi/g					
Bismuth-212	U	0.196	+/-0.172	0.264	0.500	pCi/g					
Bismuth-214		0.0905	+/-0.0528	0.0549	0.200	pCi/g					
Cesium-134	U	0.0171	+/-0.0155	0.036	0.180	pCi/g					
Cesium-137	U	-0.00571	+/-0.019	0.0304	0.300	pCi/g					
Cobalt-60	U	0.00184	+/-0.0166	0.0341	0.150	pCi/g					
Europium-152	U	0.014	+/-0.043	0.0841	0.400	pCi/g					
Europium-154	U	0.0337	+/-0.0578	0.122	0.350	pCi/g					
Europium-155	U	-0.00951	+/-0.0377	0.0749	15.0	pCi/g					
Lead-212		0.0716	+/-0.0433	0.0531	0.100	pCi/g					
Lead-214		0.0776	+/-0.0506	0.0604	0.100	pCi/g					
Manganese-54	U	-0.00442	+/-0.0185	0.034	0.650	pCi/g					
Niobium-94	U	0.00614	+/-0.0153	0.031	0.250	pCi/g					
Potassium-40		3.94	+/-0.702	0.269	1.00	pCi/g					
Radium-226		0.0905	+/-0.0528	0.0549	1.00	pCi/g					
Silver-108m	U	0.00638	+/-0.0141	0.0293	0.280	pCi/g					
Thallium-208	U	0.0322	+/-0.0267	0.0474	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.062	+/-0.0178	0.0207	0.100	pCi/g		LCW1 01/25/05	1125	395412	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	4.91	+/-5.39	8.63	15.0	pCi/g		LAG1 01/22/05	0914	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1740	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B7-02
Sample ID: 129116002

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Notes:
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B Target analyte was detected in the sample as well as the associated blank.
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E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B7-03
Sample ID: 129116003
Matrix: B
Collect Date: 13-JAN-05 14:55
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.124	+/-0.0982	0.159	0.800	pCi/g		JPH1	01/20/05	1415	395534	1
Americium-241	U	-0.00678	+/-0.0699	0.135	0.200	pCi/g						
Bismuth-212	U	0.0287	+/-0.135	0.267	0.500	pCi/g						
Bismuth-214	U	0.0593	+/-0.054	0.089	0.200	pCi/g						
Cesium-134	U	-0.00474	+/-0.017	0.0317	0.180	pCi/g						
Cesium-137	U	-0.00708	+/-0.0162	0.0299	0.300	pCi/g						
Cobalt-60	U	0.00621	+/-0.0146	0.0326	0.150	pCi/g						
Europium-152	U	-0.0134	+/-0.0451	0.0826	0.400	pCi/g						
Europium-154	U	0.0188	+/-0.0544	0.113	0.350	pCi/g						
Europium-155	U	0.032	+/-0.0684	0.0931	15.0	pCi/g						
Lead-212	U	0.0639	+/-0.0448	0.068	0.100	pCi/g						
Lead-214	U	0.0739	+/-0.0582	0.0835	0.100	pCi/g						
Manganese-54	U	0.00293	+/-0.0158	0.0313	0.650	pCi/g						
Niobium-94	U	0.0146	+/-0.017	0.0331	0.250	pCi/g						
Potassium-40		3.46	+/-0.740	0.293	1.00	pCi/g						
Radium-226	UUI	0.00	+/-0.054	0.054	1.00	pCi/g						
Silver-108m	U	0.0131	+/-0.0153	0.0314	0.280	pCi/g						
Thallium-208	U	0.0413	+/-0.0294	0.0444	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0684	+/-0.019	0.0234	0.100	pCi/g		LCW1	01/25/05	1125	395412	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	4.19	+/-6.06	9.82	15.0	pCi/g		LAG1	01/22/05	0946	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1740	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Solls and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B7-03
Sample ID: 129116003
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Notes:
The Qualifiers in this report are defined as follows :

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H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis except where prohibited by the analytical procedure.
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B8-01
Sample ID: 129116004
Matrix: B
Collect Date: 13-JAN-05 15:15
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228	U	0.0762	+/-0.217	0.167	0.800	pCi/g		JPH1 01/20/05	1415	395534	1
Americium-241	U	0.00568	+/-0.0692	0.109	0.200	pCi/g					
Bismuth-212	U	0.0743	+/-0.132	0.282	0.500	pCi/g					
Bismuth-214	U	0.00	+/-0.0581	0.0954	0.200	pCi/g					
Cesium-134	U	0.013	+/-0.021	0.0442	0.180	pCi/g					
Cesium-137	U	0.00814	+/-0.0129	0.0295	0.300	pCi/g					
Cobalt-60	U	0.0132	+/-0.0153	0.0378	0.150	pCi/g					
Europium-152	U	-0.0209	+/-0.0466	0.0757	0.400	pCi/g					
Europium-154	U	0.0317	+/-0.0495	0.113	0.350	pCi/g					
Europium-155	U	0.0177	+/-0.0391	0.083	15.0	pCi/g					
Lead-212	U	0.0651	+/-0.033	0.0734	0.100	pCi/g					
Lead-214		0.0801	+/-0.0505	0.058	0.100	pCi/g					
Manganese-54	U	-0.00113	+/-0.0195	0.0373	0.650	pCi/g					
Niobium-94	U	-0.00725	+/-0.0134	0.0247	0.250	pCi/g					
Potassium-40		2.10	+/-0.476	0.302	1.00	pCi/g					
Radium-226	UUI	0.00	+/-0.0581	0.0656	1.00	pCi/g					
Silver-108m	U	-0.00249	+/-0.0135	0.0261	0.280	pCi/g					
Thallium-208	U	0.0296	+/-0.0265	0.0357	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.0667	+/-0.0185	0.0208	0.100	pCi/g		LCW1 01/25/05	1126	395412	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	2.32	+/-5.62	9.25	15.0	pCi/g		LAG1 01/22/05	1017	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1740	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B8-01
Sample ID: 129116004
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Notes:
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E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B8-02
Sample ID: 129116005
Matrix: B
Collect Date: 13-JAN-05 15:15
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.0701	+/-0.0907	0.139	0.800	pCi/g		JPH1	01/20/05	1416	395534	1
Americium-241	U	0.0437	+/-0.0544	0.0932	0.200	pCi/g						
Bismuth-212	U	0.0255	+/-0.102	0.205	0.500	pCi/g						
Bismuth-214	UUI	0.00	+/-0.046	0.0481	0.200	pCi/g						
Cesium-134	U	0.0086	+/-0.0142	0.030	0.180	pCi/g						
Cesium-137	U	0.00357	+/-0.011	0.0231	0.300	pCi/g						
Cobalt-60	U	-0.00048	+/-0.0128	0.026	0.150	pCi/g						
Europium-152	U	-0.00575	+/-0.0338	0.063	0.400	pCi/g						
Europium-154	U	0.0419	+/-0.0332	0.0918	0.350	pCi/g						
Europium-155	U	0.0165	+/-0.0321	0.0687	15.0	pCi/g						
Lead-212		0.0603	+/-0.0415	0.0451	0.100	pCi/g						
Lead-214		0.0951	+/-0.0544	0.0474	0.100	pCi/g						
Manganese-54	U	0.00289	+/-0.0151	0.0293	0.650	pCi/g						
Niobium-94	U	0.0007	+/-0.0108	0.0215	0.250	pCi/g						
Potassium-40		2.20	+/-0.460	0.221	1.00	pCi/g						
Radium-226	UUI	0.00	+/-0.046	0.0481	1.00	pCi/g						
Silver-108m	U	-0.00201	+/-0.0125	0.0246	0.280	pCi/g						
Thallium-208	U	0.0255	+/-0.0299	0.0372	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0577	+/-0.0211	0.032	0.100	pCi/g		LCW1	01/25/05	1126	395412	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	1.93	+/-5.37	8.85	15.0	pCi/g		LAG1	01/22/05	1131	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1740	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B8-02
Sample ID: 129116005
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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H Analytical holding time exceeded.
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U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B8-03
Sample ID: 129116006
Matrix: B
Collect Date: 13-JAN-05 15:15
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	UUI	0.00	+/-0.0937	0.0828	0.800	pCi/g		JPH1	01/20/05	1416	395534	1
Americium-241	U	0.0152	+/-0.0643	0.123	0.200	pCi/g						
Bismuth-212	U	0.0433	+/-0.119	0.243	0.500	pCi/g						
Bismuth-214	U	0.0601	+/-0.0549	0.0604	0.200	pCi/g						
Cesium-134	U	-0.0093	+/-0.0165	0.0298	0.180	pCi/g						
Cesium-137	U	0.00473	+/-0.0151	0.0309	0.300	pCi/g						
Cobalt-60	U	-0.00841	+/-0.0138	0.0247	0.150	pCi/g						
Europium-152	U	-0.0295	+/-0.0389	0.0706	0.400	pCi/g						
Europium-154	U	0.0113	+/-0.155	0.0812	0.350	pCi/g						
Europium-155	U	-0.00292	+/-0.0424	0.0341	15.0	pCi/g						
Lead-212		0.104	+/-0.0456	0.0478	0.100	pCi/g						
Lead-214		0.0682	+/-0.0539	0.0566	0.100	pCi/g						
Manganese-54	U	-7.810E-05	+/-0.0153	0.0295	0.650	pCi/g						
Niobium-94	U	0.018	+/-0.0222	0.0266	0.250	pCi/g						
Potassium-40		2.46	+/-0.599	0.269	1.00	pCi/g						
Radium-226	U	0.0601	+/-0.0549	0.0604	1.00	pCi/g						
Silver-108m	U	-0.00848	+/-0.0161	0.0249	0.280	pCi/g						
Thallium-208		0.0377	+/-0.0188	0.0305	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0424	+/-0.0145	0.0172	0.100	pCi/g		LCW1	01/25/05	1126	395412	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	3.08	+/-5.25	8.56	15.0	pCi/g		LAG1	01/22/05	1203	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1740	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-BS-03
Sample ID: 129116006

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-125-B-01
Sample ID: 129116007
Matrix: B
Collect Date: 11-JAN-05 14:45
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Am241, Cm, Solid ALL FSS												
Alphaspec Pu, Solid-ALL FSS												
Plutonium-238	U	-0.057	+/-0.118	0.411	1.00	pCi/g		SCP	01/25/05	1706	395671	2
Plutonium-239/240	U	-0.00855	+/-0.0168	0.178	1.00	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS												
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.093	+/-0.0667	0.144	0.800	pCi/g		JPH1	01/20/05	1416	395534	4
Americium-241	U	-0.017	+/-0.0663	0.0921	0.200	pCi/g						
Bismuth-212	U	-0.0241	+/-0.117	0.214	0.500	pCi/g						
Bismuth-214		0.114	+/-0.0616	0.0577	0.200	pCi/g						
Cesium-134	U	0.00486	+/-0.0158	0.0311	0.180	pCi/g						
Cesium-137	U	-0.00961	+/-0.0149	0.0257	0.300	pCi/g						
Cobalt-60	U	0.003	+/-0.0152	0.0311	0.150	pCi/g						
Europium-152	U	0.0162	+/-0.0357	0.0733	0.400	pCi/g						
Europium-154	U	-0.00568	+/-0.0478	0.0793	0.350	pCi/g						
Europium-155	U	-0.00401	+/-0.0381	0.0741	15.0	pCi/g						
Lead-212		0.0684	+/-0.0469	0.0466	0.100	pCi/g						
Lead-214		0.123	+/-0.0595	0.0526	0.100	pCi/g						
Manganese-54	U	0.00653	+/-0.0155	0.0304	0.650	pCi/g						
Niobium-94	U	0.00857	+/-0.0139	0.0281	0.250	pCi/g						
Potassium-40		1.97	+/-0.483	0.237	1.00	pCi/g						
Radium-226		0.114	+/-0.0616	0.0577	1.00	pCi/g						
Silver-108m	U	-0.00734	+/-0.0132	0.024	0.280	pCi/g						
Thallium-208	U	0.0185	+/-0.0192	0.0376	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0652	+/-0.0181	0.020	0.100	pCi/g		LCW1	01/25/05	1126	395412	5
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	5.71	+/-5.68	9.05	15.0	pCi/g		LAG1	01/22/05	1235	395652	6
Liquid Scint C14, Solid FSS												
Carbon-14	U	-0.0043	+/-0.0912	0.160	0.220	pCi/g		LAG1	01/20/05	2318	395656	7
Liquid Scint Fe55, Solid-ALL FSS												
Liquid Scint Ni63, Solid-ALL FSS												
Liquid Scint Tc99, Solid-ALL FSS												

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-125-B-01 Project: YANK01304
Sample ID: 129116007 Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Liquid Scintillation Analysis											
Liquid Scint Tc99, Solid-ALL FSS											
Technetium-99	U	0.0928	+/-0.189	0.320	0.500	pCi/g		EGD1 01/25/05	0539	395653	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1740	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	DOE EML HASL-300, Am-05-RC Modified	
2	DOE EML HASL-300, Pu-11-RC Modified	
3	DOE EML HASL-300, Pu-11-RC Modified	
4	EML HASL 300, 4.5.2.3	
5	EPA 905.0 Modified	
6	EPA 906.0 Modified	
7	EPA EERF C-01 Modified	
8	DOE RESL Fe-1, Modified	
9	DOE RESL Ni-1, Modified	
10	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	62	(15%-125%)
Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Report Date: January 26, 2005

Client Sample ID: 9801-0000-125-B-01 Project: YANK01304
Sample ID: 129116007 Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

U Indicates the target analyte was analyzed for but not detected above the detection limit.
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X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-125-B-02
Sample ID: 129116008
Matrix: B
Collect Date: 11-JAN-05 14:45
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.118	+/-0.0998	0.149	0.800	pCi/g		JPH1	01/20/05	1417	395534	1
Americium-241	U	0.0153	+/-0.047	0.0855	0.200	pCi/g						
Bismuth-212	U	-0.0487	+/-0.206	0.371	0.500	pCi/g						
Bismuth-214		0.102	+/-0.0712	0.0898	0.200	pCi/g						
Cesium-134	U	0.0113	+/-0.023	0.0492	0.180	pCi/g						
Cesium-137	UUI	0.00	+/-0.0357	0.080	0.300	pCi/g						
Cobalt-60	U	0.0026	+/-0.0259	0.0517	0.150	pCi/g						
Europium-152	U	-0.0124	+/-0.0582	0.097	0.400	pCi/g						
Europium-154	U	0.00252	+/-0.078	0.152	0.350	pCi/g						
Europium-155	U	0.00436	+/-0.0545	0.105	15.0	pCi/g						
Lead-212	U	0.070	+/-0.068	0.0872	0.100	pCi/g						
Lead-214	U	0.0701	+/-0.0649	0.103	0.100	pCi/g						
Manganese-54	U	0.00737	+/-0.0237	0.0185	0.650	pCi/g						
Niobium-94	U	0.0126	+/-0.0314	0.0424	0.250	pCi/g						
Potassium-40		1.90	+/-0.676	0.573	1.00	pCi/g						
Radium-226		0.102	+/-0.0712	0.0898	1.00	pCi/g						
Silver-108m	U	-0.0129	+/-0.0204	0.0364	0.280	pCi/g						
Thallium-208	U	0.0348	+/-0.0407	0.0398	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0484	+/-0.0173	0.0251	0.100	pCi/g		LCW1	01/25/05	1126	395412	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	4.17	+/-4.97	8.00	15.0	pCi/g		LAG1	01/22/05	1307	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1741	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-125-B-02
Sample ID: 129116008

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-125-B-03
Sample ID: 129116009
Matrix: B
Collect Date: 11-JAN-05 14:45
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228	U	0.0844	+/-0.0981	0.177	0.800	pCi/g		JPH1 01/20/05	1417	395534	1
Americium-241	U	0.000549	+/-0.0195	0.0368	0.200	pCi/g					
Bismuth-212	U	0.137	+/-0.147	0.264	0.500	pCi/g					
Bismuth-214		0.119	+/-0.0615	0.0615	0.200	pCi/g					
Cesium-134	U	-0.00473	+/-0.0179	0.0342	0.180	pCi/g					
Cesium-137	U	0.000254	+/-0.018	0.0359	0.300	pCi/g					
Cobalt-60	U	0.00747	+/-0.0172	0.0382	0.150	pCi/g					
Europium-152	U	0.000857	+/-0.0398	0.0781	0.400	pCi/g					
Europium-154	U	-0.0015	+/-0.0482	0.0943	0.350	pCi/g					
Europium-155	U	-0.0203	+/-0.0377	0.0694	15.0	pCi/g					
Lead-212		0.0895	+/-0.0395	0.0417	0.100	pCi/g					
Lead-214	U	0.0487	+/-0.045	0.0565	0.100	pCi/g					
Manganese-54	U	-0.00609	+/-0.0178	0.0332	0.650	pCi/g					
Niobium-94	U	-0.00311	+/-0.0165	0.0319	0.250	pCi/g					
Potassium-40		1.97	+/-0.459	0.181	1.00	pCi/g					
Radium-226		0.119	+/-0.0615	0.0615	1.00	pCi/g					
Silver-108m	U	-0.00491	+/-0.0148	0.0273	0.280	pCi/g					
Thallium-208	U	0.0187	+/-0.0245	0.0428	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.0419	+/-0.0153	0.0205	0.100	pCi/g		LCW1 01/25/05	1126	395412	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	2.23	+/-5.40	8.88	15.0	pCi/g		LAG1 01/22/05	1338	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1741	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-125-B-03
Sample ID: 129116009

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Notes:
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H Analytical holding time exceeded.
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U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-126-B-01
Sample ID: 129116010
Matrix: B
Collect Date: 11-JAN-05 15:15
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.0891	+/-0.0599	0.122	0.800	pCi/g		JPH1	01/21/05	0716	395534	1
Americium-241	U	0.00934	+/-0.0625	0.115	0.200	pCi/g						
Bismuth-212	U	0.0147	+/-0.117	0.226	0.500	pCi/g						
Bismuth-214		0.124	+/-0.0557	0.0448	0.200	pCi/g						
Cesium-134	U	0.00108	+/-0.0153	0.0295	0.180	pCi/g						
Cesium-137	U	0.0014	+/-0.0154	0.0297	0.300	pCi/g						
Cobalt-60	U	0.0309	+/-0.019	0.0446	0.150	pCi/g						
Europium-152	U	-0.00276	+/-0.0357	0.070	0.400	pCi/g						
Europium-154	U	-0.0457	+/-0.0429	0.067	0.350	pCi/g						
Europium-155	U	0.00457	+/-0.0375	0.0741	15.0	pCi/g						
Lead-212		0.0983	+/-0.0289	0.0393	0.100	pCi/g						
Lead-214		0.130	+/-0.058	0.0533	0.100	pCi/g						
Manganese-54	U	0.00598	+/-0.0147	0.0294	0.650	pCi/g						
Niobium-94	U	0.00226	+/-0.0118	0.0234	0.250	pCi/g						
Potassium-40		2.68	+/-0.545	0.286	1.00	pCi/g						
Radium-226		0.124	+/-0.0557	0.0448	1.00	pCi/g						
Silver-108m	U	0.00135	+/-0.013	0.0256	0.280	pCi/g						
Thallium-208		0.0321	+/-0.0223	0.0238	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0493	+/-0.0163	0.0212	0.100	pCi/g		LCW1	01/25/05	1126	395412	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	0.124	+/-5.22	8.75	15.0	pCi/g		LAG1	01/22/05	1410	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1741	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-126-B-01
Sample ID: 129116010
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-126-B-02
Sample ID: 129116011
Matrix: B
Collect Date: 11-JAN-05 15:15
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228	U	0.0331	+/-0.0676	0.0919	0.800	pCi/g		JPH1 01/21/05	0716	395534	1
Americium-241	U	-0.105	+/-0.106	0.179	0.200	pCi/g					
Bismuth-212	U	0.119	+/-0.127	0.275	0.500	pCi/g					
Bismuth-214	U	0.00	+/-0.0502	0.0844	0.200	pCi/g					
Cesium-134	U	-0.00591	+/-0.0139	0.0262	0.180	pCi/g					
Cesium-137	U	0.00935	+/-0.0144	0.0288	0.300	pCi/g					
Cobalt-60	U	0.0106	+/-0.0145	0.0334	0.150	pCi/g					
Europium-152	U	0.0285	+/-0.0409	0.0846	0.400	pCi/g					
Europium-154	U	-0.0427	+/-0.0462	0.073	0.350	pCi/g					
Europium-155	U	-0.036	+/-0.0445	0.0866	15.0	pCi/g					
Lead-212	U	0.0401	+/-0.0422	0.0667	0.100	pCi/g					
Lead-214		0.127	+/-0.0595	0.0541	0.100	pCi/g					
Manganese-54	U	-0.00433	+/-0.0147	0.0279	0.650	pCi/g					
Niobium-94	U	-0.0058	+/-0.0146	0.0274	0.250	pCi/g					
Potassium-40		2.83	+/-0.580	0.226	1.00	pCi/g					
Radium-226	UUI	0.00	+/-0.0502	0.0508	1.00	pCi/g					
Silver-108m	U	-0.0115	+/-0.0139	0.0241	0.280	pCi/g					
Thallium-208	U	0.0271	+/-0.0314	0.0391	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.057	+/-0.0157	0.0181	0.100	pCi/g		LCW1 01/25/05	1126	395412	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	5.40	+/-5.93	9.50	15.0	pCi/g		LAG1 01/22/05	1442	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1741	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-126-B-02
Sample ID: 129116011
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-126-B-03
Sample ID: 129116012
Matrix: B
Collect Date: 11-JAN-05 15:15
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.134	+/-0.0666	0.147	0.800	pCi/g		JPH1	01/21/05	0726	395534	1
Americium-241	U	0.0137	+/-0.0502	0.105	0.200	pCi/g						
Bismuth-212	U	0.0235	+/-0.112	0.170	0.500	pCi/g						
Bismuth-214		0.0865	+/-0.0453	0.0554	0.200	pCi/g						
Cesium-134	U	0.00353	+/-0.0158	0.0313	0.180	pCi/g						
Cesium-137	U	0.0104	+/-0.0117	0.0213	0.300	pCi/g						
Cobalt-60	U	-0.00162	+/-0.0133	0.0263	0.150	pCi/g						
Europium-152	U	-0.0326	+/-0.0371	0.0659	0.400	pCi/g						
Europium-154	U	-0.00155	+/-0.046	0.0899	0.350	pCi/g						
Europium-155	U	0.00167	+/-0.037	0.0732	15.0	pCi/g						
Lead-212		0.0846	+/-0.0372	0.0475	0.100	pCi/g						
Lead-214		0.133	+/-0.0484	0.0565	0.100	pCi/g						
Manganese-54	U	0.00309	+/-0.0155	0.0304	0.650	pCi/g						
Niobium-94	U	0.00116	+/-0.0143	0.0279	0.250	pCi/g						
Potassium-40		3.26	+/-0.516	0.256	1.00	pCi/g						
Radium-226		0.0865	+/-0.0453	0.0554	1.00	pCi/g						
Silver-108m	U	0.00928	+/-0.0127	0.0261	0.280	pCi/g						
Thallium-208	U	0.0237	+/-0.0188	0.030	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0908	+/-0.030	0.0383	0.100	pCi/g		LCW1	01/25/05	1126	395412	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	2.90	+/-5.67	9.27	15.0	pCi/g		LAG1	01/22/05	1514	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1741	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-126-B-03 Project: YANK01304
Sample ID: 129116012 Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-127-B-01
Sample ID: 129116013
Matrix: B
Collect Date: 11-JAN-05 15:45
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.0396	+/-0.0709	0.138	0.800	pCi/g		JPH1	01/21/05	0717	395534	1
Americium-241	U	-0.0227	+/-0.0836	0.148	0.200	pCi/g						
Bismuth-212	UUI	0.00	+/-0.134	0.181	0.500	pCi/g						
Bismuth-214		0.114	+/-0.0584	0.0471	0.200	pCi/g						
Cesium-134	U	-0.00746	+/-0.0189	0.029	0.180	pCi/g						
Cesium-137	U	-0.00415	+/-0.014	0.0261	0.300	pCi/g						
Cobalt-60	U	0.0208	+/-0.0163	0.0383	0.150	pCi/g						
Europium-152	U	0.0105	+/-0.0355	0.0698	0.400	pCi/g						
Europium-154	U	0.00444	+/-0.0473	0.0939	0.350	pCi/g						
Europium-155	U	0.0197	+/-0.0373	0.0803	15.0	pCi/g						
Lead-212		0.0835	+/-0.0347	0.0426	0.100	pCi/g						
Lead-214	U	0.0519	+/-0.0546	0.0529	0.100	pCi/g						
Manganese-54	U	0.000522	+/-0.0138	0.0266	0.650	pCi/g						
Niobium-94	U	-0.00615	+/-0.0121	0.0218	0.250	pCi/g						
Potassium-40		5.28	+/-0.747	0.204	1.00	pCi/g						
Radium-226		0.114	+/-0.0584	0.0471	1.00	pCi/g						
Silver-108m	U	-0.00897	+/-0.0142	0.0228	0.280	pCi/g						
Thallium-208		0.0281	+/-0.0216	0.0274	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0515	+/-0.0163	0.0184	0.100	pCi/g		LCW1	01/25/05	1600	395412	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	1.81	+/-5.39	8.90	15.0	pCi/g		LAG1	01/22/05	1546	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1741	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-127-B-01 Project: YANK01304
Sample ID: 129116013 Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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U Indicates the target analyte was analyzed for but not detected above the detection limit.
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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-127-B-02
Sample ID: 129116014
Matrix: B
Collect Date: 11-JAN-05 15:45
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228	U	0.149	+/-0.110	0.158	0.800	pCi/g		JPH1 01/21/05	0717	395534	1
Americium-241	U	0.018	+/-0.0193	0.0412	0.200	pCi/g					
Bismuth-212	U	0.0395	+/-0.123	0.249	0.500	pCi/g					
Bismuth-214		0.0963	+/-0.0701	0.0586	0.200	pCi/g					
Cesium-134	U	-0.00996	+/-0.0164	0.0294	0.180	pCi/g					
Cesium-137	U	0.00871	+/-0.0165	0.0342	0.300	pCi/g					
Cobalt-60	U	-0.000798	+/-0.0152	0.0303	0.150	pCi/g					
Europium-152	U	0.0429	+/-0.0344	0.0779	0.400	pCi/g					
Europium-154	U	0.0336	+/-0.0416	0.0949	0.350	pCi/g					
Europium-155	U	-0.0219	+/-0.0365	0.0731	15.0	pCi/g					
Lead-212		0.0826	+/-0.0482	0.0452	0.100	pCi/g					
Lead-214	UUI	0.00	+/-0.0576	0.0818	0.100	pCi/g					
Manganese-54	U	-0.0074	+/-0.0162	0.0247	0.650	pCi/g					
Niobium-94	U	0.00145	+/-0.0144	0.0284	0.250	pCi/g					
Potassium-40		4.75	+/-0.666	0.247	1.00	pCi/g					
Radium-226		0.0963	+/-0.0701	0.0586	1.00	pCi/g					
Silver-108m	U	0.0095	+/-0.0139	0.0296	0.280	pCi/g					
Thallium-208		0.0388	+/-0.0246	0.0296	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.0474	+/-0.0164	0.0205	0.100	pCi/g		LCW1 01/25/05	1600	395412	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	4.59	+/-5.67	9.14	15.0	pCi/g		LAG1 01/22/05	1618	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1741	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-127-B-02
Sample ID: 129116014

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Notes:
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H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-127-B-03
Sample ID: 129116015
Matrix: B
Collect Date: 11-JAN-05 15:45
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	UUI	0.00	+/-0.167	0.0849	0.800	pCi/g		JPH1	01/21/05	0718	395534	1
Americium-241	U	0.0252	+/-0.0482	0.0983	0.200	pCi/g						
Bismuth-212	U	0.0728	+/-0.116	0.242	0.500	pCi/g						
Bismuth-214	U	0.0521	+/-0.0615	0.0778	0.200	pCi/g						
Cesium-134	U	0.00646	+/-0.0154	0.0318	0.180	pCi/g						
Cesium-137	U	-0.000137	+/-0.013	0.026	0.300	pCi/g						
Cobalt-60	U	-0.00135	+/-0.0172	0.0332	0.150	pCi/g						
Europium-152	U	-0.0226	+/-0.0325	0.0599	0.400	pCi/g						
Europium-154	U	-0.00553	+/-0.0456	0.0882	0.350	pCi/g						
Europium-155	U	-0.00809	+/-0.0316	0.0635	15.0	pCi/g						
Lead-212		0.0638	+/-0.0548	0.037	0.100	pCi/g						
Lead-214		0.0702	+/-0.0443	0.0551	0.100	pCi/g						
Manganese-54	U	0.00396	+/-0.0145	0.029	0.650	pCi/g						
Niobium-94	U	0.00658	+/-0.0135	0.0278	0.250	pCi/g						
Potassium-40		5.10	+/-0.720	0.264	1.00	pCi/g						
Radium-226	U	0.0521	+/-0.0615	0.0592	1.00	pCi/g						
Silver-108m	U	0.00905	+/-0.0124	0.0265	0.280	pCi/g						
Thallium-208		0.0332	+/-0.0219	0.0278	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0584	+/-0.0207	0.030	0.100	pCi/g		LCW1	01/25/05	1600	395412	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	7.39	+/-5.73	9.01	15.0	pCi/g		LAG1	01/22/05	1650	395652	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1741	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-127-B-03
Sample ID: 129116015

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B1-01
Sample ID: 129116016
Matrix: B
Collect Date: 13-JAN-05 10:10
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228	U	0.0229	+/-0.0812	0.161	0.800	pCi/g		JPH1 01/21/05	0718	395534	1
Americium-241	U	0.0394	+/-0.0521	0.109	0.200	pCi/g					
Bismuth-212	U	0.0535	+/-0.114	0.235	0.500	pCi/g					
Bismuth-214	U	0.0907	+/-0.0577	0.0958	0.200	pCi/g					
Cesium-134	U	0.00983	+/-0.0164	0.0342	0.180	pCi/g					
Cesium-137	U	-0.000167	+/-0.0135	0.0265	0.300	pCi/g					
Cobalt-60	U	0.00567	+/-0.0176	0.0365	0.150	pCi/g					
Europium-152	U	0.0223	+/-0.0413	0.0755	0.400	pCi/g					
Europium-154	U	-0.00444	+/-0.0469	0.0915	0.350	pCi/g					
Europium-155	U	0.00897	+/-0.0349	0.0733	15.0	pCi/g					
Lead-212	UUI	0.00	+/-0.0314	0.0668	0.100	pCi/g					
Lead-214		0.170	+/-0.0492	0.052	0.100	pCi/g					
Manganese-54	U	0.00665	+/-0.0141	0.0292	0.650	pCi/g					
Niobium-94	U	-0.00198	+/-0.0116	0.0222	0.250	pCi/g					
Potassium-40		4.12	+/-0.637	0.258	1.00	pCi/g					
Radium-226	UUI	0.00	+/-0.0577	0.0547	1.00	pCi/g					
Silver-108m	U	-0.00371	+/-0.0129	0.0251	0.280	pCi/g					
Thallium-208	U	0.0271	+/-0.0266	0.0318	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.0868	+/-0.0218	0.0238	0.100	pCi/g		LCW1 01/25/05	1600	395412	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	-1.4	+/-4.18	7.20	15.0	pCi/g		ATH1 01/23/05	0358	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1741	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B1-01 Project: YANK01304
Sample ID: 129116016 Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Notes:
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U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B1-02
Sample ID: 129116017
Matrix: B
Collect Date: 13-JAN-05 10:10
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.115	+/-0.0787	0.123	0.800	pCi/g		JPH1	01/21/05	0719	395534	1
Americium-241	U	0.0133	+/-0.0688	0.131	0.200	pCi/g						
Bismuth-212	U	0.133	+/-0.131	0.260	0.500	pCi/g						
Bismuth-214		0.146	+/-0.0532	0.103	0.200	pCi/g						
Cesium-134	U	0.00694	+/-0.016	0.033	0.180	pCi/g						
Cesium-137	U	-0.0108	+/-0.0165	0.025	0.300	pCi/g						
Cobalt-60	U	0.0121	+/-0.0183	0.039	0.150	pCi/g						
Europium-152	U	-0.00627	+/-0.0412	0.070	0.400	pCi/g						
Europium-154	U	-0.023	+/-0.0463	0.0844	0.350	pCi/g						
Europium-155	U	-0.0169	+/-0.0422	0.0817	15.0	pCi/g						
Lead-212	UUI	0.00	+/-0.0544	0.0687	0.100	pCi/g						
Lead-214		0.139	+/-0.0611	0.0571	0.100	pCi/g						
Manganese-54	U	-0.00208	+/-0.016	0.0304	0.650	pCi/g						
Niobium-94	U	-0.00857	+/-0.0153	0.0279	0.250	pCi/g						
Potassium-40		3.32	+/-0.665	0.254	1.00	pCi/g						
Radium-226		0.146	+/-0.0532	0.068	1.00	pCi/g						
Silver-108m	U	-0.00488	+/-0.0152	0.0282	0.280	pCi/g						
Thallium-208	U	0.0338	+/-0.0186	0.0403	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0601	+/-0.0181	0.0224	0.100	pCi/g		LCW1	01/25/05	1600	395412	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-5.07	+/-3.93	7.28	15.0	pCi/g		ATH1	01/23/05	0431	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0937	395408
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1741	395404

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B1-02
Sample ID: 129116017

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B1-03
Sample ID: 129116018
Matrix: B
Collect Date: 13-JAN-05 10:10
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228		0.144	+/-0.0962	0.0879	0.800	pCi/g		JPH1	01/21/05	0719	395534	1
Americium-241	U	0.0171	+/-0.0519	0.100	0.200	pCi/g						
Bismuth-212	U	0.0838	+/-0.303	0.214	0.500	pCi/g						
Bismuth-214		0.159	+/-0.053	0.0435	0.200	pCi/g						
Cesium-134	U	0.00899	+/-0.0142	0.0294	0.180	pCi/g						
Cesium-137	U	0.0174	+/-0.0139	0.0303	0.300	pCi/g						
Cobalt-60	U	0.00917	+/-0.0152	0.0324	0.150	pCi/g						
Europium-152	U	-0.00114	+/-0.0321	0.0645	0.400	pCi/g						
Europium-154	U	0.00379	+/-0.0397	0.0795	0.350	pCi/g						
Europium-155	U	0.0348	+/-0.0339	0.0731	15.0	pCi/g						
Lead-212		0.0836	+/-0.0309	0.0384	0.100	pCi/g						
Lead-214		0.102	+/-0.0464	0.0544	0.100	pCi/g						
Manganese-54	U	0.00842	+/-0.0129	0.0267	0.650	pCi/g						
Niobium-94	U	-0.00145	+/-0.0128	0.024	0.250	pCi/g						
Potassium-40		3.21	+/-0.534	0.247	1.00	pCi/g						
Radium-226		0.159	+/-0.053	0.0435	1.00	pCi/g						
Silver-108m	U	-0.00322	+/-0.0121	0.0233	0.280	pCi/g						
Thallium-208		0.0298	+/-0.0221	0.0295	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0978	+/-0.0239	0.0231	0.100	pCi/g		LCW1	01/25/05	2044	395417	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-2.59	+/-4.10	7.23	15.0	pCi/g		ATH1	01/23/05	0504	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1743	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B1-03 Project: YANK01304
Sample ID: 129116018 Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B2-01
Sample ID: 129116019
Matrix: B
Collect Date: 13-JAN-05 10:50
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228	U	0.0911	+/-0.0917	0.143	0.800	pCi/g		JPH1 01/21/05	0720	395534	1
Americium-241	U	0.00592	+/-0.0859	0.170	0.200	pCi/g					
Bismuth-212	U	0.000417	+/-0.107	0.207	0.500	pCi/g					
Bismuth-214		0.188	+/-0.061	0.0544	0.200	pCi/g					
Cesium-134	U	0.00831	+/-0.0157	0.0323	0.180	pCi/g					
Cesium-137	U	0.0242	+/-0.0254	0.0251	0.300	pCi/g					
Cobalt-60	U	-0.00171	+/-0.0159	0.031	0.150	pCi/g					
Europium-152	U	0.000297	+/-0.0361	0.0689	0.400	pCi/g					
Europium-154	U	0.0131	+/-0.0416	0.0873	0.350	pCi/g					
Europium-155	U	-0.0129	+/-0.0391	0.0789	15.0	pCi/g					
Lead-212		0.0493	+/-0.0426	0.0445	0.100	pCi/g					
Lead-214	UUI	0.00	+/-0.0614	0.0504	0.100	pCi/g					
Manganese-54	U	0.00184	+/-0.0128	0.0254	0.650	pCi/g					
Niobium-94	U	-0.011	+/-0.0133	0.0231	0.250	pCi/g					
Potassium-40		5.07	+/-0.751	0.262	1.00	pCi/g					
Radium-226		0.188	+/-0.061	0.0544	1.00	pCi/g					
Silver-108m	U	0.0237	+/-0.0164	0.0238	0.280	pCi/g					
Thallium-208	U	0.0187	+/-0.0196	0.0238	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.0539	+/-0.0229	0.0364	0.100	pCi/g		LCW1 01/25/05	2044	395417	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	-1.8	+/-4.30	7.46	15.0	pCi/g		ATH1 01/25/05	0410	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1743	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B2-01
Sample ID: 129116019

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Notes:
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BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B2-02
Sample ID: 129116020
Matrix: B
Collect Date: 13-JAN-05 10:50
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228	UUI	0.00	+/-0.121	0.132	0.800	pCi/g		JPH1 01/21/05	0722	395534	1
Americium-241	U	-0.0158	+/-0.0244	0.0429	0.200	pCi/g					
Bismuth-212	U	0.183	+/-0.166	0.357	0.500	pCi/g					
Bismuth-214		0.362	+/-0.0904	0.0708	0.200	pCi/g					
Cesium-134	U	0.0257	+/-0.0403	0.0407	0.180	pCi/g					
Cesium-137	U	0.00108	+/-0.0186	0.0371	0.300	pCi/g					
Cobalt-60	U	-0.00159	+/-0.0225	0.0443	0.150	pCi/g					
Europium-152	U	0.0122	+/-0.0431	0.0861	0.400	pCi/g					
Europium-154	U	-0.00964	+/-0.0807	0.128	0.350	pCi/g					
Europium-155	U	-0.0109	+/-0.0385	0.0725	15.0	pCi/g					
Lead-212	UUI	0.00	+/-0.0668	0.0456	0.100	pCi/g					
Lead-214		0.374	+/-0.0748	0.0611	0.100	pCi/g					
Manganese-54	U	-0.0128	+/-0.0208	0.0315	0.650	pCi/g					
Niobium-94	U	-0.00529	+/-0.0172	0.0327	0.250	pCi/g					
Potassium-40		5.27	+/-0.782	0.400	1.00	pCi/g					
Radium-226		0.362	+/-0.0904	0.0708	1.00	pCi/g					
Silver-108m	U	0.00244	+/-0.0151	0.0295	0.280	pCi/g					
Thallium-208	U	0.0368	+/-0.0303	0.0493	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.124	+/-0.0255	0.0197	0.100	pCi/g		LCW1 01/25/05	2044	395417	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	0.359	+/-4.29	7.15	15.0	pCi/g		ATH1 01/23/05	0609	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1743	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B2-02
Sample ID: 129116020
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B2-03
Sample ID: 129116021
Matrix: B
Collect Date: 13-JAN-05 10:50
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.0955	+/-0.0629	0.140	0.800	pCi/g		JPH1	01/21/05	0930	395536	1
Americium-241	U	0.0228	+/-0.0513	0.109	0.200	pCi/g						
Bismuth-212	U	-0.0561	+/-0.104	0.185	0.500	pCi/g						
Bismuth-214	UUI	0.00	+/-0.0482	0.0996	0.200	pCi/g						
Cesium-134	U	0.0144	+/-0.0176	0.0365	0.180	pCi/g						
Cesium-137	U	-0.0101	+/-0.0143	0.0249	0.300	pCi/g						
Cobalt-60	U	0.000895	+/-0.0183	0.0213	0.150	pCi/g						
Europium-152	U	-0.000225	+/-0.0385	0.0674	0.400	pCi/g						
Europium-154	U	-0.0296	+/-0.0572	0.0851	0.350	pCi/g						
Europium-155	U	0.00709	+/-0.038	0.0761	15.0	pCi/g						
Lead-212	U	0.0297	+/-0.0332	0.0498	0.100	pCi/g						
Lead-214		0.200	+/-0.0588	0.0491	0.100	pCi/g						
Manganese-54	U	0.0165	+/-0.0152	0.0325	0.650	pCi/g						
Nioblum-94	U	0.00488	+/-0.0128	0.0257	0.250	pCi/g						
Potassium-40		4.97	+/-0.718	0.261	1.00	pCi/g						
Radium-226		0.159	+/-0.0482	0.0496	1.00	pCi/g						
Silver-108m	U	-0.0044	+/-0.0109	0.0207	0.280	pCi/g						
Thallium-208	U	0.00906	+/-0.0335	0.0265	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0633	+/-0.0201	0.0229	0.100	pCi/g		LCW1	01/25/05	2044	395417	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	2.28	+/-4.46	7.20	15.0	pCi/g		ATH1	01/23/05	0641	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1743	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B2-03 Project: YANK01304
Sample ID: 129116021 Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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H Analytical holding time exceeded.
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U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B3-01
Sample ID: 129116022
Matrix: B
Collect Date: 13-JAN-05 11:25
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	UUI	0.00	+/-0.106	0.162	0.800	pCi/g		JPH1	01/21/05	0930	395536	1
Americium-241	U	-0.0352	+/-0.119	0.218	0.200	pCi/g						
Bismuth-212	U	0.0841	+/-0.132	0.276	0.500	pCi/g						
Bismuth-214		0.165	+/-0.0557	0.0546	0.200	pCi/g						
Cesium-134	U	0.0147	+/-0.0191	0.0373	0.180	pCi/g						
Cesium-137	U	0.0096	+/-0.0157	0.0333	0.300	pCi/g						
Cobalt-60	U	0.00713	+/-0.0168	0.0326	0.150	pCi/g						
Europium-152	U	4.500E-05	+/-0.0426	0.0826	0.400	pCi/g						
Europium-154	U	0.0209	+/-0.0515	0.106	0.350	pCi/g						
Europium-155	U	0.0304	+/-0.0525	0.0998	15.0	pCi/g						
Lead-212	U	0.0511	+/-0.0638	0.0765	0.100	pCi/g						
Lead-214		0.136	+/-0.059	0.0613	0.100	pCi/g						
Manganese-54	U	0.000396	+/-0.017	0.0331	0.650	pCi/g						
Niobium-94	U	0.00373	+/-0.0153	0.0276	0.250	pCi/g						
Potassium-40		4.08	+/-0.655	0.293	1.00	pCi/g						
Radium-226		0.165	+/-0.0557	0.0546	1.00	pCi/g						
Silver-108m	U	-0.00808	+/-0.0142	0.0256	0.280	pCi/g						
Thallium-208		0.0538	+/-0.0224	0.0348	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0739	+/-0.0253	0.0352	0.100	pCi/g		LCW1	01/25/05	2044	395417	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-2.4	+/-4.05	7.12	15.0	pCi/g		ATH1	01/23/05	0714	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1743	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B3-01
Sample ID: 129116022
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B3-02
Sample ID: 129116023
Matrix: B
Collect Date: 13-JAN-05 11:25
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228		0.128	+/-0.0858	0.0932	0.800	pCi/g		JPH1 01/21/05	0931	395536	1
Americium-241	U	0.0115	+/-0.0527	0.100	0.200	pCi/g					
Bismuth-212	U	0.200	+/-0.163	0.239	0.500	pCi/g					
Bismuth-214	UUI	0.00	+/-0.0546	0.0929	0.200	pCi/g					
Cesium-134	U	-0.000127	+/-0.0137	0.0269	0.180	pCi/g					
Cesium-137	U	0.00255	+/-0.0138	0.0276	0.300	pCi/g					
Cobalt-60	U	0.0124	+/-0.0153	0.034	0.150	pCi/g					
Europium-152	U	-0.00323	+/-0.0424	0.0718	0.400	pCi/g					
Europium-154	U	0.029	+/-0.0512	0.106	0.350	pCi/g					
Europium-155	U	0.00279	+/-0.0396	0.0786	15.0	pCi/g					
Lead-212		0.0829	+/-0.036	0.0424	0.100	pCi/g					
Lead-214		0.133	+/-0.036	0.0514	0.100	pCi/g					
Manganese-54	U	-0.0139	+/-0.0135	0.0222	0.650	pCi/g					
Niobium-94	U	0.000695	+/-0.0123	0.0242	0.250	pCi/g					
Potassium-40		4.33	+/-0.672	0.261	1.00	pCi/g					
Radium-226		0.150	+/-0.0546	0.0495	1.00	pCi/g					
Silver-108m	UUI	0.00	+/-0.0348	0.0262	0.280	pCi/g					
Thallium-208		0.060	+/-0.0234	0.0249	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.0747	+/-0.0224	0.026	0.100	pCi/g		LCW1 01/25/05	2044	395417	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	0.352	+/-4.20	7.01	15.0	pCi/g		ATH1 01/23/05	0746	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1743	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B3-02
Sample ID: 129116023
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B3-03
Sample ID: 129116024
Matrix: B
Collect Date: 13-JAN-05 11:25
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	UUI	0.00	+/-0.104	0.145	0.800	pCi/g		JPH1	01/21/05	0931	395536	1
Americium-241	U	0.0274	+/-0.0748	0.144	0.200	pCi/g						
Bismuth-212	U	0.0878	+/-0.176	0.196	0.500	pCi/g						
Bismuth-214		0.0759	+/-0.0399	0.0403	0.200	pCi/g						
Cesium-134	U	0.00954	+/-0.0143	0.0303	0.180	pCi/g						
Cesium-137	U	-0.00864	+/-0.013	0.0231	0.300	pCi/g						
Cobalt-60	U	0.00818	+/-0.0158	0.0336	0.150	pCi/g						
Europium-152	U	0.0234	+/-0.0363	0.0737	0.400	pCi/g						
Europium-154	U	0.00855	+/-0.0429	0.0876	0.350	pCi/g						
Europium-155	U	0.00938	+/-0.0331	0.0714	15.0	pCi/g						
Lead-212		0.088	+/-0.0327	0.0385	0.100	pCi/g						
Lead-214		0.0919	+/-0.0471	0.0446	0.100	pCi/g						
Manganese-54	U	8.260E-05	+/-0.012	0.0233	0.650	pCi/g						
Niobium-94	U	0.0027	+/-0.0112	0.0227	0.250	pCi/g						
Potassium-40		4.02	+/-0.626	0.259	1.00	pCi/g						
Radium-226		0.0759	+/-0.0399	0.0403	1.00	pCi/g						
Silver-108m	U	0.00748	+/-0.0111	0.024	0.280	pCi/g						
Thallium-208		0.056	+/-0.0212	0.0209	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0455	+/-0.0214	0.0318	0.100	pCi/g		LCW1	01/25/05	2045	395417	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-2.61	+/-4.13	7.27	15.0	pCi/g		ATH1	01/23/05	0819	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1743	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B3-03 Project: YANK01304
Sample ID: 129116024 Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

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Company': Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B4-01
Sample ID: 129116025
Matrix: B
Collect Date: 13-JAN-05 13:30
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Alpha Spec Analysis												
Alphaspec Am241, Cm, Solid ALL FSS												
Alphaspec Pu, Solid-ALL FSS												
Plutonium-238	U	-0.0357	+/-0.0627	0.253	1.00	pCi/g		SCP	01/25/05	1706	395671	2
Plutonium-239/240	U	0.00102	+/-0.0554	0.185	1.00	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS												
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.118	+/-0.109	0.171	0.800	pCi/g		JPH1	01/21/05	0932	395536	4
Americium-241	U	0.00874	+/-0.0221	0.0402	0.200	pCi/g						
Bismuth-212	U	0.190	+/-0.226	0.307	0.500	pCi/g						
Bismuth-214	UUI	0.00	+/-0.0723	0.0605	0.200	pCi/g						
Cesium-134	U	-0.00274	+/-0.0182	0.0345	0.180	pCi/g						
Cesium-137	U	0.00634	+/-0.0152	0.0316	0.300	pCi/g						
Cobalt-60	U	0.00279	+/-0.0185	0.0375	0.150	pCi/g						
Europium-152	U	0.00285	+/-0.0398	0.0769	0.400	pCi/g						
Europium-154	U	-0.00644	+/-0.0471	0.0921	0.350	pCi/g						
Europium-155	U	0.0039	+/-0.0371	0.0761	15.0	pCi/g						
Lead-212	U	0.0503	+/-0.0442	0.0541	0.100	pCi/g						
Lead-214		0.0598	+/-0.0432	0.048	0.100	pCi/g						
Manganese-54	U	-0.0076	+/-0.0158	0.0284	0.650	pCi/g						
Niobium-94	U	-0.00334	+/-0.0147	0.0279	0.250	pCi/g						
Potassium-40		4.09	+/-0.711	0.428	1.00	pCi/g						
Radium-226	UUI	0.00	+/-0.0723	0.0605	1.00	pCi/g						
Silver-108m	U	-0.000737	+/-0.0129	0.0259	0.280	pCi/g						
Thallium-208	U	0.0132	+/-0.0244	0.0284	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.124	+/-0.0285	0.0277	0.100	pCi/g		LCW1	01/25/05	2045	395417	5
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-1.18	+/-4.16	7.13	15.0	pCi/g		ATH1	01/23/05	0851	395655	6
Liquid Scint C14, Solid FSS												
Carbon-14	U	-0.0345	+/-0.091	0.162	0.220	pCi/g		LAG1	01/21/05	0020	395656	7
Liquid Scint Fe55, Solid-ALL FSS												
Liquid Scint Ni63, Solid-ALL FSS												
Liquid Scint Tc99, Solid-ALL FSS												

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B4-01
Sample ID: 129116025
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Liquid Scintillation Analysis												
Liquid Scint Tc99, Solid-ALL FSS												
Technetium-99	U	0.0264	+/-0.199	0.342	0.500	pCi/g		EGD1	01/25/05	0611	395653	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1759	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	DOE EML HASL-300, Am-05-RC Modified	
2	DOE EML HASL-300, Pu-11-RC Modified	
3	DOE EML HASL-300, Pu-11-RC Modified	
4	EML HASL 300, 4.5.2.3	
5	EPA 905.0 Modified	
6	EPA 906.0 Modified	
7	EPA EERF C-01 Modified	
8	DOE RESL Fe-1, Modified	
9	DOE RESL Ni-1, Modified	
10	DOE EML HASL-300, Tc-02-RC Modified	

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	89	(15%-125%)
Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B4-01 Project: YANK01304
Sample ID: 129116025 Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B4-02
Sample ID: 129116026
Matrix: B
Collect Date: 13-JAN-05 13:30
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.110	+/-0.0647	0.143	0.800	pCi/g		JPH1	01/21/05	0932	395536	1
Americium-241	U	0.0413	+/-0.0653	0.0943	0.200	pCi/g						
Bismuth-212	U	0.0494	+/-0.106	0.221	0.500	pCi/g						
Bismuth-214	UUI	0.00	+/-0.0573	0.0753	0.200	pCi/g						
Cesium-134	U	-0.00464	+/-0.0161	0.0302	0.180	pCi/g						
Cesium-137	U	-0.0159	+/-0.0136	0.0227	0.300	pCi/g						
Cobalt-60	U	0.00892	+/-0.0181	0.0343	0.150	pCi/g						
Europium-152	U	-0.0189	+/-0.0358	0.0673	0.400	pCi/g						
Europium-154	U	-0.0148	+/-0.0489	0.0909	0.350	pCi/g						
Europium-155	U	0.0183	+/-0.035	0.074	15.0	pCi/g						
Lead-212		0.0725	+/-0.0346	0.0429	0.100	pCi/g						
Lead-214		0.0919	+/-0.0355	0.0505	0.100	pCi/g						
Manganese-54	U	-0.00414	+/-0.0126	0.0234	0.650	pCi/g						
Nioblum-94	U	0.00286	+/-0.0127	0.0257	0.250	pCi/g						
Potassium-40		3.80	+/-0.648	0.272	1.00	pCi/g						
Radium-226		0.0903	+/-0.0573	0.0425	1.00	pCi/g						
Silver-108m	U	-0.00398	+/-0.012	0.0225	0.280	pCi/g						
Thallium-208		0.0442	+/-0.0213	0.0276	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0433	+/-0.0198	0.0286	0.100	pCi/g		LCW1	01/25/05	2045	395417	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	1.08	+/-4.35	7.16	15.0	pCi/g		ATH1	01/23/05	0924	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/19/05	1759	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B4-02
Sample ID: 129116026

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B4-03
Sample ID: 129116027
Matrix: B
Collect Date: 13-JAN-05 13:30
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	U	0.120	+/-0.0817	0.139	0.800	pCi/g		JPH1	01/21/05	0933	395536	1
Americium-241	U	-0.00341	+/-0.0583	0.112	0.200	pCi/g						
Bismuth-212	U	0.00252	+/-0.103	0.205	0.500	pCi/g						
Bismuth-214	U	0.0713	+/-0.0465	0.0841	0.200	pCi/g						
Cesium-134	U	0.00143	+/-0.0165	0.0327	0.180	pCi/g						
Cesium-137	U	-0.00533	+/-0.0139	0.0265	0.300	pCi/g						
Cobalt-60	U	0.0207	+/-0.015	0.0248	0.150	pCi/g						
Europium-152	U	-0.0112	+/-0.0371	0.0721	0.400	pCi/g						
Europium-154	U	0.0048	+/-0.0383	0.0789	0.350	pCi/g						
Europium-155	U	0.00286	+/-0.0392	0.0806	15.0	pCi/g						
Lead-212		0.131	+/-0.0363	0.0413	0.100	pCi/g						
Lead-214		0.0814	+/-0.0512	0.0573	0.100	pCi/g						
Manganese-54	U	0.00298	+/-0.0129	0.0262	0.650	pCi/g						
Niobium-94	U	0.0127	+/-0.0147	0.031	0.250	pCi/g						
Potassium-40		3.37	+/-0.605	0.347	1.00	pCi/g						
Radium-226		0.0713	+/-0.0465	0.0602	1.00	pCi/g						
Silver-108m	U	0.00616	+/-0.0122	0.0254	0.280	pCi/g						
Thallium-208	UUI	0.00	+/-0.0247	0.044	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0411	+/-0.0221	0.0355	0.100	pCi/g		LCW1	01/25/05	2228	395417	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-1.37	+/-4.10	7.06	15.0	pCi/g		ATH1	01/23/05	0956	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/20/05	0811	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B4-03
Sample ID: 129116027

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B5-01
Sample ID: 129116028
Matrix: B
Collect Date: 13-JAN-05 14:00
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228	U	0.144	+/-0.0902	0.145	0.800	pCi/g		JPH1 01/21/05	0933	395536	1
Americium-241	U	0.013	+/-0.0502	0.0984	0.200	pCi/g					
Bismuth-212	U	0.0534	+/-0.127	0.200	0.500	pCi/g					
Bismuth-214	U	0.0327	+/-0.0286	0.0601	0.200	pCi/g					
Cesium-134	U	0.005	+/-0.0133	0.027	0.180	pCi/g					
Cesium-137	U	0.000443	+/-0.0134	0.0259	0.300	pCi/g					
Cobalt-60	U	-0.00944	+/-0.0122	0.0205	0.150	pCi/g					
Europium-152	U	0.0177	+/-0.0367	0.069	0.400	pCi/g					
Europium-154	U	0.0344	+/-0.0483	0.0843	0.350	pCi/g					
Europium-155	U	0.0118	+/-0.0324	0.0683	15.0	pCi/g					
Lead-212		0.0816	+/-0.0378	0.0378	0.100	pCi/g					
Lead-214	U	0.0362	+/-0.0396	0.0507	0.100	pCi/g					
Manganese-54	U	-0.00615	+/-0.0141	0.0249	0.650	pCi/g					
Niobium-94	U	0.00576	+/-0.0111	0.0229	0.250	pCi/g					
Potassium-40		4.42	+/-0.591	0.224	1.00	pCi/g					
Radium-226	U	0.0327	+/-0.0286	0.0601	1.00	pCi/g					
Silver-108m	U	-0.00438	+/-0.0115	0.0221	0.280	pCi/g					
Thallium-208		0.042	+/-0.0222	0.0216	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.0495	+/-0.0216	0.0321	0.100	pCi/g		LCW1 01/25/05	2228	395417	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	-1.19	+/-4.20	7.21	15.0	pCi/g		ATH1 01/23/05	1029	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/20/05	0811	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B5-01
Sample ID: 129116028

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Notes:
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E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B5-02
Sample ID: 129116029
Matrix: B
Collect Date: 13-JAN-05 14:00
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	UUI	0.00	+/-0.145	0.0968	0.800	pCi/g		JPH1	01/21/05	0934	395536	1
Americium-241	U	0.0102	+/-0.0851	0.168	0.200	pCi/g						
Bismuth-212	U	0.0909	+/-0.122	0.252	0.500	pCi/g						
Bismuth-214	U	0.0533	+/-0.0571	0.0789	0.200	pCi/g						
Cesium-134	U	7.330E-05	+/-0.0134	0.0262	0.180	pCi/g						
Cesium-137	U	0.00657	+/-0.0259	0.0278	0.300	pCi/g						
Cobalt-60	U	0.00123	+/-0.017	0.0337	0.150	pCi/g						
Europium-152	U	-0.0135	+/-0.0381	0.0694	0.400	pCi/g						
Europium-154	U	-0.0541	+/-0.0595	0.0795	0.350	pCi/g						
Europium-155	U	-0.0034	+/-0.0332	0.0685	15.0	pCi/g						
Lead-212		0.120	+/-0.0403	0.0456	0.100	pCi/g						
Lead-214	U	0.0548	+/-0.0515	0.0718	0.100	pCi/g						
Manganese-54	U	0.0135	+/-0.014	0.0301	0.650	pCi/g						
Niobium-94	U	0.00436	+/-0.0125	0.0253	0.250	pCi/g						
Potassium-40		4.28	+/-0.660	0.256	1.00	pCi/g						
Radium-226	U	0.0533	+/-0.0571	0.0538	1.00	pCi/g						
Silver-108m	U	0.00101	+/-0.0111	0.0227	0.280	pCi/g						
Thallium-208	UUI	0.00	+/-0.0309	0.028	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0926	+/-0.0262	0.0288	0.100	pCi/g		LCW1	01/25/05	2228	395417	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-2.82	+/-4.10	7.26	15.0	pCi/g		ATH1	01/23/05	1101	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/20/05	0811	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Project: Solls and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B5-02
Sample ID: 129116029

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B5-03
Sample ID: 129116030
Matrix: B
Collect Date: 13-JAN-05 14:00
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228	UUI	0.00	+/-0.217	0.162	0.800	pCi/g		JPH1	01/21/05	0934	395536	1
Americium-241	U	0.0182	+/-0.0167	0.0385	0.200	pCi/g						
Bismuth-212	U	0.00122	+/-0.128	0.257	0.500	pCi/g						
Bismuth-214	U	0.0756	+/-0.0478	0.0869	0.200	pCi/g						
Cesium-134	U	-0.00598	+/-0.017	0.0325	0.180	pCi/g						
Cesium-137	U	0.0144	+/-0.0269	0.0331	0.300	pCi/g						
Cobalt-60	U	0.0114	+/-0.0136	0.034	0.150	pCi/g						
Europium-152	U	0.00817	+/-0.0326	0.0679	0.400	pCi/g						
Europium-154	U	0.0268	+/-0.0428	0.0943	0.350	pCi/g						
Europium-155	U	0.0135	+/-0.0301	0.0632	15.0	pCi/g						
Lead-212		0.0821	+/-0.033	0.0427	0.100	pCi/g						
Lead-214		0.0773	+/-0.0462	0.049	0.100	pCi/g						
Manganese-54	U	0.00243	+/-0.0175	0.0349	0.650	pCi/g						
Niobium-94	U	-0.00311	+/-0.0137	0.0271	0.250	pCi/g						
Potassium-40		4.91	+/-0.662	0.282	1.00	pCi/g						
Radium-226		0.0756	+/-0.0478	0.0567	1.00	pCi/g						
Silver-108m	U	-0.00286	+/-0.0137	0.0263	0.280	pCi/g						
Thallium-208		0.0581	+/-0.0299	0.0272	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.0502	+/-0.0209	0.0302	0.100	pCi/g		LCW1	01/25/05	2228	395417	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	1.40	+/-4.40	7.20	15.0	pCi/g		ATH1	01/23/05	1134	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/20/05	0811	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B5-03
Sample ID: 129116030

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B6-01
Sample ID: 129116031
Matrix: B
Collect Date: 13-JAN-05 14:30
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived												
Actinium-228		0.296	+/-0.103	0.0758	0.800	pCi/g		JPH1	01/21/05	0936	395536	1
Americium-241	U	0.000436	+/-0.0514	0.0817	0.200	pCi/g						
Bismuth-212	U	0.0573	+/-0.0897	0.178	0.500	pCi/g						
Bismuth-214		0.443	+/-0.0802	0.0413	0.200	pCi/g						
Cesium-134	U	0.00882	+/-0.0122	0.0243	0.180	pCi/g						
Cesium-137	U	-0.00707	+/-0.0135	0.0211	0.300	pCi/g						
Cobalt-60	U	0.000134	+/-0.0138	0.0253	0.150	pCi/g						
Europium-152	U	-0.0146	+/-0.0308	0.0587	0.400	pCi/g						
Europium-154	U	-0.0108	+/-0.0439	0.0785	0.350	pCi/g						
Europium-155	U	-0.0218	+/-0.0354	0.0715	15.0	pCi/g						
Lead-212		0.121	+/-0.0303	0.0349	0.100	pCi/g						
Lead-214		0.545	+/-0.0767	0.0414	0.100	pCi/g						
Manganese-54	U	-0.000924	+/-0.0129	0.0237	0.650	pCi/g						
Niobium-94	U	0.00325	+/-0.0111	0.0215	0.250	pCi/g						
Potassium-40		11.9	+/-0.955	0.201	1.00	pCi/g						
Radium-226		0.443	+/-0.0802	0.0413	1.00	pCi/g						
Silver-108m	U	-0.000889	+/-0.0118	0.0196	0.280	pCi/g						
Thallium-208		0.0573	+/-0.0229	0.0218	0.080	pCi/g						
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid Quick TAT												
Strontium-90		0.108	+/-0.0272	0.0281	0.100	pCi/g		LCW1	01/26/05	0119	395417	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-2.38	+/-4.02	7.07	15.0	pCi/g		ATH1	01/23/05	1206	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/20/05	0811	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B6-01
Sample ID: 129116031
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B6-02
Sample ID: 129116032
Matrix: B
Collect Date: 13-JAN-05 14:30
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228		0.856	+/-0.201	0.124	0.800	pCi/g		JPH1 01/21/05	0936	395536	1
Americium-241	U	-0.0825	+/-0.130	0.238	0.200	pCi/g					
Bismuth-212		0.357	+/-0.244	0.244	0.500	pCi/g					
Bismuth-214		1.07	+/-0.138	0.0632	0.200	pCi/g					
Cesium-134	U	0.0417	+/-0.0347	0.0458	0.180	pCi/g					
Cesium-137	U	-0.0198	+/-0.0192	0.0329	0.300	pCi/g					
Cobalt-60	U	-0.0006	+/-0.022	0.0412	0.150	pCi/g					
Europium-152	U	0.0129	+/-0.0533	0.0952	0.400	pCi/g					
Europium-154	U	0.0557	+/-0.0651	0.131	0.350	pCi/g					
Europium-155	U	0.0407	+/-0.0608	0.126	15.0	pCi/g					
Lead-212		0.681	+/-0.0843	0.0571	0.100	pCi/g					
Lead-214		1.26	+/-0.145	0.0667	0.100	pCi/g					
Manganese-54	U	0.0192	+/-0.0205	0.0403	0.650	pCi/g					
Niobium-94	U	0.00814	+/-0.0165	0.0322	0.250	pCi/g					
Potassium-40		10.4	+/-1.06	0.316	1.00	pCi/g					
Radium-226		1.07	+/-0.138	0.0632	1.00	pCi/g					
Silver-108m	U	0.00235	+/-0.0158	0.0312	0.280	pCi/g					
Thallium-208		0.232	+/-0.0426	0.0355	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.0864	+/-0.0246	0.0283	0.100	pCi/g		LCW1 01/26/05	0015	395417	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	-2.23	+/-4.03	7.06	15.0	pCi/g		ATH1 01/23/05	1240	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/20/05	0811	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

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Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B6-02
Sample ID: 129116032
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B6-03
Sample ID: 129116033
Matrix: B
Collect Date: 13-JAN-05 14:30
Receive Date: 19-JAN-05
Collector: Client

Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL Ra-226 In-growth Waived											
Actinium-228		0.145	+/-0.103	0.125	0.800	pCi/g		JPH1 01/21/05	1027	395536	1
Americium-241	U	0.033	+/-0.0768	0.143	0.200	pCi/g					
Bismuth-212		0.238	+/-0.144	0.221	0.500	pCi/g					
Bismuth-214		0.658	+/-0.0999	0.0531	0.200	pCi/g					
Cesium-134	U	0.0336	+/-0.0246	0.0406	0.180	pCi/g					
Cesium-137	U	-0.00652	+/-0.0158	0.0293	0.300	pCi/g					
Cobalt-60	U	-0.00932	+/-0.0165	0.0293	0.150	pCi/g					
Europium-152	U	-0.0319	+/-0.0463	0.0823	0.400	pCi/g					
Europium-154	U	0.0642	+/-0.0435	0.123	0.350	pCi/g					
Europium-155	U	-0.00174	+/-0.0436	0.0906	15.0	pCi/g					
Lead-212		0.179	+/-0.0417	0.0472	0.100	pCi/g					
Lead-214		0.686	+/-0.097	0.0655	0.100	pCi/g					
Manganese-54	U	0.0239	+/-0.0188	0.0343	0.650	pCi/g					
Niobium-94	U	0.0157	+/-0.0148	0.0311	0.250	pCi/g					
Potassium-40		10.2	+/-1.04	0.302	1.00	pCi/g					
Radium-226		0.658	+/-0.0999	0.0531	1.00	pCi/g					
Silver-108m	U	0.0013	+/-0.0139	0.028	0.280	pCi/g					
Thallium-208	UUI	0.00	+/-0.0234	0.0423	0.080	pCi/g					
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid Quick TAT											
Strontium-90		0.0643	+/-0.0219	0.0274	0.100	pCi/g		LCW1 01/26/05	0015	395417	2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	1.25	+/-4.40	7.23	15.0	pCi/g		ATH1 01/23/05	1312	395655	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	TC1	01/20/05	0939	395410
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	01/20/05	0811	395405

The following Analytical Methods were performed

Method	Description	Analyst Comments
1	EML HASL 300, 4.5.2.3	
2	EPA 905.0 Modified	
3	EPA 906.0 Modified	

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils and Concrete PO# 002337

Report Date: January 26, 2005

Client Sample ID: 9801-0000-118-B6-03
Sample ID: 129116033
Project: YANK01304
Client ID: YANK001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	AnalystDate	Time	Batch	Method

Notes:
The Qualifiers in this report are defined as follows :

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
B Target analyte was detected in the sample as well as the associated blank.
BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis except where prohibited by the analytical procedure.
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: January 26, 2005

Connecticut Yankee Atomic Power
Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut

Contact: Mr. Pete Hollenbeck

Workorder: 129116

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec											
Batch 395671											
QC1200774898 129116007 DUP											
Plutonium-238		U	-0.057 +/-0.118	U	-0.0615 +/-0.0455	pCi/g	N/A		(0%-20%)	SCP	01/25/05 17:06
Plutonium-239/240		U	-0.00855 +/-0.0168		0.421 +/-0.250	pCi/g	208*		(0%-20%)		
QC1200774900 LCS											
Plutonium-238				U	0.0798 +/-0.0974	pCi/g			(75%-125%)		
Plutonium-239/240	9.37				10.3 +/-0.984	pCi/g		110	(75%-125%)		
QC1200774897 MB											
Plutonium-238				U	-0.0432 +/-0.0759	pCi/g					
Plutonium-239/240				U	0.139 +/-0.137	pCi/g					
QC1200774899 129116007 MS											
Plutonium-238		U	-0.057 +/-0.118	U	0.0953 +/-0.134	pCi/g			(75%-125%)		
Plutonium-239/240	9.60	U	-0.00855 +/-0.0168		10.4 +/-0.990	pCi/g		108	(75%-125%)		
Rad Gamma Spec											
Batch 395534											
QC1200774546 129116001 DUP											
Actinium-228		U	0.0847 +/-0.103	U	0.0935 +/-0.0761	pCi/g	10			JPH1	01/21/05 07:32
Americium-241		U	0.00454 +/-0.0492	U	0.0304 +/-0.0823	pCi/g	148				
Bismuth-212		U	0.0697 +/-0.109	U	-0.0413 +/-0.107	pCi/g	780				
Bismuth-214		UUI	0.00 +/-0.0475		0.0826 +/-0.0463	pCi/g	37				
Cesium-134		U	-0.00498 +/-0.0157	U	-0.00207 +/-0.0143	pCi/g	N/A				
Cesium-137		U	-0.000172 +/-0.0132	U	0.0126 +/-0.0126	pCi/g	206*		(0%-20%)		
Cobalt-60		U	0.00416 +/-0.018	U	0.00341 +/-0.0164	pCi/g	20		(0%-20%)		
Europium-152		U	0.0369 +/-0.0323	U	-0.0344 +/-0.0291	pCi/g	5730				
Europium-154		U	-0.00595 +/-0.0463	U	-0.0234 +/-0.0385	pCi/g	N/A				
Europium-155		U	0.0469 +/-0.0445	U	-0.0133 +/-0.0336	pCi/g	358				

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QC Summary

Workorder: 129116

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 395534										
Lead-212		0.0729 +/-0.0415		0.0737 +/-0.0317	pCi/g	1				
Lead-214		0.126 +/-0.0515		0.0764 +/-0.0409	pCi/g	49			JPH1	01/21/05 07:32
Manganese-54	U	-0.00116 +/-0.0136	U	-0.0103 +/-0.0117	pCi/g	N/A				
Niobium-94	U	-0.000471 +/-0.0126	U	0.00773 +/-0.0114	pCi/g	226				
Potassium-40		3.93 +/-0.658		4.06 +/-0.661	pCi/g	3		(0%-20%)		
Radium-226	UUI	0.00 +/-0.0475		0.0826 +/-0.0463	pCi/g	37*		(0%-20%)		
Silver-108m	U	-0.00213 +/-0.0118	U	-0.0119 +/-0.0105	pCi/g	N/A				
Thallium-208		0.0497 +/-0.022	U	0.0249 +/-0.0144	pCi/g	66				
QC1200774547 LCS										
Actinium-228			U	-0.278 +/-0.765	pCi/g					01/21/05 07:23
Americium-241	23.4			23.9 +/-1.88	pCi/g		102	(75%-125%)		
Bismuth-212			U	-1.0 +/-1.33	pCi/g					
Bismuth-214			U	0.440 +/-0.295	pCi/g					
Cesium-134			U	-0.188 +/-0.187	pCi/g					
Cesium-137	9.12			9.71 +/-1.00	pCi/g		107	(75%-125%)		
Cobalt-60	13.2			12.8 +/-1.10	pCi/g		97	(75%-125%)		
Europium-152			U	0.0475 +/-0.375	pCi/g					
Europium-154			U	-0.23 +/-0.307	pCi/g					
Europium-155			U	-0.197 +/-0.367	pCi/g					
Lead-212			U	0.055 +/-0.182	pCi/g					
Lead-214			U	0.419 +/-0.500	pCi/g					
Manganese-54			U	-0.00792 +/-0.171	pCi/g					
Niobium-94			U	0.0382 +/-0.146	pCi/g					
Potassium-40			U	0.574 +/-1.23	pCi/g					
Radium-226			U	0.440	pCi/g			(75%-125%)		

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QC Summary

Workorder: 129116

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 395534										
				+/-0.295						
Silver-108m			U	-0.115	pCi/g				JPH1	01/21/05 07:23
				+/-0.151						
Thallium-208			U	0.0751	pCi/g					
				+/-0.162						
QC1200774545 MB										
Actinium-228			U	0.0296	pCi/g					01/21/05 07:33
				+/-0.0641						
Americium-241			U	0.00697	pCi/g					
				+/-0.028						
Bismuth-212			U	0.0657	pCi/g					
				+/-0.0799						
Bismuth-214			U	0.00309	pCi/g					
				+/-0.0319						
Cesium-134			U	-0.00591	pCi/g					
				+/-0.0112						
Cesium-137			U	0.00993	pCi/g					
				+/-0.00841						
Cobalt-60			U	-0.00015	pCi/g					
				+/-0.00998						
Europium-152			U	-0.00102	pCi/g					
				+/-0.0275						
Europium-154			U	0.0104	pCi/g					
				+/-0.0287						
Europium-155			U	0.0249	pCi/g					
				+/-0.0268						
Lead-212			U	0.00411	pCi/g					
				+/-0.0259						
Lead-214			U	0.0277	pCi/g					
				+/-0.0319						
Manganese-54			U	0.00316	pCi/g					
				+/-0.0118						
Niobium-94			U	-0.00313	pCi/g					
				+/-0.010						
Potassium-40			U	0.104	pCi/g					
				+/-0.197						
Radium-226			U	0.00309	pCi/g					
				+/-0.0319						
Silver-108m			U	0.0017	pCi/g					
				+/-0.00884						
Thallium-208			UUI	0.00	pCi/g					
				+/-0.0146						
Batch 395536										
QC1200774553 129116031 DUP										
Actinium-228	U	0.0955	U	0.0771	pCi/g	21			JPH1	01/21/05 11:33
		+/-0.0629		+/-0.0705						
Americium-241	U	0.0228	U	-0.102	pCi/g	315				

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QC Summary

Workorder: 129116

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 395536										
		+/-0.0513		+/-0.130						
Bismuth-212	U	-0.0561	U	0.0252	pCi/g	526			JPH1	01/21/05 11:33
		+/-0.104		+/-0.154						
Bismuth-214	UUI	0.00		0.212	pCi/g	29				
		+/-0.0482		+/-0.0666						
Cesium-134	U	0.0144	U	-0.00485	pCi/g	402				
		+/-0.0176		+/-0.0207						
Cesium-137	U	-0.0101	U	0.0289	pCi/g	414*		(0%-20%)		
		+/-0.0143		+/-0.0309						
Cobalt-60	U	0.000895	U	0.017	pCi/g	180*		(0%-20%)		
		+/-0.0183		+/-0.0185						
Europium-152	U	-0.000225	U	-0.0155	pCi/g	N/A				
		+/-0.0385		+/-0.0521						
Europium-154	U	-0.0296	U	-0.0413	pCi/g	N/A				
		+/-0.0572		+/-0.0734						
Europium-155	U	0.00709	U	-0.031	pCi/g	318				
		+/-0.038		+/-0.0598						
Lead-212	U	0.0297	U	0.00386	pCi/g	154				
		+/-0.0332		+/-0.0574						
Lead-214		0.200		0.139	pCi/g	36				
		+/-0.0588		+/-0.0679						
Manganese-54	U	0.0165	U	0.00345	pCi/g	131				
		+/-0.0152		+/-0.0179						
Niobium-94	U	0.00488	U	0.0178	pCi/g	114				
		+/-0.0128		+/-0.0169						
Potassium-40		4.97		4.20	pCi/g	17		(0%-20%)		
		+/-0.718		+/-0.842						
Radium-226		0.159		0.212	pCi/g	29*		(0%-20%)		
		+/-0.0482		+/-0.0666						
Silver-108m	U	-0.0044	U	0.000851	pCi/g	296				
		+/-0.0109		+/-0.0183						
Thallium-208	U	0.00906	U	0.0321	pCi/g	112				
		+/-0.0335		+/-0.0303						
QC1200774554 LCS										
Actinium-228			U	0.635	pCi/g					01/21/05 10:28
				+/-0.755						
Americium-241	23.4			22.9	pCi/g		98	(75%-125%)		
				+/-1.94						
Bismuth-212			U	0.193	pCi/g					
				+/-1.28						
Bismuth-214			U	-0.18	pCi/g					
				+/-0.283						
Cesium-134			U	0.167	pCi/g					
				+/-0.213						
Cesium-137	9.12			9.80	pCi/g		108	(75%-125%)		
				+/-0.987						
Cobalt-60	13.2			13.9	pCi/g		105	(75%-125%)		

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QC Summary

Workorder: 129116

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 395536										
				+/-1.13						
Europium-152			U	0.116 +/-0.374	pCi/g				JPH1	01/21/05 10:28
Europium-154			U	-0.0219 +/-0.371	pCi/g					
Europium-155			U	-0.249 +/-0.369	pCi/g					
Lead-212			U	0.236 +/-0.191	pCi/g					
Lead-214			U	-0.000979 +/-0.269	pCi/g					
Manganese-54			U	-0.0684 +/-0.173	pCi/g					
Niobium-94			U	0.0697 +/-0.111	pCi/g					
Potassium-40			U	0.398 +/-1.12	pCi/g					
Radium-226			U	-0.18 +/-0.283	pCi/g			(75%-125%)		
Silver-108m			U	0.103 +/-0.151	pCi/g					
Thallium-208			U	-0.171 +/-0.190	pCi/g					
QC1200774552 MB										
Actinium-228			U	0.0394 +/-0.0472	pCi/g					01/21/05 10:37
Americium-241			U	-0.0714 +/-0.0732	pCi/g					
Bismuth-212			U	0.0602 +/-0.0999	pCi/g					
Bismuth-214			U	0.00689 +/-0.0318	pCi/g					
Cesium-134			U	0.0241 +/-0.0146	pCi/g					
Cesium-137			U	-0.00131 +/-0.0172	pCi/g					
Cobalt-60			U	0.00109 +/-0.0159	pCi/g					
Europium-152			U	0.0139 +/-0.0365	pCi/g					
Europium-154			U	-0.0317 +/-0.0463	pCi/g					
Europium-155			U	0.0277 +/-0.0378	pCi/g					
Lead-212			U	0.0345 +/-0.0343	pCi/g					
Lead-214			U	0.0156	pCi/g					

QC Summary

Workorder: 129116

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec											
Batch 395536											
					+/-0.030						
Manganese-54				U	0.00332 +/-0.0144	pCi/g				JPH1	01/21/05 10:37
Niobium-94				U	-0.00191 +/-0.0133	pCi/g					
Potassium-40				U	0.186 +/-0.157	pCi/g					
Radium-226				U	0.00689 +/-0.0318	pCi/g					
Silver-108m				U	-0.00743 +/-0.0129	pCi/g					
Thallium-208				U	0.0108 +/-0.0187	pCi/g					
Rad Gas Flow											
Batch 395412											
QC1200774252 129116005 DUP											
Strontium-90			0.0577 +/-0.0211		0.0457 +/-0.0154	pCi/g	23*		(0%-20%)	CW1	01/25/05 16:00
QC1200774254 LCS											
Strontium-90	4.41				4.56 +/-0.253	pCi/g		103	(75%-125%)		01/25/05 14:59
QC1200774251 MB											
Strontium-90					0.0686 +/-0.0184	pCi/g					01/25/05 16:00
QC1200774253 129116005 MS											
Strontium-90	8.69		0.0577 +/-0.0211		8.81 +/-0.486	pCi/g		101	(75%-125%)		01/25/05 14:59
Batch 395417											
QC1200774263 129116018 DUP											
Strontium-90			0.0978 +/-0.0239		0.0556 +/-0.0211	pCi/g	55*		(0%-20%)	CW1	01/26/05 01:32
QC1200774265 LCS											
Strontium-90	4.36				4.34 +/-0.261	pCi/g		99	(75%-125%)		01/25/05 18:44
QC1200774262 MB											
Strontium-90					0.0553 +/-0.0192	pCi/g					01/26/05 00:15
QC1200774264 129116018 MS											
Strontium-90	4.47		0.0978 +/-0.0239		4.48 +/-0.280	pCi/g		98	(75%-125%)		01/25/05 18:44
Rad Liquid Scintillation											
Batch 395652											
QC1200774829 129116001 DUP											
Tritium		U	6.09 +/-6.19	U	3.38 +/-5.11	pCi/g	0		(0%-20%)	LAG1	01/22/05 17:54
QC1200774831 LCS											
Tritium	66.8				65.8	pCi/g		99	(75%-125%)		01/22/05 18:57

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QC Summary

Workorder: 129116

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation											
Batch 395652											
					+/-7.51						
QC1200774828 MB											
Tritium				U	4.52 +/-5.26	pCi/g				LAG1	01/22/05 17:22
QC1200774830 129116001 MS											
Tritium	78.9	U	6.09 +/-6.19		69.1 +/-8.24	pCi/g		80	(75%-125%)		01/22/05 18:25
Batch 395653											
QC1200774825 129116007 DUP											
Technetium-99		U	0.0928 +/-0.189	U	0.104 +/-0.197	pCi/g	12		(0%-20%)	EGD1	01/25/05 07:16
QC1200774827 LCS											
Technetium-99	16.0				15.9 +/-0.496	pCi/g		99	(75%-125%)		01/25/05 08:20
QC1200774824 MB											
Technetium-99				U	0.115 +/-0.185	pCi/g					01/25/05 06:44
QC1200774826 129116007 MS											
Technetium-99	16.7	U	0.0928 +/-0.189		17.2 +/-0.543	pCi/g		102	(75%-125%)		01/25/05 07:48
Batch 395655											
QC1200774837 129116016 DUP											
Tritium		U	-1.4 +/-4.18	U	-2.05 +/-4.10	pCi/g	N/A		(0%-20%)	ATH1	01/23/05 14:17
QC1200774839 LCS											
Tritium	31.5				31.7 +/-6.28	pCi/g		101	(75%-125%)		01/23/05 15:22
QC1200774836 MB											
Tritium				U	-0.157 +/-4.33	pCi/g					01/23/05 13:45
QC1200774838 129116016 MS											
Tritium	31.7	U	-1.4 +/-4.18		34.9 +/-6.42	pCi/g		110	(75%-125%)		01/23/05 14:50
Batch 395656											
QC1200774841 129116007 DUP											
Carbon-14		U	-0.0043 +/-0.0912	U	0.0416 +/-0.0946	pCi/g	0		(0%-20%)	LAG1	01/21/05 02:26
QC1200774843 LCS											
Carbon-14	7.76				7.44 +/-0.394	pCi/g		96	(75%-125%)		01/21/05 03:30
QC1200774840 MB											
Carbon-14				U	-0.0205 +/-0.0873	pCi/g					01/21/05 01:23
QC1200774842 129116007 MS											
Carbon-14	7.76	U	-0.0043 +/-0.0912		7.48 +/-0.370	pCi/g		96	(75%-125%)		01/21/05 02:58

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QC Summary

Workorder: 129116

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Daily Survey Journal

Survey Area #: 9530	Survey Area Name: Central Peninsula
Survey Unit #: 0003	WP&IR #: NA

Specific instructions for using the Daily Survey Journal.

1 The Daily Survey Journal provides the means to record those items required by the applicable sampling plan as well as any deviations or anomalies that should be brought to the attention of the cognizant final status survey (FSS) engineer.

2 All documentation will be complete and legible.

TIME	NOTES FOR SAMPLING DATE 5/23/05

Completed by: Arthur L. Hammond Date: May23, 2005

Daily Survey Journal

Survey Area #: 9530	Survey Area Name: Central Peninsula
Survey Unit #: 0003	WP&IR #: NA

Specific instructions for using the Daily Survey Journal.

1 The Daily Survey Journal provides the means to record those items required by the applicable sampling plan as well as any deviations or anomalies that should be brought to the attention of the cognizant final status survey (FSS) engineer.

2 All documentation will be complete and legible.

TIME	NOTES FOR SAMPLING DATE 5/23/05

Completed by: Arthur L. Hammond Date: May23, 2005

Connecticut Yankee Atomic Power Company

362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Chain of Custody Form

No. 2005-00027

1300691

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90	CHALL			Comment, Preservation	Lab Sample ID
9801-0000-121-B1	2/1/05	1030	B	CR	BP				X			3"	
9801-0000-123-B1-01	2/2/05	0930	B	CR	BP	X	X	X				1"	
9801-0000-123-B1-02	2/2/05	0930	B	CR	BP	X	X	X				1"	
9801-0000-123-B1-03	2/2/05	0930	B	CR	BP	X	X	X				1"	
9801-0000-123-B3-04	2/2/05	1040	B	CR	BP	X	X	X				2"	
9801-0000-123-B5-05	2/2/05	1130	B	CR	BP	X	X	X				2"	

NOTES: PO #: 002332 MSR #: 05-0357 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

Bill of Lading # 7904 1601 5867

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☑ N ☐

Custody Seal Intact? Y ☑ N ☐

1) Relinquished By [signature] Date/Time 2/3/05 1405	2) Received By [signature] Date/Time 2/8/05 09:10
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 2/4/05

SDG#: MSR# 05-0357

Work Order Number: 1300069 1.

Shipping Container ID: 7904108718867 Chain of Custody # 2005-0027

1. Custody Seals on shipping container intact? Yes [ ] No [ ]
2. Custody Seals dated and signed? Yes [ ] No [ ]
3. Chain-of-Custody record present? Yes [ ] No [ ]
4. Cooler temperature 3.0
5. Vermiculite/packing materials is: Wet [ ] Dry [ ]
6. Number of samples in shipping container: _____
7. Sample holding times exceeded? Yes [ ] No [ ]

8. Samples have:

____tape	____hazard labels
____custody seals	____appropriate sample labels

9. Samples are:

____in good condition	____leaking
____broken	____have air bubbles

10. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: [signature] Date: 2/4/05

Telephoned to: _____ On _____ By _____

SAMPLE RECEIPT & REVIEW FORM

GEN-PRING LABORATORIES, LLC

PM use only

Client: Connecticut	SDG/ARCOC/Work Order:
Date Received: 2/3/05	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By:	2/4/05

	Sample Receipt Criteria	Conforming	NA	Non-Conforming	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Coolant # ice bags blue ice dry ice none other(describe)
3	Chain of custody documents included with shipment?				
4	Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7	Samples received within holding time?				Id's and tests affected:
8	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
9	Date & time on COC match date & time on bottles?				Sample ID's affected:
10	Number of containers received match number indicated on COC?				Sample ID's affected:
11	COC form is properly signed in relinquished/received sections?				
12	Air Bill, Tracking #'s, & Additional Comments	7904 1601 8867			

Radiological Information	Non-RAD	RAD	RADII	RSO RAD Receipt #
What is the radiological classification of the samples?				Comments:
Radioactivity Screening Results (maximum observed CPM)	300 cpm			*If > x2 area background is observed on a non-radioactive sample, contact the RSO to investigate

PM (or PMA) review of Receiving Rad classification: Cay Initials 2/4/05 Date:

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID:	9801-0000-121-B1	Project:	YANK01204
Sample ID:	130069001	Client ID:	YANK001
Matrix:	B	Vol. Recv.:	
Collect Date:	01-FEB-05		
Receive Date:	04-FEB-05		
Collector:	Client		
Moisture:	3.39%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241	U	0.0816	+/-0.104	0.064	+/-0.104	0.190	pCi/g		BJB1	02/10/05	1301	399762	1
Curium-242		0.156	+/-0.125	0.0384	+/-0.126	0.141	pCi/g						
Curium-243/244	U	0.128	+/-0.132	0.0826	+/-0.133	0.227	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.0265	+/-0.0968	0.119	+/-0.0968	0.319	pCi/g		BJB1	02/09/05	1417	399763	2
Plutonium-239/240	U	0.0457	+/-0.0858	0.0485	+/-0.086	0.178	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	-2.96	+/-5.26	4.50	+/-5.27	9.27	pCi/g		BJB1	02/10/05	2137	399764	3
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.178	+/-0.0735	0.0324	+/-0.072	0.0683	pCi/g		MJH1	02/07/05	1908	399782	4
Americium-241	U	-0.072	+/-0.0685	0.0553	+/-0.0672	0.114	pCi/g						
Bismuth-212	U	0.118	+/-0.0934	0.0648	+/-0.0915	0.136	pCi/g						
Bismuth-214		0.0816	+/-0.0347	0.0166	+/-0.0341	0.0347	pCi/g						
Cesium-134	U	0.0122	+/-0.0144	0.0103	+/-0.0142	0.0216	pCi/g						
Cesium-137		0.0187	+/-0.0124	0.00781	+/-0.0122	0.0165	pCi/g						
Cobalt-60	U	-0.00729	+/-0.0116	0.00905	+/-0.0114	0.0195	pCi/g						
Europium-152	U	-0.00439	+/-0.0255	0.022	+/-0.025	0.0458	pCi/g						
Europium-154	U	-0.00286	+/-0.0335	0.0277	+/-0.0329	0.059	pCi/g						
Europium-155	U	0.00297	+/-0.0286	0.027	+/-0.0281	0.0552	pCi/g						
Lead-212		0.176	+/-0.0343	0.0125	+/-0.0336	0.0257	pCi/g						
Lead-214		0.0754	+/-0.0359	0.0174	+/-0.0352	0.0361	pCi/g						
Manganese-54	U	-0.00335	+/-0.00992	0.00837	+/-0.00972	0.0176	pCi/g						
Niobium-94	U	-0.0027	+/-0.0085	0.00729	+/-0.00833	0.0154	pCi/g						
Potassium-40		10.8	+/-0.869	0.0766	+/-0.851	0.167	pCi/g						
Radium-226		0.0816	+/-0.0347	0.0166	+/-0.0341	0.0347	pCi/g						
Silver-108m	U	0.0043	+/-0.00986	0.00763	+/-0.00966	0.0159	pCi/g						
Thallium-208	U	0.00	+/-0.0203	0.013	+/-0.0204	0.0268	pCi/g						
	UI												
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.0138	+/-0.0129	0.0132	+/-0.0133	0.0273	pCi/g		LCW1	02/10/05	1526	399703	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Solls PO# 002332

Report Date: February 11, 2005

Client Sample ID: 9801-0000-121-B1
Sample ID: 130069001

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	3.86	+/-6.76	5.52	+/-6.76	11.0	pCi/g		ATH1	02/07/05	1146	399727	6
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	-0.058	+/-0.100	0.087	+/-0.100	0.182	pCi/g		EGD1	02/07/05	1530	399725	7
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	3.19	+/-51.6	35.5	+/-51.6	72.6	pCi/g		DAJ1	02/10/05	1425	399723	8
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	-10.9	+/-10.8	9.41	+/-10.9	19.4	pCi/g		DAJ1	02/10/05	1652	399724	9
Liquid Scint Tc99, Solid-ALL FSS													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	02/07/05	0735	399557
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	02/04/05	1813	399555

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EML HASL 300, 4.5.2.3
5	EPA 905.0 Modified
6	EPA 906.0 Modified
7	EPA EERF C-01 Modified
8	DOE RESL Fe-1, Modified
9	DOE RESL Ni-1, Modified
10	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	93	(25%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	76	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	107	
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	100	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	81	

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID: 9801-0000-121-B1
Sample ID: 130069001

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch Mtd.
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-ALL FS			89						

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID:	9801-0000-123-B1-01	Project:	YANK01204
Sample ID:	130069002	Client ID:	YANK001
Matrix:	B	Vol. Recv.:	
Collect Date:	02-FEB-05		
Receive Date:	04-FEB-05		
Collector:	Client		
Moisture:	.245%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.0709	+/-0.0543	0.0177	+/-0.0532	0.0378	pCi/g		MJH1	02/07/05	1909	399782	1
Americium-241	U	-0.0173	+/-0.0224	0.0221	+/-0.022	0.0454	pCi/g						
Bismuth-212	U	0.0885	+/-0.0479	0.0469	+/-0.047	0.0983	pCi/g						
Bismuth-214		0.102	+/-0.0324	0.0108	+/-0.0317	0.0225	pCi/g						
Cesium-134	U	0.00739	+/-0.00675	0.00635	+/-0.00661	0.0134	pCi/g						
Cesium-137	U	-0.00187	+/-0.00602	0.00532	+/-0.0059	0.0112	pCi/g						
Cobalt-60	U	0.000534	+/-0.00669	0.00579	+/-0.00656	0.0125	pCi/g						
Europium-152	U	0.00434	+/-0.0158	0.0147	+/-0.0155	0.0306	pCi/g						
Europium-154	U	-0.0115	+/-0.0189	0.0154	+/-0.0185	0.0333	pCi/g						
Europium-155	U	0.00101	+/-0.0164	0.0159	+/-0.0161	0.0326	pCi/g						
Lead-212		0.0878	+/-0.0185	0.00834	+/-0.0181	0.0172	pCi/g						
Lead-214		0.101	+/-0.0308	0.0107	+/-0.0302	0.0223	pCi/g						
Manganese-54	U	-0.00319	+/-0.0064	0.00541	+/-0.00627	0.0114	pCi/g						
Niobium-94	U	-5.120E-05	+/-0.00604	0.0054	+/-0.00592	0.0113	pCi/g						
Potassium-40		2.89	+/-0.308	0.0526	+/-0.302	0.114	pCi/g						
Radium-226		0.102	+/-0.0324	0.0108	+/-0.0317	0.0225	pCi/g						
Silver-108m	U	0.00175	+/-0.00531	0.00486	+/-0.00521	0.0101	pCi/g						
Thallium-208		0.0225	+/-0.0115	0.00509	+/-0.0113	0.0107	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.00801	+/-0.0118	0.0119	+/-0.012	0.0249	pCi/g		LCW1	02/10/05	1526	399703	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	-2.76	+/-6.48	5.54	+/-6.48	11.1	pCi/g		ATH1	02/07/05	1219	399727	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	02/07/05	0735	399557
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	02/04/05	1813	399555

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID: 9801-0000-123-B1-01
Sample ID: 130069002

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
1	EML HASL 300, 4.5.2.3												
2	EPA 905.0 Modified												
3	EPA 906.0 Modified												

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	84	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID:	9801-0000-123-B1-02	Project:	YANK01204
Sample ID:	130069003	Client ID:	YANK001
Matrix:	B	Vol. Recv.:	
Collect Date:	02-FEB-05		
Receive Date:	04-FEB-05		
Collector:	Client		
Moisture:	.169%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived												
Actinium-228	U	0.0528	+/-0.042	0.0272	+/-0.0412	0.0568	pCi/g		MJH1 02/07/05	1909	399782	1
Americium-241	U	0.000451	+/-0.0315	0.0303	+/-0.0309	0.0628	pCi/g					
Bismuth-212		0.0966	+/-0.0739	0.0364	+/-0.0724	0.0775	pCi/g					
Bismuth-214		0.095	+/-0.0281	0.00916	+/-0.0275	0.0194	pCi/g					
Cesium-134	U	-0.00238	+/-0.00665	0.00558	+/-0.00651	0.0119	pCi/g					
Cesium-137	U	-0.00104	+/-0.00564	0.00493	+/-0.00552	0.0105	pCi/g					
Cobalt-60	U	0.0104	+/-0.00692	0.00562	+/-0.00678	0.0122	pCi/g					
Europium-152	U	0.00444	+/-0.0153	0.0139	+/-0.015	0.0291	pCi/g					
Europium-154	U	-0.0101	+/-0.0188	0.0152	+/-0.0184	0.0329	pCi/g					
Europium-155	U	0.00355	+/-0.0152	0.0155	+/-0.0149	0.032	pCi/g					
Lead-212		0.0714	+/-0.0148	0.00824	+/-0.0145	0.017	pCi/g					
Lead-214		0.0943	+/-0.0274	0.0103	+/-0.0269	0.0215	pCi/g					
Manganese-54	U	0.00344	+/-0.00599	0.00537	+/-0.00587	0.0114	pCi/g					
Niobium-94	U	0.00369	+/-0.00533	0.00491	+/-0.00522	0.0104	pCi/g					
Potassium-40		2.82	+/-0.313	0.0446	+/-0.307	0.0988	pCi/g					
Radium-226		0.095	+/-0.0281	0.00916	+/-0.0275	0.0194	pCi/g					
Silver-108m	U	0.00214	+/-0.00512	0.00489	+/-0.00501	0.0102	pCi/g					
Thallium-208		0.0225	+/-0.0141	0.00464	+/-0.0138	0.00984	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.00387	+/-0.0109	0.0103	+/-0.0109	0.0216	pCi/g		LCW1 02/10/05	1526	399703	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-2.42	+/-6.50	5.55	+/-6.50	11.1	pCi/g		ATH1 02/07/05	1251	399727	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	02/07/05	0735	399557
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	02/04/05	1813	399555

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID: 9801-0000-123-B1-02
Sample ID: 130069003

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch Mtd.
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	89	(25%-125%)

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID:	9801-0000-123-B1-03	Project:	YANK01204
Sample ID:	130069004	Client ID:	YANK001
Matrix:	B	Vol. Recv.:	
Collect Date:	02-FEB-05		
Receive Date:	04-FEB-05		
Collector:	Client		
Moisture:	.133%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	Mtd.
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived												
Actinium-228	U	0.062	+/-0.0521	0.0343	+/-0.051	0.0716	pCi/g		MJH1 02/07/05	1910	399782	1
Americium-241	U	-0.00397	+/-0.0309	0.0291	+/-0.0303	0.060	pCi/g					
Bismuth-212	U	0.0406	+/-0.0935	0.0453	+/-0.0916	0.0963	pCi/g					
Bismuth-214		0.0813	+/-0.0275	0.0133	+/-0.0269	0.0279	pCi/g					
Cesium-134	U	0.0119	+/-0.00789	0.00757	+/-0.00773	0.016	pCi/g					
Cesium-137	U	0.00416	+/-0.00735	0.00677	+/-0.0072	0.0143	pCi/g					
Cobalt-60	U	0.0152	+/-0.0129	0.00833	+/-0.0126	0.0178	pCi/g					
Europium-152	U	0.0149	+/-0.0206	0.019	+/-0.0202	0.0395	pCi/g					
Europium-154	U	0.015	+/-0.0216	0.0198	+/-0.0212	0.0426	pCi/g					
Europium-155	U	0.00659	+/-0.019	0.0192	+/-0.0186	0.0395	pCi/g					
Lead-212		0.083	+/-0.020	0.0103	+/-0.0196	0.0212	pCi/g					
Lead-214		0.0998	+/-0.0271	0.0139	+/-0.0266	0.0289	pCi/g					
Manganese-54	U	-0.000253	+/-0.00739	0.00637	+/-0.00724	0.0135	pCi/g					
Niobium-94	U	0.0077	+/-0.00776	0.00653	+/-0.00761	0.0137	pCi/g					
Potassium-40		3.13	+/-0.327	0.0534	+/-0.320	0.118	pCi/g					
Radium-226		0.0813	+/-0.0275	0.0133	+/-0.0269	0.0279	pCi/g					
Silver-108m	U	0.00256	+/-0.00704	0.00624	+/-0.00689	0.013	pCi/g					
Thallium-208		0.019	+/-0.0118	0.00637	+/-0.0116	0.0134	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	-0.00581	+/-0.0221	0.0217	+/-0.0222	0.0445	pCi/g		LCW1 02/10/05	1527	399703	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	-1.15	+/-6.47	5.48	+/-6.47	11.0	pCi/g		ATH1 02/07/05	1324	399727	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	02/07/05	0735	399557
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	02/04/05	1813	399555

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID: 9801-0000-123-B1-03
Sample ID: 130069004

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch Mtd.
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	78	(25%-125%)

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.
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Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID:	9801-0000-123-B3-04	Project:	YANK01204
Sample ID:	130069005	Client ID:	YANK001
Matrix:	B	Vol. Recv.:	
Collect Date:	02-FEB-05		
Receive Date:	04-FEB-05		
Collector:	Client		
Moisture:	.141%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch Mtd.
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived											
Actinium-228		0.121	+/-0.0454	0.0206	+/-0.0445	0.0435	pCi/g		MJH1 02/07/05	1911	399782 1
Americium-241	U	0.00315	+/-0.0225	0.0218	+/-0.0221	0.0449	pCi/g				
Bismuth-212	U	0.0603	+/-0.0624	0.040	+/-0.0611	0.0845	pCi/g				
Bismuth-214		0.0627	+/-0.0284	0.00931	+/-0.0278	0.0196	pCi/g				
Cesium-134	U	0.00419	+/-0.00645	0.0059	+/-0.00632	0.0125	pCi/g				
Cesium-137	U	0.00179	+/-0.00595	0.00542	+/-0.00583	0.0114	pCi/g				
Cobalt-60	U	-0.00193	+/-0.00645	0.00537	+/-0.00632	0.0117	pCi/g				
Europium-152	U	0.0145	+/-0.015	0.0142	+/-0.0147	0.0296	pCi/g				
Europium-154	U	-0.00398	+/-0.0198	0.0168	+/-0.0194	0.036	pCi/g				
Europium-155	U	-0.00163	+/-0.0146	0.0148	+/-0.0144	0.0305	pCi/g				
Lead-212		0.122	+/-0.019	0.00771	+/-0.0186	0.016	pCi/g				
Lead-214		0.0903	+/-0.0249	0.00944	+/-0.0244	0.0197	pCi/g				
Manganese-54	U	0.00129	+/-0.00557	0.00492	+/-0.00546	0.0104	pCi/g				
Niobium-94	U	0.0028	+/-0.00521	0.00478	+/-0.0051	0.0101	pCi/g				
Potassium-40		4.36	+/-0.391	0.048	+/-0.383	0.105	pCi/g				
Radium-226		0.0627	+/-0.0284	0.00931	+/-0.0278	0.0196	pCi/g				
Silver-108m	U	0.0058	+/-0.00477	0.00477	+/-0.00467	0.00998	pCi/g				
Thallium-208		0.0353	+/-0.0114	0.00507	+/-0.0112	0.0107	pCi/g				
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid-ALL FSS											
Strontium-90	U	-0.034	+/-0.0137	0.0195	+/-0.0166	0.0418	pCi/g		LCW1 02/10/05	2025	399703 2
Rad Liquid Scintillation Analysis											
LSC, Tritium Dist, Solid-HTD2,ALL FSS											
Tritium	U	5.94	+/-6.86	5.53	+/-6.87	11.1	pCi/g		ATH1 02/07/05	1356	399727 3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	02/07/05	0735	399557
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	02/04/05	1813	399555

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID: 9801-0000-123-B3-04
Sample ID: 130069005

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch Mtd.
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	82	(25%-125%)

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

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Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID:	9801-0000-123-B5-05	Project:	YANK01204
Sample ID:	130069006	Client ID:	YANK001
Matrix:	B	Vol. Recv.:	
Collect Date:	02-FEB-05		
Receive Date:	04-FEB-05		
Collector:	Client		
Moisture:	.209%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd.
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.123	+/-0.050	0.0212	+/-0.049	0.0449	pCi/g		MJH1	02/07/05	1911	399782	1
Americium-241	U	0.030	+/-0.0385	0.0283	+/-0.0377	0.0581	pCi/g						
Bismuth-212		0.118	+/-0.102	0.0435	+/-0.0998	0.0918	pCi/g						
Bismuth-214		0.089	+/-0.0247	0.0113	+/-0.0242	0.0236	pCi/g						
Cesium-134	U	0.000935	+/-0.00749	0.0067	+/-0.00734	0.0141	pCi/g						
Cesium-137	U	0.00105	+/-0.00703	0.00643	+/-0.00689	0.0135	pCi/g						
Cobalt-60	U	0.00419	+/-0.00708	0.00643	+/-0.00694	0.0138	pCi/g						
Europium-152	U	-7.410E-05	+/-0.0184	0.0171	+/-0.018	0.0354	pCi/g						
Europium-154	U	-0.00718	+/-0.0209	0.0177	+/-0.0205	0.0379	pCi/g						
Europium-155	U	0.00555	+/-0.0201	0.0197	+/-0.0197	0.0405	pCi/g						
Lead-212		0.110	+/-0.0223	0.0105	+/-0.0218	0.0215	pCi/g						
Lead-214		0.0956	+/-0.0283	0.0124	+/-0.0277	0.0257	pCi/g						
Manganese-54	U	-0.00627	+/-0.0068	0.00561	+/-0.00666	0.0119	pCi/g						
Niobium-94	U	-0.000917	+/-0.00633	0.00566	+/-0.0062	0.0119	pCi/g						
Potassium-40		4.83	+/-0.558	0.0538	+/-0.546	0.117	pCi/g						
Radium-226		0.089	+/-0.0247	0.0113	+/-0.0242	0.0236	pCi/g						
Silver-108m	U	0.000665	+/-0.00643	0.00585	+/-0.0063	0.0122	pCi/g						
Thallium-208		0.0368	+/-0.0135	0.00641	+/-0.0133	0.0134	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0119	+/-0.0208	0.0215	+/-0.0211	0.0456	pCi/g		LCW1	02/10/05	2026	399703	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	0.776	+/-6.66	5.56	+/-6.66	11.1	pCi/g		ATH1	02/07/05	1428	399727	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	BJ1	02/07/05	0735	399557
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	DLD1	02/04/05	1814	399555

The following Analytical Methods were performed

Method	Description

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: February 11, 2005

Client Sample ID: 9801-0000-123-B5-05
Sample ID: 130069006

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch Mtd.
1	EML HASL 300, 4.5.2.3										
2	EPA 905.0 Modified										
3	EPA 906.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	81	(25%-125%)

Notes:
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- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

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Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: February 11, 2005

Client: Connecticut Yankee Atomic Power
Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut

Contact: Mr. Pete Hollenbeck

Workorder: 130069

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 399762										
QC1200784706 130069001 DUP										
Americium-241	U	0.0816	U	-0.0626	pCi/g	N/A		(0% - 100%)	BJB1	02/10/05 13:01
Uncert:		+/-0.104		+/-0.139						
TPU:		+/-0.104		+/-0.139						
Curium-242		0.156		0.217	pCi/g	33		(0% - 100%)		
Uncert:		+/-0.125		+/-0.174						
TPU:		+/-0.126		+/-0.177						
Curium-243/244	U	0.128	U	0.0584	pCi/g	75		(0% - 100%)		
Uncert:		+/-0.132		+/-0.181						
TPU:		+/-0.133		+/-0.181						
QC1200784708 LCS										
Americium-241	10.6			9.25	pCi/g		87	(75%-125%)		
Uncert:				+/-0.974						
TPU:				+/-1.61						
Curium-242			U	0.0403	pCi/g					
Uncert:				+/-0.0755						
TPU:				+/-0.0757						
Curium-243/244	13.1			12.6	pCi/g		96	(75%-125%)		
Uncert:				+/-1.13						
TPU:				+/-2.08						
QC1200784705 MB										
Americium-241			U	0.0202	pCi/g					
Uncert:				+/-0.154						
TPU:				+/-0.154						
Curium-242			U	0.0448	pCi/g					
Uncert:				+/-0.0716						
TPU:				+/-0.0719						
Curium-243/244			U	0.0192	pCi/g					
Uncert:				+/-0.144						
TPU:				+/-0.144						
QC1200784707 130069001 MS										
Americium-241	10.7 U	0.0816		11.8	pCi/g		110	(75%-125%)		
Uncert:		+/-0.104		+/-1.10						
TPU:		+/-0.104		+/-1.97						
Curium-242		0.156	U	0.00109	pCi/g					
Uncert:		+/-0.125		+/-0.0595						
TPU:		+/-0.126		+/-0.0595						
Curium-243/244	13.2 U	0.128		14.1	pCi/g		106	(75%-125%)		
Uncert:		+/-0.132		+/-1.20						
TPU:		+/-0.133		+/-2.29						
Batch 399763										
QC1200784710 130069001 DUP										
Plutonium-238	U	-0.0265	U	-0.0464	pCi/g	N/A		(0% - 100%)	BJB1	02/09/05 14:17

QC Summary

Workorder: 130069

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 399763										
	Uncert:	+/-0.0968		+/-0.0845						
	TPU:	+/-0.0968		+/-0.0846						
Plutonium-239/240	U	0.0457	U	0.0827	pCi/g	58		(0% - 100%)		
	Uncert:	+/-0.0858		+/-0.101						
	TPU:	+/-0.086		+/-0.101						
QC1200784712 LCS										
Plutonium-238			U	0.00969	pCi/g			(75%-125%)		
	Uncert:			+/-0.092						
	TPU:			+/-0.092						
Plutonium-239/240	9.30			10.0	pCi/g		108	(75%-125%)		
	Uncert:			+/-1.08						
	TPU:			+/-1.66						
QC1200784709 MB										
Plutonium-238			U	-0.00361	pCi/g					02/09/05 14:17
	Uncert:			+/-0.0703						
	TPU:			+/-0.0703						
Plutonium-239/240			U	-0.0108	pCi/g					
	Uncert:			+/-0.0467						
	TPU:			+/-0.0468						
QC1200784711 130069001 MS										
Plutonium-238	U	-0.0265	U	0.0356	pCi/g			(75%-125%)		02/09/05 14:17
	Uncert:	+/-0.0968		+/-0.146						
	TPU:	+/-0.0968		+/-0.146						
Plutonium-239/240	9.37 U	0.0457		11.3	pCi/g		120	(75%-125%)		
	Uncert:	+/-0.0858		+/-1.15						
	TPU:	+/-0.086		+/-1.83						
Batch 399764										
QC1200784714 130069001 DUP										
Plutonium-241	U	-2.96	U	-0.096	pCi/g	N/A		(0% - 100%)	BJB1	02/10/05 22:40
	Uncert:	+/-5.26		+/-5.79						
	TPU:	+/-5.27		+/-5.79						
QC1200784716 LCS										
Plutonium-241	138			122	pCi/g		89	(75%-125%)		02/10/05 23:44
	Uncert:			+/-9.70						
	TPU:			+/-15.4						
QC1200784713 MB										
Plutonium-241			U	0.439	pCi/g					02/10/05 22:09
	Uncert:			+/-6.12						
	TPU:			+/-6.12						
QC1200784715 130069001 MS										
Plutonium-241	136 U	-2.96		122	pCi/g		90	(75%-125%)		02/10/05 23:12
	Uncert:	+/-5.26		+/-10.1						
	TPU:	+/-5.27		+/-15.9						
Rad Gamma Spec										
Batch 399782										
QC1200784755 130069001 DUP										
Actinium-228		0.178		0.108	pCi/g	49		(0% - 100%)	MJH1	02/08/05 07:22
	Uncert:	+/-0.0735		+/-0.0693						
				+/-0.0679						

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 130069

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 399782											
	TPU:	+/-0.072									
Americium-241	U	-0.072	U	0.0194	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0685		+/-0.0479							
	TPU:	+/-0.0672		+/-0.047							
Bismuth-212	U	0.118		0.172	pCi/g	38		(0% - 100%)			
	Uncert:	+/-0.0934		+/-0.158							
	TPU:	+/-0.0915		+/-0.155							
Bismuth-214		0.0816	UUI	0.00	pCi/g	3		(0% - 100%)			
	Uncert:	+/-0.0347		+/-0.0469							
	TPU:	+/-0.0341		+/-0.046							
Cesium-134	U	0.0122	U	0.0198	pCi/g	47		(0% - 100%)			
	Uncert:	+/-0.0144		+/-0.0174							
	TPU:	+/-0.0142		+/-0.017							
Cesium-137		0.0187	U	0.00713	pCi/g	90		(0% - 100%)			
	Uncert:	+/-0.0124		+/-0.0118							
	TPU:	+/-0.0122		+/-0.0116							
Cobalt-60	U	-0.00729	U	0.00382	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0116		+/-0.014							
	TPU:	+/-0.0114		+/-0.0137							
Europium-152	U	-0.00439	U	0.027	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0255		+/-0.0328							
	TPU:	+/-0.025		+/-0.0322							
Europium-154	U	-0.00286	U	0.0233	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0335		+/-0.0467							
	TPU:	+/-0.0329		+/-0.0458							
Europium-155	U	0.00297	U	-0.00679	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0286		+/-0.0318							
	TPU:	+/-0.0281		+/-0.0311							
Lead-212		0.176		0.163	pCi/g	8		(0% - 100%)			
	Uncert:	+/-0.0343		+/-0.0335							
	TPU:	+/-0.0336		+/-0.0328							
Lead-214		0.0754		0.137	pCi/g	58		(0% - 100%)			
	Uncert:	+/-0.0359		+/-0.0426							
	TPU:	+/-0.0352		+/-0.0418							
Manganese-54	U	-0.00335	U	0.00276	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.00992		+/-0.0122							
	TPU:	+/-0.00972		+/-0.012							
Niobium-94	U	-0.0027	U	0.000363	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0085		+/-0.0129							
	TPU:	+/-0.00833		+/-0.0126							
Potassium-40		10.8		10.3	pCi/g	5		(0% - 20%)			
	Uncert:	+/-0.869		+/-0.963							
	TPU:	+/-0.851		+/-0.943							
Radium-226		0.0816		0.0794	pCi/g	3		(0% - 100%)			
	Uncert:	+/-0.0347		+/-0.0469							
	TPU:	+/-0.0341		+/-0.046							
Silver-108m	U	0.0043	U	-0.0047	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.00986		+/-0.0111							

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QC Summary

Workorder: 130069

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 399782										
	TPU:	+/-0.00966		+/-0.0109						
Thallium-208	UUI	0.00		0.0418	pCi/g	27		(0% - 100%)		
	Uncert:	+/-0.0208		+/-0.0274						
	TPU:	+/-0.0204		+/-0.0269						
QC1200784756 LCS										
Actinium-228			U	-0.185	pCi/g					02/09/05 10:06
	Uncert:			+/-0.526						
	TPU:			+/-0.516						
Americium-241	23.4			23.5	pCi/g		100	(75%-125%)		
	Uncert:			+/-3.04						
	TPU:			+/-2.98						
Bismuth-212			U	-0.0433	pCi/g					
	Uncert:			+/-0.813						
	TPU:			+/-0.797						
Bismuth-214			U	0.0874	pCi/g					
	Uncert:			+/-0.199						
	TPU:			+/-0.195						
Cesium-134			U	-0.019	pCi/g					
	Uncert:			+/-0.128						
	TPU:			+/-0.126						
Cesium-137	9.11			9.94	pCi/g		109	(75%-125%)		
	Uncert:			+/-0.824						
	TPU:			+/-0.808						
Cobalt-60	13.2			14.8	pCi/g		112	(75%-125%)		
	Uncert:			+/-1.10						
	TPU:			+/-1.08						
Europium-152			U	0.292	pCi/g					
	Uncert:			+/-0.342						
	TPU:			+/-0.335						
Europium-154			U	0.0565	pCi/g					
	Uncert:			+/-0.260						
	TPU:			+/-0.254						
Europium-155			U	0.0816	pCi/g					
	Uncert:			+/-0.244						
	TPU:			+/-0.239						
Lead-212			U	0.0263	pCi/g					
	Uncert:			+/-0.140						
	TPU:			+/-0.137						
Lead-214			U	0.0721	pCi/g					
	Uncert:			+/-0.196						
	TPU:			+/-0.192						
Manganese-54			U	-0.104	pCi/g					
	Uncert:			+/-0.129						
	TPU:			+/-0.127						
Niobium-94			U	-0.0534	pCi/g					
	Uncert:			+/-0.0961						
	TPU:			+/-0.0942						
Potassium-40			U	0.890	pCi/g					

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QC Summary

Workorder: 130069

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 399782											
	Uncert:			+/-0.987							
	TPU:			+/-0.967							
Radium-226			U	0.0874	pCi/g			(75%-125%)			
	Uncert:			+/-0.199							
	TPU:			+/-0.195							
Silver-108m			U	-0.0208	pCi/g						
	Uncert:			+/-0.0961							
	TPU:			+/-0.0942							
Thallium-208			U	-0.0356	pCi/g						
	Uncert:			+/-0.103							
	TPU:			+/-0.101							
QC1200784754 MB											
Actinium-228			U	0.00448	pCi/g					02/07/05	19:12
	Uncert:			+/-0.0165							
	TPU:			+/-0.0162							
Americium-241			U	0.0151	pCi/g						
	Uncert:			+/-0.0244							
	TPU:			+/-0.0239							
Bismuth-212			U	0.0259	pCi/g						
	Uncert:			+/-0.0352							
	TPU:			+/-0.0345							
Bismuth-214			U	0.00709	pCi/g						
	Uncert:			+/-0.0211							
	TPU:			+/-0.0207							
Cesium-134			U	-0.00232	pCi/g						
	Uncert:			+/-0.00498							
	TPU:			+/-0.00488							
Cesium-137			U	0.00377	pCi/g						
	Uncert:			+/-0.00393							
	TPU:			+/-0.00385							
Cobalt-60			U	0.00272	pCi/g						
	Uncert:			+/-0.00451							
	TPU:			+/-0.00442							
Europium-152			U	0.000169	pCi/g						
	Uncert:			+/-0.0108							
	TPU:			+/-0.0106							
Europium-154			U	0.0075	pCi/g						
	Uncert:			+/-0.0132							
	TPU:			+/-0.013							
Europium-155			U	0.00235	pCi/g						
	Uncert:			+/-0.0107							
	TPU:			+/-0.0105							
Lead-212			U	0.00582	pCi/g						
	Uncert:			+/-0.0137							
	TPU:			+/-0.0134							
Lead-214			U	0.00872	pCi/g						
	Uncert:			+/-0.0189							
	TPU:			+/-0.0186							

QC Summary

Workorder: 130069

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 399782										
Manganese-54			U	0.000286	pCi/g					
Uncert:				+/-0.00444						
TPU:				+/-0.00435						
Niobium-94			U	0.00028	pCi/g					
Uncert:				+/-0.00427						
TPU:				+/-0.00418						
Potassium-40			U	0.0763	pCi/g					
Uncert:				+/-0.0573						
TPU:				+/-0.0562						
Radium-226			U	0.00709	pCi/g					
Uncert:				+/-0.0211						
TPU:				+/-0.0207						
Silver-108m			U	0.002	pCi/g					
Uncert:				+/-0.00394						
TPU:				+/-0.00386						
Thallium-208			U	0.00471	pCi/g					
Uncert:				+/-0.00463						
TPU:				+/-0.00454						
Rad Gas Flow										
Batch 399703										
QC1200784504 130069001 DUP										
Strontium-90	U	-0.0138	U	-0.0118	pCi/g	N/A		(0% - 100%)	LCW1	02/10/05 20:26
Uncert:		+/-0.0129		+/-0.0172						
TPU:		+/-0.0133		+/-0.0176						
QC1200784506 LCS										
Strontium-90	3.01			3.26	pCi/g		108	(75%-125%)		02/10/05 16:43
Uncert:				+/-0.198						
TPU:				+/-0.881						
QC1200784503 MB										
Strontium-90			U	-0.000166	pCi/g					02/10/05 20:26
Uncert:				+/-0.0201						
TPU:				+/-0.0201						
QC1200784505 130069001 MS										
Strontium-90	5.73 U	-0.0138		6.41	pCi/g		112	(75%-125%)		02/10/05 16:43
Uncert:		+/-0.0129		+/-0.403						
TPU:		+/-0.0133		+/-1.88						
Rad Liquid Scintillation										
Batch 399723										
QC1200784592 130069001 DUP										
Iron-55	U	3.19	U	37.4	pCi/g	0		(0% - 100%)	DAJ1	02/10/05 15:28
Uncert:		+/-51.6		+/-56.2						
TPU:		+/-51.6		+/-56.3						
QC1200784594 LCS										
Iron-55	841			765	pCi/g		91	(75%-125%)		02/10/05 16:32
Uncert:				+/-74.5						
TPU:				+/-82.7						
QC1200784591 MB										
Iron-55			U	-23.3	pCi/g					02/10/05 14:57

QC Summary

Workorder: 130069

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation											
Batch 399723											
	Uncert:				+/-58.9						
	TPU:				+/-58.9						
QC1200784593 130069001 MS											
Iron-55	845	U	3.19		817	pCi/g		96	(75%-125%)		02/10/05 16:00
	Uncert:		+/-51.6		+/-75.1						
	TPU:		+/-51.6		+/-84.4						
Batch 399724											
QC1200784596 130069001 DUP											
Nickel-63		U	-10.9	U	-7.33	pCi/g	N/A		(0% - 100%)	DAJ1	02/10/05 17:55
	Uncert:		+/-10.8		+/-10.9						
	TPU:		+/-10.9		+/-10.9						
QC1200784598 LCS											
Nickel-63	647				558	pCi/g		86	(75%-125%)		02/10/05 18:58
	Uncert:				+/-22.1						
	TPU:				+/-29.0						
QC1200784595 MB											
Nickel-63				U	-2.78	pCi/g					02/10/05 17:24
	Uncert:				+/-10.6						
	TPU:				+/-10.6						
QC1200784597 130069001 MS											
Nickel-63	679	U	-10.9		591	pCi/g		87	(75%-125%)		02/10/05 18:27
	Uncert:		+/-10.8		+/-24.4						
	TPU:		+/-10.9		+/-31.4						
Batch 399725											
QC1200784600 130069001 DUP											
Carbon-14		U	-0.058	U	0.0162	pCi/g	N/A		(0% - 100%)	EGD1	02/07/05 17:05
	Uncert:		+/-0.100		+/-0.114						
	TPU:		+/-0.100		+/-0.114						
QC1200784602 LCS											
Carbon-14	7.21				7.58	pCi/g		105	(75%-125%)		02/07/05 18:10
	Uncert:				+/-0.409						
	TPU:				+/-0.425						
QC1200784599 MB											
Carbon-14				U	-0.03	pCi/g					02/07/05 16:18
	Uncert:				+/-0.114						
	TPU:				+/-0.114						
QC1200784601 130069001 MS											
Carbon-14	7.29	U	-0.058		6.90	pCi/g		95	(75%-125%)		02/07/05 17:38
	Uncert:		+/-0.100		+/-0.375						
	TPU:		+/-0.100		+/-0.390						
Batch 399727											
QC1200784609 130069001 DUP											
Tritium		U	3.86	U	2.67	pCi/g	0		(0% - 100%)	ATH1	02/07/05 15:33
	Uncert:		+/-6.76		+/-6.64						
	TPU:		+/-6.76		+/-6.64						
QC1200784611 LCS											
Tritium	76.7				73.9	pCi/g		96	(75%-125%)		02/07/05 16:38
	Uncert:				+/-9.43						
	TPU:				+/-10.7						

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QC Summary

Workorder: 130069

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 399727										
QC1200784608 MB										
Tritium			U	2.20	pCi/g					02/07/05 15:01
	Uncert:			+/-6.62						
	TPU:			+/-6.62						
QC1200784610 130069001 MS										
Tritium	76.7 U	3.86		67.3	pCi/g		83	(75%-125%)		02/07/05 16:05
	Uncert:	+/-6.76		+/-8.96						
	TPU:	+/-6.76		+/-9.99						

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Analytical Data Package Prepared For

Connecticut Yankee

Radiochemical Analysis By

STL Richland

2800 G.W. Way, Richland Wa, 99352, (509)-375-3131.

Assigned Laboratory Code: STLR

Data Package Contains 87 *Pages*

Report No.: 25203

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
25173		3107-0000-187-C-1C-01	J4B110186-7	F9EPH1AA	9F9EPH10	4043468
		3107-0000-187-C-1C-01	J4B110186-7	F9EPH1AC	9F9EPH10	4043472
		3107-0000-187-C-1C-02	J4B110186-8	F9EPK1AA	9F9EPK10	4043468
		3107-0000-187-C-1C-03	J4B110186-9	F9EPL1AA	9F9EPL10	4043468
		3107-0000-187-C-1C-04	J4B110186-10	F9EPN1AA	9F9EPN10	4043468
		3107-0000-187-C-2C-05	J4B110186-11	F9EPQ1AA	9F9EPQ10	4043468
		3107-0000-187-C-2C-06	J4B110186-12	F9EPR1AA	9F9EPR10	4043468
		3107-0000-187-C-2C-06	J4B110186-12	F9EPR1AC	9F9EPR10	4043472
		3107-0000-187-C-2C-07	J4B110186-13	F9EPT1AC	9F9EPT10	4043468
		3107-0000-187-C-2C-07	J4B110186-13	F9EPT1AD	9F9EPT10	4043472
		3107-0000-187-C-2C-07	J4B110186-13	F9EPT1AA	9F9EPT10	4043475
		3107-0000-188-C-1C-01	J4B110186-31	F9ETD1AG	9F9ETD10	4043465
		3107-0000-188-C-1C-01	J4B110186-31	F9ETD1AE	9F9ETD10	4043466
		3107-0000-188-C-1C-01	J4B110186-31	F9ETD1AF	9F9ETD10	4043467
		3107-0000-188-C-1C-01	J4B110186-31	F9ETD1AC	9F9ETD10	4043471
		3107-0000-188-C-1C-01	J4B110186-31	F9ETD1AD	9F9ETD10	4043472
		3107-0000-188-C-1C-01	J4B110186-31	F9ETD1AA	9F9ETD10	4043475
		3107-0000-188-C-1C-02	J4B110186-32	F9ETM1AA	9F9ETM10	4043471
		3107-0000-188-C-1C-03	J4B110186-33	F9ETT1AA	9F9ETT10	4043471
		3107-0000-188-C-1C-04	J4B110186-34	F9ETX1AA	9F9ETX10	4043471
		3107-0000-188-C-1C-05	J4B110186-35	F9ET21AA	9F9ET210	4043471
		3107-0000-188-C-1C-05	J4B110186-35	F9ET21AC	9F9ET210	4043472
		3107-0000-188-C-1C-06	J4B110186-36	F9ET51AC	9F9ET510	4043471
		3107-0000-188-C-1C-06	J4B110186-36	F9ET51AD	9F9ET510	4043472
		3107-0000-188-C-1C-06	J4B110186-36	F9ET51AA	9F9ET510	4043475
		3107-0000-189-C-1C-01	J4B110186-1	F9EM21AA	9F9EM210	4043468

Report No.: 25203

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
25173		3107-0000-189-C-1C-01	J4B110186-1	F9EM21AC	9F9EM210	4043472
		3107-0000-189-C-1C-02	J4B110186-2	F9EN71AA	9F9EN710	4043468
		3107-0000-189-C-2C-03	J4B110186-3	F9EPC1AA	9F9EPC10	4043468
		3107-0000-189-C-2C-04	J4B110186-4	F9EPD1AA	9F9EPD10	4043468
		3107-0000-189-C-2C-05	J4B110186-5	F9EPE1AA	9F9EPE10	4043468
		3107-0000-189-C-2C-05	J4B110186-5	F9EPE1AC	9F9EPE10	4043472
		3107-0000-189-C-2C-06	J4B110186-6	F9EPG1AA	9F9EPG10	4043468
		3107-0000-189-C-2C-06	J4B110186-6	F9EPG1AD	9F9EPG10	4043472
		3107-0000-189-C-2C-06	J4B110186-6	F9EPG1AC	9F9EPG10	4043475
		3107-0000-190-C1C-01	J4B110186-14	F9EP41AA	9F9EP410	4043468
		3107-0000-190-C1C-01	J4B110186-14	F9EP41AC	9F9EP410	4043472
		3107-0000-190-C1C-02	J4B110186-15	F9EP81AA	9F9EP810	4043468
		3107-0000-190-C1C-03	J4B110186-16	F9EQC1AA	9F9EQC10	4043468
		3107-0000-190-C1C-04	J4B110186-17	F9EQF1AA	9F9EQF10	4043468
		3107-0000-190-C1C-05	J4B110186-18	F9EQJ1AA	9F9EQJ10	4043468
		3107-0000-190-C2C-06	J4B110186-19	F9EQQ1AA	9F9EQQ10	4043471
		3107-0000-190-C2C-06	J4B110186-19	F9EQQ1AC	9F9EQQ10	4043472
		3107-0000-190-C2C-07	J4B110186-20	F9EQX1AA	9F9EQX10	4043471
		3107-0000-190-C2C-07	J4B110186-20	F9EQX1AD	9F9EQX10	4043472
		3107-0000-190-C2C-07	J4B110186-20	F9EQX1AC	9F9EQX10	4043475
		3107-0000-191-C-1C-01	J4B110186-21	F9EQ51AA	9F9EQ510	4043471
		3107-0000-191-C-1C-01	J4B110186-21	F9EQ51AC	9F9EQ510	4043472
		3107-0000-191-C-1C-02	J4B110186-22	F9ERA1AA	9F9ERA10	4043471
		3107-0000-191-C-1C-03	J4B110186-23	F9ERD1AA	9F9ERD10	4043471
		3107-0000-191-C-1C-04	J4B110186-24	F9ERE1AA	9F9ERE10	4043471
		3107-0000-191-C-2C-05	J4B110186-25	F9ERG1AA	9F9ERG10	4043471
		3107-0000-191-C-2C-06	J4B110186-26	F9ERH1AA	9F9ERH10	4043471
		3107-0000-191-C-2C-07	J4B110186-27	F9ERM1AA	9F9ERM10	4043471
		3107-0000-191-C-2C-08	J4B110186-28	F9ERQ1AA	9F9ERQ10	4043471
		3107-0000-191-C-3C-09	J4B110186-29	F9ERW1AA	9F9ERW10	4043471
		3107-0000-191-C-3C-09	J4B110186-29	F9ERW1AC	9F9ERW10	4043472
		3107-0000-191-C-3C-10	J4B110186-30	F9ER01AA	9F9ER010	4043471
		3107-0000-191-C-3C-10	J4B110186-30	F9ER01AD	9F9ER010	4043472
		3107-0000-191-C-3C-10	J4B110186-30	F9ER01AC	9F9ER010	4043475

SEVERN TRENT STL

Certificate of Analysis

Connecticut Yankee Atomic Power
362 Injun Hollow Road
East Hampton, CT 06424

March 18, 2004

Attention: Jack McCarthy/Pete Hollenbeck

Date Received in Lab	:	February 11, 2004
Sample Type	:	Thirty Six (36) Solid
SDG Number	:	25173
Project Name/Number	:	Haddam Neck Decommissioning
COC Number	:	2004-00008, 2004-00009, 2004-00010, 2004-00011, 2004-00012

CASE NARRATIVE

I. Introduction

On February 11, 2004, thirty six solid samples were received at the STL Richland (STLR) laboratory for radiochemical analyses. The samples were assigned the STLR identification numbers as described on the cover page of the Analytical Data Package report form. The samples were assigned to Lot Number J4B110186.

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were:

Alpha Spectroscopy
Americium-241 by method RICH-RC-5080
Curium-243/244 by method RICH-RC-5080
Plutonium-238, -239/240 by method RICH-RC-5010
Gas Proportional Counting
Strontium-90 by method RICH-RC-5006

Liquid Scintillation Counting
Plutonium-241 by method RICH-RC-5010
Tritium by method RICH-RC-5037
Gamma Spectroscopy
Gamma by method RICH-RC-5017

IV. Quality Control

The analytical result for each analysis performed includes a minimum of one laboratory control sample (LCS), and one reagent blank sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

Americium-241 by method RICH-RC-5080:
The LCS recovery was calculated low due to the smeared spectra. The Am-241 peak smeared slightly into the Am-243 region. The sample results are below the CRDL. Except as noted, the LCS, batch blank, sample and sample duplicate results are within acceptance limits.

Curium-243/244 by method RICH-RC-5080:
The LCS recovery was calculated low due to the smeared spectra. The Am-241 peak smeared slightly into the Am-243 region. The sample results are below the CRDL. Except as noted, the LCS, batch blank, sample and sample duplicate results are within acceptance limits.

Plutonium-238, -239/240 by method RICH-RC-5010:
The LCS, batch blank, sample and sample duplicate results are within acceptance limits.

Strontium-90 by method RICH-RC-5006:
The LCS, batch blank, sample and sample duplicate results are within acceptance limits.

Plutonium-241 by method RICH-RC-5010:
The LCS, batch blank, samples and sample duplicate results are within acceptance limits.

Tritium by method RICH-RC-5037:
The LCS, batch blank, sample and sample duplicate results are within acceptance limits.

Gamma by method RICH RC 5013/5017:
There was insufficient sample volume received to perform a sample duplicate analysis from a second sample aliquot. Precision determination was performed by recounting a sample on a second detector.

The following may be false positives due to the key-line activity greater than the MDA but the identification of the radionuclide was rejected by the abundance criteria:

Connecticut Yankee Atomic Power
March 18, 2004

Isotope(s)	Sample ID(s)
Tl-208, Bi-214, Ac-228	3107-0000-189-C-1C-01, 3107-0000-189-C-2C-05, 3107-0000-187-C-2C-06, 3107-0000-190-C2C-07, 3107-0000-191-C-3C-10, 3107-0000-188-C-1C-01, 3107-0000-188-C-1C-06
Bi-212, Bi-214	3107-0000-189-C-2C-05
Bi-214, Ac-228	3107-0000-189-C-2C-06, 3107-0000-187-C-1C-01, 3107-0000-191-C-1C-01, 3107-0000-188-C-1C-05
Tl-208, Bi-214	3107-0000-187-C-2C-07, 3107-0000-190-C1C-01
Tl-208, Bi-212, Bi-214	3107-0000-190-C2C-06
Bi-214	3107-0000-191-C-3C-09

Except as noted, the LCS, batch blank, and sample results are within acceptance limits.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

for Jadine Waddell
Theresa H. Kallsen
Project Management Assistant

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-241 (unless otherwise specified in the case narrative)		
The Gross Beta LCS is prepared with Sr/Y-90 (unless otherwise specified in the case narrative)		

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/vn), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) *u_c - Combined Uncertainty.*	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, *u_c the combined uncertainty*. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = (S-D)/(sqrt($TPUs^2$ + $TPUd^2$)) as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate. TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 18-Mar-04

Report No. : 25203

SDG No: 25173

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043475 CMUD									
	3107-0000-187-C-2C-07								
	F9EPT1AA	SR-90	2.15E-01 +- 4.43E-02		pCi/g	57%	4.38E-02	6.00E-02	
	3107-0000-188-C-1C-01								
	F9ETD1AA	SR-90	2.69E-01 +- 5.21E-02		pCi/g	51%	3.84E-02	6.00E-02	
	3107-0000-188-C-1C-06								
	F9ET51AA	SR-90	3.52E-01 +- 6.23E-02		pCi/g	57%	3.30E-02	6.00E-02	
	3107-0000-189-C-2C-06								
	F9EPG1AC	SR-90	5.84E-02 +- 2.61E-02	J	pCi/g	58%	4.27E-02	6.00E-02	
	3107-0000-189-C-2C-06 DUP								
	F9EPG1AE	SR-90	5.01E-02 +- 2.66E-02	J	pCi/g	54%	4.52E-02	6.00E-02	
	3107-0000-190-C2C-07								
	F9EOX1AC	SR-90	2.06E-01 +- 4.26E-02		pCi/g	54%	3.86E-02	6.00E-02	
	3107-0000-191-C-3C-10								
	F9ER01AC	SR-90	8.47E-02 +- 2.67E-02		pCi/g	50%	3.52E-02	6.00E-02	
4043465 RICHRC5080									
	3107-0000-188-C-1C-01								
	F9ETD1AG	AM-241	0.00E+00 +- 1.66E-02	U	pCi/g	60%	1.83E-02	1.03E+00	
		CM-242	0.00E+00 +- 1.99E-02	U	pCi/g	60%	2.20E-02		
		CM-243/244	0.00E+00 +- 1.66E-02	U	pCi/g	60%	1.84E-02	1.16E+00	
	3107-0000-188-C-1C-01 DUP								
	F9ETD1AH	AM-241	1.26E-02 +- 2.02E-02	U	pCi/g	60%	3.36E-02	1.03E+00	
		CM-242	0.00E+00 +- 2.06E-02	U	pCi/g	60%	2.28E-02		
		CM-243/244	0.00E+00 +- 1.72E-02	U	pCi/g	60%	1.91E-02	1.16E+00	
4043466 RICHRC5010									
	3107-0000-188-C-1C-01								
	F9ETD1AE	PU-238	0.00E+00 +- 1.28E-02	U	pCi/g	70%	1.41E-02	1.18E+00	
		PU239/40	0.00E+00 +- 1.27E-02	U	pCi/g	70%	1.41E-02	1.07E+00	
	3107-0000-188-C-1C-01 DUP								
	F9ETD1AJ	PU-238	1.31E-02 +- 1.86E-02	U	pCi/g	51%	1.77E-02	1.18E+00	
		PU239/40	0.00E+00 +- 1.60E-02	U	pCi/g	51%	1.77E-02	1.07E+00	
4043472 RICHRC5017									
	3107-0000-187-C-1C-01								
	F9EPH1AC	AC-228	4.16E-01 +- 1.23E-01	U	pCi/g		2.52E-01		
		AG-108M	-1.29E-02 +- 1.83E-02	U	pCi/g		3.00E-02		
		AM-241	-2.45E-03 +- 5.07E-02	U	pCi/g		7.32E-02		
		BI-212	2.97E-01 +- 3.40E-01	U	pCi/g		6.63E-01	3.00E+00	
		BI-214	4.55E-01 +- 1.08E-01	U	pCi/g		1.78E-01	1.00E+00	
		CO-60	-1.81E-02 +- 2.24E-02	U	pCi/g		3.57E-02	1.52E-01	
		CS-134	3.68E-02 +- 2.76E-02	U	pCi/g		5.63E-02	1.87E-01	

STL Richland

rptSTLRchSaSummary2 V4.07 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

Date: 18-Mar-04

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 25203

SDG No: 25173

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043472	RICHRC5017								
	3107-0000-187-C-1C-01								
	F9EPH1AC	CS-137	4.10E-03 +- 2.24E-02	U	pCi/g		4.17E-02	3.16E-01	
		EU-152	1.91E-02 +- 6.29E-02	U	pCi/g		1.14E-01	4.04E-01	
		EU-154	6.61E-02 +- 7.41E-02	U	pCi/g		1.53E-01	3.72E-01	
		EU-155	-5.04E-03 +- 5.88E-02	U	pCi/g		1.02E-01	1.57E+01	
		K-40	6.99E+00 +- 1.18E+00		pCi/g		3.95E-01		
		MN-54	-1.37E-03 +- 2.46E-02	U	pCi/g		4.41E-02	6.96E-01	
		NB-94	-1.20E-02 +- 1.90E-02	U	pCi/g		3.15E-02	2.85E-01	
		PB-212	4.18E-01 +- 9.63E-02	J	pCi/g		9.04E-02	1.00E+00	
		PB-214	5.45E-01 +- 1.20E-01	J	pCi/g		7.57E-02	1.00E+00	
		TL-208	1.01E-01 +- 4.47E-02	J	pCi/g		3.78E-02	1.00E+00	
	3107-0000-187-C-2C-06								
	F9EPR1AC	AC-228	4.16E-01 +- 1.76E-01	U	pCi/g		2.92E-01		
		AG-108M	4.93E-04 +- 1.90E-02	U	pCi/g		3.40E-02		
		AM-241	4.58E-03 +- 6.73E-02	U	pCi/g		1.15E-01		
		BI-212	5.34E-01 +- 4.09E-01	U	pCi/g		8.05E-01	3.00E+00	
		BI-214	3.34E-01 +- 9.67E-02	U	pCi/g		1.65E-01	1.00E+00	
		CO-60	1.86E-02 +- 2.51E-02	U	pCi/g		5.30E-02	1.52E-01	
		CS-134	3.69E-02 +- 3.03E-02	U	pCi/g		6.06E-02	1.87E-01	
		CS-137	-2.97E-02 +- 2.52E-02	U	pCi/g		3.81E-02	3.16E-01	
		EU-152	-7.36E-02 +- 6.89E-02	U	pCi/g		1.07E-01	4.04E-01	
		EU-154	-3.58E-02 +- 8.58E-02	U	pCi/g		1.48E-01	3.72E-01	
		EU-155	3.40E-02 +- 5.86E-02	U	pCi/g		1.05E-01	1.57E+01	
		K-40	6.89E+00 +- 1.29E+00		pCi/g		4.24E-01		
		MN-54	-4.39E-03 +- 2.54E-02	U	pCi/g		4.49E-02	6.96E-01	
		NB-94	3.68E-03 +- 2.39E-02	U	pCi/g		4.48E-02	2.85E-01	
		PB-212	3.69E-01 +- 1.00E-01	J	pCi/g		8.71E-02	1.00E+00	
		PB-214	3.67E-01 +- 1.32E-01	J	pCi/g		8.78E-02	1.00E+00	
		TL-208	1.57E-01 +- 4.78E-02	U	pCi/g		8.04E-02	1.00E+00	
	3107-0000-187-C-2C-07								
	F9EPT1AD	AC-228	6.51E-01 +- 2.14E-01		pCi/g		1.83E-01		
		AG-108M	-3.89E-02 +- 2.63E-02	U	pCi/g		3.90E-02		
		AM-241	2.80E-02 +- 5.37E-02	U	pCi/g		8.69E-02		
		BI-212	3.11E-01 +- 5.41E-01	U	pCi/g		1.02E+00	3.00E+00	
		BI-214	3.74E-01 +- 1.50E-01	U	pCi/g		2.24E-01	1.00E+00	
		CO-60	-1.74E-02 +- 3.75E-02	U	pCi/g		6.43E-02	1.52E-01	
		CS-134	5.08E-02 +- 3.77E-02	U	pCi/g		7.84E-02	1.87E-01	
		CS-137	2.30E-02 +- 3.27E-02	U	pCi/g		6.43E-02	3.16E-01	

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

Date: 18-Mar-04

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 25203

SDG No: 25173

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043472 RICHRC5017									
3107-0000-187-C-2C-07									
	F9EPT1AD	EU-152	-6.82E-02 +- 8.10E-02	U	pCi/g		1.34E-01	4.04E-01	
		EU-154	-2.72E-02 +- 8.94E-02	U	pCi/g		1.60E-01	3.72E-01	
		EU-155	8.05E-02 +- 7.49E-02	U	pCi/g		1.36E-01	1.57E+01	
		K-40	7.95E+00 +- 1.57E+00		pCi/g		4.52E-01		
		MN-54	1.86E-02 +- 3.55E-02	U	pCi/g		6.82E-02	6.96E-01	
		NB-94	-2.09E-02 +- 3.20E-02	U	pCi/g		5.28E-02	2.85E-01	
		PB-212	4.20E-01 +- 9.63E-02	J	pCi/g		1.05E-01	1.00E+00	
		PB-214	4.98E-01 +- 1.45E-01	J	pCi/g		1.13E-01	1.00E+00	
		TL-208	1.71E-01 +- 7.28E-02	U	pCi/g		1.04E-01	1.00E+00	
3107-0000-188-C-1C-01									
	F9ETD1AD	AC-228	4.07E-01 +- 2.08E-01	U	pCi/g		3.18E-01		
		AG-108M	1.48E-02 +- 2.20E-02	U	pCi/g		4.19E-02		
		AM-241	1.60E-01 +- 1.59E-01	U	pCi/g		2.92E-01		
		BI-212	3.98E-01 +- 4.66E-01	U	pCi/g		8.89E-01	3.00E+00	
		BI-214	4.75E-01 +- 1.16E-01	U	pCi/g		1.96E-01	1.00E+00	
		CO-60	1.29E-02 +- 2.61E-02	U	pCi/g		5.38E-02	1.52E-01	
		CS-134	5.48E-03 +- 3.61E-02	U	pCi/g		6.55E-02	1.87E-01	
		CS-137	3.25E-02 +- 3.17E-02	U	pCi/g		6.20E-02	3.16E-01	
		EU-152	1.66E-02 +- 7.07E-02	U	pCi/g		1.27E-01	4.04E-01	
		EU-154	-3.17E-02 +- 9.72E-02	U	pCi/g		1.72E-01	3.72E-01	
		EU-155	-3.40E-02 +- 8.54E-02	U	pCi/g		1.41E-01	1.57E+01	
		K-40	7.48E+00 +- 1.45E+00		pCi/g		4.42E-01		
		MN-54	3.05E-02 +- 3.01E-02	U	pCi/g		5.96E-02	6.96E-01	
		NB-94	1.59E-02 +- 2.24E-02	U	pCi/g		4.51E-02	2.85E-01	
		PB-212	4.08E-01 +- 1.14E-01	J	pCi/g		7.69E-02	1.00E+00	
		PB-214	4.80E-01 +- 1.33E-01	J	pCi/g		9.04E-02	1.00E+00	
		TL-208	1.56E-01 +- 6.16E-02	U	pCi/g		9.27E-02	1.00E+00	
3107-0000-188-C-1C-05									
	F9ET21AC	AC-228	4.39E-01 +- 1.69E-01	U	pCi/g		2.74E-01		
		AG-108M	5.74E-03 +- 1.83E-02	U	pCi/g		3.35E-02		
		AM-241	4.78E-02 +- 4.33E-02	U	pCi/g		7.32E-02		
		BI-212	2.80E-01 +- 3.50E-01	U	pCi/g		6.72E-01	3.00E+00	
		BI-214	3.94E-01 +- 1.08E-01	U	pCi/g		1.73E-01	1.00E+00	
		CO-60	5.04E-03 +- 1.99E-02	U	pCi/g		3.95E-02	1.52E-01	
		CS-134	3.64E-02 +- 2.71E-02	U	pCi/g		5.48E-02	1.87E-01	
		CS-137	-1.03E-02 +- 2.30E-02	U	pCi/g		3.97E-02	3.16E-01	
		EU-152	3.34E-02 +- 6.35E-02	U	pCi/g		1.17E-01	4.04E-01	

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 18-Mar-04

Report No. : 25203

SDG No: 25173

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043472	RICHRC5017								
3107-0000-188-C-1C-05									
	F9ET21AC	EU-154	3.84E-02 +- 6.65E-02	U	pCi/g		1.33E-01	3.72E-01	
		EU-155	2.99E-02 +- 5.84E-02	U	pCi/g		1.02E-01	1.57E+01	
		K-40	5.25E+00 +- 1.03E+00		pCi/g		3.90E-01		
		MN-54	-6.36E-04 +- 2.58E-02	U	pCi/g		4.61E-02	6.96E-01	
		NB-94	-7.01E-03 +- 2.23E-02	U	pCi/g		3.86E-02	2.85E-01	
		PB-212	3.64E-01 +- 9.19E-02	J	pCi/g		6.69E-02	1.00E+00	
		PB-214	4.68E-01 +- 1.14E-01	J	pCi/g		7.33E-02	1.00E+00	
		TL-208	1.43E-01 +- 4.97E-02	J	pCi/g		4.82E-02	1.00E+00	
3107-0000-188-C-1C-06									
	F9ET51AD	AC-228	5.47E-01 +- 2.80E-01	U	pCi/g		5.43E-01		
		AG-108M	-1.50E-02 +- 3.34E-02	U	pCi/g		5.70E-02		
		AM-241	-1.36E-01 +- 1.03E-01	U	pCi/g		1.56E-01		
		BI-212	1.20E+00 +- 7.19E-01	U	pCi/g		1.48E+00	3.00E+00	
		BI-214	6.27E-01 +- 1.80E-01	U	pCi/g		3.17E-01	1.00E+00	
		CO-60	1.29E-02 +- 4.88E-02	U	pCi/g		9.75E-02	1.52E-01	
		CS-134	4.17E-03 +- 5.34E-02	U	pCi/g		9.81E-02	1.87E-01	
		CS-137	-3.02E-02 +- 4.69E-02	U	pCi/g		7.73E-02	3.16E-01	
		EU-152	-5.65E-02 +- 1.11E-01	U	pCi/g		1.85E-01	4.04E-01	
		EU-154	5.81E-02 +- 1.51E-01	U	pCi/g		2.96E-01	3.72E-01	
		EU-155	2.25E-02 +- 9.81E-02	U	pCi/g		1.74E-01	1.57E+01	
		K-40	7.64E+00 +- 1.99E+00		pCi/g		6.38E-01		
		MN-54	-5.76E-03 +- 4.60E-02	U	pCi/g		8.25E-02	6.96E-01	
		NB-94	-9.22E-03 +- 4.59E-02	U	pCi/g		8.29E-02	2.85E-01	
		PB-212	5.18E-01 +- 1.33E-01	J	pCi/g		1.42E-01	1.00E+00	
		PB-214	6.47E-01 +- 1.97E-01	J	pCi/g		1.41E-01	1.00E+00	
		TL-208	1.60E-01 +- 9.94E-02	U	pCi/g		1.39E-01	1.00E+00	
3107-0000-189-C-1C-01									
	F9EM21AC	AC-228	3.70E-01 +- 1.54E-01	U	pCi/g		2.70E-01		
		AG-108M	6.43E-03 +- 2.07E-02	U	pCi/g		3.74E-02		
		AM-241	-7.76E-02 +- 1.03E-01	U	pCi/g		1.66E-01		
		BI-212	5.23E-01 +- 3.77E-01	U	pCi/g		7.43E-01	3.00E+00	
		BI-214	4.37E-01 +- 1.48E-01	U	pCi/g		1.78E-01	1.00E+00	
		CO-60	-6.10E-03 +- 2.45E-02	U	pCi/g		4.39E-02	1.52E-01	
		CS-134	1.87E-02 +- 2.71E-02	U	pCi/g		5.22E-02	1.87E-01	
		CS-137	-1.29E-02 +- 2.62E-02	U	pCi/g		4.42E-02	3.16E-01	
		EU-152	-8.39E-02 +- 7.81E-02	U	pCi/g		1.19E-01	4.04E-01	
		EU-154	-2.39E-02 +- 7.58E-02	U	pCi/g		1.34E-01	3.72E-01	

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 18-Mar-04

Report No. : 25203

SDG No: 25173

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043472 RICHRC5017									
3107-0000-189-C-1C-01									
	F9EM21AC	EU-155	9.09E-04 +- 7.57E-02	U	pCi/g		1.30E-01	1.57E+01	
		K-40	7.34E+00 +- 1.26E+00		pCi/g		4.45E-01		
		MN-54	-1.98E-03 +- 2.52E-02	U	pCi/g		4.50E-02	6.96E-01	
		NB-94	-4.34E-03 +- 2.48E-02	U	pCi/g		4.36E-02	2.85E-01	
		PB-212	3.97E-01 +- 1.04E-01	J	pCi/g		6.10E-02	1.00E+00	
		PB-214	4.81E-01 +- 1.30E-01	J	pCi/g		8.96E-02	1.00E+00	
		TL-208	8.66E-02 +- 3.58E-02	U	pCi/g		6.83E-02	1.00E+00	
3107-0000-189-C-2C-05									
	F9EPE1AC	AC-228	4.26E-01 +- 1.58E-01		pCi/g		1.54E-01		
		AG-108M	2.36E-03 +- 2.01E-02	U	pCi/g		3.65E-02		
		AM-241	-9.19E-03 +- 1.46E-01	U	pCi/g		2.54E-01		
		BI-212	8.86E-01 +- 3.68E-01	U	pCi/g		7.74E-01	3.00E+00	
		BI-214	3.79E-01 +- 1.08E-01	U	pCi/g		1.69E-01	1.00E+00	
		CO-60	9.51E-03 +- 2.50E-02	U	pCi/g		4.98E-02	1.52E-01	
		CS-134	3.03E-02 +- 3.12E-02	U	pCi/g		6.05E-02	1.87E-01	
		CS-137	-3.91E-03 +- 2.60E-02	U	pCi/g		4.64E-02	3.16E-01	
		EU-152	-1.55E-02 +- 5.97E-02	U	pCi/g		1.03E-01	4.04E-01	
		EU-154	1.07E-02 +- 7.37E-02	U	pCi/g		1.41E-01	3.72E-01	
		EU-155	-2.65E-02 +- 7.61E-02	U	pCi/g		1.26E-01	1.57E+01	
		K-40	6.08E+00 +- 1.22E+00		pCi/g		4.49E-01		
		MN-54	-9.11E-04 +- 2.36E-02	U	pCi/g		4.26E-02	6.96E-01	
		NB-94	2.70E-03 +- 1.98E-02	U	pCi/g		3.70E-02	2.85E-01	
		PB-212	3.75E-01 +- 9.33E-02	J	pCi/g		6.44E-02	1.00E+00	
		PB-214	3.67E-01 +- 1.16E-01	J	pCi/g		8.13E-02	1.00E+00	
		TL-208	1.60E-01 +- 5.85E-02	J	pCi/g		4.39E-02	1.00E+00	
3107-0000-189-C-2C-05 DUP									
	F9EPE1AD	AC-228	3.91E-01 +- 1.36E-01	U	pCi/g		2.54E-01		
		AG-108M	-1.45E-02 +- 1.99E-02	U	pCi/g		3.28E-02		
		AM-241	1.04E-02 +- 9.44E-02	U	pCi/g		1.60E-01		
		BI-212	1.91E-01 +- 3.59E-01	U	pCi/g		6.71E-01	3.00E+00	
		BI-214	5.21E-01 +- 1.16E-01	U	pCi/g		1.70E-01	1.00E+00	
		CO-60	1.05E-02 +- 2.47E-02	U	pCi/g		4.82E-02	1.52E-01	
		CS-134	1.29E-02 +- 2.78E-02	U	pCi/g		5.20E-02	1.87E-01	
		CS-137	-5.82E-03 +- 2.40E-02	U	pCi/g		4.16E-02	3.16E-01	
		EU-152	-6.60E-02 +- 8.14E-02	U	pCi/g		1.17E-01	4.04E-01	
		EU-154	-1.05E-02 +- 7.38E-02	U	pCi/g		1.33E-01	3.72E-01	
		EU-155	-8.18E-03 +- 7.48E-02	U	pCi/g		1.27E-01	1.57E+01	

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 18-Mar-04

Report No. : 25203

SDG No: 25173

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043472	RICHRC5017								
	3107-0000-189-C-2C-05 DUP								
	F9EPE1AD	K-40	6.24E+00 +- 1.12E+00		pCi/g		4.22E-01		
		MN-54	3.30E-02 +- 3.06E-02	U	pCi/g		5.82E-02	6.96E-01	
		NB-94	1.68E-02 +- 2.45E-02	U	pCi/g		4.66E-02	2.85E-01	
		PB-212	3.77E-01 +- 1.15E-01	J	pCi/g		7.41E-02	1.00E+00	
		PB-214	4.09E-01 +- 1.14E-01	J	pCi/g		7.82E-02	1.00E+00	
		TL-208	1.47E-01 +- 4.93E-02	U	pCi/g		7.38E-02	1.00E+00	
	3107-0000-189-C-2C-06								
	F9EPG1AD	AC-228	5.65E-01 +- 1.59E-01	U	pCi/g		3.00E-01		
		AG-108M	5.81E-03 +- 1.73E-02	U	pCi/g		3.24E-02		
		AM-241	8.02E-03 +- 7.92E-02	U	pCi/g		1.38E-01		
		BI-212	5.80E-01 +- 3.85E-01	U	pCi/g		7.68E-01	3.00E+00	
		BI-214	3.09E-01 +- 1.25E-01	U	pCi/g		1.68E-01	1.00E+00	
		CO-60	1.62E-02 +- 2.46E-02	U	pCi/g		5.09E-02	1.52E-01	
		CS-134	3.44E-02 +- 2.61E-02	U	pCi/g		5.36E-02	1.87E-01	
		CS-137	-1.98E-02 +- 2.06E-02	U	pCi/g		3.29E-02	3.16E-01	
		EU-152	3.90E-03 +- 6.43E-02	U	pCi/g		1.13E-01	4.04E-01	
		EU-154	-7.30E-02 +- 7.73E-02	U	pCi/g		1.22E-01	3.72E-01	
		EU-155	-1.93E-03 +- 6.42E-02	U	pCi/g		1.08E-01	1.57E+01	
		K-40	6.75E+00 +- 1.22E+00		pCi/g		4.56E-01		
		MN-54	1.31E-02 +- 2.50E-02	U	pCi/g		4.63E-02	6.96E-01	
		NB-94	-7.92E-03 +- 2.01E-02	U	pCi/g		3.54E-02	2.85E-01	
		PB-212	3.78E-01 +- 1.21E-01	J	pCi/g		7.65E-02	1.00E+00	
		PB-214	4.50E-01 +- 1.17E-01	J	pCi/g		7.64E-02	1.00E+00	
		TL-208	1.89E-01 +- 5.38E-02	J	pCi/g		4.63E-02	1.00E+00	
	3107-0000-190-C1C-01								
	F9EP41AC	AC-228	4.45E-01 +- 1.86E-01		pCi/g		1.45E-01		
		AG-108M	-3.80E-04 +- 1.98E-02	U	pCi/g		3.55E-02		
		AM-241	-5.24E-03 +- 1.40E-01	U	pCi/g		2.44E-01		
		BI-212	5.87E-01 +- 3.70E-01	U	pCi/g		7.49E-01	3.00E+00	
		BI-214	4.48E-01 +- 1.36E-01	U	pCi/g		1.86E-01	1.00E+00	
		CO-60	2.06E-02 +- 2.66E-02	U	pCi/g		5.49E-02	1.52E-01	
		CS-134	3.51E-03 +- 2.71E-02	U	pCi/g		4.98E-02	1.87E-01	
		CS-137	2.10E-03 +- 2.14E-02	U	pCi/g		4.00E-02	3.16E-01	
		EU-152	2.80E-02 +- 6.10E-02	U	pCi/g		1.12E-01	4.04E-01	
		EU-154	1.11E-02 +- 7.64E-02	U	pCi/g		1.46E-01	3.72E-01	
		EU-155	6.75E-02 +- 7.56E-02	U	pCi/g		1.34E-01	1.57E+01	
		K-40	7.14E+00 +- 1.29E+00		pCi/g		4.81E-01		

STL Richland

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Sample Results Summary

Date: 18-Mar-04

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 25203

SDG No: 25173

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043472	RICHRC5017								
	3107-0000-190-C1C-01								
	F9EP41AC	MN-54	-1.26E-02 +- 2.73E-02	U	pCi/g		4.63E-02	6.96E-01	
		NB-94	-2.92E-02 +- 2.72E-02	U	pCi/g		4.22E-02	2.85E-01	
		PB-212	4.37E-01 +- 9.31E-02	J	pCi/g		6.28E-02	1.00E+00	
		PB-214	4.30E-01 +- 1.23E-01	J	pCi/g		8.21E-02	1.00E+00	
		TL-208	1.58E-01 +- 5.00E-02	U	pCi/g		7.88E-02	1.00E+00	
	3107-0000-190-C2C-06								
	F9EQQ1AC	AC-228	5.29E-01 +- 1.44E-01		pCi/g		1.38E-01		
		AG-108M	-3.46E-03 +- 1.82E-02	U	pCi/g		3.19E-02		
		AM-241	-6.11E-03 +- 4.35E-02	U	pCi/g		7.12E-02		
		BI-212	7.80E-01 +- 3.36E-01	U	pCi/g		7.12E-01	3.00E+00	
		BI-214	3.34E-01 +- 1.05E-01	U	pCi/g		1.57E-01	1.00E+00	
		CO-60	8.02E-03 +- 2.37E-02	U	pCi/g		4.61E-02	1.52E-01	
		CS-134	1.52E-02 +- 2.45E-02	U	pCi/g		4.75E-02	1.87E-01	
		CS-137	-1.04E-02 +- 2.38E-02	U	pCi/g		4.11E-02	3.16E-01	
		EU-152	1.18E-02 +- 5.76E-02	U	pCi/g		1.04E-01	4.04E-01	
		EU-154	2.32E-02 +- 7.64E-02	U	pCi/g		1.45E-01	3.72E-01	
		EU-155	5.63E-02 +- 5.83E-02	U	pCi/g		1.03E-01	1.57E+01	
		K-40	6.78E+00 +- 1.20E+00		pCi/g		3.90E-01		
		MN-54	1.79E-02 +- 2.13E-02	U	pCi/g		4.25E-02	6.96E-01	
		NB-94	2.31E-02 +- 1.86E-02	U	pCi/g		3.94E-02	2.85E-01	
		PB-212	3.56E-01 +- 9.38E-02	J	pCi/g		6.69E-02	1.00E+00	
		PB-214	3.99E-01 +- 1.24E-01	J	pCi/g		7.06E-02	1.00E+00	
		TL-208	1.71E-01 +- 5.10E-02	U	pCi/g		7.52E-02	1.00E+00	
	3107-0000-190-C2C-07								
	F9EQX1AD	AC-228	4.71E-01 +- 2.41E-01	U	pCi/g		4.30E-01		
		AG-108M	-2.19E-03 +- 2.95E-02	U	pCi/g		5.21E-02		
		AM-241	1.69E-02 +- 7.93E-02	U	pCi/g		1.38E-01		
		BI-212	-1.98E-01 +- 5.96E-01	U	pCi/g		1.03E+00	3.00E+00	
		BI-214	3.30E-01 +- 1.66E-01	U	pCi/g		2.39E-01	1.00E+00	
		CO-60	2.89E-02 +- 3.93E-02	U	pCi/g		8.23E-02	1.52E-01	
		CS-134	4.33E-02 +- 4.62E-02	U	pCi/g		9.05E-02	1.87E-01	
		CS-137	-1.34E-03 +- 3.62E-02	U	pCi/g		6.46E-02	3.16E-01	
		EU-152	4.49E-02 +- 8.79E-02	U	pCi/g		1.60E-01	4.04E-01	
		EU-154	-1.51E-01 +- 1.44E-01	U	pCi/g		2.24E-01	3.72E-01	
		EU-155	2.01E-02 +- 7.80E-02	U	pCi/g		1.38E-01	1.57E+01	
		K-40	7.64E+00 +- 1.66E+00		pCi/g		5.41E-01		
		MN-54	2.29E-02 +- 4.41E-02	U	pCi/g		8.26E-02	6.96E-01	

STL Richland

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 18-Mar-04

Report No. : 25203

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Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043472	RICHRC5017								
	3107-0000-190-C2C-07								
	F9EQX1AD	NB-94	-2.30E-02 +- 3.31E-02	U	pCi/g		5.57E-02	2.85E-01	
		PB-212	5.04E-01 +- 1.15E-01	J	pCi/g		1.14E-01	1.00E+00	
		PB-214	4.33E-01 +- 1.51E-01	J	pCi/g		1.28E-01	1.00E+00	
		TL-208	1.94E-01 +- 8.54E-02	U	pCi/g		1.19E-01	1.00E+00	
	3107-0000-191-C-1C-01								
	F9EQ51AC	AC-228	3.70E-01 +- 1.57E-01	U	pCi/g		2.81E-01		
		AG-108M	6.60E-03 +- 2.06E-02	U	pCi/g		3.80E-02		
		AM-241	4.84E-03 +- 8.53E-02	U	pCi/g		1.48E-01		
		BI-212	7.61E-01 +- 4.12E-01	U	pCi/g		8.35E-01	3.00E+00	
		BI-214	4.66E-01 +- 1.12E-01	U	pCi/g		1.83E-01	1.00E+00	
		CO-60	5.12E-02 +- 3.06E-02	U	pCi/g		6.75E-02	1.52E-01	
		CS-134	1.23E-02 +- 3.09E-02	U	pCi/g		5.75E-02	1.87E-01	
		CS-137	3.24E-01 +- 6.82E-02		pCi/g		4.73E-02	3.16E-01	
		EU-152	4.50E-02 +- 7.34E-02	U	pCi/g		1.21E-01	4.04E-01	
		EU-154	-3.14E-02 +- 6.92E-02	U	pCi/g		1.21E-01	3.72E-01	
		EU-155	1.94E-03 +- 6.77E-02	U	pCi/g		1.15E-01	1.57E+01	
		K-40	6.34E+00 +- 1.15E+00		pCi/g		3.93E-01		
		MN-54	-1.70E-03 +- 2.06E-02	U	pCi/g		3.84E-02	6.96E-01	
		NB-94	-4.00E-03 +- 2.23E-02	U	pCi/g		4.03E-02	2.85E-01	
		PB-212	4.05E-01 +- 9.42E-02	J	pCi/g		7.77E-02	1.00E+00	
		PB-214	4.01E-01 +- 1.07E-01	J	pCi/g		7.88E-02	1.00E+00	
		TL-208	1.31E-01 +- 4.87E-02	J	pCi/g		4.18E-02	1.00E+00	
	3107-0000-191-C-3C-09								
	F9ERW1AC	AC-228	3.07E-01 +- 1.30E-01		pCi/g		1.23E-01		
		AG-108M	-1.37E-02 +- 1.57E-02	U	pCi/g		2.52E-02		
		AM-241	8.15E-03 +- 3.75E-02	U	pCi/g		6.40E-02		
		BI-212	1.17E-01 +- 3.19E-01	U	pCi/g		5.89E-01	3.00E+00	
		BI-214	3.50E-01 +- 8.77E-02	U	pCi/g		1.42E-01	1.00E+00	
		CO-60	3.13E-03 +- 1.78E-02	U	pCi/g		3.52E-02	1.52E-01	
		CS-134	1.34E-02 +- 2.31E-02	U	pCi/g		4.43E-02	1.87E-01	
		CS-137	-1.33E-03 +- 1.80E-02	U	pCi/g		3.27E-02	3.16E-01	
		EU-152	-4.10E-02 +- 5.04E-02	U	pCi/g		8.27E-02	4.04E-01	
		EU-154	1.56E-02 +- 6.09E-02	U	pCi/g		1.17E-01	3.72E-01	
		EU-155	2.36E-02 +- 5.02E-02	U	pCi/g		8.92E-02	1.57E+01	
		K-40	6.97E+00 +- 1.12E+00		pCi/g		2.92E-01		
		MN-54	6.15E-03 +- 1.84E-02	U	pCi/g		3.51E-02	6.96E-01	
		NB-94	-2.74E-03 +- 1.76E-02	U	pCi/g		3.14E-02	2.85E-01	

STL Richland

rplSTLRchSaSummary2 V4.07 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 18-Mar-04

Report No. : 25203

SDG No: 25173

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043472 RICHRC5017									
	3107-0000-191-C-3C-09								
	F9ERW1AC	PB-212	4.64E-01 +- 9.78E-02	J	pCi/g		7.59E-02	1.00E+00	
		PB-214	3.46E-01 +- 8.71E-02	J	pCi/g		7.09E-02	1.00E+00	
		TL-208	1.40E-01 +- 3.67E-02	J	pCi/g		2.67E-02	1.00E+00	
	3107-0000-191-C-3C-10								
	F9ER01AD	AC-228	4.94E-01 +- 1.59E-01	U	pCi/g		3.14E-01		
		AG-108M	-7.92E-04 +- 2.34E-02	U	pCi/g		4.11E-02		
		AM-241	-2.87E-02 +- 1.08E-01	U	pCi/g		1.80E-01		
		BI-212	6.13E-01 +- 4.23E-01	U	pCi/g		8.33E-01	3.00E+00	
		BI-214	3.43E-01 +- 1.04E-01	U	pCi/g		1.66E-01	1.00E+00	
		CO-60	2.33E-02 +- 2.76E-02	U	pCi/g		5.69E-02	1.52E-01	
		CS-134	2.56E-02 +- 3.27E-02	U	pCi/g		6.25E-02	1.87E-01	
		CS-137	-6.39E-03 +- 2.83E-02	U	pCi/g		4.92E-02	3.16E-01	
		EU-152	-4.29E-02 +- 8.05E-02	U	pCi/g		1.25E-01	4.04E-01	
		EU-154	-2.55E-02 +- 8.67E-02	U	pCi/g		1.53E-01	3.72E-01	
		EU-155	3.41E-02 +- 8.04E-02	U	pCi/g		1.41E-01	1.57E+01	
		K-40	6.60E+00 +- 1.19E+00		pCi/g		3.45E-01		
		MN-54	-1.37E-02 +- 2.80E-02	U	pCi/g		4.76E-02	6.96E-01	
		NB-94	-5.81E-03 +- 2.79E-02	U	pCi/g		4.87E-02	2.85E-01	
		PB-212	3.39E-01 +- 1.08E-01	J	pCi/g		9.12E-02	1.00E+00	
		PB-214	5.00E-01 +- 1.25E-01	J	pCi/g		8.14E-02	1.00E+00	
		TL-208	1.67E-01 +- 6.15E-02	U	pCi/g		8.36E-02	1.00E+00	
4043467 RICHRC5010									
	3107-0000-188-C-1C-01								
	F9ETD1AF	PU-241	2.41E-01 +- 5.65E-01	U	pCi/g	70%	1.00E+00	3.48E+01	
	3107-0000-188-C-1C-01 DUP								
	F9ETD1AK	PU-241	2.17E-03 +- 7.70E-01	U	pCi/g	51%	1.39E+00	3.48E+01	
4043468 RICHRC5037									
	3107-0000-187-C-1C-01								
	F9EPH1AA	H-3	6.43E-01 +- 4.27E-02	J	pCi/g	100%	2.74E-02	1.65E+01	
	3107-0000-187-C-1C-02								
	F9EPK1AA	H-3	9.87E-01 +- 5.75E-02	J	pCi/g	100%	2.72E-02	1.65E+01	
	3107-0000-187-C-1C-03								
	F9EPL1AA	H-3	1.60E+00 +- 8.39E-02	J	pCi/g	100%	2.79E-02	1.65E+01	
	3107-0000-187-C-1C-04								
	F9EPN1AA	H-3	3.89E+00 +- 1.79E-01	J	pCi/g	100%	2.71E-02	1.65E+01	
	3107-0000-187-C-2C-05								
	F9EPQ1AA	H-3	8.80E+00 +- 3.80E-01	J	pCi/g	100%	2.52E-02	1.65E+01	

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 18-Mar-04

Report No. : 25203

SDG No: 25173

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043468 RICHRC5037									
	3107-0000-187-C-2C-06								
	F9EPR1AA	H-3	1.47E+01 +- 6.26E-01	J	pCi/g	100%	2.72E-02	1.65E+01	
	3107-0000-187-C-2C-07								
	F9EPT1AC	H-3	4.21E+00 +- 2.03E-01	J	pCi/g	100%	4.50E-02	1.65E+01	
	3107-0000-189-C-1C-01								
	F9EM21AA	H-3	5.85E-01 +- 4.08E-02	J	pCi/g	100%	2.84E-02	1.65E+01	
	3107-0000-189-C-1C-01 DUP								
	F9EM21AD	H-3	5.52E-01 +- 3.84E-02	J	pCi/g	100%	2.64E-02	1.65E+01	
	3107-0000-189-C-1C-02								
	F9EN71AA	H-3	6.46E-01 +- 4.35E-02	J	pCi/g	100%	2.84E-02	1.65E+01	
	3107-0000-189-C-2C-03								
	F9EPC1AA	H-3	3.59E-01 +- 3.00E-02	J	pCi/g	100%	2.69E-02	1.65E+01	
	3107-0000-189-C-2C-04								
	F9EPD1AA	H-3	1.78E-01 +- 2.18E-02	J	pCi/g	100%	2.83E-02	1.65E+01	
	3107-0000-189-C-2C-05								
	F9EPE1AA	H-3	1.21E-01 +- 1.80E-02	J	pCi/g	100%	2.58E-02	1.65E+01	
	3107-0000-189-C-2C-06								
	F9EPG1AA	H-3	2.05E-01 +- 2.21E-02	J	pCi/g	100%	2.55E-02	1.65E+01	
	3107-0000-190-C1C-01								
	F9EP41AA	H-3	8.82E-01 +- 5.30E-02	J	pCi/g	100%	2.72E-02	1.65E+01	
	3107-0000-190-C1C-02								
	F9EP81AA	H-3	1.08E+00 +- 6.39E-02	J	pCi/g	100%	3.15E-02	1.65E+01	
	3107-0000-190-C1C-03								
	F9EQC1AA	H-3	7.26E-01 +- 4.55E-02	J	pCi/g	100%	2.58E-02	1.65E+01	
	3107-0000-190-C1C-04								
	F9EQF1AA	H-3	2.46E-01 +- 2.45E-02	J	pCi/g	100%	2.65E-02	1.65E+01	
	3107-0000-190-C1C-05								
	F9EQJ1AA	H-3	2.41E-01 +- 2.43E-02	J	pCi/g	100%	2.67E-02	1.65E+01	
4043471 RICHRC5037									
	3107-0000-188-C-1C-01								
	F9ETD1AC	H-3	2.66E+00 +- 1.41E-01	J	pCi/g	100%	2.51E-02	1.65E+01	
	3107-0000-188-C-1C-02								
	F9ETM1AA	H-3	3.19E+00 +- 1.65E-01	J	pCi/g	100%	2.46E-02	1.65E+01	
	3107-0000-188-C-1C-03								
	F9ETT1AA	H-3	1.49E+00 +- 8.49E-02	J	pCi/g	100%	2.50E-02	1.65E+01	
	3107-0000-188-C-1C-04								
	F9ETX1AA	H-3	9.42E-01 +- 5.88E-02	J	pCi/g	100%	2.45E-02	1.65E+01	
	3107-0000-188-C-1C-05								
	F9ET21AA	H-3	1.69E+00 +- 9.45E-02	J	pCi/g	100%	2.52E-02	1.65E+01	

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

Sample Results Summary

Date: 18-Mar-04

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 25203

SDG No: 25173

Batch	Client Id Work Order	Parameter	Result ± Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
4043471	RICHRC5037								
	3107-0000-188-C-1C-06								
	F9ET51AC	H-3	3.87E-01 ± 5.98E-02	J	pCi/g	100%	8.35E-02	1.65E+01	
	3107-0000-190-C2C-06								
	F9EQQ1AA	H-3	8.16E-01 ± 5.44E-02	J	pCi/g	100%	2.75E-02	1.65E+01	
	3107-0000-190-C2C-06 DUP								
	F9EQQ1AD	H-3	7.08E-01 ± 4.79E-02	J	pCi/g	100%	2.51E-02	1.65E+01	
	3107-0000-190-C2C-07								
	F9EQX1AA	H-3	5.38E-01 ± 3.96E-02	J	pCi/g	100%	2.52E-02	1.65E+01	
	3107-0000-191-C-1C-01								
	F9EQ51AA	H-3	8.52E-01 ± 5.61E-02	J	pCi/g	100%	2.79E-02	1.65E+01	
	3107-0000-191-C-1C-02								
	F9ERA1AA	H-3	8.13E-01 ± 5.41E-02	J	pCi/g	100%	2.71E-02	1.65E+01	
	3107-0000-191-C-1C-03								
	F9ERD1AA	H-3	1.38E+00 ± 8.25E-02	J	pCi/g	100%	2.99E-02	1.65E+01	
	3107-0000-191-C-1C-04								
	F9ERE1AA	H-3	1.06E+00 ± 6.61E-02	J	pCi/g	100%	2.74E-02	1.65E+01	
	3107-0000-191-C-2C-05								
	F9ERG1AA	H-3	4.25E+00 ± 2.15E-01	J	pCi/g	100%	2.53E-02	1.65E+01	
	3107-0000-191-C-2C-06								
	F9ERH1AA	H-3	3.42E+00 ± 1.76E-01	J	pCi/g	100%	2.47E-02	1.65E+01	
	3107-0000-191-C-2C-07								
	F9ERM1AA	H-3	4.42E+00 ± 2.23E-01	J	pCi/g	100%	2.51E-02	1.65E+01	
	3107-0000-191-C-2C-08								
	F9ERQ1AA	H-3	4.09E+00 ± 2.08E-01	J	pCi/g	100%	2.51E-02	1.65E+01	
	3107-0000-191-C-3C-09								
	F9ERW1AA	H-3	7.04E+00 ± 3.46E-01	J	pCi/g	100%	2.48E-02	1.65E+01	
	3107-0000-191-C-3C-10								
	F9ER01AA	H-3	4.07E+00 ± 2.06E-01	J	pCi/g	100%	2.48E-02	1.65E+01	

No. of Results: 329

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

QC Results Summary
STL Richland STLR

Date: 18-Mar-04

Ordered by Method, Batch No, QC Type,.

Report No. : 25203

SDG No.: 25173

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC|MDA
CMUD								
4043475 BLANK QC								
F9HTX1AA	SR-90	3.83E-02 +- 1.49E-02	J	pCi/g	81%			2.21E-02
4043475 LCS								
F9HTX1AC	SR-90	1.55E+00 +- 2.31E-01		pCi/g	69%	114%	0.1	2.55E-02
RICHRC5080								
4043465 BLANK QC								
F9HQH1AA	AM-241	6.51E-03 +- 1.31E-02	U	pCi/g	49%			1.77E-02
	CM-242	0.00E+00 +- 1.92E-02	U	pCi/g	49%			2.12E-02
	CM-243/244	0.00E+00 +- 1.60E-02	U	pCi/g	49%			1.77E-02
4043465 LCS								
F9HQH1AC	AM-241	3.04E+00 +- 5.80E-01		pCi/g	73%	67%	-0.3	2.52E-02
RICHRC5010								
4043466 BLANK QC								
F9HQN1AA	PU-238	0.00E+00 +- 1.56E-02	U	pCi/g	65%			1.72E-02
	PU239/40	0.00E+00 +- 1.55E-02	U	pCi/g	65%			1.72E-02
4043466 LCS								
F9HQN1AC	PU239/40	4.40E-01 +- 1.16E-01	J	pCi/g	71%	96%	0.0	1.26E-02
RICHRC5017								
4043472 BLANK QC								
F9HTJ1AA	AC-228	-1.57E-03 +- 1.08E-01	U	pCi/g				2.15E-01
	AG-108M	1.72E-02 +- 2.28E-02	U	pCi/g				4.64E-02
	AM-241	2.34E-02 +- 8.34E-02	U	pCi/g				1.51E-01
	BI-212	-1.72E-01 +- 4.70E-01	U	pCi/g				8.23E-01
	BI-214	-6.16E-02 +- 7.33E-02	U	pCi/g				1.31E-01
	CO-60	2.20E-02 +- 3.23E-02	U	pCi/g				7.23E-02
	CS-134	-7.75E-03 +- 2.96E-02	U	pCi/g				5.37E-02
	CS-137	-7.71E-03 +- 2.50E-02	U	pCi/g				4.57E-02
	EU-152	-2.12E-02 +- 7.90E-02	U	pCi/g				1.37E-01
	EU-154	9.99E-02 +- 9.72E-02	U	pCi/g				2.22E-01
	EU-155	-3.29E-02 +- 6.00E-02	U	pCi/g				9.87E-02
	K-40	-2.73E-01 +- 5.07E-01	U	pCi/g				1.11E+00
	MN-54	-1.98E-02 +- 2.73E-02	U	pCi/g				4.58E-02
	NB-94	-1.74E-02 +- 2.92E-02	U	pCi/g				5.02E-02
	PB-212	4.63E-02 +- 6.16E-02	U	pCi/g				6.66E-02
	PB-214	-6.08E-02 +- 6.36E-02	U	pCi/g				1.09E-01
	TL-208	2.13E-03 +- 3.04E-02	U	pCi/g				5.63E-02
4043472 LCS								
F9HTJ1AC	CS-137	1.18E+00 +- 1.93E-01		pCi/g		115%	0.2	5.52E-02
RICHRC5010								
4043467 BLANK QC								

STL Richland

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Bias - (Result/Expected)-1 as defined by ANSI N13.30.

J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

QC Results Summary
STL Richland STLR

Date: 18-Mar-04

Ordered by Method, Batch No, QC Type,.

Report No. : 25203

SDG No.: 25173

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC/MDA
F9HQT1AA	PU-241	5.41E-01 +- 6.30E-01	U	pCi/g	65%			1.09E+00
4043467 LCS								
F9HQT1AC	PU-241	2.34E+01 +- 2.15E+00		pCi/g	71%	103%	0.0	9.87E-01
RICHRC5037								
4043468 BLANK QC								
F9HRF1AA	H-3	6.18E-02 +- 1.11E-01	U	pCi/g	100%			2.51E-01
4043468 LCS								
F9HRF1AC	H-3	6.33E+00 +- 3.70E-01	J	pCi/g	100%	93%	-0.1	2.50E-01
RICHRC5037								
4043471 BLANK QC								
F9HRT1AA	H-3	5.92E-03 +- 1.07E-01	U	pCi/g	100%			2.48E-01
4043471 LCS								
F9HRT1AC	H-3	6.82E+00 +- 4.23E-01	J	pCi/g	100%	100%	0.0	2.49E-01

No. of Results: 33

Bias - (Result/Expected)-1 as defined by ANSI N13.30.

J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 2:25:00 PM
Lot-Sample No.:	J4B110186-7	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-187-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order:	F9EPH1AA		Report DB ID:	9F9EPH10				
H-3	6.43E-01	J	3.26E-02	4.27E-02	2.74E-02	pCi/g	100%	*(23.5)*	3/9/04 03:33 a		100.2	LSC4
						1.27E-02	1.65E+01	*(30.1)*			G	
Batch: 4043472	RICHRC5017			Work Order:	F9EPH1AC		Report DB ID:	9F9EPH10				
AC-228	4.16E-01	U	1.23E-01	1.23E-01	2.52E-01	pCi/g		*(1.6)*	3/3/04 08:08 a		326.4	GER8$1
								(6.8)			g	
AG-108M	-1.29E-02	U	1.83E-02	1.83E-02	3.00E-02	pCi/g		*-0.43*	3/3/04 08:08 a		326.4	GER8$1
								-(1.4)			g	
AM-241	-2.45E-03	U	5.07E-02	5.07E-02	7.32E-02	pCi/g		*-0.03*	3/3/04 08:08 a		326.4	GER8$1
								-0.1			g	
BI-212	2.97E-01	U	3.40E-01	3.40E-01	6.63E-01	pCi/g		*0.45*	3/3/04 08:08 a		326.4	GER8$1
							3.00E+00	*(1.7)*			g	
BI-214	4.55E-01	U	1.08E-01	1.08E-01	1.78E-01	pCi/g		*(2.6)*	3/3/04 08:08 a		326.4	GER8$1
							1.00E+00	*(8.4)*			g	
CO-60	-1.81E-02	U	2.24E-02	2.24E-02	3.57E-02	pCi/g		*-0.51*	3/3/04 08:08 a		326.4	GER8$1
							1.52E-01	*-(1.6)*			g	
CS-134	3.68E-02	U	2.76E-02	2.76E-02	5.63E-02	pCi/g		*0.65*	3/3/04 08:08 a		326.4	GER8$1
							1.87E-01	*(2.7)*			g	
CS-137	4.10E-03	U	2.24E-02	2.24E-02	4.17E-02	pCi/g		*0.1*	3/3/04 08:08 a		326.4	GER8$1
							3.16E-01	*0.37*			g	
EU-152	1.91E-02	U	6.29E-02	6.29E-02	1.14E-01	pCi/g		*0.17*	3/3/04 08:08 a		326.4	GER8$1
							4.04E-01	*0.61*			g	

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 2:25:00 PM
Lot-Sample No.:	J4B110186-7	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-187-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	6.61E-02	U	7.41E-02	7.41E-02	1.53E-01	pCi/g		*0.43*	3/3/04 08:08 a		326.4	GER8$1
							3.72E-01	*(1.8)*			g	
EU-155	-5.04E-03	U	5.88E-02	5.88E-02	1.02E-01	pCi/g		*-0.05*	3/3/04 08:08 a		326.4	GER8$1
							1.57E+01	*-0.17*			g	
K-40	6.99E+00		1.18E+00	1.18E+00	3.95E-01	pCi/g		*(17.7)*	3/3/04 08:08 a		326.4	GER8$1
								(11.9)			g	
MN-54	-1.37E-03	U	2.46E-02	2.46E-02	4.41E-02	pCi/g		*-0.03*	3/3/04 08:08 a		326.4	GER8$1
							6.96E-01	*-0.11*			g	
NB-94	-1.20E-02	U	1.90E-02	1.90E-02	3.15E-02	pCi/g		*-0.38*	3/3/04 08:08 a		326.4	GER8$1
							2.85E-01	*-(1.3)*			g	
PB-212	4.18E-01	J	9.63E-02	9.63E-02	9.04E-02	pCi/g		*(4.6)*	3/3/04 08:08 a		326.4	GER8$1
							1.00E+00	*(8.7)*			g	
PB-214	5.45E-01	J	1.20E-01	1.20E-01	7.57E-02	pCi/g		*(7.2)*	3/3/04 08:08 a		326.4	GER8$1
							1.00E+00	*(9.1)*			g	
TL-208	1.01E-01	J	4.47E-02	4.47E-02	3.78E-02	pCi/g		*(2.7)*	3/3/04 08:08 a		326.4	GER8$1
							1.00E+00	*(4.5)*			g	

No. of Results: 18 Comments:

STL Richland
rptSTLRchSample
V4.97 A97
12

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 2:25:00 PM
Lot-Sample No.:	J4B110186-8	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-187-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EPK1AA		Report DB ID: 9F9EPK10						
H-3	9.87E-01	J	3.95E-02	5.75E-02	2.72E-02	pCi/g	100%	*(36.4)*	3/9/04 04:15 a		100.8	LSC4
						1.26E-02	1.65E+01	*(34.4)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.97 A97
C3

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 2:25:00 PM
Lot-Sample No.:	J4B110186-9	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-187-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EPL1AA			Report DB ID: 9F9EPL10					
H-3	1.60E+00	J	5.03E-02	8.39E-02	2.79E-02	pCi/g	100%	*(57.4)*	3/9/04 04:58 a		100.4	LSC4
						1.29E-02	1.65E+01	*(38.2)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.97 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 2:25:00 PM
Lot-Sample No.:	J4B110186-10	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-187-C-1C-04	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert (2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EPN1AA		Report DB ID: 9F9EPN10						
H-3	3.89E+00	J	7.62E-02	1.79E-01	2.71E-02	pCi/g	100%	*(143.8)*	3/9/04 05:40 a		100.4	LSC4
						1.26E-02	1.65E+01	*(43.6)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.97 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 3:00:00 PM
Lot-Sample No.:	J4B110186-11	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-187-C-2C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order:	F9EPQ1AA		Report DB ID: 9F9EPQ10					
H-3	8.80E+00	J	1.10E-01	3.80E-01	2.52E-02	pCi/g	100%	*(349.7)*	3/9/04 06:22 a		100.5	LSC4
						1.17E-02	1.65E+01	*(46.3)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.97 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 3:00:00 PM
Lot-Sample No.:	J4B110186-12	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-187-C-2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EPR1AA			Report DB ID: 9F9EPR10					
H-3	1.47E+01	J	1.48E-01	6.26E-01	2.72E-02	pCi/g	100%	*(540.8)*	3/9/04 07:05 a		100.7	LSC4
						1.26E-02	1.65E+01	*(47.1)*			G	
Batch: 4043472	RICHRC5017			Work Order: F9EPR1AC			Report DB ID: 9F9EPR10					
AC-228	4.16E-01	U	1.76E-01	1.76E-01	2.92E-01	pCi/g		*(1.4)*	3/3/04 08:08 a		321.6	GER6$1
								(4.7)			g	
AG-108M	4.93E-04	U	1.90E-02	1.90E-02	3.40E-02	pCi/g		*0.01*	3/3/04 08:08 a		321.6	GER6$1
								0.05			g	
AM-241	4.58E-03	U	6.73E-02	6.73E-02	1.15E-01	pCi/g		*0.04*	3/3/04 08:08 a		321.6	GER6$1
								0.14			g	
BI-212	5.34E-01	U	4.09E-01	4.09E-01	8.05E-01	pCi/g		*0.66*	3/3/04 08:08 a		321.6	GER6$1
							3.00E+00	*(2.6)*			g	
BI-214	3.34E-01	U	9.67E-02	9.67E-02	1.65E-01	pCi/g		*(2.)*	3/3/04 08:08 a		321.6	GER6$1
							1.00E+00	*(6.9)*			g	
CO-60	1.86E-02	U	2.51E-02	2.51E-02	5.30E-02	pCi/g		*0.35*	3/3/04 08:08 a		321.6	GER6$1
							1.52E-01	*(1.5)*			g	
CS-134	3.69E-02	U	3.03E-02	3.03E-02	6.06E-02	pCi/g		*0.61*	3/3/04 08:08 a		321.6	GER6$1
							1.87E-01	*(2.4)*			g	
CS-137	-2.97E-02	U	2.52E-02	2.52E-02	3.81E-02	pCi/g		*-0.78*	3/3/04 08:08 a		321.6	GER6$1
							3.16E-01	*-(2.4)*			g	
EU-152	-7.36E-02	U	6.89E-02	6.89E-02	1.07E-01	pCi/g		*-0.69*	3/3/04 08:08 a		321.6	GER6$1
							4.04E-01	*-(2.1)*			g	

STL Richland
rptSTLRchSample
V4.97 A97

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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 3:00:00 PM
Lot-Sample No.:	J4B110186-12	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-187-C-2C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	-3.58E-02	U	8.58E-02	8.58E-02	1.48E-01	pCi/g		-0.24	3/3/04 08:08 a		321.6	GER6$1
							3.72E-01	-0.83			g	
EU-155	3.40E-02	U	5.86E-02	5.86E-02	1.05E-01	pCi/g		0.32	3/3/04 08:08 a		321.6	GER6$1
							1.57E+01	(1.2)			g	
K-40	6.89E+00		1.29E+00	1.29E+00	4.24E-01	pCi/g		(16.3)	3/3/04 08:08 a		321.6	GER6$1
								(10.7)			g	
MN-54	-4.39E-03	U	2.54E-02	2.54E-02	4.49E-02	pCi/g		-0.1	3/3/04 08:08 a		321.6	GER6$1
							6.96E-01	-0.35			g	
NB-94	3.68E-03	U	2.39E-02	2.39E-02	4.48E-02	pCi/g		0.08	3/3/04 08:08 a		321.6	GER6$1
							2.85E-01	0.31			g	
PB-212	3.69E-01	J	1.00E-01	1.00E-01	8.71E-02	pCi/g		(4.2)	3/3/04 08:08 a		321.6	GER6$1
							1.00E+00	(7.4)			g	
PB-214	3.67E-01	J	1.32E-01	1.32E-01	8.78E-02	pCi/g		(4.2)	3/3/04 08:08 a		321.6	GER6$1
							1.00E+00	(5.5)			g	
TL-208	1.57E-01	U	4.78E-02	4.78E-02	8.04E-02	pCi/g		(2.)	3/3/04 08:08 a		321.6	GER6$1
							1.00E+00	(6.6)			g	

No. of Results: 18 Comments:

STL Richland
rptSTLRichSample
V4.97 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 3:00:00 PM
Lot-Sample No.:	J4B110186-13	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-187-C-2C-07	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EPT1AC			Report DB ID: 9F9EPT10					
H-3	4.21E+00	J	1.03E-01	2.03E-01	4.50E-02	pCi/g	100%	(93.7)	3/9/04 07:47 a		59.8	LSC4
						2.08E-02	1.65E+01	(41.5)			G	
Batch: 4043472	RICHRC5017			Work Order: F9EPT1AD			Report DB ID: 9F9EPT10					
AC-228	6.51E-01		2.14E-01	2.14E-01	1.83E-01	pCi/g		(3.6)	3/3/04 08:15 a		242.0	GER5S1
								(6.1)			g	
AG-108M	-3.89E-02	U	2.63E-02	2.63E-02	3.90E-02	pCi/g		-1.	3/3/04 08:15 a		242.0	GER5S1
								-(3.)			g	
AM-241	2.80E-02	U	5.37E-02	5.37E-02	8.69E-02	pCi/g		0.32	3/3/04 08:15 a		242.0	GER5S1
								(1.)			g	
BI-212	3.11E-01	U	5.41E-01	5.41E-01	1.02E+00	pCi/g		0.3	3/3/04 08:15 a		242.0	GER5S1
							3.00E+00	(1.2)			g	
BI-214	3.74E-01	U	1.50E-01	1.50E-01	2.24E-01	pCi/g		(1.7)	3/3/04 08:15 a		242.0	GER5S1
							1.00E+00	(5.)			g	
CO-60	-1.74E-02	U	3.75E-02	3.75E-02	6.43E-02	pCi/g		-0.27	3/3/04 08:15 a		242.0	GER5S1
							1.52E-01	-0.93			g	
CS-134	5.08E-02	U	3.77E-02	3.77E-02	7.84E-02	pCi/g		0.65	3/3/04 08:15 a		242.0	GER5S1
							1.87E-01	(2.7)			g	
CS-137	2.30E-02	U	3.27E-02	3.27E-02	6.43E-02	pCi/g		0.36	3/3/04 08:15 a		242.0	GER5S1
							3.16E-01	(1.4)			g	
EU-152	-6.82E-02	U	8.10E-02	8.10E-02	1.34E-01	pCi/g		-0.51	3/3/04 08:15 a		242.0	GER5S1
							4.04E-01	-(1.7)			g	

STL Richland
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V4.97 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 3:00:00 PM
Lot-Sample No.:	J4B110186-13	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-187-C-2C-07	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	-2.72E-02	U	8.94E-02	8.94E-02	1.60E-01	pCi/g		-0.17	3/3/04 08:15 a		242.0	GER5$1
							3.72E-01	-0.61			g	
EU-155	8.05E-02	U	7.49E-02	7.49E-02	1.36E-01	pCi/g		0.59	3/3/04 08:15 a		242.0	GER5$1
							1.57E+01	(2.2)			g	
K-40	7.95E+00		1.57E+00	1.57E+00	4.52E-01	pCi/g		(17.6)	3/3/04 08:15 a		242.0	GER5$1
								(10.1)			g	
MN-54	1.86E-02	U	3.55E-02	3.55E-02	6.82E-02	pCi/g		0.27	3/3/04 08:15 a		242.0	GER5$1
							6.96E-01	(1.1)			g	
NB-94	-2.09E-02	U	3.20E-02	3.20E-02	5.28E-02	pCi/g		-0.4	3/3/04 08:15 a		242.0	GER5$1
							2.85E-01	-(1.3)			g	
PB-212	4.20E-01	J	9.63E-02	9.63E-02	1.05E-01	pCi/g		(4.)	3/3/04 08:15 a		242.0	GER5$1
							1.00E+00	(8.7)			g	
PB-214	4.98E-01	J	1.45E-01	1.45E-01	1.13E-01	pCi/g		(4.4)	3/3/04 08:15 a		242.0	GER5$1
							1.00E+00	(6.9)			g	
TL-208	1.71E-01	U	7.28E-02	7.28E-02	1.04E-01	pCi/g		(1.6)	3/3/04 08:15 a		242.0	GER5S1
							1.00E+00	(4.7)			g	
Batch: 4043475	CMUD			Work Order: F9EPT1AA			Report DB ID: 9F9EPT10					
SR-90	2.16E-01		3.12E-02	4.43E-02	4.38E-02	pCi/g	57%	(4.9)	3/13/04 09:17 a		10.0	GPC1D
						2.08E-02	6.00E-02	(9.7)			G	

No. of Results: 19 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-31	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-188-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043465	RICHRC5080			Work Order:	F9ETD1AG		Report DB ID:	9F9ETD10				
AM-241	0.00E+00	U	0.00E+00	1.66E-02	1.83E-02	pCi/g	60%	0.	3/16/04 07:13 p		2.04	ALP43
							1.03E+00	0.			G	
CM-242	0.00E+00	U	0.00E+00	1.99E-02	2.20E-02	pCi/g	60%	0.	3/16/04 07:13 p		2.04	ALP43
								0.			G	
CM-243/244	0.00E+00	U	0.00E+00	1.66E-02	1.84E-02	pCi/g	60%	0.	3/16/04 07:13 p		2.04	ALP43
							1.16E+00	0.			G	
Batch: 4043466	RICHRC5010			Work Order:	F9ETD1AE		Report DB ID:	9F9ETD10				
PU-238	0.00E+00	U	0.00E+00	1.28E-02	1.41E-02	pCi/g	70%	0.	3/8/04 06:00 p		2.02	ALP127
							1.18E+00	0.			G	
PU239/40	0.00E+00	U	0.00E+00	1.27E-02	1.41E-02	pCi/g	70%	0.	3/8/04 06:00 p		2.02	ALP127
							1.07E+00	0.			G	
Batch: 4043467	RICHRC5010			Work Order:	F9ETD1AF		Report DB ID:	9F9ETD10				
PU-241	2.41E-01	U	4.20E-01	5.65E-01	1.00E+00	pCi/g	70%	0.24	3/12/04 11:33 a		2.02	LSC7
						4.79E-01	3.48E+01	0.85			G	
Batch: 4043471	RICHRC5037			Work Order:	F9ETD1AC		Report DB ID:	9F9ETD10				
H-3	2.66E+00	J	6.14E-02	1.41E-01	2.51E-02	pCi/g	100%	(106.)	3/10/04 10:54 a		100.4	LSC5
						1.16E-02	1.65E+01	(37.9)			G	
Batch: 4043472	RICHRC5017			Work Order:	F9ETD1AD		Report DB ID:	9F9ETD10				
AC-228	4.07E-01	U	2.08E-01	2.08E-01	3.18E-01	pCi/g		(1.3)	3/3/04 11:40 a		309.8	GER4S1
								(3.9)			g	

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-31	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-188-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
AG-108M	1.48E-02	U	2.20E-02	2.20E-02	4.19E-02	pCi/g		0.35	3/3/04 11:40 a		309.8	GER4$1
								(1.3)			g	
AM-241	1.60E-01	U	1.59E-01	1.59E-01	2.92E-01	pCi/g		0.55	3/3/04 11:40 a		309.8	GER4$1
								(2.)			g	
BI-212	3.98E-01	U	4.66E-01	4.66E-01	8.89E-01	pCi/g		0.45	3/3/04 11:40 a		309.8	GER4S1
							3.00E+00	(1.7)			g	
BI-214	4.75E-01	U	1.16E-01	1.16E-01	1.96E-01	pCi/g		(2.4)	3/3/04 11:40 a		309.8	GER4S1
							1.00E+00	(8.2)			g	
CO-60	1.29E-02	U	2.61E-02	2.61E-02	5.38E-02	pCi/g		0.24	3/3/04 11:40 a		309.8	GER4$1
							1.52E-01	0.99			g	
CS-134	5.48E-03	U	3.61E-02	3.61E-02	6.55E-02	pCi/g		0.08	3/3/04 11:40 a		309.8	GER4$1
							1.87E-01	0.3			g	
CS-137	3.25E-02	U	3.17E-02	3.17E-02	6.20E-02	pCi/g		0.52	3/3/04 11:40 a		309.8	GER4$1
							3.16E-01	(2.)			g	
EU-152	1.66E-02	U	7.07E-02	7.07E-02	1.27E-01	pCi/g		0.13	3/3/04 11:40 a		309.8	GER4S1
							4.04E-01	0.47			g	
EU-154	-3.17E-02	U	9.72E-02	9.72E-02	1.72E-01	pCi/g		-0.18	3/3/04 11:40 a		309.8	GER4S1
							3.72E-01	-0.65			g	
EU-155	-3.40E-02	U	8.54E-02	8.54E-02	1.41E-01	pCi/g		-0.24	3/3/04 11:40 a		309.8	GER4S1
							1.57E+01	-0.8			g	
K-40	7.48E+00		1.45E+00	1.45E+00	4.42E-01	pCi/g		(16.9)	3/3/04 11:40 a		309.8	GER4S1
								(10.3)			g	

STL Richland
rptSTLRchSample
V4.97 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-31	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-188-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
MN-54	3.05E-02	U	3.01E-02	3.01E-02	5.96E-02	pCi/g		*0.51*	3/3/04 11:40 a		309.8	GER4S1
							6.96E-01	*(2.)*			g	
NB-94	1.59E-02	U	2.24E-02	2.24E-02	4.51E-02	pCi/g		*0.35*	3/3/04 11:40 a		309.8	GER4S1
							2.85E-01	*(1.4)*			g	
PB-212	4.08E-01	J	1.14E-01	1.14E-01	7.69E-02	pCi/g		*(5.3)*	3/3/04 11:40 a		309.8	GER4S1
							1.00E+00	*(7.2)*			g	
PB-214	4.80E-01	J	1.33E-01	1.33E-01	9.04E-02	pCi/g		*(5.3)*	3/3/04 11:40 a		309.8	GER4S1
							1.00E+00	*(7.2)*			g	
TL-208	1.56E-01	U	6.16E-02	6.16E-02	9.27E-02	pCi/g		*(1.7)*	3/3/04 11:40 a		309.8	GER4S1
							1.00E+00	*(5.1)*			g	
Batch: 4043475	CMUD			Work Order:	F9ETD1AA		Report DB ID:	9F9ETD10				
SR-90	2.69E-01		3.39E-02	5.21E-02	3.84E-02	pCi/g	51%	*(7.)*	3/13/04 09:23 a		10.0	GPC2C
						1.77E-02	6.00E-02	*(10.3)*			G	

No. of Results: 25 Comments:

STL Richland
rptSTLRchSample
V4.97 A97
33

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-32	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-188-C-1C-02	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F9ETM1AA		Report DB ID: 9F9ETM10						
H-3	3.19E+00	J	6.63E-02	1.65E-01	2.46E-02	pCi/g	100%	*(129.7)*	3/10/04 10:54 a		100.6	LSC5
						1.14E-02	1.65E+01	*(38.7)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRichSample
V4.97 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-33	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-188-C-1C-03	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F9ETT1AA		Report DB ID: 9F9ETT10						
H-3	1.49E+00	J	4.62E-02	8.49E-02	2.50E-02	pCi/g	100%	*(59.6)*	3/10/04 10:54 a		100.3	LSC5
						1.15E-02	1.65E+01	*(35.)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.97 A97
CT

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-34	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-188-C-1C-04	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F9ETX1AA			Report DB ID: 9F9ETX10					
H-3	9.42E-01	J	3.69E-02	5.88E-02	2.45E-02	pCi/g	100%	*(38.4)*	3/10/04 10:54 a		100.3	LSC5
						1.14E-02	1.65E+01	*(32.)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-35	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-188-C-1C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order:	F9ET21AA		Report DB ID: 9F9ET210					
H-3	1.69E+00	J	4.93E-02	9.45E-02	2.52E-02	pCi/g	100%	*(67.1)*	3/10/04 10:54 a		100.3	LSC5
						1.16E-02	1.65E+01	*(35.7)*			G	
Batch: 4043472	RICHRC5017			Work Order:	F9ET21AC		Report DB ID: 9F9ET210					
AC-228	4.39E-01	U	1.69E-01	1.69E-01	2.74E-01	pCi/g		*(1.6)*	3/3/04 11:46 a		376.7	GER5$1
								(5.2)			g	
AG-108M	5.74E-03	U	1.83E-02	1.83E-02	3.35E-02	pCi/g		*0.17*	3/3/04 11:46 a		376.7	GER5$1
								0.63			g	
AM-241	4.78E-02	U	4.33E-02	4.33E-02	7.32E-02	pCi/g		*0.65*	3/3/04 11:46 a		376.7	GER5$1
								(2.2)			g	
BI-212	2.80E-01	U	3.50E-01	3.50E-01	6.72E-01	pCi/g		*0.42*	3/3/04 11:46 a		376.7	GER5$1
							3.00E+00	*(1.6)*			g	
BI-214	3.94E-01	U	1.08E-01	1.08E-01	1.73E-01	pCi/g		*(2.3)*	3/3/04 11:46 a		376.7	GER5$1
							1.00E+00	*(7.3)*			g	
CO-60	5.04E-03	U	1.99E-02	1.99E-02	3.95E-02	pCi/g		*0.13*	3/3/04 11:46 a		376.7	GER5$1
							1.52E-01	*0.51*			g	
CS-134	3.64E-02	U	2.71E-02	2.71E-02	5.48E-02	pCi/g		*0.66*	3/3/04 11:46 a		376.7	GER5$1
							1.87E-01	*(2.7)*			g	
CS-137	-1.03E-02	U	2.30E-02	2.30E-02	3.97E-02	pCi/g		*-0.26*	3/3/04 11:46 a		376.7	GER5$1
							3.16E-01	*-0.89*			g	
EU-152	3.34E-02	U	6.35E-02	6.35E-02	1.17E-01	pCi/g		*0.29*	3/3/04 11:46 a		376.7	GER5$1
							4.04E-01	*(1.1)*			g	

STL Richland
rptSTLRchSample
V4.97 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-35	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-188-C-1C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	3.84E-02	U	6.65E-02	6.65E-02	1.33E-01	pCi/g		*0.29*	3/3/04 11:46 a		376.7	GER5S1
							3.72E-01	*(1.2)*			g	
EU-155	2.99E-02	U	5.84E-02	5.84E-02	1.02E-01	pCi/g		*0.29*	3/3/04 11:46 a		376.7	GER5S1
							1.57E+01	*(1.)*			g	
K-40	5.25E+00		1.03E+00	1.03E+00	3.90E-01	pCi/g		*(13.4)*	3/3/04 11:46 a		376.7	GER5S1
								(10.2)			g	
MN-54	-6.36E-04	U	2.58E-02	2.58E-02	4.61E-02	pCi/g		*-0.01*	3/3/04 11:46 a		376.7	GER5S1
							6.96E-01	*-0.05*			g	
NB-94	-7.01E-03	U	2.23E-02	2.23E-02	3.86E-02	pCi/g		*-0.18*	3/3/04 11:46 a		376.7	GER5S1
							2.85E-01	*-0.63*			g	
PB-212	3.64E-01	J	9.19E-02	9.19E-02	6.69E-02	pCi/g		*(5.4)*	3/3/04 11:46 a		376.7	GER5S1
							1.00E+00	*(7.9)*			g	
PB-214	4.68E-01	J	1.14E-01	1.14E-01	7.33E-02	pCi/g		*(6.4)*	3/3/04 11:46 a		376.7	GER5S1
							1.00E+00	*(8.2)*			g	
TL-208	1.43E-01	J	4.97E-02	4.97E-02	4.82E-02	pCi/g		*(3.)*	3/3/04 11:46 a		376.7	GER5S1
							1.00E+00	*(5.8)*			g	

No. of Results: 18 Comments:

STL Richland
rptSTLRchSample
V4.97 A97
8

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-36	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-188-C-1C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F9ET51AC			Report DB ID: 9F9ET510					
H-3	3.87E-01	J	5.37E-02	5.98E-02	8.35E-02	pCi/g	100%	(4.6)	3/10/04 10:54 a		33.4	LSC5
						3.86E-02	1.65E+01	(13.)			G	
Batch: 4043472	RICHRC5017			Work Order: F9ET51AD			Report DB ID: 9F9ET510					
AC-228	5.47E-01	U	2.80E-01	2.80E-01	5.43E-01	pCi/g		(1.)	3/3/04 11:42 a		170.4	GER6S1
								(3.9)			g	
AG-106M	-1.50E-02	U	3.34E-02	3.34E-02	5.70E-02	pCi/g		-0.26	3/3/04 11:42 a		170.4	GER6S1
								-0.9			g	
AM-241	-1.36E-01	U	1.03E-01	1.03E-01	1.56E-01	pCi/g		-0.87	3/3/04 11:42 a		170.4	GER6S1
								-(2.6)			g	
BI-212	1.20E+00	U	7.19E-01	7.19E-01	1.48E+00	pCi/g		0.81	3/3/04 11:42 a		170.4	GER6S1
							3.00E+00	(3.3)			g	
BI-214	6.27E-01	U	1.80E-01	1.80E-01	3.17E-01	pCi/g		(2.)	3/3/04 11:42 a		170.4	GER6S1
							1.00E+00	(7.)			g	
CO-60	1.29E-02	U	4.88E-02	4.88E-02	9.75E-02	pCi/g		0.13	3/3/04 11:42 a		170.4	GER6S1
							1.52E-01	0.53			g	
CS-134	4.17E-03	U	5.34E-02	5.34E-02	9.81E-02	pCi/g		0.04	3/3/04 11:42 a		170.4	GER6S1
							1.87E-01	0.16			g	
CS-137	-3.02E-02	U	4.69E-02	4.69E-02	7.73E-02	pCi/g		-0.39	3/3/04 11:42 a		170.4	GER6S1
							3.16E-01	-(1.3)			g	
EU-152	-5.65E-02	U	1.11E-01	1.11E-01	1.85E-01	pCi/g		-0.31	3/3/04 11:42 a		170.4	GER6S1
							4.04E-01	-(1.)			g	

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/2/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-36	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-188-C-1C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	5.81E-02	U	1.51E-01	1.51E-01	2.96E-01	pCi/g		*0.2*	3/3/04 11:42 a		170.4	GER6$1
							3.72E-01	*0.77*			g	
EU-155	2.25E-02	U	9.81E-02	9.81E-02	1.74E-01	pCi/g		*0.13*	3/3/04 11:42 a		170.4	GER6S1
							1.57E+01	*0.46*			g	
K-40	7.64E+00		1.99E+00	1.99E+00	6.38E-01	pCi/g		*(12.)*	3/3/04 11:42 a		170.4	GER6$1
								(7.7)			g	
MN-54	-5.76E-03	U	4.60E-02	4.60E-02	8.25E-02	pCi/g		*-0.07*	3/3/04 11:42 a		170.4	GER6$1
							6.96E-01	*-0.25*			g	
NB-94	-9.22E-03	U	4.59E-02	4.59E-02	8.29E-02	pCi/g		*-0.11*	3/3/04 11:42 a		170.4	GER6$1
							2.85E-01	*-0.4*			g	
PB-212	5.18E-01	J	1.33E-01	1.33E-01	1.42E-01	pCi/g		*(3.6)*	3/3/04 11:42 a		170.4	GER6S1
							1.00E+00	*(7.8)*			g	
PB-214	6.47E-01	J	1.97E-01	1.97E-01	1.41E-01	pCi/g		*(4.6)*	3/3/04 11:42 a		170.4	GER6S1
							1.00E+00	*(6.6)*			g	
TL-208	1.60E-01	U	9.94E-02	9.94E-02	1.39E-01	pCi/g		*(1.1)*	3/3/04 11:42 a		170.4	GER6S1
							1.00E+00	*(3.2)*			g	
Batch: 4043475	CMUD			Work Order:	F9ET51AA		Report DB ID:	9F9ET510				
SR-90	3.52E-01		3.53E-02	6.23E-02	3.30E-02	pCi/g	57%	*(10.7)*	3/13/04 09:23 a		10.08	GPC2D
						1.51E-02	6.00E-02	*(11.3)*			G	

No. of Results: 19 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:15:00 AM
Lot-Sample No.:	J4B110186-1	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order:	F9EM21AA		Report DB ID: 9F9EM210					
H-3	5.85E-01	J	3.20E-02	4.08E-02	2.84E-02	pCi/g	100%	*(20.6)*	3/8/04 10:36 p		100.2	LSC4
						1.32E-02	1.65E+01	*(28.7)*			G	
Batch: 4043472	RICHRC5017			Work Order:	F9EM21AC		Report DB ID: 9F9EM210					
AC-228	3.70E-01	U	1.54E-01	1.54E-01	2.70E-01	pCi/g		*(1.4)*	3/3/04 08:06 a		345.2	GER1$1
								(4.8)			g	
AG-108M	6.43E-03	U	2.07E-02	2.07E-02	3.74E-02	pCi/g		*0.17*	3/3/04 08:06 a		345.2	GER1$1
								0.62			g	
AM-241	-7.76E-02	U	1.03E-01	1.03E-01	1.66E-01	pCi/g		*-0.47*	3/3/04 08:06 a		345.2	GER1$1
								-(1.5)			g	
BI-212	5.23E-01	U	3.77E-01	3.77E-01	7.43E-01	pCi/g		*0.7*	3/3/04 08:06 a		345.2	GER1$1
							3.00E+00	*(2.8)*			g	
BI-214	4.37E-01	U	1.48E-01	1.48E-01	1.78E-01	pCi/g		*(2.4)*	3/3/04 08:06 a		345.2	GER1$1
							1.00E+00	*(5.9)*			g	
CO-60	-6.10E-03	U	2.45E-02	2.45E-02	4.39E-02	pCi/g		*-0.14*	3/3/04 08:06 a		345.2	GER1$1
							1.52E-01	*-0.5*			g	
CS-134	1.87E-02	U	2.71E-02	2.71E-02	5.22E-02	pCi/g		*0.36*	3/3/04 08:06 a		345.2	GER1$1
							1.87E-01	*(1.4)*			g	
CS-137	-1.29E-02	U	2.62E-02	2.62E-02	4.42E-02	pCi/g		*-0.29*	3/3/04 08:06 a		345.2	GER1$1
							3.16E-01	*-0.98*			g	
EU-152	-8.39E-02	U	7.81E-02	7.81E-02	1.19E-01	pCi/g		*-0.71*	3/3/04 08:06 a		345.2	GER1$1
							4.04E-01	*-(2.1)*			g	

STL Richland
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V4.07 A97

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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:15:00 AM
Lot-Sample No.:	J4B110186-1	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EM21AA			Report DB ID: 9F9EM210					
H-3	5.85E-01	J	3.20E-02	4.08E-02	2.84E-02	pCi/g	100%	*(20.6)*	3/8/04 10:36 p		100.2	LSC4
						1.32E-02	1.65E+01	*(28.7)*			G	
Batch: 4043472	RICHRC5017			Work Order: F9EM21AC			Report DB ID: 9F9EM210					
AC-228	3.70E-01	U	1.54E-01	1.54E-01	2.70E-01	pCi/g		*(1.4)*	3/3/04 08:06 a		345.2	GER1S1
								(4.8)			g	
AG-108M	6.43E-03	U	2.07E-02	2.07E-02	3.74E-02	pCi/g		*0.17*	3/3/04 08:06 a		345.2	GER1S1
								0.62			g	
AM-241	-7.76E-02	U	1.03E-01	1.03E-01	1.66E-01	pCi/g		*-0.47*	3/3/04 08:06 a		345.2	GER1S1
								-(1.5)			g	
BI-212	5.23E-01	U	3.77E-01	3.77E-01	7.43E-01	pCi/g		*0.7*	3/3/04 08:06 a		345.2	GER1S1
							3.00E+00	*(2.8)*			g	
BI-214	4.37E-01	U	1.48E-01	1.48E-01	1.78E-01	pCi/g		*(2.4)*	3/3/04 08:06 a		345.2	GER1S1
							1.00E+00	*(5.9)*			g	
CO-60	-6.10E-03	U	2.45E-02	2.45E-02	4.39E-02	pCi/g		*-0.14*	3/3/04 08:06 a		345.2	GER1S1
							1.52E-01	*-0.5*			g	
CS-134	1.87E-02	U	2.71E-02	2.71E-02	5.22E-02	pCi/g		*0.36*	3/3/04 08:06 a		345.2	GER1S1
							1.87E-01	*(1.4)*			g	
CS-137	-1.29E-02	U	2.62E-02	2.62E-02	4.42E-02	pCi/g		*-0.29*	3/3/04 08:06 a		345.2	GER1S1
							3.16E-01	*-0.98*			g	
EU-152	-8.39E-02	U	7.81E-02	7.81E-02	1.19E-01	pCi/g		*-0.71*	3/3/04 08:06 a		345.2	GER1S1
							4.04E-01	*-(2.1)*			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:15:00 AM
Lot-Sample No.:	J4B110186-1	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	-2.39E-02	U	7.58E-02	7.58E-02	1.34E-01	pCi/g		*-0.18*	3/3/04 08:06 a		345.2	GER1S1
							3.72E-01	*-0.63*			g	
EU-155	9.09E-04	U	7.57E-02	7.57E-02	1.30E-01	pCi/g		*0.01*	3/3/04 08:06 a		345.2	GER1S1
							1.57E+01	*0.02*			g	
K-40	7.34E+00		1.26E+00	1.26E+00	4.45E-01	pCi/g		*(16.5)*	3/3/04 08:06 a		345.2	GER1S1
								(11.6)			g	
MN-54	-1.98E-03	U	2.52E-02	2.52E-02	4.50E-02	pCi/g		*-0.04*	3/3/04 08:06 a		345.2	GER1S1
							6.96E-01	*-0.16*			g	
NB-94	-4.34E-03	U	2.48E-02	2.48E-02	4.36E-02	pCi/g		*-0.1*	3/3/04 08:06 a		345.2	GER1S1
							2.85E-01	*-0.35*			g	
PB-212	3.97E-01	J	1.04E-01	1.04E-01	6.10E-02	pCi/g		*(6.5)*	3/3/04 08:06 a		345.2	GER1S1
							1.00E+00	*(7.6)*			g	
PB-214	4.81E-01	J	1.30E-01	1.30E-01	8.96E-02	pCi/g		*(5.4)*	3/3/04 08:06 a		345.2	GER1S1
							1.00E+00	*(7.4)*			g	
TL-208	8.66E-02	U	3.58E-02	3.58E-02	6.83E-02	pCi/g		*(1.3)*	3/3/04 08:06 a		345.2	GER1S1
							1.00E+00	*(4.8)*			g	

No. of Results: 18 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:15:00 AM
Lot-Sample No.:	J4B110186-2	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order:	F9EN71AA		Report DB ID: 9F9EN710					
H-3	6.46E-01	J	3.34E-02	4.35E-02	2.84E-02	pCi/g	100%	*(22.8)*	3/9/04		100.2	LSC4
						1.31E-02	1.65E+01	*(29.7)*			G	

No. of Results: 1 Comments:

STL Richland
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V4.07 A97
C3

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:30:00 AM
Lot-Sample No.:	J4B110186-3	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-2C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EPC1AA		Report DB ID: 9F9EPC10						
H-3	3.59E-01	J	2.52E-02	3.00E-02	2.69E-02	pCi/g	100%	*(13.4)*	3/9/04 12:43 a		100.7	LSC4
						1.25E-02	1.65E+01	*(24.)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:30:00 AM
Lot-Sample No.:	J4B110186-4	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-2C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order:	F9EPD1AA		Report DB ID:	9F9EPD10				
H-3	1.78E-01	J	1.98E-02	2.18E-02	2.83E-02	pCi/g	100%	*(6.3)*	3/9/04 01:25 a		100.4	LSC4
						1.31E-02	1.65E+01	*(16.3)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:30:00 AM
Lot-Sample No.:	J4B110186-5	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-2C-05	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EPE1AA			Report DB ID: 9F9EPE10					
H-3	1.21E-01	J	1.66E-02	1.80E-02	2.58E-02	pCi/g	100%	*(4.7)*	3/9/04 02:08 a		100.6	LSC4
						1.20E-02	1.65E+01	*(13.5)*			G	
Batch: 4043472	RICHRC5017			Work Order: F9EPE1AC			Report DB ID: 9F9EPE10					
AC-228	4.26E-01		1.58E-01	1.58E-01	1.54E-01	pCi/g		*(2.8)*	3/3/04 08:07 a		362.7	GER4$1
								(5.4)			g	
AG-108M	2.36E-03	U	2.01E-02	2.01E-02	3.65E-02	pCi/g		*0.06*	3/3/04 08:07 a		362.7	GER4$1
								0.24			g	
AM-241	-9.19E-03	U	1.46E-01	1.46E-01	2.54E-01	pCi/g		*-0.04*	3/3/04 08:07 a		362.7	GER4$1
								-0.13			g	
BI-212	8.86E-01	U	3.68E-01	3.68E-01	7.74E-01	pCi/g		*(1.1)*	3/3/04 08:07 a		362.7	GER4$1
							3.00E+00	*(4.8)*			g	
BI-214	3.79E-01	U	1.08E-01	1.08E-01	1.69E-01	pCi/g		*(2.2)*	3/3/04 08:07 a		362.7	GER4$1
							1.00E+00	*(7.)*			g	
CO-60	9.51E-03	U	2.50E-02	2.50E-02	4.98E-02	pCi/g		*0.19*	3/3/04 08:07 a		362.7	GER4$1
							1.52E-01	*0.76*			g	
CS-134	3.03E-02	U	3.12E-02	3.12E-02	6.05E-02	pCi/g		*0.5*	3/3/04 08:07 a		362.7	GER4$1
							1.87E-01	*(1.9)*			g	
CS-137	-3.91E-03	U	2.60E-02	2.60E-02	4.64E-02	pCi/g		*-0.08*	3/3/04 08:07 a		362.7	GER4$1
							3.16E-01	*-0.3*			g	
EU-152	-1.55E-02	U	5.97E-02	5.97E-02	1.03E-01	pCi/g		*-0.15*	3/3/04 08:07 a		362.7	GER4$1
							4.04E-01	*-0.52*			g	

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:30:00 AM
Lot-Sample No.:	J4B110186-5	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-2C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	1.07E-02	U	7.37E-02	7.37E-02	1.41E-01	pCi/g		*0.08*	3/3/04 08:07 a		362.7	GER4S1
							3.72E-01	*0.29*			g	
EU-155	-2.65E-02	U	7.61E-02	7.61E-02	1.26E-01	pCi/g		*-0.21*	3/3/04 08:07 a		362.7	GER4S1
							1.57E+01	*-0.7*			g	
K-40	6.08E+00		1.22E+00	1.22E+00	4.49E-01	pCi/g		*(13.5)*	3/3/04 08:07 a		362.7	GER4S1
								(9.9)			g	
MN-54	-9.11E-04	U	2.36E-02	2.36E-02	4.26E-02	pCi/g		*-0.02*	3/3/04 08:07 a		362.7	GER4S1
							6.96E-01	*-0.08*			g	
NB-94	2.70E-03	U	1.98E-02	1.98E-02	3.70E-02	pCi/g		*0.07*	3/3/04 08:07 a		362.7	GER4S1
							2.85E-01	*0.27*			g	
PB-212	3.75E-01	J	9.33E-02	9.33E-02	6.44E-02	pCi/g		*(5.8)*	3/3/04 08:07 a		362.7	GER4S1
							1.00E+00	*(8.)*			g	
PB-214	3.67E-01	J	1.16E-01	1.16E-01	8.13E-02	pCi/g		*(4.5)*	3/3/04 08:07 a		362.7	GER4S1
							1.00E+00	*(6.3)*			g	
TL-208	1.60E-01	J	5.85E-02	5.85E-02	4.39E-02	pCi/g		*(3.6)*	3/3/04 08:07 a		362.7	GER4S1
							1.00E+00	*(5.5)*			g	

No. of Results: 18 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:30:00 AM
Lot-Sample No.:	J4B110186-6	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order:	F9EPG1AA		Report DB ID: 9F9EPG10					
H-3	2.05E-01	J	1.96E-02	2.21E-02	2.55E-02	pCi/g	100%	*(8.1)*	3/9/04 02:50 a		100.8	LSC4
						1.18E-02	1.65E+01	*(18.6)*			G	
Batch: 4043472	RICHRC5017			Work Order:	F9EPG1AD		Report DB ID: 9F9EPG10					
AC-228	5.65E-01	U	1.59E-01	1.59E-01	3.00E-01	pCi/g		*(1.9)*	3/3/04 08:07 a		355.8	GER7S1
								(7.1)			g	
AG-108M	5.81E-03	U	1.73E-02	1.73E-02	3.24E-02	pCi/g		*0.18*	3/3/04 08:07 a		355.8	GER7S1
								0.67			g	
AM-241	8.02E-03	U	7.92E-02	7.92E-02	1.38E-01	pCi/g		*0.06*	3/3/04 08:07 a		355.8	GER7S1
								0.2			g	
BI-212	5.80E-01	U	3.85E-01	3.85E-01	7.68E-01	pCi/g		*0.76*	3/3/04 08:07 a		355.8	GER7S1
							3.00E+00	*(3.)*			g	
BI-214	3.09E-01	U	1.25E-01	1.25E-01	1.68E-01	pCi/g		*(1.8)*	3/3/04 08:07 a		355.8	GER7S1
							1.00E+00	*(4.9)*			g	
CO-60	1.62E-02	U	2.46E-02	2.46E-02	5.09E-02	pCi/g		*0.32*	3/3/04 08:07 a		355.8	GER7S1
							1.52E-01	*(1.3)*			g	
CS-134	3.44E-02	U	2.61E-02	2.61E-02	5.36E-02	pCi/g		*0.64*	3/3/04 08:07 a		355.8	GER7S1
							1.87E-01	*(2.6)*			g	
CS-137	-1.98E-02	U	2.06E-02	2.06E-02	3.29E-02	pCi/g		*-0.6*	3/3/04 08:07 a		355.8	GER7S1
							3.16E-01	*-(1.9)*			g	
EU-152	3.90E-03	U	6.43E-02	6.43E-02	1.13E-01	pCi/g		*0.03*	3/3/04 08:07 a		355.8	GER7S1
							4.04E-01	*0.12*			g	

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:30:00 AM
Lot-Sample No.:	J4B110186-6	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-2C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	-7.30E-02	U	7.73E-02	7.73E-02	1.22E-01	pCi/g		-0.6	3/3/04 08:07 a		355.8	GER7S1
							3.72E-01	-(1.9)			g	
EU-155	-1.93E-03	U	6.42E-02	6.42E-02	1.08E-01	pCi/g		-0.02	3/3/04 08:07 a		355.8	GER7S1
							1.57E+01	-0.06			g	
K-40	6.75E+00		1.22E+00	1.22E+00	4.56E-01	pCi/g		(14.8)	3/3/04 08:07 a		355.8	GER7S1
								(11.1)			g	
MN-54	1.31E-02	U	2.50E-02	2.50E-02	4.83E-02	pCi/g		0.27	3/3/04 08:07 a		355.8	GER7S1
							6.96E-01	(1.)			g	
NB-94	-7.92E-03	U	2.01E-02	2.01E-02	3.54E-02	pCi/g		-0.22	3/3/04 08:07 a		355.8	GER7S1
							2.85E-01	-0.79			g	
PB-212	3.78E-01	J	1.21E-01	1.21E-01	7.65E-02	pCi/g		(4.9)	3/3/04 08:07 a		355.8	GER7S1
							1.00E+00	(6.2)			g	
PB-214	4.50E-01	J	1.17E-01	1.17E-01	7.64E-02	pCi/g		(5.9)	3/3/04 08:07 a		355.8	GER7S1
							1.00E+00	(7.7)			g	
TL-208	1.89E-01	J	5.38E-02	5.38E-02	4.63E-02	pCi/g		(4.1)	3/3/04 08:07 a		355.8	GER7S1
							1.00E+00	(7.)			g	
Batch: 4043475	CMUD			Work Order: F9EPG1AC			Report DB ID: 9F9EPG10					
SR-90	5.84E-02	J	2.28E-02	2.61E-02	4.27E-02	pCi/g	58%	(1.4)	3/13/04 09:17 a		10.05	GPC1A
						2.03E-02	6.00E-02	(4.5)			G	

No. of Results: 19 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:29:00 PM
Lot-Sample No.:	J4B110186-14	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EP41AA			Report DB ID: 9F9EP410					
H-3	8.82E-01	J	3.76E-02	5.30E-02	2.72E-02	pCi/g	100%	*(32.4)*	3/9/04 08:29 a		100.5	LSC4
						1.26E-02	1.65E+01	*(33.3)*			G	
Batch: 4043472	RICHRC5017			Work Order: F9EP41AC			Report DB ID: 9F9EP410					
AC-228	4.45E-01		1.86E-01	1.86E-01	1.45E-01	pCi/g		*(3.1)*	3/3/04 09:51 a		358.1	GER4S1
								(4.8)			g	
AG-108M	-3.80E-04	U	1.98E-02	1.98E-02	3.55E-02	pCi/g		*-0.01*	3/3/04 09:51 a		358.1	GER4S1
								-0.04			g	
AM-241	-5.24E-03	U	1.40E-01	1.40E-01	2.44E-01	pCi/g		*-0.02*	3/3/04 09:51 a		358.1	GER4S1
								-0.07			g	
BI-212	5.87E-01	U	3.70E-01	3.70E-01	7.49E-01	pCi/g		*0.78*	3/3/04 09:51 a		358.1	GER4S1
							3.00E+00	*(3.2)*			g	
BI-214	4.48E-01	U	1.36E-01	1.36E-01	1.86E-01	pCi/g		*(2.4)*	3/3/04 09:51 a		358.1	GER4S1
							1.00E+00	*(6.6)*			g	
CO-60	2.06E-02	U	2.66E-02	2.66E-02	5.49E-02	pCi/g		*0.37*	3/3/04 09:51 a		358.1	GER4S1
							1.52E-01	*(1.5)*			g	
CS-134	3.51E-03	U	2.71E-02	2.71E-02	4.98E-02	pCi/g		*0.07*	3/3/04 09:51 a		358.1	GER4S1
							1.87E-01	*0.26*			g	
CS-137	2.10E-03	U	2.14E-02	2.14E-02	4.00E-02	pCi/g		*0.05*	3/3/04 09:51 a		358.1	GER4S1
							3.16E-01	*0.2*			g	
EU-152	2.80E-02	U	6.10E-02	6.10E-02	1.12E-01	pCi/g		*0.25*	3/3/04 09:51 a		358.1	GER4S1
							4.04E-01	*0.92*			g	

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:29:00 PM
Lot-Sample No.:	J4B110186-14	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	1.11E-02	U	7.64E-02	7.64E-02	1.46E-01	pCi/g		*0.08*	3/3/04 09:51 a		358.1	GER4$1
							3.72E-01	*0.29*			g	
EU-155	6.75E-02	U	7.56E-02	7.56E-02	1.34E-01	pCi/g		*0.5*	3/3/04 09:51 a		358.1	GER4$1
							1.57E+01	*(1.8)*			g	
K-40	7.14E+00		1.29E+00	1.29E+00	4.81E-01	pCi/g		*(14.9)*	3/3/04 09:51 a		358.1	GER4$1
								(11.1)			g	
MN-54	-1.26E-02	U	2.73E-02	2.73E-02	4.63E-02	pCi/g		*-0.27*	3/3/04 09:51 a		358.1	GER4$1
							6.96E-01	*-0.93*			g	
NB-94	-2.92E-02	U	2.72E-02	2.72E-02	4.22E-02	pCi/g		*-0.69*	3/3/04 09:51 a		358.1	GER4$1
							2.85E-01	*-(2.1)*			g	
PB-212	4.37E-01	J	9.31E-02	9.31E-02	6.28E-02	pCi/g		*(7.)*	3/3/04 09:51 a		358.1	GER4$1
							1.00E+00	*(9.4)*			g	
PB-214	4.30E-01	J	1.23E-01	1.23E-01	8.21E-02	pCi/g		*(5.2)*	3/3/04 09:51 a		358.1	GER4$1
							1.00E+00	*(7.)*			g	
TL-208	1.58E-01	U	5.00E-02	5.00E-02	7.88E-02	pCi/g		*(2.)*	3/3/04 09:51 a		358.1	GER4$1
							1.00E+00	*(6.3)*			g	

No. of Results: 18 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:29:00 PM
Lot-Sample No.:	J4B110186-15	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EP81AA			Report DB ID: 9F9EP810					
H-3	1.08E+00	J	4.46E-02	6.39E-02	3.15E-02	pCi/g	100%	*(34.3)*	3/9/04 09:12 a		100.2	LSC4
						1.46E-02	1.65E+01	*(33.8)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:29:00 PM
Lot-Sample No.:	J4B110186-16	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EQC1AA		Report DB ID: 9F9EQC10						
H-3	7.26E-01	J	3.34E-02	4.55E-02	2.58E-02	pCi/g	100%	*(28.2)*	3/9/04 09:54 a		100.5	LSC4
						1.19E-02	1.65E+01	*(31.9)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.07 A97
C3

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:29:00 PM
Lot-Sample No.:	J4B110186-17	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C1C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order:	F9EOF1AA		Report DB ID:	9F9EOF10				
H-3	2.46E-01	J	2.15E-02	2.45E-02	2.65E-02	pCi/g	100%	*(9.3)*	3/9/04 10:37 a		100.3	LSC4
						1.23E-02	1.65E+01	*(20.1)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V6.07 A97

MDC|MDA,Lc - Detection, Decision Level based on Instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:29:00 PM
Lot-Sample No.:	J4B110186-18	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C1C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EQJ1AA			Report DB ID: 9F9EQJ10					
H-3	2.41E-01	J	2.14E-02	2.43E-02	2.67E-02	pCi/g	100%	*(9.)*	3/9/04 11:19 a		100.8	LSC4
						1.24E-02	1.65E+01	*(19.9)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:45:00 PM
Lot-Sample No.:	J4B110186-19	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order:	F9EQQ1AA		Report DB ID:	9F9EQQ10				
H-3	8.16E-01	J	3.68E-02	5.44E-02	2.75E-02	pCi/g	100%	*(29.6)*	3/10/04 10:54 a		100.5	LSC5
						1.27E-02	1.65E+01	*(30.)*			G	
Batch: 4043472	RICHRC5017			Work Order:	F9EQQ1AC		Report DB ID:	9F9EQQ10				
AC-228	5.29E-01		1.44E-01	1.44E-01	1.38E-01	pCi/g		*(3.8)*	3/3/04 09:57 a		377.1	GER5S1
								(7.4)			g	
AG-108M	-3.46E-03	U	1.82E-02	1.82E-02	3.19E-02	pCi/g		*-0.11*	3/3/04 09:57 a		377.1	GER5S1
								-0.38			g	
AM-241	-6.11E-03	U	4.35E-02	4.35E-02	7.12E-02	pCi/g		*-0.09*	3/3/04 09:57 a		377.1	GER5S1
								-0.28			g	
BI-212	7.80E-01	U	3.36E-01	3.36E-01	7.12E-01	pCi/g		*(1.1)*	3/3/04 09:57 a		377.1	GER5S1
							3.00E+00	*(4.6)*			g	
BI-214	3.34E-01	U	1.05E-01	1.05E-01	1.57E-01	pCi/g		*(2.1)*	3/3/04 09:57 a		377.1	GER5S1
							1.00E+00	*(6.3)*			g	
CO-60	8.02E-03	U	2.37E-02	2.37E-02	4.61E-02	pCi/g		*0.17*	3/3/04 09:57 a		377.1	GER5S1
							1.52E-01	*0.68*			g	
CS-134	1.52E-02	U	2.45E-02	2.45E-02	4.75E-02	pCi/g		*0.32*	3/3/04 09:57 a		377.1	GER5S1
							1.87E-01	*(1.2)*			g	
CS-137	-1.04E-02	U	2.38E-02	2.38E-02	4.11E-02	pCi/g		*-0.25*	3/3/04 09:57 a		377.1	GER5S1
							3.16E-01	*-0.88*			g	
EU-152	1.18E-02	U	5.76E-02	5.76E-02	1.04E-01	pCi/g		*0.11*	3/3/04 09:57 a		377.1	GER5S1
							4.04E-01	*0.41*			g	

STL Richland
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V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:45:00 PM
Lot-Sample No.:	J4B110186-19	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	2.32E-02	U	7.64E-02	7.64E-02	1.45E-01	pCi/g		*0.16*	3/3/04 09:57 a		377.1	GER5$1
							3.72E-01	*0.61*			g	
EU-155	5.63E-02	U	5.83E-02	5.83E-02	1.03E-01	pCi/g		*0.55*	3/3/04 09:57 a		377.1	GER5$1
							1.57E+01	*(1.9)*			g	
K-40	6.78E+00		1.20E+00	1.20E+00	3.90E-01	pCi/g		*(17.4)*	3/3/04 09:57 a		377.1	GER5$1
								(11.3)			g	
MN-54	1.79E-02	U	2.13E-02	2.13E-02	4.25E-02	pCi/g		*0.42*	3/3/04 09:57 a		377.1	GER5$1
							6.96E-01	*(1.7)*			g	
NB-94	2.31E-02	U	1.86E-02	1.86E-02	3.94E-02	pCi/g		*0.59*	3/3/04 09:57 a		377.1	GER5$1
							2.85E-01	*(2.5)*			g	
PB-212	3.56E-01	J	9.38E-02	9.38E-02	6.69E-02	pCi/g		*(5.3)*	3/3/04 09:57 a		377.1	GER5$1
							1.00E+00	*(7.6)*			g	
PB-214	3.99E-01	J	1.24E-01	1.24E-01	7.06E-02	pCi/g		*(5.6)*	3/3/04 09:57 a		377.1	GER5$1
							1.00E+00	*(6.4)*			g	
TL-208	1.71E-01	U	5.10E-02	5.10E-02	7.52E-02	pCi/g		*(2.3)*	3/3/04 09:57 a		377.1	GER5$1
							1.00E+00	*(6.7)*			g	

No. of Results: 18 Comments:

STL Richland
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V4.97 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:45:00 PM
Lot-Sample No.:	J4B110186-20	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C2C-07	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F9EQX1AA			Report DB ID: 9F9EQX10					
H-3	5.38E-01	J	2.91E-02	3.96E-02	2.52E-02	pCi/g	100%	*(21.3)*	3/10/04 10:54 a		100.3	LSC5
						1.17E-02	1.65E+01	*(27.1)*			G	
Batch: 4043472	RICHRC5017			Work Order: F9EQX1AD			Report DB ID: 9F9EQX10					
AC-228	4.71E-01	U	2.41E-01	2.41E-01	4.30E-01	pCi/g		*(1.1)*	3/3/04 09:52 a		225.9	GER6S1
								(3.9)			g	
AG-108M	-2.19E-03	U	2.95E-02	2.95E-02	5.21E-02	pCi/g		*-0.04*	3/3/04 09:52 a		225.9	GER6S1
								-0.15			g	
AM-241	1.69E-02	U	7.93E-02	7.93E-02	1.38E-01	pCi/g		*0.12*	3/3/04 09:52 a		225.9	GER6S1
								0.43			g	
BI-212	-1.98E-01	U	5.96E-01	5.96E-01	1.03E+00	pCi/g		*-0.19*	3/3/04 09:52 a		225.9	GER6S1
							3.00E+00	*-0.66*			g	
BI-214	3.30E-01	U	1.66E-01	1.66E-01	2.39E-01	pCi/g		*(1.4)*	3/3/04 09:52 a		225.9	GER6S1
							1.00E+00	*(4.)*			g	
CO-60	2.89E-02	U	3.93E-02	3.93E-02	8.23E-02	pCi/g		*0.35*	3/3/04 09:52 a		225.9	GER6S1
							1.52E-01	*(1.5)*			g	
CS-134	4.33E-02	U	4.62E-02	4.62E-02	9.05E-02	pCi/g		*0.48*	3/3/04 09:52 a		225.9	GER6S1
							1.87E-01	*(1.9)*			g	
CS-137	-1.34E-03	U	3.62E-02	3.62E-02	6.46E-02	pCi/g		*-0.02*	3/3/04 09:52 a		225.9	GER6S1
							3.16E-01	*-0.07*			g	
EU-152	4.49E-02	U	8.79E-02	8.79E-02	1.60E-01	pCi/g		*0.28*	3/3/04 09:52 a		225.9	GER6S1
							4.04E-01	*(1.)*			g	

STL Richland
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8

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:45:00 PM
Lot-Sample No.:	J4B110186-20	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C2C-07	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	-1.51E-01	U	1.44E-01	1.44E-01	2.24E-01	pCi/g		-0.67	3/3/04 09:52 a		225.9	GER6$1
							3.72E-01	-(2.1)			g	
EU-155	2.01E-02	U	7.80E-02	7.80E-02	1.38E-01	pCi/g		0.15	3/3/04 09:52 a		225.9	GER6S1
							1.57E+01	0.51			g	
K-40	7.64E+00		1.66E+00	1.66E+00	5.41E-01	pCi/g		(14.1)	3/3/04 09:52 a		225.9	GER6S1
								(9.2)			g	
MN-54	2.29E-02	U	4.41E-02	4.41E-02	8.26E-02	pCi/g		0.28	3/3/04 09:52 a		225.9	GER6S1
							6.96E-01	(1.)			g	
NB-94	-2.30E-02	U	3.31E-02	3.31E-02	5.57E-02	pCi/g		-0.41	3/3/04 09:52 a		225.9	GER6$1
							2.85E-01	-(1.4)			g	
PB-212	5.04E-01	J	1.15E-01	1.15E-01	1.14E-01	pCi/g		(4.4)	3/3/04 09:52 a		225.9	GER6S1
							1.00E+00	(8.8)			g	
PB-214	4.33E-01	J	1.51E-01	1.51E-01	1.28E-01	pCi/g		(3.4)	3/3/04 09:52 a		225.9	GER6$1
							1.00E+00	(5.7)			g	
TL-208	1.94E-01	U	8.54E-02	8.54E-02	1.19E-01	pCi/g		(1.6)	3/3/04 09:52 a		225.9	GER6$1
							1.00E+00	(4.6)			g	
Batch: 4043475	CMUD			Work Order: F9EQX1AC			Report DB ID: 9F9EQX10					
SR-90	2.06E-01		3.03E-02	4.26E-02	3.86E-02	pCi/g	54%	(5.3)	3/13/04 09:23 a		10.04	GPC2A
						1.80E-02	6.00E-02	(9.7)			G	

No. of Results: 19 Comments:

STL Richland
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V4.07 A97

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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 8:40:00 AM
Lot-Sample No.:	J4B110186-21	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F9EQ51AA			Report DB ID: 9F9EQ510					
H-3	8.52E-01	J	3.77E-02	5.61E-02	2.79E-02	pCi/g	100%	*(30.5)*	3/10/04 10:54 a		100.3	LSC5
						1.29E-02	1.65E+01	*(30.3)*			G	
Batch: 4043472	RICHRC5017			Work Order: F9EQ51AC			Report DB ID: 9F9EQ510					
AC-228	3.70E-01	U	1.57E-01	1.57E-01	2.81E-01	pCi/g		*(1.3)*	3/3/04 09:52 a		337.6	GER7$1
								(4.7)			g	
AG-108M	6.60E-03	U	2.06E-02	2.06E-02	3.80E-02	pCi/g		*0.17*	3/3/04 09:52 a		337.6	GER7$1
								0.64			g	
AM-241	4.84E-03	U	8.53E-02	8.53E-02	1.48E-01	pCi/g		*0.03*	3/3/04 09:52 a		337.6	GER7$1
								0.11			g	
BI-212	7.61E-01	U	4.12E-01	4.12E-01	8.35E-01	pCi/g		*0.91*	3/3/04 09:52 a		337.6	GER7$1
							3.00E+00	*(3.7)*			g	
BI-214	4.66E-01	U	1.12E-01	1.12E-01	1.83E-01	pCi/g		*(2.5)*	3/3/04 09:52 a		337.6	GER7$1
							1.00E+00	*(8.3)*			g	
CO-60	5.12E-02	U	3.08E-02	3.06E-02	6.75E-02	pCi/g		*0.76*	3/3/04 09:52 a		337.6	GER7$1
							1.52E-01	*(3.3)*			g	
CS-134	1.23E-02	U	3.09E-02	3.09E-02	5.75E-02	pCi/g		*0.21*	3/3/04 09:52 a		337.6	GER7$1
							1.87E-01	*0.8*			g	
CS-137	3.24E-01		6.82E-02	6.82E-02	4.73E-02	pCi/g		*(6.9)*	3/3/04 09:52 a		337.6	GER7$1
							3.16E-01	*(9.5)*			g	
EU-152	4.50E-02	U	7.34E-02	7.34E-02	1.21E-01	pCi/g		*0.37*	3/3/04 09:52 a		337.6	GER7$1
							4.04E-01	*(1.2)*			g	

STL Richland
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MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 8:40:00 AM
Lot-Sample No.:	J4B110186-21	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	-3.14E-02	U	6.92E-02	6.92E-02	1.21E-01	pCi/g		-0.26	3/3/04 09:52 a		337.6	GER7S1
							3.72E-01	-0.91			g	
EU-155	1.94E-03	U	6.77E-02	6.77E-02	1.15E-01	pCi/g		0.02	3/3/04 09:52 a		337.6	GER7S1
							1.57E+01	0.06			g	
K-40	6.34E+00		1.15E+00	1.15E+00	3.93E-01	pCi/g		(16.1)	3/3/04 09:52 a		337.6	GER7S1
								(11.)			g	
MN-54	-1.70E-03	U	2.06E-02	2.06E-02	3.84E-02	pCi/g		-0.04	3/3/04 09:52 a		337.6	GER7S1
							6.96E-01	-0.17			g	
NB-94	-4.00E-03	U	2.23E-02	2.23E-02	4.03E-02	pCi/g		-0.1	3/3/04 09:52 a		337.6	GER7S1
							2.85E-01	-0.36			g	
PB-212	4.05E-01	J	9.42E-02	9.42E-02	7.77E-02	pCi/g		(5.2)	3/3/04 09:52 a		337.6	GER7S1
							1.00E+00	(8.6)			g	
PB-214	4.01E-01	J	1.07E-01	1.07E-01	7.88E-02	pCi/g		(5.1)	3/3/04 09:52 a		337.6	GER7S1
							1.00E+00	(7.5)			g	
TL-208	1.31E-01	J	4.87E-02	4.87E-02	4.18E-02	pCi/g		(3.1)	3/3/04 09:52 a		337.6	GER7S1
							1.00E+00	(5.4)			g	

No. of Results: 18 Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 8:40:00 AM
Lot-Sample No.:	J4B110186-22	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-1C-02	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order:	F9ERA1AA		Report DB ID: 9F9ERA10					
H-3	8.13E-01	J	3.64E-02	5.41E-02	2.71E-02	pCi/g	100%	*(30.)*	3/10/04 10:54 a		100.7	LSC5
						1.25E-02	1.65E+01	*(30.1)*			G	

No. of Results: 1 Comments:

STL Richland
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V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 8:40:00 AM
Lot-Sample No.:	J4B110186-23	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F0ERD1AA			Report DB ID: 9F0ERD10					
H-3	1.38E+00	J	4.90E-02	8.25E-02	2.99E-02	pCi/g	100%	*(46.1)*	3/10/04 10:54 a		100.8	LSC5
						1.39E-02	1.65E+01	*(33.4)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRichSample
V4.97 A97
C3

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 8:40:00 AM
Lot-Sample No.:	J4B110186-24	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-1C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order:	F9ERE1AA		Report DB ID:	9F9ERE10				
H-3	1.06E+00	J	4.14E-02	6.61E-02	2.74E-02	pCi/g	100%	*(38.8)*	3/10/04 10:54 a		100.3	LSC5
						1.27E-02	1.65E+01	*(32.2)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-25	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-2C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F9ERG1AA			Report DB ID: 9F9ERG10					
H-3	4.25E+00	J	7.74E-02	2.15E-01	2.53E-02	pCi/g	100%	*(168.2)*	3/10/04 10:54 a		100.6	LSC5
						1.17E-02	1.65E+01	*(39.5)*			G	

No. of Results: 1 Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-26	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order:	F9ERH1AA		Report DB ID: 9F9ERH10					
H-3	3.42E+00	J	6.88E-02	1.76E-01	2.47E-02	pCi/g	100%	*(138.5)*	3/10/04 10:54 a		100.7	LSC5
						1.14E-02	1.65E+01	*(38.9)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-27	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-2C-07	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rsl/MDC, Rsl/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order:	F9ERM1AA		Report DB ID:	9F9ERM10				
H-3	4.42E+00	J	7.87E-02	2.23E-01	2.51E-02	pCi/g	100%	*(176.4)*	3/10/04 10:54 a		100.4	LSC5
						1.16E-02	1.65E+01	*(39.6)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-28	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-2C-08	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F9ERQ1AA		Report DB ID: 9F9ERQ10						
H-3	4.09E+00	J	7.58E-02	2.08E-01	2.51E-02	pCi/g	100%	*(162.8)*	3/10/04 10:54 a		100.4	LSC5
						1.16E-02	1.65E+01	*(39.4)*			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchSample
V4.97 A97
8

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-29	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-3C-09	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order:	F9ERW1AA		Report DB ID: 9F9ERW10					
H-3	7.04E+00	J	9.83E-02	3.46E-01	2.48E-02	pCi/g	100%	(284.5)	3/10/04 10:54 a		100.5	LSC5
						1.15E-02	1.65E+01	(40.7)			G	
Batch: 4043472	RICHRC5017			Work Order:	F9ERW1AC		Report DB ID: 9F9ERW10					
AC-228	3.07E-01		1.30E-01	1.30E-01	1.23E-01	pCi/g		(2.5)	3/3/04 09:53 a		386.1	GER8$1
								(4.7)			g	
AG-108M	-1.37E-02	U	1.57E-02	1.57E-02	2.52E-02	pCi/g		-0.54	3/3/04 09:53 a		386.1	GER8$1
								-(1.8)			g	
AM-241	8.15E-03	U	3.75E-02	3.75E-02	6.40E-02	pCi/g		0.13	3/3/04 09:53 a		386.1	GER8S1
								0.43			g	
BI-212	1.17E-01	U	3.19E-01	3.19E-01	5.89E-01	pCi/g		0.2	3/3/04 09:53 a		386.1	GER8S1
							3.00E+00	0.73			g	
BI-214	3.50E-01	U	8.77E-02	8.77E-02	1.42E-01	pCi/g		(2.5)	3/3/04 09:53 a		386.1	GER8S1
							1.00E+00	(8.)			g	
CO-60	3.13E-03	U	1.78E-02	1.78E-02	3.52E-02	pCi/g		0.09	3/3/04 09:53 a		386.1	GER8S1
							1.52E-01	0.35			g	
CS-134	1.34E-02	U	2.31E-02	2.31E-02	4.43E-02	pCi/g		0.3	3/3/04 09:53 a		386.1	GER8$1
							1.87E-01	(1.2)			g	
CS-137	-1.33E-03	U	1.80E-02	1.80E-02	3.27E-02	pCi/g		-0.04	3/3/04 09:53 a		386.1	GER8S1
							3.16E-01	-0.15			g	
EU-152	-4.10E-02	U	5.04E-02	5.04E-02	8.27E-02	pCi/g		-0.5	3/3/04 09:53 a		386.1	GER8$1
							4.04E-01	-(1.6)			g	

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-29	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-3C-09	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	1.56E-02	U	6.09E-02	6.09E-02	1.17E-01	pCi/g		*0.13*	3/3/04 09:53 a		386.1	GER8S1
							3.72E-01	*0.51*			g	
EU-155	2.36E-02	U	5.02E-02	5.02E-02	8.92E-02	pCi/g		*0.27*	3/3/04 09:53 a		386.1	GER8S1
							1.57E+01	*0.94*			g	
K-40	6.97E+00		1.12E+00	1.12E+00	2.92E-01	pCi/g		*(23.9)*	3/3/04 09:53 a		386.1	GER8S1
								(12.4)			g	
MN-54	6.15E-03	U	1.84E-02	1.84E-02	3.51E-02	pCi/g		*0.18*	3/3/04 09:53 a		386.1	GER8S1
							6.96E-01	*0.67*			g	
NB-94	-2.74E-03	U	1.76E-02	1.76E-02	3.14E-02	pCi/g		*-0.09*	3/3/04 09:53 a		386.1	GER8S1
							2.85E-01	*-0.31*			g	
PB-212	4.64E-01	J	9.78E-02	9.78E-02	7.59E-02	pCi/g		*(6.1)*	3/3/04 09:53 a		386.1	GER8S1
							1.00E+00	*(9.5)*			g	
PB-214	3.46E-01	J	8.71E-02	8.71E-02	7.09E-02	pCi/g		*(4.9)*	3/3/04 09:53 a		386.1	GER8S1
							1.00E+00	*(7.9)*			g	
TL-208	1.40E-01	J	3.67E-02	3.67E-02	2.67E-02	pCi/g		*(5.3)*	3/3/04 09:53 a		386.1	GER8S1
							1.00E+00	*(7.6)*			g	

No. of Results: 18 Comments:

STL Richland
rptSTLRchSample
V4.97 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-30	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-3C-10	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F9ER01AA			Report DB ID: 9F9ER010					
H-3	4.07E+00	J	7.51E-02	2.06E-01	2.48E-02	pCi/g	100%	*(163.7)*	3/10/04 10:54 a		100.4	LSC5
						1.15E-02	1.65E+01	*(39.4)*			G	
Batch: 4043472	RICHRC5017			Work Order: F9ER01AD			Report DB ID: 9F9ER010					
AC-228	4.94E-01	U	1.59E-01	1.59E-01	3.14E-01	pCi/g		*(1.6)*	3/3/04 11:40 a		314.0	GER1S1
								(6.2)			g	
AG-108M	-7.92E-04	U	2.34E-02	2.34E-02	4.11E-02	pCi/g		*-0.02*	3/3/04 11:40 a		314.0	GER1S1
								-0.07			g	
AM-241	-2.87E-02	U	1.08E-01	1.08E-01	1.80E-01	pCi/g		*-0.16*	3/3/04 11:40 a		314.0	GER1S1
								-0.53			g	
BI-212	6.13E-01	U	4.23E-01	4.23E-01	8.33E-01	pCi/g		*0.74*	3/3/04 11:40 a		314.0	GER1S1
							3.00E+00	*(2.9)*			g	
BI-214	3.43E-01	U	1.04E-01	1.04E-01	1.66E-01	pCi/g		*(2.1)*	3/3/04 11:40 a		314.0	GER1S1
							1.00E+00	*(6.6)*			g	
CO-60	2.33E-02	U	2.76E-02	2.76E-02	5.69E-02	pCi/g		*0.41*	3/3/04 11:40 a		314.0	GER1S1
							1.52E-01	*(1.7)*			g	
CS-134	2.56E-02	U	3.27E-02	3.27E-02	6.25E-02	pCi/g		*0.41*	3/3/04 11:40 a		314.0	GER1S1
							1.87E-01	*(1.6)*			g	
CS-137	-6.39E-03	U	2.83E-02	2.83E-02	4.92E-02	pCi/g		*-0.13*	3/3/04 11:40 a		314.0	GER1S1
							3.16E-01	*-0.45*			g	
EU-152	-4.29E-02	U	8.05E-02	8.05E-02	1.25E-01	pCi/g		*-0.34*	3/3/04 11:40 a		314.0	GER1S1
							4.04E-01	*-(1.1)*			g	

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 18-Mar-04

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 10:20:00 AM
Lot-Sample No.:	J4B110186-30	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-191-C-3C-10	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	-2.55E-02	U	8.67E-02	8.67E-02	1.53E-01	pCi/g		-0.17	3/3/04 11:40 a		314.0	GER1S1
							3.72E-01	-0.59			g	
EU-155	3.41E-02	U	8.04E-02	8.04E-02	1.41E-01	pCi/g		0.24	3/3/04 11:40 a		314.0	GER1S1
							1.57E+01	0.85			g	
K-40	6.60E+00		1.19E+00	1.19E+00	3.45E-01	pCi/g		(19.1)	3/3/04 11:40 a		314.0	GER1S1
								(11.1)			g	
MN-54	-1.37E-02	U	2.80E-02	2.80E-02	4.76E-02	pCi/g		-0.29	3/3/04 11:40 a		314.0	GER1S1
							6.96E-01	-0.98			g	
NB-94	-5.81E-03	U	2.79E-02	2.79E-02	4.87E-02	pCi/g		-0.12	3/3/04 11:40 a		314.0	GER1S1
							2.85E-01	-0.42			g	
PB-212	3.39E-01	J	1.08E-01	1.08E-01	9.12E-02	pCi/g		(3.7)	3/3/04 11:40 a		314.0	GER1S1
							1.00E+00	(6.3)			g	
PB-214	5.00E-01	J	1.25E-01	1.25E-01	8.14E-02	pCi/g		(6.1)	3/3/04 11:40 a		314.0	GER1S1
							1.00E+00	(8.)			g	
TL-208	1.67E-01	U	6.15E-02	6.15E-02	8.36E-02	pCi/g		(2.)	3/3/04 11:40 a		314.0	GER1S1
							1.00E+00	(5.4)			g	
Batch: 4043475	CMUD			Work Order: F9ER01AC			Report DB ID: 9F9ER010					
SR-90	8.47E-02		2.34E-02	2.67E-02	3.52E-02	pCi/g	50%	(2.4)	3/13/04 09:23 a		10.04	GPC2B
						1.61E-02	6.00E-02	(6.3)			G	

No. of Results: 19 Comments:

STL Richland
rptSTLRchSample
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 18-Mar-04

DUPLICATE RESULTS

Lab Name: STL Richland | SDG: 25173 | Collection Date: 2/2/2004 10:20:00 AM

Lot-Sample No.: J4B110186-31 | Report No. :. 25203 | Received Date: 2/11/2004 10:15:00 AM

Client Sample ID: 3107-0000-188-C-1C-01 DUP | COC No. : | Matrix: SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043465	RICHRC5080			Work Order: F9ETD1AH		Report DB ID: F9ETD1HR			Orig Sa DB ID: 9F9ETD10			
AM-241	1.26E-02	U	2.00E-02	2.02E-02	3.36E-02	pCi/g	60%	0.38	3/16/04 07:14 p		2.01	ALP45
	0.00E+00	U	RER2 1.0			1.03E+00		(1.3)			G	
CM-242	0.00E+00	U	0.00E+00	2.06E-02	2.28E-02	pCi/g	60%	0.	3/16/04 07:14 p		2.01	ALP45
	0.00E+00	U	RER2 0.0					0.			G	
CM-243/244	0.00E+00	U	0.00E+00	1.72E-02	1.91E-02	pCi/g	60%	0.	3/16/04 07:14 p		2.01	ALP45
	0.00E+00	U	RER2 0.0			1.16E+00		0.			G	
									Alpha Spec Result Sum = 1.3E-02			
Batch: 4043466	RICHRC5010			Work Order: F9ETD1AJ		Report DB ID: F9ETD1JR			Orig Sa DB ID: 9F9ETD10			
PU-238	1.31E-02	U	1.85E-02	1.86E-02	1.77E-02	pCi/g	51%	0.74	3/8/04 06:01 p		1.99	ALP128
	0.00E+00	U	RER2 1.2			1.18E+00		(1.4)			G	
PU239/40	0.00E+00	U	0.00E+00	1.60E-02	1.77E-02	pCi/g	51%	0.	3/8/04 06:01 p		1.99	ALP128
	0.00E+00	U	RER2 0.0			1.07E+00		0.			G	
									Alpha Spec Result Sum = 2.6E-02			
Batch: 4043467	RICHRC5010			Work Order: F9ETD1AK		Report DB ID: F9ETD1KR			Orig Sa DB ID: 9F9ETD10			
PU-241	2.17E-03	U	5.72E-01	7.70E-01	1.39E+00	pCi/g	51%	0.	3/12/04 11:33 a		1.99	LSC7
	2.41E-01	U	RER2 0.5			3.48E+01		0.01			G	
									Alpha Spec Result Sum = 2.6E-02			

No. of Results: 6 Comments:

STL Richland RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

rptSTLRchDupV4.0 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

7 A97 U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 18-Mar-04

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:15:00 AM
Lot-Sample No.:	J4B110186-1	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-1C-01 DUP	COC No.:		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043468	RICHRC5037			Work Order: F9EM21AD		Report DB ID: F9EM21DR			Orig Sa DB ID: 9F9EM210			
H-3	5.52E-01	J	3.00E-02	3.84E-02	2.64E-02	pCi/g	100%	(20.9)	3/8/04 11:18 p		100.3	LSC4
	5.85E-01	J	RER2 1.2			1.65E+01		(28.8)			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchDupV4.0
7 A97

RER2 - Replicate Error Ratio = (S-D)/(sqrt(sq(TPUs)+sq(TPUd)))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

FORM II

Date: 18-Mar-04

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:30:00 AM
Lot-Sample No.:	J4B110186-5	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-2C-05 DUP	COC No. :		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043472	RICHRC5017			Work Order: F9EPE1AD		Report DB ID: F9EPE1DR			Orig Sa DB ID: 9F9EPE10			
AC-228	3.91E-01	U	1.36E-01	1.36E-01	2.54E-01	pCi/g		(1.5)	3/3/04 09:51 a		362.7	GER1$1
	4.26E-01	U	RER2 0.3					(5.7)			g	
AG-108M	-1.45E-02	U	1.99E-02	1.99E-02	3.28E-02	pCi/g		-0.44	3/3/04 09:51 a		362.7	GER1$1
	2.36E-03	U	RER2 1.2					-(1.5)			g	
AM-241	1.04E-02	U	9.44E-02	9.44E-02	1.60E-01	pCi/g		0.06	3/3/04 09:51 a		362.7	GER1S1
	-9.19E-03	U	RER2 0.2					0.22			g	
BI-212	1.91E-01	U	3.59E-01	3.59E-01	6.71E-01	pCi/g		0.28	3/3/04 09:51 a		362.7	GER1S1
	8.86E-01	U	RER2 2.7			3.00E+00		(1.1)			g	
BI-214	5.21E-01	U	1.16E-01	1.16E-01	1.70E-01	pCi/g		(3.1)	3/3/04 09:51 a		362.7	GER1$1
	3.79E-01	U	RER2 1.8			1.00E+00		(9.)			g	
CO-60	1.05E-02	U	2.47E-02	2.47E-02	4.82E-02	pCi/g		0.22	3/3/04 09:51 a		362.7	GER1$1
	9.51E-03	U	RER2 0.1			1.52E-01		0.85			g	
CS-134	1.29E-02	U	2.78E-02	2.78E-02	5.20E-02	pCi/g		0.25	3/3/04 09:51 a		362.7	GER1S1
	3.03E-02	U	RER2 0.8			1.87E-01		0.93			g	
CS-137	-5.82E-03	U	2.40E-02	2.40E-02	4.16E-02	pCi/g		-0.14	3/3/04 09:51 a		362.7	GER1$1
	-3.91E-03	U	RER2 0.1			3.16E-01		-0.49			g	
EU-152	-6.60E-02	U	8.14E-02	8.14E-02	1.17E-01	pCi/g		-0.56	3/3/04 09:51 a		362.7	GER1S1
	-1.55E-02	U	RER2 1.0			4.04E-01		-(1.6)			g	
EU-154	-1.05E-02	U	7.38E-02	7.38E-02	1.33E-01	pCi/g		-0.08	3/3/04 09:51 a		362.7	GER1S1
	1.07E-02	U	RER2 0.4			3.72E-01		-0.29			g	
EU-155	-8.18E-03	U	7.48E-02	7.48E-02	1.27E-01	pCi/g		-0.06	3/3/04 09:51 a		362.7	GER1S1
	-2.65E-02	U	RER2 0.3			1.57E+01		-0.22			g	

STL Richland
rptSTLRchDupV4.0
7 A97
75

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 18-Mar-04

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:30:00 AM
Lot-Sample No.:	J4B110186-5	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-2C-05 DUP	COC No. :		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
K-40	6.24E+00		1.12E+00	1.12E+00	4.22E-01	pCi/g		(14.8)	3/3/04 09:51 a		362.7	GER1S1
	6.08E+00		RER2 0.2					(11.2)			g	
MN-54	3.30E-02	U	3.06E-02	3.06E-02	5.82E-02	pCi/g		0.57	3/3/04 09:51 a		362.7	GER1S1
	-9.11E-04	U	RER2 1.8			6.96E-01		(2.2)			g	
NB-94	1.68E-02	U	2.45E-02	2.45E-02	4.66E-02	pCi/g		0.36	3/3/04 09:51 a		362.7	GER1S1
	2.70E-03	U	RER2 0.9			2.85E-01		(1.4)			g	
PB-212	3.77E-01	J	1.15E-01	1.15E-01	7.41E-02	pCi/g		(5.1)	3/3/04 09:51 a		362.7	GER1S1
	3.75E-01	J	RER2 0.0			1.00E+00		(6.6)			g	
PB-214	4.09E-01	J	1.14E-01	1.14E-01	7.82E-02	pCi/g		(5.2)	3/3/04 09:51 a		362.7	GER1S1
	3.67E-01	J	RER2 0.5			1.00E+00		(7.1)			g	
TL-208	1.47E-01	U	4.93E-02	4.93E-02	7.38E-02	pCi/g		(2.)	3/3/04 09:51 a		362.7	GER1S1
	1.60E-01	U	RER2 0.3			1.00E+00		(6.)			g	

No. of Results: 17 Comments:

STL Richland
rptSTLRchDupV4.0
7 A97
95

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 18-Mar-04

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/4/2004 8:30:00 AM
Lot-Sample No.:	J4B110186-6	Report No.:	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-189-C-2C-06 DUP	COC No.:		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043475	CMUD			Work Order: F9EPG1AE		Report DB ID: F9EPG1ER			Orig Sa DB ID: 9F9EPG10			
SR-90	5.01E-02	J	2.58E-02	2.66E-02	4.52E-02	pCi/g	54%	(1.1)	3/13/04 09:17 a		10.07	GPC1C
	5.84E-02	J	RER2 0.4			6.00E-02		(3.8)			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchDupV4.0
7 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

FORM II

Date: 18-Mar-04

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	25173	Collection Date:	2/3/2004 1:45:00 PM
Lot-Sample No.:	J4B110186-19	Report No. :	25203	Received Date:	2/11/2004 10:15:00 AM
Client Sample ID:	3107-0000-190-C2C-06 DUP	COC No. :		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043471	RICHRC5037			Work Order: F9EOQ1AD		Report DB ID: F9EOQ1DR			Orig Sa DB ID: 9F9EOQ10			
H-3	7.08E-01	J	3.28E-02	4.79E-02	2.51E-02	pCi/g	100%	(28.2)	3/10/04 10:54 a		100.4	LSC5
	8.16E-01	J	RER2 3.0			1.65E+01		(29.6)			G	

No. of Results: 1 Comments:

STL Richland
rptSTLRchDupV4.0
7 A97
8/8

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

FORM II

BLANK RESULTS

Date: 18-Mar-04

Lab Name: STL Richland

Matrix: SOLID

SDG: 25173

Report No.: 25203

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4043465	RICHRC5080			Work Order: F9HQH1AA		Report DB ID: F9HQH1AB						
AM-241	6.51E-03	U	1.30E-02	1.31E-02	1.77E-02	pCi/g	49%	0.37	3/16/04 07:15 p		2.0	ALP47
						1.03E+00		1.			G	
CM-242	0.00E+00	U	0.00E+00	1.92E-02	2.12E-02	pCi/g	49%	0.	3/16/04 07:15 p		2.0	ALP47
								0.			G	
CM-243/244	0.00E+00	U	0.00E+00	1.60E-02	1.77E-02	pCi/g	49%	0.	3/16/04 07:15 p		2.0	ALP47
						1.16E+00		0.			G	
Batch: 4043466	RICHRC5010			Work Order: F9HQN1AA		Report DB ID: F9HQN1AB						
PU-238	0.00E+00	U	0.00E+00	1.56E-02	1.72E-02	pCi/g	65%	0.	3/8/04 06:02 p		2.0	ALP131
						1.18E+00		0.			G	
PU239/40	0.00E+00	U	0.00E+00	1.55E-02	1.72E-02	pCi/g	65%	0.	3/8/04 06:02 p		2.0	ALP131
						1.07E+00		0.			G	
Batch: 4043467	RICHRC5010			Work Order: F9HQT1AA		Report DB ID: F9HQT1AB						
PU-241	5.41E-01	U	4.67E-01	6.30E-01	1.09E+00	pCi/g	65%	0.5	3/12/04 11:33 a		2.0	LSC7
					5.20E-01	3.48E+01		(1.7)			G	
Batch: 4043468	RICHRC5037			Work Order: F9HRF1AA		Report DB ID: F9HRF1AB						
H-3	6.18E-02	U	1.04E-01	1.11E-01	2.51E-01	pCi/g	100%	0.25	3/8/04 09:10 p		10.0	LSC4
					1.17E-01	1.65E+01		(1.1)			G	
Batch: 4043471	RICHRC5037			Work Order: F9HRT1AA		Report DB ID: F9HRT1AB						
H-3	5.92E-03	U	9.90E-02	1.07E-01	2.48E-01	pCi/g	100%	0.02	3/10/04 10:54 a		10.0	LSC5
					1.15E-01	1.65E+01		0.11			G	
Batch: 4043472	RICHRC5017			Work Order: F9HTJ1AA		Report DB ID: F9HTJ1AB						

STL Richland
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V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

BLANK RESULTS

Date: 18-Mar-04

Lab Name: STL Richland

Matrix: SOLID

SDG: 25173

Report No. : 25203

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
AC-228	-1.57E-03	U	1.08E-01	1.08E-01	2.15E-01	pCi/g		-0.01	3/3/04 11:42 a		200.0	GER7$1
								-0.03			g	
AG-108M	1.72E-02	U	2.28E-02	2.28E-02	4.64E-02	pCi/g		0.37	3/3/04 11:42 a		200.0	GER7$1
								(1.5)			g	
AM-241	2.34E-02	U	8.34E-02	8.34E-02	1.51E-01	pCi/g		0.15	3/3/04 11:42 a		200.0	GER7$1
								0.56			g	
BI-212	-1.72E-01	U	4.70E-01	4.70E-01	8.23E-01	pCi/g		-0.21	3/3/04 11:42 a		200.0	GER7$1
						3.00E+00		-0.73			g	
BI-214	-6.16E-02	U	7.33E-02	7.33E-02	1.31E-01	pCi/g		-0.47	3/3/04 11:42 a		200.0	GER7$1
						1.00E+00		-(1.7)			g	
CO-60	2.20E-02	U	3.23E-02	3.23E-02	7.23E-02	pCi/g		0.3	3/3/04 11:42 a		200.0	GER7$1
						1.52E-01		(1.4)			g	
CS-134	-7.75E-03	U	2.96E-02	2.96E-02	5.37E-02	pCi/g		-0.14	3/3/04 11:42 a		200.0	GER7$1
						1.87E-01		-0.52			g	
CS-137	-7.71E-03	U	2.50E-02	2.50E-02	4.57E-02	pCi/g		-0.17	3/3/04 11:42 a		200.0	GER7$1
						3.16E-01		-0.62			g	
EU-152	-2.12E-02	U	7.90E-02	7.90E-02	1.37E-01	pCi/g		-0.15	3/3/04 11:42 a		200.0	GER7$1
						4.04E-01		-0.54			g	
EU-154	9.99E-02	U	9.72E-02	9.72E-02	2.22E-01	pCi/g		0.45	3/3/04 11:42 a		200.0	GER7$1
						3.72E-01		(2.1)			g	
EU-155	-3.29E-02	U	6.00E-02	6.00E-02	9.87E-02	pCi/g		-0.33	3/3/04 11:42 a		200.0	GER7$1
						1.57E+01		-(1.1)			g	
K-40	-2.73E-01	U	5.07E-01	5.07E-01	1.11E+00	pCi/g		-0.24	3/3/04 11:42 a		200.0	GER7$1
								-(1.1)			g	

STL Richland
rptSTLRchBlank
V4.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

BLANK RESULTS

Date: 18-Mar-04

Lab Name: STL Richland

Matrix: SOLID

SDG: 25173

Report No. : 25203

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Lc	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
MN-54	-1.98E-02	U	2.73E-02	2.73E-02	4.58E-02	pCi/g		-0.43	3/3/04 11:42 a		200.0	GER7S1
						6.96E-01		-(1.5)			g	
NB-94	-1.74E-02	U	2.92E-02	2.92E-02	5.02E-02	pCi/g		-0.35	3/3/04 11:42 a		200.0	GER7S1
						2.85E-01		-(1.2)			g	
PB-212	4.63E-02	U	6.16E-02	6.16E-02	6.66E-02	pCi/g		0.7	3/3/04 11:42 a		200.0	GER7S1
						1.00E+00		(1.5)			g	
PB-214	-6.08E-02	U	6.36E-02	6.36E-02	1.09E-01	pCi/g		-0.56	3/3/04 11:42 a		200.0	GER7S1
						1.00E+00		-(1.9)			g	
TL-208	2.13E-03	U	3.04E-02	3.04E-02	5.63E-02	pCi/g		0.04	3/3/04 11:42 a		200.0	GER7S1
						1.00E+00		0.14			g	
Batch: 4043475	CMUD			Work Order:	F9HTX1AA		Report DB ID:	F9HTX1AB				
SR-90	3.83E-02	J	1.39E-02	1.49E-02	2.21E-02	pCi/g	81%	(1.7)	3/13/04 09:19 a		10.0	GPC3A
					1.01E-02	6.00E-02		(5.1)			G	

No. of Results: 28 Comments:

STL Richland
rptSTLRchBlank
V6.07 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

LCS RESULTS

Date: 18-Mar-04

Lab Name: STL Richland

Matrix: SOLID

SDG: 25173

Report No. : 25203

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 4043465	RICHRC5080			Work Order:	F9HQH1AC		Report DB ID:	F9HQH1CS					
AM-241	3.04E+00		2.33E-01	5.80E-01	2.52E-02	pCi/g	73%	4.56E+00	1.52E-01	67%	3/16/04 07:17 p	2.0	ALP130
							Rec Limits:	70	130	-0.3		G	
Batch: 4043466	RICHRC5010			Work Order:	F9HQN1AC		Report DB ID:	F9HQN1CS					
PU239/40	4.40E-01		9.04E-02	1.16E-01	1.26E-02	pCi/g	71%	4.61E-01	2.32E-02	96%	3/8/04 06:03 p	2.0	ALP132
							Rec Limits:	70	130	0.0		G	
Batch: 4043467	RICHRC5010			Work Order:	F9HQT1AC		Report DB ID:	F9HQT1CS					
PU-241	2.34E+01		9.43E-01	2.15E+00	9.87E-01	pCi/g	71%	2.27E+01	1.03E+00	103%	3/12/04 11:33 a	2.0	LSC7
							Rec Limits:	70	130	0.0		G	
Batch: 4043468	RICHRC5037			Work Order:	F9HRF1AC		Report DB ID:	F9HRF1CS					
H-3	6.33E+00		3.09E-01	3.70E-01	2.50E-01	pCi/g	100%	6.84E+00	2.35E-01	93%	3/8/04 09:53 p	10.0	LSC4
							Rec Limits:	70	130	-0.1		G	
Batch: 4043471	RICHRC5037			Work Order:	F9HRT1AC		Report DB ID:	F9HRT1CS					
H-3	6.82E+00		3.21E-01	4.23E-01	2.49E-01	pCi/g	100%	6.79E+00	2.34E-01	100%	3/10/04 10:54 a	10.0	LSC5
							Rec Limits:	70	130	0.0		G	
Batch: 4043472	RICHRC5017			Work Order:	F9HTJ1AC		Report DB ID:	F9HTJ1CS					
CS-137	1.18E+00		1.93E-01	1.93E-01	5.52E-02	pCi/g		1.02E+00	3.56E-02	115%	3/3/04 11:42 a	200.0	GER8S1
							Rec Limits:	70	130	0.2		g	
Batch: 4043475	CMUD			Work Order:	F9HTX1AC		Report DB ID:	F9HTX1CS					
SR-90	1.55E+00		6.00E-02	2.31E-01	2.55E-02	pCi/g	69%	1.36E+00	1.65E-02	114%	3/13/04 09:19 a	10.0	GPC3B
							Rec Limits:	70	130	0.1		G	

No. of Results: 7 Comments:

STL Richland Bias = (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchLcs
V#97 A97

Q-55733 CYA. Due 3-12

J4B110186 SDG 25173

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Chain of Custody Form

No. 2004-00010

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck (860) 267-3923

Analytical Lab (Name, City, State):
STL, 2800 George Washington Way, Richland, WA 99352 Theresa Kallsen (509) 375-3131 x144

Priority: ☒ 45 D. ☐ 30 D. ☐ 15 D. ☐ 7 D.
Other:

Lab Use Only
Comments:
TRX 7900 5299 4850

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM		Sr-90		H-3		Comment, Preservation	Lab Sample ID
3107-0000-189-C-1C-01	2/4/04	0815	CT	CR	BP	X				X			F9EM2
3107-0000-189-C-1C-02	2/4/04	0815	CT.	CR	BP					X			F9EN7
3107-0000-189-C-2C-03	2/4/04	0830	CT	CR	BP					X			F9EPC
3107-0000-189-C-2C-04	2/4/04	0830	CT	CR	BP					X			F9EPD
3107-0000-189-C-2C-05	2/4/04	0830	CT	CR	BP	X				X			F9EPE
3107-0000-189-C-2C-06	2/4/04	0830	CT	CR	BP	X		X		X			F9EPG

NOTES: PO #: 002092 MSR #: 04-0337 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

NOTE: Save a portion of each sample for potential future Hard-To-Detect radionuclide analysis.

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y☐ N☐

Custody Seal Intact? Y☐ N☐

1) Relinquished By — Date/Time 2/6/04 1400	2) Received By 2100 — Date/Time 2/11/04 @ 10:15
3) Relinquished By — Date/Time	4) Received By — Date/Time
5) Relinquished By — Date/Time	6) Received By — Date/Time

Chain of Custody Form

No. 2004-00008

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck (860) 267-3923

Analytical Lab (Name, City, State):
STL, 2800 George Washington Way, Richland, WA 99352 Theresa Kallsen (509) 375-3131 x144

Priority: ☒ 45 D. ☐ 30 D. ☐ 15 D. ☐ 7 D.
Other:

Lab Use Only
Comments:
TRX# 7900 5299 4850

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM		Sr-90		H-3		Comment, Preservation	Lab Sample ID
3107-0000-187-C-1C-01	2/2/04	1425	CT	CR	BP	X				X			F9EPH
3107-0000-187-C-1C-02	2/2/04	1425	CT	CR	BP					X			F9EPK
3107-0000-187-C-1C-03	2/2/04	1425	CT	CR	BP					X			F9EPL
3107-0000-187-C-1C-04	2/2/04	1425	CT	CR	BP					X			F9EPN
3107-0000-187-C-2C-05	2/2/04	1500	CT	CR	BP					X			F9EPQ
3107-0000-187-C-2C-06	2/2/04	1500	CT	CR	BP	X				X			F9EPR
3107-0000-187-C-2C-07	2/2/04	1500	CT	CR	BP	X		X		X			F9EPT

NOTES: PO #: 002092 MSR #: 04-0337 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

NOTE: Save a portion of each sample for potential future Hard-To-Detect radionuclide analysis.

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
Bill of Lading #

Internal Container Temp.: ____ Deg. C
Custody Sealed? Y☐ N☐
Custody Seal Intact? Y☐ N☐

1) Relinquished By [signature] Date/Time 2/10/04/1400	2) Received By [signature] <100 cpm Date/Time 2/11/04 @ 10:15
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

Connecticut Yankee Atomic Power Company

362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Chain of Custody Form

No. 2004-00011

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck (860) 267-3923

Analytical Lab (Name, City, State):
STL, 2800 George Washington Way, Richland, WA 99352 Theresa Kallsen (509) 375-3131 x144

Priority: ☒ 45 D. ☐ 30 D. ☐ 15 D. ☐ 7 D.
Other:

Lab Use Only
Comments:
TRX 7900 5299 4850

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM		Sr-90		H-3		Comment, Preservation	Lab Sample ID
3107-0000-190-C1C-01	2/3/04	1329	CT	CR	BP	X				X			F9EP4
3107-0000-190-C1C-02	2/3/04	1329	CT	CR	BP					X			F9EP8
3107-0000-190-C1C-03	2/3/04	1329	CT	CR	BP					X			F9EQC
3107-0000-190-C1C-04	2/3/04	1329	CT	CR	BP					X			F9EQF
3107-0000-190-C1C-05	2/3/04	1329	CT	CR	BP					X			F9EQJ
3107-0000-190-C2C-06	2/3/04	1345	CT	CR	BP	X				X			F9EQQ
3107-0000-190-C2C-07	2/3/04	1345	CT	CR	BP	X		X		X			F9EQX

NOTES: PO #: 002092 MSR #: 04-0337 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

NOTE: Save a portion of each sample for potential future Hard-To-Detect radionuclide analysis.

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
Bill of Lading #

Internal Container Temp.: ____ Deg. C
Custody Sealed? Y☐ N☐
Custody Seal Intact? Y☐ N☐

1) Relinquished By [signature] Date/Time 2/10/04 1400	2) Received By [signature] <1004pm Date/Time 2/11/04 @10:15
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

Chain of Custody Form

No. 2004-00012

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck (860) 267-3923

Analytical Lab (Name, City, State):
STL, 2800 George Washington Way, Richland, WA 99352 Theresa Kallsen (509) 375-3131 x144

Priority: ☒ 45 D. ☐ 30 D. ☐ 15 D. ☐ 7 D.
Other:

Lab Use Only
Comments:
TRX 7900 5299 4850

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM		Sr-90		H-3		Comment, Preservation	Lab Sample ID
3107-0000-191-C-1C-01	2/3/04	0840	CT	CR	BP	X				X			F9EQ5
3107-0000-191-C-1C-02	2/3/04	0840	CT	CR	BP					X			F9ERA
3107-0000-191-C-1C-03	2/3/04	0840	CT	CR	BP					X			F9ERD
3107-0000-191-C-1C-04	2/3/04	0840	CT	CR	BP					X			F9ERE
3107-0000-191-C-2C-05	2/3/04	1020	CT	CR	BP					X			F9ERG
3107-0000-191-C-2C-06	2/3/04	1020	CT	CR	BP					X			F9ERH
3107-0000-191-C-2C-07	2/3/04	1020	CT	CR	BP					X			F9ERM
3107-0000-191-C-2C-08	2/3/04	1020	CT	CR	BP					X			F9ERQ
3107-0000-191-C-3C-09	2/3/04	1030	CT	CR	BP	X				X			F9ERW
3107-0000-191-C-3C-10	2/3/04	1030	CT	CR	BP	X		X		X			F9ERO

NOTES: PO #: 002092 MSR #: 04-0337 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

NOTE: Save a portion of each sample for potential future Hard-To-Detect radionuclide analysis.

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
Bill of Lading #

Internal Container Temp.: ____ Deg. C
Custody Sealed? YU NO
Custody Seal Intact? YO NO

1) Relinquished By [signature] Date/Time 2/10/04 1400	2) Received By [signature] <1000 Lab Date/Time 2/11/04 @ 10:15
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

Chain of Custody Form

No. 2004-00009

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck (860) 267-3923

Analytical Lab (Name, City, State):
STL, 2800 George Washington Way, Richland, WA 99352 Theresa Kallsen (509) 375-3131 x144

Priority: ☒ 45 D. ☐ 30 D. ☐ 15 D. ☐ 7 D.
Other:

Lab Use Only
Comments:
TRX # 7900 5299 4850

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM		Sr-90	TRU	H-3		Comment, Preservation	Lab Sample ID
3107-0000-188-C-1C-01	2/2/04	1020	CT	CR	BP	X		X	X	X			F9ETD
3107-0000-188-C-1C-02	2/2/04	1020	CT	CR	BP					X			F9ETM
3107-0000-188-C-1C-03	2/2/04	1020	CT	CR	BP					X			F9ETT
3107-0000-188-C-1C-04	2/2/04	1020	CT	CR	BP					X			F9ETX
3107-0000-188-C-1C-05	2/2/04	1020	CT	CR	BP	X				X			F9ET2
3107-0000-188-C-1C-06	2/2/04	1020	CT	CR	BP	X		X		X			F9ET5

NOTES: PO #: 002092 MSR #: 04-0337 ☐ LTP QA ☐ Radwaste QA ☒ Non QA

NOTE: Save a portion of each sample for potential future Hard-To-Detect radionuclide analysis.

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y☐ N☐

Custody Seal Intact? Y☐ N☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	2/10/04/1400	[signature]	2/11/04 @ 10:15
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

CONNECTICUT YANKEE
RE: Soils
PO# 002332
Work Order: 132868

132868001	9801-0000-141-S-01
132868002	9801-0000-141-S-02
132868003	9801-0000-142-S-01
132868004	9801-0000-142-S-02
132868005	9801-0000-143-S-01
132868006	9801-0000-143-S-02
132868007	9801-0000-144-S-01
132868008	9801-0000-144-S-02
132868009	9801-0000-145-S-01
132868010	9801-0000-145-S-02
132868011	9801-0000-146-S-01
132868012	9801-0000-146-S-02
132868013	9801-0000-147-S-01
132868014	9801-0000-147-S-02
132868015	9801-0000-148-S-01
132868016	9801-0000-148-S-02
132868017	9801-0000-149-S-01

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GENERAL NARRATIVE

CASE NARRATIVE
FOR
CONNECTICUT YANKEE
RE: Soils
PO# 002332
Work Order: 132868

March 21, 2005

Laboratory Identification:
General Engineering Laboratories, LLC

Mailing Address:
P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:
2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:
(843) 556-8171

Summary:

Sample receipt
The samples arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina March 21, 2005. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures except in items of note located below.

The laboratory prepared the following sample(s):

Sample ID	Client Sample ID
132868001	9801-0000-141-S-01
132868002	9801-0000-141-S-02
132868003	9801-0000-142-S-01
132868004	9801-0000-142-S-02
132868005	9801-0000-143-S-01
132868006	9801-0000-143-S-02
132868007	9801-0000-144-S-01
132868008	9801-0000-144-S-02
132868009	9801-0000-145-S-01
132868010	9801-0000-145-S-02
132868011	9801-0000-146-S-01
132868012	9801-0000-146-S-02
132868013	9801-0000-147-S-01
132868014	9801-0000-147-S-02

Sample ID	Client Sample ID
132868015	9801-0000-148-S-01
132868016	9801-0000-148-S-02
132868017	9801-0000-149-S-01

Items of Note:

There are no items to note.

Case Narrative:

Sample analyses were conducted using methodology as outlined in General Engineering Laboratories (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are listed below by analytical parameter.

Analytical Request:

Two soil samples were analyzed for CHALL.
Fifteen soil samples were analyzed for CHGAM, and Sr-90.

Internal Chain of Custody:

Custody was maintained for all of these samples.

Data Package:

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, and Radiochemistry.

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Cheryl Jones
Project Manager

CHAIN OF CUSTODY

Chain of Custody Form

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

No. 2005-00062
132868

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
52 lbs

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	Sr-90	CHALL				Comment, Preservation	Lab Sample ID
9801-0000-141-S-01	3/16/05	0917	TS	G	BP	X	X						
9801-0000-141-S-02	3/16/05	0924	TS	G	BP	X	X						
9801-0000-142-S-01	3/16/05	0931	TS	G	BP	X	X						
9801-0000-142-S-02	3/16/05	0936	TS	G	BP	X	X						
9801-0000-143-S-01	3/16/05	0943	TS	G	BP	X	X						
9801-0000-143-S-02	3/16/05	0950	TS	G	BP	X	X						
9801-0000-144-S-01	3/16/05	1001	TS	G	BP	X	X						
9801-0000-144-S-02	3/16/05	1005	TS	G	BP	X	X						
9801-0000-145-S-01	3/16/05	1012	TS	G	BP			X					
9801-0000-145-S-02	3/16/05	1018	TS	G	BP	X	X						

NOTES: PO #: 002332 MSR #: 05-0902 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

Bill of Lading #
7910 1116 0271

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☑ N ☐

Custody Seal Intact? Y ☑ N ☐

1) Relinquished By [signature] Date/Time 3/18/05	2) Received By [signature] Date/Time 3.21.05 8:50
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

Connecticut Yankee Atomic Power Company

362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Chain of Custody Form

No. 2005-00063

132868

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
38 lbs 2

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	Sr-90	CHALL				Comment, Preservation	Lab Sample ID
9801-0000-146-S-01	3/16/05	1324	TS	G	BP	X	X						
9801-0000-146-S-02	3/16/05	1331	TS	G	BP	X	X						
9801-0000-147-S-01	3/16/05	1337	TS	G	BP	X	X						
9801-0000-147-S-02	3/16/05	1340	TS	G	BP	X	X						
9801-0000-148-S-01	3/16/05	1346	TS	G	BP	X	X						
9801-0000-148-S-02	3/16/05	1353	TS	G	BP	X	X						
9801-0000-149-S-01	3/16/05	0905	TS	G	BP			X					

NOTES: PO #: 002332 MSR #: 05-0902 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

Bill of Lading #
~~7910 1116 0282~~ 3-18
7910 1116 0282

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☑ N ☐

Custody Seal Intact? Y ☑ N ☐

1) Relinquished By [signature] Date/Time 3/18/05	2) Received By [signature] Date/Time 3·21·05 8[illegible]
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

COOLER RECEIPT CHECKLIST

Figure 1. Sample Check-in List

Date/Time Received: 3·21·05 850

SDG#: MSR#05-0902

Work Order Number: 132868

Shipping Container ID: 7910 1116 0271 Chain of Custody # 2005-00062

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 14.0
5. Vermiculite/packing materials is: Wet [ ] Dry [✓]
6. Number of samples in shipping container: 10
7. Sample holding times exceeded? Yes [ ] No [✓]

8. Samples have:
   - ✓ tape
   - ✓ custody seals
   - hazard labels
   - ✓ appropriate sample labels

9. Samples are:
   - ✓ in good condition
   - broken
   - leaking
   - have air bubbles

10. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: [illegible] Date: 3·21·05/850

Telephoned to: _____ On _____ By _____

SAMPLE RECEIPT & REVIEW FORM

GENERAL ENGINEERING LABORATORIES, LLC

PM use only (2005-00062)

Client: Connecticut Yankee	SDG/ARCOC/Work Order: 1328.08
Date Received: 3.21.05	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: AM	

	Sample Receipt Criteria	Conforming	NA	Non-Conforming	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Temp device serial # ice bags blue ice dry ice none other(describe)
3	Chain of custody documents included with shipment?				
4	Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7	Samples received within holding time?				Id's and tests affected:
8	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
9	Date & time on COC match date & time on bottles?				Sample ID's affected:
10	Number of containers received match number indicated on COC?				Sample ID's affected:
11	COC form is properly signed in relinquished/received sections?				
12	Air Bill ,Tracking #'s, & Additional Comments				

Radiological Information	Non-RAD	RAD	RADIO	RSO RAD Receipt #
What is the radiological classification of the samples?		✓		Comments:
Radioactivity Screening Results (maximum observed CPM)	30cpm			*If > x2 area background is observed on a non-radioactive sample contact the RSO to investigate

PM (or PMA) review of Receiving Rad classification: CAJ Initials 3/21/05 Date

Figure 1. Sample Check-in List

Date/Time Received: 3·21·05 850

SDG#: MSR#05-0902

Work Order Number: 132868

Shipping Container ID: 7910 1116 0282 Chain of Custody # 2005-00063

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 14.0°
5. Vermiculite/packing materials is: Wet [ ] Dry [✓]
6. Number of samples in shipping container: 7
7. Sample holding times exceeded? Yes [ ] No [✓]

8. Samples have:

✓ tape ____ hazard labels

✓ custody seals ✓ appropriate sample labels

9. Samples are:

✓ in good condition ____ leaking

____ broken ____ have air bubbles

10. Were any anomalies identified in sample receipt? Yes [ ] No [ ]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: C. M. Iles Date: 3·21·05

Telephoned to: _____ On _____ By _____

SAMPLE RECEIPT & REVIEW FORM

GENERAL ENGINEERING LABORATORIES, LLC

PM use only (2005-00063)

Client: Connecticut Yankee	SDG/ARCOC/Work Order: 132868
Date Received: 3.21.05	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: [illegible]	

	Sample Receipt Criteria	Conforming	NA	Non-Conforming	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Temp device serial # ice bags blue ice dry ice none other(describe)
3	Chain of custody documents included with shipment?				
4	Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7	Samples received within holding time?				Id's and tests affected:
8	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
9	Date & time on COC match date & time on bottles?				Sample ID's affected:
10	Number of containers received match number indicated on COC?				Sample ID's affected:
11	COC form is properly signed in relinquished/received sections?				
12	Air Bill ,Tracking #'s, & Additional Comments				

Radiological Information	Non-RAD	RAD	RAD II	RSO RAD Receipt #
What is the radiological classification of the samples?				Comments
Radioactivity Screening Results (maximum observed CPM)	90cpm			*If > x2 area background is observed on a non-radioactive sample, contact the RSO to investigate

PM (or PMA) review of Receiving Rad classification: CAJ Initials 3/21/05 Date

11

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
SDG MSR#05-0902

Method/Analysis Information

Product:	Alphaspec Am241, Cm, Solid ALL FSS
Analytical Method:	DOE EML HASL-300, Am-05-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	410822
Prep Batch Number:	410673
Dry Soil Prep GL-RAD-A-021 Batch Number:	410672

Sample ID	Client ID
132868009	9801-0000-145-S-01
132868017	9801-0000-149-S-01
1200810935	Method Blank (MB)
1200810936	132868009(9801-0000-145-S-01) Sample Duplicate (DUP)
1200810937	132868009(9801-0000-145-S-01) Matrix Spike (MS)
1200810938	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 14.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 132868009 (9801-0000-145-S-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	Alphaspec Pu, Solid-ALL FSS
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	410823
Prep Batch Number:	410673
Dry Soil Prep GL-RAD-A-021 Batch Number:	410672

Sample ID	Client ID
132868009	9801-0000-145-S-01
132868017	9801-0000-149-S-01
1200810939	Method Blank (MB)
1200810940	132868009(9801-0000-145-S-01) Sample Duplicate (DUP)
1200810941	132868009(9801-0000-145-S-01) Matrix Spike (MS)
1200810942	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 14.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC

The following sample was used for QC: 132868009 (9801-0000-145-S-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Sample 1200810939 (MB) was recounted due to negative area.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint Pu241, Solid-ALL FSS
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	410825
Prep Batch Number:	410673
Dry Soil Prep GL-RAD-A-021 Batch Number:	410672

Sample ID	Client ID
132868009	9801-0000-145-S-01
132868017	9801-0000-149-S-01
1200810948	Method Blank (MB)
1200810949	132868009(9801-0000-145-S-01) Sample Duplicate (DUP)
1200810950	132868009(9801-0000-145-S-01) Matrix Spike (MS)
1200810951	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-035 REV# 6.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 132868009 (9801-0000-145-S-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Manual Integration
No manual integrations were performed on data in this batch.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	411100
Prep Batch Number:	410672

Sample ID	Client ID
132868001	9801-0000-141-S-01
132868002	9801-0000-141-S-02
132868003	9801-0000-142-S-01
132868004	9801-0000-142-S-02
132868005	9801-0000-143-S-01
132868006	9801-0000-143-S-02
132868007	9801-0000-144-S-01

132868008	9801-0000-144-S-02
132868009	9801-0000-145-S-01
132868010	9801-0000-145-S-02
132868011	9801-0000-146-S-01
132868012	9801-0000-146-S-02
132868013	9801-0000-147-S-01
132868014	9801-0000-147-S-02
132868015	9801-0000-148-S-01
132868016	9801-0000-148-S-02
132868017	9801-0000-149-S-01
1200811602	Method Blank (MB)
1200811603	132868001(9801-0000-141-S-01) Sample Duplicate (DUP)
1200811604	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 132868001 (9801-0000-141-S-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced

SOP or contractual documents. The following NCR was generated for this SDG:
NCR 189635 was generated due to Container scanning event for custody missed. 1. The analyst did not scan the samples 132867021, 132868001, 132868002, 132868003, 132868004, 132868005, 132868006, 132868007, 132868008, 132868009, 132868010, 132868011, 132868012, 132868013, 132868014, 132868015, 132868016, and 132868017 into the batch prior to analysis, however the samples did remain in their custody at all times. The error has been corrected and the analyst has been instructed on the proper scanning procedures. 1. Reporting results.

Qualifier Information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to low abundance.	Cesium-134	132868006
			132868010
UI	Data rejected due to no valid peak.	Actinium-228	132868009
		Cobalt-60	132868010

Method/Analysis Information

Product:	GFPC, Sr90, solid-ALL FSS
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	414566
Prep Batch Number:	410673
Dry Soil Prep GL-RAD-A-021 Batch Number:	410672

Sample ID	Client ID
132868001	9801-0000-141-S-01
132868002	9801-0000-141-S-02
132868003	9801-0000-142-S-01
132868004	9801-0000-142-S-02
132868005	9801-0000-143-S-01
132868006	9801-0000-143-S-02
132868007	9801-0000-144-S-01
132868008	9801-0000-144-S-02
132868009	9801-0000-145-S-01
132868010	9801-0000-145-S-02
132868011	9801-0000-146-S-01
132868012	9801-0000-146-S-02
132868013	9801-0000-147-S-01
132868014	9801-0000-147-S-02
132868015	9801-0000-148-S-01
132868016	9801-0000-148-S-02
132868017	9801-0000-149-S-01
1200819805	Method Blank (MB)
1200819806	132868014(9801-0000-147-S-02) Sample Duplicate (DUP)
1200819807	132868014(9801-0000-147-S-02) Matrix Spike (MS)
1200819808	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 9.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 132868014 (9801-0000-147-S-02).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Samples were reprepped due to high blank activity.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint Tc99, Solid-ALL FSS
Analytical Method:	DOE EML HASL-300, Tc-02-RC Modified
Analytical Batch Number:	412468

Sample ID	Client ID
132868009	9801-0000-145-S-01
132868017	9801-0000-149-S-01
1200814867	Method Blank (MB)
1200814868	132868009(9801-0000-145-S-01) Sample Duplicate (DUP)
1200814869	132868009(9801-0000-145-S-01) Matrix Spike (MS)
1200814870	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-005 REV# 11.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 132868009 (9801-0000-145-S-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Samples were reprepped due to low/high recovery.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Additional Comments
The sample's, 132868009 (9801-0000-145-S-01), MDA was used to calculate the relative percent difference.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Fe55, Solid-ALL FSS**
Analytical Method:	DOE RESL Fe-1, Modified
Prep Method:	Ash Soil Prep

Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	410946
Prep Batch Number:	410673
Dry Soil Prep GL-RAD-A-021 Batch Number:	410672

Sample ID	Client ID
132868009	9801-0000-145-S-01
132868017	9801-0000-149-S-01
1200811258	Method Blank (MB)
1200811259	132868009(9801-0000-145-S-01) Sample Duplicate (DUP)
1200811260	132868009(9801-0000-145-S-01) Matrix Spike (MS)
1200811261	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-040 REV# 2.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 132868009 (9801-0000-145-S-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint Ni63, Solid-ALL FSS
Analytical Method:	DOE RESL Ni-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	410947
Prep Batch Number:	410673
Dry Soil Prep GL-RAD-A-021 Batch Number:	410672

Sample ID	Client ID
132868009	9801-0000-145-S-01
132868017	9801-0000-149-S-01
1200811262	Method Blank (MB)
1200811263	132868009(9801-0000-145-S-01) Sample Duplicate (DUP)
1200811264	132868009(9801-0000-145-S-01) Matrix Spike (MS)
1200811265	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-022 REV# 7.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 132868009 (9801-0000-145-S-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	LSC, Tritium Dist, Solid-HTD2,ALL FSS
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	410944

Sample ID	Client ID
132868009	9801-0000-145-S-01
132868017	9801-0000-149-S-01
1200811250	Method Blank (MB)
1200811251	132867011(9802-0000-AS2-A-01) Sample Duplicate (DUP)
1200811252	132867011(9802-0000-AS2-A-01) Matrix Spike (MS)
1200811253	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 132867011 (9802-0000-AS2-A-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint C14, Solid All,FSS**
Analytical Method:	EPA EERF C-01 Modified
Analytical Batch Number:	410948

Sample ID	Client ID
132868009	9801-0000-145-S-01
132868017	9801-0000-149-S-01
1200811266	Method Blank (MB)
1200811267	132868009(9801-0000-145-S-01) Sample Duplicate (DUP)
1200811268	132868009(9801-0000-145-S-01) Matrix Spike (MS)
1200811269	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-003 REV# 7.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 132868009 (9801-0000-145-S-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier information
Manual qualifiers were not required.

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:
GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.
The following data validator verified the information presented in this case narrative:

Reviewer: [illegible] 4/11/05

NCR Report No.: 189635
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
28-MAR-05	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
GAMMA SPECTROMETER	EML HASL 300, 4.5.2.3	Solid	YANK
Batch ID:	**Sample Numbers:**		
411100	See Below		

Potentially affected work order(s)(SDG): 132867(MSR#05-0906),132868(MSR#05-0902)

Application Issues:

Container scanning event for custody missed

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The analyst did not scan the samples 132867021, 132868001, 132868002, 132868003, 132868004, 132868005, 132868006, 132868007, 132868008, 132868009, 132868010, 132868011, 132868012, 132868013, 132868014, 132868015, 132868016, and 132868017 into the batch prior to analysis, however the samples did remain in their custody at all times. The error has been corrected and the analyst has been instructed on the proper scanning procedures.	1. Reporting results.

Originator's Name:
Jimmy Hartley 28-MAR-05

Data Validator/Group Leader:
Melanie Aycock 29-MAR-05

Quality Review:
Lonnie Morris 11-APR-05

Director:

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#05-0902 GEL Work Order: 132868

The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- < Result is less than amount reported.
- > Result is greater than amount reported.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- P The response between the confirmation column and the primary column is >40%D.
- R Sample results are rejected due to sample preservation with HCl.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- Y QC Samples were not spiked with this compound.
- h Sample preparation or preservation holding time exceeded.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.
** Indicates the analyte is a surrogate compound.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-141-S-01	Project:	YANK01204
Sample ID:	132868001	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	8.03%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth													
Waived													
Actinium-228		0.690	+/-0.205	0.0815	+/-0.201	0.178	pCi/g		AKB	03/24/05	0733	411100	1
Americium-241	U	0.0496	+/-0.141	0.119	+/-0.138	0.246	pCi/g						
Bismuth-212		0.554	+/-0.267	0.173	+/-0.262	0.375	pCi/g						
Bismuth-214		0.626	+/-0.118	0.0428	+/-0.115	0.0919	pCi/g						
Cesium-134	U	0.0356	+/-0.0397	0.0315	+/-0.0389	0.0674	pCi/g						
Cesium-137	U	0.0491	+/-0.0452	0.0243	+/-0.0443	0.0523	pCi/g						
Cobalt-60	U	0.0291	+/-0.0233	0.0241	+/-0.0229	0.0537	pCi/g						
Europium-152	U	-0.00351	+/-0.0699	0.0606	+/-0.0685	0.129	pCi/g						
Europium-154	U	0.0147	+/-0.0867	0.075	+/-0.085	0.165	pCi/g						
Europium-155	U	0.00636	+/-0.084	0.0747	+/-0.0823	0.155	pCi/g						
Lead-212		0.770	+/-0.0987	0.0411	+/-0.0967	0.0856	pCi/g						
Lead-214		0.783	+/-0.137	0.0425	+/-0.135	0.0904	pCi/g						
Manganese-54	U	-0.00126	+/-0.0263	0.0221	+/-0.0257	0.0481	pCi/g						
Niobium-94	U	-0.00132	+/-0.0226	0.0194	+/-0.0222	0.0421	pCi/g						
Potassium-40		18.3	+/-2.18	0.213	+/-2.14	0.481	pCi/g						
Radium-226		0.626	+/-0.118	0.0428	+/-0.115	0.0919	pCi/g						
Silver-108m	U	0.0136	+/-0.0243	0.0217	+/-0.0239	0.0463	pCi/g						
Thallium-208		0.137	+/-0.063	0.0239	+/-0.0617	0.0512	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00214	+/-0.017	0.0164	+/-0.017	0.0337	pCi/g		LCW	04/09/05	2202	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-141-S-01
Sample ID: 132868001

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
3	EPA 905.0 Modified										
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	70	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-141-S-02	Project:	YANK01204
Sample ID:	132868002	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	9.83%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived												
Actinium-228		0.839	+/-0.189	0.0646	+/-0.185	0.143	pCi/g		AKB 03/24/05	1000	411100	1
Americium-241	U	0.0188	+/-0.136	0.0906	+/-0.133	0.188	pCi/g					
Bismuth-212		0.478	+/-0.354	0.157	+/-0.347	0.340	pCi/g					
Bismuth-214		0.706	+/-0.134	0.0374	+/-0.131	0.0804	pCi/g					
Cesium-134	U	0.030	+/-0.0297	0.0274	+/-0.0291	0.0586	pCi/g					
Cesium-137	U	0.0301	+/-0.0251	0.0238	+/-0.0246	0.0508	pCi/g					
Cobalt-60	U	0.00305	+/-0.0301	0.0256	+/-0.0295	0.0564	pCi/g					
Europium-152	U	-0.0339	+/-0.061	0.051	+/-0.0598	0.108	pCi/g					
Europium-154	U	0.0137	+/-0.0799	0.069	+/-0.0783	0.152	pCi/g					
Europium-155	U	0.0635	+/-0.0812	0.0667	+/-0.0796	0.138	pCi/g					
Lead-212		0.750	+/-0.0961	0.0332	+/-0.0942	0.0692	pCi/g					
Lead-214		0.711	+/-0.112	0.0394	+/-0.110	0.0834	pCi/g					
Manganese-54	U	0.00525	+/-0.0242	0.0209	+/-0.0237	0.0452	pCi/g					
Niobium-94	U	0.00269	+/-0.0234	0.0204	+/-0.023	0.0436	pCi/g					
Potassium-40		12.7	+/-1.44	0.221	+/-1.41	0.494	pCi/g					
Radium-226		0.706	+/-0.134	0.0374	+/-0.131	0.0804	pCi/g					
Silver-108m	U	0.00148	+/-0.0204	0.0175	+/-0.020	0.0374	pCi/g					
Thallium-208		0.232	+/-0.0694	0.0212	+/-0.068	0.0453	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	-0.00361	+/-0.0159	0.0156	+/-0.0159	0.0321	pCi/g		LCW1 04/09/05	2202	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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Certificate of Analysis

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-141-S-02
Sample ID: 132868002

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	69	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-142-S-01	Project:	YANK01204
Sample ID:	132868003	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	9.97%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.809	+/-0.246	0.0788	+/-0.241	0.172	pCi/g		AKB	03/24/05	1001	411100	1
Americium-241	U	0.0459	+/-0.129	0.109	+/-0.126	0.226	pCi/g						
Bismuth-212		0.459	+/-0.365	0.166	+/-0.358	0.361	pCi/g						
Bismuth-214		0.708	+/-0.148	0.0403	+/-0.145	0.0868	pCi/g						
Cesium-134	U	0.0536	+/-0.0472	0.0282	+/-0.0463	0.0605	pCi/g						
Cesium-137	U	0.022	+/-0.0592	0.0238	+/-0.0581	0.0512	pCi/g						
Cobalt-60	U	-0.0138	+/-0.0258	0.0199	+/-0.0253	0.0453	pCi/g						
Europium-152	U	0.0153	+/-0.0745	0.0659	+/-0.073	0.139	pCi/g						
Europium-154	U	-0.00505	+/-0.0897	0.0757	+/-0.088	0.166	pCi/g						
Europium-155	U	-0.0148	+/-0.0813	0.0717	+/-0.0797	0.149	pCi/g						
Lead-212		0.825	+/-0.108	0.0377	+/-0.106	0.0788	pCi/g						
Lead-214		0.823	+/-0.153	0.0429	+/-0.150	0.091	pCi/g						
Manganese-54	U	-0.0109	+/-0.0264	0.0214	+/-0.0258	0.0466	pCi/g						
Niobium-94	U	0.0305	+/-0.0249	0.0237	+/-0.0245	0.0506	pCi/g						
Potassium-40		12.6	+/-1.61	0.172	+/-1.58	0.400	pCi/g						
Radium-226		0.708	+/-0.148	0.0403	+/-0.145	0.0868	pCi/g						
Silver-108m	U	-0.0138	+/-0.0238	0.0193	+/-0.0233	0.0414	pCi/g						
Thallium-208		0.280	+/-0.0647	0.0228	+/-0.0634	0.049	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.015	+/-0.0171	0.016	+/-0.0174	0.0329	pCi/g		LCW1	04/09/05	2202	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-142-S-01
Sample ID: 132868003

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	69	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-142-S-02	Project:	YANK01204
Sample ID:	132868004	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	11%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.719	+/-0.227	0.0501	+/-0.222	0.113	pCi/g		AKB	03/24/05	1001	411100	1
Americium-241	U	0.00439	+/-0.132	0.113	+/-0.130	0.235	pCi/g						
Bismuth-212		0.410	+/-0.234	0.152	+/-0.229	0.328	pCi/g						
Bismuth-214		0.564	+/-0.118	0.0361	+/-0.116	0.0774	pCi/g						
Cesium-134	U	0.017	+/-0.0255	0.0227	+/-0.025	0.0489	pCi/g						
Cesium-137	U	0.0369	+/-0.0319	0.0181	+/-0.0312	0.0392	pCi/g						
Cobalt-60	U	0.0289	+/-0.0267	0.0221	+/-0.0262	0.0491	pCi/g						
Europium-152	U	-0.00282	+/-0.0627	0.0496	+/-0.0615	0.105	pCi/g						
Europium-154	U	-0.00638	+/-0.0744	0.0617	+/-0.0729	0.137	pCi/g						
Europium-155	U	0.00207	+/-0.0629	0.0576	+/-0.0617	0.120	pCi/g						
Lead-212		0.778	+/-0.113	0.028	+/-0.111	0.0588	pCi/g						
Lead-214		0.834	+/-0.122	0.0343	+/-0.120	0.0729	pCi/g						
Manganese-54	U	-0.00213	+/-0.0231	0.0189	+/-0.0226	0.0411	pCi/g						
Niobium-94	U	-0.00579	+/-0.0199	0.0162	+/-0.0195	0.0352	pCi/g						
Potassium-40		12.3	+/-1.34	0.138	+/-1.31	0.326	pCi/g						
Radium-226		0.564	+/-0.118	0.0361	+/-0.116	0.0774	pCi/g						
Silver-108m	U	0.0184	+/-0.0179	0.017	+/-0.0175	0.0363	pCi/g						
Thallium-208		0.232	+/-0.0518	0.0168	+/-0.0507	0.0364	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0193	+/-0.0182	0.0169	+/-0.0184	0.0348	pCi/g		LCW1	04/09/05	2202	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-142-S-02
Sample ID: 132868004

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	65	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-143-S-01	Project:	YANK01204
Sample ID:	132868005	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	11%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.648	+/-0.227	0.076	+/-0.222	0.167	pCi/g		AKB	03/24/05	1230	411100	1
Americium-241	U	-0.181	+/-0.208	0.166	+/-0.204	0.344	pCi/g						
Bismuth-212	U	0.301	+/-0.352	0.163	+/-0.345	0.356	pCi/g						
Bismuth-214		0.954	+/-0.156	0.0416	+/-0.153	0.0896	pCi/g						
Cesium-134	U	0.0233	+/-0.0344	0.0282	+/-0.0337	0.0606	pCi/g						
Cesium-137		0.131	+/-0.0489	0.0242	+/-0.048	0.0521	pCi/g						
Cobalt-60	U	0.0014	+/-0.0345	0.0287	+/-0.0338	0.0632	pCi/g						
Europium-152	U	0.013	+/-0.0737	0.0649	+/-0.0723	0.137	pCi/g						
Europium-154	U	-0.0205	+/-0.105	0.0721	+/-0.103	0.160	pCi/g						
Europium-155	U	0.0527	+/-0.0855	0.0817	+/-0.0838	0.169	pCi/g						
Lead-212		0.722	+/-0.0999	0.0356	+/-0.0979	0.0744	pCi/g						
Lead-214		0.927	+/-0.164	0.0439	+/-0.161	0.093	pCi/g						
Manganese-54	U	0.00983	+/-0.0275	0.0245	+/-0.0269	0.0528	pCi/g						
Niobium-94	U	0.00181	+/-0.023	0.0202	+/-0.0226	0.0438	pCi/g						
Potassium-40		12.6	+/-1.35	0.174	+/-1.32	0.407	pCi/g						
Radium-226		0.954	+/-0.156	0.0416	+/-0.153	0.0896	pCi/g						
Silver-108m	U	0.00935	+/-0.0246	0.0217	+/-0.0241	0.0461	pCi/g						
Thallium-208		0.176	+/-0.064	0.0242	+/-0.0627	0.0519	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr-90, solid-ALL FSS													
Strontium-90	U	0.00401	+/-0.017	0.0163	+/-0.017	0.0335	pCi/g		LCW1	04/09/05	2204	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-143-S-01
Sample ID: 132868005

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	76	(25%-125%)

Notes:
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BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-143-S-02	Project:	YANK01204
Sample ID:	132868006	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	9.25%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.710	+/-0.178	0.0769	+/-0.174	0.168	pCi/g		AKB	03/24/05	1231	411100	1
Americium-241	U	0.0106	+/-0.136	0.114	+/-0.134	0.236	pCi/g						
Bismuth-212		0.578	+/-0.299	0.143	+/-0.293	0.314	pCi/g						
Bismuth-214		0.826	+/-0.135	0.0403	+/-0.132	0.0868	pCi/g						
Cesium-134	UUI	0.00	+/-0.0444	0.032	+/-0.0435	0.0681	pCi/g						
Cesium-137	U	0.00197	+/-0.029	0.0254	+/-0.0284	0.0543	pCi/g						
Cobalt-60	U	0.0235	+/-0.0271	0.0255	+/-0.0266	0.0563	pCi/g						
Europium-152	U	-0.0353	+/-0.0711	0.060	+/-0.0697	0.127	pCi/g						
Europium-154	U	0.00528	+/-0.0883	0.0755	+/-0.0865	0.166	pCi/g						
Europium-155	U	0.0566	+/-0.0825	0.0761	+/-0.0809	0.158	pCi/g						
Lead-212		0.882	+/-0.112	0.0368	+/-0.109	0.0771	pCi/g						
Lead-214		0.945	+/-0.154	0.0448	+/-0.151	0.0948	pCi/g						
Manganese-54		0.0558	+/-0.0441	0.0212	+/-0.0432	0.046	pCi/g						
Niobium-94	U	-0.00104	+/-0.0252	0.0217	+/-0.0247	0.0467	pCi/g						
Potassium-40		14.5	+/-1.80	0.215	+/-1.76	0.484	pCi/g						
Radium-226		0.826	+/-0.135	0.0403	+/-0.132	0.0868	pCi/g						
Silver-108m	U	0.0143	+/-0.0243	0.0218	+/-0.0239	0.0464	pCi/g						
Thallium-208		0.269	+/-0.0514	0.0195	+/-0.0504	0.0424	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.011	+/-0.0156	0.0146	+/-0.0157	0.0302	pCi/g		LCW1	04/09/05	2204	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-143-S-02
Sample ID: 132868006

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	78	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
B Target analyte was detected in the sample as well as the associated blank.
BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.
The above sample is reported on a dry weight basis.

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Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-144-S-01	Project:	YANK01204
Sample ID:	132868007	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	11.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived												
Actinium-228		0.621	+/-0.230	0.0801	+/-0.225	0.176	pCi/g		AKB 03/24/05	1010	411100	1
Americium-241	U	0.0882	+/-0.269	0.169	+/-0.264	0.351	pCi/g					
Bismuth-212		0.641	+/-0.334	0.160	+/-0.328	0.351	pCi/g					
Bismuth-214		0.802	+/-0.142	0.0417	+/-0.139	0.0901	pCi/g					
Cesium-134	U	0.0462	+/-0.0319	0.0294	+/-0.0313	0.0634	pCi/g					
Cesium-137	U	0.0162	+/-0.0289	0.0264	+/-0.0284	0.0567	pCi/g					
Cobalt-60	U	0.00421	+/-0.0377	0.0274	+/-0.037	0.061	pCi/g					
Europium-152	U	-0.00197	+/-0.0824	0.0619	+/-0.0808	0.131	pCi/g					
Europium-154	U	-0.0115	+/-0.0877	0.0711	+/-0.0859	0.159	pCi/g					
Europium-155	U	-0.00228	+/-0.0885	0.0814	+/-0.0867	0.169	pCi/g					
Lead-212		0.715	+/-0.102	0.0397	+/-0.100	0.0828	pCi/g					
Lead-214		0.869	+/-0.143	0.0406	+/-0.141	0.0867	pCi/g					
Manganese-54	U	-0.0127	+/-0.0237	0.0189	+/-0.0232	0.0419	pCi/g					
Niobium-94	U	0.013	+/-0.0237	0.0216	+/-0.0232	0.0467	pCi/g					
Potassium-40		13.7	+/-1.52	0.229	+/-1.49	0.520	pCi/g					
Radium-226		0.802	+/-0.142	0.0417	+/-0.139	0.0901	pCi/g					
Silver-108m	U	0.014	+/-0.0185	0.022	+/-0.0182	0.0469	pCi/g					
Thallium-208		0.236	+/-0.0512	0.0238	+/-0.0502	0.0511	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	-0.0116	+/-0.0145	0.0145	+/-0.0146	0.0299	pCi/g		LCW1 04/09/05	2204	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-144-S-01
Sample ID: 132868007

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	86	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-144-S-02	Project:	YANK01204
Sample ID:	132868008	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	12.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.882	+/-0.224	0.0788	+/-0.219	0.172	pCi/g		AKB	03/24/05	1013	411100	1
Americium-241	U	-0.0391	+/-0.151	0.122	+/-0.148	0.252	pCi/g						
Bismuth-212		0.599	+/-0.456	0.193	+/-0.447	0.415	pCi/g						
Bismuth-214		0.734	+/-0.127	0.0437	+/-0.125	0.0938	pCi/g						
Cesium-134	U	0.0134	+/-0.0588	0.0303	+/-0.0577	0.0649	pCi/g						
Cesium-137		0.173	+/-0.0468	0.0277	+/-0.0459	0.0591	pCi/g						
Cobalt-60	U	0.0134	+/-0.0326	0.0284	+/-0.032	0.0625	pCi/g						
Europium-152	U	-0.052	+/-0.0761	0.0645	+/-0.0746	0.136	pCi/g						
Europium-154	U	-0.0187	+/-0.0928	0.0751	+/-0.0909	0.166	pCi/g						
Europium-155	U	0.00428	+/-0.0826	0.0749	+/-0.0809	0.155	pCi/g						
Lead-212		0.751	+/-0.106	0.0371	+/-0.104	0.0773	pCi/g						
Lead-214		0.841	+/-0.147	0.0458	+/-0.144	0.0967	pCi/g						
Manganese-54	U	0.00112	+/-0.028	0.0242	+/-0.0274	0.0524	pCi/g						
Niobium-94	U	0.00382	+/-0.0257	0.0219	+/-0.0252	0.047	pCi/g						
Potassium-40		13.1	+/-1.53	0.168	+/-1.50	0.393	pCi/g						
Radium-226		0.734	+/-0.127	0.0437	+/-0.125	0.0938	pCi/g						
Silver-108m	U	0.0155	+/-0.0284	0.0256	+/-0.0278	0.0539	pCi/g						
Thallium-208		0.218	+/-0.0558	0.0242	+/-0.0547	0.0518	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.000224	+/-0.0163	0.0158	+/-0.0163	0.0326	pCi/g		LCWI	04/09/05	2205	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-144-S-02
Sample ID: 132868008

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	82	(25%-125%)

Notes:
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* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
B Target analyte was detected in the sample as well as the associated blank.
BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.
The above sample is reported on a dry weight basis.

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Certificate of Analysis

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-145-S-01	Project:	YANK01204
Sample ID:	132868009	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	10.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241	U	-0.0677	+/-0.120	0.159	+/-0.121	0.398	pCi/g		SCP	03/28/05	1016	410822	1
Curium-242	U	0.0551	+/-0.088	0.0357	+/-0.0883	0.156	pCi/g						
Curium-243/244	U	-0.082	+/-0.122	0.166	+/-0.122	0.412	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	0.0169	+/-0.104	0.101	+/-0.104	0.278	pCi/g		SCP	03/24/05	1834	410823	2
Plutonium-239/240	U	0.0438	+/-0.101	0.0784	+/-0.101	0.233	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	0.546	+/-6.15	5.14	+/-6.15	10.6	pCi/g		SCP	03/25/05	1838	410825	3
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228	UUI	0.00	+/-0.239	0.0597	+/-0.234	0.132	pCi/g		AKB	03/24/05	1231	411100	4
Americium-241	U	0.0248	+/-0.139	0.121	+/-0.136	0.251	pCi/g						
Bismuth-212		0.425	+/-0.283	0.144	+/-0.278	0.311	pCi/g						
Bismuth-214		0.733	+/-0.129	0.0326	+/-0.126	0.0703	pCi/g						
Cesium-134	U	0.0225	+/-0.0251	0.0229	+/-0.0246	0.0492	pCi/g						
Cesium-137		0.172	+/-0.0441	0.018	+/-0.0432	0.039	pCi/g						
Cobalt-60	U	0.0211	+/-0.0275	0.0252	+/-0.027	0.0551	pCi/g						
Europium-152	U	0.0414	+/-0.0602	0.051	+/-0.059	0.108	pCi/g						
Europium-154	U	0.023	+/-0.086	0.0659	+/-0.0843	0.145	pCi/g						
Europium-155	U	0.00404	+/-0.0657	0.0607	+/-0.0643	0.126	pCi/g						
Lead-212		0.729	+/-0.108	0.0287	+/-0.106	0.060	pCi/g						
Lead-214		0.849	+/-0.133	0.0335	+/-0.130	0.0712	pCi/g						
Manganese-54	U	-0.0156	+/-0.024	0.0185	+/-0.0235	0.0402	pCi/g						
Niobium-94	U	-0.0173	+/-0.0201	0.0155	+/-0.0197	0.0336	pCi/g						
Potassium-40		11.2	+/-1.22	0.152	+/-1.20	0.352	pCi/g						
Radium-226		0.733	+/-0.129	0.0326	+/-0.126	0.0703	pCi/g						
Silver-108m	U	0.00108	+/-0.0188	0.0167	+/-0.0184	0.0357	pCi/g						
Thallium-208		0.211	+/-0.062	0.0186	+/-0.0608	0.0398	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.000884	+/-0.0159	0.0154	+/-0.0159	0.0317	pCi/g		LCW1	04/09/05	2205	414566	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	5.18	+/-6.29	5.10	+/-6.29	10.6	pCi/g		ATH1	03/23/05	2231	410944	8

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Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-145-S-01
Sample ID: 132868009

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Liquid Scintillation Analysis												
Liquid Scint C14, Solid All,FSS												
Carbon-14	U	-0.0693	+/-0.0958	0.0831	+/-0.0958	0.173	pCi/g		EGD1 03/23/05	0813	410948	9
Liquid Scint Fe55, Solid-ALL FSS												
Iron-55	U	6.71	+/-26.7	17.9	+/-26.7	36.2	pCi/g		DAJ1 03/26/05	0105	410946	10
Liquid Scint Ni63, Solid-ALL FSS												
Nickel-63	U	3.74	+/-8.10	6.70	+/-8.10	13.8	pCi/g		DAJ1 03/25/05	1409	410947	11
Liquid Scint Tc99, Solid-ALL FSS												
Technetium-99	U	0.0784	+/-0.197	0.163	+/-0.197	0.336	pCi/g		LAG1 04/04/05	1443	412468	12

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EML HASL 300, 4.5.2.3
5	EPA 905.0 Modified
6	EPA 905.0 Modified
7	EPA 905.0 Modified
8	EPA 906.0 Modified
9	EPA EERF C-01 Modified
10	DOE RESL Fe-1, Modified
11	DOE RESL Ni-1, Modified
12	DOE EML HASL-300, Tc-02-RC Modified
13	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	82	(25%-125%)
Carrier/Tracer Recovery	Alphaspec Pu, Solid-ALL FSS	81	
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	101	

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Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-145-S-01
Sample ID: 132868009

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			83		(25%-125%)				
Carrier/Tracer Recovery		Liquid Scint Fe55, Solid-ALL FS			92						
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-ALL FS			78						
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-ALL FS			78						

Notes:
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- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier--please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-145-S-02	Project:	YANK01204
Sample ID:	132868010	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	9.31%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived												
Actinium-228		0.794	+/-0.211	0.0808	+/-0.207	0.175	pCi/g		AKB 03/24/05	1232	411100	1
Americium-241	U	0.163	+/-0.175	0.117	+/-0.172	0.241	pCi/g					
Bismuth-212		0.557	+/-0.385	0.210	+/-0.377	0.446	pCi/g					
Bismuth-214		0.688	+/-0.135	0.0456	+/-0.132	0.0967	pCi/g					
Cesium-134	UUI	0.00	+/-0.0549	0.0306	+/-0.0538	0.0651	pCi/g					
Cesium-137		0.143	+/-0.0609	0.0213	+/-0.0597	0.0459	pCi/g					
Cobalt-60	UUI	0.00	+/-0.0445	0.0258	+/-0.0436	0.0567	pCi/g					
Europium-152	U	-0.0274	+/-0.0845	0.0647	+/-0.0828	0.136	pCi/g					
Europium-154	U	-0.00998	+/-0.0933	0.0773	+/-0.0914	0.168	pCi/g					
Europium-155	U	-0.0363	+/-0.0795	0.0728	+/-0.0779	0.150	pCi/g					
Lead-212		0.699	+/-0.098	0.0358	+/-0.096	0.0745	pCi/g					
Lead-214		0.927	+/-0.134	0.0502	+/-0.131	0.105	pCi/g					
Manganese-54	U	0.000548	+/-0.0315	0.0238	+/-0.0309	0.0511	pCi/g					
Niobium-94	U	-0.00114	+/-0.0231	0.0195	+/-0.0226	0.042	pCi/g					
Potassium-40		13.0	+/-1.45	0.214	+/-1.42	0.477	pCi/g					
Radium-226		0.688	+/-0.135	0.0456	+/-0.132	0.0967	pCi/g					
Silver-108m	U	-0.00596	+/-0.0252	0.0189	+/-0.0247	0.0402	pCi/g					
Thallium-208		0.233	+/-0.062	0.0202	+/-0.0607	0.0434	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	-0.0282	+/-0.0175	0.018	+/-0.0176	0.0368	pCi/g		LCW1 04/09/05	2205	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-145-S-02
Sample ID: 132868010

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	79	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-146-S-01	Project:	YANK01204
Sample ID:	132868011	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	9.48%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.761	+/-0.256	0.0836	+/-0.251	0.187	pCi/g		AKB	03/24/05	1234	411100	1
Americium-241	U	0.0126	+/-0.0808	0.0687	+/-0.0792	0.142	pCi/g						
Bismuth-212	U	0.453	+/-0.412	0.213	+/-0.404	0.463	pCi/g						
Bismuth-214		0.759	+/-0.169	0.0541	+/-0.166	0.116	pCi/g						
Cesium-134	U	0.00895	+/-0.0345	0.0312	+/-0.0338	0.068	pCi/g						
Cesium-137	U	0.0353	+/-0.0701	0.0297	+/-0.0687	0.0641	pCi/g						
Cobalt-60	U	0.0143	+/-0.030	0.0272	+/-0.0294	0.0618	pCi/g						
Europium-152	U	0.0399	+/-0.0818	0.0758	+/-0.0801	0.160	pCi/g						
Europium-154	U	-0.0553	+/-0.111	0.0863	+/-0.109	0.193	pCi/g						
Europium-155	U	0.0458	+/-0.0862	0.0804	+/-0.0845	0.166	pCi/g						
Lead-212		0.479	+/-0.125	0.0472	+/-0.123	0.098	pCi/g						
Lead-214		0.853	+/-0.152	0.0495	+/-0.149	0.105	pCi/g						
Manganese-54	U	0.0192	+/-0.0386	0.0244	+/-0.0378	0.0539	pCi/g						
Niobium-94	U	-0.0137	+/-0.0374	0.0259	+/-0.0366	0.0561	pCi/g						
Potassium-40		10.9	+/-1.39	0.259	+/-1.37	0.594	pCi/g						
Radium-226		0.759	+/-0.169	0.0541	+/-0.166	0.116	pCi/g						
Silver-108m	U	-0.00268	+/-0.0269	0.0235	+/-0.0264	0.0503	pCi/g						
Thallium-208		0.241	+/-0.0629	0.0265	+/-0.0616	0.0573	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.0231	+/-0.0219	0.0219	+/-0.0219	0.0448	pCi/g		LCW1	04/09/05	2205	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-146-S-01
Sample ID: 132868011

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
3	EPA 905.0 Modified										
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	70	(25%-125%)

Notes:
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- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-146-S-02	Project:	YANK01204
Sample ID:	132868012	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	11.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
Rad Gamma Spec Analysis											
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth											
Waived											
Actinium-228		0.431	+/-0.209	0.0596	+/-0.205	0.131	pCi/g		AKB 03/24/05	1533	411100 1
Americium-241	U	-0.0561	+/-0.105	0.0864	+/-0.103	0.179	pCi/g				
Bismuth-212		0.465	+/-0.298	0.117	+/-0.292	0.256	pCi/g				
Bismuth-214		0.637	+/-0.104	0.0288	+/-0.101	0.0626	pCi/g				
Cesium-134	U	0.0328	+/-0.0437	0.0243	+/-0.0429	0.0519	pCi/g				
Cesium-137	U	5.560E-05	+/-0.0202	0.0173	+/-0.0198	0.0376	pCi/g				
Cobalt-60	U	0.00761	+/-0.0242	0.019	+/-0.0238	0.0426	pCi/g				
Europium-152	U	-0.0059	+/-0.0509	0.0459	+/-0.0499	0.0974	pCi/g				
Europium-154	U	0.026	+/-0.0616	0.0555	+/-0.0604	0.124	pCi/g				
Europium-155	U	0.0505	+/-0.0828	0.0591	+/-0.0811	0.122	pCi/g				
Lead-212		0.535	+/-0.0778	0.0283	+/-0.0762	0.059	pCi/g				
Lead-214		0.630	+/-0.104	0.0323	+/-0.102	0.0686	pCi/g				
Manganese-54	U	0.00622	+/-0.0203	0.0177	+/-0.0199	0.0384	pCi/g				
Niobium-94	U	0.0104	+/-0.0183	0.0166	+/-0.018	0.0358	pCi/g				
Potassium-40		10.7	+/-1.16	0.0901	+/-1.14	0.227	pCi/g				
Radium-226		0.637	+/-0.104	0.0288	+/-0.101	0.0626	pCi/g				
Silver-108m	U	-0.00477	+/-0.0192	0.0168	+/-0.0188	0.0357	pCi/g				
Thallium-208		0.198	+/-0.0415	0.0177	+/-0.0407	0.0381	pCi/g				
Rad Gas Flow Proportional Counting											
GFPC, Sr90, solid-ALL FSS											
Strontium-90	U	-0.0156	+/-0.0174	0.0174	+/-0.0174	0.0358	pCi/g		LCW1 04/09/05	2206	414566 2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-146-S-02
Sample ID: 132868012

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	83	(25%-125%)

Notes:
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E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.
The above sample is reported on a dry weight basis.

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Certificate of Analysis

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-147-S-01	Project:	YANK01204
Sample ID:	132868013	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	11.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived												
Actinium-228		0.758	+/-0.220	0.0673	+/-0.216	0.149	pCi/g		AKB 03/24/05	1534	411100	1
Americium-241	U	0.00696	+/-0.197	0.169	+/-0.193	0.350	pCi/g					
Bismuth-212		0.605	+/-0.273	0.151	+/-0.268	0.329	pCi/g					
Bismuth-214		0.778	+/-0.129	0.0405	+/-0.126	0.0871	pCi/g					
Cesium-134	U	0.0335	+/-0.0285	0.0273	+/-0.0279	0.0588	pCi/g					
Cesium-137	U	0.037	+/-0.0204	0.0225	+/-0.020	0.0485	pCi/g					
Cobalt-60	U	-3.580E-05	+/-0.0246	0.0204	+/-0.0241	0.0464	pCi/g					
Europium-152	U	-0.0433	+/-0.0676	0.0562	+/-0.0662	0.119	pCi/g					
Europium-154	U	-0.0549	+/-0.0942	0.0725	+/-0.0923	0.160	pCi/g					
Europium-155	U	0.00252	+/-0.0875	0.0826	+/-0.0858	0.171	pCi/g					
Lead-212		0.727	+/-0.0999	0.0404	+/-0.0979	0.084	pCi/g					
Lead-214		1.00	+/-0.149	0.0444	+/-0.146	0.0939	pCi/g					
Manganese-54	U	-0.000355	+/-0.0232	0.020	+/-0.0228	0.0438	pCi/g					
Niobium-94	U	0.00438	+/-0.0242	0.0215	+/-0.0237	0.0462	pCi/g					
Potassium-40		11.8	+/-1.28	0.151	+/-1.25	0.357	pCi/g					
Radium-226		0.778	+/-0.129	0.0405	+/-0.126	0.0871	pCi/g					
Silver-108m	U	0.00837	+/-0.0239	0.0211	+/-0.0234	0.0449	pCi/g					
Thallium-208		0.276	+/-0.0563	0.024	+/-0.0551	0.0512	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.021	+/-0.021	0.0196	+/-0.021	0.0402	pCi/g		LCW1 04/09/05	2206	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-147-S-01
Sample ID: 132868013

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
3	EPA 905.0 Modified										
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	68	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
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- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-147-S-02	Project:	YANK01204
Sample ID:	132868014	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	14.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived												
Actinium-228		0.929	+/-0.264	0.0808	+/-0.259	0.177	pCi/g		AKB 03/24/05	1534	411100	1
Americium-241	U	-0.00928	+/-0.206	0.143	+/-0.202	0.298	pCi/g					
Bismuth-212	U	0.361	+/-0.228	0.208	+/-0.224	0.445	pCi/g					
Bismuth-214		1.14	+/-0.161	0.0413	+/-0.158	0.0889	pCi/g					
Cesium-134	U	0.0359	+/-0.0482	0.0295	+/-0.0473	0.0633	pCi/g					
Cesium-137	U	0.00636	+/-0.0298	0.0227	+/-0.0292	0.0491	pCi/g					
Cobalt-60	U	0.00496	+/-0.0281	0.0239	+/-0.0276	0.0537	pCi/g					
Europium-152	U	-0.0144	+/-0.075	0.0619	+/-0.0735	0.131	pCi/g					
Europium-154	U	-0.0586	+/-0.0969	0.0745	+/-0.095	0.165	pCi/g					
Europium-155	U	0.0796	+/-0.107	0.0678	+/-0.105	0.141	pCi/g					
Lead-212		1.04	+/-0.127	0.0363	+/-0.125	0.0758	pCi/g					
Lead-214		1.22	+/-0.165	0.0468	+/-0.162	0.0988	pCi/g					
Manganese-54	U	0.0101	+/-0.0298	0.0254	+/-0.0292	0.0547	pCi/g					
Niobium-94	U	-0.00953	+/-0.0242	0.0195	+/-0.0237	0.0423	pCi/g					
Potassium-40		13.7	+/-1.57	0.219	+/-1.54	0.497	pCi/g					
Radium-226		1.14	+/-0.161	0.0413	+/-0.158	0.0889	pCi/g					
Silver-108m	U	0.0028	+/-0.0233	0.0207	+/-0.0229	0.0442	pCi/g					
Thallium-208		0.332	+/-0.0619	0.0229	+/-0.0606	0.0491	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.0187	+/-0.0179	0.0166	+/-0.0179	0.0342	pCi/g		LCW1 04/09/05	2206	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-147-S-02
Sample ID: 132868014

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	78	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
B Target analyte was detected in the sample as well as the associated blank.
BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
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UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-148-S-01	Project:	YANK01204
Sample ID:	132868015	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	11.6%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.808	+/-0.224	0.0749	+/-0.219	0.165	pCi/g		AKB	03/24/05	1535	411100	1
Americium-241	U	-0.0307	+/-0.135	0.109	+/-0.132	0.226	pCi/g						
Bismuth-212		0.476	+/-0.375	0.189	+/-0.368	0.407	pCi/g						
Bismuth-214		0.874	+/-0.142	0.0394	+/-0.139	0.0851	pCi/g						
Cesium-134	U	0.0216	+/-0.0389	0.0263	+/-0.0381	0.057	pCi/g						
Cesium-137		0.0564	+/-0.0484	0.0221	+/-0.0474	0.048	pCi/g						
Cobalt-60	U	0.0137	+/-0.0268	0.0243	+/-0.0263	0.0545	pCi/g						
Europium-152	U	-0.0858	+/-0.0763	0.0599	+/-0.0747	0.127	pCi/g						
Europium-154	U	0.0518	+/-0.0806	0.074	+/-0.079	0.164	pCi/g						
Europium-155	U	0.0229	+/-0.0731	0.0701	+/-0.0716	0.146	pCi/g						
Lead-212		0.803	+/-0.0993	0.034	+/-0.0973	0.0713	pCi/g						
Lead-214		1.01	+/-0.154	0.0452	+/-0.151	0.0954	pCi/g						
Manganese-54	U	0.00859	+/-0.0232	0.0205	+/-0.0227	0.0448	pCi/g						
Niobium-94	U	0.0139	+/-0.0242	0.0219	+/-0.0237	0.0471	pCi/g						
Potassium-40		13.4	+/-1.41	0.165	+/-1.38	0.388	pCi/g						
Radium-226		0.874	+/-0.142	0.0394	+/-0.139	0.0851	pCi/g						
Silver-108m	U	0.0041	+/-0.0259	0.022	+/-0.0254	0.0468	pCi/g						
Thallium-208		0.246	+/-0.0621	0.0262	+/-0.0609	0.0558	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0122	+/-0.0196	0.0186	+/-0.0196	0.038	pCi/g		LCW1	04/09/05	2338	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-148-S-01
Sample ID: 132868015

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	80	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-148-S-02	Project:	YANK01204
Sample ID:	132868016	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	11.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth												
Waived												
Actinium-228		0.739	+/-0.194	0.0843	+/-0.190	0.182	pCi/g		AKB 03/24/05	1536	411100	1
Americium-241	U	0.0118	+/-0.109	0.096	+/-0.107	0.199	pCi/g					
Bismuth-212		0.609	+/-0.458	0.166	+/-0.449	0.358	pCi/g					
Bismuth-214		0.873	+/-0.139	0.0398	+/-0.137	0.085	pCi/g					
Cesium-134	U	0.0318	+/-0.0343	0.0286	+/-0.0336	0.061	pCi/g					
Cesium-137	U	0.000298	+/-0.0241	0.0212	+/-0.0237	0.0455	pCi/g					
Cobalt-60	U	0.00409	+/-0.027	0.0231	+/-0.0264	0.0513	pCi/g					
Europium-152	U	-0.0256	+/-0.0617	0.0534	+/-0.0605	0.113	pCi/g					
Europium-154	U	-0.0692	+/-0.0877	0.0671	+/-0.0859	0.148	pCi/g					
Europium-155	U	0.0847	+/-0.0667	0.065	+/-0.0654	0.135	pCi/g					
Lead-212		0.622	+/-0.0912	0.0534	+/-0.0893	0.110	pCi/g					
Lead-214		1.03	+/-0.141	0.0383	+/-0.139	0.081	pCi/g					
Manganese-54	U	-0.00574	+/-0.0252	0.021	+/-0.0247	0.0454	pCi/g					
Niobium-94	U	0.00251	+/-0.0202	0.0177	+/-0.0198	0.0383	pCi/g					
Potassium-40		15.2	+/-1.48	0.172	+/-1.45	0.395	pCi/g					
Radium-226		0.873	+/-0.139	0.0398	+/-0.137	0.085	pCi/g					
Silver-108m	U	-0.0056	+/-0.0222	0.0189	+/-0.0218	0.0402	pCi/g					
Thallium-208		0.209	+/-0.0551	0.0236	+/-0.054	0.0501	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.0165	+/-0.0124	0.0114	+/-0.0125	0.0235	pCi/g		LCW1 04/09/05	2338	414566	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-148-S-02
Sample ID: 132868016

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M
4	EPA 905.0 Modified										

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	90	(25%-125%)

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	9801-0000-149-S-01	Project:	YANK01204
Sample ID:	132868017	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	21-MAR-05		
Collector:	Client		
Moisture:	14.9%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241	U	0.0106	+/-0.114	0.117	+/-0.114	0.305	pCi/g		SCP	03/28/05	1016	410822	1
Curium-242	U	-0.0134	+/-0.0186	0.045	+/-0.0186	0.166	pCi/g						
Curium-243/244	U	0.103	+/-0.145	0.109	+/-0.145	0.289	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.0423	+/-0.0313	0.076	+/-0.0317	0.220	pCi/g		SCP	03/24/05	1834	410823	2
Plutonium-239/240	U	0.0141	+/-0.0756	0.0703	+/-0.0756	0.209	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	-2.06	+/-6.48	5.50	+/-6.49	11.3	pCi/g		SCP	03/25/05	1910	410825	3
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.337	+/-0.142	0.0724	+/-0.139	0.158	pCi/g		AKB	03/24/05	1536	411100	4
Americium-241	U	0.0622	+/-0.088	0.0802	+/-0.0862	0.168	pCi/g						
Bismuth-212		0.304	+/-0.213	0.129	+/-0.208	0.285	pCi/g						
Bismuth-214		0.518	+/-0.0909	0.0262	+/-0.0891	0.0581	pCi/g						
Cesium-134	U	0.0127	+/-0.0227	0.0203	+/-0.0222	0.0446	pCi/g						
Cesium-137		0.0693	+/-0.028	0.0181	+/-0.0274	0.0395	pCi/g						
Cobalt-60	U	0.0167	+/-0.0248	0.0228	+/-0.0243	0.0508	pCi/g						
Europium-152	U	0.0481	+/-0.0535	0.049	+/-0.0524	0.104	pCi/g						
Europium-154	U	-0.0302	+/-0.0657	0.0512	+/-0.0644	0.117	pCi/g						
Europium-155	U	0.0341	+/-0.0527	0.0508	+/-0.0517	0.106	pCi/g						
Lead-212		0.411	+/-0.0636	0.0239	+/-0.0623	0.0508	pCi/g						
Lead-214		0.532	+/-0.110	0.0345	+/-0.108	0.0736	pCi/g						
Manganese-54	U	0.0219	+/-0.0203	0.0192	+/-0.0199	0.0418	pCi/g						
Niobium-94	U	-0.00824	+/-0.0186	0.0149	+/-0.0182	0.0328	pCi/g						
Potassium-40		9.04	+/-1.10	0.165	+/-1.08	0.382	pCi/g						
Radium-226		0.518	+/-0.0909	0.0262	+/-0.0891	0.0581	pCi/g						
Silver-108m	U	0.00166	+/-0.0162	0.0145	+/-0.0158	0.0316	pCi/g						
Thallium-208		0.134	+/-0.0375	0.0173	+/-0.0367	0.0377	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.00399	+/-0.0166	0.0162	+/-0.0166	0.0332	pCi/g		LCW1	04/09/05	2338	414566	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	-0.522	+/-6.11	5.15	+/-6.11	10.7	pCi/g		ATH1	03/23/05	2303	410944	8

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-149-S-01
Sample ID: 132868017

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid All, FSS													
Carbon-14	U	-0.0168	+/-0.0975	0.0825	+/-0.0975	0.171	pCi/g		EGD1	03/23/05	0915	410948	9
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	15.2	+/-52.9	35.7	+/-52.9	72.9	pCi/g		DAJ1	03/26/05	0307	410946	10
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	2.38	+/-8.79	7.32	+/-8.79	15.0	pCi/g		DAJ1	03/25/05	1456	410947	11
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.00387	+/-0.168	0.141	+/-0.168	0.290	pCi/g		LAG1	04/04/05	1515	412468	12

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/22/05	0751	410673
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/21/05	1320	410672

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EML HASL 300, 4.5.2.3
5	EPA 905.0 Modified
6	EPA 905.0 Modified
7	EPA 905.0 Modified
8	EPA 906.0 Modified
9	EPA EERF C-01 Modified
10	DOE RESL Fe-1, Modified
11	DOE RESL Ni-1, Modified
12	DOE EML HASL-300, Tc-02-RC Modified
13	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	77	(25%-125%)
Carrier/Tracer Recovery	Alphaspec Pu, Solid-ALL FSS	85	
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	93	

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 9801-0000-149-S-01
Sample ID: 132868017

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch N
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			87		(25%-125%)				
Carrier/Tracer Recovery		Liquid Scint Fe55, Solid-ALL FS			92						
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-ALL FS			70						
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-ALL FS			89						

Notes:
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- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

QC Summary

Report Date: April 11, 2005
Page 1 of 9

Client: Connecticut Yankee Atomic Power
Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut

Contact: Mr. Pete Hollenbeck

Workorder: 132868

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 410822										
QC1200810936 132868009 DUP										
Americium-241	U	-0.0677	U	0.0478	pCi/g	N/A		(0% - 100%)	SCP	03/28/05 10:16
	Uncert:	+/-0.120		+/-0.129						
	TPU:	+/-0.121		+/-0.129						
Curium-242	U	0.0551	U	0.0672	pCi/g	20		(0% - 100%)		
	Uncert:	+/-0.088		+/-0.107						
	TPU:	+/-0.0883		+/-0.108						
Curium-243/244	U	-0.082	U	-0.124	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.122		+/-0.0936						
	TPU:	+/-0.122		+/-0.0949						
QC1200810938 LCS										
Americium-241	10.5			10.8	pCi/g		103	(75%-125%)		
	Uncert:			+/-0.999						
	TPU:			+/-1.65						
Curium-242			U	0.00672	pCi/g					
	Uncert:			+/-0.0509						
	TPU:			+/-0.051						
Curium-243/244	12.9			13.6	pCi/g		105	(75%-125%)		
	Uncert:			+/-1.12						
	TPU:			+/-2.00						
QC1200810935 MB										
Americium-241			U	0.0543	pCi/g					03/28/05 10:16
	Uncert:			+/-0.146						
	TPU:			+/-0.147						
Curium-242			U	-0.0207	pCi/g					
	Uncert:			+/-0.0234						
	TPU:			+/-0.0235						
Curium-243/244			U	-0.0532	pCi/g					
	Uncert:			+/-0.0721						
	TPU:			+/-0.0724						
QC1200810937 132868009 MS										
Americium-241	10.5 U	-0.0677		10.9	pCi/g		104	(75%-125%)		03/28/05 10:16
	Uncert:	+/-0.120		+/-1.20						
	TPU:	+/-0.121		+/-1.90						
Curium-242	U	0.0551	U	-0.0329	pCi/g					
	Uncert:	+/-0.088		+/-0.0847						
	TPU:	+/-0.0883		+/-0.0848						
Curium-243/244	12.9 U	-0.082		13.1	pCi/g		102	(75%-125%)		
	Uncert:	+/-0.122		+/-1.32						
	TPU:	+/-0.122		+/-2.21						
Batch 410823										
QC1200810940 132868009 DUP										
Plutonium-238	U	0.0169	U	0.000961	pCi/g	178		(0% - 100%)	SCP	03/24/05 18:34

QC Summary

Workorder: 132868

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 410823										
	Uncert:	+/-0.104		+/-0.0522						
	TPU:	+/-0.104		+/-0.0522						
Plutonium-239/240	U	0.0438	U	-0.023	pCi/g	N/A		(0% - 100%)		
	Uncert:	+/-0.101		+/-0.0226						
	TPU:	+/-0.101		+/-0.0228						
QC1200810942 LCS										
Plutonium-238			U	0.031	pCi/g			(75%-125%)		03/25/05 08:20
	Uncert:			+/-0.0848						
	TPU:			+/-0.0849						
Plutonium-239/240	9.26			10.0	pCi/g		108	(75%-125%)		
	Uncert:			+/-0.952						
	TPU:			+/-1.51						
QC1200810939 MB										
Plutonium-238			U	0.0136	pCi/g					03/26/05 08:40
	Uncert:			+/-0.084						
	TPU:			+/-0.084						
Plutonium-239/240			U	0.0526	pCi/g					
	Uncert:			+/-0.0932						
	TPU:			+/-0.0934						
QC1200810941 132868009 MS										
Plutonium-238	U	0.0169	U	0.0482	pCi/g			(75%-125%)		03/24/05 18:34
	Uncert:	+/-0.104		+/-0.0668						
	TPU:	+/-0.104		+/-0.0671						
Plutonium-239/240	9.41 U	0.0438		9.96	pCi/g		105	(75%-125%)		
	Uncert:	+/-0.101		+/-0.962						
	TPU:	+/-0.101		+/-1.52						
Batch 410825										
QC1200810949 132868009 DUP										
Plutonium-241	U	0.546	U	0.00	pCi/g	0		(0% - 100%)	SCP	03/25/05 20:13
	Uncert:	+/-6.15		+/-6.65						
	TPU:	+/-6.15		+/-6.65						
QC1200810951 LCS										
Plutonium-241	137			115	pCi/g		84	(75%-125%)		03/25/05 21:17
	Uncert:			+/-12.8						
	TPU:			+/-17.0						
QC1200810948 MB										
Plutonium-241			U	2.12	pCi/g					03/25/05 19:41
	Uncert:			+/-6.49						
	TPU:			+/-6.50						
QC1200810950 132868009 MS										
Plutonium-241	136 U	0.546		126	pCi/g		92	(75%-125%)		03/25/05 20:45
	Uncert:	+/-6.15		+/-9.99						
	TPU:	+/-6.15		+/-14.9						
Rad Gamma Spec										
Batch 411100										
QC1200811603 132868001 DUP										
Actinium-228		0.690		0.772	pCi/g	11		(0% - 100%)	AKB	03/24/05 15:37
	Uncert:	+/-0.205		+/-0.238						
				+/-0.233						

QC Summary

Workorder: 132868

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 411100											
	TPU:	+/-0.201									
Americium-241	U	0.0496	U	-0.0356	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.141		+/-0.142							
	TPU:	+/-0.138		+/-0.140							
Bismuth-212		0.554	U	0.352	pCi/g	45		(0% - 100%)			
	Uncert:	+/-0.267		+/-0.202							
	TPU:	+/-0.262		+/-0.198							
Bismuth-214		0.626		0.665	pCi/g	6		(0% - 100%)			
	Uncert:	+/-0.118		+/-0.116							
	TPU:	+/-0.115		+/-0.114							
Cesium-134	U	0.0356	U	6.990E-05	pCi/g	199		(0% - 100%)			
	Uncert:	+/-0.0397		+/-0.0246							
	TPU:	+/-0.0389		+/-0.0241							
Cesium-137	U	0.0491		0.0444	pCi/g	10		(0% - 100%)			
	Uncert:	+/-0.0452		+/-0.0342							
	TPU:	+/-0.0443		+/-0.0336							
Cobalt-60	U	0.0291	U	-0.0153	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0233		+/-0.026							
	TPU:	+/-0.0229		+/-0.0254							
Europium-152	U	-0.00351	U	0.0479	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0699		+/-0.0588							
	TPU:	+/-0.0685		+/-0.0577							
Europium-154	U	0.0147	U	-0.0383	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0867		+/-0.0756							
	TPU:	+/-0.085		+/-0.0741							
Europium-155	U	0.00636	U	0.0456	pCi/g	151		(0% - 100%)			
	Uncert:	+/-0.084		+/-0.0645							
	TPU:	+/-0.0823		+/-0.0632							
Lead-212		0.770		0.788	pCi/g	2		(0% - 20%)			
	Uncert:	+/-0.0987		+/-0.144							
	TPU:	+/-0.0967		+/-0.141							
Lead-214		0.783		0.751	pCi/g	4		(0% - 20%)			
	Uncert:	+/-0.137		+/-0.125							
	TPU:	+/-0.135		+/-0.122							
Manganese-54	U	-0.00126	U	0.00689	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0263		+/-0.022							
	TPU:	+/-0.0257		+/-0.0215							
Niobium-94	U	-0.00132	U	-0.0265	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0226		+/-0.0209							
	TPU:	+/-0.0222		+/-0.0205							
Potassium-40		18.3		15.2	pCi/g	19		(0% - 20%)			
	Uncert:	+/-2.18		+/-1.55							
	TPU:	+/-2.14		+/-1.52							
Radium-226		0.626		0.665	pCi/g	6		(0% - 100%)			
	Uncert:	+/-0.118		+/-0.116							
	TPU:	+/-0.115		+/-0.114							
Silver-108m	U	0.0136	U	-0.00449	pCi/g	N/A		(0% - 100%)			
	Uncert:	+/-0.0243		+/-0.0188							

QC Summary

Workorder: 132868

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 411100										
	TPU:	+/-0.0239		+/-0.0185						
Thallium-208		0.137		0.222	pCi/g	47*		(0% - 100%)		
	Uncert:	+/-0.063		+/-0.0612						
	TPU:	+/-0.0617		+/-0.060						
QC1200811604 LCS										
Actinium-228			U	0.044	pCi/g					03/24/05 09:03
	Uncert:			+/-0.724						
	TPU:			+/-0.710						
Americium-241	23.4			24.2	pCi/g		104	(75%-125%)		
	Uncert:			+/-2.08						
	TPU:			+/-2.03						
Bismuth-212			U	-0.763	pCi/g					
	Uncert:			+/-1.33						
	TPU:			+/-1.31						
Bismuth-214			U	-0.00757	pCi/g					
	Uncert:			+/-0.275						
	TPU:			+/-0.269						
Cesium-134			U	0.0841	pCi/g					
	Uncert:			+/-0.191						
	TPU:			+/-0.187						
Cesium-137	9.08			9.54	pCi/g		105	(75%-125%)		
	Uncert:			+/-0.956						
	TPU:			+/-0.937						
Cobalt-60	13.0			13.5	pCi/g		104	(75%-125%)		
	Uncert:			+/-1.10						
	TPU:			+/-1.08						
Europium-152			U	0.456	pCi/g					
	Uncert:			+/-0.396						
	TPU:			+/-0.388						
Europium-154			U	0.665	pCi/g					
	Uncert:			+/-0.440						
	TPU:			+/-0.431						
Europium-155			U	0.0663	pCi/g					
	Uncert:			+/-0.351						
	TPU:			+/-0.344						
Lead-212			U	0.0115	pCi/g					
	Uncert:			+/-0.185						
	TPU:			+/-0.181						
Lead-214			U	0.0597	pCi/g					
	Uncert:			+/-0.266						
	TPU:			+/-0.260						
Manganese-54			U	-0.119	pCi/g					
	Uncert:			+/-0.160						
	TPU:			+/-0.157						
Niobium-94			U	-0.0218	pCi/g					
	Uncert:			+/-0.178						
	TPU:			+/-0.174						
Potassium-40			U	0.590	pCi/g					

QC Summary

Workorder: 132868

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 411100										
	Uncert:			+/-1.06						
	TPU:			+/-1.04						
Radium-226			U	-0.00757	pCi/g			(75%-125%)		
	Uncert:			+/-0.275						
	TPU:			+/-0.269						
Silver-108m			U	-0.0942	pCi/g					
	Uncert:			+/-0.163						
	TPU:			+/-0.160						
Thallium-208			U	0.0602	pCi/g					
	Uncert:			+/-0.155						
	TPU:			+/-0.152						
QC1200811602 MB										
Actinium-228			U	-0.0257	pCi/g					03/24/05 15:37
	Uncert:			+/-0.0956						
	TPU:			+/-0.0937						
Americium-241			U	0.0459	pCi/g					
	Uncert:			+/-0.115						
	TPU:			+/-0.113						
Bismuth-212			U	-0.00679	pCi/g					
	Uncert:			+/-0.209						
	TPU:			+/-0.205						
Bismuth-214			U	0.0604	pCi/g					
	Uncert:			+/-0.102						
	TPU:			+/-0.100						
Cesium-134			U	-0.0242	pCi/g					
	Uncert:			+/-0.0376						
	TPU:			+/-0.0368						
Cesium-137			U	0.0138	pCi/g					
	Uncert:			+/-0.0291						
	TPU:			+/-0.0285						
Cobalt-60			U	-0.000253	pCi/g					
	Uncert:			+/-0.0264						
	TPU:			+/-0.0258						
Europium-152			U	-0.0409	pCi/g					
	Uncert:			+/-0.0722						
	TPU:			+/-0.0707						
Europium-154			U	0.0143	pCi/g					
	Uncert:			+/-0.0746						
	TPU:			+/-0.0731						
Europium-155			U	-0.00824	pCi/g					
	Uncert:			+/-0.0676						
	TPU:			+/-0.0663						
Lead-212			U	0.048	pCi/g					
	Uncert:			+/-0.0628						
	TPU:			+/-0.0615						
Lead-214			U	0.0289	pCi/g					
	Uncert:			+/-0.0604						
	TPU:			+/-0.0592						

QC Summary

Workorder: 132868

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 411100										
Manganese-54			U	0.00416	pCi/g					
Uncert:				+/-0.0222						
TPU:				+/-0.0217						
Niobium-94			U	-0.00312	pCi/g					
Uncert:				+/-0.0255						
TPU:				+/-0.025						
Potassium-40			U	0.354	pCi/g					
Uncert:				+/-0.335						
TPU:				+/-0.328						
Radium-226			U	0.0604	pCi/g					
Uncert:				+/-0.102						
TPU:				+/-0.100						
Silver-108m			U	0.00474	pCi/g					
Uncert:				+/-0.0265						
TPU:				+/-0.026						
Thallium-208			U	0.0253	pCi/g					
Uncert:				+/-0.0331						
TPU:				+/-0.0325						
Rad Gas Flow										
Batch 414566										
QC1200819806 132868014 DUP										
Strontium-90	U	0.0187	U	-0.00465	pCi/g	N/A		(0% - 100%)	LCW1	04/09/05 23:38
Uncert:		+/-0.0179		+/-0.0166						
TPU:		+/-0.0179		+/-0.0166						
QC1200819808 LCS										
Strontium-90	2.25			2.19	pCi/g		97	(75%-125%)		04/09/05 21:48
Uncert:				+/-0.138						
TPU:				+/-0.169						
QC1200819805 MB										
Strontium-90			U	0.00743	pCi/g					04/09/05 23:38
Uncert:				+/-0.0124						
TPU:				+/-0.0124						
QC1200819807 132868014 MS										
Strontium-90	5.81 U	0.0187		5.77	pCi/g		99	(75%-125%)		04/09/05 21:48
Uncert:		+/-0.0179		+/-0.372						
TPU:		+/-0.0179		+/-0.442						
Rad Liquid Scintillation										
Batch 410944										
QC1200811251 132867011 DUP										
Tritium	U	-1.1	U	-3.42	pCi/g	N/A		(0% - 100%)	ATH1	03/24/05 00:07
Uncert:		+/-6.16		+/-6.38						
TPU:		+/-6.16		+/-6.38						
QC1200811253 LCS										
Tritium	74.3			70.2	pCi/g		95	(75%-125%)		03/24/05 01:10
Uncert:				+/-8.69						
TPU:				+/-8.77						
QC1200811250 MB										
Tritium			U	-1.75	pCi/g					03/23/05 23:35

QC Summary

Workorder: 132868

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation											
Batch 410944											
	Uncert:				+/-6.15						
	TPU:				+/-6.15						
QC1200811252 132867011 MS											
Tritium	76.9	U	-1.1		78.6	pCi/g		102	(75%-125%)		03/24/05 00:38
	Uncert:		+/-6.16		+/-9.29						
	TPU:		+/-6.16		+/-9.39						
Batch 410946											
QC1200811259 132868009 DUP											
Iron-55		U	6.71	U	-68.8	pCi/g	N/A		(0% - 100%)	DAJ1	03/26/05 04:11
	Uncert:		+/-26.7		+/-59.9						
	TPU:		+/-26.7		+/-60.0						
QC1200811261 LCS											
Iron-55	79.7				72.9	pCi/g		91	(75%-125%)		03/26/05 05:14
	Uncert:				+/-6.53						
	TPU:				+/-7.38						
QC1200811258 MB											
Iron-55				U	-1.39	pCi/g					03/26/05 03:39
	Uncert:				+/-5.45						
	TPU:				+/-5.45						
QC1200811260 132868009 MS											
Iron-55	881	U	6.71		838	pCi/g		94	(75%-125%)		03/26/05 04:43
	Uncert:		+/-26.7		+/-74.9						
	TPU:		+/-26.7		+/-89.3						
Batch 410947											
QC1200811263 132868009 DUP											
Nickel-63		U	3.74	U	-0.868	pCi/g	N/A		(0% - 100%)	DAJ1	03/25/05 16:30
	Uncert:		+/-8.10		+/-8.01						
	TPU:		+/-8.10		+/-8.01						
QC1200811265 LCS											
Nickel-63	73.2				78.4	pCi/g		107	(75%-125%)		03/25/05 18:05
	Uncert:				+/-2.19						
	TPU:				+/-4.93						
QC1200811262 MB											
Nickel-63				U	0.146	pCi/g					03/25/05 15:43
	Uncert:				+/-0.927						
	TPU:				+/-0.927						
QC1200811264 132868009 MS											
Nickel-63	806	U	3.74		815	pCi/g		101	(75%-125%)		03/25/05 17:17
	Uncert:		+/-8.10		+/-23.0						
	TPU:		+/-8.10		+/-58.4						
Batch 410948											
QC1200811267 132868009 DUP											
Carbon-14		U	-0.0693	U	0.0252	pCi/g	N/A		(0% - 100%)	EGD1	03/23/05 11:20
	Uncert:		+/-0.0958		+/-0.0993						
	TPU:		+/-0.0958		+/-0.0993						
QC1200811269 LCS											
Carbon-14	7.08				7.32	pCi/g		103	(75%-125%)		03/23/05 12:55
	Uncert:				+/-0.380						
	TPU:				+/-0.397						

QC Summary

Workorder: 132868

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 410948										
QC1200811266 MB										
Carbon-14			U	0.0111	pCi/g					03/23/05 10:18
Uncert:				+/-0.0979						
TPU:				+/-0.0979						
QC1200811268 132868009 MS										
Carbon-14	7.08 U	-0.0693		6.88	pCi/g		97	(75%-125%)		03/23/05 12:23
Uncert:		+/-0.0958		+/-0.378						
TPU:		+/-0.0958		+/-0.393						
Batch 412468										
QC1200814868 132868009 DUP										
Technetium-99	U	0.0784		0.400	pCi/g	17		(0% - 100%)	LAGI	04/04/05 16:20
Uncert:		+/-0.197		+/-0.220						
TPU:		+/-0.197		+/-0.220						
QC1200814870 LCS										
Technetium-99	16.9			16.1	pCi/g		95	(75%-125%)		04/04/05 17:24
Uncert:				+/-0.514						
TPU:				+/-0.683						
QC1200814867 MB										
Technetium-99			U	0.0556	pCi/g					04/04/05 15:47
Uncert:				+/-0.180						
TPU:				+/-0.180						
QC1200814869 132868009 MS										
Technetium-99	16.1 U	0.0784		15.7	pCi/g		97	(75%-125%)		04/04/05 16:52
Uncert:		+/-0.197		+/-0.484						
TPU:		+/-0.197		+/-0.652						

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

QC Summary

Workorder: 132868

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
** Indicates analyte is a surrogate compound.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

CONNECTICUT YANKEE
RE: CONCRETE and BEDROCK
PO# 002332
Work Order: 133280

133280001	6000-0000-100-C-1C-01
133280002	6000-0000-100-C-2C-02
133280003	6000-0000-100-C-4C-03
133280004	6000-0000-100-C-8C-04
133280005	6000-0000-100-C-9C-05
133280006	6000-0000-101-C-1C-01
133280007	6000-0000-101-C-1C-02
133280008	6000-0000-101-C-8C-03
133280009	6000-0000-101-C-12C-04
133280010	6000-0000-101-C-12C-05
133280011	6000-0000-102-C-1C-01
133280012	6000-0000-102-C-2C-02
133280013	6000-0000-102-C-7C-03
133280014	6000-0000-102-C-11C-04
133280015	6000-0000-102-C-11C-05
133280016	6000-0000-103-C-1C-01
133280017	6000-0000-103-C-2C-02
133280018	6000-0000-103-C-4C-03
133280019	6000-0000-103-C-7C-04
133280020	6000-0000-103-C-8C-05
133280021	6000-0000-100-C-B
133280022	6000-0000-101-C-B
133280023	6000-0000-102-C-B
133280024	6000-0000-103-C-B

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GENERAL NARRATIVE

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Concrete and Bedrock
PO# 002332
Work Order: 133280

April 11, 2004

Laboratory Identification:
General Engineering Laboratories, LLC

Mailing Address:
P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:
2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:
(843) 556-8171

Summary:

Sample receipt
The samples arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina March 28, 2005. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures except in items of note located below.

The laboratory prepared the following sample(s):

Sample ID	Client Sample ID
133280001	6000-0000-100-C-1C-01
133280002	6000-0000-100-C-2C-02
133280003	6000-0000-100-C-4C-03
133280004	6000-0000-100-C-8C-04
133280005	6000-0000-100-C-9C-05
133280006	6000-0000-101-C-1C-01
133280007	6000-0000-101-C-1C-02
133280008	6000-0000-101-C-8C-03
133280009	6000-0000-101-C-12C-04
133280010	6000-0000-101-C-12C-05
133280011	6000-0000-102-C-1C-01
133280012	6000-0000-102-C-2C-02

133280013	6000-0000-102-C-7C-03
133280014	6000-0000-102-C-11C-04
133280015	6000-0000-102-C-11C-05
133280016	6000-0000-103-C-1C-01
133280017	6000-0000-103-C-2C-02
133280018	6000-0000-103-C-4C-03
133280019	6000-0000-103-C-7C-04
133280020	6000-0000-103-C-8C-05
133280021	6000-0000-100-C-B
133280022	6000-0000-101-C-B
133280023	6000-0000-102-C-B
133280024	6000-0000-103-C-B

Items of Note:
There are no items of note.

Case Narrative:

Sample analyses were conducted using methodology as outlined in General Engineering Laboratories (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are listed below by analytical parameter.

Analytical Request:

Twenty concrete samples were analyzed for CHGAM, Sr-90, and H_3. Four bedrock samples were analyzed for CHGAM, Sr-90, and H_3.

Internal Chain of Custody:

Custody was maintained for all of these samples.

Data Package:

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Laboratory Certifications, and Radiochemistry.

I certify that this data package is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or a designee, as verified by the following signature.

Cheryl Jones
Project Manager

CHAIN OF CUSTODY

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Chain of Custody Form

No. 2005-00087

133280%

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	Sr-90	H-3	CHALL			Comment, Preservation	Lab Sample ID
6000-0000-100-C-1C-01	3/14/05	1041	CT	CR	BP	X	X	X					
6000-0000-100-C-2C-02	3/14/05	1057	CT	CR	BP	X	X	X					
6000-0000-100-C-4C-03	3/15/05	1357	CT	CR	BP	X	X	X					
6000-0000-100-C-8C-04	3/16/05	0810	CT	CR	BP	X	X	X					
6000-0000-100-C-9C-05	3/16/05	0812	CT	CR	BP	X	X	X					
6000-0000-101-C-1C-01	3/16/05	0955	CT	CR	BP	X	X	X					
6000-0000-101-C-1C-02	3/16/05	0955	CT	CR	BP	X	X	X					
6000-0000-101-C-8C-03	3/16/05	1305	CT	CR	BP	X	X	X					
6000-0000-101-C-12C-04	3/16/05	1422	CT	CR	BP	X	X	X					
6000-0000-101-C-12C-05	3/16/05	1422	CT	CR	BP	X	X	X					

NOTES: PO #: 002332 MSR #: 05-0793 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

Bill of Lading #
7915 8214 6860

Internal Container Temp.: 16.9 Deg. C

Custody Sealed? Y ☑ N ☐

Custody Seal Intact? Y ☑ N ☐

1) Relinquished By [signature] Date/Time 3/24/05 1620	2) Received By [signature] Date/Time 3·28·05 8:15
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

Chain of Custody Form

No. 2005-00088

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	Sr-90	H-3	CHALL			Comment, Preservation	Lab Sample ID
6000-0000-102-C-1C-01	3/16/05	1517	CT	CR	BP	X	X	X					
6000-0000-102-C-2C-02	3/16/05	1532	CT	CR	BP	X	X	X					
6000-0000-102-C-7C-03	3/17/05	0851	CT	CR	BP	X	X	X					
6000-0000-102-C-11C-04	3/17/05	1134	CT	CR	BP	X	X	X					
6000-0000-102-C-11C-05	3/17/05	1134	CT	CR	BP	X	X	X					
6000-0000-103-C-1C-01	3/21/05	0822	CT	CR	BP	X	X	X					
6000-0000-103-C-2C-02	3/21/05	0822	CT	CR	BP	X	X	X					
6000-0000-103-C-4C-03	3/21/05	1027	CT	CR	BP	X	X	X					
6000-0000-103-C-7C-04	3/21/05	1200	CT	CR	BP	X	X	X					
6000-0000-103-C-8C-05	3/21/05	1200	CT	CR	BP	X	X	X					

NOTES: PO #: 002332 MSR #: 05-0793 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

Bill of Lading #
7915 8214 6860

Internal Container Temp. 16.0 Deg. C

Custody Sealed? Y ☑ N ☐

Custody Seal Intact? Y ☑ N ☐

1) Relinquished By [signature] Date/Time 3/24/05 1620	2) Received By [signature] Date/Time 3·28·05 8:15
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

Chain of Custody Form

No. 2005-00089

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Analytical Lab (Name, City, State):
General Engineering Laboratories
2040 Savage Road
Charleston, SC 29407 ATT: Cheryl Jones

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	Sr-90	H-3	CHALL			Comment, Preservation	Lab Sample ID
6000-0000-100-C-B	3/16/05	0829	B	CR	BP	X	X	X					
6000-0000-101-C-B	3/16/05	1422	B	CR	BP	X	X	X					
6000-0000-102-C-B	3/17/05	1149	B	CR	BP	X	X	X					
6000-0000-103-C-B	3/21/05	1200	B	CR	BP	X	X	X					

NOTES: PO #: 002332 MSR #: 05-0793 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

Bill of Lading #
7915 8214 6860

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☑ N ☐

Custody Seal Intact? Y ☑ N ☐

1) Relinquished By [signature] Date/Time 3/24/05 1620	2) Received By [signature] Date/Time 3·28·05 815
3) Relinquished By Date/Time	4) Received By Date/Time
5) Relinquished By Date/Time	6) Received By Date/Time

COOLER RECEIPT CHECKLIST

Figure 1. Sample Check-in List

Date/Time Received: 3·28·05 8^15

SDG#: MSR# 05-0793

Work Order Number: 133280

Shipping Container ID: 7915 8214 6060 Chain of Custody # 2005-00087; 00088; 00089

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [ ] No [✓]
4. Cooler temperature 16.0° for each cooler
5. Vermiculite/packing materials is: Wet [ ] Dry [✓]
6. Number of samples in shipping container: _____
7. Sample holding times exceeded? Yes [ ] No [✓]

8. Samples have:

✓ tape ____ hazard labels

✓ custody seals ____ appropriate sample labels

9. Samples are:

✓ in good condition ____ leaking

____ broken ____ have air bubbles

10. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: [signature] Date: 3·28·05 8^15

Telephoned to: _____ On _____ By _____

GENERAL ENGINEERING LABORATORIES, LLC

SAMPLE RECEIPT & REVIEW FORM

	PM use only
Client: Connecticut Yankee	SDG/ARCOC/Work Order:
Date Received: 3-28-05	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: AM	

	Sample Receipt Criteria	Conforming	NA	Non-Conforming	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Temp device serial # ice bags blue ice dry ice none other(describe)
3	Chain of custody documents included with shipment?				
4	Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7	Samples received within holding time?				Id's and tests affected:
8	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
9	Date & time on COC match date & time on bottles?				Sample ID's affected:
10	Number of containers received match number indicated on COC?				Sample ID's affected:
11	COC form is properly signed in relinquished/received sections?				
12	Air Bill ,Tracking #'s, & Additional Comments				

Radiological Information	Non-RAD	RAD	RADT	RSO RAD Receipt #
What is the radiological classification of the samples?		✓		Comments:
Radioactivity Screening Results (maximum observed CPM)				*If > 2 area background is observed on a non-radioactive sample, contact the RSO to investigate.

PM (or PMA) review of Receiving Rad classification: CAM Initials 3/28/05 Date

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
SDG MSR#05-0793

Method/Analysis Information

Product:	Gamma,Solid-FSS GAM & ALL FSS
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	412584
Prep Batch Number:	412543

Sample ID	Client ID
133280001	6000-0000-100-C-1C-01
133280002	6000-0000-100-C-2C-02
133280003	6000-0000-100-C-4C-03
133280004	6000-0000-100-C-8C-04
133280005	6000-0000-100-C-9C-05
133280006	6000-0000-101-C-1C-01
133280007	6000-0000-101-C-1C-02
133280008	6000-0000-101-C-8C-03
133280009	6000-0000-101-C-12C-04
133280010	6000-0000-101-C-12C-05
133280011	6000-0000-102-C-1C-01
133280012	6000-0000-102-C-2C-02
133280013	6000-0000-102-C-7C-03
133280014	6000-0000-102-C-11C-04
133280015	6000-0000-102-C-11C-05
133280016	6000-0000-103-C-1C-01
133280017	6000-0000-103-C-2C-02
133280018	6000-0000-103-C-4C-03
133280019	6000-0000-103-C-7C-04
133280020	6000-0000-103-C-8C-05
1200815116	Method Blank (MB)
1200815117	133280001(6000-0000-100-C-1C-01) Sample Duplicate (DUP)
1200815118	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information

The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 133280001 (6000-0000-100-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to interference.	Europium-155	133280018
UI	Data rejected due to low abundance.	Actinium-228	133280008
			133280012
			133280016
		Cesium-134	133280014
		Thallium-208	133280014
UI	Data rejected due to no valid peak.	Bismuth-212	1200815117
			133280010

Method/Analysis Information

Product:	Gamma,Solid-FSS GAM & ALL FSS
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	412590
Prep Batch Number:	412543

Sample ID	Client ID
133280021	6000-0000-100-C-B
133280022	6000-0000-101-C-B
133280023	6000-0000-102-C-B
133280024	6000-0000-103-C-B
1200815131	Method Blank (MB)
1200815132	133280021(6000-0000-100-C-B) Sample Duplicate (DUP)
1200815133	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 133280021 (6000-0000-100-C-B).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to low abundance.	Actinium-228	133280024
		Cesium-134	1200815132
			133280021
			133280022
		Thallium-208	133280024

Method/Analysis Information

Product:	GFPC, Sr90, solid-ALL FSS
Analytical Method:	EPA 905.0 Modified

Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	412860
Prep Batch Number:	412545
Dry Soil Prep GL-RAD-A-021 Batch Number:	412543

Sample ID	Client ID
133280001	6000-0000-100-C-1C-01
133280002	6000-0000-100-C-2C-02
133280003	6000-0000-100-C-4C-03
133280004	6000-0000-100-C-8C-04
133280005	6000-0000-100-C-9C-05
133280006	6000-0000-101-C-1C-01
133280007	6000-0000-101-C-1C-02
133280008	6000-0000-101-C-8C-03
133280009	6000-0000-101-C-12C-04
133280010	6000-0000-101-C-12C-05
133280011	6000-0000-102-C-1C-01
133280012	6000-0000-102-C-2C-02
133280013	6000-0000-102-C-7C-03
133280014	6000-0000-102-C-11C-04
133280015	6000-0000-102-C-11C-05
133280016	6000-0000-103-C-1C-01
133280017	6000-0000-103-C-2C-02
133280018	6000-0000-103-C-4C-03
133280019	6000-0000-103-C-7C-04
133280020	6000-0000-103-C-8C-05
1200815809	Method Blank (MB)
1200815810	133280003(6000-0000-100-C-4C-03) Sample Duplicate (DUP)
1200815811	133280003(6000-0000-100-C-4C-03) Matrix Spike (MS)
1200815812	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 9.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 133280003 (6000-0000-100-C-4C-03).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR ID 192998 The duplicate, 1200815810, MDA is slightly above the detection limit. The sample that was duplicated met the detection limit and neither the sample nor the duplicate have activity above the MDA.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	GFPC, Sr90, solid-ALL FSS
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	415404
Prep Batch Number:	412545
Dry Soil Prep GL-RAD-A-021 Batch Number:	412543

Sample ID	Client ID
133280021	6000-0000-100-C-B
133280022	6000-0000-101-C-B
133280023	6000-0000-102-C-B
133280024	6000-0000-103-C-B
1200821770	Method Blank (MB)
1200821771	133280022(6000-0000-101-C-B) Sample Duplicate (DUP)
1200821772	133280022(6000-0000-101-C-B) Matrix Spike (MS)
1200821773	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 9.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 133280022 (6000-0000-101-C-B).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Samples were reprepped due to high blank activity.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 193083 was generated due to RDL less than MDA. 1. Samples 133262002 and 133262007 did not meet the client's detection limit. Samples were counted for 500 minutes. 1. Reporting results.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**LSC, Tritium Dist, Solid-HTD2,ALL FSS**
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	412898

Sample ID	Client ID
133280016	6000-0000-103-C-1C-01
133280017	6000-0000-103-C-2C-02
133280018	6000-0000-103-C-4C-03
133280019	6000-0000-103-C-7C-04
133280020	6000-0000-103-C-8C-05

133280021	6000-0000-100-C-B
133280022	6000-0000-101-C-B
133280023	6000-0000-102-C-B
133280024	6000-0000-103-C-B
1200815914	Method Blank (MB)
1200815915	133280016(6000-0000-103-C-1C-01) Sample Duplicate (DUP)
1200815916	133280016(6000-0000-103-C-1C-01) Matrix Spike (MS)
1200815917	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 133280016 (6000-0000-103-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. An NCR was not generated for this SDG.

Qualifier Information
Manual qualifiers were not required.

Method/Analysis Information

Product:	LSC, Tritium Dist, Solid-HTD2,ALL FSS
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	412897

Sample ID	Client ID
133280001	6000-0000-100-C-1C-01
133280002	6000-0000-100-C-2C-02
133280003	6000-0000-100-C-4C-03
133280004	6000-0000-100-C-8C-04
133280005	6000-0000-100-C-9C-05
133280006	6000-0000-101-C-1C-01
133280007	6000-0000-101-C-1C-02
133280008	6000-0000-101-C-8C-03
133280009	6000-0000-101-C-12C-04
133280010	6000-0000-101-C-12C-05
133280011	6000-0000-102-C-1C-01
133280012	6000-0000-102-C-2C-02
133280013	6000-0000-102-C-7C-03
133280014	6000-0000-102-C-11C-04
133280015	6000-0000-102-C-11C-05
1200815910	Method Blank (MB)
1200815911	133280001(6000-0000-100-C-1C-01) Sample Duplicate (DUP)
1200815912	133280001(6000-0000-100-C-1C-01) Matrix Spike (MS)
1200815913	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 10.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solution(s) for these analyses are NIST traceable and used before the expiration date(s).

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 133280001 (6000-0000-100-C-1C-01).

QC Information
All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Preparation Information
All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis
Samples 133280009 (6000-0000-101-C-12C-04), 133280010 (6000-0000-101-C-12C-05) and 133280011 (6000-0000-102-C-1C-01) were recounted due to the quench number being outside the calibration range.

Miscellaneous Information:

NCR Documentation
NCR 193098 was generated due to RDL less than MDA and Container scanning event for custody missed. 1. Samples 133280009, 133280010, and 133280011 failed to meet the detection limit due to high quench numbers. The samples did not have any activity and had the same count times as the rest of the batch. The project manager was notified and permission was received to report the data. 2. The analyst did not scan sample 133280008 into the batch prior to analysis, however the samples did remain in their custody at all times. The error has been corrected and the analyst has been instructed on proper scanning procedures. 1. Reporting results. 2. Reporting results.

Qualifier Information
Manual qualifiers were not required.

Certification Statement
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

Review Validation:
GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.
The following data validator verified the information presented in this case narrative:

Reviewer: Kathleen O'Connor 4/11/05

General Engineering Laboratories
Form GEL-XXX
Rev. 06/02

NCR Report No.: 193083
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
11-APR-05	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
GFPC	EPA 905.0 Modified	Solid	YANK
Batch ID:	**Sample Numbers:**		
415404	See Below		

Potentially affected work order(s)(SDG): 133262(MSR#05-0966),133280(MSR#05-0793)

Application Issues:

RDL less than MDA

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Samples 133262002 and 133262007 did not meet the client's detection limit. Samples were counted for 500 minutes.	1. Reporting results.

Originator's Name:
Melanie Aycock 11-APR-05

Data Validator/Group Leader:
Heather Anderson 11-APR-05

Quality Review:

Director:

General Engineering Laboratories
Form GEL-XXX
Rev. 06/02

NCR Report No.: 192998
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
11-APR-05	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
GFPC	EPA 905.0 Modified	Solid	YANK001
Batch ID:	**Sample Numbers:**		
412860	See Below		

Potentially affected work order(s)(SDG):133280(MSR#05-0793)

Application Issues:

RDL less than MDA

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The duplicate, 1200815810, MDA is slightly above the detection limit. The sample that was duplicated met the detection limit and neither the sample nor the duplicate have activity above the MDA.	1. Reporting results.

Originator's Name:
Melanie Aycock 11-APR-05

Data Validator/Group Leader:
Heather Anderson 11-APR-05

Quality Review:

Director:

General Engineering Laboratories
Form GEL-XXX
Rev. 06/02

NCR Report No.: 193098
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
11-APR-05	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LSC	EPA 906.0 Modified	Solid	YANK
Batch ID:	**Sample Numbers:**		
412897	See Below		

Potentially affected work order(s)(SDG): 133280(MSR#05-0793)

Application Issues:

RDL less than MDA

Container scanning event for custody missed

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Samples 133280009, 133280010, and 133280011 failed to meet the detection limit due to high quench numbers. The samples did not have any activity and had the same count times as the rest of the batch. The project manager was notified and permission was received to report the data. 2. The analyst did not scan sample 133280008 into the batch prior to analysis, however the samples did remain in their custody at all times. The error has been corrected and the analyst has been instructed on proper scanning procedures.	1. Reporting results. 2. Reporting results.

Originator's Name:
John Parker 11-APR-05

Data Validator/Group Leader:
Heather Anderson 11-APR-05

Quality Review:

Director:

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis Report
for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#05-0793 GEL Work Order: 133280

The Qualifiers in this report are defined as follows:

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
< Result is less than amount reported.
> Result is greater than amount reported.
B Target analyte was detected in the sample as well as the associated blank.
BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
P The response between the confirmation column and the primary column is >40%D.
R Sample results are rejected due to sample preservation with HCl.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
Y QC Samples were not spiked with this compound.
h Sample preparation or preservation holding time exceeded.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the Certificate of Analysis.
** Indicates the analyte is a surrogate compound.
This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-100-C-1C-01	Project:	YANK01204
Sample ID:	133280001	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	14-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	5.4%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		0.284	+/-0.165	0.0592	+/-0.162	0.129	pCi/g		AKB 03/31/05	2208	412584	1
Americium-241		0.0693	+/-0.0392	0.0189	+/-0.0384	0.0394	pCi/g					
Bismuth-212		0.333	+/-0.218	0.128	+/-0.214	0.276	pCi/g					
Bismuth-214		0.168	+/-0.071	0.0318	+/-0.0695	0.0678	pCi/g					
Cesium-134	U	0.00349	+/-0.0228	0.0196	+/-0.0223	0.0421	pCi/g					
Cesium-137		0.204	+/-0.0419	0.0153	+/-0.0411	0.033	pCi/g					
Cobalt-60	U	0.00581	+/-0.0196	0.0173	+/-0.0192	0.0385	pCi/g					
Europium-152	U	0.025	+/-0.045	0.0398	+/-0.0441	0.084	pCi/g					
Europium-154	U	0.005	+/-0.0598	0.0488	+/-0.0586	0.108	pCi/g					
Europium-155	U	0.0259	+/-0.0368	0.0323	+/-0.0361	0.0673	pCi/g					
Lead-212		0.331	+/-0.0448	0.0226	+/-0.0439	0.0471	pCi/g					
Lead-214		0.226	+/-0.0637	0.0261	+/-0.0624	0.0553	pCi/g					
Manganese-54	U	-0.00468	+/-0.0204	0.0168	+/-0.0199	0.0363	pCi/g					
Niobium-94	U	-0.00635	+/-0.0165	0.0137	+/-0.0162	0.0295	pCi/g					
Potassium-40		6.38	+/-0.676	0.158	+/-0.662	0.356	pCi/g					
Radium-226		0.168	+/-0.071	0.0318	+/-0.0695	0.0678	pCi/g					
Silver-108m	U	0.020	+/-0.0189	0.0146	+/-0.0185	0.031	pCi/g					
Thallium-208		0.094	+/-0.0365	0.0151	+/-0.0357	0.0324	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.016	+/-0.0133	0.0121	+/-0.0134	0.0252	pCi/g		LCW1 04/06/05	1357	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	3.65	+/-5.88	4.77	+/-5.88	9.97	pCi/g		ATH1 04/09/05	1122	412897	3
Solid Preparation												
Laboratory Composite - CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

GENERAL ENGINEERING LABORATORIES, LLC
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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-100-C-1C-01
Sample ID: 133280001

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	BatchM

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	67	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-100-C-2C-02	Project:	YANK01204
Sample ID:	133280002	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	14-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	5.18%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS													
Actinium-228		0.446	+/-0.196	0.0692	+/-0.192	0.157	pCi/g		AKB	04/01/05	0727	412584	1
Americium-241	U	0.0593	+/-0.111	0.101	+/-0.109	0.211	pCi/g						
Bismuth-212		0.485	+/-0.388	0.191	+/-0.380	0.419	pCi/g						
Bismuth-214		0.351	+/-0.102	0.0535	+/-0.100	0.115	pCi/g						
Cesium-134	U	0.0136	+/-0.0308	0.0275	+/-0.0302	0.0604	pCi/g						
Cesium-137	U	-0.0129	+/-0.0328	0.0257	+/-0.0321	0.056	pCi/g						
Cobalt-60	U	0.00372	+/-0.032	0.0267	+/-0.0314	0.0606	pCi/g						
Europium-152	U	-0.0205	+/-0.0717	0.0599	+/-0.0703	0.128	pCi/g						
Europium-154	U	0.0695	+/-0.0807	0.0758	+/-0.0791	0.171	pCi/g						
Europium-155	U	0.0027	+/-0.0751	0.0647	+/-0.0736	0.136	pCi/g						
Lead-212		0.454	+/-0.0893	0.0304	+/-0.0875	0.0647	pCi/g						
Lead-214		0.361	+/-0.109	0.0451	+/-0.107	0.0965	pCi/g						
Manganese-54	U	0.0024	+/-0.0331	0.0244	+/-0.0324	0.0538	pCi/g						
Niobium-94	U	0.00691	+/-0.0295	0.0247	+/-0.0289	0.0535	pCi/g						
Potassium-40		7.56	+/-1.12	0.250	+/-1.10	0.573	pCi/g						
Radium-226		0.351	+/-0.102	0.0535	+/-0.100	0.115	pCi/g						
Silver-108m	U	0.00262	+/-0.0237	0.0203	+/-0.0233	0.0439	pCi/g						
Thallium-208		0.163	+/-0.0624	0.0209	+/-0.0611	0.0462	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0053	+/-0.0115	0.0108	+/-0.0115	0.0225	pCi/g		LCW1	04/06/05	1357	412860	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	3.96	+/-6.13	4.97	+/-6.13	10.4	pCi/g		ATH1	04/09/05	1154	412897	3
Solid Preparation													
Laboratory Composite – CONCRETE													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-100-C-2C-02
Sample ID: 133280002

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	65	(25%-125%)

Notes:
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- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier--please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-100-C-4C-03	Project:	YANK01204
Sample ID:	133280003	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	15-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	5.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS													
Actinium-228		0.590	+/-0.183	0.0664	+/-0.179	0.147	pCi/g		AKB	04/01/05	0728	412584	1
Americium-241	U	0.018	+/-0.0325	0.0266	+/-0.0319	0.0552	pCi/g						
Bismuth-212	U	0.128	+/-0.317	0.159	+/-0.311	0.345	pCi/g						
Bismuth-214		0.247	+/-0.0863	0.036	+/-0.0846	0.0779	pCi/g						
Cesium-134	U	0.00921	+/-0.0255	0.022	+/-0.025	0.0481	pCi/g						
Cesium-137	U	-0.00544	+/-0.0251	0.0204	+/-0.0246	0.0443	pCi/g						
Cobalt-60	U	0.0104	+/-0.024	0.0213	+/-0.0235	0.0482	pCi/g						
Europium-152	U	0.0132	+/-0.0537	0.0476	+/-0.0526	0.102	pCi/g						
Europium-154	U	-0.059	+/-0.0723	0.0518	+/-0.0709	0.119	pCi/g						
Europium-155	U	-0.0392	+/-0.0533	0.0448	+/-0.0523	0.0934	pCi/g						
Lead-212		0.349	+/-0.0608	0.0286	+/-0.0596	0.060	pCi/g						
Lead-214		0.333	+/-0.0769	0.0305	+/-0.0753	0.0657	pCi/g						
Manganese-54	U	0.00978	+/-0.0244	0.021	+/-0.0239	0.0458	pCi/g						
Niobium-94	U	-0.00407	+/-0.024	0.0196	+/-0.0236	0.0424	pCi/g						
Potassium-40		7.24	+/-1.03	0.199	+/-1.01	0.454	pCi/g						
Radium-226		0.247	+/-0.0863	0.036	+/-0.0846	0.0779	pCi/g						
Silver-108m	U	-0.0121	+/-0.0201	0.0163	+/-0.0197	0.035	pCi/g						
Thallium-208		0.137	+/-0.0397	0.0178	+/-0.0389	0.0389	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0115	+/-0.0118	0.0108	+/-0.0118	0.0225	pCi/g		LCW1	04/06/05	1357	412860	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	1.31	+/-5.89	4.89	+/-5.89	10.2	pCi/g		ATH1	04/09/05	1226	412897	3
Solid Preparation													
Laboratory Composite - CONCRETE													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-100-C-4C-03
Sample ID: 133280003

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	66	(25%-125%)

Notes:
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- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-100-C-8C-04	Project:	YANK01204
Sample ID:	133280004	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	5.52%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		0.323	+/-0.189	0.0737	+/-0.185	0.164	pCi/g		AKB 04/01/05	0728	412584	1
Americium-241	U	0.0904	+/-0.153	0.132	+/-0.150	0.279	pCi/g					
Bismuth-212	U	0.147	+/-0.201	0.181	+/-0.197	0.394	pCi/g					
Bismuth-214		0.212	+/-0.0834	0.0359	+/-0.0817	0.0786	pCi/g					
Cesium-134	U	0.046	+/-0.033	0.0251	+/-0.0323	0.055	pCi/g					
Cesium-137	U	0.00581	+/-0.0386	0.0208	+/-0.0378	0.0455	pCi/g					
Cobalt-60	U	0.00291	+/-0.019	0.0164	+/-0.0186	0.0392	pCi/g					
Europium-152	U	-0.0388	+/-0.0612	0.0467	+/-0.0599	0.101	pCi/g					
Europium-154	U	0.00605	+/-0.0641	0.048	+/-0.0628	0.113	pCi/g					
Europium-155	U	-0.0386	+/-0.063	0.0534	+/-0.0618	0.113	pCi/g					
Lead-212		0.292	+/-0.0743	0.0371	+/-0.0728	0.0779	pCi/g					
Lead-214		0.268	+/-0.0778	0.033	+/-0.0762	0.0716	pCi/g					
Manganese-54	U	0.0283	+/-0.0194	0.0152	+/-0.019	0.0347	pCi/g					
Niobium-94	U	-0.00841	+/-0.0217	0.0173	+/-0.0213	0.0382	pCi/g					
Potassium-40		6.28	+/-1.07	0.155	+/-1.05	0.374	pCi/g					
Radium-226		0.212	+/-0.0834	0.0359	+/-0.0817	0.0786	pCi/g					
Silver-108m	U	0.00737	+/-0.0193	0.0174	+/-0.0189	0.0378	pCi/g					
Thallium-208		0.121	+/-0.0396	0.0194	+/-0.0388	0.0424	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.0217	+/-0.0175	0.0161	+/-0.0175	0.0332	pCi/g		LCW1 04/06/05	1357	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	5.15	+/-5.73	4.58	+/-5.73	9.57	pCi/g		ATH1 04/09/05	1257	412897	3
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

GENERAL ENGINEERING LABORATORIES, LLC
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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-100-C-8C-04
Sample ID: 133280004

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	68	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
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- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-100-C-9C-05	Project:	YANK01204
Sample ID:	133280005	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	4.89%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS													
Actinium-228		0.220	+/-0.133	0.0613	+/-0.131	0.138	pCi/g		AKB	04/01/05	0729	412584	1
Americium-241	U	0.00256	+/-0.029	0.0252	+/-0.0284	0.053	pCi/g						
Bismuth-212	U	0.189	+/-0.196	0.129	+/-0.192	0.290	pCi/g						
Bismuth-214		0.259	+/-0.0936	0.0327	+/-0.0917	0.072	pCi/g						
Cesium-134	U	0.0149	+/-0.0249	0.0232	+/-0.0244	0.0509	pCi/g						
Cesium-137	U	-0.00543	+/-0.0184	0.0156	+/-0.018	0.0351	pCi/g						
Cobalt-60	U	-0.0175	+/-0.0274	0.0213	+/-0.0269	0.0487	pCi/g						
Europium-152	U	0.00944	+/-0.0464	0.0421	+/-0.0455	0.091	pCi/g						
Europium-154	U	-0.0204	+/-0.0854	0.0573	+/-0.0837	0.131	pCi/g						
Europium-155	U	0.013	+/-0.0451	0.0411	+/-0.0442	0.0867	pCi/g						
Lead-212		0.267	+/-0.050	0.0274	+/-0.049	0.0579	pCi/g						
Lead-214		0.263	+/-0.0604	0.0302	+/-0.0592	0.0655	pCi/g						
Manganese-54	U	0.00953	+/-0.0212	0.0194	+/-0.0208	0.0431	pCi/g						
Niobium-94	U	0.00224	+/-0.0216	0.0192	+/-0.0211	0.0419	pCi/g						
Potassium-40		6.20	+/-0.869	0.147	+/-0.852	0.354	pCi/g						
Radium-226		0.259	+/-0.0936	0.0327	+/-0.0917	0.072	pCi/g						
Silver-108m	U	-0.00942	+/-0.0179	0.0145	+/-0.0175	0.0318	pCi/g						
Thallium-208		0.0922	+/-0.0366	0.0182	+/-0.0358	0.0399	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.00176	+/-0.0132	0.0129	+/-0.0132	0.0269	pCi/g		LCW1	04/06/05	1357	412860	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	2.43	+/-5.63	4.62	+/-5.63	9.65	pCi/g		ATH1	04/09/05	1329	412897	3
Solid Preparation													
Laboratory Composite – CONCRETE													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-100-C-9C-05
Sample ID: 133280005

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	56	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-101-C-1C-01	Project:	YANK01204
Sample ID:	133280006	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	5.89%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		0.310	+/-0.0988	0.0374	+/-0.0968	0.0822	pCi/g		AKB 04/01/05	0729	412584	1
Americium-241	U	-0.0126	+/-0.0866	0.0725	+/-0.0848	0.151	pCi/g					
Bismuth-212		0.215	+/-0.185	0.0867	+/-0.181	0.188	pCi/g					
Bismuth-214		0.231	+/-0.0654	0.026	+/-0.0641	0.0554	pCi/g					
Cesium-134	U	0.0137	+/-0.0171	0.0157	+/-0.0168	0.0336	pCi/g					
Cesium-137	U	0.00288	+/-0.0143	0.0128	+/-0.014	0.0275	pCi/g					
Cobalt-60	U	0.0172	+/-0.0253	0.0125	+/-0.0248	0.0278	pCi/g					
Europium-152	U	-0.00866	+/-0.0377	0.0328	+/-0.0369	0.0697	pCi/g					
Europium-154	U	0.0255	+/-0.0357	0.0335	+/-0.035	0.0746	pCi/g					
Europium-155	U	0.0408	+/-0.0469	0.0446	+/-0.046	0.093	pCi/g					
Lead-212		0.307	+/-0.0482	0.0208	+/-0.0473	0.0436	pCi/g					
Lead-214		0.225	+/-0.0632	0.0235	+/-0.0619	0.0498	pCi/g					
Manganese-54	U	-0.00495	+/-0.0144	0.0119	+/-0.0141	0.0258	pCi/g					
Niobium-94	U	0.00153	+/-0.0129	0.0114	+/-0.0126	0.0244	pCi/g					
Potassium-40		7.56	+/-0.779	0.106	+/-0.763	0.239	pCi/g					
Radium-226		0.231	+/-0.0654	0.026	+/-0.0641	0.0554	pCi/g					
Silver-108m	U	-0.00616	+/-0.0134	0.0112	+/-0.0131	0.0239	pCi/g					
Thallium-208		0.0735	+/-0.0268	0.0114	+/-0.0262	0.0246	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.016	+/-0.0123	0.0111	+/-0.0123	0.0231	pCi/g		LCW1 04/06/05	1357	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	3.93	+/-5.61	4.53	+/-5.61	9.48	pCi/g		ATH1 04/09/05	1401	412897	3
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-101-C-1C-01
Sample ID: 133280006

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	61	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-101-C-1C-02	Project:	YANK01204
Sample ID:	133280007	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	6.53%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		0.331	+/-0.109	0.0489	+/-0.107	0.106	pCi/g		AKB 04/01/05	0729	412584	1
Americium-241	U	0.00155	+/-0.0491	0.0464	+/-0.0481	0.097	pCi/g					
Bismuth-212		0.278	+/-0.154	0.0889	+/-0.151	0.194	pCi/g					
Bismuth-214		0.222	+/-0.0668	0.0234	+/-0.0655	0.0504	pCi/g					
Cesium-134	U	0.0122	+/-0.0193	0.0152	+/-0.0189	0.0328	pCi/g					
Cesium-137	U	0.00755	+/-0.0156	0.0139	+/-0.0153	0.0298	pCi/g					
Cobalt-60	U	0.0239	+/-0.0158	0.0143	+/-0.0155	0.0317	pCi/g					
Europium-152	U	1.190E-05	+/-0.0453	0.0345	+/-0.0444	0.0732	pCi/g					
Europium-154	U	-0.00334	+/-0.054	0.0443	+/-0.0529	0.0967	pCi/g					
Europium-155	U	-0.000511	+/-0.0447	0.0403	+/-0.0438	0.0843	pCi/g					
Lead-212		0.323	+/-0.0516	0.0221	+/-0.0506	0.0463	pCi/g					
Lead-214		0.221	+/-0.0721	0.0295	+/-0.0706	0.062	pCi/g					
Manganese-54	U	-0.00587	+/-0.0157	0.0125	+/-0.0154	0.0272	pCi/g					
Niobium-94	U	0.0123	+/-0.0147	0.0133	+/-0.0144	0.0284	pCi/g					
Potassium-40		7.57	+/-0.814	0.119	+/-0.798	0.267	pCi/g					
Radium-226		0.222	+/-0.0668	0.0234	+/-0.0655	0.0504	pCi/g					
Silver-108m	U	-0.004	+/-0.0136	0.0112	+/-0.0133	0.024	pCi/g					
Thallium-208		0.122	+/-0.033	0.0106	+/-0.0323	0.023	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.0171	+/-0.0123	0.0109	+/-0.0123	0.0228	pCi/g		LCW1 04/06/05	2104	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	2.20	+/-5.09	4.17	+/-5.09	8.71	pCi/g		ATH1 04/09/05	1433	412897	3
Solid Preparation												
Laboratory Composite - CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-101-C-1C-02
Sample ID: 133280007

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	54	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-101-C-8C-03	Project:	YANK01204
Sample ID:	133280008	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	5.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS													
Actinium-228	UUI	0.00	+/-0.115	0.103	+/-0.112	0.218	pCi/g		AKB	04/01/05	0912	412584	1
Americium-241	U	-0.0174	+/-0.0663	0.0605	+/-0.065	0.128	pCi/g						
Bismuth-212	U	0.0633	+/-0.206	0.135	+/-0.202	0.296	pCi/g						
Bismuth-214		0.239	+/-0.0674	0.0298	+/-0.066	0.0651	pCi/g						
Cesium-134	U	0.0124	+/-0.0198	0.018	+/-0.0194	0.0398	pCi/g						
Cesium-137	U	0.00307	+/-0.0178	0.0154	+/-0.0174	0.034	pCi/g						
Cobalt-60	U	-0.000997	+/-0.0201	0.0167	+/-0.0196	0.0385	pCi/g						
Europium-152	U	-0.0147	+/-0.047	0.041	+/-0.0461	0.0879	pCi/g						
Europium-154	U	-0.0344	+/-0.064	0.0399	+/-0.0627	0.0936	pCi/g						
Europium-155	U	0.011	+/-0.0511	0.0466	+/-0.050	0.0978	pCi/g						
Lead-212		0.290	+/-0.0567	0.0221	+/-0.0556	0.047	pCi/g						
Lead-214		0.197	+/-0.0793	0.0291	+/-0.0777	0.0625	pCi/g						
Manganese-54	U	-0.0106	+/-0.0195	0.0149	+/-0.0191	0.0333	pCi/g						
Niobium-94	U	0.00174	+/-0.0165	0.0142	+/-0.0162	0.0312	pCi/g						
Potassium-40		6.37	+/-0.897	0.134	+/-0.880	0.319	pCi/g						
Radium-226		0.239	+/-0.0674	0.0298	+/-0.066	0.0651	pCi/g						
Silver-108m	U	0.00328	+/-0.015	0.0135	+/-0.0147	0.0292	pCi/g						
Thallium-208		0.0756	+/-0.038	0.0134	+/-0.0372	0.0297	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-6.600E-05	+/-0.0113	0.011	+/-0.0113	0.023	pCi/g		LCW1	04/06/05	2104	412860	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	1.44	+/-4.72	3.90	+/-4.72	8.15	pCi/g		ATH1	04/09/05	1505	412897	3
Solid Preparation													
Laboratory Composite – CONCRETE													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-101-C-8C-03
Sample ID: 133280008

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	47	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-101-C-12C-04	Project:	YANK01204
Sample ID:	133280009	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	9.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS													
Actinium-228		0.548	+/-0.174	0.0688	+/-0.170	0.151	pCi/g		AKB	04/01/05	0912	412584	1
Americium-241	U	-0.06	+/-0.124	0.0995	+/-0.122	0.209	pCi/g						
Bismuth-212	U	0.275	+/-0.177	0.170	+/-0.173	0.366	pCi/g						
Bismuth-214		0.547	+/-0.122	0.0335	+/-0.119	0.0725	pCi/g						
Cesium-134	U	0.00736	+/-0.0231	0.0199	+/-0.0227	0.0437	pCi/g						
Cesium-137	U	0.0373	+/-0.031	0.0182	+/-0.0304	0.0397	pCi/g						
Cobalt-60	U	0.0141	+/-0.0214	0.0199	+/-0.021	0.0451	pCi/g						
Europium-152	U	0.0172	+/-0.0557	0.0505	+/-0.0546	0.107	pCi/g						
Europium-154	U	0.037	+/-0.0713	0.0639	+/-0.0699	0.142	pCi/g						
Europium-155	U	-0.0175	+/-0.0593	0.0523	+/-0.0581	0.110	pCi/g						
Lead-212		0.470	+/-0.0726	0.0253	+/-0.0711	0.0535	pCi/g						
Lead-214		0.671	+/-0.116	0.0354	+/-0.114	0.0754	pCi/g						
Manganese-54	U	-0.00818	+/-0.019	0.0146	+/-0.0187	0.0328	pCi/g						
Niobium-94	U	0.015	+/-0.0206	0.0185	+/-0.0202	0.0399	pCi/g						
Potassium-40		8.95	+/-1.12	0.134	+/-1.10	0.323	pCi/g						
Radium-226		0.547	+/-0.122	0.0335	+/-0.119	0.0725	pCi/g						
Silver-108m	U	-0.00319	+/-0.0165	0.0141	+/-0.0162	0.0306	pCi/g						
Thallium-208		0.172	+/-0.0547	0.0175	+/-0.0536	0.0381	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00887	+/-0.00948	0.00871	+/-0.00949	0.0181	pCi/g		LCW1	04/06/05	2104	412860	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	-4.21	+/-13.7	11.6	+/-13.7	24.2	pCi/g		ATH1	04/11/05	1357	412897	3
Solid Preparation													
Laboratory Composite – CONCRETE													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-101-C-12C-04
Sample ID: 133280009

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	BatchM

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	74	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows:

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-101-C-12C-05	Project:	YANK01204
Sample ID:	133280010	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	5.87%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS													
Actinium-228		0.284	+/-0.135	0.0678	+/-0.133	0.150	pCi/g		AKB	04/01/05	0940	412584	1
Americium-241	U	-0.157	+/-0.121	0.106	+/-0.119	0.224	pCi/g						
Bismuth-212	UUI	0.00	+/-0.228	0.134	+/-0.224	0.296	pCi/g						
Bismuth-214		0.233	+/-0.0785	0.0331	+/-0.0769	0.0724	pCi/g						
Cesium-134	U	0.00574	+/-0.0393	0.0203	+/-0.0385	0.0448	pCi/g						
Cesium-137	U	-0.00423	+/-0.0205	0.0176	+/-0.0201	0.0388	pCi/g						
Cobalt-60	U	0.0146	+/-0.0211	0.0198	+/-0.0207	0.0453	pCi/g						
Europium-152	U	0.0279	+/-0.0561	0.0512	+/-0.0549	0.109	pCi/g						
Europium-154	U	0.0589	+/-0.0607	0.0589	+/-0.0595	0.133	pCi/g						
Europium-155	U	0.0206	+/-0.0621	0.0595	+/-0.0609	0.125	pCi/g						
Lead-212		0.339	+/-0.0574	0.0255	+/-0.0562	0.0543	pCi/g						
Lead-214		0.238	+/-0.0745	0.0356	+/-0.073	0.0763	pCi/g						
Manganese-54	U	0.0128	+/-0.0216	0.0199	+/-0.0212	0.0437	pCi/g						
Niobium-94	U	0.00189	+/-0.0189	0.0168	+/-0.0186	0.0367	pCi/g						
Potassium-40		6.51	+/-0.918	0.143	+/-0.900	0.342	pCi/g						
Radium-226		0.233	+/-0.0785	0.0331	+/-0.0769	0.0724	pCi/g						
Silver-108m	U	0.00501	+/-0.0199	0.0176	+/-0.0195	0.0378	pCi/g						
Thallium-208		0.128	+/-0.0365	0.0172	+/-0.0357	0.0377	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0226	+/-0.0157	0.0147	+/-0.0157	0.0308	pCi/g		LCW1	04/06/05	2236	412860	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	5.33	+/-14.3	11.8	+/-14.3	24.6	pCi/g		ATH1	04/11/05	1429	412897	2
Solid Preparation													
Laboratory Composite – CONCRETE													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-101-C-12C-05
Sample ID: 133280010

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	62	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- I Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-102-C-1C-01	Project:	YANK01204
Sample ID:	133280011	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	4.65%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS													
Actinium-228		0.349	+/-0.125	0.052	+/-0.122	0.118	pCi/g		AKB	04/01/05	0940	412584	1
Americium-241	U	-0.0433	+/-0.113	0.0887	+/-0.111	0.189	pCi/g						
Bismuth-212	U	0.208	+/-0.155	0.142	+/-0.152	0.309	pCi/g						
Bismuth-214		0.194	+/-0.0695	0.0312	+/-0.0681	0.0682	pCi/g						
Cesium-134	U	0.00642	+/-0.021	0.0183	+/-0.0206	0.0406	pCi/g						
Cesium-137	U	-0.00708	+/-0.0185	0.015	+/-0.0181	0.0333	pCi/g						
Cobalt-60	U	0.0237	+/-0.0247	0.0235	+/-0.0242	0.0522	pCi/g						
Europium-152	U	0.0035	+/-0.0476	0.0408	+/-0.0466	0.088	pCi/g						
Europium-154	U	-0.0111	+/-0.0529	0.0425	+/-0.0518	0.0992	pCi/g						
Europium-155	U	0.0257	+/-0.0522	0.0506	+/-0.0511	0.106	pCi/g						
Lead-212		0.281	+/-0.0567	0.0237	+/-0.0555	0.0504	pCi/g						
Lead-214		0.289	+/-0.0817	0.0275	+/-0.080	0.0596	pCi/g						
Manganese-54	U	0.0226	+/-0.0182	0.0177	+/-0.0178	0.039	pCi/g						
Niobium-94	U	-0.00927	+/-0.0165	0.0129	+/-0.0161	0.0287	pCi/g						
Potassium-40		6.36	+/-0.908	0.132	+/-0.890	0.316	pCi/g						
Radium-226		0.194	+/-0.0695	0.0312	+/-0.0681	0.0682	pCi/g						
Silver-108m	U	-0.000184	+/-0.0154	0.0137	+/-0.0151	0.0299	pCi/g						
Thallium-208		0.137	+/-0.0427	0.0146	+/-0.0419	0.0322	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0142	+/-0.0134	0.0128	+/-0.0134	0.0269	pCi/g		LCW1	04/06/05	2236	412860	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	2.34	+/-13.6	11.3	+/-13.6	23.5	pCi/g		ATH1	04/11/05	1501	412897	3
Solid Preparation													
Laboratory Composite – CONCRETE													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-102-C-1C-01
Sample ID: 133280011

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	60	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-102-C-2C-02	Project:	YANK01204
Sample ID:	133280012	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	5.13%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228	UUI	0.00	+/-0.0984	0.102	+/-0.0964	0.219	pCi/g		AKB 04/01/05	0941	412584	1
Americium-241	U	-0.0177	+/-0.0944	0.0769	+/-0.0925	0.162	pCi/g					
Bismuth-212	U	0.101	+/-0.171	0.157	+/-0.168	0.342	pCi/g					
Bismuth-214		0.263	+/-0.0761	0.0292	+/-0.0746	0.0646	pCi/g					
Cesium-134	U	0.0137	+/-0.0219	0.0202	+/-0.0215	0.0447	pCi/g					
Cesium-137	U	-0.0103	+/-0.0192	0.0154	+/-0.0188	0.0345	pCi/g					
Cobalt-60	U	0.00543	+/-0.0204	0.0181	+/-0.020	0.0418	pCi/g					
Europium-152	U	0.00275	+/-0.058	0.0449	+/-0.0569	0.0967	pCi/g					
Europium-154	U	-0.000149	+/-0.0666	0.0567	+/-0.0653	0.129	pCi/g					
Europium-155	U	0.0018	+/-0.0547	0.0524	+/-0.0536	0.110	pCi/g					
Lead-212		0.242	+/-0.0464	0.0299	+/-0.0455	0.0629	pCi/g					
Lead-214		0.192	+/-0.0733	0.0356	+/-0.0718	0.0761	pCi/g					
Manganese-54	U	0.00378	+/-0.0221	0.0191	+/-0.0216	0.042	pCi/g					
Niobium-94	U	0.0286	+/-0.027	0.0189	+/-0.0265	0.041	pCi/g					
Potassium-40		5.39	+/-0.870	0.144	+/-0.853	0.343	pCi/g					
Radium-226		0.263	+/-0.0761	0.0292	+/-0.0746	0.0646	pCi/g					
Silver-108m	U	-0.00205	+/-0.018	0.015	+/-0.0176	0.0326	pCi/g					
Thallium-208		0.0753	+/-0.0592	0.0173	+/-0.058	0.0379	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.00531	+/-0.0138	0.0139	+/-0.0138	0.0292	pCi/g		LCW1 04/06/05	2236	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	2.02	+/-6.17	5.09	+/-6.17	10.6	pCi/g		ATH1 04/09/05	1712	412897	3
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-102-C-2C-02
Sample ID: 133280012

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	56	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-102-C-7C-03	Project:	YANK01204
Sample ID:	133280013	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	17-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	3.97%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS													
Actinium-228		0.330	+/-0.124	0.063	+/-0.121	0.140	pCi/g		AKB	04/01/05	0941	412584	1
Americium-241	U	0.137	+/-0.0827	0.0842	+/-0.0811	0.177	pCi/g						
Bismuth-212	U	0.269	+/-0.216	0.144	+/-0.212	0.316	pCi/g						
Bismuth-214		0.270	+/-0.0867	0.0358	+/-0.085	0.0776	pCi/g						
Cesium-134	U	0.0114	+/-0.0239	0.0215	+/-0.0234	0.0472	pCi/g						
Cesium-137	U	0.0186	+/-0.0218	0.0206	+/-0.0214	0.0448	pCi/g						
Cobalt-60	U	-0.0156	+/-0.0187	0.013	+/-0.0184	0.0312	pCi/g						
Europium-152	U	0.0354	+/-0.0541	0.0502	+/-0.053	0.107	pCi/g						
Europium-154	U	-0.0651	+/-0.0683	0.0491	+/-0.067	0.113	pCi/g						
Europium-155	U	0.049	+/-0.066	0.0617	+/-0.0646	0.129	pCi/g						
Lead-212		0.349	+/-0.0619	0.0288	+/-0.0606	0.061	pCi/g						
Lead-214		0.312	+/-0.0994	0.0333	+/-0.0974	0.0718	pCi/g						
Manganese-54	U	0.00887	+/-0.0217	0.0194	+/-0.0213	0.0424	pCi/g						
Niobium-94	U	-0.0223	+/-0.0217	0.0168	+/-0.0212	0.0366	pCi/g						
Potassium-40		8.05	+/-1.13	0.142	+/-1.11	0.336	pCi/g						
Radium-226		0.270	+/-0.0867	0.0358	+/-0.085	0.0776	pCi/g						
Silver-108m	U	-0.0199	+/-0.020	0.0154	+/-0.0196	0.0334	pCi/g						
Thallium-208		0.112	+/-0.0406	0.0177	+/-0.0398	0.0386	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00991	+/-0.0221	0.0223	+/-0.0221	0.0461	pCi/g		LCW1	04/06/05	2237	412860	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	5.36	+/-5.96	4.77	+/-5.96	9.96	pCi/g		ATH1	04/09/05	1744	412897	3
Solid Preparation													
Laboratory Composite – CONCRETE													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-102-C-7C-03
Sample ID: 133280013

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	52	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-102-C-11C-04	Project:	YANK01204
Sample ID:	133280014	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	17-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	4.13%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		0.549	+/-0.226	0.0865	+/-0.222	0.189	pCi/g		AKB 04/01/05	0942	412584	1
Americium-241	U	-0.208	+/-0.170	0.127	+/-0.166	0.262	pCi/g					
Bismuth-212	U	0.448	+/-0.308	0.257	+/-0.302	0.544	pCi/g					
Bismuth-214		1.77	+/-0.241	0.0476	+/-0.237	0.102	pCi/g					
Cesium-134	UUI	0.00	+/-0.0421	0.0339	+/-0.0413	0.0724	pCi/g					
Cesium-137	U	0.0232	+/-0.0318	0.0283	+/-0.0312	0.0605	pCi/g					
Cobalt-60	U	-0.00927	+/-0.0373	0.0249	+/-0.0366	0.0558	pCi/g					
Europium-152	U	-0.0631	+/-0.0964	0.0692	+/-0.0945	0.146	pCi/g					
Europium-154	U	0.0673	+/-0.104	0.0921	+/-0.102	0.201	pCi/g					
Europium-155	U	-0.0107	+/-0.0919	0.0816	+/-0.090	0.169	pCi/g					
Lead-212		0.403	+/-0.0894	0.043	+/-0.0876	0.0894	pCi/g					
Lead-214		2.06	+/-0.246	0.056	+/-0.241	0.117	pCi/g					
Manganese-54	U	0.00878	+/-0.0588	0.0246	+/-0.0576	0.0535	pCi/g					
Niobium-94	U	0.0154	+/-0.0259	0.0228	+/-0.0254	0.0492	pCi/g					
Potassium-40		11.3	+/-1.45	0.300	+/-1.42	0.661	pCi/g					
Radium-226		1.77	+/-0.241	0.0476	+/-0.237	0.102	pCi/g					
Silver-108m	U	0.0037	+/-0.0296	0.0258	+/-0.029	0.0544	pCi/g					
Thallium-208	UUI	0.00	+/-0.0626	0.0391	+/-0.0614	0.0817	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.00392	+/-0.0143	0.0144	+/-0.0143	0.0303	pCi/g		LCW1 04/06/05	2237	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	4.46	+/-6.16	4.98	+/-6.16	10.4	pCi/g		ATH1 04/09/05	1816	412897	3
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-102-C-11C-04
Sample ID: 133280014

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	60	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-102-C-11C-05	Project:	YANK01204
Sample ID:	133280015	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	17-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	4.07%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS													
Actinium-228		0.357	+/-0.163	0.0714	+/-0.159	0.155	pCi/g		AKB	04/01/05	0942	412584	1
Americium-241	U	-0.0584	+/-0.123	0.114	+/-0.120	0.235	pCi/g						
Bismuth-212	U	0.210	+/-0.191	0.176	+/-0.187	0.375	pCi/g						
Bismuth-214		3.16	+/-0.330	0.0415	+/-0.323	0.088	pCi/g						
Cesium-134	U	0.0146	+/-0.0273	0.0239	+/-0.0267	0.0513	pCi/g						
Cesium-137	U	-0.0218	+/-0.0269	0.0212	+/-0.0264	0.0454	pCi/g						
Cobalt-60	U	-0.00232	+/-0.0256	0.0211	+/-0.025	0.0469	pCi/g						
Europium-152	U	0.0314	+/-0.0732	0.0674	+/-0.0718	0.141	pCi/g						
Europium-154	U	0.0254	+/-0.0802	0.0698	+/-0.0786	0.152	pCi/g						
Europium-155	U	0.0114	+/-0.0823	0.0757	+/-0.0807	0.156	pCi/g						
Lead-212		0.205	+/-0.0681	0.047	+/-0.0667	0.0966	pCi/g						
Lead-214		3.47	+/-0.344	0.0468	+/-0.337	0.0978	pCi/g						
Manganese-54	U	-0.00547	+/-0.0318	0.0225	+/-0.0311	0.0481	pCi/g						
Niobium-94	U	0.00827	+/-0.0239	0.0207	+/-0.0234	0.0441	pCi/g						
Potassium-40		9.34	+/-1.17	0.203	+/-1.15	0.453	pCi/g						
Radium-226		3.16	+/-0.330	0.0415	+/-0.323	0.088	pCi/g						
Silver-108m	U	-0.0207	+/-0.0237	0.0196	+/-0.0232	0.0415	pCi/g						
Thallium-208		0.109	+/-0.0418	0.0237	+/-0.041	0.0501	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90		0.040	+/-0.0149	0.0127	+/-0.015	0.0266	pCi/g		LCW1	04/06/05	2237	412860	2
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	2.20	+/-5.73	4.71	+/-5.73	9.85	pCi/g		ATH1	04/09/05	1848	412897	3
Solid Preparation													
Laboratory Composite – CONCRETE													

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-102-C-11C-05
Sample ID: 133280015

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	65	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-103-C-1C-01	Project:	YANK01204
Sample ID:	133280016	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	21-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	4.47%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228	UUI	0.00	+/-0.165	0.124	+/-0.162	0.262	pCi/g		AKB 04/01/05	0943	412584	1
Americium-241	U	0.00179	+/-0.0286	0.023	+/-0.028	0.048	pCi/g					
Bismuth-212	U	0.227	+/-0.160	0.154	+/-0.157	0.335	pCi/g					
Bismuth-214		0.259	+/-0.0832	0.0343	+/-0.0815	0.0742	pCi/g					
Cesium-134	U	0.0164	+/-0.0235	0.0211	+/-0.023	0.0461	pCi/g					
Cesium-137	U	-0.0263	+/-0.0214	0.0151	+/-0.021	0.0335	pCi/g					
Cobalt-60	U	0.0174	+/-0.0383	0.0206	+/-0.0375	0.0465	pCi/g					
Europium-152	U	0.0136	+/-0.050	0.0449	+/-0.049	0.0958	pCi/g					
Europium-154	U	0.0299	+/-0.0719	0.0565	+/-0.0705	0.127	pCi/g					
Europium-155	U	0.0484	+/-0.0665	0.0399	+/-0.0651	0.0834	pCi/g					
Lead-212		0.246	+/-0.0662	0.0332	+/-0.0648	0.0691	pCi/g					
Lead-214		0.259	+/-0.0581	0.0301	+/-0.0569	0.0646	pCi/g					
Manganese-54	U	-0.0049	+/-0.0238	0.0192	+/-0.0234	0.0419	pCi/g					
Niobium-94	U	-0.00466	+/-0.0222	0.0154	+/-0.0217	0.0338	pCi/g					
Potassium-40		5.81	+/-0.877	0.167	+/-0.859	0.387	pCi/g					
Radium-226		0.259	+/-0.0832	0.0343	+/-0.0815	0.0742	pCi/g					
Silver-108m	U	0.00863	+/-0.0183	0.0165	+/-0.0179	0.0353	pCi/g					
Thallium-208		0.0934	+/-0.0446	0.0174	+/-0.0437	0.0379	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90		0.0344	+/-0.0124	0.0105	+/-0.0125	0.0217	pCi/g		LCW1 04/07/05	0715	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	4.54	+/-5.70	4.58	+/-5.70	9.58	pCi/g		ATH1 04/09/05	2159	412898	3
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-103-C-1C-01
Sample ID: 133280016

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	64	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-103-C-2C-02	Project:	YANK01204
Sample ID:	133280017	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	21-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	4.42%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		0.286	+/-0.170	0.0578	+/-0.167	0.130	pCi/g		AKB 04/01/05	0943	412584	1
Americium-241	U	-0.032	+/-0.134	0.112	+/-0.132	0.238	pCi/g					
Bismuth-212		0.283	+/-0.237	0.120	+/-0.232	0.268	pCi/g					
Bismuth-214		0.314	+/-0.0918	0.0317	+/-0.090	0.0693	pCi/g					
Cesium-134	U	0.0199	+/-0.0209	0.0176	+/-0.0205	0.0392	pCi/g					
Cesium-137	U	0.0194	+/-0.0218	0.0204	+/-0.0214	0.0442	pCi/g					
Cobalt-60	U	0.0144	+/-0.0173	0.017	+/-0.017	0.0396	pCi/g					
Europium-152	U	0.0474	+/-0.0568	0.0456	+/-0.0556	0.0982	pCi/g					
Europium-154	U	0.0275	+/-0.0568	0.052	+/-0.0557	0.119	pCi/g					
Europium-155	U	0.0363	+/-0.0547	0.0521	+/-0.0536	0.110	pCi/g					
Lead-212		0.311	+/-0.0649	0.0257	+/-0.0636	0.0546	pCi/g					
Lead-214		0.345	+/-0.0825	0.0313	+/-0.0808	0.0677	pCi/g					
Manganese-54	U	0.0103	+/-0.0172	0.017	+/-0.0168	0.0377	pCi/g					
Niobium-94	U	-0.0098	+/-0.0178	0.014	+/-0.0174	0.0311	pCi/g					
Potassium-40		7.71	+/-1.05	0.171	+/-1.03	0.396	pCi/g					
Radium-226		0.314	+/-0.0918	0.0317	+/-0.090	0.0693	pCi/g					
Silver-108m	U	-0.00245	+/-0.0168	0.0146	+/-0.0165	0.0319	pCi/g					
Thallium-208		0.096	+/-0.0397	0.0175	+/-0.0389	0.0382	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	-0.00186	+/-0.0109	0.0107	+/-0.0109	0.0224	pCi/g		LCW1 04/07/05	0715	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	4.73	+/-6.18	4.98	+/-6.19	10.4	pCi/g		ATH1 04/09/05	2231	412898	3
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-103-C-2C-02
Sample ID: 133280017

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	52	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

* Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
** Indicates the analyte is a surrogate compound.
B Target analyte was detected in the sample as well as the associated blank.
BD Flag for results below the MDC or a flag for low tracer recovery.
E Concentration of the target analyte exceeds the instrument calibration range.
H Analytical holding time exceeded.
J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
U Indicates the target analyte was analyzed for but not detected above the detection limit.
UI Uncertain identification for gamma spectroscopy.
X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
h Sample preparation or preservation holding time exceeded.
The above sample is reported on a dry weight basis.

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362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-103-C-4C-03	Project:	YANK01204
Sample ID:	133280018	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	21-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	3.96%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		0.300	+/-0.152	0.0539	+/-0.148	0.123	pCi/g		AKB 04/01/05	0944	412584	1
Americium-241	U	-0.000606	+/-0.025	0.0234	+/-0.0245	0.0493	pCi/g					
Bismuth-212	U	0.273	+/-0.235	0.144	+/-0.230	0.318	pCi/g					
Bismuth-214		0.302	+/-0.0699	0.0314	+/-0.0685	0.0692	pCi/g					
Cesium-134	U	0.00181	+/-0.0234	0.0206	+/-0.023	0.0457	pCi/g					
Cesium-137	U	-0.00212	+/-0.0204	0.0179	+/-0.020	0.0397	pCi/g					
Cobalt-60	U	0.00762	+/-0.0235	0.0213	+/-0.023	0.0487	pCi/g					
Europium-152	U	0.0111	+/-0.052	0.0472	+/-0.051	0.101	pCi/g					
Europium-154	U	0.0343	+/-0.0731	0.0648	+/-0.0716	0.146	pCi/g					
Europium-155	UUI	0.00	+/-0.0828	0.0359	+/-0.0811	0.0762	pCi/g					
Lead-212		0.252	+/-0.0478	0.0221	+/-0.0468	0.0472	pCi/g					
Lead-214		0.266	+/-0.0604	0.0301	+/-0.0592	0.0651	pCi/g					
Manganese-54	U	-0.0097	+/-0.0199	0.016	+/-0.0195	0.0361	pCi/g					
Niobium-94	U	-0.0183	+/-0.0203	0.0161	+/-0.0199	0.0356	pCi/g					
Potassium-40		5.44	+/-0.742	0.187	+/-0.727	0.434	pCi/g					
Radium-226		0.302	+/-0.0699	0.0314	+/-0.0685	0.0692	pCi/g					
Silver-108m	U	-0.0145	+/-0.0179	0.0141	+/-0.0175	0.0308	pCi/g					
Thallium-208		0.116	+/-0.0437	0.0208	+/-0.0428	0.045	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90		0.0209	+/-0.0107	0.00933	+/-0.0108	0.0194	pCi/g		LCW1 04/07/05	0715	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	3.88	+/-6.08	4.93	+/-6.08	10.3	pCi/g		ATH1 04/09/05	2303	412898	3
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-103-C-4C-03
Sample ID: 133280018

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	65	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-103-C-7C-04	Project:	YANK01204
Sample ID:	133280019	Client ID:	YANK001
Matrix:	CT	Vol. Recv.:	
Collect Date:	21-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	4.36%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		0.255	+/-0.100	0.0398	+/-0.098	0.0865	pCi/g		AKB 04/01/05	0944	412584	1
Americium-241	U	0.00115	+/-0.0827	0.0716	+/-0.0811	0.149	pCi/g					
Bismuth-212		0.317	+/-0.204	0.0807	+/-0.200	0.175	pCi/g					
Bismuth-214		0.195	+/-0.0619	0.024	+/-0.0607	0.051	pCi/g					
Cesium-134	U	0.0111	+/-0.015	0.0139	+/-0.0147	0.0299	pCi/g					
Cesium-137	U	0.0207	+/-0.0209	0.0105	+/-0.0205	0.0227	pCi/g					
Cobalt-60	U	0.00594	+/-0.0152	0.012	+/-0.0149	0.0266	pCi/g					
Europium-152	U	-0.0262	+/-0.0339	0.0286	+/-0.0332	0.061	pCi/g					
Europium-154	U	0.0123	+/-0.0441	0.0344	+/-0.0432	0.0757	pCi/g					
Europium-155	U	-0.0169	+/-0.0431	0.039	+/-0.0423	0.0816	pCi/g					
Lead-212		0.223	+/-0.0503	0.022	+/-0.0493	0.0459	pCi/g					
Lead-214		0.245	+/-0.0544	0.0226	+/-0.0533	0.0478	pCi/g					
Manganese-54	U	0.0124	+/-0.0129	0.0103	+/-0.0127	0.0224	pCi/g					
Niobium-94	U	0.00478	+/-0.00988	0.0111	+/-0.00968	0.0237	pCi/g					
Potassium-40		6.11	+/-0.690	0.105	+/-0.677	0.236	pCi/g					
Radium-226		0.195	+/-0.0619	0.024	+/-0.0607	0.051	pCi/g					
Silver-108m	U	0.00025	+/-0.0123	0.0109	+/-0.0121	0.0231	pCi/g					
Thallium-208		0.0886	+/-0.0254	0.012	+/-0.0248	0.0256	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.00952	+/-0.0114	0.0106	+/-0.0114	0.022	pCi/g		LCW1 04/07/05	0716	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	3.29	+/-5.65	4.60	+/-5.65	9.62	pCi/g		ATH1 04/09/05	2334	412898	3
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-103-C-7C-04
Sample ID: 133280019

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	64	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-103-C-8C-05	Project:	YANK01204
Sample ID:	133280020	Client ID:	YANK001
Matrix:	B	Vol. Recv.:	
Collect Date:	21-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	2.08%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		0.272	+/-0.0884	0.0487	+/-0.0866	0.105	pCi/g		AKB 04/01/05	0944	412584	1
Americium-241	U	0.034	+/-0.0975	0.0698	+/-0.0955	0.144	pCi/g					
Bismuth-212	U	0.154	+/-0.166	0.104	+/-0.163	0.223	pCi/g					
Bismuth-214		1.26	+/-0.159	0.0299	+/-0.156	0.063	pCi/g					
Cesium-134	U	-0.00256	+/-0.017	0.0142	+/-0.0167	0.0305	pCi/g					
Cesium-137		0.373	+/-0.0604	0.0154	+/-0.0591	0.0326	pCi/g					
Cobalt-60	U	0.0154	+/-0.0164	0.0151	+/-0.0161	0.0328	pCi/g					
Europium-152	U	-0.0149	+/-0.0465	0.0402	+/-0.0455	0.0843	pCi/g					
Europium-154	U	0.00911	+/-0.0567	0.0479	+/-0.0556	0.103	pCi/g					
Europium-155	U	0.00609	+/-0.0529	0.0492	+/-0.0519	0.102	pCi/g					
Lead-212		0.231	+/-0.0481	0.0302	+/-0.0472	0.0622	pCi/g					
Lead-214		1.57	+/-0.177	0.0284	+/-0.174	0.0596	pCi/g					
Manganese-54	U	-0.0167	+/-0.0183	0.0141	+/-0.0179	0.0302	pCi/g					
Niobium-94	U	0.00247	+/-0.0155	0.0135	+/-0.0152	0.0286	pCi/g					
Potassium-40		4.85	+/-0.596	0.113	+/-0.585	0.253	pCi/g					
Radium-226		1.26	+/-0.159	0.0299	+/-0.156	0.063	pCi/g					
Silver-108m	U	0.017	+/-0.0168	0.0153	+/-0.0165	0.0321	pCi/g					
Thallium-208		0.0646	+/-0.0316	0.0148	+/-0.031	0.0314	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90		0.209	+/-0.018	0.00986	+/-0.0202	0.0205	pCi/g		LCW1 04/07/05	0716	412860	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium		10.9	+/-5.94	4.51	+/-5.94	9.43	pCi/g		ATH1 04/10/05	0006	412898	3
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-103-C-8C-05
Sample ID: 133280020

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 906.0 Modified
4	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	72	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-100-C-B	Project:	YANK01204
Sample ID:	133280021	Client ID:	YANK001
Matrix:	B	Vol. Recv.:	
Collect Date:	16-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	.208%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		1.04	+/-0.164	0.0318	+/-0.161	0.0671	pCi/g		AKB 03/31/05	2210	412590	1
Americium-241	U	0.011	+/-0.0394	0.0391	+/-0.0386	0.080	pCi/g					
Bismuth-212		0.648	+/-0.155	0.0733	+/-0.152	0.154	pCi/g					
Bismuth-214		0.295	+/-0.0587	0.0178	+/-0.0575	0.0372	pCi/g					
Cesium-134	UUI	0.00	+/-0.0221	0.0133	+/-0.0216	0.0276	pCi/g					
Cesium-137	U	-0.00695	+/-0.0113	0.00947	+/-0.0111	0.0198	pCi/g					
Cobalt-60	U	0.00217	+/-0.0125	0.00909	+/-0.0123	0.0195	pCi/g					
Europium-152	U	-0.0102	+/-0.0295	0.0258	+/-0.0289	0.0535	pCi/g					
Europium-154	U	-0.0378	+/-0.0313	0.0231	+/-0.0307	0.0497	pCi/g					
Europium-155	U	0.0409	+/-0.0433	0.0304	+/-0.0424	0.0623	pCi/g					
Lead-212		0.984	+/-0.0903	0.0157	+/-0.0885	0.0323	pCi/g					
Lead-214		0.355	+/-0.0509	0.0191	+/-0.0499	0.0395	pCi/g					
Manganese-54	U	0.011	+/-0.0171	0.010	+/-0.0168	0.0209	pCi/g					
Niobium-94	U	0.00605	+/-0.0107	0.00952	+/-0.0105	0.0198	pCi/g					
Potassium-40		6.17	+/-0.561	0.0781	+/-0.549	0.169	pCi/g					
Radium-226		0.295	+/-0.0587	0.0178	+/-0.0575	0.0372	pCi/g					
Silver-108m	U	-0.0023	+/-0.00959	0.00819	+/-0.00939	0.0171	pCi/g					
Thallium-208		0.300	+/-0.040	0.00965	+/-0.0392	0.0201	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90		0.0239	+/-0.0104	0.00832	+/-0.0109	0.0172	pCi/g		LCW1 04/11/05	0918	415404	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	3.32	+/-5.70	4.63	+/-5.70	9.69	pCi/g		ATH1 04/10/05	0038	412898	4
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-100-C-B
Sample ID: 133280021

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch N

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified
4	EPA 906.0 Modified
5	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	78	(25%-125%)

Notes:
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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-101-C-B
Sample ID: 133280022
Matrix: B
Collect Date: 16-MAR-05
Receive Date: 28-MAR-05
Collector: Client
Moisture: .58%

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228		0.824	+/-0.205	0.0895	+/-0.201	0.193	pCi/g		AKB 04/01/05	0719	412590	1
Americium-241	U	0.226	+/-0.270	0.160	+/-0.265	0.332	pCi/g					
Bismuth-212		0.414	+/-0.304	0.157	+/-0.298	0.342	pCi/g					
Bismuth-214		0.990	+/-0.157	0.0442	+/-0.154	0.0944	pCi/g					
Cesium-134	UUI	0.00	+/-0.0371	0.0286	+/-0.0363	0.0614	pCi/g					
Cesium-137	U	0.00206	+/-0.0263	0.0204	+/-0.0258	0.0443	pCi/g					
Cobalt-60	U	0.0228	+/-0.0278	0.0237	+/-0.0272	0.053	pCi/g					
Europium-152	U	0.0856	+/-0.0744	0.0698	+/-0.0729	0.147	pCi/g					
Europium-154	U	0.0082	+/-0.0727	0.0616	+/-0.0713	0.138	pCi/g					
Europium-155	U	0.0363	+/-0.0863	0.0827	+/-0.0845	0.171	pCi/g					
Lead-212		0.877	+/-0.113	0.0379	+/-0.110	0.0791	pCi/g					
Lead-214		1.09	+/-0.161	0.0426	+/-0.158	0.0902	pCi/g					
Manganese-54	U	-0.00233	+/-0.0316	0.0234	+/-0.0309	0.0507	pCi/g					
Niobium-94	U	0.00847	+/-0.024	0.0217	+/-0.0236	0.0466	pCi/g					
Potassium-40		9.00	+/-1.19	0.206	+/-1.16	0.468	pCi/g					
Radium-226		0.990	+/-0.157	0.0442	+/-0.154	0.0944	pCi/g					
Silver-108m	U	4.860E-05	+/-0.0234	0.0202	+/-0.0229	0.043	pCi/g					
Thallium-208		0.244	+/-0.0613	0.0233	+/-0.0601	0.0498	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.0225	+/-0.0151	0.0127	+/-0.0152	0.0262	pCi/g		LCW1 04/11/05	0918	415404	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	5.26	+/-6.01	4.80	+/-6.01	10.1	pCi/g		ATH1 04/10/05	0110	412898	4
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TCI	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-101-C-B
Sample ID: 133280022

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified
4	EPA 906.0 Modified
5	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	54	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier–please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company: Connecticut Yankee Atomic Power
Address: Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-102-C-B	Project:	YANK01204
Sample ID:	133280023	Client ID:	YANK001
Matrix:	B	Vol. Recv.:	
Collect Date:	17-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	.123%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228	U	0.253	+/-0.205	0.126	+/-0.201	0.266	pCi/g		AKB 04/01/05	0720	412590	1
Americium-241	U	-0.00679	+/-0.173	0.137	+/-0.170	0.287	pCi/g					
Bismuth-212	U	-0.0575	+/-0.215	0.175	+/-0.210	0.378	pCi/g					
Bismuth-214		0.487	+/-0.133	0.042	+/-0.131	0.0904	pCi/g					
Cesium-134	U	-0.00842	+/-0.0368	0.0298	+/-0.036	0.064	pCi/g					
Cesium-137	U	0.00288	+/-0.0294	0.0251	+/-0.0288	0.0538	pCi/g					
Cobalt-60	U	-0.0111	+/-0.0442	0.0303	+/-0.0433	0.0665	pCi/g					
Europium-152	U	0.0619	+/-0.0719	0.0601	+/-0.0704	0.127	pCi/g					
Europium-154	U	0.0689	+/-0.143	0.123	+/-0.140	0.262	pCi/g					
Europium-155	U	0.0138	+/-0.0767	0.0711	+/-0.0752	0.148	pCi/g					
Lead-212	U	0.0654	+/-0.0722	0.0393	+/-0.0708	0.082	pCi/g					
Lead-214		0.625	+/-0.134	0.0453	+/-0.132	0.0957	pCi/g					
Manganese-54	U	-0.000659	+/-0.0328	0.027	+/-0.0322	0.058	pCi/g					
Niobium-94	U	-0.00891	+/-0.027	0.022	+/-0.0265	0.0473	pCi/g					
Potassium-40		64.0	+/-5.07	0.156	+/-4.97	0.372	pCi/g					
Radium-226		0.487	+/-0.133	0.042	+/-0.131	0.0904	pCi/g					
Silver-108m	U	-0.0183	+/-0.0274	0.0197	+/-0.0268	0.0422	pCi/g					
Thallium-208		0.0801	+/-0.0394	0.0194	+/-0.0386	0.0423	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90		0.0267	+/-0.0134	0.011	+/-0.0135	0.0227	pCi/g		LCW1 04/11/05	0918	415404	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	7.96	+/-5.66	4.40	+/-5.66	9.20	pCi/g		ATH1 04/10/05	0142	412898	4
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-102-C-B
Sample ID: 133280023

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified
4	EPA 906.0 Modified
5	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	61	(25%-125%)

Notes:
The Qualifiers in this report are defined as follows :

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- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID:	6000-0000-103-C-B	Project:	YANK01204
Sample ID:	133280024	Client ID:	YANK001
Matrix:	B	Vol. Recv.:	
Collect Date:	21-MAR-05		
Receive Date:	28-MAR-05		
Collector:	Client		
Moisture:	.249%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch	M
Rad Gamma Spec Analysis												
Gamma,Solid-FSS GAM & ALL FSS												
Actinium-228	UUI	0.00	+/-0.150	0.130	+/-0.147	0.273	pCi/g		AKB 04/01/05	0720	412590	1
Americium-241	U	0.0666	+/-0.114	0.0993	+/-0.112	0.207	pCi/g					
Bismuth-212	U	0.119	+/-0.179	0.165	+/-0.175	0.357	pCi/g					
Bismuth-214		0.939	+/-0.144	0.0405	+/-0.141	0.087	pCi/g					
Cesium-134	U	0.0146	+/-0.0259	0.0235	+/-0.0253	0.051	pCi/g					
Cesium-137	U	-0.00798	+/-0.024	0.0202	+/-0.0235	0.0439	pCi/g					
Cobalt-60	U	0.0118	+/-0.0223	0.0206	+/-0.0219	0.0466	pCi/g					
Europium-152	U	0.0126	+/-0.0621	0.0548	+/-0.0609	0.116	pCi/g					
Europium-154	U	0.00935	+/-0.0735	0.0639	+/-0.0721	0.142	pCi/g					
Europium-155	U	0.0101	+/-0.0607	0.0589	+/-0.0595	0.123	pCi/g					
Lead-212		0.269	+/-0.0568	0.0358	+/-0.0557	0.0747	pCi/g					
Lead-214		0.982	+/-0.135	0.0457	+/-0.132	0.0962	pCi/g					
Manganese-54	U	-0.00989	+/-0.0226	0.0181	+/-0.0221	0.0399	pCi/g					
Niobium-94	U	0.0029	+/-0.0208	0.0183	+/-0.0204	0.0397	pCi/g					
Potassium-40		5.67	+/-0.907	0.186	+/-0.889	0.426	pCi/g					
Radium-226		0.939	+/-0.144	0.0405	+/-0.141	0.087	pCi/g					
Silver-108m	U	0.000205	+/-0.0217	0.0184	+/-0.0213	0.0394	pCi/g					
Thallium-208	UUI	0.00	+/-0.0441	0.032	+/-0.0433	0.0672	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.0218	+/-0.0132	0.011	+/-0.0132	0.0227	pCi/g		LCW1 04/11/05	0918	415404	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid-HTD2,ALL FSS												
Tritium	U	2.57	+/-5.40	4.41	+/-5.40	9.23	pCi/g		ATH1 04/10/05	0214	412898	4
Solid Preparation												
Laboratory Composite – CONCRETE												

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	PD	03/30/05	0756	412545
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TC1	03/28/05	1930	412543
GL-RAD-A-026	Laboratory sample composite				412541

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston SC 29407 – (843) 556-8171 – www.gel.com

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut 06424
Contact: Mr. Pete Hollenbeck
Project: Soils PO# 002332

Report Date: April 11, 2005

Client Sample ID: 6000-0000-103-C-B
Sample ID: 133280024

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	AnalystDate	Time	Batch M

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified
3	EPA 905.0 Modified
4	EPA 906.0 Modified
5	GL-RAD-A-026

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	68	(25%-125%)

Notes:
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- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

QC Summary

Report Date: April 11, 2005

Connecticut Yankee Atomic Power
Haddam Neck Plant
362 Injun Hollow Road
East Hampton, Connecticut

Contact: Mr. Pete Hollenbeck

Workorder: 133280

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 412584										
QC1200815117 133280001 DUP										
Actinium-228		0.284 +/-0.165		0.315 +/-0.151	pCi/g	10			AKB	04/01/05 11:21
Americium-241		0.0693 +/-0.0392	U	0.0637 +/-0.0914	pCi/g	8				
Bismuth-212		0.333 +/-0.218	UUI	0.00 +/-0.437	pCi/g	14				
Bismuth-214		0.168 +/-0.071		0.194 +/-0.0873	pCi/g	15				
Cesium-134	U	0.00349 +/-0.0228	U	0.0443 +/-0.0343	pCi/g	171				
Cesium-137		0.204 +/-0.0419		0.233 +/-0.0527	pCi/g	13		(0%-20%)		
Cobalt-60	U	0.00581 +/-0.0196	U	-0.00924 +/-0.0227	pCi/g	878*		(0%-20%)		
Europium-152	U	0.025 +/-0.045	U	-0.012 +/-0.057	pCi/g	572				
Europium-154	U	0.005 +/-0.0598	U	0.0265 +/-0.0559	pCi/g	137				
Europium-155	U	0.0259 +/-0.0368	U	0.0327 +/-0.0543	pCi/g	23				
Lead-212		0.331 +/-0.0448		0.289 +/-0.0646	pCi/g	14				
Lead-214		0.226 +/-0.0637		0.282 +/-0.0726	pCi/g	22				
Manganese-54	U	-0.00468 +/-0.0204	U	0.0142 +/-0.0221	pCi/g	396				
Niobium-94	U	-0.00635 +/-0.0165	U	-0.00495 +/-0.0197	pCi/g	N/A				
Potassium-40		6.38 +/-0.676		7.14 +/-0.967	pCi/g	11		(0%-20%)		
Radium-226		0.168 +/-0.071		0.194 +/-0.0873	pCi/g	15		(0%-20%)		
Silver-108m	U	0.020 +/-0.0189	U	0.0128 +/-0.0193	pCi/g	44				
Thallium-208		0.094 +/-0.0365		0.0845 +/-0.0559	pCi/g	11				
QC1200815118 LCS										
Actinium-228			U	-0.153 +/-0.821	pCi/g					04/01/05 09:15
Americium-241	23.4			23.4 +/-1.94	pCi/g		100	(75%-125%)		
Bismuth-212			U	0.758	pCi/g					

QC Summary

Workorder: 133280

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 412584										
				+/-1.22						
Bismuth-214			U	0.0985	pCi/g				AKB	04/01/05 09:15
				+/-0.285						
Cesium-134			U	-0.0014	pCi/g					
				+/-0.189						
Cesium-137	9.08			9.65	pCi/g		106	(75%-125%)		
				+/-0.948						
Cobalt-60	12.9			14.3	pCi/g		111	(75%-125%)		
				+/-1.16						
Europium-152			U	0.0012	pCi/g					
				+/-0.341						
Europium-154			U	0.151	pCi/g					
				+/-0.369						
Europium-155			U	-0.172	pCi/g					
				+/-0.325						
Lead-212			U	0.0637	pCi/g					
				+/-0.256						
Lead-214			U	0.308	pCi/g					
				+/-0.256						
Manganese-54			U	-0.078	pCi/g					
				+/-0.186						
Niobium-94			U	0.0147	pCi/g					
				+/-0.148						
Potassium-40			U	0.555	pCi/g					
				+/-0.907						
Radium-226			U	0.0985	pCi/g			(75%-125%)		
				+/-0.285						
Silver-108m			U	-0.023	pCi/g					
				+/-0.150						
Thallium-208			U	0.120	pCi/g					
				+/-0.157						
QC1200815116 MB										
Actinium-228			U	0.0343	pCi/g					04/01/05 11:20
				+/-0.145						
Americium-241			U	-0.0679	pCi/g					
				+/-0.0883						
Bismuth-212			U	-0.0465	pCi/g					
				+/-0.169						
Bismuth-214			U	0.0558	pCi/g					
				+/-0.0658						
Cesium-134			U	0.0175	pCi/g					
				+/-0.0512						
Cesium-137			U	0.0047	pCi/g					
				+/-0.0282						
Cobalt-60			U	-0.00971	pCi/g					
				+/-0.0237						
Europium-152			U	0.0279	pCi/g					

QC Summary

Workorder: 133280

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 412584										
				+/-0.0673						
Europium-154			U	-0.0071	pCi/g				AKB	04/01/05 11:20
				+/-0.0729						
Europium-155			U	0.0334	pCi/g					
				+/-0.0584						
Lead-212			U	0.046	pCi/g					
				+/-0.0373						
Lead-214			U	0.00344	pCi/g					
				+/-0.0518						
Manganese-54			U	0.000344	pCi/g					
				+/-0.024						
Niobium-94			U	0.0071	pCi/g					
				+/-0.0256						
Potassium-40			U	0.262	pCi/g					
				+/-0.285						
Radium-226			U	0.0558	pCi/g					
				+/-0.0658						
Silver-108m			U	0.000395	pCi/g					
				+/-0.022						
Thallium-208			U	0.0304	pCi/g					
				+/-0.026						
Batch 412590										
QC1200815132 133280021 DUP										
Actinium-228		1.04		1.15	pCi/g	10			AKB	04/01/05 07:22
		+/-0.164		+/-0.197						
Americium-241	U	0.011	U	-0.0263	pCi/g	485				
		+/-0.0394		+/-0.121						
Bismuth-212		0.648		0.881	pCi/g	31				
		+/-0.155		+/-0.357						
Bismuth-214		0.295		0.395	pCi/g	29				
		+/-0.0587		+/-0.102						
Cesium-134	UUI	0.00	UUI	0.00	pCi/g	62				
		+/-0.0221		+/-0.0323						
Cesium-137	U	-0.00695	U	-0.00813	pCi/g	N/A		(0%-20%)		
		+/-0.0113		+/-0.0227						
Cobalt-60	U	0.00217	U	-0.00138	pCi/g	896*		(0%-20%)		
		+/-0.0125		+/-0.0185						
Europium-152	U	-0.0102	U	-0.0247	pCi/g	N/A				
		+/-0.0295		+/-0.0634						
Europium-154	U	-0.0378	U	-0.0352	pCi/g	N/A				
		+/-0.0313		+/-0.0747						
Europium-155	U	0.0409	U	0.0832	pCi/g	68				
		+/-0.0433		+/-0.107						
Lead-212		0.984		1.13	pCi/g	14				
		+/-0.0903		+/-0.123						
Lead-214		0.355		0.468	pCi/g	28				
		+/-0.0509		+/-0.100						

QC Summary

Workorder: 133280

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 412590										
Manganese-54		U 0.011 +/-0.0171	U	0.0157 +/-0.0251	pCi/g	35				
Niobium-94		U 0.00605 +/-0.0107	U	-0.00321 +/-0.022	pCi/g	652			AKB	04/01/05 07:22
Potassium-40		6.17 +/-0.561		6.40 +/-1.06	pCi/g	4		(0%-20%)		
Radium-226		0.295 +/-0.0587		0.395 +/-0.102	pCi/g	29*		(0%-20%)		
Silver-108m		U -0.0023 +/-0.00959	U	0.0053 +/-0.0234	pCi/g	508				
Thallium-208		0.300 +/-0.040		0.346 +/-0.0617	pCi/g	14				
QC1200815133 LCS										
Actinium-228			U	0.222 +/-0.498	pCi/g					04/01/05 09:08
Americium-241	23.4			24.3 +/-3.23	pCi/g		104	(75%-125%)		
Bismuth-212			U	-0.515 +/-1.00	pCi/g					
Bismuth-214			U	-0.0168 +/-0.191	pCi/g					
Cesium-134			U	-0.123 +/-0.122	pCi/g					
Cesium-137	9.08			9.50 +/-0.795	pCi/g		105	(75%-125%)		
Cobalt-60	12.9			13.7 +/-1.04	pCi/g		106	(75%-125%)		
Europium-152			U	0.194 +/-0.282	pCi/g					
Europium-154			U	-0.107 +/-0.261	pCi/g					
Europium-155			U	0.0789 +/-0.224	pCi/g					
Lead-212			U	0.00391 +/-0.137	pCi/g					
Lead-214			U	0.0925 +/-0.198	pCi/g					
Manganese-54			U	-0.0528 +/-0.117	pCi/g					
Niobium-94			U	-0.0265 +/-0.0886	pCi/g					
Potassium-40			U	0.568 +/-0.740	pCi/g					
Radium-226			U	-0.0168 +/-0.191	pCi/g			(75%-125%)		
Silver-108m			U	0.0159 +/-0.0938	pCi/g					
Thallium-208			U	-0.0254	pCi/g					

QC Summary

Workorder: 133280

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 412590										
				+/-0.099						
QC1200815131 MB										
Actinium-228			U	0.145 +/-0.125	pCi/g				AKB	04/01/05 07:21
Americium-241			U	-0.049 +/-0.0954	pCi/g					
Bismuth-212			U	-0.0333 +/-0.197	pCi/g					
Bismuth-214			U	0.0806 +/-0.0542	pCi/g					
Cesium-134			U	-0.0156 +/-0.0206	pCi/g					
Cesium-137			U	1.690E-05 +/-0.0259	pCi/g					
Cobalt-60			U	-0.00964 +/-0.0221	pCi/g					
Europium-152			U	-0.00796 +/-0.059	pCi/g					
Europium-154			U	0.00197 +/-0.0779	pCi/g					
Europium-155			U	0.0647 +/-0.0615	pCi/g					
Lead-212			U	0.0694 +/-0.0443	pCi/g					
Lead-214			U	0.0292 +/-0.0541	pCi/g					
Manganese-54			U	0.00247 +/-0.0219	pCi/g					
Niobium-94			U	-0.00302 +/-0.023	pCi/g					
Potassium-40			U	0.396 +/-0.256	pCi/g					
Radium-226			U	0.0806 +/-0.0542	pCi/g					
Silver-108m			U	-0.00682 +/-0.0214	pCi/g					
Thallium-208			U	0.021 +/-0.0321	pCi/g					
Rad Gas Flow										
Batch 412860										
QC1200815810 133280003 DUP										
Strontium-90		U 0.0115 +/-0.0118	U	0.0635 +/-0.0392	pCi/g	0		(0%-20%)	LCW1	04/06/05 12:40
QC1200815812 LCS										
Strontium-90	2.16			2.14 +/-0.119	pCi/g		99	(75%-125%)		04/06/05 15:02
QC1200815809 MB										

QC Summary

Workorder: 133280

Parmname	NOM		Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow											
Batch 412860											
Strontium-90					0.0126 +/-0.00686	pCi/g					04/07/05 07:16
QC1200815811 133280003 MS											
Strontium-90	4.84	U	0.0115 +/-0.0118		5.99 +/-0.144	pCi/g		123	(75%-125%)	LCW1	
Batch 415404											
QC1200821771 133280022 DUP											
Strontium-90		U	0.0225 +/-0.0151		0.0306 +/-0.0133	pCi/g	31*		(0%-20%)	LCW1	04/11/05 09:18
QC1200821773 LCS											
Strontium-90	1.20				1.24 +/-0.0833	pCi/g		103	(75%-125%)		04/11/05 09:16
QC1200821770 MB											
Strontium-90				U	0.0121 +/-0.0117	pCi/g					04/11/05 09:18
QC1200821772 133280022 MS											
Strontium-90	1.26	U	0.0225 +/-0.0151		1.00 +/-0.0791	pCi/g		78	(75%-125%)		04/11/05 09:16
Rad Liquid Scintillation											
Batch 412897											
QC1200815911 133280001 DUP											
Tritium		U	3.65 +/-5.88	U	3.51 +/-5.94	pCi/g	4		(0%-20%)	ATH1	04/09/05 19:51
QC1200815913 LCS											
Tritium	75.2				68.3 +/-7.49	pCi/g		91	(75%-125%)		04/09/05 20:55
QC1200815910 MB											
Tritium				U	-0.439 +/-5.23	pCi/g					04/09/05 19:19
QC1200815912 133280001 MS											
Tritium	78.9	U	3.65 +/-5.88		64.4 +/-7.78	pCi/g		77	(75%-125%)		04/09/05 20:23
Batch 412898											
QC1200815915 133280016 DUP											
Tritium		U	4.54 +/-5.70	U	1.65 +/-4.90	pCi/g	0		(0%-20%)	ATH1	04/10/05 03:17
QC1200815917 LCS											
Tritium	74.8				88.9 +/-9.39	pCi/g		119	(75%-125%)		04/10/05 04:21
QC1200815914 MB											
Tritium				U	5.15 +/-5.15	pCi/g					04/10/05 02:45
QC1200815916 133280016 MS											
Tritium	78.8	U	4.54 +/-5.70		82.1 +/-9.61	pCi/g		98	(75%-125%)		04/10/05 03:49

Notes:
The Qualifiers in this report are defined as follows:

GENERAL ENGINEERING LABORATORIES, LLC
2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Workorder: 133280

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

- * Indicates that a quality control analyte recovery is outside of specified acceptance criteria.
- ** Indicates the analyte is a surrogate compound.
- B Target analyte was detected in the sample as well as the associated blank.
- BD Flag for results below the MDC or a flag for low tracer recovery.
- E Concentration of the target analyte exceeds the instrument calibration range.
- H Analytical holding time exceeded.
- J Indicates an estimated value. The result was greater than the detection limit, but less than the reporting limit.
- U Indicates the target analyte was analyzed for but not detected above the detection limit.
- UI Uncertain identification for gamma spectroscopy.
- X Lab-specific qualifier-please see case narrative, data summary package or contact your project manager for details.
- h Sample preparation or preservation holding time exceeded.

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

Analytical Data Package Prepared For

Connecticut Yankee

Radiochemical Analysis By

STL Richland

2800 G.W. Way, Richland Wa, 99352, (509)-375-3131.

Assigned Laboratory Code: STLR

Data Package Contains 146 *Pages*

Report No.: 28635

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
28704		3107-0000-194-C-1C-01	J5D150180-1	G8FQQ1AD	9G8FQQ10	5105267
		3107-0000-194-C-1C-01	J5D150180-1	G8FQQ1AC	9G8FQQ10	5105278
		3107-0000-194-C-1C-01	J5D150180-1	G8FQQ1AA	9G8FQQ10	5105290
		3107-0000-194-C-1C-02	J5D150180-2	G8FQX1AD	9G8FQX10	5105267
		3107-0000-194-C-1C-02	J5D150180-2	G8FQX1AC	9G8FQX10	5105278
		3107-0000-194-C-1C-02	J5D150180-2	G8FQX1AA	9G8FQX10	5105290
		3107-0000-194-C-1C-03	J5D150180-3	G8FQ01AD	9G8FQ010	5105267
		3107-0000-194-C-1C-03	J5D150180-3	G8FQ01AC	9G8FQ010	5105278
		3107-0000-194-C-1C-03	J5D150180-3	G8FQ01AA	9G8FQ010	5105290
		3107-0000-194-C-1C-04	J5D150180-4	G8FQ11AD	9G8FQ110	5105267
		3107-0000-194-C-1C-04	J5D150180-4	G8FQ11AC	9G8FQ110	5105278
		3107-0000-194-C-1C-04	J5D150180-4	G8FQ11AA	9G8FQ110	5105290
		3107-0000-194-C-1C-05	J5D150180-5	G8FQ21AD	9G8FQ210	5105267
		3107-0000-194-C-1C-05	J5D150180-5	G8FQ21AC	9G8FQ210	5105278
		3107-0000-194-C-1C-05	J5D150180-5	G8FQ21AA	9G8FQ210	5105290
		3107-0000-194-C-2C-06	J5D150180-6	G8FQ31AD	9G8FQ310	5105267
		3107-0000-194-C-2C-06	J5D150180-6	G8FQ31AC	9G8FQ310	5105278
		3107-0000-194-C-2C-06	J5D150180-6	G8FQ31AA	9G8FQ310	5105290
		3107-0000-195-C-1C-01	J5D150180-7	G8FQ71AD	9G8FQ710	5105267
		3107-0000-195-C-1C-01	J5D150180-7	G8FQ71AC	9G8FQ710	5105278
		3107-0000-195-C-1C-01	J5D150180-7	G8FQ71AA	9G8FQ710	5105290
		3107-0000-195-C-1C-02	J5D150180-8	G8FQ91AD	9G8FQ910	5105267
		3107-0000-195-C-1C-02	J5D150180-8	G8FQ91AC	9G8FQ910	5105278
		3107-0000-195-C-1C-02	J5D150180-8	G8FQ91AA	9G8FQ910	5105290
		3107-0000-195-C-1C-03	J5D150180-9	G8FRA1AD	9G8FRA10	5105267
		3107-0000-195-C-1C-03	J5D150180-9	G8FRA1AC	9G8FRA10	5105278

Report No.: 28635

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
28704		3107-0000-195-C-1C-03	J5D150180-9	G8FRA1AA	9G8FRA10	5105290
		3107-0000-195-C-1C-04	J5D150180-10	G8FRC1AD	9G8FRC10	5105267
		3107-0000-195-C-1C-04	J5D150180-10	G8FRC1AC	9G8FRC10	5105278
		3107-0000-195-C-1C-04	J5D150180-10	G8FRC1AA	9G8FRC10	5105290
		3107-0000-195-C-2C-05	J5D150180-11	G8FRF1AD	9G8FRF10	5105267
		3107-0000-195-C-2C-05	J5D150180-11	G8FRF1AC	9G8FRF10	5105278
		3107-0000-195-C-2C-05	J5D150180-11	G8FRF1AA	9G8FRF10	5105290
		3107-0000-195-C-2C-06	J5D150180-12	G8FRG1AD	9G8FRG10	5105267
		3107-0000-195-C-2C-06	J5D150180-12	G8FRG1AC	9G8FRG10	5105278
		3107-0000-195-C-2C-06	J5D150180-12	G8FRG1AA	9G8FRG10	5105290
		3107-0000-196-C-1C-01	J5D150180-13	G8FRH1AD	9G8FRH10	5105267
		3107-0000-196-C-1C-01	J5D150180-13	G8FRH1AC	9G8FRH10	5105278
		3107-0000-196-C-1C-01	J5D150180-13	G8FRH1AA	9G8FRH10	5105290
		3107-0000-196-C-1C-02	J5D150180-14	G8FRK1AD	9G8FRK10	5105267
		3107-0000-196-C-1C-02	J5D150180-14	G8FRK1AC	9G8FRK10	5105278
		3107-0000-196-C-1C-02	J5D150180-14	G8FRK1AA	9G8FRK10	5105290
		3107-0000-196-C-1C-03	J5D150180-15	G8FRN1AD	9G8FRN10	5105267
		3107-0000-196-C-1C-03	J5D150180-15	G8FRN1AC	9G8FRN10	5105278
		3107-0000-196-C-1C-03	J5D150180-15	G8FRN1AA	9G8FRN10	5105290
		3107-0000-196-C-2C-04	J5D150180-16	G8FRQ1AD	9G8FRQ10	5105271
		3107-0000-196-C-2C-04	J5D150180-16	G8FRQ1AC	9G8FRQ10	5105284
		3107-0000-196-C-2C-04	J5D150180-16	G8FRQ1AA	9G8FRQ10	5105292
		3107-0000-196-C-2C-05	J5D150180-17	G8FRR1AD	9G8FRR10	5105271
		3107-0000-196-C-2C-05	J5D150180-17	G8FRR1AC	9G8FRR10	5105284
		3107-0000-196-C-2C-05	J5D150180-17	G8FRR1AA	9G8FRR10	5105292
		3107-0000-196-C-2C-06	J5D150180-18	G8FRT1AD	9G8FRT10	5105271
		3107-0000-196-C-2C-06	J5D150180-18	G8FRT1AC	9G8FRT10	5105284
		3107-0000-196-C-2C-06	J5D150180-18	G8FRT1AA	9G8FRT10	5105292
		3107-0000-197-C-1C-01	J5D150180-19	G8FRV1AD	9G8FRV10	5105271
		3107-0000-197-C-1C-01	J5D150180-19	G8FRV1AC	9G8FRV10	5105284
		3107-0000-197-C-1C-01	J5D150180-19	G8FRV1AA	9G8FRV10	5105292
		3107-0000-197-C-1C-02	J5D150180-20	G8FRW1AD	9G8FRW10	5105271
		3107-0000-197-C-1C-02	J5D150180-20	G8FRW1AC	9G8FRW10	5105284
		3107-0000-197-C-1C-02	J5D150180-20	G8FRW1AA	9G8FRW10	5105292
		3107-0000-197-C-1C-03	J5D150180-21	G8FRX1AD	9G8FRX10	5105271
		3107-0000-197-C-1C-03	J5D150180-21	G8FRX1AC	9G8FRX10	5105284
		3107-0000-197-C-1C-03	J5D150180-21	G8FRX1AA	9G8FRX10	5105292
		3107-0000-197-C-1C-04	J5D150180-22	G8FR21AD	9G8FR210	5105271
		3107-0000-197-C-1C-04	J5D150180-22	G8FR21AC	9G8FR210	5105284

Report No.: 28635

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
28704		3107-0000-197-C-1C-04	J5D150180-22	G8FR21AA	9G8FR210	5105292
		3107-0000-197-C-1C-05	J5D150180-23	G8FR31AD	9G8FR310	5105271
		3107-0000-197-C-1C-05	J5D150180-23	G8FR31AC	9G8FR310	5105284
		3107-0000-197-C-1C-05	J5D150180-23	G8FR31AA	9G8FR310	5105292
		3107-0000-197-C-1C-06	J5D150180-24	G8FR51AD	9G8FR510	5105271
		3107-0000-197-C-1C-06	J5D150180-24	G8FR51AC	9G8FR510	5105284
		3107-0000-197-C-1C-06	J5D150180-24	G8FR51AA	9G8FR510	5105292
		3107-0000-198-C-1C-01	J5D150180-25	G8FR71AD	9G8FR710	5105271
		3107-0000-198-C-1C-01	J5D150180-25	G8FR71AC	9G8FR710	5105284
		3107-0000-198-C-1C-01	J5D150180-25	G8FR71AA	9G8FR710	5105292
		3107-0000-198-C-1C-02	J5D150180-26	G8FR81AD	9G8FR810	5105271
		3107-0000-198-C-1C-02	J5D150180-26	G8FR81AC	9G8FR810	5105284
		3107-0000-198-C-1C-02	J5D150180-26	G8FR81AA	9G8FR810	5105292
		3107-0000-198-C-1C-03	J5D150180-27	G8FR91AD	9G8FR910	5105271
		3107-0000-198-C-1C-03	J5D150180-27	G8FR91AC	9G8FR910	5105284
		3107-0000-198-C-1C-03	J5D150180-27	G8FR91AA	9G8FR910	5105292
		3107-0000-198-C-1C-04	J5D150180-28	G8FTC1AD	9G8FTC10	5105271
		3107-0000-198-C-1C-04	J5D150180-28	G8FTC1AC	9G8FTC10	5105284
		3107-0000-198-C-1C-04	J5D150180-28	G8FTC1AA	9G8FTC10	5105292
		3107-0000-198-C-1C-05	J5D150180-29	G8FTD1AD	9G8FTD10	5105271
		3107-0000-198-C-1C-05	J5D150180-29	G8FTD1AC	9G8FTD10	5105284
		3107-0000-198-C-1C-05	J5D150180-29	G8FTD1AA	9G8FTD10	5105292
		3107-0000-198-C-1C-06	J5D150180-30	G8FTE1AD	9G8FTE10	5105271
		3107-0000-198-C-1C-06	J5D150180-30	G8FTE1AC	9G8FTE10	5105284
		3107-0000-198-C-1C-06	J5D150180-30	G8FTE1AA	9G8FTE10	5105292
		3107-0000-199-C-1C-01	J5D150180-31	G8FTG1AD	9G8FTG10	5105275
		3107-0000-199-C-1C-01	J5D150180-31	G8FTG1AC	9G8FTG10	5105287
		3107-0000-199-C-1C-01	J5D150180-31	G8FTG1AA	9G8FTG10	5105297
		3107-0000-199-C-1C-02	J5D150180-32	G8FTH1AD	9G8FTH10	5105275
		3107-0000-199-C-1C-02	J5D150180-32	G8FTH1AC	9G8FTH10	5105287
		3107-0000-199-C-1C-02	J5D150180-32	G8FTH1AA	9G8FTH10	5105297
		3107-0000-199-C-1C-03	J5D150180-33	G8FTJ1AD	9G8FTJ10	5105275
		3107-0000-199-C-1C-03	J5D150180-33	G8FTJ1AC	9G8FTJ10	5105287
		3107-0000-199-C-1C-03	J5D150180-33	G8FTJ1AA	9G8FTJ10	5105297
		3107-0000-199-C-1C-04	J5D150180-34	G8FTK1AD	9G8FTK10	5105275
		3107-0000-199-C-1C-04	J5D150180-34	G8FTK1AC	9G8FTK10	5105287
		3107-0000-199-C-1C-04	J5D150180-34	G8FTK1AA	9G8FTK10	5105297
		3107-0000-199-C-1C-05	J5D150180-35	G8FTL1AD	9G8FTL10	5105275
		3107-0000-199-C-1C-05	J5D150180-35	G8FTL1AC	9G8FTL10	5105287

Report No.: 28635

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
28704		3107-0000-199-C-1C-05	J5D150180-35	G8FTL1AA	9G8FTL10	5105297
		3107-0000-199-C-2C-06	J5D150180-36	G8FTM1AD	9G8FTM10	5105275
		3107-0000-199-C-2C-06	J5D150180-36	G8FTM1AC	9G8FTM10	5105287
		3107-0000-199-C-2C-06	J5D150180-36	G8FTM1AA	9G8FTM10	5105297
		9801-0000-030-RA-01	J5D150180-37	G8FTN1AD	9G8FTN10	5105275
		9801-0000-030-RA-01	J5D150180-37	G8FTN1AC	9G8FTN10	5105287
		9801-0000-030-RA-01	J5D150180-37	G8FTN1AA	9G8FTN10	5105297
		9801-0000-031-RA-01	J5D150180-38	G8FTX1AD	9G8FTX10	5105275
		9801-0000-031-RA-01	J5D150180-38	G8FTX1AC	9G8FTX10	5105287
		9801-0000-031-RA-01	J5D150180-38	G8FTX1AA	9G8FTX10	5105297
		9801-0000-032-RA-01	J5D150180-39	G8FT01AD	9G8FT010	5105275
		9801-0000-032-RA-01	J5D150180-39	G8FT01AC	9G8FT010	5105287
		9801-0000-032-RA-01	J5D150180-39	G8FT01AA	9G8FT010	5105297
		9801-0000-033-RA-01	J5D150180-40	G8FT11AD	9G8FT110	5105275
		9801-0000-033-RA-01	J5D150180-40	G8FT11AC	9G8FT110	5105287
		9801-0000-033-RA-01	J5D150180-40	G8FT11AA	9G8FT110	5105297
		9801-0000-034-RA-01	J5D150180-41	G8FT21AD	9G8FT210	5105275
		9801-0000-034-RA-01	J5D150180-41	G8FT21AC	9G8FT210	5105287
		9801-0000-034-RA-01	J5D150180-41	G8FT21AA	9G8FT210	5105297
		9801-0000-039-RA	J5D150180-43	G8FT61AD	9G8FT610	5105275
	DUCT	9801-0000-039-RA	J5D150180-43	G8FT61AC	9G8FT610	5105287
	DUCT	9801-0000-039-RA	J5D150180-43	G8FT61AA	9G8FT610	5105297
		9801-0000-040-RA-01	J5D150180-42	G8FT41AD	9G8FT410	5105275
	DUCT	9801-0000-040-RA-01	J5D150180-42	G8FT41AC	9G8FT410	5105287
		9801-0000-040-RA-01	J5D150180-42	G8FT41AA	9G8FT410	5105297

SEVERN TRENT STL

STL Richland
2800 George Washington Way
Richland, WA 99354

Tel: 509 375 3131 Fax: 509 375 5590
www.stl-inc.com

Certificate of Analysis

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road
East Hampton, CT 06424

April 21, 2005

Attention: Pete Hollenbeck

Date Received in Lab	:	April 15, 2005
Number of Samples / Type	:	Forty-Three (43) / Concrete, Bedrock, Soil
SDG Number	:	28704
Project Name/Number	:	Haddam Neck Decommissioning
COC Number(s)	:	2005-00136, 2005-00137, 2005-00138, 2005-00139, 2005-00140
Purchase Order Number	:	002133
MSR	:	05-1144

CASE NARRATIVE

I. Introduction

On April 15, 2005, forty-three concrete, bedrock, and soil samples were received at STL Richland (STLR). Upon receipt, the samples were assigned the STLR identification numbers as described on the cover page of the Analytical Data Package report form. The samples were assigned to Lot Number J5D150180.

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

The requested priority was 7-days. The following exceptions to the FSS project requirements were confirmed via email from D. Keefer on 3/29/05:

- The Total Strontium method would be performed in lieu of Strontium-90 due to the priority turnaround time required.
- The Strontium RDL requested is 0.025 pCi/g.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information, analytical results and the appropriate associated statistical errors.

The requested analyses were: Gas Proportional Counting
Total Strontium by method RICH-RC-5006
Gamma Spectroscopy
Gamma Spec by method RICH-RC-5017
Liquid Scintillation Counting
Tritium by method RICH-RC-5037

IV. Quality Control

The analytical result for each analysis performed includes a minimum of one laboratory control sample (LCS), and one reagent blank sample analysis. Any exceptions have been noted in the "Comments" section.

QC and sample results are reported in the same units.

V. Comments

The samples were processed in three (four for Tritium) separate analysis batches. Notes for each analytical batch are detailed below.

Gas Proportional Counting

Total Strontium by method RICH-RC-5006:

Batch 5105271: The LCS, batch blank, sample, and sample duplicate (3107-0000-197-C-1C-03) results are within acceptance limits.

Batch 5105267: The LCS, batch blank, sample, and sample duplicate (3107-0000-194-C-1C-01) results are within acceptance limits.

Batch 5105275: The achieved MDAs for samples 3107-0000-199-C-1C-02 (0.0306 pCi/g), 3107-0000-199-C-1C-04 (0.0290 pCi/g) and 9801-0000-033-RA-01 (0.0273 pCi/g) are greater than the RDL (0.025 pCi/g) due to tracer yields less than 50%. The tracer yields for these samples are greater than the minimum acceptance limits, therefore the results are included in the report. Except as noted, the LCS, batch blank, sample, and sample duplicate (3107-0000-199-C-1C-01) results are within acceptance limits.

Gamma Spectroscopy

Gamma Spec by method RICH-RC-5017:

Batch 5105290: The LCS, batch blank, sample, and sample duplicate (3107-0000-194-C-1C-01) results are within acceptance limits.

Batch 5105292: The LCS, batch blank, sample, and sample duplicate (3107-0000-196-C-2C-04) results are within acceptance limits.

Batch 5105297: The LCS, batch blank, sample, and sample duplicate (3107-0000-199-C-1C-01) results are within acceptance limits.

Liquid Scintillation Counting

Tritium by method RICH-RC-5037:

Batch 5105284: The LCS, batch blank, sample, and sample duplicate (3107-0000-194-C-2C-06) results are within acceptance limits.

Batch 5105287: The LCS, batch blank, sample, and sample duplicate (3107-0000-199-C-1C-01) results are within acceptance limits.

Batch 5105278: The LCS, batch blank, sample, and sample duplicate (3107-0000-194-C-1C-04) results are within acceptance limits.

I certify that this Certificate of Analysis is in compliance with the SOW, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

for Jackie Waddell
Jackie Waddell
Laboratory Director

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	Isotope(s)	STL Richland's SOP number
EPA 901.1	Cs-134, I-131	RICH-RC-5017
EPA 900.0	Alpha & Beta	RICH-RC-5014
EPA 903.1	Ra-226	RICH-RC-5005
EPA 904.0	Ra-228	RICH-RC-5005
EPA 905.0	Sr89/90	RICH-RC-5006
ASTM D2460	Total Radium	RICH-RC-5027
Standard Method 7500-U-C & ASTM D5174	Uranium	RICH-RC-5058
EPA 906.0	Tritium	RICH-RC-5007
NOTE:		
The Gross Alpha LCS is prepared with Am-241 (unless otherwise specified in the case narrative)		
The Gross Beta LCS is prepared with Sr/Y-90 (unless otherwise specified in the case narrative)		

Uncertainty Estimation

STL Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/vn), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or STL Richland.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) u_c - *Combined Uncertainty.*	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, u_c *the combined uncertainty*. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or STL Richland "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the Work Order Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt($TPUs^2$ + $TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by STL Richland upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

Date: 21-Apr-05

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105290	RICHRC5017								
	3107-0000-194-C-1C-01								
	G8FQQ1AA	AC-228	4.10E-01 +- 1.74E-01	U	pCi/g		3.33E-01		
		AG-108M	1.60E-02 +- 2.56E-02	U	pCi/g		4.80E-02		
		AM-241	1.78E-02 +- 8.76E-02	U	pCi/g		1.55E-01		
		BI-212	5.33E-01 +- 4.66E-01	U	pCi/g		9.13E-01		
		BI-214	3.21E-01 +- 1.61E-01	U	pCi/g		1.99E-01		
		CO-60	1.89E-02 +- 3.43E-02	U	pCi/g		6.91E-02	3.00E+00	
		CS-134	2.99E-03 +- 3.13E-02	U	pCi/g		5.83E-02	1.00E+01	
		CS-137	1.15E-02 +- 2.93E-02	U	pCi/g		5.53E-02	2.00E+01	
		EU-152	-6.49E-02 +- 9.38E-02	U	pCi/g		1.31E-01	9.00E+00	
		EU-154	-8.34E-02 +- 9.71E-02	U	pCi/g		1.64E-01	7.00E+00	
		EU-155	7.20E-02 +- 7.26E-02	U	pCi/g		1.31E-01	3.00E+02	
		K-40	7.92E+00 +- 1.49E+00		pCi/g		5.64E-01		
		MN-54	2.50E-03 +- 3.33E-02	U	pCi/g		6.05E-02	2.00E+00	
		NB-94	-8.07E-03 +- 2.30E-02	U	pCi/g		4.06E-02	3.00E-01	
		PB-212	3.97E-01 +- 9.99E-02		pCi/g		1.08E-01		
		PB-214	3.17E-01 +- 1.75E-01		pCi/g		1.07E-01		
		RA-226	3.21E-01 +- 1.61E-01	U	pCi/g		1.99E-01		
		TL-208	1.75E-01 +- 6.16E-02	U	pCi/g		9.20E-02		
	3107-0000-194-C-1C-01 DUP								
	G8FQQ1AH	AC-228	4.47E-01 +- 1.77E-01	U	pCi/g		3.46E-01		
		AG-108M	-1.48E-02 +- 2.85E-02	U	pCi/g		4.83E-02		
		AM-241	-2.48E-01 +- 1.41E-01	U	pCi/g		2.13E-01		
		BI-212	2.85E-01 +- 4.58E-01	U	pCi/g		8.55E-01		
		BI-214	4.65E-01 +- 1.23E-01	U	pCi/g		2.02E-01		
		CO-60	1.93E-02 +- 3.36E-02	U	pCi/g		6.64E-02	3.00E+00	
		CS-134	3.08E-02 +- 3.76E-02	U	pCi/g		7.11E-02	1.00E+01	
		CS-137	1.50E-02 +- 3.29E-02	U	pCi/g		6.08E-02	2.00E+01	
		EU-152	-2.61E-01 +- 1.36E-01	U	pCi/g		1.56E-01	9.00E+00	
		EU-154	-4.81E-02 +- 1.13E-01	U	pCi/g		1.93E-01	7.00E+00	
		EU-155	3.23E-02 +- 9.83E-02	U	pCi/g		1.71E-01	3.00E+02	
		K-40	7.12E+00 +- 1.40E+00		pCi/g		5.05E-01		
		MN-54	-4.06E-03 +- 3.06E-02	U	pCi/g		5.45E-02	2.00E+00	
		NB-94	1.24E-02 +- 2.74E-02	U	pCi/g		5.24E-02	3.00E-01	
		PB-212	6.00E-01 +- 1.42E-01		pCi/g		9.07E-02		
		PB-214	2.48E-01 +- 1.04E-01		pCi/g		1.03E-01		
		RA-226	4.65E-01 +- 1.23E-01	U	pCi/g		2.02E-01		

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

U Qual - Analyzed for, but the result is less than the Mdc/Mda/Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105290 RICHRC5017									
3107-0000-194-C-1C-01 DUP									
	G8FQQ1AH	TL-208	1.17E-01 +- 6.76E-02	U	pCi/g		8.84E-02		
3107-0000-194-C-1C-02									
	G8FQX1AA	AC-228	3.17E-01 +- 1.30E-01	U	pCi/g		2.04E-01		
		AG-108M	-1.32E-02 +- 1.48E-02	U	pCi/g		2.37E-02		
		AM-241	-5.77E-03 +- 6.60E-02	U	pCi/g		1.14E-01		
		BI-212	5.82E-01 +- 2.67E-01	U	pCi/g		5.48E-01		
		BI-214	5.08E-01 +- 9.70E-02		pCi/g		6.35E-02		
		CO-60	-8.34E-03 +- 1.77E-02	U	pCi/g		3.03E-02	3.00E+00	
		CS-134	1.73E-02 +- 1.95E-02	U	pCi/g		3.83E-02	1.00E+01	
		CS-137	1.51E-04 +- 2.01E-02	U	pCi/g		3.55E-02	2.00E+01	
		EU-152	-1.90E-02 +- 4.98E-02	U	pCi/g		8.52E-02	9.00E+00	
		EU-154	2.95E-02 +- 5.44E-02	U	pCi/g		1.06E-01	7.00E+00	
		EU-155	2.34E-03 +- 5.94E-02	U	pCi/g		1.02E-01	3.00E+02	
		K-40	7.63E+00 +- 1.20E+00		pCi/g		3.18E-01		
		MN-54	5.18E-03 +- 1.95E-02	U	pCi/g		3.58E-02	2.00E+00	
		NB-94	-1.03E-02 +- 1.88E-02	U	pCi/g		3.16E-02	3.00E-01	
		PB-212	3.64E-01 +- 7.42E-02		pCi/g		6.87E-02		
		PB-214	4.74E-01 +- 1.06E-01		pCi/g		6.45E-02		
		RA-226	5.08E-01 +- 9.70E-02		pCi/g		6.35E-02		
		TL-208	1.20E-01 +- 2.93E-02		pCi/g		2.94E-02		
3107-0000-194-C-1C-03									
	G8FQ01AA	AC-228	5.45E-01 +- 1.36E-01	U	pCi/g		2.32E-01		
		AG-108M	1.16E-02 +- 1.52E-02	U	pCi/g		2.85E-02		
		AM-241	-5.47E-02 +- 1.22E-01	U	pCi/g		2.04E-01		
		BI-212	3.55E-01 +- 2.90E-01	U	pCi/g		5.67E-01		
		BI-214	7.08E-01 +- 1.36E-01		pCi/g		6.27E-02		
		CO-60	1.12E-02 +- 1.90E-02	U	pCi/g		3.81E-02	3.00E+00	
		CS-134	1.94E-02 +- 2.05E-02	U	pCi/g		4.02E-02	1.00E+01	
		CS-137	-2.69E-02 +- 2.67E-02	U	pCi/g		4.80E-02	2.00E+01	
		EU-152	5.57E-02 +- 4.99E-02	U	pCi/g		9.52E-02	9.00E+00	
		EU-154	1.66E-02 +- 5.65E-02	U	pCi/g		1.08E-01	7.00E+00	
		EU-155	5.22E-02 +- 6.23E-02	U	pCi/g		1.15E-01	3.00E+02	
		K-40	7.46E+00 +- 1.54E+00		pCi/g		3.20E-01		
		MN-54	-1.07E-02 +- 1.92E-02	U	pCi/g		3.20E-02	2.00E+00	
		NB-94	-7.19E-03 +- 1.71E-02	U	pCi/g		2.90E-02	3.00E-01	
		PB-212	4.72E-01 +- 9.15E-02		pCi/g		4.97E-02		
		PB-214	8.57E-01 +- 1.56E-01		pCi/g		6.78E-02		

STL Richland

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Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

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5105290 RICHRC5017									
3107-0000-194-C-1C-03									
	G8FQ01AA	RA-226	7.08E-01 +- 1.36E-01		pCi/g		6.27E-02		
		TL-208	1.59E-01 +- 4.55E-02	U	pCi/g		6.54E-02		
3107-0000-194-C-1C-04									
	G8FQ11AA	AC-228	5.62E-01 +- 1.67E-01		pCi/g		1.35E-01		
		AG-108M	-1.04E-02 +- 2.03E-02	U	pCi/g		3.43E-02		
		AM-241	-5.48E-02 +- 1.38E-01	U	pCi/g		2.37E-01		
		BI-212	7.02E-01 +- 4.19E-01	U	pCi/g		8.38E-01		
		BI-214	4.85E-01 +- 1.12E-01	U	pCi/g		1.95E-01		
		CO-60	-7.14E-04 +- 2.17E-02	U	pCi/g		4.23E-02	3.00E+00	
		CS-134	2.85E-02 +- 2.88E-02	U	pCi/g		5.78E-02	1.00E+01	
		CS-137	-2.35E-02 +- 2.40E-02	U	pCi/g		3.77E-02	2.00E+01	
		EU-152	-1.08E-02 +- 6.11E-02	U	pCi/g		1.05E-01	9.00E+00	
		EU-154	3.92E-02 +- 7.40E-02	U	pCi/g		1.52E-01	7.00E+00	
		EU-155	3.75E-02 +- 7.61E-02	U	pCi/g		1.33E-01	3.00E+02	
		K-40	6.84E+00 +- 1.35E+00		pCi/g		4.40E-01		
		MN-54	-2.65E-02 +- 2.50E-02	U	pCi/g		3.91E-02	2.00E+00	
		NB-94	-7.83E-03 +- 2.45E-02	U	pCi/g		4.29E-02	3.00E-01	
		PB-212	3.69E-01 +- 9.46E-02		pCi/g		8.05E-02		
		PB-214	5.01E-01 +- 1.36E-01		pCi/g		8.67E-02		
		RA-226	4.85E-01 +- 1.12E-01		pCi/g		8.82E-02		
		TL-208	1.49E-01 +- 4.85E-02	U	pCi/g		8.16E-02		
3107-0000-194-C-1C-05									
	G8FQ21AA	AC-228	3.59E-01 +- 1.92E-01	U	pCi/g		2.93E-01		
		AG-108M	2.42E-02 +- 2.19E-02	U	pCi/g		4.19E-02		
		AM-241	2.99E-02 +- 7.93E-02	U	pCi/g		1.35E-01		
		BI-212	5.30E-01 +- 3.86E-01	U	pCi/g		7.74E-01		
		BI-214	3.72E-01 +- 1.14E-01	U	pCi/g		1.81E-01		
		CO-60	1.62E-02 +- 2.43E-02	U	pCi/g		5.09E-02	3.00E+00	
		CS-134	1.26E-02 +- 2.74E-02	U	pCi/g		5.24E-02	1.00E+01	
		CS-137	-6.91E-03 +- 2.43E-02	U	pCi/g		4.21E-02	2.00E+01	
		EU-152	-1.18E-02 +- 5.98E-02	U	pCi/g		1.05E-01	9.00E+00	
		EU-154	3.59E-02 +- 8.06E-02	U	pCi/g		1.59E-01	7.00E+00	
		EU-155	4.76E-02 +- 6.54E-02	U	pCi/g		1.18E-01	3.00E+02	
		K-40	6.40E+00 +- 1.24E+00		pCi/g		4.64E-01		
		MN-54	-5.54E-03 +- 2.65E-02	U	pCi/g		4.65E-02	2.00E+00	
		NB-94	-1.12E-03 +- 2.48E-02	U	pCi/g		4.45E-02	3.00E-01	
		PB-212	3.51E-01 +- 8.89E-02		pCi/g		8.55E-02		

STL Richland

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5105290	RICHRC5017								
	3107-0000-194-C-1C-05								
	G8FQ21AA	PB-214	5.67E-01 +- 1.47E-01		pCi/g		7.78E-02		
		RA-226	3.72E-01 +- 1.14E-01	U	pCi/g		1.81E-01		
		TL-208	1.02E-01 +- 5.58E-02		pCi/g		4.74E-02		
	3107-0000-194-C-2C-06								
	G8FQ31AA	AC-228	4.54E-01 +- 1.72E-01	U	pCi/g		2.81E-01		
		AG-108M	4.50E-03 +- 1.93E-02	U	pCi/g		3.49E-02		
		AM-241	2.31E-02 +- 4.76E-02	U	pCi/g		7.32E-02		
		BI-212	3.78E-01 +- 3.94E-01	U	pCi/g		7.61E-01		
		BI-214	5.03E-01 +- 1.14E-01	U	pCi/g		1.89E-01		
		CO-60	-1.38E-03 +- 2.50E-02	U	pCi/g		4.76E-02	3.00E+00	
		CS-134	2.47E-02 +- 2.88E-02	U	pCi/g		5.63E-02	1.00E+01	
		CS-137	7.31E-03 +- 2.53E-02	U	pCi/g		4.70E-02	2.00E+01	
		EU-152	-3.43E-02 +- 6.17E-02	U	pCi/g		1.03E-01	9.00E+00	
		EU-154	2.03E-02 +- 8.72E-02	U	pCi/g		1.64E-01	7.00E+00	
		EU-155	-5.46E-02 +- 6.39E-02	U	pCi/g		1.04E-01	3.00E+02	
		K-40	6.41E+00 +- 1.18E+00		pCi/g		3.65E-01		
		MN-54	5.97E-03 +- 2.34E-02	U	pCi/g		4.37E-02	2.00E+00	
		NB-94	-3.42E-03 +- 1.98E-02	U	pCi/g		3.64E-02	3.00E-01	
		PB-212	3.60E-01 +- 9.05E-02		pCi/g		9.50E-02		
		PB-214	5.73E-01 +- 1.36E-01		pCi/g		8.11E-02		
		RA-226	5.03E-01 +- 1.14E-01		pCi/g		6.85E-02		
		TL-208	9.30E-02 +- 5.52E-02		pCi/g		4.47E-02		
	3107-0000-195-C-1C-01								
	G8FQ71AA	AC-228	3.36E-01 +- 1.13E-01	U	pCi/g		2.13E-01		
		AG-108M	-7.50E-03 +- 1.42E-02	U	pCi/g		2.36E-02		
		AM-241	-1.49E-02 +- 1.08E-01	U	pCi/g		1.83E-01		
		BI-212	9.70E-01 +- 4.48E-01	U	pCi/g		5.44E-01		
		BI-214	4.96E-01 +- 1.17E-01	U	pCi/g		1.48E-01		
		CO-60	-1.28E-03 +- 1.74E-02	U	pCi/g		3.26E-02	3.00E+00	
		CS-134	1.37E-02 +- 2.20E-02	U	pCi/g		4.17E-02	1.00E+01	
		CS-137	3.78E-02 +- 2.84E-02	J	pCi/g		3.76E-02	2.00E+01	
		EU-152	1.06E-02 +- 4.61E-02	U	pCi/g		8.39E-02	9.00E+00	
		EU-154	4.90E-03 +- 5.96E-02	U	pCi/g		1.11E-01	7.00E+00	
		EU-155	2.51E-02 +- 5.78E-02	U	pCi/g		1.04E-01	3.00E+02	
		K-40	7.64E+00 +- 1.56E+00		pCi/g		2.79E-01		
		MN-54	3.70E-03 +- 1.80E-02	U	pCi/g		3.31E-02	2.00E+00	
		NB-94	3.55E-03 +- 1.78E-02	U	pCi/g		3.27E-02	3.00E-01	

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/|sqrt(sq(TPUs)+sq(TPUd))| as defined by ICPT BOA.

J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

U Qual - Analyzed for, but the result is less than the Mdc/Mda/Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105290	RICHRC5017								
	3107-0000-195-C-1C-01								
	G8FQ71AA	PB-212	4.14E-01 +- 8.01E-02		pCi/g		4.91E-02		
		PB-214	5.41E-01 +- 1.16E-01		pCi/g		5.93E-02		
		RA-226	4.96E-01 +- 1.17E-01		pCi/g		5.27E-02		
		TL-208	1.39E-01 +- 3.80E-02	U	pCi/g		6.16E-02		
	3107-0000-195-C-1C-02								
	G8FQ91AA	AC-228	2.71E-01 +- 1.36E-01	U	pCi/g		2.67E-01		
		AG-108M	4.33E-03 +- 2.35E-02	U	pCi/g		4.20E-02		
		AM-241	-5.50E-02 +- 1.16E-01	U	pCi/g		1.91E-01		
		BI-212	4.49E-01 +- 4.44E-01	U	pCi/g		8.32E-01		
		BI-214	4.69E-01 +- 1.11E-01	U	pCi/g		1.81E-01		
		CO-60	-1.47E-02 +- 3.06E-02	U	pCi/g		5.21E-02	3.00E+00	
		CS-134	-5.66E-03 +- 3.16E-02	U	pCi/g		5.48E-02	1.00E+01	
		CS-137	9.81E-03 +- 2.86E-02	U	pCi/g		5.21E-02	2.00E+01	
		EU-152	-1.27E-01 +- 1.00E-01	U	pCi/g		1.29E-01	9.00E+00	
		EU-154	-9.65E-02 +- 9.21E-02	U	pCi/g		1.43E-01	7.00E+00	
		EU-155	-1.84E-02 +- 8.35E-02	U	pCi/g		1.41E-01	3.00E+02	
		K-40	5.77E+00 +- 1.08E+00		pCi/g		3.32E-01		
		MN-54	-5.51E-03 +- 2.58E-02	U	pCi/g		4.56E-02	2.00E+00	
		NB-94	-1.13E-02 +- 2.55E-02	U	pCi/g		4.39E-02	3.00E-01	
		PB-212	4.21E-01 +- 1.14E-01		pCi/g		7.75E-02		
		PB-214	5.31E-01 +- 1.32E-01		pCi/g		8.64E-02		
		RA-226	4.69E-01 +- 1.11E-01	U	pCi/g		1.81E-01		
		TL-208	1.02E-01 +- 3.75E-02	U	pCi/g		7.19E-02		
	3107-0000-195-C-1C-03								
	G8FRA1AA	AC-228	4.70E-01 +- 2.06E-01	U	pCi/g		3.18E-01		
		AG-108M	2.43E-02 +- 2.07E-02	U	pCi/g		4.08E-02		
		AM-241	4.16E-02 +- 1.29E-01	U	pCi/g		2.33E-01		
		BI-212	4.61E-01 +- 3.74E-01	U	pCi/g		7.47E-01		
		BI-214	4.13E-01 +- 1.24E-01	U	pCi/g		1.80E-01		
		CO-60	-3.05E-03 +- 2.60E-02	U	pCi/g		4.89E-02	3.00E+00	
		CS-134	1.83E-02 +- 2.56E-02	U	pCi/g		5.14E-02	1.00E+01	
		CS-137	2.05E-02 +- 2.57E-02	U	pCi/g		5.03E-02	2.00E+01	
		EU-152	4.90E-03 +- 7.13E-02	U	pCi/g		1.25E-01	9.00E+00	
		EU-154	-1.17E-02 +- 8.49E-02	U	pCi/g		1.57E-01	7.00E+00	
		EU-155	3.04E-02 +- 7.16E-02	U	pCi/g		1.26E-01	3.00E+02	
		K-40	7.45E+00 +- 1.45E+00		pCi/g		5.34E-01		
		MN-54	1.14E-02 +- 2.40E-02	U	pCi/g		4.66E-02	2.00E+00	

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICIT DOA.

U Qual - Analyzed for, but the result is less than the Mdc/Mda/Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105290	RICHRC5017								
	3107-0000-195-C-1C-03								
	G8FRA1AA	NB-94	-3.48E-03 +- 2.24E-02	U	pCi/g		4.04E-02	3.00E-01	
		PB-212	4.12E-01 +- 1.03E-01		pCi/g		8.24E-02		
		PB-214	4.42E-01 +- 1.31E-01		pCi/g		8.53E-02		
		RA-226	4.13E-01 +- 1.24E-01	U	pCi/g		1.80E-01		
		TL-208	8.34E-02 +- 6.44E-02		pCi/g		4.00E-02		
	3107-0000-195-C-1C-04								
	G8FRC1AA	AC-228	5.00E-01 +- 1.96E-01	U	pCi/g		3.28E-01		
		AG-108M	7.88E-03 +- 2.48E-02	U	pCi/g		4.49E-02		
		AM-241	-2.24E-03 +- 8.81E-02	U	pCi/g		1.51E-01		
		BI-212	5.20E-01 +- 4.41E-01	U	pCi/g		8.76E-01		
		BI-214	3.22E-01 +- 1.12E-01	U	pCi/g		1.93E-01		
		CO-60	4.84E-04 +- 2.43E-02	U	pCi/g		4.76E-02	3.00E+00	
		CS-134	1.33E-03 +- 3.12E-02	U	pCi/g		5.71E-02	1.00E+01	
		CS-137	-3.05E-03 +- 2.75E-02	U	pCi/g		4.88E-02	2.00E+01	
		EU-152	1.78E-02 +- 7.26E-02	U	pCi/g		1.33E-01	9.00E+00	
		EU-154	6.84E-02 +- 8.91E-02	U	pCi/g		1.84E-01	7.00E+00	
		EU-155	5.07E-02 +- 7.23E-02	U	pCi/g		1.31E-01	3.00E+02	
		K-40	8.18E+00 +- 1.47E+00		pCi/g		6.01E-01		
		MN-54	-2.10E-02 +- 2.66E-02	U	pCi/g		4.32E-02	2.00E+00	
		NB-94	-1.26E-02 +- 2.79E-02	U	pCi/g		4.75E-02	3.00E-01	
		PB-212	3.73E-01 +- 1.06E-01		pCi/g		1.04E-01		
		PB-214	5.10E-01 +- 1.24E-01		pCi/g		9.27E-02		
		RA-226	3.22E-01 +- 1.12E-01		pCi/g		9.45E-02		
		TL-208	9.81E-02 +- 5.29E-02		pCi/g		4.50E-02		
	3107-0000-195-C-2C-05								
	G8FRF1AA	AC-228	3.52E-01 +- 1.32E-01	U	pCi/g		2.73E-01		
		AG-108M	1.33E-02 +- 1.86E-02	U	pCi/g		3.53E-02		
		AM-241	-4.04E-02 +- 4.27E-02	U	pCi/g		7.05E-02		
		BI-212	4.37E-01 +- 3.68E-01	U	pCi/g		7.34E-01		
		BI-214	5.01E-01 +- 1.13E-01	U	pCi/g		1.85E-01		
		CO-60	-2.50E-02 +- 2.41E-02	U	pCi/g		3.71E-02	3.00E+00	
		CS-134	2.11E-02 +- 3.15E-02	U	pCi/g		6.00E-02	1.00E+01	
		CS-137	-3.33E-03 +- 2.48E-02	U	pCi/g		4.42E-02	2.00E+01	
		EU-152	-8.54E-03 +- 7.15E-02	U	pCi/g		1.15E-01	9.00E+00	
		EU-154	9.34E-02 +- 8.23E-02	U	pCi/g		1.74E-01	7.00E+00	
		EU-155	1.37E-03 +- 6.43E-02	U	pCi/g		1.11E-01	3.00E+02	
		K-40	7.69E+00 +- 1.36E+00		pCi/g		4.47E-01		

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

U Qual - Analyzed for, but the result is less than the Mdc/Mda/Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105290	RICHRC5017								
	3107-0000-195-C-2C-05								
	G8FRF1AA	MN-54	2.75E-02 +- 2.49E-02	U	pCi/g		5.04E-02	2.00E+00	
		NB-94	1.89E-03 +- 2.13E-02	U	pCi/g		4.05E-02	3.00E-01	
		PB-212	3.94E-01 +- 9.41E-02		pCi/g		7.23E-02		
		PB-214	4.51E-01 +- 1.10E-01		pCi/g		8.50E-02		
		RA-226	5.01E-01 +- 1.13E-01	U	pCi/g		1.85E-01		
		TL-208	9.84E-02 +- 5.35E-02	U	pCi/g		7.84E-02		
	3107-0000-195-C-2C-06								
	G8FRG1AA	AC-228	5.61E-01 +- 1.82E-01	U	pCi/g		2.33E-01		
		AG-108M	-3.30E-03 +- 1.47E-02	U	pCi/g		2.52E-02		
		AM-241	-3.39E-02 +- 1.29E-01	U	pCi/g		2.14E-01		
		BI-212	6.36E-01 +- 2.89E-01	U	pCi/g		5.94E-01		
		BI-214	5.90E-01 +- 1.03E-01	U	pCi/g		1.58E-01		
		CO-60	1.60E-02 +- 1.75E-02	U	pCi/g		3.71E-02	3.00E+00	
		CS-134	1.21E-02 +- 2.16E-02	U	pCi/g		4.09E-02	1.00E+01	
		CS-137	4.50E-03 +- 2.40E-02	U	pCi/g		4.75E-02	2.00E+01	
		EU-152	-2.19E-02 +- 4.71E-02	U	pCi/g		8.06E-02	9.00E+00	
		EU-154	-2.88E-02 +- 5.98E-02	U	pCi/g		1.03E-01	7.00E+00	
		EU-155	2.15E-02 +- 5.61E-02	U	pCi/g		1.01E-01	3.00E+02	
		K-40	7.54E+00 +- 1.56E+00		pCi/g		2.69E-01		
		MN-54	-7.40E-03 +- 2.01E-02	U	pCi/g		3.45E-02	2.00E+00	
		NB-94	-1.59E-02 +- 1.55E-02	U	pCi/g		2.38E-02	3.00E-01	
		PB-212	4.44E-01 +- 8.73E-02		pCi/g		5.14E-02		
		PB-214	6.84E-01 +- 1.35E-01		pCi/g		5.90E-02		
		RA-226	5.90E-01 +- 1.03E-01	U	pCi/g		1.58E-01		
		TL-208	1.12E-01 +- 3.56E-02		pCi/g		2.85E-02		
	3107-0000-196-C-1C-01								
	G8FRH1AA	AC-228	4.81E-01 +- 2.05E-01	U	pCi/g		3.30E-01		
		AG-108M	-6.07E-03 +- 2.48E-02	U	pCi/g		4.31E-02		
		AM-241	-1.60E-01 +- 1.45E-01	U	pCi/g		2.30E-01		
		BI-212	4.37E-01 +- 4.71E-01	U	pCi/g		8.85E-01		
		BI-214	5.71E-01 +- 1.36E-01	U	pCi/g		2.11E-01		
		CO-60	1.76E-02 +- 3.19E-02	U	pCi/g		6.27E-02	3.00E+00	
		CS-134	-8.43E-03 +- 3.44E-02	U	pCi/g		5.94E-02	1.00E+01	
		CS-137	8.15E-03 +- 3.39E-02	U	pCi/g		6.12E-02	2.00E+01	
		EU-152	-1.17E-01 +- 1.21E-01	U	pCi/g		1.67E-01	9.00E+00	
		EU-154	5.87E-02 +- 1.07E-01	U	pCi/g		2.03E-01	7.00E+00	
		EU-155	3.20E-02 +- 9.58E-02	U	pCi/g		1.66E-01	3.00E+02	

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/|sqrt(sq(TPUs)+sq(TPUd))| as defined by ICPT BOA.

U Qual - Analyzed for, but the result is less than the Mdc/Mda/Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order ..	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105290 RICHRC5017									
3107-0000-196-C-1C-01									
	G8FRH1AA	K-40	7.19E+00 +- 1.33E+00		pCi/g		5.24E-01		
		MN-54	1.45E-02 +- 3.12E-02	U	pCi/g		5.82E-02	2.00E+00	
		NB-94	1.18E-02 +- 3.27E-02	U	pCi/g		6.01E-02	3.00E-01	
		PB-212	6.38E-01 +- 1.51E-01		pCi/g		8.99E-02		
		PB-214	6.54E-01 +- 1.41E-01		pCi/g		1.11E-01		
		RA-226	5.71E-01 +- 1.36E-01	U	pCi/g		2.11E-01		
		TL-208	1.79E-01 +- 4.99E-02	U	pCi/g		8.09E-02		
3107-0000-196-C-1C-02									
	G8FRK1AA	AC-228	4.72E-01 +- 1.76E-01	U	pCi/g		3.09E-01		
		AG-108M	-2.01E-03 +- 2.19E-02	U	pCi/g		3.86E-02		
		AM-241	5.31E-02 +- 1.30E-01	U	pCi/g		2.36E-01		
		BI-212	6.76E-01 +- 4.05E-01	U	pCi/g		8.19E-01		
		BI-214	5.72E-01 +- 1.29E-01	U	pCi/g		2.10E-01		
		CO-60	-1.16E-02 +- 2.69E-02	U	pCi/g		4.75E-02	3.00E+00	
		CS-134	2.56E-03 +- 3.27E-02	U	pCi/g		5.97E-02	1.00E+01	
		CS-137	-9.63E-03 +- 2.64E-02	U	pCi/g		4.55E-02	2.00E+01	
		EU-152	1.81E-02 +- 7.10E-02	U	pCi/g		1.26E-01	9.00E+00	
		EU-154	4.31E-02 +- 8.25E-02	U	pCi/g		1.66E-01	7.00E+00	
		EU-155	1.21E-01 +- 8.30E-02	U	pCi/g		1.51E-01	3.00E+02	
		K-40	7.14E+00 +- 1.42E+00		pCi/g		3.93E-01		
		MN-54	-2.95E-03 +- 2.31E-02	U	pCi/g		4.20E-02	2.00E+00	
		NB-94	5.23E-03 +- 2.39E-02	U	pCi/g		4.49E-02	3.00E-01	
		PB-212	5.25E-01 +- 1.11E-01		pCi/g		7.38E-02		
		PB-214	6.54E-01 +- 1.41E-01		pCi/g		8.74E-02		
		RA-226	5.72E-01 +- 1.29E-01		pCi/g		8.15E-02		
		TL-208	1.59E-01 +- 6.46E-02	U	pCi/g		8.88E-02		
3107-0000-196-C-1C-03									
	G8FRN1AA	AC-228	1.65E-01 +- 1.60E-01	U	pCi/g		2.66E-01		
		AG-108M	-3.00E-03 +- 2.01E-02	U	pCi/g		3.50E-02		
		AM-241	5.47E-02 +- 7.89E-02	U	pCi/g		1.40E-01		
		BI-212	4.51E-01 +- 3.25E-01	U	pCi/g		6.72E-01		
		BI-214	4.54E-01 +- 1.12E-01	U	pCi/g		1.87E-01		
		CO-60	-1.16E-02 +- 2.95E-02	U	pCi/g		5.16E-02	3.00E+00	
		CS-134	4.68E-02 +- 2.73E-02	U	pCi/g		5.75E-02	1.00E+01	
		CS-137	-6.83E-03 +- 2.59E-02	U	pCi/g		4.47E-02	2.00E+01	
		EU-152	4.56E-02 +- 7.14E-02	U	pCi/g		1.32E-01	9.00E+00	
		EU-154	-2.06E-02 +- 8.21E-02	U	pCi/g		1.47E-01	7.00E+00	

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

U Qual - Analyzed for, but the result is less than the Mdc/Mda/Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105290 RICHRC5017									
3107-0000-196-C-1C-03									
	G8FRN1AA	EU-155	4.71E-02 +- 6.22E-02	U	pCi/g		1.13E-01	3.00E+02	
		K-40	6.92E+00 +- 1.28E+00		pCi/g		4.28E-01		
		MN-54	-1.41E-03 +- 2.52E-02	U	pCi/g		4.52E-02	2.00E+00	
		NB-94	-1.96E-02 +- 2.39E-02	U	pCi/g		3.84E-02	3.00E-01	
		PB-212	4.87E-01 +- 1.06E-01		pCi/g		9.28E-02		
		PB-214	4.44E-01 +- 1.40E-01		pCi/g		8.61E-02		
		RA-226	4.54E-01 +- 1.12E-01	U	pCi/g		1.87E-01		
		TL-208	1.42E-01 +- 4.62E-02	U	pCi/g		7.60E-02		
5105292 RICHRC5017									
3107-0000-196-C-2C-04									
	G8FRQ1AA	AC-228	7.46E-01 +- 2.02E-01	U	pCi/g		3.19E-01		
		AG-108M	1.13E-02 +- 1.83E-02	U	pCi/g		3.38E-02		
		AM-241	-3.08E-02 +- 6.76E-02	U	pCi/g		1.14E-01		
		BI-212	1.12E+00 +- 6.61E-01	U	pCi/g		8.22E-01		
		BI-214	5.45E-01 +- 1.18E-01		pCi/g		8.27E-02		
		CO-60	1.20E-04 +- 2.71E-02	U	pCi/g		5.00E-02	3.00E+00	
		CS-134	4.48E-02 +- 2.82E-02	U	pCi/g		5.66E-02	1.00E+01	
		CS-137	-1.35E-03 +- 2.18E-02	U	pCi/g		3.86E-02	2.00E+01	
		EU-152	2.07E-02 +- 5.27E-02	U	pCi/g		9.76E-02	9.00E+00	
		EU-154	-1.01E-02 +- 7.94E-02	U	pCi/g		1.44E-01	7.00E+00	
		EU-155	6.13E-03 +- 6.02E-02	U	pCi/g		1.07E-01	3.00E+02	
		K-40	9.10E+00 +- 1.61E+00		pCi/g		3.90E-01		
		MN-54	-7.91E-03 +- 2.31E-02	U	pCi/g		3.99E-02	2.00E+00	
		NB-94	1.62E-02 +- 2.28E-02	U	pCi/g		4.38E-02	3.00E-01	
		PB-212	6.34E-01 +- 1.22E-01		pCi/g		6.57E-02		
		PB-214	5.66E-01 +- 1.26E-01		pCi/g		7.02E-02		
		RA-226	5.45E-01 +- 1.18E-01		pCi/g		8.27E-02		
		TL-208	1.63E-01 +- 5.04E-02		pCi/g		4.29E-02		
3107-0000-196-C-2C-04 DUP									
	G8FRQ1AH	AC-228	5.84E-01 +- 2.27E-01	U	pCi/g		3.81E-01		
		AG-108M	-4.47E-03 +- 2.69E-02	U	pCi/g		4.65E-02		
		AM-241	-6.59E-02 +- 1.60E-01	U	pCi/g		2.62E-01		
		BI-212	1.26E+00 +- 5.35E-01	U	pCi/g		1.02E+00		
		BI-214	5.52E-01 +- 1.62E-01	U	pCi/g		2.44E-01		
		CO-60	3.82E-03 +- 3.58E-02	U	pCi/g		6.65E-02	3.00E+00	
		CS-134	8.36E-02 +- 3.48E-02	U	pCi/g		7.97E-02	1.00E+01	
		CS-137	-1.53E-02 +- 3.35E-02	U	pCi/g		5.63E-02	2.00E+01	

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RER2 - Replicate Error Ratio = (S-D)/|sqrt(sq(TPUs)+sq(TPUd))| as defined by ICPT BOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105292	RICHRC5017								
	3107-0000-196-C-2C-04 DUP								
	G8FRQ1AH	EU-152	-1.78E-02 +- 7.92E-02	U	pCi/g		1.38E-01	9.00E+00	
		EU-154	6.78E-02 +- 1.11E-01	U	pCi/g		2.22E-01	7.00E+00	
		EU-155	1.14E-02 +- 9.39E-02	U	pCi/g		1.65E-01	3.00E+02	
		K-40	7.72E+00 +- 1.51E+00		pCi/g		4.50E-01		
		MN-54	2.18E-02 +- 2.89E-02	U	pCi/g		5.77E-02	2.00E+00	
		NB-94	-1.65E-02 +- 2.91E-02	U	pCi/g		4.87E-02	3.00E-01	
		PB-212	5.13E-01 +- 1.37E-01		pCi/g		1.13E-01		
		PB-214	5.66E-01 +- 1.42E-01		pCi/g		1.06E-01		
		RA-226	5.52E-01 +- 1.62E-01	U	pCi/g		2.44E-01		
		TL-208	2.04E-01 +- 6.87E-02		pCi/g		5.42E-02		
	3107-0000-196-C-2C-05								
	G8FRR1AA	AC-228	4.40E-01 +- 1.67E-01	U	pCi/g		3.22E-01		
		AG-108M	-1.79E-02 +- 2.82E-02	U	pCi/g		4.63E-02		
		AM-241	-1.37E-01 +- 1.28E-01	U	pCi/g		2.08E-01		
		BI-212	6.75E-01 +- 4.92E-01	U	pCi/g		9.35E-01		
		BI-214	5.13E-01 +- 1.62E-01	U	pCi/g		2.03E-01		
		CO-60	4.38E-03 +- 3.28E-02	U	pCi/g		6.13E-02	3.00E+00	
		CS-134	3.18E-02 +- 3.81E-02	U	pCi/g		7.17E-02	1.00E+01	
		CS-137	-3.02E-02 +- 3.11E-02	U	pCi/g		5.01E-02	2.00E+01	
		EU-152	-1.41E-01 +- 1.10E-01	U	pCi/g		1.59E-01	9.00E+00	
		EU-154	-6.19E-03 +- 9.97E-02	U	pCi/g		1.80E-01	7.00E+00	
		EU-155	6.55E-02 +- 9.41E-02	U	pCi/g		1.63E-01	3.00E+02	
		K-40	7.71E+00 +- 1.39E+00		pCi/g		4.29E-01		
		MN-54	-3.51E-03 +- 3.18E-02	U	pCi/g		5.61E-02	2.00E+00	
		NB-94	2.29E-02 +- 2.84E-02	U	pCi/g		5.46E-02	3.00E-01	
		PB-212	6.08E-01 +- 1.57E-01		pCi/g		8.47E-02		
		PB-214	5.14E-01 +- 1.44E-01		pCi/g		1.11E-01		
		RA-226	5.13E-01 +- 1.62E-01	U	pCi/g		2.03E-01		
		TL-208	1.60E-01 +- 5.31E-02	U	pCi/g		8.69E-02		
	3107-0000-196-C-2C-06								
	G8FRT1AA	AC-228	6.81E-01 +- 2.09E-01		pCi/g		1.49E-01		
		AG-108M	9.67E-03 +- 2.35E-02	U	pCi/g		4.28E-02		
		AM-241	4.72E-02 +- 1.65E-01	U	pCi/g		2.85E-01		
		BI-212	9.73E-01 +- 5.31E-01	U	pCi/g		8.89E-01		
		BI-214	5.79E-01 +- 1.38E-01	U	pCi/g		2.15E-01		
		CO-60	-3.48E-04 +- 2.91E-02	U	pCi/g		5.52E-02	3.00E+00	
		CS-134	3.94E-02 +- 3.15E-02	U	pCi/g		6.40E-02	1.00E+01	

STL Richland

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105292	RICHRC5017								
	3107-0000-196-C-2C-06								
	G8FRT1AA	CS-137	-7.96E-03 +- 2.92E-02	U	pCi/g		5.03E-02	2.00E+01	
		EU-152	-1.17E-02 +- 7.70E-02	U	pCi/g		1.35E-01	9.00E+00	
		EU-154	1.42E-02 +- 7.26E-02	U	pCi/g		1.44E-01	7.00E+00	
		EU-155	1.14E-01 +- 8.27E-02	U	pCi/g		1.54E-01	3.00E+02	
		K-40	6.86E+00 +- 1.42E+00		pCi/g		2.47E-01		
		MN-54	-1.44E-02 +- 2.98E-02	U	pCi/g		5.05E-02	2.00E+00	
		NB-94	1.13E-02 +- 2.23E-02	U	pCi/g		4.40E-02	3.00E-01	
		PB-212	7.14E-01 +- 1.38E-01		pCi/g		9.52E-02		
		PB-214	6.06E-01 +- 1.40E-01		pCi/g		8.59E-02		
		RA-226	5.79E-01 +- 1.38E-01	U	pCi/g		2.15E-01		
		TL-208	1.92E-01 +- 5.77E-02	U	pCi/g		9.56E-02		
	3107-0000-197-C-1C-01								
	G8FRV1AA	AC-228	6.27E-01 +- 1.81E-01	U	pCi/g		3.42E-01		
		AG-108M	1.06E-02 +- 1.86E-02	U	pCi/g		3.58E-02		
		AM-241	-1.96E-02 +- 7.83E-02	U	pCi/g		1.35E-01		
		BI-212	8.52E-01 +- 4.63E-01	U	pCi/g		9.34E-01		
		BI-214	3.62E-01 +- 1.48E-01	U	pCi/g		1.90E-01		
		CO-60	1.94E-03 +- 2.49E-02	U	pCi/g		4.90E-02	3.00E+00	
		CS-134	1.81E-02 +- 2.81E-02	U	pCi/g		5.56E-02	1.00E+01	
		CS-137	-8.33E-03 +- 2.87E-02	U	pCi/g		4.98E-02	2.00E+01	
		EU-152	3.47E-02 +- 7.70E-02	U	pCi/g		1.39E-01	9.00E+00	
		EU-154	2.60E-02 +- 8.59E-02	U	pCi/g		1.69E-01	7.00E+00	
		EU-155	2.51E-02 +- 7.31E-02	U	pCi/g		1.27E-01	3.00E+02	
		K-40	6.61E+00 +- 1.28E+00		pCi/g		4.13E-01		
		MN-54	3.38E-03 +- 2.46E-02	U	pCi/g		4.62E-02	2.00E+00	
		NB-94	8.79E-03 +- 2.33E-02	U	pCi/g		4.54E-02	3.00E-01	
		PB-212	4.12E-01 +- 1.01E-01		pCi/g		9.34E-02		
		PB-214	4.46E-01 +- 1.17E-01		pCi/g		8.23E-02		
		RA-226	3.62E-01 +- 1.48E-01	U	pCi/g		1.91E-01		
		TL-208	1.53E-01 +- 4.44E-02	U	pCi/g		8.27E-02		
	3107-0000-197-C-1C-02								
	G8FRW1AA	AC-228	4.09E-01 +- 1.65E-01		pCi/g		1.31E-01		
		AG-108M	2.11E-03 +- 1.81E-02	U	pCi/g		3.23E-02		
		AM-241	4.55E-03 +- 4.30E-02	U	pCi/g		7.23E-02		
		BI-212	2.71E-01 +- 3.88E-01	U	pCi/g		7.31E-01		
		BI-214	4.42E-01 +- 1.13E-01	U	pCi/g		1.79E-01		
		CO-60	1.48E-02 +- 2.62E-02	U	pCi/g		5.27E-02	3.00E+00	

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105292	RICHRC5017								
3107-0000-197-C-1C-02									
	G8FRW1AA	CS-134	1.49E-02 +- 2.40E-02	U	pCi/g		4.69E-02	1.00E+01	
		CS-137	3.55E-02 +- 2.59E-02	U	pCi/g		5.17E-02	2.00E+01	
		EU-152	-7.64E-03 +- 6.15E-02	U	pCi/g		1.04E-01	9.00E+00	
		EU-154	2.90E-02 +- 5.96E-02	U	pCi/g		1.23E-01	7.00E+00	
		EU-155	-3.64E-03 +- 6.01E-02	U	pCi/g		1.04E-01	3.00E+02	
		K-40	6.26E+00 +- 1.13E+00		pCi/g		3.57E-01		
		MN-54	-2.02E-03 +- 2.41E-02	U	pCi/g		4.29E-02	2.00E+00	
		NB-94	-9.82E-03 +- 2.08E-02	U	pCi/g		3.53E-02	3.00E-01	
		PB-212	4.15E-01 +- 9.40E-02		pCi/g		9.53E-02		
		PB-214	4.71E-01 +- 1.12E-01		pCi/g		7.44E-02		
		RA-226	4.42E-01 +- 1.13E-01	U	pCi/g		1.79E-01		
		TL-208	1.66E-01 +- 4.67E-02		pCi/g		3.39E-02		
3107-0000-197-C-1C-03									
	G8FRX1AA	AC-228	4.20E-01 +- 1.48E-01	U	pCi/g		2.48E-01		
		AG-108M	-1.18E-02 +- 1.74E-02	U	pCi/g		2.85E-02		
		AM-241	2.39E-02 +- 8.07E-02	U	pCi/g		1.42E-01		
		BI-212	4.17E-01 +- 3.31E-01	U	pCi/g		6.39E-01		
		BI-214	5.92E-01 +- 1.28E-01		pCi/g		7.26E-02		
		CO-60	-3.33E-03 +- 2.18E-02	U	pCi/g		3.93E-02	3.00E+00	
		CS-134	4.01E-02 +- 2.61E-02	U	pCi/g		5.22E-02	1.00E+01	
		CS-137	3.72E-03 +- 2.30E-02	U	pCi/g		4.13E-02	2.00E+01	
		EU-152	1.92E-02 +- 6.11E-02	U	pCi/g		1.10E-01	9.00E+00	
		EU-154	-7.17E-02 +- 6.96E-02	U	pCi/g		1.08E-01	7.00E+00	
		EU-155	7.46E-02 +- 6.58E-02	U	pCi/g		1.19E-01	3.00E+02	
		K-40	7.72E+00 +- 1.23E+00		pCi/g		3.69E-01		
		MN-54	-1.04E-02 +- 2.17E-02	U	pCi/g		3.70E-02	2.00E+00	
		NB-94	-1.22E-03 +- 1.86E-02	U	pCi/g		3.37E-02	3.00E-01	
		PB-212	4.19E-01 +- 9.04E-02		pCi/g		6.71E-02		
		PB-214	6.76E-01 +- 1.46E-01		pCi/g		7.75E-02		
		RA-226	5.92E-01 +- 1.28E-01		pCi/g		7.26E-02		
		TL-208	1.36E-01 +- 4.96E-02	U	pCi/g		6.93E-02		
3107-0000-197-C-1C-04									
	G8FR21AA	AC-228	4.16E-01 +- 1.07E-01		pCi/g		9.10E-02		
		AG-108M	-2.43E-03 +- 1.06E-02	U	pCi/g		1.77E-02		
		AM-241	2.95E-03 +- 2.93E-02	U	pCi/g		4.99E-02		
		BI-212	6.87E-01 +- 2.32E-01	U	pCi/g		4.04E-01		
		BI-214	3.62E-01 +- 8.94E-02		pCi/g		4.42E-02		

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No.: 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105292	RICHRC5017								
3107-0000-197-C-1C-04									
	G8FR21AA	CO-60	2.48E-02 +- 1.85E-02	U	pCi/g		3.36E-02	3.00E+00	
		CS-134	2.90E-02 +- 1.66E-02	U	pCi/g		2.94E-02	1.00E+01	
		CS-137	-2.69E-03 +- 1.46E-02	U	pCi/g		2.44E-02	2.00E+01	
		EU-152	-1.09E-03 +- 3.27E-02	U	pCi/g		5.62E-02	9.00E+00	
		EU-154	9.17E-03 +- 4.82E-02	U	pCi/g		8.43E-02	7.00E+00	
		EU-155	4.09E-02 +- 2.62E-02	U	pCi/g		4.63E-02	3.00E+02	
		K-40	7.28E+00 +- 1.18E+00		pCi/g		3.02E-01		
		MN-54	-6.29E-03 +- 1.42E-02	U	pCi/g		2.36E-02	2.00E+00	
		NB-94	-6.07E-03 +- 1.41E-02	U	pCi/g		2.34E-02	3.00E-01	
		PB-212	4.04E-01 +- 7.37E-02		pCi/g		2.95E-02		
		PB-214	3.36E-01 +- 8.77E-02		pCi/g		3.98E-02		
		RA-226	3.62E-01 +- 8.94E-02		pCi/g		4.42E-02		
		TL-208	1.35E-01 +- 3.31E-02		pCi/g		2.20E-02		
3107-0000-197-C-1C-05									
	G8FR31AA	AC-228	2.75E-01 +- 1.61E-01	U	pCi/g		2.26E-01		
		AG-108M	-2.76E-03 +- 1.50E-02	U	pCi/g		2.58E-02		
		AM-241	-5.25E-02 +- 1.11E-01	U	pCi/g		1.85E-01		
		BI-212	3.21E-01 +- 4.84E-01	U	pCi/g		5.45E-01		
		BI-214	3.87E-01 +- 9.62E-02	U	pCi/g		1.40E-01		
		CO-60	7.84E-03 +- 2.12E-02	U	pCi/g		4.07E-02	3.00E+00	
		CS-134	2.46E-02 +- 1.98E-02	U	pCi/g		3.97E-02	1.00E+01	
		CS-137	1.19E-02 +- 2.91E-02	U	pCi/g		3.15E-02	2.00E+01	
		EU-152	7.51E-03 +- 4.16E-02	U	pCi/g		7.60E-02	9.00E+00	
		EU-154	-4.32E-03 +- 5.15E-02	U	pCi/g		9.47E-02	7.00E+00	
		EU-155	-1.25E-02 +- 5.30E-02	U	pCi/g		9.27E-02	3.00E+02	
		K-40	7.80E+00 +- 1.60E+00		pCi/g		3.39E-01		
		MN-54	1.05E-02 +- 1.85E-02	U	pCi/g		3.49E-02	2.00E+00	
		NB-94	-6.16E-03 +- 1.75E-02	U	pCi/g		2.99E-02	3.00E-01	
		PB-212	4.23E-01 +- 8.18E-02		pCi/g		4.70E-02		
		PB-214	4.37E-01 +- 9.65E-02		pCi/g		5.70E-02		
		RA-226	3.87E-01 +- 9.62E-02	U	pCi/g		1.40E-01		
		TL-208	1.65E-01 +- 4.44E-02		pCi/g		3.04E-02		
3107-0000-197-C-1C-06									
	G8FR51AA	AC-228	3.60E-01 +- 1.53E-01	U	pCi/g		3.01E-01		
		AG-108M	-1.19E-02 +- 2.62E-02	U	pCi/g		4.37E-02		
		AM-241	-1.38E-01 +- 1.32E-01	U	pCi/g		2.15E-01		
		BI-212	5.74E-01 +- 4.89E-01	U	pCi/g		9.25E-01		

STL Richland

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Date: 21-Apr-05

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SDG No: 28704

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5105292	RICHRC5017								
	3107-0000-197-C-1C-06								
	G8FR51AA	BI-214	4.73E-01 +- 1.20E-01	U	pCi/g		1.92E-01		
		CO-60	1.23E-02 +- 3.17E-02	U	pCi/g		6.15E-02	3.00E+00	
		CS-134	-7.18E-03 +- 3.64E-02	U	pCi/g		6.38E-02	1.00E+01	
		CS-137	1.88E-02 +- 2.85E-02	U	pCi/g		5.38E-02	2.00E+01	
		EU-152	-1.77E-01 +- 1.20E-01	U	pCi/g		1.48E-01	9.00E+00	
		EU-154	7.48E-02 +- 1.03E-01	U	pCi/g		2.01E-01	7.00E+00	
		EU-155	-6.45E-02 +- 9.14E-02	U	pCi/g		1.49E-01	3.00E+02	
		K-40	7.66E+00 +- 1.39E+00		pCi/g		4.43E-01		
		MN-54	1.89E-02 +- 2.81E-02	U	pCi/g		5.38E-02	2.00E+00	
		NB-94	-3.25E-02 +- 3.08E-02	U	pCi/g		4.88E-02	3.00E-01	
		PB-212	4.14E-01 +- 1.04E-01		pCi/g		9.20E-02		
		PB-214	4.93E-01 +- 1.40E-01		pCi/g		1.03E-01		
		RA-226	4.73E-01 +- 1.20E-01	U	pCi/g		1.92E-01		
		TL-208	1.52E-01 +- 4.83E-02	U	pCi/g		8.28E-02		
	3107-0000-198-C-1C-01								
	G8FR71AA	AC-228	4.31E-01 +- 1.88E-01		pCi/g		1.45E-01		
		AG-108M	-1.46E-02 +- 1.86E-02	U	pCi/g		3.05E-02		
		AM-241	-9.59E-03 +- 7.45E-02	U	pCi/g		1.29E-01		
		BI-212	3.43E-01 +- 3.83E-01	U	pCi/g		7.35E-01		
		BI-214	4.73E-01 +- 1.03E-01	U	pCi/g		1.78E-01		
		CO-60	1.57E-02 +- 2.56E-02	U	pCi/g		5.29E-02	3.00E+00	
		CS-134	-6.17E-03 +- 2.83E-02	U	pCi/g		5.04E-02	1.00E+01	
		CS-137	-1.37E-02 +- 2.45E-02	U	pCi/g		4.11E-02	2.00E+01	
		EU-152	-5.39E-02 +- 6.50E-02	U	pCi/g		1.04E-01	9.00E+00	
		EU-154	-8.02E-02 +- 8.42E-02	U	pCi/g		1.35E-01	7.00E+00	
		EU-155	4.44E-02 +- 6.17E-02	U	pCi/g		1.10E-01	3.00E+02	
		K-40	7.56E+00 +- 1.33E+00		pCi/g		3.63E-01		
		MN-54	-1.67E-02 +- 2.25E-02	U	pCi/g		3.71E-02	2.00E+00	
		NB-94	-9.84E-03 +- 2.22E-02	U	pCi/g		3.83E-02	3.00E-01	
		PB-212	4.35E-01 +- 8.72E-02		pCi/g		7.55E-02		
		PB-214	4.44E-01 +- 1.19E-01		pCi/g		9.35E-02		
		RA-226	4.73E-01 +- 1.03E-01	U	pCi/g		1.78E-01		
		TL-208	1.44E-01 +- 5.83E-02	U	pCi/g		7.76E-02		
	3107-0000-198-C-1C-02								
	G8FR81AA	AC-228	4.72E-01 +- 1.40E-01		pCi/g		1.42E-01		
		AG-108M	-2.63E-02 +- 1.80E-02	U	pCi/g		2.64E-02		
		AM-241	2.59E-02 +- 4.78E-02	U	pCi/g		7.11E-02		

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RER2 - Replicate Error Ratio = (S-D)/|sqrt(sq(TPUs)+sq(TPUd))| as defined by ICPT BOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105292 RICHRC5017									
3107-0000-198-C-1C-02									
	G8FR81AA	BI-212	5.53E-01 +- 3.22E-01	U	pCi/g		6.72E-01		
		BI-214	3.38E-01 +- 1.10E-01		pCi/g		7.80E-02		
		CO-60	-1.08E-03 +- 2.28E-02	U	pCi/g		4.29E-02	3.00E+00	
		CS-134	1.33E-02 +- 2.16E-02	U	pCi/g		4.30E-02	1.00E+01	
		CS-137	-3.14E-03 +- 2.12E-02	U	pCi/g		3.81E-02	2.00E+01	
		EU-152	3.11E-02 +- 6.19E-02	U	pCi/g		1.13E-01	9.00E+00	
		EU-154	4.75E-02 +- 5.93E-02	U	pCi/g		1.28E-01	7.00E+00	
		EU-155	8.87E-03 +- 5.76E-02	U	pCi/g		1.01E-01	3.00E+02	
		K-40	6.23E+00 +- 1.16E+00		pCi/g		5.98E-01		
		MN-54	-1.33E-02 +- 2.42E-02	U	pCi/g		4.06E-02	2.00E+00	
		NB-94	-3.08E-03 +- 2.24E-02	U	pCi/g		3.99E-02	3.00E-01	
		PB-212	4.09E-01 +- 8.96E-02		pCi/g		7.69E-02		
		PB-214	4.52E-01 +- 1.09E-01		pCi/g		7.43E-02		
		RA-226	3.38E-01 +- 1.10E-01		pCi/g		7.80E-02		
		TL-208	1.28E-01 +- 4.57E-02	U	pCi/g		7.13E-02		
3107-0000-198-C-1C-03									
	G8FR91AA	AC-228	3.78E-01 +- 1.83E-01		pCi/g		1.37E-01		
		AG-108M	7.73E-04 +- 1.82E-02	U	pCi/g		3.19E-02		
		AM-241	-8.94E-03 +- 7.35E-02	U	pCi/g		1.27E-01		
		BI-212	6.64E-01 +- 3.33E-01	U	pCi/g		6.60E-01		
		BI-214	3.85E-01 +- 1.00E-01	U	pCi/g		1.53E-01		
		CO-60	-1.50E-03 +- 2.08E-02	U	pCi/g		3.79E-02	3.00E+00	
		CS-134	3.27E-02 +- 2.42E-02	U	pCi/g		4.80E-02	1.00E+01	
		CS-137	1.08E-03 +- 1.95E-02	U	pCi/g		3.50E-02	2.00E+01	
		EU-152	-2.97E-02 +- 5.22E-02	U	pCi/g		8.79E-02	9.00E+00	
		EU-154	2.59E-02 +- 6.30E-02	U	pCi/g		1.21E-01	7.00E+00	
		EU-155	1.74E-02 +- 6.41E-02	U	pCi/g		1.11E-01	3.00E+02	
		K-40	7.18E+00 +- 1.18E+00		pCi/g		3.13E-01		
		MN-54	-2.00E-03 +- 1.88E-02	U	pCi/g		3.36E-02	2.00E+00	
		NB-94	-9.15E-03 +- 1.75E-02	U	pCi/g		2.97E-02	3.00E-01	
		PB-212	3.85E-01 +- 8.68E-02		pCi/g		6.05E-02		
		PB-214	5.15E-01 +- 1.03E-01		pCi/g		6.88E-02		
		RA-226	3.85E-01 +- 1.00E-01		pCi/g		7.25E-02		
		TL-208	1.25E-01 +- 5.17E-02		pCi/g		3.21E-02		
3107-0000-198-C-1C-04									
	G8FTC1AA	AC-228	4.21E-01 +- 1.14E-01	U	pCi/g		1.96E-01		
		AG-108M	3.92E-03 +- 1.58E-02	U	pCi/g		2.81E-02		

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105292 RICHRC5017									
3107-0000-198-C-1C-04									
	G8FTC1AA	AM-241	3.44E-02 +- 1.04E-01	U	pCi/g		1.85E-01		
		BI-212	3.94E-01 +- 2.76E-01	U	pCi/g		5.43E-01		
		BI-214	4.05E-01 +- 1.10E-01	U	pCi/g		1.43E-01		
		CO-60	-1.37E-02 +- 2.14E-02	U	pCi/g		3.54E-02	3.00E+00	
		CS-134	1.36E-02 +- 1.83E-02	U	pCi/g		3.55E-02	1.00E+01	
		CS-137	-2.58E-02 +- 2.43E-02	U	pCi/g		4.38E-02	2.00E+01	
		EU-152	1.40E-02 +- 4.37E-02	U	pCi/g		8.00E-02	9.00E+00	
		EU-154	-7.58E-03 +- 4.90E-02	U	pCi/g		8.94E-02	7.00E+00	
		EU-155	3.36E-02 +- 5.38E-02	U	pCi/g		9.86E-02	3.00E+02	
		K-40	7.03E+00 +- 1.46E+00		pCi/g		2.82E-01		
		MN-54	1.53E-02 +- 1.73E-02	U	pCi/g		3.36E-02	2.00E+00	
		NB-94	-1.18E-02 +- 1.68E-02	U	pCi/g		2.72E-02	3.00E-01	
		PB-212	3.96E-01 +- 8.07E-02		pCi/g		4.71E-02		
		PB-214	5.53E-01 +- 1.12E-01		pCi/g		5.66E-02		
		RA-226	4.05E-01 +- 1.10E-01		pCi/g		5.09E-02		
		TL-208	1.46E-01 +- 4.08E-02	U	pCi/g		5.92E-02		
3107-0000-198-C-1C-05									
	G8FTD1AA	AC-228	3.30E-01 +- 1.53E-01	U	pCi/g		2.95E-01		
		AG-108M	-3.70E-03 +- 2.36E-02	U	pCi/g		4.06E-02		
		AM-241	-1.43E-01 +- 1.21E-01	U	pCi/g		1.94E-01		
		BI-212	1.41E-01 +- 4.21E-01	U	pCi/g		7.63E-01		
		BI-214	3.62E-01 +- 1.16E-01	U	pCi/g		1.86E-01		
		CO-60	-6.79E-03 +- 3.08E-02	U	pCi/g		5.51E-02	3.00E+00	
		CS-134	1.13E-02 +- 3.46E-02	U	pCi/g		6.33E-02	1.00E+01	
		CS-137	3.90E-04 +- 2.86E-02	U	pCi/g		5.09E-02	2.00E+01	
		EU-152	-8.05E-02 +- 1.01E-01	U	pCi/g		1.40E-01	9.00E+00	
		EU-154	6.01E-02 +- 9.76E-02	U	pCi/g		1.89E-01	7.00E+00	
		EU-155	-3.84E-03 +- 8.97E-02	U	pCi/g		1.51E-01	3.00E+02	
		K-40	6.24E+00 +- 1.22E+00		pCi/g		4.43E-01		
		MN-54	3.61E-03 +- 3.00E-02	U	pCi/g		5.42E-02	2.00E+00	
		NB-94	9.46E-03 +- 2.82E-02	U	pCi/g		5.20E-02	3.00E-01	
		PB-212	3.12E-01 +- 1.17E-01		pCi/g		1.00E-01		
		PB-214	6.24E-01 +- 1.48E-01		pCi/g		9.26E-02		
		RA-226	3.62E-01 +- 1.16E-01	U	pCi/g		1.86E-01		
		TL-208	2.28E-01 +- 5.42E-02		pCi/g		4.52E-02		
3107-0000-198-C-1C-06									
	G8FTE1AA	AC-228	4.13E-01 +- 1.65E-01	U	pCi/g		3.00E-01		

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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Sample Results Summary

Date: 21-Apr-05

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105292 RICHRC5017									
3107-0000-198-C-1C-06									
	G8FTE1AA	AG-108M	1.42E-03 +- 2.09E-02	U	pCi/g		3.71E-02		
		AM-241	-1.24E-02 +- 1.46E-01	U	pCi/g		2.46E-01		
		BI-212	3.69E-01 +- 3.90E-01	U	pCi/g		7.63E-01		
		BI-214	3.52E-01 +- 1.32E-01	U	pCi/g		1.78E-01		
		CO-60	-1.03E-02 +- 2.63E-02	U	pCi/g		4.67E-02	3.00E+00	
		CS-134	2.60E-02 +- 3.05E-02	U	pCi/g		5.98E-02	1.00E+01	
		CS-137	-9.26E-03 +- 2.54E-02	U	pCi/g		4.34E-02	2.00E+01	
		EU-152	1.74E-02 +- 7.65E-02	U	pCi/g		1.27E-01	9.00E+00	
		EU-154	7.31E-02 +- 8.37E-02	U	pCi/g		1.74E-01	7.00E+00	
		EU-155	5.04E-02 +- 7.99E-02	U	pCi/g		1.44E-01	3.00E+02	
		K-40	6.72E+00 +- 1.35E+00		pCi/g		4.65E-01		
		MN-54	3.00E-02 +- 2.35E-02	U	pCi/g		4.90E-02	2.00E+00	
		NB-94	8.01E-05 +- 2.49E-02	U	pCi/g		4.52E-02	3.00E-01	
		PB-212	5.19E-01 +- 1.12E-01		pCi/g		9.30E-02		
		PB-214	4.51E-01 +- 1.15E-01		pCi/g		7.55E-02		
		RA-226	3.52E-01 +- 1.32E-01	U	pCi/g		1.78E-01		
		TL-208	1.40E-01 +- 5.00E-02		pCi/g		3.85E-02		
5105297 RICHRC5017									
3107-0000-199-C-1C-01									
	G8FTG1AA	AC-228	6.54E-01 +- 1.68E-01		pCi/g		1.07E-01		
		AG-108M	1.25E-02 +- 1.43E-02	U	pCi/g		2.47E-02		
		AM-241	1.64E-02 +- 2.38E-02	U	pCi/g		3.66E-02		
		BI-212	5.44E-01 +- 2.82E-01	U	pCi/g		5.05E-01		
		BI-214	3.99E-01 +- 1.02E-01		pCi/g		5.83E-02		
		CO-60	-3.54E-03 +- 2.10E-02	U	pCi/g		3.65E-02	3.00E+00	
		CS-134	2.69E-02 +- 2.08E-02	U	pCi/g		3.69E-02	1.00E+01	
		CS-137	2.63E-03 +- 1.84E-02	U	pCi/g		3.17E-02	2.00E+01	
		EU-152	1.98E-02 +- 4.57E-02	U	pCi/g		7.81E-02	9.00E+00	
		EU-154	-1.81E-02 +- 5.41E-02	U	pCi/g		9.13E-02	7.00E+00	
		EU-155	5.06E-03 +- 3.50E-02	U	pCi/g		5.91E-02	3.00E+02	
		K-40	7.24E+00 +- 1.13E+00		pCi/g		3.11E-01		
		MN-54	1.31E-02 +- 1.90E-02	U	pCi/g		3.33E-02	2.00E+00	
		NB-94	-1.88E-04 +- 1.78E-02	U	pCi/g		3.09E-02	3.00E-01	
		PB-212	3.12E-01 +- 7.66E-02		pCi/g		4.91E-02		
		PB-214	4.20E-01 +- 1.01E-01		pCi/g		5.58E-02		
		RA-226	3.99E-01 +- 1.02E-01		pCi/g		5.84E-02		
		TL-208	1.58E-01 +- 3.65E-02		pCi/g		2.81E-02		

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105297	RICHRC5017								
	3107-0000-199-C-1C-01 DUP								
	G8FTG1AH	AC-228	3.99E-01 +- 1.81E-01		pCi/g		1.51E-01		
		AG-108M	3.72E-03 +- 1.95E-02	U	pCi/g		3.32E-02		
		AM-241	-1.51E-01 +- 7.99E-02	U	pCi/g		1.24E-01		
		BI-212	4.00E-01 +- 3.69E-01	U	pCi/g		6.38E-01		
		BI-214	3.74E-01 +- 1.09E-01	U	pCi/g		1.22E-01		
		CO-60	1.44E-03 +- 2.67E-02	U	pCi/g		4.56E-02	3.00E+00	
		CS-134	1.19E-02 +- 2.87E-02	U	pCi/g		4.90E-02	1.00E+01	
		CS-137	2.30E-02 +- 2.57E-02	U	pCi/g		4.48E-02	2.00E+01	
		EU-152	3.44E-02 +- 9.29E-02	U	pCi/g		1.07E-01	9.00E+00	
		EU-154	-5.16E-02 +- 7.88E-02	U	pCi/g		1.29E-01	7.00E+00	
		EU-155	6.63E-02 +- 5.57E-02	U	pCi/g		9.43E-02	3.00E+02	
		K-40	7.51E+00 +- 1.50E+00		pCi/g		3.63E-01		
		MN-54	5.00E-03 +- 2.56E-02	U	pCi/g		4.40E-02	2.00E+00	
		NB-94	6.73E-04 +- 2.38E-02	U	pCi/g		4.07E-02	3.00E-01	
		PB-212	5.64E-01 +- 1.15E-01		pCi/g		5.47E-02		
		PB-214	4.34E-01 +- 1.03E-01		pCi/g		7.30E-02		
		RA-226	3.74E-01 +- 1.09E-01	U	pCi/g		1.22E-01		
		TL-208	1.35E-01 +- 3.69E-02		pCi/g		3.91E-02		
	3107-0000-199-C-1C-02								
	G8FTH1AA	AC-228	3.89E-01 +- 1.45E-01		pCi/g		1.55E-01		
		AG-108M	-1.15E-02 +- 1.94E-02	U	pCi/g		3.20E-02		
		AM-241	-1.04E-02 +- 4.28E-02	U	pCi/g		7.35E-02		
		BI-212	4.02E-01 +- 3.67E-01	U	pCi/g		7.23E-01		
		BI-214	3.46E-01 +- 1.08E-01	U	pCi/g		1.74E-01		
		CO-60	1.05E-03 +- 2.54E-02	U	pCi/g		4.89E-02	3.00E+00	
		CS-134	5.06E-03 +- 2.70E-02	U	pCi/g		4.98E-02	1.00E+01	
		CS-137	-1.94E-02 +- 2.31E-02	U	pCi/g		3.74E-02	2.00E+01	
		EU-152	-4.11E-02 +- 6.29E-02	U	pCi/g		1.04E-01	9.00E+00	
		EU-154	-3.09E-02 +- 7.44E-02	U	pCi/g		1.29E-01	7.00E+00	
		EU-155	8.84E-04 +- 6.00E-02	U	pCi/g		1.04E-01	3.00E+02	
		K-40	7.11E+00 +- 1.24E+00		pCi/g		3.63E-01		
		MN-54	1.44E-02 +- 2.37E-02	U	pCi/g		4.59E-02	2.00E+00	
		NB-94	-1.06E-02 +- 2.28E-02	U	pCi/g		3.97E-02	3.00E-01	
		PB-212	3.40E-01 +- 7.87E-02		pCi/g		8.53E-02		
		PB-214	4.66E-01 +- 1.14E-01		pCi/g		7.51E-02		
		RA-226	3.46E-01 +- 1.08E-01		pCi/g		7.86E-02		

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT DOA.

U Qual - Analyzed for, but the result is less than the Mde/Mda/Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

Date: 21-Apr-05

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105297	RICHRC5017								
3107-0000-199-C-1C-02									
	G8FTH1AA	TL-208	1.50E-01 +- 4.13E-02		pCi/g		4.35E-02		
3107-0000-199-C-1C-03									
	G8FTJ1AA	AC-228	4.62E-01 +- 1.55E-01	U	pCi/g		2.21E-01		
		AG-108M	2.80E-03 +- 1.39E-02	U	pCi/g		2.48E-02		
		AM-241	8.31E-02 +- 1.07E-01	U	pCi/g		1.92E-01		
		BI-212	5.35E-01 +- 2.95E-01	U	pCi/g		5.84E-01		
		BI-214	4.91E-01 +- 9.44E-02		pCi/g		5.31E-02		
		CO-60	9.81E-03 +- 1.85E-02	U	pCi/g		3.66E-02	3.00E+00	
		CS-134	1.90E-02 +- 1.96E-02	U	pCi/g		3.84E-02	1.00E+01	
		CS-137	4.40E-03 +- 2.19E-02	U	pCi/g		2.97E-02	2.00E+01	
		EU-152	-1.97E-03 +- 4.49E-02	U	pCi/g		7.79E-02	9.00E+00	
		EU-154	7.56E-03 +- 4.97E-02	U	pCi/g		9.48E-02	7.00E+00	
		EU-155	3.13E-02 +- 5.41E-02	U	pCi/g		9.79E-02	3.00E+02	
		K-40	7.78E+00 +- 1.59E+00		pCi/g		2.78E-01		
		MN-54	1.10E-02 +- 1.76E-02	U	pCi/g		3.34E-02	2.00E+00	
		NB-94	-2.22E-03 +- 1.55E-02	U	pCi/g		2.74E-02	3.00E-01	
		PB-212	3.85E-01 +- 7.65E-02		pCi/g		4.97E-02		
		PB-214	4.99E-01 +- 9.76E-02		pCi/g		6.49E-02		
		RA-226	4.91E-01 +- 9.44E-02		pCi/g		5.31E-02		
		TL-208	1.43E-01 +- 3.92E-02		pCi/g		2.87E-02		
3107-0000-199-C-1C-04									
	G8FTK1AA	AC-228	2.96E-01 +- 2.07E-01	U	pCi/g		2.90E-01		
		AG-108M	5.60E-03 +- 1.94E-02	U	pCi/g		3.58E-02		
		AM-241	-5.01E-02 +- 1.17E-01	U	pCi/g		2.00E-01		
		BI-212	7.71E-01 +- 4.18E-01	U	pCi/g		8.45E-01		
		BI-214	3.60E-01 +- 1.09E-01	U	pCi/g		1.79E-01		
		CO-60	1.56E-02 +- 2.79E-02	U	pCi/g		5.71E-02	3.00E+00	
		CS-134	6.90E-03 +- 2.77E-02	U	pCi/g		5.21E-02	1.00E+01	
		CS-137	-2.02E-03 +- 2.49E-02	U	pCi/g		4.45E-02	2.00E+01	
		EU-152	-1.13E-02 +- 5.73E-02	U	pCi/g		9.89E-02	9.00E+00	
		EU-154	-5.84E-02 +- 8.13E-02	U	pCi/g		1.36E-01	7.00E+00	
		EU-155	6.76E-02 +- 7.43E-02	U	pCi/g		1.33E-01	3.00E+02	
		K-40	5.78E+00 +- 1.29E+00		pCi/g		3.87E-01		
		MN-54	6.89E-04 +- 2.37E-02	U	pCi/g		4.38E-02	2.00E+00	
		NB-94	-3.62E-03 +- 2.32E-02	U	pCi/g		4.17E-02	3.00E-01	
		PB-212	4.23E-01 +- 9.41E-02		pCi/g		6.47E-02		
		PB-214	4.56E-01 +- 1.21E-01		pCi/g		8.98E-02		

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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Sample Results Summary

Date: 21-Apr-05

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105297	RICHRC5017								
	3107-0000-199-C-1C-04								
	G8FTK1AA	RA-226	3.60E-01 +- 1.09E-01	U	pCi/g		1.79E-01		
		TL-208	1.49E-01 +- 5.58E-02	U	pCi/g		8.49E-02		
	3107-0000-199-C-1C-05								
	G8FTL1AA	AC-228	4.60E-01 +- 1.88E-01		pCi/g		1.51E-01		
		AG-108M	-7.98E-03 +- 2.26E-02	U	pCi/g		3.85E-02		
		AM-241	-6.56E-03 +- 8.46E-02	U	pCi/g		1.44E-01		
		BI-212	3.11E-01 +- 3.84E-01	U	pCi/g		7.41E-01		
		BI-214	6.08E-01 +- 1.36E-01	U	pCi/g		2.16E-01		
		CO-60	-2.29E-02 +- 2.27E-02	U	pCi/g		3.47E-02	3.00E+00	
		CS-134	1.23E-02 +- 3.16E-02	U	pCi/g		5.88E-02	1.00E+01	
		CS-137	-4.59E-03 +- 2.85E-02	U	pCi/g		4.96E-02	2.00E+01	
		EU-152	-3.32E-02 +- 7.94E-02	U	pCi/g		1.22E-01	9.00E+00	
		EU-154	2.93E-02 +- 8.77E-02	U	pCi/g		1.68E-01	7.00E+00	
		EU-155	5.02E-03 +- 6.80E-02	U	pCi/g		1.19E-01	3.00E+02	
		K-40	6.36E+00 +- 1.18E+00		pCi/g		4.58E-01		
		MN-54	-1.81E-02 +- 2.71E-02	U	pCi/g		4.49E-02	2.00E+00	
		NB-94	2.25E-02 +- 2.75E-02	U	pCi/g		5.31E-02	3.00E-01	
		PB-212	3.60E-01 +- 1.05E-01		pCi/g		1.04E-01		
		PB-214	6.80E-01 +- 1.43E-01		pCi/g		8.43E-02		
		RA-226	6.08E-01 +- 1.36E-01	U	pCi/g		2.16E-01		
		TL-208	1.17E-01 +- 5.41E-02	U	pCi/g		7.95E-02		
	3107-0000-199-C-2C-06								
	G8FTM1AA	AC-228	5.02E-01 +- 1.51E-01	U	pCi/g		2.19E-01		
		AG-108M	-4.37E-04 +- 1.34E-02	U	pCi/g		2.34E-02		
		AM-241	-7.88E-02 +- 1.09E-01	U	pCi/g		1.73E-01		
		BI-212	1.24E-01 +- 2.58E-01	U	pCi/g		4.82E-01		
		BI-214	4.37E-01 +- 8.50E-02		pCi/g		4.87E-02		
		CO-60	2.91E-03 +- 1.61E-02	U	pCi/g		3.12E-02	3.00E+00	
		CS-134	1.92E-02 +- 1.87E-02	U	pCi/g		3.69E-02	1.00E+01	
		CS-137	-1.41E-02 +- 2.07E-02	U	pCi/g		3.89E-02	2.00E+01	
		EU-152	3.73E-02 +- 4.12E-02	U	pCi/g		7.76E-02	9.00E+00	
		EU-154	-2.49E-02 +- 5.54E-02	U	pCi/g		9.61E-02	7.00E+00	
		EU-155	2.17E-02 +- 5.12E-02	U	pCi/g		9.21E-02	3.00E+02	
		K-40	6.86E+00 +- 1.45E+00		pCi/g		2.43E-01		
		MN-54	9.75E-03 +- 1.50E-02	U	pCi/g		2.92E-02	2.00E+00	
		NB-94	7.61E-03 +- 1.60E-02	U	pCi/g		3.02E-02	3.00E-01	
		PB-212	4.22E-01 +- 7.72E-02		pCi/g		4.37E-02		

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RER2 - Replicate Error Ratio = (S-D)/|sqrt(sq(TPUs)+sq(TPUd))| as defined by ICPT BOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105297 RICHRC5017									
3107-0000-199-C-2C-06									
	G8FTM1AA	PB-214	4.55E-01 +- 9.65E-02		pCi/g		5.97E-02		
		RA-226	4.37E-01 +- 8.50E-02		pCi/g		4.87E-02		
		TL-208	1.51E-01 +- 3.72E-02		pCi/g		2.67E-02		
9801-0000-030-RA-01									
	G8FTN1AA	AC-228	3.91E-01 +- 2.17E-01	U	pCi/g		3.22E-01		
		AG-108M	4.82E-03 +- 2.71E-02	U	pCi/g		4.79E-02		
		AM-241	-4.84E-02 +- 2.09E-01	U	pCi/g		3.57E-01		
		BI-212	4.25E-01 +- 4.69E-01	U	pCi/g		8.72E-01		
		BI-214	3.55E+00 +- 4.77E-01		pCi/g		1.09E-01		
		CO-60	2.12E-02 +- 3.34E-02	U	pCi/g		6.61E-02	1.50E-01	
		CS-134	2.20E-02 +- 3.25E-02	U	pCi/g		6.19E-02	1.80E-01	
		CS-137	-4.37E-02 +- 3.47E-02	U	pCi/g		5.35E-02	3.00E-01	
		EU-152	-4.54E-02 +- 1.03E-01	U	pCi/g		1.70E-01	4.00E-01	
		EU-154	1.24E-02 +- 9.91E-02	U	pCi/g		1.84E-01	3.50E-01	
		EU-155	-3.15E-02 +- 1.12E-01	U	pCi/g		1.83E-01	1.50E+01	
		K-40	3.23E+00 +- 9.07E-01		pCi/g		5.20E-01		
		MN-54	2.10E-03 +- 3.23E-02	U	pCi/g		5.77E-02	6.50E-01	
		NB-94	-2.28E-03 +- 3.01E-02	U	pCi/g		5.32E-02	2.50E-01	
		PB-212	3.56E-01 +- 1.16E-01		pCi/g		1.09E-01		
		PB-214	3.78E+00 +- 5.82E-01		pCi/g		1.23E-01		
		RA-226	3.55E+00 +- 4.77E-01		pCi/g		1.09E-01		
		TL-208	1.28E-01 +- 6.51E-02	U	pCi/g		8.19E-02		
9801-0000-031-RA-01									
	G8FTX1AA	AC-228	2.09E-01 +- 8.34E-02		pCi/g		6.79E-02		
		AG-108M	3.67E-04 +- 8.23E-03	U	pCi/g		1.40E-02		
		AM-241	2.10E-02 +- 2.26E-02	U	pCi/g		3.91E-02		
		BI-212	6.58E-02 +- 1.52E-01	U	pCi/g		2.62E-01		
		BI-214	1.81E-01 +- 5.25E-02	U	pCi/g		5.64E-02		
		CO-60	-7.86E-03 +- 1.32E-02	U	pCi/g		2.18E-02	1.50E-01	
		CS-134	1.66E-02 +- 1.21E-02	U	pCi/g		2.19E-02	1.80E-01	
		CS-137	4.48E-03 +- 1.12E-02	U	pCi/g		1.94E-02	3.00E-01	
		EU-152	2.08E-02 +- 2.62E-02	U	pCi/g		4.44E-02	4.00E-01	
		EU-154	-1.94E-02 +- 3.71E-02	U	pCi/g		6.16E-02	3.50E-01	
		EU-155	1.78E-02 +- 2.05E-02	U	pCi/g		3.60E-02	1.50E+01	
		K-40	1.90E+00 +- 5.60E-01		pCi/g		2.09E-01		
		MN-54	5.54E-03 +- 1.15E-02	U	pCi/g		2.02E-02	6.50E-01	
		NB-94	7.62E-03 +- 1.09E-02	U	pCi/g		1.93E-02	2.50E-01	

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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Sample Results Summary

Date: 21-Apr-05

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105297	RICHRC5017								
9801-0000-031-RA-01									
	G8FTX1AA	PB-212	1.53E-01 +- 3.34E-02		pCi/g		2.54E-02		
		PB-214	1.34E-01 +- 5.23E-02		pCi/g		3.20E-02		
		RA-226	1.81E-01 +- 5.25E-02		pCi/g		3.59E-02		
		TL-208	5.23E-02 +- 1.85E-02	U	pCi/g		2.31E-02		
9801-0000-032-RA-01									
	G8FT01AA	AC-228	1.25E-01 +- 9.26E-02	U	pCi/g		1.92E-01		
		AG-108M	-4.93E-04 +- 1.62E-02	U	pCi/g		2.88E-02		
		AM-241	2.31E-03 +- 5.72E-02	U	pCi/g		9.92E-02		
		BI-212	1.94E-01 +- 3.01E-01	U	pCi/g		5.84E-01		
		BI-214	2.08E-01 +- 8.40E-02	U	pCi/g		1.30E-01		
		CO-60	-7.99E-03 +- 1.85E-02	U	pCi/g		3.28E-02	1.50E-01	
		CS-134	1.78E-02 +- 2.05E-02	U	pCi/g		4.19E-02	1.80E-01	
		CS-137	3.03E-03 +- 2.12E-02	U	pCi/g		3.87E-02	3.00E-01	
		EU-152	4.58E-02 +- 5.58E-02	U	pCi/g		1.06E-01	4.00E-01	
		EU-154	-4.66E-02 +- 5.57E-02	U	pCi/g		9.00E-02	3.50E-01	
		EU-155	2.84E-02 +- 4.60E-02	U	pCi/g		8.47E-02	1.50E+01	
		K-40	2.65E+00 +- 6.88E-01		pCi/g		2.46E-01		
		MN-54	1.46E-02 +- 1.92E-02	U	pCi/g		3.83E-02	6.50E-01	
		NB-94	-4.35E-03 +- 1.81E-02	U	pCi/g		3.22E-02	2.50E-01	
		PB-212	2.54E-01 +- 7.92E-02		pCi/g		4.72E-02		
		PB-214	1.95E-01 +- 9.20E-02		pCi/g		7.29E-02		
		RA-226	2.08E-01 +- 8.40E-02	U	pCi/g		1.30E-01		
		TL-208	6.02E-02 +- 2.91E-02		pCi/g		3.63E-02		
9801-0000-033-RA-01									
	G8FT11AA	AC-228	3.38E+00 +- 6.10E-01		pCi/g		1.63E-01		
		AG-108M	9.45E-03 +- 2.49E-02	U	pCi/g		4.27E-02		
		AM-241	-4.11E-02 +- 2.31E-01	U	pCi/g		3.77E-01		
		BI-212	3.44E+00 +- 9.80E-01	U	pCi/g		1.18E+00		
		BI-214	2.58E+00 +- 3.40E-01		pCi/g		9.05E-02		
		CO-60	6.53E-03 +- 2.84E-02	U	pCi/g		5.11E-02	1.50E-01	
		CS-134	2.19E-01 +- 7.04E-02	U	pCi/g		7.58E-02	1.80E-01	
		CS-137	-1.93E-02 +- 3.37E-02	U	pCi/g		5.75E-02	3.00E-01	
		EU-152	-9.34E-02 +- 7.83E-02	U	pCi/g		1.26E-01	4.00E-01	
		EU-154	7.28E-02 +- 9.11E-02	U	pCi/g		1.67E-01	3.50E-01	
		EU-155	2.60E-01 +- 1.16E-01	U	pCi/g		2.01E-01	1.50E+01	
		K-40	2.51E+01 +- 4.70E+00		pCi/g		4.66E-01		
		MN-54	3.94E-02 +- 2.97E-02	U	pCi/g		5.37E-02	6.50E-01	

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

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5105297	RICHRC5017								
9801-0000-033-RA-01									
	G8FT11AA	NB-94	3.19E-04 +- 2.58E-02	U	pCi/g		4.44E-02	2.50E-01	
		PB-212	3.65E+00 +- 5.34E-01		pCi/g		8.65E-02		
		PB-214	3.10E+00 +- 4.42E-01		pCi/g		9.71E-02		
		RA-226	2.58E+00 +- 3.40E-01		pCi/g		9.05E-02		
		TL-208	1.08E+00 +- 1.52E-01		pCi/g		5.02E-02		
9801-0000-034-RA-01									
	G8FT21AA	AC-228	5.38E-01 +- 1.67E-01		pCi/g		1.21E-01		
		AG-108M	-1.53E-02 +- 1.92E-02	U	pCi/g		3.13E-02		
		AM-241	-6.37E-03 +- 1.27E-01	U	pCi/g		2.23E-01		
		BI-212	2.75E-01 +- 3.61E-01	U	pCi/g		6.84E-01		
		BI-214	4.75E-01 +- 1.11E-01	U	pCi/g		1.77E-01		
		CO-60	8.14E-03 +- 1.94E-02	U	pCi/g		4.10E-02	1.50E-01	
		CS-134	3.51E-02 +- 2.82E-02	U	pCi/g		5.66E-02	1.80E-01	
		CS-137	-3.40E-03 +- 2.45E-02	U	pCi/g		4.32E-02	3.00E-01	
		EU-152	7.81E-03 +- 6.23E-02	U	pCi/g		1.09E-01	4.00E-01	
		EU-154	5.20E-02 +- 7.50E-02	U	pCi/g		1.53E-01	3.50E-01	
		EU-155	7.78E-02 +- 6.67E-02	U	pCi/g		1.21E-01	1.50E+01	
		K-40	3.74E+00 +- 8.70E-01		pCi/g		3.80E-01		
		MN-54	1.43E-02 +- 2.36E-02	U	pCi/g		4.54E-02	6.50E-01	
		NB-94	1.15E-02 +- 2.12E-02	U	pCi/g		4.13E-02	2.50E-01	
		PB-212	4.51E-01 +- 9.59E-02		pCi/g		5.76E-02		
		PB-214	5.57E-01 +- 1.21E-01		pCi/g		7.20E-02		
		RA-226	4.75E-01 +- 1.11E-01		pCi/g		7.39E-02		
		TL-208	1.78E-01 +- 5.16E-02		pCi/g		3.48E-02		
9801-0000-039-RA									
	G8FT61AA	AC-228	5.61E-01 +- 1.72E-01		pCi/g		1.30E-01		
		AG-108M	9.29E-03 +- 1.95E-02	U	pCi/g		3.41E-02		
		AM-241	1.68E-02 +- 1.32E-01	U	pCi/g		2.21E-01		
		BI-212	6.50E-01 +- 3.08E-01	U	pCi/g		5.93E-01		
		BI-214	5.38E-01 +- 1.02E-01		pCi/g		6.34E-02		
		CO-60	4.53E-01 +- 1.03E-01		pCi/g		3.06E-02	1.50E-01	
		CS-134	4.37E-02 +- 2.31E-02	U	pCi/g		4.47E-02	1.80E-01	
		CS-137	2.24E+00 +- 2.80E-01		pCi/g		3.70E-02	3.00E-01	
		EU-152	3.48E-02 +- 5.73E-02	U	pCi/g		1.02E-01	4.00E-01	
		EU-154	3.40E-02 +- 6.02E-02	U	pCi/g		1.14E-01	3.50E-01	
		EU-155	6.15E-02 +- 6.72E-02	U	pCi/g		1.19E-01	1.50E+01	
		K-40	9.12E+00 +- 1.80E+00		pCi/g		1.89E-01		

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT DOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105297 RICHRC5017									
9801-0000-039-RA									
	G8FT61AA	MN-54	8.88E-03 +- 1.74E-02	U	pCi/g		3.20E-02	6.50E-01	
		NB-94	4.20E-03 +- 1.94E-02	U	pCi/g		3.45E-02	2.50E-01	
		PB-212	5.77E-01 +- 1.09E-01		pCi/g		6.03E-02		
		PB-214	5.83E-01 +- 1.19E-01		pCi/g		7.30E-02		
		RA-226	5.38E-01 +- 1.02E-01		pCi/g		6.34E-02		
		TL-208	1.94E-01 +- 4.44E-02		pCi/g		3.35E-02		
9801-0000-040-RA-01									
	G8FT41AA	AC-228	4.01E-01 +- 2.08E-01		pCi/g		1.95E-01		
		AG-108M	-1.31E-03 +- 2.66E-02	U	pCi/g		4.72E-02		
		AM-241	1.02E-02 +- 1.12E-01	U	pCi/g		1.93E-01		
		BI-212	5.82E-01 +- 4.51E-01	U	pCi/g		9.38E-01		
		BI-214	4.74E-01 +- 1.38E-01	U	pCi/g		2.34E-01		
		CO-60	3.10E-02 +- 3.80E-02	U	pCi/g		7.99E-02	1.50E-01	
		CS-134	2.39E-02 +- 3.85E-02	U	pCi/g		7.51E-02	1.80E-01	
		CS-137	-3.15E-02 +- 3.69E-02	U	pCi/g		5.89E-02	3.00E-01	
		EU-152	-4.75E-02 +- 8.24E-02	U	pCi/g		1.37E-01	4.00E-01	
		EU-154	2.20E-02 +- 1.12E-01	U	pCi/g		2.16E-01	3.50E-01	
		EU-155	-1.58E-02 +- 9.09E-02	U	pCi/g		1.58E-01	1.50E+01	
		K-40	8.13E+00 +- 1.60E+00		pCi/g		5.21E-01		
		MN-54	-1.16E-02 +- 3.28E-02	U	pCi/g		5.72E-02	6.50E-01	
		NB-94	1.13E-02 +- 3.59E-02	U	pCi/g		6.72E-02	2.50E-01	
		PB-212	4.98E-01 +- 1.27E-01		pCi/g		1.27E-01		
		PB-214	5.99E-01 +- 1.61E-01		pCi/g		1.19E-01		
		RA-226	4.74E-01 +- 1.38E-01	U	pCi/g		2.34E-01		
		TL-208	1.57E-01 +- 6.15E-02		pCi/g		6.52E-02		
5105267 RICHRC5006									
3107-0000-194-C-1C-01									
	G8FQQ1AD	STRONTIUM	2.62E-02 +- 1.26E-02		pCi/g	82%	1.89E-02	1.00E-02	
3107-0000-194-C-1C-01 DUP									
	G8FQQ1AF	STRONTIUM	3.25E-02 +- 1.29E-02		pCi/g	84%	1.66E-02	1.00E-02	0.7
3107-0000-194-C-1C-02									
	G8FQX1AD	STRONTIUM	2.32E-02 +- 1.08E-02		pCi/g	88%	1.57E-02	1.00E-02	
3107-0000-194-C-1C-03									
	G8FQ01AD	STRONTIUM	4.03E-03 +- 8.90E-03	U	pCi/g	81%	1.76E-02	1.00E-02	
3107-0000-194-C-1C-04									
	G8FQ11AD	STRONTIUM	5.53E-02 +- 1.79E-02		pCi/g	89%	1.54E-02	1.00E-02	
3107-0000-194-C-1C-05									

STL Richland

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105267 RICHRC5006									
	3107-0000-194-C-1C-05								
	G8FQ21AD	STRONTIUM	1.60E-02 +- 9.26E-03		pCi/g	88%	1.51E-02	1.00E-02	
	3107-0000-194-C-2C-06								
	G8FQ31AD	STRONTIUM	7.92E-02 +- 2.37E-02		pCi/g	79%	1.61E-02	1.00E-02	
	3107-0000-195-C-1C-01								
	G8FQ71AD	STRONTIUM	9.41E-02 +- 2.71E-02		pCi/g	89%	1.56E-02	1.00E-02	
	3107-0000-195-C-1C-02								
	G8FQ91AD	STRONTIUM	1.10E-01 +- 3.15E-02		pCi/g	84%	1.70E-02	1.00E-02	
	3107-0000-195-C-1C-03								
	G8FRA1AD	STRONTIUM	2.82E-02 +- 1.22E-02		pCi/g	79%	1.66E-02	1.00E-02	
	3107-0000-195-C-1C-04								
	G8FRC1AD	STRONTIUM	1.25E-01 +- 3.50E-02		pCi/g	95%	1.51E-02	1.00E-02	
	3107-0000-195-C-2C-05								
	G8FRF1AD	STRONTIUM	2.00E-01 +- 5.43E-02		pCi/g	88%	1.59E-02	1.00E-02	
	3107-0000-195-C-2C-06								
	G8FRG1AD	STRONTIUM	1.57E-01 +- 4.41E-02		pCi/g	86%	1.67E-02	1.00E-02	
	3107-0000-196-C-1C-01								
	G8FRH1AD	STRONTIUM	1.86E-01 +- 5.14E-02		pCi/g	87%	1.60E-02	1.00E-02	
	3107-0000-196-C-1C-02								
	G8FRK1AD	STRONTIUM	1.46E-01 +- 4.10E-02		pCi/g	83%	1.65E-02	1.00E-02	
	3107-0000-196-C-1C-03								
	G8FRN1AD	STRONTIUM	4.63E-02 +- 1.62E-02		pCi/g	80%	1.70E-02	1.00E-02	
5105271 RICHRC5006									
	3107-0000-196-C-2C-04								
	G8FRQ1AD	STRONTIUM	2.36E-01 +- 6.43E-02		pCi/g	77%	1.90E-02	1.00E-02	
	3107-0000-196-C-2C-05								
	G8FRR1AD	STRONTIUM	8.81E-02 +- 2.58E-02		pCi/g	83%	1.62E-02	1.00E-02	
	3107-0000-196-C-2C-06								
	G8FRT1AD	STRONTIUM	1.34E-01 +- 3.72E-02		pCi/g	89%	1.51E-02	1.00E-02	
	3107-0000-197-C-1C-01								
	G8FRV1AD	STRONTIUM	2.79E-01 +- 7.55E-02		pCi/g	70%	1.90E-02	1.00E-02	
	3107-0000-197-C-1C-02								
	G8FRW1AD	STRONTIUM	1.05E-01 +- 3.04E-02		pCi/g	84%	1.54E-02	1.00E-02	
	3107-0000-197-C-1C-03								
	G8FRX1AD	STRONTIUM	7.55E-02 +- 2.29E-02		pCi/g	78%	1.61E-02	1.00E-02	
	3107-0000-197-C-1C-03 DUP								
	G8FRX1AF	STRONTIUM	1.97E-01 +- 5.35E-02		pCi/g	100%	1.28E-02	1.00E-02	4.2
	3107-0000-197-C-1C-04								
	G8FR21AD	STRONTIUM	5.08E-02 +- 1.62E-02		pCi/g	93%	1.45E-02	1.00E-02	

STL Richland RER2 - Replicate Error Ratio = (S-D)/|sqrt(sq(TPUs)+sq(TPUd))| as defined by ICPT BOA.

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Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105271	RICHRC5006								
	3107-0000-197-C-1C-05								
	G8FR31AD	STRONTIUM	7.79E-02 +- 2.29E-02		pCi/g	97%	1.45E-02	1.00E-02	
	3107-0000-197-C-1C-06								
	G8FR51AD	STRONTIUM	8.96E-02 +- 2.58E-02		pCi/g	97%	1.36E-02	1.00E-02	
	3107-0000-198-C-1C-01								
	G8FR71AD	STRONTIUM	2.43E-01 +- 6.59E-02		pCi/g	76%	1.74E-02	1.00E-02	
	3107-0000-198-C-1C-02								
	G8FR81AD	STRONTIUM	1.50E-01 +- 4.14E-02		pCi/g	86%	1.54E-02	1.00E-02	
	3107-0000-198-C-1C-03								
	G8FR91AD	STRONTIUM	6.66E-02 +- 2.06E-02		pCi/g	89%	1.56E-02	1.00E-02	
	3107-0000-198-C-1C-04								
	G8FTC1AD	STRONTIUM	1.39E-01 +- 3.90E-02		pCi/g	84%	1.56E-02	1.00E-02	
	3107-0000-198-C-1C-05								
	G8FTD1AD	STRONTIUM	1.76E-01 +- 4.89E-02		pCi/g	81%	1.62E-02	1.00E-02	
	3107-0000-198-C-1C-06								
	G8FTE1AD	STRONTIUM	1.50E-01 +- 4.16E-02		pCi/g	90%	1.49E-02	1.00E-02	
5105275	RICHRC5006								
	3107-0000-199-C-1C-01								
	G8FTG1AD	STRONTIUM	5.71E-01 +- 1.58E-01		pCi/g	56%	2.19E-02	1.00E-02	
	3107-0000-199-C-1C-01 DUP								
	G8FTG1AF	STRONTIUM	4.17E-01 +- 1.14E-01		pCi/g	54%	2.17E-02	1.00E-02	1.6
	3107-0000-199-C-1C-02								
	G8FTH1AD	STRONTIUM	1.83E-01 +- 5.45E-02		pCi/g	35%	3.06E-02	1.00E-02	
	3107-0000-199-C-1C-03								
	G8FTJ1AD	STRONTIUM	1.53E-01 +- 4.66E-02		pCi/g	65%	2.08E-02	1.00E-02	
	3107-0000-199-C-1C-04								
	G8FTK1AD	STRONTIUM	1.58E-01 +- 4.70E-02		pCi/g	41%	2.90E-02	1.00E-02	
	3107-0000-199-C-1C-05								
	G8FTL1AD	STRONTIUM	2.30E-01 +- 6.35E-02		pCi/g	63%	1.93E-02	1.00E-02	
	3107-0000-199-C-2C-06								
	G8FTM1AD	STRONTIUM	2.13E-01 +- 5.87E-02		pCi/g	70%	1.77E-02	1.00E-02	
	9801-0000-030-RA-01								
	G8FTN1AD	STRONTIUM	2.17E-02 +- 1.01E-02	J	pCi/g	88%	1.47E-02	5.00E-02	
	9801-0000-031-RA-01								
	G8FTX1AD	STRONTIUM	7.24E-02 +- 2.18E-02		pCi/g	89%	1.43E-02	5.00E-02	
	9801-0000-032-RA-01								
	G8FT01AD	STRONTIUM	1.86E-03 +- 7.53E-03	U	pCi/g	81%	1.51E-02	5.00E-02	
	9801-0000-033-RA-01								
	G8FT11AD	STRONTIUM	1.58E-02 +- 1.49E-02	U	pCi/g	40%	2.73E-02	5.00E-02	

STL Richland

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U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id · Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105275 RICHRC5006									
	9801-0000-034-RA-01								
	G8FT21AD	STRONTIUM	5.94E-03 +- 1.06E-02	U	pCi/g	58%	2.08E-02	5.00E-02	
	9801-0000-039-RA								
	G8FT61AD	STRONTIUM	2.11E-01 +- 5.77E-02		pCi/g	80%	1.54E-02	5.00E-02	
	9801-0000-040-RA-01								
	G8FT41AD	STRONTIUM	3.31E+00 +- 8.63E-01		pCi/g	76%	1.73E-02	5.00E-02	
5105278 RICHRC5037									
	3107-0000-194-C-1C-01								
	G8FQQ1AC	H-3	6.51E+00 +- 3.02E-01		pCi/g	100%	4.75E-02	3.00E+00	
	3107-0000-194-C-1C-02								
	G8FQX1AC	H-3	1.37E+01 +- 6.00E-01		pCi/g	100%	4.21E-02	3.00E+00	
	3107-0000-194-C-1C-03								
	G8FQ01AC	H-3	1.19E+01 +- 5.17E-01		pCi/g	100%	3.57E-02	3.00E+00	
	3107-0000-194-C-1C-04								
	G8FQ11AC	H-3	1.12E+01 +- 4.91E-01		pCi/g	100%	3.68E-02	3.00E+00	
	3107-0000-194-C-1C-04 DUP								
	G8FQ11AF	H-3	1.12E+01 +- 4.92E-01		pCi/g	100%	3.83E-02	3.00E+00	0.0
	3107-0000-194-C-1C-05								
	G8FQ21AC	H-3	6.14E+00 +- 2.80E-01		pCi/g	100%	3.59E-02	3.00E+00	
	3107-0000-194-C-2C-06								
	G8FQ31AC	H-3	1.58E+00 +- 9.35E-02	J	pCi/g	100%	4.51E-02	3.00E+00	
	3107-0000-195-C-1C-01								
	G8FQ71AC	H-3	4.95E+00 +- 2.41E-01		pCi/g	100%	5.51E-02	3.00E+00	
	3107-0000-195-C-1C-02								
	G8FQ91AC	H-3	1.30E+01 +- 5.66E-01		pCi/g	100%	4.11E-02	3.00E+00	
	3107-0000-195-C-1C-03								
	G8FRA1AC	H-3	1.79E+01 +- 7.73E-01		pCi/g	100%	4.26E-02	3.00E+00	
	3107-0000-195-C-1C-04								
	G8FRC1AC	H-3	1.31E+01 +- 5.71E-01		pCi/g	100%	3.90E-02	3.00E+00	
	3107-0000-195-C-2C-05								
	G8FRF1AC	H-3	1.13E+01 +- 4.96E-01		pCi/g	100%	3.59E-02	3.00E+00	
	3107-0000-195-C-2C-06								
	G8FRG1AC	H-3	7.50E+00 +- 3.38E-01		pCi/g	100%	3.88E-02	3.00E+00	
	3107-0000-196-C-1C-01								
	G8FRH1AC	H-3	5.55E+00 +- 2.62E-01		pCi/g	100%	4.77E-02	3.00E+00	
	3107-0000-196-C-1C-02								
	G8FRK1AC	H-3	6.98E+00 +- 3.22E-01		pCi/g	100%	4.84E-02	3.00E+00	
	3107-0000-196-C-1C-03								
	G8FRN1AC	H-3	4.18E+00 +- 2.00E-01		pCi/g	100%	4.05E-02	3.00E+00	

STL Richland

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RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

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Sample Results Summary

Date: 21-Apr-05

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105284	RICHRC5037								
	3107-0000-196-C-2C-04								
	G8FRQ1AC	H-3	1.08E+01 +- 4.74E-01		pCi/g	100%	2.65E-02	3.00E+00	
	3107-0000-196-C-2C-05								
	G8FRR1AC	H-3	1.33E+01 +- 5.80E-01		pCi/g	100%	2.55E-02	3.00E+00	
	3107-0000-196-C-2C-06								
	G8FRT1AC	H-3	1.58E+01 +- 6.96E-01		pCi/g	100%	3.94E-02	3.00E+00	
	3107-0000-197-C-1C-01								
	G8FRV1AC	H-3	2.19E+00 +- 1.09E-01	J	pCi/g	100%	2.55E-02	3.00E+00	
	3107-0000-197-C-1C-02								
	G8FRW1AC	H-3	5.65E+00 +- 2.59E-01		pCi/g	100%	3.03E-02	3.00E+00	
	3107-0000-197-C-1C-03								
	G8FRX1AC	H-3	3.50E+00 +- 1.68E-01		pCi/g	100%	3.11E-02	3.00E+00	
	3107-0000-197-C-1C-04								
	G8FR21AC	H-3	4.42E+00 +- 2.05E-01		pCi/g	100%	2.75E-02	3.00E+00	
	3107-0000-197-C-1C-05								
	G8FR31AC	H-3	3.71E+00 +- 1.72E-01		pCi/g	100%	2.30E-02	3.00E+00	
	3107-0000-197-C-1C-05 DUP								
	G8FR31AF	H-3	4.87E+00 +- 2.22E-01		pCi/g	100%	2.42E-02	3.00E+00	8.2
	3107-0000-197-C-1C-06								
	G8FR51AC	H-3	5.24E+00 +- 2.37E-01		pCi/g	100%	2.33E-02	3.00E+00	
	3107-0000-198-C-1C-01								
	G8FR71AC	H-3	4.17E+00 +- 1.91E-01		pCi/g	100%	2.28E-02	3.00E+00	
	3107-0000-198-C-1C-02								
	G8FR81AC	H-3	7.78E+00 +- 3.46E-01		pCi/g	100%	2.46E-02	3.00E+00	
	3107-0000-198-C-1C-03								
	G8FR91AC	H-3	8.31E+00 +- 3.66E-01		pCi/g	100%	2.17E-02	3.00E+00	
	3107-0000-198-C-1C-04								
	G8FTC1AC	H-3	6.25E+00 +- 2.80E-01		pCi/g	100%	2.34E-02	3.00E+00	
	3107-0000-198-C-1C-05								
	G8FTD1AC	H-3	8.21E+00 +- 3.63E-01		pCi/g	100%	2.31E-02	3.00E+00	
	3107-0000-198-C-1C-06								
	G8FTE1AC	H-3	6.46E+00 +- 2.88E-01		pCi/g	100%	2.27E-02	3.00E+00	
5105287	RICHRC5037								
	3107-0000-199-C-1C-01								
	G8FTG1AC	H-3	1.77E+00 +- 1.19E-01	J	pCi/g	100%	7.71E-02	3.00E+00	
	3107-0000-199-C-1C-01 DUP								
	G8FTG1AG	H-3	1.84E+00 +- 1.05E-01	J	pCi/g	100%	4.49E-02	3.00E+00	0.8
	3107-0000-199-C-1C-02								
	G8FTH1AC	H-3	1.40E+00 +- 8.15E-02	J	pCi/g	100%	3.58E-02	3.00E+00	

STL Richland

rptSTLRchSaSummary2 V4.12 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

Sample Results Summary

STL Richland STLR

Ordered by Method, Batch No., Client Sample ID.

Date: 21-Apr-05

Report No. : 28635

SDG No: 28704

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	MDC or MDA	CRDL	RER2
5105287	RICHRC5037								
	3107-0000-199-C-1C-03								
	G8FTJ1AC	H-3	4.29E-01 +- 3.74E-02	J	pCi/g	100%	3.37E-02	3.00E+00	
	3107-0000-199-C-1C-04								
	G8FTK1AC	H-3	2.71E-01 +- 3.02E-02	J	pCi/g	100%	3.48E-02	3.00E+00	
	3107-0000-199-C-1C-05								
	G8FTL1AC	H-3	6.54E-01 +- 4.73E-02	J	pCi/g	100%	3.30E-02	3.00E+00	
	3107-0000-199-C-2C-06								
	G8FTM1AC	H-3	8.49E-01 +- 5.67E-02	J	pCi/g	100%	3.42E-02	3.00E+00	
	9801-0000-030-RA-01								
	G8FTN1AC	H-3	2.59E-01 +- 2.89E-02	J	pCi/g	100%	3.32E-02	1.50E+01	
	9801-0000-031-RA-01								
	G8FTX1AC	H-3	9.93E-03 +- 1.48E-02	U	pCi/g	100%	3.31E-02	1.50E+01	
	9801-0000-032-RA-01								
	G8FT01AC	H-3	2.34E-02 +- 1.56E-02	U	pCi/g	100%	3.27E-02	1.50E+01	
	9801-0000-033-RA-01								
	G8FT11AC	H-3	5.15E-02 +- 1.72E-02	J	pCi/g	100%	3.22E-02	1.50E+01	
	9801-0000-034-RA-01								
	G8FT21AC	H-3	8.67E-03 +- 1.46E-02	U	pCi/g	100%	3.26E-02	1.50E+01	
	9801-0000-039-RA								
	G8FT61AC	H-3	7.26E-01 +- 5.44E-02	J	pCi/g	100%	4.00E-02	1.50E+01	
	9801-0000-040-RA-01								
	G8FT41AC	H-3	5.59E-01 +- 4.37E-02	J	pCi/g	100%	3.44E-02	1.50E+01	

No. of Results: 920

STL Richland

rptSTLRchSaSummary2 V4.12 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

J Qual - No U]< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

U Qual - Analyzed for, but the result is less than the Mdc/Mda/Total Uncert or gamma scan software did not identify the nuclide.

QC Results Summary
STL Richland STLR

Date: 21-Apr-05

Ordered by Method, Batch No, QC Type,.

Report No. : 28635

SDG No.: 28704

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC|MDA
RICHRC5017								
5105290 BLANK QC								
G8GGE1AA	AC-228	-1.34E-02 +- 8.15E-02	U	pCi/g				1.46E-01
	AG-108M	-6.03E-03 +- 1.43E-02	U	pCi/g				2.47E-02
	AM-241	-7.00E-03 +- 4.73E-02	U	pCi/g				8.43E-02
	BI-212	6.79E-02 +- 3.13E-01	U	pCi/g				5.95E-01
	BI-214	-3.98E-02 +- 5.64E-02	U	pCi/g				9.44E-02
	CO-60	-1.75E-02 +- 2.39E-02	U	pCi/g				3.94E-02
	CS-134	4.53E-03 +- 2.33E-02	U	pCi/g				4.45E-02
	CS-137	-1.31E-03 +- 2.23E-02	U	pCi/g				4.04E-02
	EU-152	-5.06E-03 +- 5.26E-02	U	pCi/g				9.54E-02
	EU-154	-3.82E-02 +- 6.27E-02	U	pCi/g				1.07E-01
	EU-155	3.09E-03 +- 4.09E-02	U	pCi/g				7.63E-02
	K-40	-1.07E-01 +- 4.77E-01	U	pCi/g				1.03E+00
	MN-54	2.00E-02 +- 2.11E-02	U	pCi/g				4.37E-02
	NB-94	5.95E-03 +- 2.12E-02	U	pCi/g				4.08E-02
	PB-212	5.85E-03 +- 2.85E-02	U	pCi/g				5.21E-02
	PB-214	-3.91E-02 +- 4.39E-02	U	pCi/g				7.57E-02
	RA-226	-3.99E-02 +- 5.63E-02	U	pCi/g				9.44E-02
	TL-208	9.91E-03 +- 2.37E-02	U	pCi/g				4.38E-02
5105290 LCS								
G8GGE1AC	CS-137	1.14E+00 +- 1.63E-01		pCi/g		112%	0.1	4.52E-02
RICHRC5017								
5105292 BLANK QC								
G8GHF1AA	AC-228	7.73E-03 +- 6.88E-02	U	pCi/g				1.32E-01
	AG-108M	4.12E-03 +- 1.72E-02	U	pCi/g				3.19E-02
	AM-241	5.04E-02 +- 4.47E-02	U	pCi/g				8.99E-02
	BI-212	-1.09E-01 +- 2.80E-01	U	pCi/g				4.97E-01
	BI-214	-1.56E-02 +- 5.31E-02	U	pCi/g				9.33E-02
	CO-60	-2.60E-03 +- 2.38E-02	U	pCi/g				4.51E-02
	CS-134	2.41E-03 +- 2.35E-02	U	pCi/g				4.44E-02
	CS-137	1.57E-02 +- 2.43E-02	U	pCi/g				4.71E-02
	EU-152	-2.06E-02 +- 5.35E-02	U	pCi/g				9.39E-02
	EU-154	1.69E-02 +- 7.10E-02	U	pCi/g				1.41E-01
	EU-155	-1.39E-02 +- 4.04E-02	U	pCi/g				7.22E-02
	K-40	6.92E-02 +- 5.06E-01	U	pCi/g				1.09E+00
	MN-54	-3.28E-03 +- 1.87E-02	U	pCi/g				3.42E-02
	NB-94	1.93E-02 +- 2.34E-02	U	pCi/g				4.71E-02
	PB-212	-5.22E-03 +- 2.64E-02	U	pCi/g				4.68E-02

STL Richland
rptSTLRchQcSummary V4.12 A97

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
U Qual - Analyzed for, but the result is less than the Mdc/Mda/Total Uncert or gamma scan software did not identify the nuclide.

QC Results Summary
STL Richland STLR

Date: 21-Apr-05

Ordered by Method, Batch No, QC Type,.

Report No. : 28635

SDG No.: 28704

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC|MDA
G8GHF1AA	PB-214	3.08E-02 +- 5.65E-02	U	pCi/g				9.03E-02
	RA-226	-1.56E-02 +- 5.31E-02	U	pCi/g				9.33E-02
	TL-208	1.42E-02 +- 2.42E-02	U	pCi/g				4.55E-02
5105292 LCS								
G8GHF1AC	CS-137	1.13E+00 +- 1.77E-01		pCi/g		111%	0.1	5.52E-02
RICHRC5017								
5105297 BLANK QC								
G8GHT1AA	AC-228	-3.28E-02 +- 7.56E-02	U	pCi/g				1.32E-01
	AG-108M	-1.67E-02 +- 1.84E-02	U	pCi/g				2.96E-02
	AM-241	1.71E-02 +- 4.43E-02	U	pCi/g				8.34E-02
	BI-212	1.28E-01 +- 2.79E-01	U	pCi/g				5.46E-01
	BI-214	1.51E-02 +- 4.84E-02	U	pCi/g				9.13E-02
	CO-60	6.87E-03 +- 2.09E-02	U	pCi/g				4.35E-02
	CS-134	-3.91E-03 +- 2.00E-02	U	pCi/g				3.71E-02
	CS-137	6.46E-03 +- 2.05E-02	U	pCi/g				3.96E-02
	EU-152	-3.91E-02 +- 4.98E-02	U	pCi/g				7.95E-02
	EU-154	-4.26E-02 +- 7.00E-02	U	pCi/g				1.18E-01
	EU-155	-1.64E-02 +- 4.17E-02	U	pCi/g				7.36E-02
	K-40	-3.47E-02 +- 4.71E-01	U	pCi/g				1.03E+00
	MN-54	1.46E-02 +- 2.02E-02	U	pCi/g				4.14E-02
	NB-94	-8.58E-03 +- 1.99E-02	U	pCi/g				3.49E-02
	PB-212	1.78E-02 +- 2.79E-02	U	pCi/g				5.31E-02
	PB-214	-1.86E-02 +- 4.60E-02	U	pCi/g				7.87E-02
	RA-226	1.27E-02 +- 4.87E-02	U	pCi/g				9.14E-02
	TL-208	6.95E-03 +- 2.00E-02	U	pCi/g				3.87E-02
5105297 LCS								
G8GHT1AC	CS-137	1.17E+00 +- 1.88E-01		pCi/g		115%	0.1	6.51E-02
RICHRC5006								
5105267 BLANK QC								
G8GCJ1AA	STRONTIUM	2.42E-03 +- 8.11E-03	U	pCi/g	89%			1.62E-02
5105267 LCS								
G8GCJ1AC	STRONTIUM	2.48E-01 +- 6.85E-02		pCi/g	87%	91%	-0.1	1.55E-02
RICHRC5006								
5105271 BLANK QC								
G8GC11AA	STRONTIUM	-6.21E-04 +- 7.47E-03	U	pCi/g	91%			1.53E-02
5105271 LCS								
G8GC11AC	STRONTIUM	2.46E-01 +- 6.80E-02		pCi/g	74%	90%	-0.1	1.70E-02
RICHRC5006								
5105275 BLANK QC								
G8GDD1AA	STRONTIUM	-5.18E-04 +- 7.08E-03	U	pCi/g	92%			1.45E-02
5105275 LCS								

STL Richland

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Bias - (Result/Expected)-1 as defined by ANSI N13.30.

U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

QC Results Summary
STL Richland STLR

Date: 21-Apr-05

Ordered by Method, Batch No, QC Type,.

Report No. : 28635

SDG No.: 28704

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Yield	Recovery	Bias	MDC|MDA
G8GDD1AC	STRONTIUM	2.55E-01 +- 6.82E-02		pCi/g	91%	94%	-0.1	1.43E-02
RICHRC5037								
5105278 BLANK QC								
G8GDP1AA	H-3	-3.76E-02 +- 1.46E-01	U	pCi/g	100%			3.47E-01
5105278 LCS								
G8GDP1AC	H-3	1.19E+00 +- 2.18E-01	J	pCi/g	100%	87%	-0.1	3.50E-01
RICHRC5037								
5105284 BLANK QC								
G8GFG1AA	H-3	-8.33E-02 +- 8.75E-02	U	pCi/g	100%			2.17E-01
5105284 LCS								
G8GFG1AC	H-3	5.54E+00 +- 3.27E-01	J	pCi/g	100%	81%	-0.2	2.16E-01
RICHRC5037								
5105287 BLANK QC								
G8GF01AA	H-3	-9.29E-02 +- 1.34E-01	U	pCi/g	100%			3.29E-01
5105287 LCS								
G8GF01AC	H-3	6.26E+00 +- 4.26E-01	J	pCi/g	100%	92%	-0.1	3.32E-01

No. of Results: 69

STL Richland
rptSTLRchQcSummary V4.12 A97

Bias - (Result/Expected)-1 as defined by ANSI N13.30.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda/Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-1	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FQQ1AD		Report DB ID: 9G8FQQ10					
STRONTIUM	*2.62E-02*		1.05E-02	1.26E-02	1.89E-02	pCi/g	82%	*(1.4)*	4/20/05 09:53 a		25.0	GPC26A
						9.16E-03	1.00E-02	*(4.2)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FQQ1AC		Report DB ID: 9G8FQQ10					
H-3	*6.51E+00*		1.32E-01	3.02E-01	4.75E-02	pCi/g	100%	*(137.1)*	4/18/05 07:58 p		100.9	LSC3
						2.20E-02	3.00E+00	*(43.1)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FQQ1AA		Report DB ID: 9G8FQQ10					
AC-228	*4.10E-01*	U	1.74E-01	1.74E-01	3.33E-01	pCi/g		*(1.2)*	4/16/05 12:11 p		273.4	GER7S1
								(4.7)			g	
AG-108M	*1.60E-02*	U	2.56E-02	2.56E-02	4.80E-02	pCi/g		*0.33*	4/16/05 12:11 p		273.4	GER7S1
								(1.3)			g	
AM-241	*1.78E-02*	U	8.76E-02	8.76E-02	1.55E-01	pCi/g		*0.11*	4/16/05 12:11 p		273.4	GER7S1
								0.41			g	
BI-212	*5.33E-01*	U	4.66E-01	4.66E-01	9.13E-01	pCi/g		*0.58*	4/16/05 12:11 p		273.4	GER7S1
								(2.3)			g	
BI-214	*3.21E-01*	U	1.61E-01	1.61E-01	1.99E-01	pCi/g		*(1.6)*	4/16/05 12:11 p		273.4	GER7S1
								(4.)			g	
CO-60	*1.89E-02*	U	3.43E-02	3.43E-02	6.91E-02	pCi/g		*0.27*	4/16/05 12:11 p		273.4	GER7S1
							3.00E+00	*(1.1)*			g	
CS-134	*2.99E-03*	U	3.13E-02	3.13E-02	5.83E-02	pCi/g		*0.05*	4/16/05 12:11 p		273.4	GER7S1
							1.00E+01	*0.19*			g	

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-1	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*1.15E-02*	U	2.93E-02	2.93E-02	5.53E-02	pCi/g		*0.21*	4/16/05 12:11 p		273.4	GER7$1
							2.00E+01	*0.79*			g	
EU-152	*-6.49E-02*	U	9.38E-02	9.38E-02	1.31E-01	pCi/g		*-0.5*	4/16/05 12:11 p		273.4	GER7$1
							9.00E+00	*-(1.4)*			g	
EU-154	*-6.34E-02*	U	9.71E-02	9.71E-02	1.64E-01	pCi/g		*-0.39*	4/16/05 12:11 p		273.4	GER7$1
							7.00E+00	*-(1.3)*			g	
EU-155	*7.20E-02*	U	7.26E-02	7.26E-02	1.31E-01	pCi/g		*0.55*	4/16/05 12:11 p		273.4	GER7$1
							3.00E+02	*(2.)*			g	
K-40	*7.92E+00*		1.49E+00	1.49E+00	5.64E-01	pCi/g		*(14.)*	4/16/05 12:11 p		273.4	GER7$1
								(10.6)			g	
MN-54	*2.50E-03*	U	3.33E-02	3.33E-02	6.05E-02	pCi/g		*0.04*	4/16/05 12:11 p		273.4	GER7$1
							2.00E+00	*0.15*			g	
NB-94	*-8.07E-03*	U	2.30E-02	2.30E-02	4.06E-02	pCi/g		*-0.2*	4/16/05 12:11 p		273.4	GER7$1
							3.00E-01	*-0.7*			g	
PB-212	*3.97E-01*		9.99E-02	9.99E-02	1.08E-01	pCi/g		*(3.7)*	4/16/05 12:11 p		273.4	GER7$1
								(7.9)			g	
PB-214	*3.17E-01*		1.75E-01	1.75E-01	1.07E-01	pCi/g		*(3.)*	4/16/05 12:11 p		273.4	GER7$1
								(3.6)			g	
RA-226	*3.21E-01*	U	1.61E-01	1.61E-01	1.99E-01	pCi/g		*(1.6)*	4/16/05 12:11 p		273.4	GER7$1
								(4.)			g	
TL-208	*1.75E-01*	U	6.16E-02	6.16E-02	9.20E-02	pCi/g		*(1.9)*	4/16/05 12:11 p		273.4	GER7$1
								(5.7)			g	

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-1	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-2	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FQX1AD		Report DB ID: 9G8FQX10					
STRONTIUM	*2.32E-02*		8.93E-03	1.08E-02	1.57E-02	pCi/g	88%	*(1.5)*	4/20/05 09:53 a		25.1	GPC26C
						7.57E-03	1.00E-02	*(4.3)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FQX1AC		Report DB ID: 9G8FQX10					
H-3	*1.37E+01*		1.79E-01	6.00E-01	4.21E-02	pCi/g	100%	*(326.7)*	4/18/05 08:40 p		100.1	LSC3
						1.95E-02	3.00E+00	*(45.8)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FQX1AA		Report DB ID: 9G8FQX10					
AC-228	*3.17E-01*	U	1.30E-01	1.30E-01	2.04E-01	pCi/g		*(1.6)*	4/16/05 12:12 p		339.2	GER10S1
								(4.9)			g	
AG-108M	*-1.32E-02*	U	1.48E-02	1.48E-02	2.37E-02	pCi/g		*-0.56*	4/16/05 12:12 p		339.2	GER10S1
								-(1.8)			g	
AM-241	*-5.77E-03*	U	6.60E-02	6.60E-02	1.14E-01	pCi/g		*-0.05*	4/16/05 12:12 p		339.2	GER10S1
								-0.18			g	
BI-212	*5.82E-01*	U	2.67E-01	2.67E-01	5.48E-01	pCi/g		*(1.1)*	4/16/05 12:12 p		339.2	GER10S1
								(4.4)			g	
BI-214	*5.08E-01*		9.70E-02	9.70E-02	6.35E-02	pCi/g		*(8.)*	4/16/05 12:12 p		339.2	GER10S1
								(10.5)			g	
CO-60	*-8.34E-03*	U	1.77E-02	1.77E-02	3.03E-02	pCi/g		*-0.28*	4/16/05 12:12 p		339.2	GER10S1
							3.00E+00	*-0.94*			g	
CS-134	*1.73E-02*	U	1.95E-02	1.95E-02	3.83E-02	pCi/g		*0.45*	4/16/05 12:12 p		339.2	GER10S1
							1.00E+01	*(1.8)*			g	

STL Richland
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V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/7/2005 1:50:00 PM
Lot-Sample No.: J5D150180-2
Report No. : 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-194-C-1C-02
COC No. :
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*1.51E-04*	U	2.01E-02	2.01E-02	3.55E-02	pCi/g		*0.*	4/16/05 12:12 p		339.2	GER10S1
							2.00E+01	*0.02*			g	
EU-152	*-1.90E-02*	U	4.98E-02	4.98E-02	8.52E-02	pCi/g		*-0.22*	4/16/05 12:12 p		339.2	GER10S1
							9.00E+00	*-0.76*			g	
EU-154	*2.95E-02*	U	5.44E-02	5.44E-02	1.06E-01	pCi/g		*0.28*	4/16/05 12:12 p		339.2	GER10S1
							7.00E+00	*(1.1)*			g	
EU-155	*2.34E-03*	U	5.94E-02	5.94E-02	1.02E-01	pCi/g		*0.02*	4/16/05 12:12 p		339.2	GER10S1
							3.00E+02	*0.08*			g	
K-40	*7.63E+00*		1.20E+00	1.20E+00	3.18E-01	pCi/g		*(24.)*	4/16/05 12:12 p		339.2	GER10S1
								(12.7)			g	
MN-54	*5.18E-03*	U	1.95E-02	1.95E-02	3.58E-02	pCi/g		*0.14*	4/16/05 12:12 p		339.2	GER10S1
							2.00E+00	*0.53*			g	
NB-94	*-1.03E-02*	U	1.88E-02	1.88E-02	3.16E-02	pCi/g		*-0.33*	4/16/05 12:12 p		339.2	GER10S1
							3.00E-01	*-(1.1)*			g	
PB-212	*3.64E-01*		7.42E-02	7.42E-02	6.87E-02	pCi/g		*(5.3)*	4/16/05 12:12 p		339.2	GER10S1
								(9.8)			g	
PB-214	*4.74E-01*		1.06E-01	1.06E-01	6.45E-02	pCi/g		*(7.3)*	4/16/05 12:12 p		339.2	GER10S1
								(8.9)			g	
RA-226	*5.08E-01*		9.70E-02	9.70E-02	6.35E-02	pCi/g		*(8.)*	4/16/05 12:12 p		339.2	GER10S1
								(10.5)			g	
TL-208	*1.20E-01*		2.93E-02	2.93E-02	2.94E-02	pCi/g		*(4.1)*	4/16/05 12:12 p		339.2	GER10S1
								(8.2)			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-2	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/7/2005 1:50:00 PM
Lot-Sample No.: J5D150180-3
Report No.: 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-194-C-1C-03
COC No.:
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FQ01AD		Report DB ID:	9G8FQ010				
STRONTIUM	*4.03E-03*	U	8.84E-03	8.90E-03	1.76E-02	pCi/g	81%	*0.23*	4/20/05 09:53 a		25.04	GPC26D
						8.47E-03	1.00E-02	*0.91*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FQ01AC		Report DB ID:	9G8FQ010				
H-3	*1.19E+01*		1.53E-01	5.17E-01	3.57E-02	pCi/g	100%	*(332.6)*	4/18/05 09:22 p		100.9	LSC3
						1.65E-02	3.00E+00	*(45.8)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FQ01AA		Report DB ID:	9G8FQ010				
AC-228	*5.45E-01*	U	1.36E-01	1.36E-01	2.32E-01	pCi/g		*(2.3)*	4/16/05 12:13 p		299.9	GER11S1
								(8.)			g	
AG-108M	*1.16E-02*	U	1.52E-02	1.52E-02	2.85E-02	pCi/g		*0.41*	4/16/05 12:13 p		299.9	GER11S1
								(1.5)			g	
AM-241	*-5.47E-02*	U	1.22E-01	1.22E-01	2.04E-01	pCi/g		*-0.27*	4/16/05 12:13 p		299.9	GER11S1
								-0.9			g	
BI-212	*3.55E-01*	U	2.90E-01	2.90E-01	5.67E-01	pCi/g		*0.63*	4/16/05 12:13 p		299.9	GER11S1
								(2.4)			g	
BI-214	*7.08E-01*		1.36E-01	1.36E-01	6.27E-02	pCi/g		*(11.3)*	4/16/05 12:13 p		299.9	GER11S1
								(10.4)			g	
CO-60	*1.12E-02*	U	1.90E-02	1.90E-02	3.81E-02	pCi/g		*0.29*	4/16/05 12:13 p		299.9	GER11S1
							3.00E+00	*(1.2)*			g	
CS-134	*1.94E-02*	U	2.05E-02	2.05E-02	4.02E-02	pCi/g		*0.48*	4/16/05 12:13 p		299.9	GER11S1
							1.00E+01	*(1.9)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-3	Report No. :.	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	-2.69E-02	U	2.67E-02	2.67E-02	4.80E-02	pCi/g		-0.56	4/16/05 12:13 p		299.9	GER11S1
							2.00E+01	-(2.)			g	
EU-152	5.57E-02	U	4.99E-02	4.99E-02	9.52E-02	pCi/g		0.59	4/16/05 12:13 p		299.9	GER11S1
							9.00E+00	(2.2)			g	
EU-154	1.66E-02	U	5.65E-02	5.65E-02	1.08E-01	pCi/g		0.15	4/16/05 12:13 p		299.9	GER11S1
							7.00E+00	0.59			g	
EU-155	5.22E-02	U	6.23E-02	6.23E-02	1.15E-01	pCi/g		0.46	4/16/05 12:13 p		299.9	GER11S1
							3.00E+02	(1.7)			g	
K-40	7.46E+00		1.54E+00	1.54E+00	3.20E-01	pCi/g		(23.3)	4/16/05 12:13 p		299.9	GER11S1
								(9.7)			g	
MN-54	-1.07E-02	U	1.92E-02	1.92E-02	3.20E-02	pCi/g		-0.33	4/16/05 12:13 p		299.9	GER11S1
							2.00E+00	-(1.1)			g	
NB-94	-7.19E-03	U	1.71E-02	1.71E-02	2.90E-02	pCi/g		-0.25	4/16/05 12:13 p		299.9	GER11S1
							3.00E-01	-0.84			g	
PB-212	4.72E-01		9.15E-02	9.15E-02	4.97E-02	pCi/g		(9.5)	4/16/05 12:13 p		299.9	GER11S1
								(10.3)			g	
PB-214	8.57E-01		1.56E-01	1.56E-01	6.78E-02	pCi/g		(12.6)	4/16/05 12:13 p		299.9	GER11S1
								(11.)			g	
RA-226	7.08E-01		1.36E-01	1.36E-01	6.27E-02	pCi/g		(11.3)	4/16/05 12:13 p		299.9	GER11S1
								(10.4)			g	
TL-208	1.59E-01	U	4.55E-02	4.55E-02	6.54E-02	pCi/g		(2.4)	4/16/05 12:13 p		299.9	GER11S1
								(7.)			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-3	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland | SDG: 28704 | Collection Date: 4/7/2005 1:50:00 PM

Lot-Sample No.: J5D150180-4 | Report No.: 28635 | Received Date: 4/15/2005 9:00:00 AM

Client Sample ID: 3107-0000-194-C-1C-04 | COC No.: | Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FQ11AD		Report DB ID: 9G8FQ110					
STRONTIUM	*5.53E-02*		1.02E-02	1.79E-02	1.54E-02	pCi/g	89%	*(3.6)*	4/20/05 09:53 a		25.07	GPC27A
						7.41E-03	1.00E-02	*(6.2)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FQ11AC		Report DB ID: 9G8FQ110					
H-3	*1.12E+01*		1.51E-01	4.91E-01	3.68E-02	pCi/g	100%	*(304.9)*	4/18/05 10:05 p		100.6	LSC3
						1.70E-02	3.00E+00	*(45.7)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FQ11AA		Report DB ID: 9G8FQ110					
AC-228	*5.62E-01*		1.67E-01	1.67E-01	1.35E-01	pCi/g		*(4.2)*	4/18/05 06:04 a		311.1	GER4$1
								(6.7)			g	
AG-108M	*-1.04E-02*	U	2.03E-02	2.03E-02	3.43E-02	pCi/g		*-0.3*	4/18/05 06:04 a		311.1	GER4$1
								-(1.)			g	
AM-241	*-5.48E-02*	U	1.38E-01	1.38E-01	2.37E-01	pCi/g		*-0.23*	4/18/05 06:04 a		311.1	GER4$1
								-0.79			g	
BI-212	*7.02E-01*	U	4.19E-01	4.19E-01	8.38E-01	pCi/g		*0.84*	4/18/05 06:04 a		311.1	GER4$1
								(3.4)			g	
BI-214	*4.85E-01*	U	1.12E-01	1.12E-01	1.95E-01	pCi/g		*(2.5)*	4/18/05 06:04 a		311.1	GER4$1
								(8.7)			g	
CO-60	*-7.14E-04*	U	2.17E-02	2.17E-02	4.23E-02	pCi/g		*-0.02*	4/18/05 06:04 a		311.1	GER4$1
							3.00E+00	*-0.07*			g	
CS-134	*2.85E-02*	U	2.88E-02	2.88E-02	5.78E-02	pCi/g		*0.49*	4/18/05 06:04 a		311.1	GER4$1
							1.00E+01	*(2.)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-4	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	-2.35E-02	U	2.40E-02	2.40E-02	3.77E-02	pCi/g		-0.62	4/18/05 06:04 a		311.1	GER4$1
							2.00E+01	-(2.)			g	
EU-152	-1.08E-02	U	6.11E-02	6.11E-02	1.05E-01	pCi/g		-0.1	4/18/05 06:04 a		311.1	GER4$1
							9.00E+00	-0.35			g	
EU-154	3.92E-02	U	7.40E-02	7.40E-02	1.52E-01	pCi/g		0.26	4/18/05 06:04 a		311.1	GER4$1
							7.00E+00	(1.1)			g	
EU-155	3.75E-02	U	7.61E-02	7.61E-02	1.33E-01	pCi/g		0.28	4/18/05 06:04 a		311.1	GER4$1
							3.00E+02	0.98			g	
K-40	6.84E+00		1.35E+00	1.35E+00	4.40E-01	pCi/g		(15.5)	4/18/05 06:04 a		311.1	GER4$1
								(10.1)			g	
MN-54	-2.65E-02	U	2.50E-02	2.50E-02	3.91E-02	pCi/g		-0.68	4/18/05 06:04 a		311.1	GER4$1
							2.00E+00	-(2.1)			g	
NB-94	-7.83E-03	U	2.45E-02	2.45E-02	4.29E-02	pCi/g		-0.18	4/18/05 06:04 a		311.1	GER4$1
							3.00E-01	-0.64			g	
PB-212	3.69E-01		9.46E-02	9.46E-02	8.05E-02	pCi/g		(4.6)	4/18/05 06:04 a		311.1	GER4$1
								(7.8)			g	
PB-214	5.01E-01		1.36E-01	1.36E-01	8.67E-02	pCi/g		(5.8)	4/18/05 06:04 a		311.1	GER4$1
								(7.4)			g	
RA-226	4.85E-01		1.12E-01	1.12E-01	8.82E-02	pCi/g		(5.5)	4/18/05 06:04 a		311.1	GER4$1
								(8.7)			g	
TL-208	1.49E-01	U	4.85E-02	4.85E-02	8.16E-02	pCi/g		(1.8)	4/18/05 06:04 a		311.1	GER4$1
								(6.2)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-4	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-04	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/7/2005 1:50:00 PM
Lot-Sample No.: J5D150180-5
Report No. : 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-194-C-1C-05
COC No. :
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FQ21AD		Report DB ID: 9G8FQ210					
STRONTIUM	*1.60E-02*		8.25E-03	9.26E-03	1.51E-02	pCi/g	88%	*(1.1)*	4/20/05 09:53 a		25.06	GPC27B
						7.27E-03	1.00E-02	*(3.5)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FQ21AC		Report DB ID: 9G8FQ210					
H-3	*6.14E+00*		1.11E-01	2.80E-01	3.59E-02	pCi/g	100%	*(171.)*	4/18/05 11:29 p		100.5	LSC3
						1.66E-02	3.00E+00	*(44.)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FQ21AA		Report DB ID: 9G8FQ210					
AC-228	*3.59E-01*	U	1.92E-01	1.92E-01	2.93E-01	pCi/g		*(1.2)*	4/18/05 06:05 a		334.8	GER7S1
								(3.7)			g	
AG-108M	*2.42E-02*	U	2.19E-02	2.19E-02	4.19E-02	pCi/g		*0.58*	4/18/05 06:05 a		334.8	GER7S1
								(2.2)			g	
AM-241	*2.99E-02*	U	7.93E-02	7.93E-02	1.35E-01	pCi/g		*0.22*	4/18/05 06:05 a		334.8	GER7S1
								0.75			g	
BI-212	*5.30E-01*	U	3.86E-01	3.86E-01	7.74E-01	pCi/g		*0.68*	4/18/05 06:05 a		334.8	GER7S1
								(2.7)			g	
BI-214	*3.72E-01*	U	1.14E-01	1.14E-01	1.81E-01	pCi/g		*(2.1)*	4/18/05 06:05 a		334.8	GER7S1
								(6.5)			g	
CO-60	*1.62E-02*	U	2.43E-02	2.43E-02	5.09E-02	pCi/g		*0.32*	4/18/05 06:05 a		334.8	GER7S1
							3.00E+00	*(1.3)*			g	
CS-134	*1.26E-02*	U	2.74E-02	2.74E-02	5.24E-02	pCi/g		*0.24*	4/18/05 06:05 a		334.8	GER7S1
							1.00E+01	*0.92*			g	

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
Lot-Sample No.: J5D150180-5
Client Sample ID: 3107-0000-194-C-1C-05

SDG: 28704
Report No. : 28635
COC No. :

Collection Date: 4/7/2005 1:50:00 PM
Received Date: 4/15/2005 9:00:00 AM
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-6.91E-03*	U	2.43E-02	2.43E-02	4.21E-02	pCi/g		*-0.16*	4/18/05 06:05 a		334.8	GER7S1
							2.00E+01	*-0.57*			g	
EU-152	*-1.18E-02*	U	5.98E-02	5.98E-02	1.05E-01	pCi/g		*-0.11*	4/18/05 06:05 a		334.8	GER7S1
							9.00E+00	*-0.39*			g	
EU-154	*3.59E-02*	U	8.06E-02	8.06E-02	1.59E-01	pCi/g		*0.23*	4/18/05 06:05 a		334.8	GER7S1
							7.00E+00	*0.89*			g	
EU-155	*4.76E-02*	U	6.54E-02	6.54E-02	1.19E-01	pCi/g		*0.4*	4/18/05 06:05 a		334.8	GER7S1
							3.00E+02	*(1.5)*			g	
K-40	*6.40E+00*		1.24E+00	1.24E+00	4.64E-01	pCi/g		*(13.8)*	4/18/05 06:05 a		334.8	GER7S1
								(10.3)			g	
MN-54	*-5.54E-03*	U	2.65E-02	2.65E-02	4.65E-02	pCi/g		*-0.12*	4/18/05 06:05 a		334.8	GER7S1
							2.00E+00	*-0.42*			g	
NB-94	*-1.12E-03*	U	2.48E-02	2.48E-02	4.45E-02	pCi/g		*-0.03*	4/18/05 06:05 a		334.8	GER7S1
							3.00E-01	*-0.09*			g	
PB-212	*3.51E-01*		8.89E-02	8.89E-02	8.55E-02	pCi/g		*(4.1)*	4/18/05 06:05 a		334.8	GER7S1
								(7.9)			g	
PB-214	*5.67E-01*		1.47E-01	1.47E-01	7.78E-02	pCi/g		*(7.3)*	4/18/05 06:05 a		334.8	GER7S1
								(7.7)			g	
RA-226	*3.72E-01*	U	1.14E-01	1.14E-01	1.81E-01	pCi/g		*(2.1)*	4/18/05 06:05 a		334.8	GER7S1
								(6.5)			g	
TL-208	*1.02E-01*		5.58E-02	5.58E-02	4.74E-02	pCi/g		*(2.2)*	4/18/05 06:05 a		334.8	GER7S1
								(3.7)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-5	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 2:10:00 PM
Lot-Sample No.:	J5D150180-6	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FQ31AD		Report DB ID: 9G8FQ310					
STRONTIUM	*7.92E-02*		1.17E-02	2.37E-02	1.61E-02	pCi/g	79%	*(4.9)*	4/20/05 09:53 a		25.08	GPC27C
						7.75E-03	1.00E-02	*(6.7)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FQ31AC		Report DB ID: 9G8FQ310					
H-3	*1.58E+00*	J	6.49E-02	9.35E-02	4.51E-02	pCi/g	100%	*(35.1)*	4/19/05 12:12 a		98.7	LSC3
						2.09E-02	3.00E+00	*(33.9)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FQ31AA		Report DB ID: 9G8FQ310					
AC-228	*4.54E-01*	U	1.72E-01	1.72E-01	2.81E-01	pCi/g		*(1.6)*	4/18/05 06:05 a		299.8	GER8$1
								(5.3)			g	
AG-108M	*4.50E-03*	U	1.93E-02	1.93E-02	3.49E-02	pCi/g		*0.13*	4/18/05 06:05 a		299.8	GER8$1
								0.47			g	
AM-241	*2.31E-02*	U	4.76E-02	4.76E-02	7.32E-02	pCi/g		*0.31*	4/18/05 06:05 a		299.8	GER8$1
								0.97			g	
BI-212	*3.78E-01*	U	3.94E-01	3.94E-01	7.61E-01	pCi/g		*0.5*	4/18/05 06:05 a		299.8	GER8$1
								(1.9)			g	
BI-214	*5.03E-01*	U	1.14E-01	1.14E-01	1.89E-01	pCi/g		*(2.7)*	4/18/05 06:05 a		299.8	GER8$1
								(8.8)			g	
CO-60	*-1.38E-03*	U	2.50E-02	2.50E-02	4.76E-02	pCi/g		*-0.03*	4/18/05 06:05 a		299.8	GER8$1
							3.00E+00	*-0.11*			g	
CS-134	*2.47E-02*	U	2.88E-02	2.88E-02	5.63E-02	pCi/g		*0.44*	4/18/05 06:05 a		299.8	GER8$1
							1.00E+01	*(1.7)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 2:10:00 PM
Lot-Sample No.:	J5D150180-6	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-2C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*7.31E-03*	U	2.53E-02	2.53E-02	4.70E-02	pCi/g		*0.16*	4/18/05 06:05 a		299.8	GER8S1
							2.00E+01	*0.58*			g	
EU-152	*-3.43E-02*	U	6.17E-02	6.17E-02	1.03E-01	pCi/g		*-0.33*	4/18/05 06:05 a		299.8	GER8S1
							9.00E+00	*-(1.1)*			g	
EU-154	*2.03E-02*	U	8.72E-02	8.72E-02	1.64E-01	pCi/g		*0.12*	4/18/05 06:05 a		299.8	GER8S1
							7.00E+00	*0.47*			g	
EU-155	*-5.46E-02*	U	6.39E-02	6.39E-02	1.04E-01	pCi/g		*-0.52*	4/18/05 06:05 a		299.8	GER8S1
							3.00E+02	*-(1.7)*			g	
K-40	*6.41E+00*		1.18E+00	1.18E+00	3.65E-01	pCi/g		*(17.6)*	4/18/05 06:05 a		299.8	GER8S1
								(10.9)			g	
MN-54	*5.97E-03*	U	2.34E-02	2.34E-02	4.37E-02	pCi/g		*0.14*	4/18/05 06:05 a		299.8	GER8S1
							2.00E+00	*0.51*			g	
NB-94	*-3.42E-03*	U	1.98E-02	1.98E-02	3.64E-02	pCi/g		*-0.09*	4/18/05 06:05 a		299.8	GER8S1
							3.00E-01	*-0.34*			g	
PB-212	*3.60E-01*		9.05E-02	9.05E-02	9.50E-02	pCi/g		*(3.8)*	4/18/05 06:05 a		299.8	GER8S1
								(7.9)			g	
PB-214	*5.73E-01*		1.36E-01	1.36E-01	8.11E-02	pCi/g		*(7.1)*	4/18/05 06:05 a		299.8	GER8S1
								(8.4)			g	
RA-226	*5.03E-01*		1.14E-01	1.14E-01	6.85E-02	pCi/g		*(7.3)*	4/18/05 06:05 a		299.8	GER8S1
								(8.8)			g	
TL-208	*9.30E-02*		5.52E-02	5.52E-02	4.47E-02	pCi/g		*(2.1)*	4/18/05 06:05 a		299.8	GER8S1
								(3.4)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 2:10:00 PM
Lot-Sample No.:	J5D150180-6	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:10:00 AM
Lot-Sample No.:	J5D150180-7	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FQ71AD		Report DB ID:	9G8FQ710				
STRONTIUM	*9.41E-02*		1.17E-02	2.71E-02	1.56E-02	pCi/g	89%	*(6.)*	4/20/05 09:53 a		25.03	GPC27D
						7.51E-03	1.00E-02	*(7.)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FQ71AC		Report DB ID:	9G8FQ710				
H-3	*4.95E+00*		1.24E-01	2.41E-01	5.51E-02	pCi/g	100%	*(89.8)*	4/19/05 12:54 a		100.9	LSC3
						2.55E-02	3.00E+00	*(41.)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FQ71AA		Report DB ID:	9G8FQ710				
AC-228	*3.36E-01*	U	1.13E-01	1.13E-01	2.13E-01	pCi/g		*(1.6)*	4/18/05 06:06 a		300.8	GER11S1
								(6.)			g	
AG-108M	*-7.50E-03*	U	1.42E-02	1.42E-02	2.36E-02	pCi/g		*-0.32*	4/18/05 06:06 a		300.8	GER11S1
								-(1.1)			g	
AM-241	*-1.49E-02*	U	1.08E-01	1.08E-01	1.83E-01	pCi/g		*-0.08*	4/18/05 06:06 a		300.8	GER11S1
								-0.28			g	
BI-212	*9.70E-01*	U	4.48E-01	4.48E-01	5.44E-01	pCi/g		*(1.8)*	4/18/05 06:06 a		300.8	GER11S1
								(4.3)			g	
BI-214	*4.96E-01*	U	1.17E-01	1.17E-01	1.48E-01	pCi/g		*(3.3)*	4/18/05 06:06 a		300.8	GER11S1
								(8.5)			g	
CO-60	*-1.28E-03*	U	1.74E-02	1.74E-02	3.26E-02	pCi/g		*-0.04*	4/18/05 06:06 a		300.8	GER11S1
							3.00E+00	*-0.15*			g	
CS-134	*1.37E-02*	U	2.20E-02	2.20E-02	4.17E-02	pCi/g		*0.33*	4/18/05 06:06 a		300.8	GER11S1
							1.00E+01	*(1.2)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/7/2005 11:10:00 AM
Lot-Sample No.: J5D150180-7
Report No.: 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-195-C-1C-01
COC No.:
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*3.78E-02*	J	2.84E-02	2.84E-02	3.76E-02	pCi/g		*(1.)*	4/18/05 06:06 a		300.8	GER11$1
							2.00E+01	*(2.7)*			g	
EU-152	*1.06E-02*	U	4.61E-02	4.61E-02	8.39E-02	pCi/g		*0.13*	4/18/05 06:06 a		300.8	GER11$1
							9.00E+00	*0.46*			g	
EU-154	*4.90E-03*	U	5.96E-02	5.96E-02	1.11E-01	pCi/g		*0.04*	4/18/05 06:06 a		300.8	GER11$1
							7.00E+00	*0.16*			g	
EU-155	*2.51E-02*	U	5.78E-02	5.78E-02	1.04E-01	pCi/g		*0.24*	4/18/05 06:06 a		300.8	GER11$1
							3.00E+02	*0.87*			g	
K-40	*7.64E+00*		1.56E+00	1.56E+00	2.79E-01	pCi/g		*(27.4)*	4/18/05 06:06 a		300.8	GER11$1
								(9.8)			g	
MN-54	*3.70E-03*	U	1.80E-02	1.80E-02	3.31E-02	pCi/g		*0.11*	4/18/05 06:06 a		300.8	GER11$1
							2.00E+00	*0.41*			g	
NB-94	*3.55E-03*	U	1.78E-02	1.78E-02	3.27E-02	pCi/g		*0.11*	4/18/05 06:06 a		300.8	GER11$1
							3.00E-01	*0.4*			g	
PB-212	*4.14E-01*		8.01E-02	8.01E-02	4.91E-02	pCi/g		*(8.4)*	4/18/05 06:06 a		300.8	GER11$1
								(10.3)			g	
PB-214	*5.41E-01*		1.16E-01	1.16E-01	5.93E-02	pCi/g		*(9.1)*	4/18/05 06:06 a		300.8	GER11$1
								(9.3)			g	
RA-226	*4.96E-01*		1.17E-01	1.17E-01	5.27E-02	pCi/g		*(9.4)*	4/18/05 06:06 a		300.8	GER11$1
								(8.5)			g	
TL-208	*1.39E-01*	U	3.80E-02	3.80E-02	6.16E-02	pCi/g		*(2.2)*	4/18/05 06:06 a		300.8	GER11$1
								(7.3)			g	

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:10:00 AM
Lot-Sample No.:	J5D150180-7	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:10:00 AM
Lot-Sample No.:	J5D150180-8	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-1C-02	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FQ91AD		Report DB ID:	9G8FQ910				
STRONTIUM	*1.10E-01*		1.31E-02	3.15E-02	1.70E-02	pCi/g	84%	*(6.4)*	4/20/05 09:53 a		25.0	GPC28A
						8.21E-03	1.00E-02	*(7.)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FQ91AC		Report DB ID:	9G8FQ910				
H-3	*1.30E+01*		1.72E-01	5.66E-01	4.11E-02	pCi/g	100%	*(315.3)*	4/19/05 01:37 a		100.4	LSC3
						1.90E-02	3.00E+00	*(45.7)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FQ91AA		Report DB ID:	9G8FQ910				
AC-228	*2.71E-01*	U	1.36E-01	1.36E-01	2.67E-01	pCi/g		*(1.)*	4/18/05 07:48 a		328.5	GER1$1
								(4.)			g	
AG-108M	*4.33E-03*	U	2.35E-02	2.35E-02	4.20E-02	pCi/g		*0.1*	4/18/05 07:48 a		328.5	GER1$1
								0.37			g	
AM-241	*-5.50E-02*	U	1.16E-01	1.16E-01	1.91E-01	pCi/g		*-0.29*	4/18/05 07:48 a		328.5	GER1$1
								-0.95			g	
BI-212	*4.49E-01*	U	4.44E-01	4.44E-01	8.32E-01	pCi/g		*0.54*	4/18/05 07:48 a		328.5	GER1$1
								(2.)			g	
BI-214	*4.69E-01*	U	1.11E-01	1.11E-01	1.81E-01	pCi/g		*(2.6)*	4/18/05 07:48 a		328.5	GER1$1
								(8.5)			g	
CO-60	*-1.47E-02*	U	3.06E-02	3.06E-02	5.21E-02	pCi/g		*-0.28*	4/18/05 07:48 a		328.5	GER1$1
							3.00E+00	*-0.96*			g	
CS-134	*-5.66E-03*	U	3.16E-02	3.16E-02	5.48E-02	pCi/g		*-0.1*	4/18/05 07:48 a		328.5	GER1$1
							1.00E+01	*-0.36*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:10:00 AM
Lot-Sample No.:	J5D150180-8	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-1C-02	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*9.81E-03*	U	2.86E-02	2.86E-02	5.21E-02	pCi/g		*0.19*	4/18/05 07:48 a		328.5	GER1S1
							2.00E+01	*0.69*			g	
EU-152	*-1.27E-01*	U	1.00E-01	1.00E-01	1.29E-01	pCi/g		*-0.99*	4/18/05 07:48 a		328.5	GER1S1
							9.00E+00	*-(2.5)*			g	
EU-154	*-9.65E-02*	U	9.21E-02	9.21E-02	1.43E-01	pCi/g		*-0.67*	4/18/05 07:48 a		328.5	GER1S1
							7.00E+00	*-(2.1)*			g	
EU-155	*-1.84E-02*	U	8.35E-02	8.35E-02	1.41E-01	pCi/g		*-0.13*	4/18/05 07:48 a		328.5	GER1S1
							3.00E+02	*-0.44*			g	
K-40	*5.77E+00*		1.08E+00	1.08E+00	3.32E-01	pCi/g		*(17.4)*	4/18/05 07:48 a		328.5	GER1S1
								(10.7)			g	
MN-54	*-5.51E-03*	U	2.58E-02	2.58E-02	4.56E-02	pCi/g		*-0.12*	4/18/05 07:48 a		328.5	GER1S1
							2.00E+00	*-0.43*			g	
NB-94	*-1.13E-02*	U	2.55E-02	2.55E-02	4.39E-02	pCi/g		*-0.26*	4/18/05 07:48 a		328.5	GER1S1
							3.00E-01	*-0.89*			g	
PB-212	*4.21E-01*		1.14E-01	1.14E-01	7.75E-02	pCi/g		*(5.4)*	4/18/05 07:48 a		328.5	GER1S1
								(7.4)			g	
PB-214	*5.31E-01*		1.32E-01	1.32E-01	8.64E-02	pCi/g		*(6.1)*	4/18/05 07:48 a		328.5	GER1S1
								(8.1)			g	
RA-226	*4.69E-01*	U	1.11E-01	1.11E-01	1.81E-01	pCi/g		*(2.6)*	4/18/05 07:48 a		328.5	GER1S1
								(8.5)			g	
TL-208	*1.02E-01*	U	3.75E-02	3.75E-02	7.19E-02	pCi/g		*(1.4)*	4/18/05 07:48 a		328.5	GER1S1
								(5.4)			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:10:00 AM
Lot-Sample No.:	J5D150180-8	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
Lot-Sample No.: J5D150180-9
Client Sample ID: 3107-0000-195-C-1C-03

SDG: 28704
Report No.: 28635
COC No.:

Collection Date: 4/7/2005 11:10:00 AM
Received Date: 4/15/2005 9:00:00 AM
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FRA1AD		Report DB ID: 9G8FRA10					
STRONTIUM	*2.82E-02*		9.65E-03	1.22E-02	1.66E-02	pCi/g	79%	*(1.7)*	4/20/05 09:53 a		25.08	GPC28B
						7.99E-03	1.00E-02	*(4.6)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FRA1AC		Report DB ID: 9G8FRA10					
H-3	*1.79E+01*		2.05E-01	7.73E-01	4.26E-02	pCi/g	100%	*(420.1)*	4/19/05 02:19 a		100.9	LSC3
						1.97E-02	3.00E+00	*(46.3)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FRA1AA		Report DB ID: 9G8FRA10					
AC-228	*4.70E-01*	U	2.06E-01	2.06E-01	3.18E-01	pCi/g		*(1.5)*	4/18/05 07:48 a		302.3	GER4S1
								(4.6)			g	
AG-108M	*2.43E-02*	U	2.07E-02	2.07E-02	4.08E-02	pCi/g		*0.59*	4/18/05 07:48 a		302.3	GER4S1
								(2.3)			g	
AM-241	*4.16E-02*	U	1.29E-01	1.29E-01	2.33E-01	pCi/g		*0.18*	4/18/05 07:48 a		302.3	GER4S1
								0.64			g	
BI-212	*4.61E-01*	U	3.74E-01	3.74E-01	7.47E-01	pCi/g		*0.62*	4/18/05 07:48 a		302.3	GER4$1
								(2.5)			g	
BI-214	*4.13E-01*	U	1.24E-01	1.24E-01	1.80E-01	pCi/g		*(2.3)*	4/18/05 07:48 a		302.3	GER4$1
								(6.7)			g	
CO-60	*-3.05E-03*	U	2.60E-02	2.60E-02	4.89E-02	pCi/g		*-0.06*	4/18/05 07:48 a		302.3	GER4S1
							3.00E+00	*-0.23*			g	
CS-134	*1.83E-02*	U	2.56E-02	2.56E-02	5.14E-02	pCi/g		*0.36*	4/18/05 07:48 a		302.3	GER4$1
							1.00E+01	*(1.4)*			g	

STL Richland
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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:10:00 AM
Lot-Sample No.:	J5D150180-9	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*2.05E-02*	U	2.57E-02	2.57E-02	5.03E-02	pCi/g		*0.41*	4/18/05 07:48 a		302.3	GER4$1
							2.00E+01	*(1.6)*			g	
EU-152	*4.90E-03*	U	7.13E-02	7.13E-02	1.25E-01	pCi/g		*0.04*	4/18/05 07:48 a		302.3	GER4$1
							9.00E+00	*0.14*			g	
EU-154	*-1.17E-02*	U	8.49E-02	8.49E-02	1.57E-01	pCi/g		*-0.07*	4/18/05 07:48 a		302.3	GER4$1
							7.00E+00	*-0.28*			g	
EU-155	*3.04E-02*	U	7.16E-02	7.16E-02	1.26E-01	pCi/g		*0.24*	4/18/05 07:48 a		302.3	GER4$1
							3.00E+02	*0.85*			g	
K-40	*7.45E+00*		1.45E+00	1.45E+00	5.34E-01	pCi/g		*(14.)*	4/18/05 07:48 a		302.3	GER4$1
								(10.3)			g	
MN-54	*1.14E-02*	U	2.40E-02	2.40E-02	4.66E-02	pCi/g		*0.24*	4/18/05 07:48 a		302.3	GER4$1
							2.00E+00	*0.95*			g	
NB-94	*-3.48E-03*	U	2.24E-02	2.24E-02	4.04E-02	pCi/g		*-0.09*	4/18/05 07:48 a		302.3	GER4$1
							3.00E-01	*-0.31*			g	
PB-212	*4.12E-01*		1.03E-01	1.03E-01	8.24E-02	pCi/g		*(5.)*	4/18/05 07:48 a		302.3	GER4$1
								(8.)			g	
PB-214	*4.42E-01*		1.31E-01	1.31E-01	8.53E-02	pCi/g		*(5.2)*	4/18/05 07:48 a		302.3	GER4$1
								(6.8)			g	
RA-226	*4.13E-01*	U	1.24E-01	1.24E-01	1.80E-01	pCi/g		*(2.3)*	4/18/05 07:48 a		302.3	GER4$1
								(6.7)			g	
TL-208	*8.34E-02*		6.44E-02	6.44E-02	4.00E-02	pCi/g		*(2.1)*	4/18/05 07:48 a		302.3	GER4$1
								(2.6)			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:10:00 AM
Lot-Sample No.:	J5D150180-9	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:10:00 AM
Lot-Sample No.:	J5D150180-10	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-1C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FRC1AD		Report DB ID:	9G8FRC10				
STRONTIUM	*1.25E-01*		1.26E-02	3.50E-02	1.51E-02	pCi/g	96%	*(8.3)*	4/20/05 09:53 a		25.01	GPC28C
						7.26E-03	1.00E-02	*(7.2)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FRC1AC		Report DB ID:	9G8FRC10				
H-3	*1.31E+01*		1.68E-01	5.71E-01	3.90E-02	pCi/g	100%	*(335.5)*	4/19/05 03:02 a		100.4	LSC3
						1.81E-02	3.00E+00	*(45.9)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FRC1AA		Report DB ID:	9G8FRC10				
AC-228	*5.00E-01*	U	1.96E-01	1.96E-01	3.28E-01	pCi/g		*(1.5)*	4/18/05 07:48 a		287.9	GER7$1
								(5.1)			g	
AG-108M	*7.88E-03*	U	2.48E-02	2.48E-02	4.49E-02	pCi/g		*0.18*	4/18/05 07:48 a		287.9	GER7$1
								0.64			g	
AM-241	*-2.24E-03*	U	8.81E-02	8.81E-02	1.51E-01	pCi/g		*-0.01*	4/18/05 07:48 a		287.9	GER7$1
								-0.05			g	
BI-212	*5.20E-01*	U	4.41E-01	4.41E-01	8.76E-01	pCi/g		*0.59*	4/18/05 07:48 a		287.9	GER7$1
								(2.4)			g	
BI-214	*3.22E-01*	U	1.12E-01	1.12E-01	1.93E-01	pCi/g		*(1.7)*	4/18/05 07:48 a		287.9	GER7$1
								(5.7)			g	
CO-60	*4.84E-04*	U	2.43E-02	2.43E-02	4.76E-02	pCi/g		*0.01*	4/18/05 07:48 a		287.9	GER7$1
							3.00E+00	*0.04*			g	
CS-134	*1.33E-03*	U	3.12E-02	3.12E-02	5.71E-02	pCi/g		*0.02*	4/18/05 07:48 a		287.9	GER7$1
							1.00E+01	*0.09*			g	

STL Richland
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V4.12 A97

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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:10:00 AM
Lot-Sample No.:	J5D150180-10	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-1C-04	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-3.05E-03*	U	2.75E-02	2.75E-02	4.88E-02	pCi/g		*-0.06*	4/18/05 07:48 a		287.9	GER7$1
							2.00E+01	*-0.22*			g	
EU-152	*1.78E-02*	U	7.26E-02	7.26E-02	1.33E-01	pCi/g		*0.13*	4/18/05 07:48 a		287.9	GER7S1
							9.00E+00	*0.49*			g	
EU-154	*6.84E-02*	U	8.91E-02	8.91E-02	1.84E-01	pCi/g		*0.37*	4/18/05 07:48 a		287.9	GER7$1
							7.00E+00	*(1.5)*			g	
EU-155	*5.07E-02*	U	7.23E-02	7.23E-02	1.31E-01	pCi/g		*0.39*	4/18/05 07:48 a		287.9	GER7S1
							3.00E+02	*(1.4)*			g	
K-40	*8.18E+00*		1.47E+00	1.47E+00	6.01E-01	pCi/g		*(13.6)*	4/18/05 07:48 a		287.9	GER7$1
								(11.1)			g	
MN-54	*-2.10E-02*	U	2.66E-02	2.66E-02	4.32E-02	pCi/g		*-0.48*	4/18/05 07:48 a		287.9	GER7$1
							2.00E+00	*-(1.6)*			g	
NB-94	*-1.26E-02*	U	2.79E-02	2.79E-02	4.75E-02	pCi/g		*-0.27*	4/18/05 07:48 a		287.9	GER7$1
							3.00E-01	*-0.9*			g	
PB-212	*3.73E-01*		1.06E-01	1.06E-01	1.04E-01	pCi/g		*(3.6)*	4/18/05 07:48 a		287.9	GER7$1
								(7.1)			g	
PB-214	*5.10E-01*		1.24E-01	1.24E-01	9.27E-02	pCi/g		*(5.5)*	4/18/05 07:48 a		287.9	GER7$1
								(8.3)			g	
RA-226	*3.22E-01*		1.12E-01	1.12E-01	9.45E-02	pCi/g		*(3.4)*	4/18/05 07:48 a		287.9	GER7$1
								(5.7)			g	
TL-208	*9.81E-02*		5.29E-02	5.29E-02	4.50E-02	pCi/g		*(2.2)*	4/18/05 07:48 a		287.9	GER7$1
								(3.7)			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:10:00 AM
Lot-Sample No.:	J5D150180-10	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-1C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:35:00 AM
Lot-Sample No.:	J5D150180-11	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-2C-05	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FRF1AD		Report DB ID:	9G8FRF10				
STRONTIUM	*2.00E-01*		1.55E-02	5.43E-02	1.59E-02	pCi/g	88%	*(12.6)*	4/20/05 09:53 a		25.09	GPC28D
						7.62E-03	1.00E-02	*(7.4)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FRF1AC		Report DB ID:	9G8FRF10				
H-3	*1.13E+01*		1.50E-01	4.96E-01	3.59E-02	pCi/g	100%	*(315.9)*	4/19/05 03:44 a		100.6	LSC3
						1.66E-02	3.00E+00	*(45.7)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FRF1AA		Report DB ID:	9G8FRF10				
AC-228	*3.52E-01*	U	1.32E-01	1.32E-01	2.73E-01	pCi/g		*(1.3)*	4/18/05 07:49 a		290.3	GER8S1
								(5.3)			g	
AG-108M	*1.33E-02*	U	1.86E-02	1.86E-02	3.53E-02	pCi/g		*0.38*	4/18/05 07:49 a		290.3	GER8S1
								(1.4)			g	
AM-241	*-4.04E-02*	U	4.27E-02	4.27E-02	7.05E-02	pCi/g		*-0.57*	4/18/05 07:49 a		290.3	GER8S1
								-(1.9)			g	
BI-212	*4.37E-01*	U	3.68E-01	3.68E-01	7.34E-01	pCi/g		*0.6*	4/18/05 07:49 a		290.3	GER8S1
								(2.4)			g	
BI-214	*5.01E-01*	U	1.13E-01	1.13E-01	1.85E-01	pCi/g		*(2.7)*	4/18/05 07:49 a		290.3	GER8S1
								(8.9)			g	
CO-60	*-2.50E-02*	U	2.41E-02	2.41E-02	3.71E-02	pCi/g		*-0.67*	4/18/05 07:49 a		290.3	GER8S1
							3.00E+00	*-(2.1)*			g	
CS-134	*2.11E-02*	U	3.15E-02	3.15E-02	6.00E-02	pCi/g		*0.35*	4/18/05 07:49 a		290.3	GER8S1
							1.00E+01	*(1.3)*			g	

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:35:00 AM
Lot-Sample No.:	J5D150180-11	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-2C-05	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	-3.33E-03	U	2.48E-02	2.48E-02	4.42E-02	pCi/g		-0.08	4/18/05 07:49 a		290.3	GER8$1
							2.00E+01	-0.27			g	
EU-152	-8.54E-03	U	7.15E-02	7.15E-02	1.15E-01	pCi/g		-0.07	4/18/05 07:49 a		290.3	GER8$1
							9.00E+00	-0.24			g	
EU-154	9.34E-02	U	8.23E-02	8.23E-02	1.74E-01	pCi/g		0.54	4/18/05 07:49 a		290.3	GER8$1
							7.00E+00	(2.3)			g	
EU-155	1.37E-03	U	6.43E-02	6.43E-02	1.11E-01	pCi/g		0.01	4/18/05 07:49 a		290.3	GER8$1
							3.00E+02	0.04			g	
K-40	7.69E+00		1.36E+00	1.36E+00	4.47E-01	pCi/g		(17.2)	4/18/05 07:49 a		290.3	GER8$1
								(11.3)			g	
MN-54	2.75E-02	U	2.49E-02	2.49E-02	5.04E-02	pCi/g		0.55	4/18/05 07:49 a		290.3	GER8$1
							2.00E+00	(2.2)			g	
NB-94	1.89E-03	U	2.13E-02	2.13E-02	4.05E-02	pCi/g		0.05	4/18/05 07:49 a		290.3	GER8$1
							3.00E-01	0.18			g	
PB-212	3.94E-01		9.41E-02	9.41E-02	7.23E-02	pCi/g		(5.5)	4/18/05 07:49 a		290.3	GER8$1
								(8.4)			g	
PB-214	4.51E-01		1.10E-01	1.10E-01	8.50E-02	pCi/g		(5.3)	4/18/05 07:49 a		290.3	GER8$1
								(8.2)			g	
RA-226	5.01E-01	U	1.13E-01	1.13E-01	1.85E-01	pCi/g		(2.7)	4/18/05 07:49 a		290.3	GER8$1
								(8.9)			g	
TL-208	9.84E-02	U	5.35E-02	5.35E-02	7.84E-02	pCi/g		(1.3)	4/18/05 07:49 a		290.3	GER8$1
								(3.7)			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:35:00 AM
Lot-Sample No.:	J5D150180-11	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-2C-05	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL|RL|	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:35:00 AM
Lot-Sample No.:	J5D150180-12	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-2C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FRG1AD		Report DB ID: 9G8FRG10					
STRONTIUM	*1.57E-01*		1.45E-02	4.41E-02	1.67E-02	pCi/g	86%	*(9.4)*	4/20/05 09:53 a		25.07	GPC31A
						8.03E-03	1.00E-02	*(7.1)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FRG1AC		Report DB ID: 9G8FRG10					
H-3	*7.50E+00*		1.27E-01	3.38E-01	3.88E-02	pCi/g	100%	*(193.6)*	4/19/05 04:26 a		100.4	LSC3
						1.79E-02	3.00E+00	*(44.4)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FRG1AA		Report DB ID: 9G8FRG10					
AC-228	*5.61E-01*	U	1.82E-01	1.82E-01	2.33E-01	pCi/g		*(2.4)*	4/18/05 07:49 a		299.7	GER11S1
								(6.2)			g	
AG-108M	*-3.30E-03*	U	1.47E-02	1.47E-02	2.52E-02	pCi/g		*-0.13*	4/18/05 07:49 a		299.7	GER11S1
								-0.45			g	
AM-241	*-3.39E-02*	U	1.29E-01	1.29E-01	2.14E-01	pCi/g		*-0.16*	4/18/05 07:49 a		299.7	GER11S1
								-0.53			g	
BI-212	*6.36E-01*	U	2.89E-01	2.89E-01	5.94E-01	pCi/g		*(1.1)*	4/18/05 07:49 a		299.7	GER11S1
								(4.4)			g	
BI-214	*5.90E-01*	U	1.03E-01	1.03E-01	1.58E-01	pCi/g		*(3.7)*	4/18/05 07:49 a		299.7	GER11S1
								(11.5)			g	
CO-60	*1.60E-02*	U	1.75E-02	1.75E-02	3.71E-02	pCi/g		*0.43*	4/18/05 07:49 a		299.7	GER11S1
							3.00E+00	*(1.8)*			g	
CS-134	*1.21E-02*	U	2.16E-02	2.16E-02	4.09E-02	pCi/g		*0.3*	4/18/05 07:49 a		299.7	GER11S1
							1.00E+01	*(1.1)*			g	

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:35:00 AM
Lot-Sample No.:	J5D150180-12	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-2C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*4.50E-03*	U	2.40E-02	2.40E-02	4.75E-02	pCi/g		*0.09*	4/18/05 07:49 a		299.7	GER11S1
							2.00E+01	*0.38*			g	
EU-152	*-2.19E-02*	U	4.71E-02	4.71E-02	8.06E-02	pCi/g		*-0.27*	4/18/05 07:49 a		299.7	GER11S1
							9.00E+00	*-0.93*			g	
EU-154	*-2.88E-02*	U	5.98E-02	5.98E-02	1.03E-01	pCi/g		*-0.28*	4/18/05 07:49 a		299.7	GER11S1
							7.00E+00	*-0.96*			g	
EU-155	*2.15E-02*	U	5.61E-02	5.61E-02	1.01E-01	pCi/g		*0.21*	4/18/05 07:49 a		299.7	GER11S1
							3.00E+02	*0.77*			g	
K-40	*7.54E+00*		1.56E+00	1.56E+00	2.69E-01	pCi/g		*(28.)*	4/18/05 07:49 a		299.7	GER11S1
								(9.7)			g	
MN-54	*-7.40E-03*	U	2.01E-02	2.01E-02	3.45E-02	pCi/g		*-0.21*	4/18/05 07:49 a		299.7	GER11S1
							2.00E+00	*-0.74*			g	
NB-94	*-1.59E-02*	U	1.55E-02	1.55E-02	2.38E-02	pCi/g		*-0.67*	4/18/05 07:49 a		299.7	GER11S1
							3.00E-01	*-(2.)*			g	
PB-212	*4.44E-01*		8.73E-02	8.73E-02	5.14E-02	pCi/g		*(8.6)*	4/18/05 07:49 a		299.7	GER11S1
								(10.2)			g	
PB-214	*6.84E-01*		1.35E-01	1.35E-01	5.90E-02	pCi/g		*(11.6)*	4/18/05 07:49 a		299.7	GER11S1
								(10.1)			g	
RA-226	*5.90E-01*	U	1.03E-01	1.03E-01	1.58E-01	pCi/g		*(3.7)*	4/18/05 07:49 a		299.7	GER11S1
								(11.5)			g	
TL-208	*1.12E-01*		3.56E-02	3.56E-02	2.85E-02	pCi/g		*(3.9)*	4/18/05 07:49 a		299.7	GER11S1
								(6.3)			g	

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 11:35:00 AM
Lot-Sample No.:	J5D150180-12	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-195-C-2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 3:50:00 PM
Lot-Sample No.:	J5D150180-13	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FRH1AD		Report DB ID:	9G8FRH10				
STRONTIUM	*1.86E-01*		1.52E-02	5.14E-02	1.60E-02	pCi/g	87%	*(11.7)*	4/20/05 09:53 a		25.01	GPC31B
						7.68E-03	1.00E-02	*(7.2)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FRH1AC		Report DB ID:	9G8FRH10				
H-3	*5.55E+00*		1.22E-01	2.62E-01	4.77E-02	pCi/g	100%	*(116.3)*	4/19/05 05:09 a		100.9	LSC3
						2.21E-02	3.00E+00	*(42.4)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FRH1AA		Report DB ID:	9G8FRH10				
AC-228	*4.81E-01*	U	2.05E-01	2.05E-01	3.30E-01	pCi/g		*(1.5)*	4/18/05 09:30 a		294.2	GER1S1
								(4.7)			g	
AG-108M	*-6.07E-03*	U	2.48E-02	2.48E-02	4.31E-02	pCi/g		*-0.14*	4/18/05 09:30 a		294.2	GER1S1
								-0.49			g	
AM-241	*-1.60E-01*	U	1.45E-01	1.45E-01	2.30E-01	pCi/g		*-0.7*	4/18/05 09:30 a		294.2	GER1S1
								-(2.2)			g	
BI-212	*4.37E-01*	U	4.71E-01	4.71E-01	8.85E-01	pCi/g		*0.49*	4/18/05 09:30 a		294.2	GER1S1
								(1.9)			g	
BI-214	*5.71E-01*	U	1.36E-01	1.36E-01	2.11E-01	pCi/g		*(2.7)*	4/18/05 09:30 a		294.2	GER1S1
								(8.4)			g	
CO-60	*1.76E-02*	U	3.19E-02	3.19E-02	6.27E-02	pCi/g		*0.28*	4/18/05 09:30 a		294.2	GER1S1
							3.00E+00	*(1.1)*			g	
CS-134	*-8.43E-03*	U	3.44E-02	3.44E-02	5.94E-02	pCi/g		*-0.14*	4/18/05 09:30 a		294.2	GER1S1
							1.00E+01	*-0.49*			g	

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 3:50:00 PM
Lot-Sample No.:	J5D150180-13	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*8.15E-03*	U	3.39E-02	3.39E-02	6.12E-02	pCi/g		*0.13*	4/18/05 09:30 a		294.2	GER1$1
							2.00E+01	*0.48*			g	
EU-152	*-1.17E-01*	U	1.21E-01	1.21E-01	1.67E-01	pCi/g		*-0.7*	4/18/05 09:30 a		294.2	GER1$1
							9.00E+00	*-(1.9)*			g	
EU-154	*5.87E-02*	U	1.07E-01	1.07E-01	2.03E-01	pCi/g		*0.29*	4/18/05 09:30 a		294.2	GER1$1
							7.00E+00	*(1.1)*			g	
EU-155	*3.20E-02*	U	9.58E-02	9.58E-02	1.66E-01	pCi/g		*0.19*	4/18/05 09:30 a		294.2	GER1$1
							3.00E+02	*0.67*			g	
K-40	*7.19E+00*		1.33E+00	1.33E+00	5.24E-01	pCi/g		*(13.7)*	4/18/05 09:30 a		294.2	GER1$1
								(10.8)			g	
MN-54	*1.45E-02*	U	3.12E-02	3.12E-02	5.82E-02	pCi/g		*0.25*	4/18/05 09:30 a		294.2	GER1$1
							2.00E+00	*0.93*			g	
NB-94	*1.18E-02*	U	3.27E-02	3.27E-02	6.01E-02	pCi/g		*0.2*	4/18/05 09:30 a		294.2	GER1$1
							3.00E-01	*0.72*			g	
PB-212	*6.38E-01*		1.51E-01	1.51E-01	8.99E-02	pCi/g		*(7.1)*	4/18/05 09:30 a		294.2	GER1$1
								(8.5)			g	
PB-214	*6.54E-01*		1.41E-01	1.41E-01	1.11E-01	pCi/g		*(5.9)*	4/18/05 09:30 a		294.2	GER1$1
								(9.3)			g	
RA-226	*5.71E-01*	U	1.36E-01	1.36E-01	2.11E-01	pCi/g		*(2.7)*	4/18/05 09:30 a		294.2	GER1$1
								(8.4)			g	
TL-208	*1.79E-01*	U	4.99E-02	4.99E-02	9.09E-02	pCi/g		*(2.)*	4/18/05 09:30 a		294.2	GER1$1
								(7.2)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 3:50:00 PM
Lot-Sample No.:	J5D150180-13	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 3:50:00 PM
Lot-Sample No.:	J5D150180-14	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-1C-02	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FRK1AD		Report DB ID: 9G8FRK10					
STRONTIUM	*1.46E-01*		1.41E-02	4.10E-02	1.65E-02	pCi/g	83%	*(8.8)*	4/20/05 09:53 a		25.05	GPC31C
						7.94E-03	1.00E-02	*(7.1)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FRK1AC		Report DB ID: 9G8FRK10					
H-3	*6.98E+00*		1.37E-01	3.22E-01	4.84E-02	pCi/g	100%	*(144.2)*	4/19/05 05:51 a		100.3	LSC3
						2.24E-02	3.00E+00	*(43.3)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FRK1AA		Report DB ID: 9G8FRK10					
AC-228	*4.72E-01*	U	1.76E-01	1.76E-01	3.09E-01	pCi/g		*(1.5)*	4/18/05 09:30 a		306.2	GER4S1
								(5.4)			g	
AG-108M	*-2.01E-03*	U	2.19E-02	2.19E-02	3.86E-02	pCi/g		*-0.05*	4/18/05 09:30 a		306.2	GER4S1
								-0.18			g	
AM-241	*5.31E-02*	U	1.30E-01	1.30E-01	2.36E-01	pCi/g		*0.23*	4/18/05 09:30 a		306.2	GER4S1
								0.82			g	
BI-212	*6.76E-01*	U	4.05E-01	4.05E-01	8.19E-01	pCi/g		*0.83*	4/18/05 09:30 a		306.2	GER4S1
								(3.3)			g	
BI-214	*5.72E-01*	U	1.29E-01	1.29E-01	2.10E-01	pCi/g		*(2.7)*	4/18/05 09:30 a		306.2	GER4S1
								(8.9)			g	
CO-60	*-1.16E-02*	U	2.69E-02	2.69E-02	4.75E-02	pCi/g		*-0.24*	4/18/05 09:30 a		306.2	GER4S1
							3.00E+00	*-0.86*			g	
CS-134	*2.56E-03*	U	3.27E-02	3.27E-02	5.97E-02	pCi/g		*0.04*	4/18/05 09:30 a		306.2	GER4S1
							1.00E+01	*0.16*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/5/2005 3:50:00 PM
Lot-Sample No.: J5D150180-14
Report No.: 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-196-C-1C-02
COC No.:
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-9.63E-03*	U	2.64E-02	2.64E-02	4.55E-02	pCi/g		*-0.21*	4/18/05 09:30 a		306.2	GER4$1
							2.00E+01	*-0.73*			g	
EU-152	*1.81E-02*	U	7.10E-02	7.10E-02	1.26E-01	pCi/g		*0.14*	4/18/05 09:30 a		306.2	GER4$1
							9.00E+00	*0.51*			g	
EU-154	*4.31E-02*	U	8.25E-02	8.25E-02	1.66E-01	pCi/g		*0.26*	4/18/05 09:30 a		306.2	GER4$1
							7.00E+00	*(1.)*			g	
EU-155	*1.21E-01*	U	8.30E-02	8.30E-02	1.51E-01	pCi/g		*0.8*	4/18/05 09:30 a		306.2	GER4$1
							3.00E+02	*(2.9)*			g	
K-40	*7.14E+00*		1.42E+00	1.42E+00	3.93E-01	pCi/g		*(18.2)*	4/18/05 09:30 a		306.2	GER4$1
								(10.1)			g	
MN-54	*-2.95E-03*	U	2.31E-02	2.31E-02	4.20E-02	pCi/g		*-0.07*	4/18/05 09:30 a		306.2	GER4$1
							2.00E+00	*-0.25*			g	
NB-94	*5.23E-03*	U	2.39E-02	2.39E-02	4.49E-02	pCi/g		*0.12*	4/18/05 09:30 a		306.2	GER4$1
							3.00E-01	*0.44*			g	
PB-212	*5.25E-01*		1.11E-01	1.11E-01	7.36E-02	pCi/g		*(7.1)*	4/18/05 09:30 a		306.2	GER4$1
								(9.4)			g	
PB-214	*6.54E-01*		1.41E-01	1.41E-01	8.74E-02	pCi/g		*(7.5)*	4/18/05 09:30 a		306.2	GER4$1
								(9.3)			g	
RA-226	*5.72E-01*		1.29E-01	1.29E-01	8.15E-02	pCi/g		*(7.)*	4/18/05 09:30 a		306.2	GER4$1
								(8.9)			g	
TL-208	*1.59E-01*	U	6.46E-02	6.46E-02	8.88E-02	pCi/g		*(1.8)*	4/18/05 09:30 a		306.2	GER4$1
								(4.9)			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 3:50:00 PM
Lot-Sample No.:	J5D150180-14	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 3:50:00 PM
Lot-Sample No.:	J5D150180-15	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order:	G8FRN1AD		Report DB ID:	9G8FRN10				
STRONTIUM	*4.63E-02*		1.06E-02	1.62E-02	1.70E-02	pCi/g	80%	*(2.7)*	4/20/05 09:53 a		25.03	GPC31D
						8.17E-03	1.00E-02	*(5.7)*			G	
Batch: 5105278	RICHRC5037			Work Order:	G8FRN1AC		Report DB ID:	9G8FRN10				
H-3	*4.18E+00*		9.76E-02	2.00E-01	4.05E-02	pCi/g	100%	*(103.2)*	4/19/05 06:33 a		100.4	LSC3
						1.87E-02	3.00E+00	*(41.7)*			G	
Batch: 5105290	RICHRC5017			Work Order:	G8FRN1AA		Report DB ID:	9G8FRN10				
AC-228	*1.65E-01*	U	1.60E-01	1.60E-01	2.66E-01	pCi/g		*0.62*	4/18/05 09:31 a		339.2	GER7$1
								(2.1)			g	
AG-108M	*-3.00E-03*	U	2.01E-02	2.01E-02	3.50E-02	pCi/g		*-0.09*	4/18/05 09:31 a		339.2	GER7S1
								-0.3			g	
AM-241	*5.47E-02*	U	7.89E-02	7.89E-02	1.40E-01	pCi/g		*0.39*	4/18/05 09:31 a		339.2	GER7S1
								(1.4)			g	
BI-212	*4.51E-01*	U	3.25E-01	3.25E-01	6.72E-01	pCi/g		*0.67*	4/18/05 09:31 a		339.2	GER7S1
								(2.8)			g	
BI-214	*4.54E-01*	U	1.12E-01	1.12E-01	1.87E-01	pCi/g		*(2.4)*	4/18/05 09:31 a		339.2	GER7$1
								(8.1)			g	
CO-60	*-1.16E-02*	U	2.95E-02	2.95E-02	5.16E-02	pCi/g		*-0.22*	4/18/05 09:31 a		339.2	GER7$1
							3.00E+00	*-0.78*			g	
CS-134	*4.68E-02*	U	2.73E-02	2.73E-02	5.75E-02	pCi/g		*0.81*	4/18/05 09:31 a		339.2	GER7S1
							1.00E+01	*(3.4)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 3:50:00 PM
Lot-Sample No.:	J5D150180-15	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-6.83E-03*	U	2.59E-02	2.59E-02	4.47E-02	pCi/g		*-0.15*	4/18/05 09:31 a		339.2	GER7$1
							2.00E+01	*-0.53*			g	
EU-152	*4.56E-02*	U	7.14E-02	7.14E-02	1.32E-01	pCi/g		*0.35*	4/18/05 09:31 a		339.2	GER7S1
							9.00E+00	*(1.3)*			g	
EU-154	*-2.06E-02*	U	8.21E-02	8.21E-02	1.47E-01	pCi/g		*-0.14*	4/18/05 09:31 a		339.2	GER7$1
							7.00E+00	*-0.5*			g	
EU-155	*4.71E-02*	U	6.22E-02	6.22E-02	1.13E-01	pCi/g		*0.42*	4/18/05 09:31 a		339.2	GER7$1
							3.00E+02	*(1.5)*			g	
K-40	*6.92E+00*		1.28E+00	1.28E+00	4.28E-01	pCi/g		*(16.2)*	4/18/05 09:31 a		339.2	GER7S1
								(10.8)			g	
MN-54	*-1.41E-03*	U	2.52E-02	2.52E-02	4.52E-02	pCi/g		*-0.03*	4/18/05 09:31 a		339.2	GER7$1
							2.00E+00	*-0.11*			g	
NB-94	*-1.96E-02*	U	2.39E-02	2.39E-02	3.84E-02	pCi/g		*-0.51*	4/18/05 09:31 a		339.2	GER7S1
							3.00E-01	*-(1.6)*			g	
PB-212	*4.87E-01*		1.06E-01	1.06E-01	9.28E-02	pCi/g		*(5.3)*	4/18/05 09:31 a		339.2	GER7$1
								(9.2)			g	
PB-214	*4.44E-01*		1.40E-01	1.40E-01	8.61E-02	pCi/g		*(5.2)*	4/18/05 09:31 a		339.2	GER7$1
								(6.3)			g	
RA-226	*4.54E-01*	U	1.12E-01	1.12E-01	1.87E-01	pCi/g		*(2.4)*	4/18/05 09:31 a		339.2	GER7$1
								(8.1)			g	
TL-208	*1.42E-01*	U	4.62E-02	4.62E-02	7.60E-02	pCi/g		*(1.9)*	4/18/05 09:31 a		339.2	GER7$1
								(6.2)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 3:50:00 PM
Lot-Sample No.:	J5D150180-15	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 10:15:00 AM
Lot-Sample No.:	J5D150180-16	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-2C-04	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FRQ1AD		Report DB ID: 9G8FRQ10					
STRONTIUM	*2.36E-01*		1.74E-02	6.43E-02	1.90E-02	pCi/g	77% .	*(12.4)*	4/20/05 01:52 p		25.08	GPC26A
						9.20E-03	1.00E-02	*(7.4)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FRQ1AC		Report DB ID: 9G8FRQ10					
H-3	*1.08E+01*		1.24E-01	4.74E-01	2.65E-02	pCi/g	100%	*(407.6)*	4/19/05 10:10 p		99.0	LSC8
						1.23E-02	3.00E+00	*(45.5)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FRQ1AA		Report DB ID: 9G8FRQ10					
AC-228	*7.46E-01*	U	2.02E-01	2.02E-01	3.19E-01	pCi/g		*(2.3)*	4/16/05 08:16 a		255.3	GER12S1
								(7.4)			g	
AG-108M	*1.13E-02*	U	1.83E-02	1.83E-02	3.38E-02	pCi/g		*0.33*	4/16/05 08:16 a		255.3	GER12S1
								(1.2)			g	
AM-241	*-3.08E-02*	U	6.76E-02	6.76E-02	1.14E-01	pCi/g		*-0.27*	4/16/05 08:16 a		255.3	GER12S1
								-0.91			g	
BI-212	*1.12E+00*	U	6.61E-01	6.61E-01	8.22E-01	pCi/g		*(1.4)*	4/16/05 08:16 a		255.3	GER12S1
								(3.4)			g	
BI-214	*5.45E-01*		1.18E-01	1.18E-01	8.27E-02	pCi/g		*(6.6)*	4/16/05 08:16 a		255.3	GER12S1
								(9.2)			g	
CO-60	*1.20E-04*	U	2.71E-02	2.71E-02	5.00E-02	pCi/g		*0.*	4/16/05 08:16 a		255.3	GER12S1
							3.00E+00	*0.01*			g	
CS-134	*4.48E-02*	U	2.82E-02	2.82E-02	5.66E-02	pCi/g		*0.79*	4/16/05 08:16 a		255.3	GER12S1
							1.00E+01	*(3.2)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/6/2005 10:15:00 AM
Lot-Sample No.: J5D150180-16
Report No.: 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-196-C-2C-04
COC No.:
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-1.35E-03*	U	2.18E-02	2.18E-02	3.86E-02	pCi/g		*-0.04*	4/16/05 08:16 a		255.3	GER12$1
							2.00E+01	*-0.12*			g	
EU-152	*2.07E-02*	U	5.27E-02	5.27E-02	9.76E-02	pCi/g		*0.21*	4/16/05 08:16 a		255.3	GER12$1
							9.00E+00	*0.78*			g	
EU-154	*-1.01E-02*	U	7.94E-02	7.94E-02	1.44E-01	pCi/g		*-0.07*	4/16/05 08:16 a		255.3	GER12$1
							7.00E+00	*-0.25*			g	
EU-155	*6.13E-03*	U	6.02E-02	6.02E-02	1.07E-01	pCi/g		*0.06*	4/16/05 08:16 a		255.3	GER12$1
							3.00E+02	*0.2*			g	
K-40	*9.10E+00*		1.61E+00	1.61E+00	3.90E-01	pCi/g		*(23.4)*	4/16/05 08:16 a		255.3	GER12$1
								(11.3)			g	
MN-54	*-7.91E-03*	U	2.31E-02	2.31E-02	3.99E-02	pCi/g		*-0.2*	4/16/05 08:16 a		255.3	GER12$1
							2.00E+00	*-0.69*			g	
NB-94	*1.62E-02*	U	2.28E-02	2.28E-02	4.38E-02	pCi/g		*0.37*	4/16/05 08:16 a		255.3	GER12$1
							3.00E-01	*(1.4)*			g	
PB-212	*6.34E-01*		1.22E-01	1.22E-01	6.57E-02	pCi/g		*(9.6)*	4/16/05 08:16 a		255.3	GER12$1
								(10.4)			g	
PB-214	*5.66E-01*		1.26E-01	1.26E-01	7.02E-02	pCi/g		*(8.1)*	4/16/05 08:16 a		255.3	GER12$1
								(8.9)			g	
RA-226	*5.45E-01*		1.18E-01	1.18E-01	8.27E-02	pCi/g		*(6.6)*	4/16/05 08:16 a		255.3	GER12$1
								(9.2)			g	
TL-208	*1.63E-01*		5.04E-02	5.04E-02	4.29E-02	pCi/g		*(3.8)*	4/16/05 08:16 a		255.3	GER12$1
								(6.5)			g	

STL Richland
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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 10:15:00 AM
Lot-Sample No.:	J5D150180-16	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-2C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 10:15:00 AM
Lot-Sample No.:	J5D150180-17	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-2C-05	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FRR1AD		Report DB ID: 9G8FRR10					
STRONTIUM	*8.81E-02*		1.18E-02	2.58E-02	1.62E-02	pCi/g	83%	*(5.4)*	4/20/05 01:52 p		25.04	GPC26B
						7.83E-03	1.00E-02	*(6.8)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FRR1AC		Report DB ID: 9G8FRR10					
H-3	*1.33E+01*		1.35E-01	5.80E-01	2.55E-02	pCi/g	100%	*(520.7)*	4/19/05 10:51 p		100.3	LSC8
						1.18E-02	3.00E+00	*(45.9)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FRR1AA		Report DB ID: 9G8FRR10					
AC-228	*4.40E-01*	U	1.67E-01	1.67E-01	3.22E-01	pCi/g		*(1.4)*	4/16/05 08:17 a		305.1	GER1S1
								(5.3)			g	
AG-108M	*-1.79E-02*	U	2.82E-02	2.82E-02	4.63E-02	pCi/g		*-0.39*	4/16/05 08:17 a		305.1	GER1S1
								-(1.3)			g	
AM-241	*-1.37E-01*	U	1.28E-01	1.28E-01	2.08E-01	pCi/g		*-0.66*	4/16/05 08:17 a		305.1	GER1S1
								-(2.1)			g	
BI-212	*6.75E-01*	U	4.92E-01	4.92E-01	9.35E-01	pCi/g		*0.72*	4/16/05 08:17 a		305.1	GER1S1
								(2.7)			g	
BI-214	*5.13E-01*	U	1.62E-01	1.62E-01	2.03E-01	pCi/g		*(2.5)*	4/16/05 08:17 a		305.1	GER1S1
								(6.3)			g	
CO-60	*4.38E-03*	U	3.28E-02	3.28E-02	6.13E-02	pCi/g		*0.07*	4/16/05 08:17 a		305.1	GER1S1
							3.00E+00	*0.27*			g	
CS-134	*3.18E-02*	U	3.81E-02	3.81E-02	7.17E-02	pCi/g		*0.44*	4/16/05 08:17 a		305.1	GER1S1
							1.00E+01	*(1.7)*			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 10:15:00 AM
Lot-Sample No.:	J5D150180-17	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-2C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-3.02E-02*	U	3.11E-02	3.11E-02	5.01E-02	pCi/g		*-0.6*	4/16/05 08:17 a		305.1	GER1S1
							2.00E+01	*-(1.9)*			g	
EU-152	*-1.41E-01*	U	1.10E-01	1.10E-01	1.59E-01	pCi/g		*-0.89*	4/16/05 08:17 a		305.1	GER1S1
							9.00E+00	*-(2.6)*			g	
EU-154	*-6.19E-03*	U	9.97E-02	9.97E-02	1.80E-01	pCi/g		*-0.03*	4/16/05 08:17 a		305.1	GER1S1
							7.00E+00	*-0.12*			g	
EU-155	*6.55E-02*	U	9.41E-02	9.41E-02	1.63E-01	pCi/g		*0.4*	4/16/05 08:17 a		305.1	GER1S1
							3.00E+02	*(1.4)*			g	
K-40	*7.71E+00*		1.39E+00	1.39E+00	4.29E-01	pCi/g		*(18.)*	4/16/05 08:17 a		305.1	GER1S1
								(11.1)			g	
MN-54	*-3.51E-03*	U	3.18E-02	3.18E-02	5.61E-02	pCi/g		*-0.06*	4/16/05 08:17 a		305.1	GER1S1
							2.00E+00	*-0.22*			g	
NB-94	*2.29E-02*	U	2.84E-02	2.84E-02	5.46E-02	pCi/g		*0.42*	4/16/05 08:17 a		305.1	GER1S1
							3.00E-01	*(1.6)*			g	
PB-212	*6.08E-01*		1.57E-01	1.57E-01	8.47E-02	pCi/g		*(7.2)*	4/16/05 08:17 a		305.1	GER1S1
								(7.7)			g	
PB-214	*5.14E-01*		1.44E-01	1.44E-01	1.11E-01	pCi/g		*(4.6)*	4/16/05 08:17 a		305.1	GER1S1
								(7.1)			g	
RA-226	*5.13E-01*	U	1.62E-01	1.62E-01	2.03E-01	pCi/g		*(2.5)*	4/16/05 08:17 a		305.1	GER1S1
								(6.3)			g	
TL-208	*1.60E-01*	U	5.31E-02	5.31E-02	8.69E-02	pCi/g		*(1.8)*	4/16/05 08:17 a		305.1	GER1S1
								(6.)			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 10:15:00 AM
Lot-Sample No.:	J5D150180-17	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-2C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 10:15:00 AM
Lot-Sample No.:	J5D150180-18	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FRT1AD		Report DB ID:	9G8FRT10				
STRONTIUM	*1.34E-01*		1.29E-02	3.72E-02	1.51E-02	pCi/g	89%	*(8.8)*	4/20/05 01:52 p		25.02	GPC26C
						7.27E-03	1.00E-02	*(7.2)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FRT1AC		Report DB ID:	9G8FRT10				
H-3	*1.58E+01*		1.83E-01	6.96E-01	3.94E-02	pCi/g	100%	*(401.7)*	4/19/05 11:32 p		100.1	LSC8
						1.83E-02	3.00E+00	*(45.5)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FRT1AA		Report DB ID:	9G8FRT10				
AC-228	*6.81E-01*		2.09E-01	2.09E-01	1.49E-01	pCi/g		*(4.6)*	4/16/05 08:17 a		287.7	GER4$1
								(6.5)			g	
AG-108M	*9.67E-03*	U	2.35E-02	2.35E-02	4.28E-02	pCi/g		*0.23*	4/16/05 08:17 a		287.7	GER4$1
								0.82			g	
AM-241	*4.72E-02*	U	1.65E-01	1.65E-01	2.85E-01	pCi/g		*0.17*	4/16/05 08:17 a		287.7	GER4$1
								0.57			g	
BI-212	*9.73E-01*	U	5.31E-01	5.31E-01	8.89E-01	pCi/g		*(1.1)*	4/16/05 08:17 a		287.7	GER4$1
								(3.7)			g	
BI-214	*5.79E-01*	U	1.38E-01	1.38E-01	2.15E-01	pCi/g		*(2.7)*	4/16/05 08:17 a		287.7	GER4$1
								(8.4)			g	
CO-60	*-3.48E-04*	U	2.91E-02	2.91E-02	5.52E-02	pCi/g		*-0.01*	4/16/05 08:17 a		287.7	GER4$1
							3.00E+00	*-0.02*			g	
CS-134	*3.94E-02*	U	3.15E-02	3.15E-02	6.40E-02	pCi/g		*0.62*	4/16/05 08:17 a		287.7	GER4$1
							1.00E+01	*(2.5)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 10:15:00 AM
Lot-Sample No.:	J5D150180-18	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-2C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-7.96E-03*	U	2.92E-02	2.92E-02	5.03E-02	pCi/g		*-0.16*	4/16/05 08:17 a		287.7	GER4$1
							2.00E+01	*-0.54*			g	
EU-152	*-1.17E-02*	U	7.70E-02	7.70E-02	1.35E-01	pCi/g		*-0.09*	4/16/05 08:17 a		287.7	GER4$1
							9.00E+00	*-0.3*			g	
EU-154	*1.42E-02*	U	7.26E-02	7.26E-02	1.44E-01	pCi/g		*0.1*	4/16/05 08:17 a		287.7	GER4$1
							7.00E+00	*0.39*			g	
EU-155	*1.14E-01*	U	8.27E-02	8.27E-02	1.54E-01	pCi/g		*0.74*	4/16/05 08:17 a		287.7	GER4$1
							3.00E+02	*(2.8)*			g	
K-40	*6.86E+00*		1.42E+00	1.42E+00	2.47E-01	pCi/g		*(27.8)*	4/16/05 08:17 a		287.7	GER4$1
								(9.7)			g	
MN-54	*-1.44E-02*	U	2.98E-02	2.98E-02	5.05E-02	pCi/g		*-0.28*	4/16/05 08:17 a		287.7	GER4$1
							2.00E+00	*-0.96*			g	
NB-94	*1.13E-02*	U	2.23E-02	2.23E-02	4.40E-02	pCi/g		*0.26*	4/16/05 08:17 a		287.7	GER4$1
							3.00E-01	*(1.)*			g	
PB-212	*7.14E-01*		1.38E-01	1.38E-01	9.52E-02	pCi/g		*(7.5)*	4/16/05 08:17 a		287.7	GER4$1
								(10.3)			g	
PB-214	*6.06E-01*		1.40E-01	1.40E-01	8.59E-02	pCi/g		*(7.1)*	4/16/05 08:17 a		287.7	GER4$1
								(8.6)			g	
RA-226	*5.79E-01*	U	1.38E-01	1.38E-01	2.15E-01	pCi/g		*(2.7)*	4/16/05 08:17 a		287.7	GER4$1
								(8.4)			g	
TL-208	*1.92E-01*	U	5.77E-02	5.77E-02	9.56E-02	pCi/g		*(2.)*	4/16/05 08:17 a		287.7	GER4$1
								(6.7)			g	

STL Richland
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V4.12 A97

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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 10:15:00 AM
Lot-Sample No.:	J5D150180-18	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-19	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FRV1AD		Report DB ID: 9G8FRV10					
STRONTIUM	*2.79E-01*		1.93E-02	7.55E-02	1.90E-02	pCi/g	70%	*(14.7)*	4/20/05 01:52 p		25.08	GPC26D
						9.14E-03	1.00E-02	*(7.4)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FRV1AC		Report DB ID: 9G8FRV10					
H-3	*2.19E+00*	J	5.53E-02	1.09E-01	2.55E-02	pCi/g	100%	*(85.9)*	4/20/05 12:14 a		100.4	LSC8
						1.18E-02	3.00E+00	*(40.3)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FRV1AA		Report DB ID: 9G8FRV10					
AC-228	*6.27E-01*	U	1.81E-01	1.81E-01	3.42E-01	pCi/g		*(1.8)*	4/16/05 08:18 a		295.1	GER7S1
								(6.9)			g	
AG-108M	*1.06E-02*	U	1.86E-02	1.86E-02	3.58E-02	pCi/g		*0.3*	4/16/05 08:18 a		295.1	GER7S1
								(1.1)			g	
AM-241	*-1.96E-02*	U	7.83E-02	7.83E-02	1.35E-01	pCi/g		*-0.15*	4/16/05 08:18 a		295.1	GER7S1
								-0.5			g	
BI-212	*8.52E-01*	U	4.63E-01	4.63E-01	9.34E-01	pCi/g		*0.91*	4/16/05 08:18 a		295.1	GER7S1
								(3.7)			g	
BI-214	*3.62E-01*	U	1.48E-01	1.48E-01	1.90E-01	pCi/g		*(1.9)*	4/16/05 08:18 a		295.1	GER7S1
								(4.9)			g	
CO-60	*1.94E-03*	U	2.49E-02	2.49E-02	4.90E-02	pCi/g		*0.04*	4/16/05 08:18 a		295.1	GER7S1
							3.00E+00	*0.16*			g	
CS-134	*1.81E-02*	U	2.81E-02	2.81E-02	5.56E-02	pCi/g		*0.32*	4/16/05 08:18 a		295.1	GER7S1
							1.00E+01	*(1.3)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-19	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-8.33E-03*	U	2.87E-02	2.87E-02	4.98E-02	pCi/g		*-0.17*	4/16/05 08:18 a		295.1	GER7$1
							2.00E+01	*-0.58*			g	
EU-152	*3.47E-02*	U	7.70E-02	7.70E-02	1.39E-01	pCi/g		*0.25*	4/16/05 08:18 a		295.1	GER7$1
							9.00E+00	*0.9*			g	
EU-154	*2.60E-02*	U	8.59E-02	8.59E-02	1.69E-01	pCi/g		*0.15*	4/16/05 08:18 a		295.1	GER7$1
							7.00E+00	*0.61*			g	
EU-155	*2.51E-02*	U	7.31E-02	7.31E-02	1.27E-01	pCi/g		*0.2*	4/16/05 08:18 a		295.1	GER7$1
							3.00E+02	*0.69*			g	
K-40	*6.61E+00*		1.28E+00	1.28E+00	4.13E-01	pCi/g		*(16.)*	4/16/05 08:18 a		295.1	GER7$1
								(10.4)			g	
MN-54	*3.38E-03*	U	2.46E-02	2.46E-02	4.62E-02	pCi/g		*0.07*	4/16/05 08:18 a		295.1	GER7$1
							2.00E+00	*0.27*			g	
NB-94	*8.79E-03*	U	2.33E-02	2.33E-02	4.54E-02	pCi/g		*0.19*	4/16/05 08:18 a		295.1	GER7$1
							3.00E-01	*0.75*			g	
PB-212	*4.12E-01*		1.01E-01	1.01E-01	9.34E-02	pCi/g		*(4.4)*	4/16/05 08:18 a		295.1	GER7$1
								(8.1)			g	
PB-214	*4.46E-01*		1.17E-01	1.17E-01	8.23E-02	pCi/g		*(5.4)*	4/16/05 08:18 a		295.1	GER7$1
								(7.6)			g	
RA-226	*3.62E-01*	U	1.48E-01	1.48E-01	1.91E-01	pCi/g		*(1.9)*	4/16/05 08:18 a		295.1	GER7$1
								(4.9)			g	
TL-208	*1.53E-01*	U	4.44E-02	4.44E-02	8.27E-02	pCi/g		*(1.8)*	4/16/05 08:18 a		295.1	GER7$1
								(6.9)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-19	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
Lot-Sample No.: J5D150180-20
Client Sample ID: 3107-0000-197-C-1C-02

SDG: 28704
Report No.: 28635
COC No.:

Collection Date: 4/6/2005 2:50:00 PM
Received Date: 4/15/2005 9:00:00 AM
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FRW1AD		Report DB ID: 9G8FRW10					
STRONTIUM	*1.05E-01*		1.21E-02	3.04E-02	1.54E-02	pCi/g	84%	*(6.8)*	4/20/05 01:52 p		25.0	GPC27A
						7.43E-03	1.00E-02	*(6.9)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FRW1AC		Report DB ID: 9G8FRW10					
H-3	*5.65E+00*		9.60E-02	2.59E-01	3.03E-02	pCi/g	100%	*(186.3)*	4/20/05 12:55 a		100.5	LSC8
						1.41E-02	3.00E+00	*(43.7)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FRW1AA		Report DB ID: 9G8FRW10					
AC-228	*4.09E-01*		1.65E-01	1.65E-01	1.31E-01	pCi/g		*(3.1)*	4/16/05 08:19 a		326.0	GER8S1
								(4.9)			g	
AG-108M	*2.11E-03*	U	1.81E-02	1.81E-02	3.23E-02	pCi/g		*0.07*	4/16/05 08:19 a		326.0	GER8S1
								0.23			g	
AM-241	*4.55E-03*	U	4.30E-02	4.30E-02	7.23E-02	pCi/g		*0.06*	4/16/05 08:19 a		326.0	GER8$1
								0.21			g	
BI-212	*2.71E-01*	U	3.88E-01	3.88E-01	7.31E-01	pCi/g		*0.37*	4/16/05 08:19 a		326.0	GER8$1
								(1.4)			g	
BI-214	*4.42E-01*	U	1.13E-01	1.13E-01	1.79E-01	pCi/g		*(2.5)*	4/16/05 08:19 a		326.0	GER8S1
								(7.8)			g	
CO-60	*1.48E-02*	U	2.62E-02	2.62E-02	5.27E-02	pCi/g		*0.28*	4/16/05 08:19 a		326.0	GER8$1
							3.00E+00	*(1.1)*			g	
CS-134	*1.49E-02*	U	2.40E-02	2.40E-02	4.69E-02	pCi/g		*0.32*	4/16/05 08:19 a		326.0	GER8S1
							1.00E+01	*(1.2)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-20	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-02	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*3.55E-02*	U	2.59E-02	2.59E-02	5.17E-02	pCi/g		*0.69*	4/16/05 08:19 a		326.0	GER8$1
							2.00E+01	*(2.7)*			g	
EU-152	*-7.64E-03*	U	6.15E-02	6.15E-02	1.04E-01	pCi/g		*-0.07*	4/16/05 08:19 a		326.0	GER8$1
							9.00E+00	*-0.25*			g	
EU-154	*2.90E-02*	U	5.96E-02	5.96E-02	1.23E-01	pCi/g		*0.24*	4/16/05 08:19 a		326.0	GER8$1
							7.00E+00	*0.97*			g	
EU-155	*-3.64E-03*	U	6.01E-02	6.01E-02	1.04E-01	pCi/g		*-0.04*	4/16/05 08:19 a		326.0	GER8$1
							3.00E+02	*-0.12*			g	
K-40	*6.26E+00*		1.13E+00	1.13E+00	3.57E-01	pCi/g		*(17.5)*	4/16/05 08:19 a		326.0	GER8$1
								(11.1)			g	
MN-54	*-2.02E-03*	U	2.41E-02	2.41E-02	4.29E-02	pCi/g		*-0.05*	4/16/05 08:19 a		326.0	GER8$1
							2.00E+00	*-0.17*			g	
NB-94	*-9.82E-03*	U	2.08E-02	2.08E-02	3.53E-02	pCi/g		*-0.28*	4/16/05 08:19 a		326.0	GER8$1
							3.00E-01	*-0.95*			g	
PB-212	*4.15E-01*		9.40E-02	9.40E-02	9.53E-02	pCi/g		*(4.3)*	4/16/05 08:19 a		326.0	GER8$1
								(8.8)			g	
PB-214	*4.71E-01*		1.12E-01	1.12E-01	7.44E-02	pCi/g		*(6.3)*	4/16/05 08:19 a		326.0	GER8$1
								(8.4)			g	
RA-226	*4.42E-01*	U	1.13E-01	1.13E-01	1.79E-01	pCi/g		*(2.5)*	4/16/05 08:19 a		326.0	GER8$1
								(7.8)			g	
TL-208	*1.66E-01*		4.67E-02	4.67E-02	3.39E-02	pCi/g		*(4.9)*	4/16/05 08:19 a		326.0	GER8$1
								(7.1)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-20	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/6/2005 2:50:00 PM
Lot-Sample No.: J5D150180-21
Report No.: 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-197-C-1C-03
COC No.:
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FRX1AD		Report DB ID:	9G8FRX10				
STRONTIUM	*7.55E-02*		1.14E-02	2.29E-02	1.61E-02	pCi/g	78%	*(4.7)*	4/20/05 01:52 p		25.06	GPC27B
						7.75E-03	1.00E-02	*(6.6)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FRX1AC		Report DB ID:	9G8FRX10				
H-3	*3.50E+00*		7.69E-02	1.68E-01	3.11E-02	pCi/g	100%	*(112.5)*	4/20/05 01:37 a		100.2	LSC8
						1.44E-02	3.00E+00	*(41.7)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FRX1AA		Report DB ID:	9G8FRX10				
AC-228	*4.20E-01*	U	1.48E-01	1.48E-01	2.48E-01	pCi/g		*(1.7)*	4/16/05 08:20 a		289.0	GER10S1
								(5.7)			g	
AG-108M	*-1.18E-02*	U	1.74E-02	1.74E-02	2.85E-02	pCi/g		*-0.42*	4/16/05 08:20 a		289.0	GER10S1
								-(1.4)			g	
AM-241	*2.39E-02*	U	8.07E-02	8.07E-02	1.42E-01	pCi/g		*0.17*	4/16/05 08:20 a		289.0	GER10S1
								0.59			g	
BI-212	*4.17E-01*	U	3.31E-01	3.31E-01	6.39E-01	pCi/g		*0.65*	4/16/05 08:20 a		289.0	GER10S1
								(2.5)			g	
BI-214	*5.92E-01*		1.28E-01	1.28E-01	7.26E-02	pCi/g		*(8.2)*	4/16/05 08:20 a		289.0	GER10S1
								(9.2)			g	
CO-60	*-3.33E-03*	U	2.18E-02	2.18E-02	3.93E-02	pCi/g		*-0.08*	4/16/05 08:20 a		289.0	GER10S1
							3.00E+00	*-0.31*			g	
CS-134	*4.01E-02*	U	2.61E-02	2.61E-02	5.22E-02	pCi/g		*0.77*	4/16/05 08:20 a		289.0	GER10S1
							1.00E+01	*(3.1)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/6/2005 2:50:00 PM
Lot-Sample No.: J5D150180-21
Report No. : 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-197-C-1C-03
COC No. :
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*3.72E-03*	U	2.30E-02	2.30E-02	4.13E-02	pCi/g		*0.09*	4/16/05 08:20 a		289.0	GER10$1
							2.00E+01	*0.32*			g	
EU-152	*1.92E-02*	U	6.11E-02	6.11E-02	1.10E-01	pCi/g		*0.17*	4/16/05 08:20 a		289.0	GER10S1
							9.00E+00	*0.63*			g	
EU-154	*-7.17E-02*	U	6.96E-02	6.96E-02	1.08E-01	pCi/g		*-0.66*	4/16/05 08:20 a		289.0	GER10$1
							7.00E+00	*-(2.1)*			g	
EU-155	*7.46E-02*	U	6.58E-02	6.58E-02	1.19E-01	pCi/g		*0.63*	4/16/05 08:20 a		289.0	GER10S1
							3.00E+02	*(2.3)*			g	
K-40	*7.72E+00*		1.23E+00	1.23E+00	3.69E-01	pCi/g		*(20.9)*	4/16/05 08:20 a		289.0	GER10S1
								(12.6)			g	
MN-54	*-1.04E-02*	U	2.17E-02	2.17E-02	3.70E-02	pCi/g		*-0.28*	4/16/05 08:20 a		289.0	GER10S1
							2.00E+00	*-0.96*			g	
NB-94	*-1.22E-03*	U	1.86E-02	1.86E-02	3.37E-02	pCi/g		*-0.04*	4/16/05 08:20 a		289.0	GER10S1
							3.00E-01	*-0.13*			g	
PB-212	*4.19E-01*		9.04E-02	9.04E-02	6.71E-02	pCi/g		*(6.3)*	4/16/05 08:20 a		289.0	GER10$1
								(9.3)			g	
PB-214	*6.76E-01*		1.46E-01	1.46E-01	7.75E-02	pCi/g		*(8.7)*	4/16/05 08:20 a		289.0	GER10$1
								(9.3)			g	
RA-226	*5.92E-01*		1.28E-01	1.28E-01	7.26E-02	pCi/g		*(8.2)*	4/16/05 08:20 a		289.0	GER10$1
								(9.2)			g	
TL-208	*1.36E-01*	U	4.96E-02	4.96E-02	6.93E-02	pCi/g		*(2.)*	4/16/05 08:20 a		289.0	GER10S1
								(5.5)			g	

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-21	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-22	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FR21AD		Report DB ID:	9G8FR210				
STRONTIUM	*5.08E-02*		9.49E-03	1.62E-02	1.45E-02	pCi/g	93%	*(3.5)*	4/20/05 01:52 p		25.07	GPC27D
						6.98E-03	1.00E-02	*(6.3)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FR21AC		Report DB ID:	9G8FR210				
H-3	*4.42E+00*		8.10E-02	2.05E-01	2.75E-02	pCi/g	100%	*(161.1)*	4/20/05 02:18 a		100.6	LSC8
						1.27E-02	3.00E+00	*(43.2)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FR21AA		Report DB ID:	9G8FR210				
AC-228	*4.16E-01*		1.07E-01	1.07E-01	9.10E-02	pCi/g		*(4.6)*	4/16/05 02:11 p		49.3	GER12S1
								(7.8)			g	
AG-108M	*-2.43E-03*	U	1.06E-02	1.06E-02	1.77E-02	pCi/g		*-0.14*	4/16/05 02:11 p		49.3	GER12S1
								-0.46			g	
AM-241	*2.95E-03*	U	2.93E-02	2.93E-02	4.99E-02	pCi/g		*0.06*	4/16/05 02:11 p		49.3	GER12S1
								0.2			g	
BI-212	*6.87E-01*	U	2.32E-01	2.32E-01	4.04E-01	pCi/g		*(1.7)*	4/16/05 02:11 p		49.3	GER12S1
								(5.9)			g	
BI-214	*3.62E-01*		8.94E-02	8.94E-02	4.42E-02	pCi/g		*(8.2)*	4/16/05 02:11 p		49.3	GER12S1
								(8.1)			g	
CO-60	*2.48E-02*	U	1.85E-02	1.85E-02	3.36E-02	pCi/g		*0.74*	4/16/05 02:11 p		49.3	GER12S1
							3.00E+00	*(2.7)*			g	
CS-134	*2.90E-02*	U	1.66E-02	1.66E-02	2.94E-02	pCi/g		*0.98*	4/16/05 02:11 p		49.3	GER12S1
							1.00E+01	*(3.5)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-22	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-04	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	-2.69E-03	U	1.46E-02	1.46E-02	2.44E-02	pCi/g		-0.11	4/16/05 02:11 p		49.3	GER12$1
							2.00E+01	-0.37			g	
EU-152	-1.09E-03	U	3.27E-02	3.27E-02	5.62E-02	pCi/g		-0.02	4/16/05 02:11 p		49.3	GER12$1
							9.00E+00	-0.07			g	
EU-154	9.17E-03	U	4.82E-02	4.82E-02	8.43E-02	pCi/g		0.11	4/16/05 02:11 p		49.3	GER12$1
							7.00E+00	0.38			g	
EU-155	4.09E-02	U	2.62E-02	2.62E-02	4.63E-02	pCi/g		0.88	4/16/05 02:11 p		49.3	GER12$1
							3.00E+02	(3.1)			g	
K-40	7.28E+00		1.18E+00	1.18E+00	3.02E-01	pCi/g		(24.1)	4/16/05 02:11 p		49.3	GER12$1
								(12.3)			g	
MN-54	-6.29E-03	U	1.42E-02	1.42E-02	2.36E-02	pCi/g		-0.27	4/16/05 02:11 p		49.3	GER12$1
							2.00E+00	-0.89			g	
NB-94	-6.07E-03	U	1.41E-02	1.41E-02	2.34E-02	pCi/g		-0.26	4/16/05 02:11 p		49.3	GER12$1
							3.00E-01	-0.86			g	
PB-212	4.04E-01		7.37E-02	7.37E-02	2.95E-02	pCi/g		(13.7)	4/16/05 02:11 p		49.3	GER12$1
								(11.)			g	
PB-214	3.36E-01		8.77E-02	8.77E-02	3.98E-02	pCi/g		(8.4)	4/16/05 02:11 p		49.3	GER12$1
								(7.7)			g	
RA-226	3.62E-01		8.94E-02	8.94E-02	4.42E-02	pCi/g		(8.2)	4/16/05 02:11 p		49.3	GER12$1
								(8.1)			g	
TL-208	1.35E-01		3.31E-02	3.31E-02	2.20E-02	pCi/g		(6.1)	4/16/05 02:11 p		49.3	GER12$1
								(8.2)			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-22	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-23	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FR31AD		Report DB ID:	9G8FR310				
STRONTIUM	*7.79E-02*		1.06E-02	2.29E-02	1.45E-02	pCi/g	97%	*(5.4)*	4/20/05 01:52 p		25.02	GPC28A
						7.01E-03	1.00E-02	*(6.8)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FR31AC		Report DB ID:	9G8FR310				
H-3	*3.71E+00*		6.79E-02	1.72E-01	2.30E-02	pCi/g	100%	*(161.6)*	4/20/05 02:59 a		100.6	LSC8
						1.07E-02	3.00E+00	*(43.2)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FR31AA		Report DB ID:	9G8FR310				
AC-228	*2.75E-01*	U	1.61E-01	1.61E-01	2.26E-01	pCi/g		*(1.2)*	4/16/05 08:21 a		309.6	GER11S1
								(3.4)			g	
AG-108M	*-2.76E-03*	U	1.50E-02	1.50E-02	2.58E-02	pCi/g		*-0.11*	4/16/05 08:21 a		309.6	GER11S1
								-0.37			g	
AM-241	*-5.25E-02*	U	1.11E-01	1.11E-01	1.85E-01	pCi/g		*-0.28*	4/16/05 08:21 a		309.6	GER11S1
								-0.95			g	
BI-212	*3.21E-01*	U	4.84E-01	4.84E-01	5.45E-01	pCi/g		*0.59*	4/16/05 08:21 a		309.6	GER11S1
								(1.3)			g	
BI-214	*3.87E-01*	U	9.62E-02	9.62E-02	1.40E-01	pCi/g		*(2.8)*	4/16/05 08:21 a		309.6	GER11S1
								(8.)			g	
CO-60	*7.84E-03*	U	2.12E-02	2.12E-02	4.07E-02	pCi/g		*0.19*	4/16/05 08:21 a		309.6	GER11S1
							3.00E+00	*0.74*			g	
CS-134	*2.46E-02*	U	1.98E-02	1.98E-02	3.97E-02	pCi/g		*0.62*	4/16/05 08:21 a		309.6	GER11S1
							1.00E+01	*(2.5)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-23	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*1.19E-02*	U	2.91E-02	2.91E-02	3.15E-02	pCi/g		*0.38*	4/16/05 08:21 a		309.6	GER11S1
							2.00E+01	*0.82*			g	
EU-152	*7.51E-03*	U	4.16E-02	4.16E-02	7.60E-02	pCi/g		*0.1*	4/16/05 08:21 a		309.6	GER11S1
							9.00E+00	*0.36*			g	
EU-154	*-4.32E-03*	U	5.15E-02	5.15E-02	9.47E-02	pCi/g		*-0.05*	4/16/05 08:21 a		309.6	GER11S1
							7.00E+00	*-0.17*			g	
EU-155	*-1.25E-02*	U	5.30E-02	5.30E-02	9.27E-02	pCi/g		*-0.13*	4/16/05 08:21 a		309.6	GER11S1
							3.00E+02	*-0.47*			g	
K-40	*7.80E+00*		1.60E+00	1.60E+00	3.39E-01	pCi/g		*(23.)*	4/16/05 08:21 a		309.6	GER11S1
								(9.7)			g	
MN-54	*1.05E-02*	U	1.85E-02	1.85E-02	3.49E-02	pCi/g		*0.3*	4/16/05 08:21 a		309.6	GER11S1
							2.00E+00	*(1.1)*			g	
NB-94	*-6.16E-03*	U	1.75E-02	1.75E-02	2.99E-02	pCi/g		*-0.21*	4/16/05 08:21 a		309.6	GER11S1
							3.00E-01	*-0.7*			g	
PB-212	*4.23E-01*		8.18E-02	8.18E-02	4.70E-02	pCi/g		*(9.)*	4/16/05 08:21 a		309.6	GER11S1
								(10.3)			g	
PB-214	*4.37E-01*		9.65E-02	9.65E-02	5.70E-02	pCi/g		*(7.7)*	4/16/05 08:21 a		309.6	GER11S1
								(9.1)			g	
RA-226	*3.87E-01*	U	9.62E-02	9.62E-02	1.40E-01	pCi/g		*(2.8)*	4/16/05 08:21 a		309.6	GER11S1
								(8.)			g	
TL-208	*1.65E-01*		4.44E-02	4.44E-02	3.04E-02	pCi/g		*(5.4)*	4/16/05 08:21 a		309.6	GER11S1
								(7.5)			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-23	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-05	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-24	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FR51AD		Report DB ID:	9G8FR510				
STRONTIUM	*8.96E-02*		1.07E-02	2.58E-02	1.36E-02	pCi/g	97%	*(6.6)*	4/20/05 01:52 p		25.1	GPC28B
						6.54E-03	1.00E-02	*(6.9)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FR51AC		Report DB ID:	9G8FR510				
H-3	*5.24E+00*		8.10E-02	2.37E-01	2.33E-02	pCi/g	100%	*(225.1)*	4/20/05 04:22 a		100.4	LSC8
						1.08E-02	3.00E+00	*(44.2)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FR51AA		Report DB ID:	9G8FR510				
AC-228	*3.60E-01*	U	1.53E-01	1.53E-01	3.01E-01	pCi/g		*(1.2)*	4/16/05 10:11 a		295.3	GER1S1
								(4.7)			g	
AG-108M	*-1.19E-02*	U	2.62E-02	2.62E-02	4.37E-02	pCi/g		*-0.27*	4/16/05 10:11 a		295.3	GER1S1
								-0.91			g	
AM-241	*-1.38E-01*	U	1.32E-01	1.32E-01	2.15E-01	pCi/g		*-0.64*	4/16/05 10:11 a		295.3	GER1S1
								-(2.1)			g	
BI-212	*5.74E-01*	U	4.89E-01	4.89E-01	9.25E-01	pCi/g		*0.62*	4/16/05 10:11 a		295.3	GER1S1
								(2.3)			g	
BI-214	*4.73E-01*	U	1.20E-01	1.20E-01	1.92E-01	pCi/g		*(2.5)*	4/16/05 10:11 a		295.3	GER1S1
								(7.9)			g	
CO-60	*1.23E-02*	U	3.17E-02	3.17E-02	6.15E-02	pCi/g		*0.2*	4/16/05 10:11 a		295.3	GER1S1
							3.00E+00	*0.77*			g	
CS-134	*-7.18E-03*	U	3.64E-02	3.64E-02	6.38E-02	pCi/g		*-0.11*	4/16/05 10:11 a		295.3	GER1S1
							1.00E+01	*-0.39*			g	

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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-24	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*1.88E-02*	U	2.85E-02	2.85E-02	5.38E-02	pCi/g		*0.35*	4/16/05 10:11 a		295.3	GER1S1
							2.00E+01	*(1.3)*			g	
EU-152	*-1.77E-01*	U	1.20E-01	1.20E-01	1.48E-01	pCi/g		*-(1.2)*	4/16/05 10:11 a		295.3	GER1S1
							9.00E+00	*-(3.)*			g	
EU-154	*7.48E-02*	U	1.03E-01	1.03E-01	2.01E-01	pCi/g		*0.37*	4/16/05 10:11 a		295.3	GER1S1
							7.00E+00	*(1.5)*			g	
EU-155	*-6.45E-02*	U	9.14E-02	9.14E-02	1.49E-01	pCi/g		*-0.43*	4/16/05 10:11 a		295.3	GER1S1
							3.00E+02	*-(1.4)*			g	
K-40	*7.66E+00*		1.39E+00	1.39E+00	4.43E-01	pCi/g		*(17.3)*	4/16/05 10:11 a		295.3	GER1S1
								(11.)			g	
MN-54	*1.89E-02*	U	2.81E-02	2.81E-02	5.38E-02	pCi/g		*0.35*	4/16/05 10:11 a		295.3	GER1S1
							2.00E+00	*(1.3)*			g	
NB-94	*-3.25E-02*	U	3.08E-02	3.08E-02	4.88E-02	pCi/g		*-0.67*	4/16/05 10:11 a		295.3	GER1S1
							3.00E-01	*-(2.1)*			g	
PB-212	*4.14E-01*		1.04E-01	1.04E-01	9.20E-02	pCi/g		*(4.5)*	4/16/05 10:11 a		295.3	GER1S1
								(8.)			g	
PB-214	*4.93E-01*		1.40E-01	1.40E-01	1.03E-01	pCi/g		*(4.8)*	4/16/05 10:11 a		295.3	GER1S1
								(7.)			g	
RA-226	*4.73E-01*	U	1.20E-01	1.20E-01	1.92E-01	pCi/g		*(2.5)*	4/16/05 10:11 a		295.3	GER1S1
								(7.9)			g	
TL-208	*1.52E-01*	U	4.83E-02	4.83E-02	8.28E-02	pCi/g		*(1.8)*	4/16/05 10:11 a		295.3	GER1S1
								(6.3)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I
SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-24	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-25	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FR71AD		Report DB ID:	9G8FR710				
STRONTIUM	*2.43E-01*		1.75E-02	6.59E-02	1.74E-02	pCi/g	76%	*(14.)*	4/20/05 01:52 p		25.04	GPC28C
						8.39E-03	1.00E-02	*(7.4)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FR71AC		Report DB ID:	9G8FR710				
H-3	*4.17E+00*		7.16E-02	1.91E-01	2.28E-02	pCi/g	100%	*(183.3)*	4/20/05 05:04 a		100.3	LSC8
						1.06E-02	3.00E+00	*(43.6)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FR71AA		Report DB ID:	9G8FR710				
AC-228	*4.31E-01*		1.88E-01	1.88E-01	1.45E-01	pCi/g		*(3.)*	4/16/05 10:11 a		335.8	GER7S1
								(4.6)			g	
AG-108M	*-1.46E-02*	U	1.86E-02	1.86E-02	3.05E-02	pCi/g		*-0.48*	4/16/05 10:11 a		335.8	GER7S1
								-(1.6)			g	
AM-241	*-9.59E-03*	U	7.45E-02	7.45E-02	1.29E-01	pCi/g		*-0.07*	4/16/05 10:11 a		335.8	GER7S1
								-0.26			g	
BI-212	*3.43E-01*	U	3.83E-01	3.83E-01	7.35E-01	pCi/g		*0.47*	4/16/05 10:11 a		335.8	GER7S1
								(1.8)			g	
BI-214	*4.73E-01*	U	1.03E-01	1.03E-01	1.78E-01	pCi/g		*(2.7)*	4/16/05 10:11 a		335.8	GER7S1
								(9.1)			g	
CO-60	*1.57E-02*	U	2.56E-02	2.56E-02	5.29E-02	pCi/g		*0.3*	4/16/05 10:11 a		335.8	GER7S1
							3.00E+00	*(1.2)*			g	
CS-134	*-6.17E-03*	U	2.83E-02	2.83E-02	5.04E-02	pCi/g		*-0.12*	4/16/05 10:11 a		335.8	GER7S1
							1.00E+01	*-0.44*			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-25	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-1.37E-02*	U	2.45E-02	2.45E-02	4.11E-02	pCi/g		-0.33	4/16/05 10:11 a		335.8	GER7$1
							2.00E+01	*-(1.1)*			g	
EU-152	*-5.39E-02*	U	6.50E-02	6.50E-02	1.04E-01	pCi/g		-0.52	4/16/05 10:11 a		335.8	GER7$1
							9.00E+00	*-(1.7)*			g	
EU-154	*-8.02E-02*	U	8.42E-02	8.42E-02	1.35E-01	pCi/g		-0.59	4/16/05 10:11 a		335.8	GER7$1
							7.00E+00	*-(1.9)*			g	
EU-155	*4.44E-02*	U	6.17E-02	6.17E-02	1.10E-01	pCi/g		0.41	4/16/05 10:11 a		335.8	GER7$1
							3.00E+02	*(1.4)*			g	
K-40	*7.56E+00*		1.33E+00	1.33E+00	3.63E-01	pCi/g		*(20.8)*	4/16/05 10:11 a		335.8	GER7$1
								(11.3)			g	
MN-54	*-1.67E-02*	U	2.25E-02	2.25E-02	3.71E-02	pCi/g		-0.45	4/16/05 10:11 a		335.8	GER7$1
							2.00E+00	*-(1.5)*			g	
NB-94	*-9.84E-03*	U	2.22E-02	2.22E-02	3.83E-02	pCi/g		-0.26	4/16/05 10:11 a		335.8	GER7$1
							3.00E-01	-0.88			g	
PB-212	*4.35E-01*		8.72E-02	8.72E-02	7.55E-02	pCi/g		*(5.8)*	4/16/05 10:11 a		335.8	GER7$1
								(10.)			g	
PB-214	*4.44E-01*		1.19E-01	1.19E-01	9.35E-02	pCi/g		*(4.8)*	4/16/05 10:11 a		335.8	GER7$1
								(7.4)			g	
RA-226	*4.73E-01*	U	1.03E-01	1.03E-01	1.78E-01	pCi/g		*(2.7)*	4/16/05 10:11 a		335.8	GER7$1
								(9.1)			g	
TL-208	*1.44E-01*	U	5.83E-02	5.83E-02	7.76E-02	pCi/g		*(1.9)*	4/16/05 10:11 a		335.8	GER7$1
								(4.9)			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-25	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-26	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FR81AD		Report DB ID:	9G8FR810				
STRONTIUM	*1.50E-01*		1.37E-02	4.14E-02	1.54E-02	pCi/g	86%	*(9.8)*	4/20/05 01:52 p		25.09	GPC28D
						7.40E-03	1.00E-02	*(7.3)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FR81AC		Report DB ID:	9G8FR810				
H-3	*7.78E+00*		1.01E-01	3.46E-01	2.46E-02	pCi/g	100%	*(316.4)*	4/20/05 05:45 a		100.3	LSC8
						1.14E-02	3.00E+00	*(45.)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FR81AA		Report DB ID:	9G8FR810				
AC-228	*4.72E-01*		1.40E-01	1.40E-01	1.42E-01	pCi/g		*(3.3)*	4/16/05 10:13 a		322.1	GER8S1
								(6.7)			g	
AG-108M	*-2.63E-02*	U	1.80E-02	1.80E-02	2.64E-02	pCi/g		*-0.99*	4/16/05 10:13 a		322.1	GER8S1
								-(2.9)			g	
AM-241	*2.59E-02*	U	4.78E-02	4.78E-02	7.11E-02	pCi/g		*0.36*	4/16/05 10:13 a		322.1	GER8S1
								(1.1)			g	
BI-212	*5.53E-01*	U	3.22E-01	3.22E-01	6.72E-01	pCi/g		*0.82*	4/16/05 10:13 a		322.1	GER8S1
								(3.4)			g	
BI-214	*3.38E-01*		1.10E-01	1.10E-01	7.80E-02	pCi/g		*(4.3)*	4/16/05 10:13 a		322.1	GER8S1
								(6.2)			g	
CO-60	*-1.08E-03*	U	2.28E-02	2.28E-02	4.29E-02	pCi/g		*-0.03*	4/16/05 10:13 a		322.1	GER8S1
							3.00E+00	*-0.09*			g	
CS-134	*1.33E-02*	U	2.16E-02	2.16E-02	4.30E-02	pCi/g		*0.31*	4/16/05 10:13 a		322.1	GER8S1
							1.00E+01	*(1.2)*			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-26	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-3.14E-03*	U	2.12E-02	2.12E-02	3.81E-02	pCi/g		*-0.08*	4/16/05 10:13 a		322.1	GER8$1
							2.00E+01	*-0.3*			g	
EU-152	*3.11E-02*	U	6.19E-02	6.19E-02	1.13E-01	pCi/g		*0.27*	4/16/05 10:13 a		322.1	GER8$1
							9.00E+00	*(1.)*			g	
EU-154	*4.75E-02*	U	5.93E-02	5.93E-02	1.28E-01	pCi/g		*0.37*	4/16/05 10:13 a		322.1	GER8$1
							7.00E+00	*(1.6)*			g	
EU-155	*8.87E-03*	U	5.76E-02	5.76E-02	1.01E-01	pCi/g		*0.09*	4/16/05 10:13 a		322.1	GER8$1
							3.00E+02	*0.31*			g	
K-40	*6.23E+00*		1.16E+00	1.16E+00	5.98E-01	pCi/g		*(10.4)*	4/16/05 10:13 a		322.1	GER8$1
								(10.8)			g	
MN-54	*-1.33E-02*	U	2.42E-02	2.42E-02	4.06E-02	pCi/g		*-0.33*	4/16/05 10:13 a		322.1	GER8$1
							2.00E+00	*-(1.1)*			g	
NB-94	*-3.08E-03*	U	2.24E-02	2.24E-02	3.99E-02	pCi/g		*-0.08*	4/16/05 10:13 a		322.1	GER8$1
							3.00E-01	*-0.28*			g	
PB-212	*4.09E-01*		8.96E-02	8.96E-02	7.69E-02	pCi/g		*(5.3)*	4/16/05 10:13 a		322.1	GER8$1
								(9.1)			g	
PB-214	*4.52E-01*		1.09E-01	1.09E-01	7.43E-02	pCi/g		*(6.1)*	4/16/05 10:13 a		322.1	GER8$1
								(8.3)			g	
RA-226	*3.38E-01*		1.10E-01	1.10E-01	7.80E-02	pCi/g		*(4.3)*	4/16/05 10:13 a		322.1	GER8$1
								(6.2)			g	
TL-208	*1.28E-01*	U	4.57E-02	4.57E-02	7.13E-02	pCi/g		*(1.8)*	4/16/05 10:13 a		322.1	GER8$1
								(5.6)			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-26	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-02	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-27	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-03	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FR91AD		Report DB ID:	9G8FR910				
STRONTIUM	*6.66E-02*		1.07E-02	2.06E-02	1.56E-02	pCi/g	89%	*(4.3)*	4/20/05 01:53 p		25.1	GPC31A
						7.50E-03	1.00E-02	*(6.5)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FR91AC		Report DB ID:	9G8FR910				
H-3	*8.31E+00*		9.84E-02	3.66E-01	2.17E-02	pCi/g	100%	*(382.3)*	4/20/05 06:27 a		100.6	LSC8
						1.01E-02	3.00E+00	*(45.4)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FR91AA		Report DB ID:	9G8FR910				
AC-228	*3.78E-01*		1.83E-01	1.83E-01	1.37E-01	pCi/g		*(2.8)*	4/16/05 10:14 a		306.7	GER10$1
								(4.1)			g	
AG-108M	*7.73E-04*	U	1.82E-02	1.82E-02	3.19E-02	pCi/g		*0.02*	4/16/05 10:14 a		306.7	GER10$1
								0.08			g	
AM-241	*-8.94E-03*	U	7.35E-02	7.35E-02	1.27E-01	pCi/g		*-0.07*	4/16/05 10:14 a		306.7	GER10$1
								-0.24			g	
BI-212	*6.64E-01*	U	3.33E-01	3.33E-01	6.60E-01	pCi/g		*(1.)*	4/16/05 10:14 a		306.7	GER10$1
								(4.)			g	
BI-214	*3.85E-01*	U	1.00E-01	1.00E-01	1.53E-01	pCi/g		*(2.5)*	4/16/05 10:14 a		306.7	GER10$1
								(7.7)			g	
CO-60	*-1.50E-03*	U	2.08E-02	2.08E-02	3.79E-02	pCi/g		*-0.04*	4/16/05 10:14 a		306.7	GER10$1
							3.00E+00	*-0.14*			g	
CS-134	*3.27E-02*	U	2.42E-02	2.42E-02	4.80E-02	pCi/g		*0.68*	4/16/05 10:14 a		306.7	GER10$1
							1.00E+01	*(2.7)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-27	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*1.08E-03*	U	1.95E-02	1.95E-02	3.50E-02	pCi/g		*0.03*	4/16/05 10:14 a		306.7	GER10$1
							2.00E+01	*0.11*			g	
EU-152	*-2.97E-02*	U	5.22E-02	5.22E-02	8.79E-02	pCi/g		*-0.34*	4/16/05 10:14 a		306.7	GER10$1
							9.00E+00	*-(1.1)*			g	
EU-154	*2.59E-02*	U	6.30E-02	6.30E-02	1.21E-01	pCi/g		*0.21*	4/16/05 10:14 a		306.7	GER10$1
							7.00E+00	*0.82*			g	
EU-155	*1.74E-02*	U	6.41E-02	6.41E-02	1.11E-01	pCi/g		*0.16*	4/16/05 10:14 a		306.7	GER10$1
							3.00E+02	*0.54*			g	
K-40	*7.18E+00*		1.18E+00	1.18E+00	3.13E-01	pCi/g		*(23.)*	4/16/05 10:14 a		306.7	GER10$1
								(12.2)			g	
MN-54	*-2.00E-03*	U	1.88E-02	1.88E-02	3.36E-02	pCi/g		*-0.06*	4/16/05 10:14 a		306.7	GER10$1
							2.00E+00	*-0.21*			g	
NB-94	*-9.15E-03*	U	1.75E-02	1.75E-02	2.97E-02	pCi/g		*-0.31*	4/16/05 10:14 a		306.7	GER10$1
							3.00E-01	*-(1.)*			g	
PB-212	*3.85E-01*		8.68E-02	8.68E-02	6.05E-02	pCi/g		*(6.4)*	4/16/05 10:14 a		306.7	GER10$1
								(8.9)			g	
PB-214	*5.15E-01*		1.03E-01	1.03E-01	6.88E-02	pCi/g		*(7.5)*	4/16/05 10:14 a		306.7	GER10$1
								(10.)			g	
RA-226	*3.85E-01*		1.00E-01	1.00E-01	7.25E-02	pCi/g		*(5.3)*	4/16/05 10:14 a		306.7	GER10$1
								(7.7)			g	
TL-208	*1.25E-01*		5.17E-02	5.17E-02	3.21E-02	pCi/g		*(3.9)*	4/16/05 10:14 a		306.7	GER10$1
								(4.8)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-27	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-28	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FTC1AD		Report DB ID:	9G8FTC10				
STRONTIUM	*1.39E-01*		1.35E-02	3.90E-02	1.56E-02	pCi/g	84%	*(8.9)*	4/20/05 01:53 p		25.08	GPC31B
						7.53E-03	1.00E-02	*(7.1)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FTC1AC		Report DB ID:	9G8FTC10				
H-3	*6.25E+00*		8.85E-02	2.80E-01	2.34E-02	pCi/g	100%	*(267.3)*	4/20/05 07:08 a		100.5	LSC8
						1.08E-02	3.00E+00	*(44.7)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FTC1AA		Report DB ID:	9G8FTC10				
AC-228	*4.21E-01*	U	1.14E-01	1.14E-01	1.96E-01	pCi/g		*(2.1)*	4/16/05 10:14 a		321.4	GER11S1
								(7.4)			g	
AG-108M	*3.92E-03*	U	1.58E-02	1.58E-02	2.81E-02	pCi/g		*0.14*	4/16/05 10:14 a		321.4	GER11S1
								0.5			g	
AM-241	*3.44E-02*	U	1.04E-01	1.04E-01	1.85E-01	pCi/g		*0.19*	4/16/05 10:14 a		321.4	GER11S1
								0.66			g	
BI-212	*3.94E-01*	U	2.76E-01	2.76E-01	5.43E-01	pCi/g		*0.73*	4/16/05 10:14 a		321.4	GER11S1
								(2.9)			g	
BI-214	*4.05E-01*	U	1.10E-01	1.10E-01	1.43E-01	pCi/g		*(2.8)*	4/16/05 10:14 a		321.4	GER11S1
								(7.3)			g	
CO-60	*-1.37E-02*	U	2.14E-02	2.14E-02	3.54E-02	pCi/g		*-0.39*	4/16/05 10:14 a		321.4	GER11S1
							3.00E+00	*-(1.3)*			g	
CS-134	*1.36E-02*	U	1.83E-02	1.83E-02	3.55E-02	pCi/g		*0.38*	4/16/05 10:14 a		321.4	GER11S1
							1.00E+01	*(1.5)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-28	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-04	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-2.58E-02*	U	2.43E-02	2.43E-02	4.38E-02	pCi/g		*-0.59*	4/16/05 10:14 a		321.4	GER11S1
							2.00E+01	*-(2.1)*			g	
EU-152	*1.40E-02*	U	4.37E-02	4.37E-02	8.00E-02	pCi/g		*0.18*	4/16/05 10:14 a		321.4	GER11S1
							9.00E+00	*0.64*			g	
EU-154	*-7.58E-03*	U	4.90E-02	4.90E-02	8.94E-02	pCi/g		*-0.08*	4/16/05 10:14 a		321.4	GER11S1
							7.00E+00	*-0.31*			g	
EU-155	*3.36E-02*	U	5.38E-02	5.38E-02	9.86E-02	pCi/g		*0.34*	4/16/05 10:14 a		321.4	GER11S1
							3.00E+02	*(1.2)*			g	
K-40	*7.03E+00*		1.46E+00	1.46E+00	2.82E-01	pCi/g		*(24.9)*	4/16/05 10:14 a		321.4	GER11S1
								(9.6)			g	
MN-54	*1.53E-02*	U	1.73E-02	1.73E-02	3.36E-02	pCi/g		*0.46*	4/16/05 10:14 a		321.4	GER11S1
							2.00E+00	*(1.8)*			g	
NB-94	*-1.18E-02*	U	1.68E-02	1.68E-02	2.72E-02	pCi/g		*-0.43*	4/16/05 10:14 a		321.4	GER11S1
							3.00E-01	*-(1.4)*			g	
PB-212	*3.96E-01*		8.07E-02	8.07E-02	4.71E-02	pCi/g		*(8.4)*	4/16/05 10:14 a		321.4	GER11S1
								(9.8)			g	
PB-214	*5.53E-01*		1.12E-01	1.12E-01	5.66E-02	pCi/g		*(9.8)*	4/16/05 10:14 a		321.4	GER11S1
								(9.9)			g	
RA-226	*4.05E-01*		1.10E-01	1.10E-01	5.09E-02	pCi/g		*(8.)*	4/16/05 10:14 a		321.4	GER11S1
								(7.3)			g	
TL-208	*1.46E-01*	U	4.08E-02	4.08E-02	5.92E-02	pCi/g		*(2.5)*	4/16/05 10:14 a		321.4	GER11S1
								(7.2)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-28	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-29	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-05	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8FTD1AD		Report DB ID:	9G8FTD10				
STRONTIUM	*1.76E-01*		1.49E-02	4.89E-02	1.62E-02	pCi/g	81%	*(10.9)*	4/20/05 01:53 p		25.11	GPC31C
						7.79E-03	1.00E-02	*(7.2)*			G	
Batch: 5105284	RICHRC5037			Work Order:	G8FTD1AC		Report DB ID:	9G8FTD10				
H-3	*8.21E+00*		1.01E-01	3.63E-01	2.31E-02	pCi/g	100%	*(354.7)*	4/20/05 07:50 a		100.3	LSC8
						1.07E-02	3.00E+00	*(45.3)*			G	
Batch: 5105292	RICHRC5017			Work Order:	G8FTD1AA		Report DB ID:	9G8FTD10				
AC-228	*3.30E-01*	U	1.53E-01	1.53E-01	2.95E-01	pCi/g		*(1.1)*	4/16/05 12:08 p		315.7	GER1S1
								(4.3)			g	
AG-108M	*-3.70E-03*	U	2.36E-02	2.36E-02	4.06E-02	pCi/g		*-0.09*	4/16/05 12:08 p		315.7	GER1S1
								-0.31			g	
AM-241	*-1.43E-01*	U	1.21E-01	1.21E-01	1.94E-01	pCi/g		*-0.74*	4/16/05 12:08 p		315.7	GER1S1
								-(2.4)			g	
BI-212	*1.41E-01*	U	4.21E-01	4.21E-01	7.63E-01	pCi/g		*0.18*	4/16/05 12:08 p		315.7	GER1S1
								0.67			g	
BI-214	*3.62E-01*	U	1.16E-01	1.16E-01	1.86E-01	pCi/g		*(1.9)*	4/16/05 12:08 p		315.7	GER1S1
								(6.3)			g	
CO-60	*-6.79E-03*	U	3.08E-02	3.08E-02	5.51E-02	pCi/g		*-0.12*	4/16/05 12:08 p		315.7	GER1S1
							3.00E+00	*-0.44*			g	
CS-134	*1.13E-02*	U	3.46E-02	3.46E-02	6.33E-02	pCi/g		*0.18*	4/16/05 12:08 p		315.7	GER1S1
							1.00E+01	*0.66*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
Lot-Sample No.: J5D150180-29
Client Sample ID: 3107-0000-198-C-1C-05

SDG: 28704
Report No. : 28635
COC No. :

Collection Date: 4/6/2005 3:15:00 PM
Received Date: 4/15/2005 9:00:00 AM
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*3.90E-04*	U	2.86E-02	2.86E-02	5.09E-02	pCi/g		*0.01*	4/16/05 12:08 p		315.7	GER1$1
							2.00E+01	*0.03*			g	
EU-152	*-8.05E-02*	U	1.01E-01	1.01E-01	1.40E-01	pCi/g		*-0.58*	4/16/05 12:08 p		315.7	GER1S1
							9.00E+00	*-(1.6)*			g	
EU-154	*6.01E-02*	U	9.76E-02	9.76E-02	1.89E-01	pCi/g		*0.32*	4/16/05 12:08 p		315.7	GER1S1
							7.00E+00	*(1.2)*			g	
EU-155	*-3.84E-03*	U	8.97E-02	8.97E-02	1.51E-01	pCi/g		*-0.03*	4/16/05 12:08 p		315.7	GER1S1
							3.00E+02	*-0.09*			g	
K-40	*6.24E+00*		1.22E+00	1.22E+00	4.43E-01	pCi/g		*(14.1)*	4/16/05 12:08 p		315.7	GER1S1
								(10.2)			g	
MN-54	*3.61E-03*	U	3.00E-02	3.00E-02	5.42E-02	pCi/g		*0.07*	4/16/05 12:08 p		315.7	GER1$1
							2.00E+00	*0.24*			g	
NB-94	*9.46E-03*	U	2.82E-02	2.82E-02	5.20E-02	pCi/g		*0.18*	4/16/05 12:08 p		315.7	GER1S1
							3.00E-01	*0.67*			g	
PB-212	*3.12E-01*		1.17E-01	1.17E-01	1.00E-01	pCi/g		*(3.1)*	4/16/05 12:08 p		315.7	GER1S1
								(5.3)			g	
PB-214	*6.24E-01*		1.48E-01	1.48E-01	9.26E-02	pCi/g		*(6.7)*	4/16/05 12:08 p		315.7	GER1S1
								(8.5)			g	
RA-226	*3.62E-01*	U	1.16E-01	1.16E-01	1.86E-01	pCi/g		*(1.9)*	4/16/05 12:08 p		315.7	GER1S1
								(6.3)			g	
TL-208	*2.28E-01*		5.42E-02	5.42E-02	4.52E-02	pCi/g		*(5.1)*	4/16/05 12:08 p		315.7	GER1S1
								(8.4)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-29	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-05	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-30	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order: G8FTE1AD			Report DB ID: 9G8FTE10					
STRONTIUM	*1.50E-01*		1.33E-02	4.16E-02	1.49E-02	pCi/g	90%	*(10.)*	4/20/05 01:53 p		25.07	GPC31D
						7.20E-03	1.00E-02	*(7.2)*			G	
Batch: 5105284	RICHRC5037			Work Order: G8FTE1AC			Report DB ID: 9G8FTE10					
H-3	*6.46E+00*		8.88E-02	2.88E-01	2.27E-02	pCi/g	100%	*(284.)*	4/20/05 08:31 a		100.1	LSC8
						1.05E-02	3.00E+00	*(44.8)*			G	
Batch: 5105292	RICHRC5017			Work Order: G8FTE1AA			Report DB ID: 9G8FTE10					
AC-228	*4.13E-01*	U	1.65E-01	1.65E-01	3.00E-01	pCi/g		*(1.4)*	4/16/05 12:09 p		308.3	GER4S1
								(5.)			g	
AG-108M	*1.42E-03*	U	2.09E-02	2.09E-02	3.71E-02	pCi/g		*0.04*	4/16/05 12:09 p		308.3	GER4S1
								0.14			g	
AM-241	*-1.24E-02*	U	1.46E-01	1.46E-01	2.46E-01	pCi/g		*-0.05*	4/16/05 12:09 p		308.3	GER4S1
								-0.17			g	
BI-212	*3.69E-01*	U	3.90E-01	3.90E-01	7.63E-01	pCi/g		*0.48*	4/16/05 12:09 p		308.3	GER4S1
								(1.9)			g	
BI-214	*3.52E-01*	U	1.32E-01	1.32E-01	1.78E-01	pCi/g		*(2.)*	4/16/05 12:09 p		308.3	GER4S1
								(5.3)			g	
CO-60	*-1.03E-02*	U	2.63E-02	2.63E-02	4.67E-02	pCi/g		*-0.22*	4/16/05 12:09 p		308.3	GER4S1
							3.00E+00	*-0.79*			g	
CS-134	*2.60E-02*	U	3.05E-02	3.05E-02	5.98E-02	pCi/g		*0.43*	4/16/05 12:09 p		308.3	GER4S1
							1.00E+01	*(1.7)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/6/2005 3:15:00 PM
Lot-Sample No.: J5D150180-30
Report No.: 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-198-C-1C-06
COC No.:
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-9.26E-03*	U	2.54E-02	2.54E-02	4.34E-02	pCi/g		*-0.21*	4/16/05 12:09 p		308.3	GER4$1
							2.00E+01	*-0.73*			g	
EU-152	*1.74E-02*	U	7.65E-02	7.65E-02	1.27E-01	pCi/g		*0.14*	4/16/05 12:09 p		308.3	GER4$1
							9.00E+00	*0.45*			g	
EU-154	*7.31E-02*	U	8.37E-02	8.37E-02	1.74E-01	pCi/g		*0.42*	4/16/05 12:09 p		308.3	GER4$1
							7.00E+00	*(1.7)*			g	
EU-155	*5.04E-02*	U	7.99E-02	7.99E-02	1.44E-01	pCi/g		*0.35*	4/16/05 12:09 p		308.3	GER4$1
							3.00E+02	*(1.3)*			g	
K-40	*6.72E+00*		1.35E+00	1.35E+00	4.65E-01	pCi/g		*(14.5)*	4/16/05 12:09 p		308.3	GER4$1
								(10.)			g	
MN-54	*3.00E-02*	U	2.35E-02	2.35E-02	4.90E-02	pCi/g		*0.61*	4/16/05 12:09 p		308.3	GER4$1
							2.00E+00	*(2.5)*			g	
NB-94	*8.01E-05*	U	2.49E-02	2.49E-02	4.52E-02	pCi/g		*0.*	4/16/05 12:09 p		308.3	GER4$1
							3.00E-01	*0.01*			g	
PB-212	*5.19E-01*		1.12E-01	1.12E-01	9.30E-02	pCi/g		*(5.6)*	4/16/05 12:09 p		308.3	GER4$1
								(9.3)			g	
PB-214	*4.51E-01*		1.15E-01	1.15E-01	7.55E-02	pCi/g		*(6.)*	4/16/05 12:09 p		308.3	GER4$1
								(7.8)			g	
RA-226	*3.52E-01*	U	1.32E-01	1.32E-01	1.76E-01	pCi/g		*(2.)*	4/16/05 12:09 p		308.3	GER4$1
								(5.3)			g	
TL-208	*1.40E-01*		5.00E-02	5.00E-02	3.85E-02	pCi/g		*(3.6)*	4/16/05 12:09 p		308.3	GER4$1
								(5.6)			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-30	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-198-C-1C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
Lot-Sample No.: J5D150180-31
Client Sample ID: 3107-0000-199-C-1C-01

SDG: 28704
Report No.: 28635
COC No.:

Collection Date: 4/5/2005 2:00:00 PM
Received Date: 4/15/2005 9:00:00 AM
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order: G8FTG1AD			Report DB ID: 9G8FTG10					
STRONTIUM	*5.71E-01*		2.82E-02	1.56E-01	2.19E-02	pCi/g	56%	*(26.)*	4/20/05 05:31 p		25.0	GPC32A
						1.06E-02	1.00E-02	*(7.2)*			G	
Batch: 5105287	RICHRC5037			Work Order: G8FTG1AC			Report DB ID: 9G8FTG10					
H-3	*1.77E+00*	J	9.17E-02	1.19E-01	7.71E-02	pCi/g	100%	*(23.)*	4/20/05 09:30 p		100.3	LSC3
						3.55E-02	3.00E+00	*(29.9)*			G	
Batch: 5105297	RICHRC5017			Work Order: G8FTG1AA			Report DB ID: 9G8FTG10					
AC-228	*6.54E-01*		1.68E-01	1.68E-01	1.07E-01	pCi/g		*(6.1)*	4/18/05 11:19 a		45.1	GER8S1
								(7.8)			g	
AG-108M	*1.25E-02*	U	1.43E-02	1.43E-02	2.47E-02	pCi/g		*0.51*	4/18/05 11:19 a		45.1	GER8S1
								(1.8)			g	
AM-241	*1.64E-02*	U	2.38E-02	2.38E-02	3.66E-02	pCi/g		*0.45*	4/18/05 11:19 a		45.1	GER8S1
								(1.4)			g	
BI-212	*5.44E-01*	U	2.82E-01	2.82E-01	5.05E-01	pCi/g		*(1.1)*	4/18/05 11:19 a		45.1	GER8S1
								(3.9)			g	
BI-214	*3.99E-01*		1.02E-01	1.02E-01	5.83E-02	pCi/g		*(6.8)*	4/18/05 11:19 a		45.1	GER8S1
								(7.8)			g	
CO-60	*-3.54E-03*	U	2.10E-02	2.10E-02	3.65E-02	pCi/g		*-0.1*	4/18/05 11:19 a		45.1	GER8S1
							3.00E+00	*-0.34*			g	
CS-134	*2.69E-02*	U	2.06E-02	2.06E-02	3.69E-02	pCi/g		*0.73*	4/18/05 11:19 a		45.1	GER8S1
							1.00E+01	*(2.6)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-31	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*2.63E-03*	U	1.84E-02	1.84E-02	3.17E-02	pCi/g		*0.08*	4/18/05 11:19 a		45.1	GER8S1
							2.00E+01	*0.28*			g	
EU-152	*1.98E-02*	U	4.57E-02	4.57E-02	7.81E-02	pCi/g		*0.25*	4/18/05 11:19 a		45.1	GER8S1
							9.00E+00	*0.87*			g	
EU-154	*-1.81E-02*	U	5.41E-02	5.41E-02	9.13E-02	pCi/g		*-0.2*	4/18/05 11:19 a		45.1	GER8S1
							7.00E+00	*-0.67*			g	
EU-155	*5.06E-03*	U	3.50E-02	3.50E-02	5.91E-02	pCi/g		*0.09*	4/18/05 11:19 a		45.1	GER8S1
							3.00E+02	*0.29*			g	
K-40	*7.24E+00*		1.13E+00	1.13E+00	3.11E-01	pCi/g		*(23.2)*	4/18/05 11:19 a		45.1	GER8S1
								(12.9)			g	
MN-54	*1.31E-02*	U	1.90E-02	1.90E-02	3.33E-02	pCi/g		*0.39*	4/18/05 11:19 a		45.1	GER8S1
							2.00E+00	*(1.4)*			g	
NB-94	*-1.88E-04*	U	1.78E-02	1.78E-02	3.09E-02	pCi/g		*-0.01*	4/18/05 11:19 a		45.1	GER8S1
							3.00E-01	*-0.02*			g	
PB-212	*3.12E-01*		7.66E-02	7.66E-02	4.91E-02	pCi/g		*(6.4)*	4/18/05 11:19 a		45.1	GER8S1
								(8.1)			g	
PB-214	*4.20E-01*		1.01E-01	1.01E-01	5.58E-02	pCi/g		*(7.5)*	4/18/05 11:19 a		45.1	GER8S1
								(8.3)			g	
RA-226	*3.99E-01*		1.02E-01	1.02E-01	5.84E-02	pCi/g		*(6.8)*	4/18/05 11:19 a		45.1	GER8S1
								(7.8)			g	
TL-208	*1.58E-01*		3.65E-02	3.65E-02	2.81E-02	pCi/g		*(5.6)*	4/18/05 11:19 a		45.1	GER8S1
								(8.7)			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-31	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-32	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FTH1AD		Report DB ID: 9G8FTH10					
STRONTIUM	*1.83E-01*		2.33E-02	5.45E-02	3.06E-02	pCi/g	35%	*(6.)*	4/20/05 05:31 p		25.07	GPC32C
						1.47E-02	1.00E-02	*(6.7)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FTH1AC		Report DB ID: 9G8FTH10					
H-3	*1.40E+00*	J	5.57E-02	8.15E-02	3.58E-02	pCi/g	100%	*(39.2)*	4/20/05 10:55 p		100.3	LSC3
						1.65E-02	3.00E+00	*(34.4)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FTH1AA		Report DB ID: 9G8FTH10					
AC-228	*3.89E-01*		1.45E-01	1.45E-01	1.55E-01	pCi/g		*(2.5)*	4/18/05 09:31 a		301.3	GER8$1
								(5.4)			g	
AG-108M	*-1.15E-02*	U	1.94E-02	1.94E-02	3.20E-02	pCi/g		*-0.36*	4/18/05 09:31 a		301.3	GER8$1
								-(1.2)			g	
AM-241	*-1.04E-02*	U	4.28E-02	4.28E-02	7.35E-02	pCi/g		*-0.14*	4/18/05 09:31 a		301.3	GER8$1
								-0.49			g	
BI-212	*4.02E-01*	U	3.67E-01	3.67E-01	7.23E-01	pCi/g		*0.56*	4/18/05 09:31 a		301.3	GER8$1
								(2.2)			g	
BI-214	*3.46E-01*	U	1.08E-01	1.08E-01	1.74E-01	pCi/g		*(2.)*	4/18/05 09:31 a		301.3	GER8$1
								(6.4)			g	
CO-60	*1.05E-03*	U	2.54E-02	2.54E-02	4.89E-02	pCi/g		*0.02*	4/18/05 09:31 a		301.3	GER8$1
							3.00E+00	*0.08*			g	
CS-134	*5.06E-03*	U	2.70E-02	2.70E-02	4.98E-02	pCi/g		*0.1*	4/18/05 09:31 a		301.3	GER8$1
							1.00E+01	*0.37*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-32	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-02	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-1.94E-02*	U	2.31E-02	2.31E-02	3.74E-02	pCi/g		*-0.52*	4/18/05 09:31 a		301.3	GER8$1
							2.00E+01	*-(1.7)*			g	
EU-152	*-4.11E-02*	U	6.29E-02	6.29E-02	1.04E-01	pCi/g		*-0.39*	4/18/05 09:31 a		301.3	GER8$1
							9.00E+00	*-(1.3)*			g	
EU-154	*-3.09E-02*	U	7.44E-02	7.44E-02	1.29E-01	pCi/g		*-0.24*	4/18/05 09:31 a		301.3	GER8$1
							7.00E+00	*-0.83*			g	
EU-155	*8.84E-04*	U	6.00E-02	6.00E-02	1.04E-01	pCi/g		*0.01*	4/18/05 09:31 a		301.3	GER8$1
							3.00E+02	*0.03*			g	
K-40	*7.11E+00*		1.24E+00	1.24E+00	3.63E-01	pCi/g		*(19.6)*	4/18/05 09:31 a		301.3	GER8$1
								(11.5)			g	
MN-54	*1.44E-02*	U	2.37E-02	2.37E-02	4.59E-02	pCi/g		*0.31*	4/18/05 09:31 a		301.3	GER8$1
							2.00E+00	*(1.2)*			g	
NB-94	*-1.06E-02*	U	2.28E-02	2.28E-02	3.97E-02	pCi/g		*-0.27*	4/18/05 09:31 a		301.3	GER8$1
							3.00E-01	-0.93			g	
PB-212	*3.40E-01*		7.87E-02	7.87E-02	8.53E-02	pCi/g		*(4.)*	4/18/05 09:31 a		301.3	GER8$1
								(8.6)			g	
PB-214	*4.66E-01*		1.14E-01	1.14E-01	7.51E-02	pCi/g		*(6.2)*	4/18/05 09:31 a		301.3	GER8$1
								(8.2)			g	
RA-226	*3.46E-01*		1.08E-01	1.08E-01	7.86E-02	pCi/g		*(4.4)*	4/18/05 09:31 a		301.3	GER8$1
								(6.4)			g	
TL-208	*1.50E-01*		4.13E-02	4.13E-02	4.35E-02	pCi/g		*(3.5)*	4/18/05 09:31 a		301.3	GER8$1
								(7.3)			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-32	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-02	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-33	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FTJ1AD		Report DB ID: 9G8FTJ10					
STRONTIUM	*1.53E-01*		1.64E-02	4.66E-02	2.08E-02	pCi/g	65%	*(7.3)*	4/20/05 05:31 p		25.04	GPC32D
						1.00E-02	1.00E-02	*(6.5)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FTJ1AC		Report DB ID: 9G8FTJ10					
H-3	*4.29E-01*	J	3.19E-02	3.74E-02	3.37E-02	pCi/g	100%	*(12.7)*	4/20/05 11:37 p		100.3	LSC3
						1.55E-02	3.00E+00	*(22.9)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FTJ1AA		Report DB ID: 9G8FTJ10					
AC-228	*4.62E-01*	U	1.55E-01	1.55E-01	2.21E-01	pCi/g		*(2.1)*	4/18/05 09:32 a		326.8	GER11S1
								(6.)			g	
AG-108M	*2.80E-03*	U	1.39E-02	1.39E-02	2.48E-02	pCi/g		*0.11*	4/18/05 09:32 a		326.8	GER11S1
								0.4			g	
AM-241	*8.31E-02*	U	1.07E-01	1.07E-01	1.92E-01	pCi/g		*0.43*	4/18/05 09:32 a		326.8	GER11S1
								(1.5)			g	
BI-212	*5.35E-01*	U	2.95E-01	2.95E-01	5.84E-01	pCi/g		*0.92*	4/18/05 09:32 a		326.8	GER11S1
								(3.6)			g	
BI-214	*4.91E-01*		9.44E-02	9.44E-02	5.31E-02	pCi/g		*(9.2)*	4/18/05 09:32 a		326.8	GER11S1
								(10.4)			g	
CO-60	*9.81E-03*	U	1.85E-02	1.85E-02	3.66E-02	pCi/g		*0.27*	4/18/05 09:32 a		326.8	GER11S1
							3.00E+00	*(1.1)*			g	
CS-134	*1.90E-02*	U	1.96E-02	1.96E-02	3.84E-02	pCi/g		*0.5*	4/18/05 09:32 a		326.8	GER11S1
							1.00E+01	*(1.9)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-33	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-03	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*4.40E-03*	U	2.19E-02	2.19E-02	2.97E-02	pCi/g		*0.15*	4/18/05 09:32 a		326.8	GER11S1
							2.00E+01	*0.4*			g	
EU-152	*-1.97E-03*	U	4.49E-02	4.49E-02	7.79E-02	pCi/g		*-0.03*	4/18/05 09:32 a		326.8	GER11S1
							9.00E+00	*-0.09*			g	
EU-154	*7.56E-03*	U	4.97E-02	4.97E-02	9.48E-02	pCi/g		*0.08*	4/18/05 09:32 a		326.8	GER11S1
							7.00E+00	*0.3*			g	
EU-155	*3.13E-02*	U	5.41E-02	5.41E-02	9.79E-02	pCi/g		*0.32*	4/18/05 09:32 a		326.8	GER11S1
							3.00E+02	*(1.2)*			g	
K-40	*7.78E+00*		1.59E+00	1.59E+00	2.78E-01	pCi/g		*(28.)*	4/18/05 09:32 a		326.8	GER11S1
								(9.8)			g	
MN-54	*1.10E-02*	U	1.76E-02	1.76E-02	3.34E-02	pCi/g		*0.33*	4/18/05 09:32 a		326.8	GER11S1
							2.00E+00	*(1.3)*			g	
NB-94	*-2.22E-03*	U	1.55E-02	1.55E-02	2.74E-02	pCi/g		*-0.08*	4/18/05 09:32 a		326.8	GER11S1
							3.00E-01	*-0.29*			g	
PB-212	*3.85E-01*		7.65E-02	7.65E-02	4.97E-02	pCi/g		*(7.7)*	4/18/05 09:32 a		326.8	GER11S1
								(10.1)			g	
PB-214	*4.99E-01*		9.76E-02	9.76E-02	6.49E-02	pCi/g		*(7.7)*	4/18/05 09:32 a		326.8	GER11S1
								(10.2)			g	
RA-226	*4.91E-01*		9.44E-02	9.44E-02	5.31E-02	pCi/g		*(9.2)*	4/18/05 09:32 a		326.8	GER11S1
								(10.4)			g	
TL-208	*1.43E-01*		3.92E-02	3.92E-02	2.87E-02	pCi/g		*(5.)*	4/18/05 09:32 a		326.8	GER11S1
								(7.3)			g	

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-33	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-03	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-34	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-04	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FTK1AD		Report DB ID:	9G8FTK10				
STRONTIUM	*1.58E-01*		2.13E-02	4.70E-02	2.90E-02	pCi/g	41%	*(5.5)*	4/20/05 05:31 p		25.05	GPC31A
						1.40E-02	1.00E-02	*(6.7)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FTK1AC		Report DB ID:	9G8FTK10				
H-3	*2.71E-01*	J	2.71E-02	3.02E-02	3.48E-02	pCi/g	100%	*(7.8)*	4/21/05 12:19 a		100.6	LSC3
						1.60E-02	3.00E+00	*(17.9)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FTK1AA		Report DB ID:	9G8FTK10				
AC-228	*2.96E-01*	U	2.07E-01	2.07E-01	2.90E-01	pCi/g		*(1.)*	4/18/05 11:20 a		311.2	GER4S1
								(2.9)			g	
AG-108M	*5.60E-03*	U	1.94E-02	1.94E-02	3.58E-02	pCi/g		*0.16*	4/18/05 11:20 a		311.2	GER4S1
								0.58			g	
AM-241	*-5.01E-02*	U	1.17E-01	1.17E-01	2.00E-01	pCi/g		*-0.25*	4/18/05 11:20 a		311.2	GER4S1
								-0.86			g	
BI-212	*7.71E-01*	U	4.18E-01	4.18E-01	8.45E-01	pCi/g		*0.91*	4/18/05 11:20 a		311.2	GER4S1
								(3.7)			g	
BI-214	*3.60E-01*	U	1.09E-01	1.09E-01	1.79E-01	pCi/g		*(2.)*	4/18/05 11:20 a		311.2	GER4S1
								(6.6)			g	
CO-60	*1.56E-02*	U	2.79E-02	2.79E-02	5.71E-02	pCi/g		*0.27*	4/18/05 11:20 a		311.2	GER4S1
							3.00E+00	*(1.1)*			g	
CS-134	*6.90E-03*	U	2.77E-02	2.77E-02	5.21E-02	pCi/g		*0.13*	4/18/05 11:20 a		311.2	GER4S1
							1.00E+01	*0.5*			g	

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-34	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-04	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-2.02E-03*	U	2.49E-02	2.49E-02	4.45E-02	pCi/g		*-0.05*	4/18/05 11:20 a		311.2	GER4$1
							2.00E+01	*-0.16*			g	
EU-152	*-1.13E-02*	U	5.73E-02	5.73E-02	9.89E-02	pCi/g		*-0.11*	4/18/05 11:20 a		311.2	GER4$1
							9.00E+00	*-0.39*			g	
EU-154	*-5.84E-02*	U	8.13E-02	8.13E-02	1.36E-01	pCi/g		*-0.43*	4/18/05 11:20 a		311.2	GER4$1
							7.00E+00	*-(1.4)*			g	
EU-155	*6.76E-02*	U	7.43E-02	7.43E-02	1.33E-01	pCi/g		*0.51*	4/18/05 11:20 a		311.2	GER4$1
							3.00E+02	*(1.8)*			g	
K-40	*5.78E+00*		1.29E+00	1.29E+00	3.87E-01	pCi/g		*(14.9)*	4/18/05 11:20 a		311.2	GER4$1
								(9.)			g	
MN-54	*6.89E-04*	U	2.37E-02	2.37E-02	4.38E-02	pCi/g		*0.02*	4/18/05 11:20 a		311.2	GER4$1
							2.00E+00	*0.06*			g	
NB-94	*-3.62E-03*	U	2.32E-02	2.32E-02	4.17E-02	pCi/g		*-0.09*	4/18/05 11:20 a		311.2	GER4$1
							3.00E-01	*-0.31*			g	
PB-212	*4.23E-01*		9.41E-02	9.41E-02	6.47E-02	pCi/g		*(6.5)*	4/18/05 11:20 a		311.2	GER4$1
								(9.)			g	
PB-214	*4.56E-01*		1.21E-01	1.21E-01	8.98E-02	pCi/g		*(5.1)*	4/18/05 11:20 a		311.2	GER4$1
								(7.6)			g	
RA-226	*3.60E-01*	U	1.09E-01	1.09E-01	1.79E-01	pCi/g		*(2.)*	4/18/05 11:20 a		311.2	GER4$1
								(6.6)			g	
TL-208	*1.49E-01*	U	5.58E-02	5.58E-02	8.49E-02	pCi/g		*(1.8)*	4/18/05 11:20 a		311.2	GER4$1
								(5.3)			g	

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-34	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-04	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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V4.12 A97

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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-35	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-05	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FTL1AD		Report DB ID:	9G8FTL10				
STRONTIUM	*2.30E-01*		1.85E-02	6.35E-02	1.93E-02	pCi/g	63%	*(11.9)*	4/20/05 05:31 p		25.09	GPC31B
						9.30E-03	1.00E-02	*(7.2)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FTL1AC		Report DB ID:	9G8FTL10				
H-3	*6.54E-01*	J	3.77E-02	4.73E-02	3.30E-02	pCi/g	100%	*(19.9)*	4/21/05 01:02 a		100.5	LSC3
						1.52E-02	3.00E+00	*(27.6)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FTL1AA		Report DB ID:	9G8FTL10				
AC-228	*4.60E-01*		1.88E-01	1.88E-01	1.51E-01	pCi/g		*(3.)*	4/18/05 11:20 a		339.0	GER7$1
								(4.9)			g	
AG-108M	*-7.98E-03*	U	2.26E-02	2.26E-02	3.85E-02	pCi/g		*-0.21*	4/18/05 11:20 a		339.0	GER7$1
								-0.7			g	
AM-241	*-6.56E-03*	U	8.46E-02	8.46E-02	1.44E-01	pCi/g		*-0.05*	4/18/05 11:20 a		339.0	GER7$1
								-0.16			g	
BI-212	*3.11E-01*	U	3.84E-01	3.84E-01	7.41E-01	pCi/g		*0.42*	4/18/05 11:20 a		339.0	GER7$1
								(1.6)			g	
BI-214	*6.08E-01*	U	1.36E-01	1.36E-01	2.16E-01	pCi/g		*(2.8)*	4/18/05 11:20 a		339.0	GER7$1
								(8.9)			g	
CO-60	*-2.29E-02*	U	2.27E-02	2.27E-02	3.47E-02	pCi/g		*-0.66*	4/18/05 11:20 a		339.0	GER7$1
							3.00E+00	*-(2.)*			g	
CS-134	*1.23E-02*	U	3.16E-02	3.16E-02	5.88E-02	pCi/g		*0.21*	4/18/05 11:20 a		339.0	GER7$1
							1.00E+01	*0.78*			g	

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/5/2005 2:00:00 PM
Lot-Sample No.: J5D150180-35
Report No. : 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-199-C-1C-05
COC No. :
Matrix: SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	-4.59E-03	U	2.85E-02	2.85E-02	4.96E-02	pCi/g		-0.09	4/18/05 11:20 a		339.0	GER7$1
							2.00E+01	-0.32			g	
EU-152	-3.32E-02	U	7.94E-02	7.94E-02	1.22E-01	pCi/g		-0.27	4/18/05 11:20 a		339.0	GER7$1
							9.00E+00	-0.84			g	
EU-154	2.93E-02	U	8.77E-02	8.77E-02	1.68E-01	pCi/g		0.17	4/18/05 11:20 a		339.0	GER7$1
							7.00E+00	0.67			g	
EU-155	5.02E-03	U	6.80E-02	6.80E-02	1.19E-01	pCi/g		0.04	4/18/05 11:20 a		339.0	GER7$1
							3.00E+02	0.15			g	
K-40	6.36E+00		1.18E+00	1.18E+00	4.58E-01	pCi/g		(13.9)	4/18/05 11:20 a		339.0	GER7$1
								(10.8)			g	
MN-54	-1.81E-02	U	2.71E-02	2.71E-02	4.49E-02	pCi/g		-0.4	4/18/05 11:20 a		339.0	GER7$1
							2.00E+00	-(1.3)			g	
NB-94	2.25E-02	U	2.75E-02	2.75E-02	5.31E-02	pCi/g		0.42	4/18/05 11:20 a		339.0	GER7$1
							3.00E-01	(1.6)			g	
PB-212	3.60E-01		1.05E-01	1.05E-01	1.04E-01	pCi/g		(3.5)	4/18/05 11:20 a		339.0	GER7$1
								(6.9)			g	
PB-214	6.80E-01		1.43E-01	1.43E-01	8.43E-02	pCi/g		(8.1)	4/18/05 11:20 a		339.0	GER7$1
								(9.5)			g	
RA-226	6.08E-01	U	1.36E-01	1.36E-01	2.16E-01	pCi/g		(2.8)	4/18/05 11:20 a		339.0	GER7$1
								(8.9)			g	
TL-208	1.17E-01	U	5.41E-02	5.41E-02	7.95E-02	pCi/g		(1.5)	4/18/05 11:20 a		339.0	GER7$1
								(4.3)			g	

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rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-35	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-05	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:10:00 PM
Lot-Sample No.:	J5D150180-36	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FTM1AD		Report DB ID:	9G8FTM10				
STRONTIUM	*2.13E-01*		1.69E-02	5.87E-02	1.77E-02	pCi/g	70%	*(12.)*	4/20/05 05:31 p		25.05	GPC31C
						8.53E-03	1.00E-02	*(7.2)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FTM1AC		Report DB ID:	9G8FTM10				
H-3	*8.49E-01*	J	4.32E-02	5.67E-02	3.42E-02	pCi/g	100%	*(24.8)*	4/21/05 01:44 a		100.7	LSC3
						1.58E-02	3.00E+00	*(30.)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FTM1AA		Report DB ID:	9G8FTM10				
AC-228	*5.02E-01*	U	1.51E-01	1.51E-01	2.19E-01	pCi/g		*(2.3)*	4/18/05 11:20 a		331.3	GER11$1
								(6.7)			g	
AG-108M	*-4.37E-04*	U	1.34E-02	1.34E-02	2.34E-02	pCi/g		*-0.02*	4/18/05 11:20 a		331.3	GER11$1
								-0.07			g	
AM-241	*-7.88E-02*	U	1.09E-01	1.09E-01	1.73E-01	pCi/g		*-0.45*	4/18/05 11:20 a		331.3	GER11$1
								-(1.5)			g	
BI-212	*1.24E-01*	U	2.58E-01	2.58E-01	4.82E-01	pCi/g		*0.26*	4/18/05 11:20 a		331.3	GER11$1
								0.96			g	
BI-214	*4.37E-01*		8.50E-02	8.50E-02	4.87E-02	pCi/g		*(9.)*	4/18/05 11:20 a		331.3	GER11$1
								(10.3)			g	
CO-60	*2.91E-03*	U	1.61E-02	1.61E-02	3.12E-02	pCi/g		*0.09*	4/18/05 11:20 a		331.3	GER11$1
							3.00E+00	*0.36*			g	
CS-134	*1.92E-02*	U	1.87E-02	1.87E-02	3.69E-02	pCi/g		*0.52*	4/18/05 11:20 a		331.3	GER11$1
							1.00E+01	*(2.1)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:10:00 PM
Lot-Sample No.:	J5D150180-36	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-2C-06	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-1.41E-02*	U	2.07E-02	2.07E-02	3.89E-02	pCi/g		*-0.36*	4/18/05 11:20 a		331.3	GER11$1
							2.00E+01	*-(1.4)*			g	
EU-152	*3.73E-02*	U	4.12E-02	4.12E-02	7.76E-02	pCi/g		*0.48*	4/18/05 11:20 a		331.3	GER11$1
							9.00E+00	*(1.8)*			g	
EU-154	*-2.49E-02*	U	5.54E-02	5.54E-02	9.61E-02	pCi/g		*-0.26*	4/18/05 11:20 a		331.3	GER11$1
							7.00E+00	*-0.9*			g	
EU-155	*2.17E-02*	U	5.12E-02	5.12E-02	9.21E-02	pCi/g		*0.24*	4/18/05 11:20 a		331.3	GER11$1
							3.00E+02	*0.85*			g	
K-40	*6.86E+00*		1.45E+00	1.45E+00	2.43E-01	pCi/g		*(28.2)*	4/18/05 11:20 a		331.3	GER11$1
								(9.5)			g	
MN-54	*9.75E-03*	U	1.50E-02	1.50E-02	2.92E-02	pCi/g		*0.33*	4/18/05 11:20 a		331.3	GER11$1
							2.00E+00	*(1.3)*			g	
NB-94	*7.61E-03*	U	1.60E-02	1.60E-02	3.02E-02	pCi/g		*0.25*	4/18/05 11:20 a		331.3	GER11$1
							3.00E-01	*0.95*			g	
PB-212	*4.22E-01*		7.72E-02	7.72E-02	4.37E-02	pCi/g		*(9.7)*	4/18/05 11:20 a		331.3	GER11$1
								(10.9)			g	
PB-214	*4.55E-01*		9.65E-02	9.65E-02	5.97E-02	pCi/g		*(7.6)*	4/18/05 11:20 a		331.3	GER11$1
								(9.4)			g	
RA-226	*4.37E-01*		8.50E-02	8.50E-02	4.87E-02	pCi/g		*(9.)*	4/18/05 11:20 a		331.3	GER11$1
								(10.3)			g	
TL-208	*1.51E-01*		3.72E-02	3.72E-02	2.67E-02	pCi/g		*(5.6)*	4/18/05 11:20 a		331.3	GER11$1
								(8.1)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:10:00 PM
Lot-Sample No.:	J5D150180-36	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-2C-06	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland

rptSTLRchSample V4.12 A97

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STL RICHLAND

FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/11/2005 10:10:00 AM
Lot-Sample No.:	J5D150180-37	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-030-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FTN1AD		Report DB ID:	9G8FTN10				
STRONTIUM	*2.17E-02*	J	8.33E-03	1.01E-02	1.47E-02	pCi/g	88%	*(1.5)*	4/20/05 05:31 p		25.06	GPC31D
						7.07E-03	5.00E-02	*(4.3)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FTN1AC		Report DB ID:	9G8FTN10				
H-3	*2.59E-01*	J	2.59E-02	2.89E-02	3.32E-02	pCi/g	100%	*(7.8)*	4/21/05 02:27 a		100.2	LSC3
						1.53E-02	1.50E+01	*(18.)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FTN1AA		Report DB ID:	9G8FTN10				
AC-228	*3.91E-01*	U	2.17E-01	2.17E-01	3.22E-01	pCi/g		*(1.2)*	4/18/05 01:03 p		326.6	GER4S1
								(3.6)			g	
AG-108M	*4.82E-03*	U	2.71E-02	2.71E-02	4.79E-02	pCi/g		*0.1*	4/18/05 01:03 p		326.6	GER4S1
								0.36			g	
AM-241	*-4.84E-02*	U	2.09E-01	2.09E-01	3.57E-01	pCi/g		*-0.14*	4/18/05 01:03 p		326.6	GER4S1
								-0.46			g	
BI-212	*4.25E-01*	U	4.69E-01	4.69E-01	8.72E-01	pCi/g		*0.49*	4/18/05 01:03 p		326.6	GER4S1
								(1.8)			g	
BI-214	*3.55E+00*		4.77E-01	4.77E-01	1.09E-01	pCi/g		*(32.5)*	4/18/05 01:03 p		326.6	GER4S1
								(14.9)			g	
CO-60	*2.12E-02*	U	3.34E-02	3.34E-02	6.61E-02	pCi/g		*0.32*	4/18/05 01:03 p		326.6	GER4S1
							1.50E-01	*(1.3)*			g	
CS-134	*2.20E-02*	U	3.25E-02	3.25E-02	6.19E-02	pCi/g		*0.36*	4/18/05 01:03 p		326.6	GER4S1
							1.80E-01	*(1.4)*			g	

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rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/11/2005 10:10:00 AM
Lot-Sample No.:	J5D150180-37	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-030-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-4.37E-02*	U	3.47E-02	3.47E-02	5.35E-02	pCi/g		*-0.82*	4/18/05 01:03 p		326.6	GER4$1
							3.00E-01	*-(2.5)*			g	
EU-152	*-4.54E-02*	U	1.03E-01	1.03E-01	1.70E-01	pCi/g		*-0.27*	4/18/05 01:03 p		326.6	GER4$1
							4.00E-01	*-0.88*			g	
EU-154	*1.24E-02*	U	9.91E-02	9.91E-02	1.84E-01	pCi/g		*0.07*	4/18/05 01:03 p		326.6	GER4$1
							3.50E-01	*0.25*			g	
EU-155	*-3.15E-02*	U	1.12E-01	1.12E-01	1.83E-01	pCi/g		*-0.17*	4/18/05 01:03 p		326.6	GER4$1
							1.50E+01	*-0.56*			g	
K-40	*3.23E+00*		9.07E-01	9.07E-01	5.20E-01	pCi/g		*(6.2)*	4/18/05 01:03 p		326.6	GER4$1
								(7.1)			g	
MN-54	*2.10E-03*	U	3.23E-02	3.23E-02	5.77E-02	pCi/g		*0.04*	4/18/05 01:03 p		326.6	GER4$1
							6.50E-01	*0.13*			g	
NB-94	*-2.28E-03*	U	3.01E-02	3.01E-02	5.32E-02	pCi/g		*-0.04*	4/18/05 01:03 p		326.6	GER4$1
							2.50E-01	*-0.15*			g	
PB-212	*3.56E-01*		1.16E-01	1.16E-01	1.09E-01	pCi/g		*(3.3)*	4/18/05 01:03 p		326.6	GER4$1
								(6.2)			g	
PB-214	*3.78E+00*		5.62E-01	5.62E-01	1.23E-01	pCi/g		*(30.7)*	4/18/05 01:03 p		326.6	GER4$1
								(13.5)			g	
RA-226	*3.55E+00*		4.77E-01	4.77E-01	1.09E-01	pCi/g		*(32.5)*	4/18/05 01:03 p		326.6	GER4$1
								(14.9)			g	
TL-208	*1.28E-01*	U	6.51E-02	6.51E-02	8.19E-02	pCi/g		*(1.6)*	4/18/05 01:03 p		326.6	GER4$1
								(3.9)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/11/2005 10:10:00 AM
Lot-Sample No.:	J5D150180-37	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-030-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/11/2005 1:40:00 PM
Lot-Sample No.:	J5D150180-38	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-031-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FTX1AD		Report DB ID: 9G8FTX10					
STRONTIUM	*7.24E-02*		1.03E-02	2.18E-02	1.43E-02	pCi/g	89%	*(5.1)*	4/20/05 05:31 p		25.03	GPC27A
						6.87E-03	5.00E-02	*(6.6)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FTX1AC		Report DB ID: 9G8FTX10					
H-3	*9.93E-03*	U	1.38E-02	1.48E-02	3.31E-02	pCi/g	100%	*0.3*	4/21/05 03:09 a		100.0	LSC3
						1.52E-02	1.50E+01	*(1.3)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FTX1AA		Report DB ID: 9G8FTX10					
AC-228	*2.09E-01*		8.34E-02	8.34E-02	6.79E-02	pCi/g		*(3.1)*	4/18/05 11:21 a		58.2	GER12$1
								(5.)			g	
AG-108M	*3.67E-04*	U	8.23E-03	8.23E-03	1.40E-02	pCi/g		*0.03*	4/18/05 11:21 a		58.2	GER12$1
								0.09			g	
AM-241	*2.10E-02*	U	2.26E-02	2.26E-02	3.91E-02	pCi/g		*0.54*	4/18/05 11:21 a		58.2	GER12$1
								(1.9)			g	
BI-212	*6.58E-02*	U	1.52E-01	1.52E-01	2.62E-01	pCi/g		*0.25*	4/18/05 11:21 a		58.2	GER12$1
								0.86			g	
BI-214	*1.81E-01*	U	5.25E-02	5.25E-02	5.64E-02	pCi/g		*(3.2)*	4/18/05 11:21 a		58.2	GER12$1
								(6.9)			g	
CO-60	*-7.86E-03*	U	1.32E-02	1.32E-02	2.18E-02	pCi/g		*-0.36*	4/18/05 11:21 a		58.2	GER12$1
							1.50E-01	*-(1.2)*			g	
CS-134	*1.66E-02*	U	1.21E-02	1.21E-02	2.19E-02	pCi/g		*0.76*	4/18/05 11:21 a		58.2	GER12$1
							1.80E-01	*(2.7)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/11/2005 1:40:00 PM
Lot-Sample No.:	J5D150180-38	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-031-RA-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*4.48E-03*	U	1.12E-02	1.12E-02	1.94E-02	pCi/g		*0.23*	4/18/05 11:21 a		58.2	GER12S1
							3.00E-01	*0.8*			g	
EU-152	*2.08E-02*	U	2.62E-02	2.62E-02	4.44E-02	pCi/g		*0.47*	4/18/05 11:21 a		58.2	GER12S1
							4.00E-01	*(1.6)*			g	
EU-154	*-1.94E-02*	U	3.71E-02	3.71E-02	6.16E-02	pCi/g		*-0.32*	4/18/05 11:21 a		58.2	GER12S1
							3.50E-01	*-(1.)*			g	
EU-155	*1.79E-02*	U	2.05E-02	2.05E-02	3.60E-02	pCi/g		*0.5*	4/18/05 11:21 a		58.2	GER12S1
							1.50E+01	*(1.7)*			g	
K-40	*1.90E+00*		5.60E-01	5.60E-01	2.09E-01	pCi/g		*(9.1)*	4/18/05 11:21 a		58.2	GER12S1
								(6.8)			g	
MN-54	*5.54E-03*	U	1.15E-02	1.15E-02	2.02E-02	pCi/g		*0.27*	4/18/05 11:21 a		58.2	GER12S1
							6.50E-01	*0.96*			g	
NB-94	*7.62E-03*	U	1.09E-02	1.09E-02	1.93E-02	pCi/g		*0.39*	4/18/05 11:21 a		58.2	GER12S1
							2.50E-01	*(1.4)*			g	
PB-212	*1.53E-01*		3.34E-02	3.34E-02	2.54E-02	pCi/g		*(6.)*	4/18/05 11:21 a		58.2	GER12S1
								(9.2)			g	
PB-214	*1.34E-01*		5.23E-02	5.23E-02	3.20E-02	pCi/g		*(4.2)*	4/18/05 11:21 a		58.2	GER12S1
								(5.1)			g	
RA-226	*1.81E-01*		5.25E-02	5.25E-02	3.59E-02	pCi/g		*(5.)*	4/18/05 11:21 a		58.2	GER12S1
								(6.9)			g	
TL-208	*5.23E-02*	U	1.85E-02	1.85E-02	2.31E-02	pCi/g		*(2.3)*	4/18/05 11:21 a		58.2	GER12S1
								(5.7)			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/11/2005 1:40:00 PM
Lot-Sample No.:	J5D150180-38	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-031-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/11/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-39	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-032-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FT01AD		Report DB ID:	9G8FT010				
STRONTIUM	*1.86E-03*	U	7.51E-03	7.53E-03	1.51E-02	pCi/g	81%	*0.12*	4/20/05 05:31 p		25.06	GPC27B
						7.28E-03	5.00E-02	*0.49*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FT01AC		Report DB ID:	9G8FT010				
H-3	*2.34E-02*	U	1.47E-02	1.56E-02	3.27E-02	pCi/g	100%	*0.72*	4/21/05 03:51 a		100.3	LSC3
						1.51E-02	1.50E+01	*(3.)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FT01AA		Report DB ID:	9G8FT010				
AC-228	*1.25E-01*	U	9.26E-02	9.26E-02	1.92E-01	pCi/g		*0.65*	4/18/05 01:03 p		378.4	GER7S1
								(2.7)			g	
AG-108M	*-4.93E-04*	U	1.62E-02	1.62E-02	2.88E-02	pCi/g		*-0.02*	4/18/05 01:03 p		378.4	GER7S1
								-0.06			g	
AM-241	*2.31E-03*	U	5.72E-02	5.72E-02	9.92E-02	pCi/g		*0.02*	4/18/05 01:03 p		378.4	GER7S1
								0.08			g	
BI-212	*1.94E-01*	U	3.01E-01	3.01E-01	5.84E-01	pCi/g		*0.33*	4/18/05 01:03 p		378.4	GER7S1
								(1.3)			g	
BI-214	*2.08E-01*	U	8.40E-02	8.40E-02	1.30E-01	pCi/g		*(1.6)*	4/18/05 01:03 p		378.4	GER7S1
								(5.)			g	
CO-60	*-7.99E-03*	U	1.85E-02	1.85E-02	3.28E-02	pCi/g		*-0.24*	4/18/05 01:03 p		378.4	GER7S1
							1.50E-01	*-0.87*			g	
CS-134	*1.78E-02*	U	2.05E-02	2.05E-02	4.19E-02	pCi/g		*0.43*	4/18/05 01:03 p		378.4	GER7S1
							1.80E-01	*(1.7)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/11/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-39	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-032-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*3.03E-03*	U	2.12E-02	2.12E-02	3.87E-02	pCi/g		*0.08*	4/18/05 01:03 p		378.4	GER7$1
							3.00E-01	*0.29*			g	
EU-152	*4.58E-02*	U	5.58E-02	5.58E-02	1.06E-01	pCi/g		*0.43*	4/18/05 01:03 p		378.4	GER7$1
							4.00E-01	*(1.6)*			g	
EU-154	*-4.66E-02*	U	5.57E-02	5.57E-02	9.00E-02	pCi/g		*-0.52*	4/18/05 01:03 p		378.4	GER7$1
							3.50E-01	*-(1.7)*			g	
EU-155	*2.84E-02*	U	4.60E-02	4.60E-02	8.47E-02	pCi/g		*0.34*	4/18/05 01:03 p		378.4	GER7$1
							1.50E+01	*(1.2)*			g	
K-40	*2.65E+00*		6.88E-01	6.88E-01	2.46E-01	pCi/g		*(10.8)*	4/18/05 01:03 p		378.4	GER7$1
								(7.7)			g	
MN-54	*1.46E-02*	U	1.92E-02	1.92E-02	3.83E-02	pCi/g		*0.38*	4/18/05 01:03 p		378.4	GER7$1
							6.50E-01	*(1.5)*			g	
NB-94	*-4.35E-03*	U	1.81E-02	1.81E-02	3.22E-02	pCi/g		*-0.14*	4/18/05 01:03 p		378.4	GER7$1
							2.50E-01	*-0.48*			g	
PB-212	*2.54E-01*		7.92E-02	7.92E-02	4.72E-02	pCi/g		*(5.4)*	4/18/05 01:03 p		378.4	GER7$1
								(6.4)			g	
PB-214	*1.95E-01*		9.20E-02	9.20E-02	7.29E-02	pCi/g		*(2.7)*	4/18/05 01:03 p		378.4	GER7$1
								(4.2)			g	
RA-226	*2.08E-01*	U	8.40E-02	8.40E-02	1.30E-01	pCi/g		*(1.6)*	4/18/05 01:03 p		378.4	GER7$1
								(5.)			g	
TL-208	*6.02E-02*		2.91E-02	2.91E-02	3.63E-02	pCi/g		*(1.7)*	4/18/05 01:03 p		378.4	GER7$1
								(4.1)			g	

STL Richland
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/11/2005 3:15:00 PM
Lot-Sample No.:	J5D150180-39	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-032-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/12/2005 10:05:00 AM
Lot-Sample No.:	J5D150180-40	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-033-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FT11AD		Report DB ID: 9G8FT110					
STRONTIUM	*1.58E-02*	U	1.43E-02	1.49E-02	2.73E-02	pCi/g	40%	*0.58*	4/20/05 05:31 p		25.05	GPC27C
						1.31E-02	5.00E-02	*(2.1)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FT11AC		Report DB ID: 9G8FT110					
H-3	*5.15E-02*	J	1.62E-02	1.72E-02	3.22E-02	pCi/g	100%	*(1.6)*	4/21/05 04:34 a		100.6	LSC3
						1.48E-02	1.50E+01	*(6.)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FT11AA		Report DB ID: 9G8FT110					
AC-228	*3.38E+00*		6.10E-01	6.10E-01	1.63E-01	pCi/g		*(20.8)*	4/18/05 01:03 p		378.4	GER11$1
								(11.1)			g	
AG-108M	*9.45E-03*	U	2.49E-02	2.49E-02	4.27E-02	pCi/g		*0.22*	4/18/05 01:03 p		378.4	GER11$1
								0.76			g	
AM-241	*-4.11E-02*	U	2.31E-01	2.31E-01	3.77E-01	pCi/g		*-0.11*	4/18/05 01:03 p		378.4	GER11$1
								-0.36			g	
BI-212	*3.44E+00*	U	9.80E-01	9.80E-01	1.18E+00	pCi/g		*(2.9)*	4/18/05 01:03 p		378.4	GER11$1
								(7.)			g	
BI-214	*2.58E+00*		3.40E-01	3.40E-01	9.05E-02	pCi/g		*(28.5)*	4/18/05 01:03 p		378.4	GER11$1
								(15.1)			g	
CO-60	*6.53E-03*	U	2.84E-02	2.84E-02	5.11E-02	pCi/g		*0.13*	4/18/05 01:03 p		378.4	GER11$1
							1.50E-01	*0.46*			g	
CS-134	*2.19E-01*	U	7.04E-02	7.04E-02	7.58E-02	pCi/g		*(2.9)*	4/18/05 01:03 p		378.4	GER11$1
							1.80E-01	*(6.2)*			g	

STL Richland
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V4.12 A97

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SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/12/2005 10:05:00 AM
Lot-Sample No.:	J5D150180-40	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-033-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	-1.93E-02	U	3.37E-02	3.37E-02	5.75E-02	pCi/g		-0.33	4/18/05 01:03 p		378.4	GER11$1
							3.00E-01	-(1.1)			g	
EU-152	-9.34E-02	U	7.83E-02	7.83E-02	1.26E-01	pCi/g		-0.74	4/18/05 01:03 p		378.4	GER11$1
							4.00E-01	-(2.4)			g	
EU-154	7.28E-02	U	9.11E-02	9.11E-02	1.67E-01	pCi/g		0.44	4/18/05 01:03 p		378.4	GER11$1
							3.50E-01	(1.6)			g	
EU-155	2.60E-01	U	1.16E-01	1.16E-01	2.01E-01	pCi/g		(1.3)	4/18/05 01:03 p		378.4	GER11$1
							1.50E+01	(4.5)			g	
K-40	2.51E+01		4.70E+00	4.70E+00	4.66E-01	pCi/g		(53.8)	4/18/05 01:03 p		378.4	GER11$1
								(10.7)			g	
MN-54	3.94E-02	U	2.97E-02	2.97E-02	5.37E-02	pCi/g		0.73	4/18/05 01:03 p		378.4	GER11$1
							6.50E-01	(2.7)			g	
NB-94	3.19E-04	U	2.58E-02	2.58E-02	4.44E-02	pCi/g		0.01	4/18/05 01:03 p		378.4	GER11$1
							2.50E-01	0.02			g	
PB-212	3.65E+00		5.34E-01	5.34E-01	8.65E-02	pCi/g		(42.2)	4/18/05 01:03 p		378.4	GER11$1
								(13.7)			g	
PB-214	3.10E+00		4.42E-01	4.42E-01	9.71E-02	pCi/g		(31.9)	4/18/05 01:03 p		378.4	GER11$1
								(14.)			g	
RA-226	2.58E+00		3.40E-01	3.40E-01	9.05E-02	pCi/g		(28.5)	4/18/05 01:03 p		378.4	GER11$1
								(15.1)			g	
TL-208	1.08E+00		1.52E-01	1.52E-01	5.02E-02	pCi/g		(21.5)	4/18/05 01:03 p		378.4	GER11$1
								(14.2)			g	

STL Richland
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SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/12/2005 10:05:00 AM
Lot-Sample No.:	J5D150180-40	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-033-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/12/2005 1:25:00 PM
Lot-Sample No.:	J5D150180-41	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-034-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FT21AD		Report DB ID: 9G8FT210					
STRONTIUM	*5.94E-03*	U	1.05E-02	1.06E-02	2.08E-02	pCi/g	58%	*0.29*	4/20/05 05:31 p		25.04	GPC27D
						1.00E-02	5.00E-02	*(1.1)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FT21AC		Report DB ID: 9G8FT210					
H-3	*8.67E-03*	U	1.36E-02	1.46E-02	3.26E-02	pCi/g	100%	*0.27*	4/21/05 05:16 a		100.2	LSC3
						1.50E-02	1.50E+01	*(1.2)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FT21AA		Report DB ID: 9G8FT210					
AC-228	*5.38E-01*		1.67E-01	1.67E-01	1.21E-01	pCi/g		*(4.5)*	4/18/05 02:54 p		347.7	GER4$1
								(6.4)			g	
AG-108M	*-1.53E-02*	U	1.92E-02	1.92E-02	3.13E-02	pCi/g		*-0.49*	4/18/05 02:54 p		347.7	GER4$1
								-(1.6)			g	
AM-241	*-6.37E-03*	U	1.27E-01	1.27E-01	2.23E-01	pCi/g		*-0.03*	4/18/05 02:54 p		347.7	GER4$1
								-0.1			g	
BI-212	*2.75E-01*	U	3.61E-01	3.61E-01	6.84E-01	pCi/g		*0.4*	4/18/05 02:54 p		347.7	GER4$1
								(1.5)			g	
BI-214	*4.75E-01*	U	1.11E-01	1.11E-01	1.77E-01	pCi/g		*(2.7)*	4/18/05 02:54 p		347.7	GER4$1
								(8.6)			g	
CO-60	*8.14E-03*	U	1.94E-02	1.94E-02	4.10E-02	pCi/g		*0.2*	4/18/05 02:54 p		347.7	GER4$1
							1.50E-01	*0.84*			g	
CS-134	*3.51E-02*	U	2.82E-02	2.82E-02	5.66E-02	pCi/g		*0.62*	4/18/05 02:54 p		347.7	GER4$1
							1.80E-01	*(2.5)*			g	

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/12/2005 1:25:00 PM
Lot-Sample No.:	J5D150180-41	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-034-RA-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-3.40E-03*	U	2.45E-02	2.45E-02	4.32E-02	pCi/g		*-0.08*	4/18/05 02:54 p		347.7	GER4$1
							3.00E-01	*-0.28*			g	
EU-152	*7.81E-03*	U	6.23E-02	6.23E-02	1.09E-01	pCi/g		*0.07*	4/18/05 02:54 p		347.7	GER4$1
							4.00E-01	*0.25*			g	
EU-154	*5.20E-02*	U	7.50E-02	7.50E-02	1.53E-01	pCi/g		*0.34*	4/18/05 02:54 p		347.7	GER4$1
							3.50E-01	*(1.4)*			g	
EU-155	*7.78E-02*	U	6.67E-02	6.67E-02	1.21E-01	pCi/g		*0.64*	4/18/05 02:54 p		347.7	GER4$1
							1.50E+01	*(2.3)*			g	
K-40	*3.74E+00*		8.70E-01	8.70E-01	3.80E-01	pCi/g		*(9.8)*	4/18/05 02:54 p		347.7	GER4$1
								(8.6)			g	
MN-54	*1.43E-02*	U	2.36E-02	2.36E-02	4.54E-02	pCi/g		*0.31*	4/18/05 02:54 p		347.7	GER4$1
							6.50E-01	*(1.2)*			g	
NB-94	*1.15E-02*	U	2.12E-02	2.12E-02	4.13E-02	pCi/g		*0.28*	4/18/05 02:54 p		347.7	GER4$1
							2.50E-01	*(1.1)*			g	
PB-212	*4.51E-01*		9.59E-02	9.59E-02	5.76E-02	pCi/g		*(7.8)*	4/18/05 02:54 p		347.7	GER4$1
								(9.4)			g	
PB-214	*5.57E-01*		1.21E-01	1.21E-01	7.20E-02	pCi/g		*(7.7)*	4/18/05 02:54 p		347.7	GER4$1
								(9.2)			g	
RA-226	*4.75E-01*		1.11E-01	1.11E-01	7.39E-02	pCi/g		*(6.4)*	4/18/05 02:54 p		347.7	GER4$1
								(8.6)			g	
TL-208	*1.78E-01*		5.16E-02	5.16E-02	3.48E-02	pCi/g		*(5.1)*	4/18/05 02:54 p		347.7	GER4$1
								(6.9)			g	

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/12/2005 1:25:00 PM
Lot-Sample No.:	J5D150180-41	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-034-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/12/2005 8:19:00 AM
Lot-Sample No.:	J5D150180-43	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-039-RA	COC No.:		Matrix:	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FT61AD		Report DB ID:	9G8FT610				
STRONTIUM	*2.11E-01*		1.56E-02	5.77E-02	1.54E-02	pCi/g	80%	*(13.7)*	4/20/05 05:31 p		25.02	GPC28B
						7.41E-03	5.00E-02	*(7.3)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FT61AC		Report DB ID:	9G8FT610				
H-3	*7.26E-01*	J	4.40E-02	5.44E-02	4.00E-02	pCi/g	100%	*(18.2)*	4/21/05 06:41 a		100.8	LSC3
						1.84E-02	1.50E+01	*(26.7)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FT61AA		Report DB ID:	9G8FT610				
AC-228	*5.61E-01*		1.72E-01	1.72E-01	1.30E-01	pCi/g		*(4.3)*	4/18/05 02:55 p		389.0	GER11$1
								(6.5)			g	
AG-108M	*9.29E-03*	U	1.95E-02	1.95E-02	3.41E-02	pCi/g		*0.27*	4/18/05 02:55 p		389.0	GER11$1
								0.95			g	
AM-241	*1.68E-02*	U	1.32E-01	1.32E-01	2.21E-01	pCi/g		*0.08*	4/18/05 02:55 p		389.0	GER11$1
								0.26			g	
BI-212	*6.50E-01*	U	3.08E-01	3.08E-01	5.93E-01	pCi/g		*(1.1)*	4/18/05 02:55 p		389.0	GER11$1
								(4.2)			g	
BI-214	*5.38E-01*		1.02E-01	1.02E-01	6.34E-02	pCi/g		*(8.5)*	4/18/05 02:55 p		389.0	GER11$1
								(10.5)			g	
CO-60	*4.53E-01*		1.03E-01	1.03E-01	3.06E-02	pCi/g		*(14.8)*	4/18/05 02:55 p		389.0	GER11$1
							1.50E-01	*(8.8)*			g	
CS-134	*4.37E-02*	U	2.31E-02	2.31E-02	4.47E-02	pCi/g		*0.98*	4/18/05 02:55 p		389.0	GER11$1
							1.80E-01	*(3.8)*			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/12/2005 8:19:00 AM
Lot-Sample No.:	J5D150180-43	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-039-RA	COC No.:		Matrix:	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*2.24E+00*		2.80E-01	2.80E-01	3.70E-02	pCi/g		*(60.5)*	4/18/05 02:55 p		389.0	GER11S1
							3.00E-01	*(16.)*			g	
EU-152	*3.48E-02*	U	5.73E-02	5.73E-02	1.02E-01	pCi/g		*0.34*	4/18/05 02:55 p		389.0	GER11S1
							4.00E-01	*(1.2)*			g	
EU-154	*3.40E-02*	U	6.02E-02	6.02E-02	1.14E-01	pCi/g		*0.3*	4/18/05 02:55 p		389.0	GER11S1
							3.50E-01	*(1.1)*			g	
EU-155	*6.15E-02*	U	6.72E-02	6.72E-02	1.19E-01	pCi/g		*0.52*	4/18/05 02:55 p		389.0	GER11S1
							1.50E+01	*(1.8)*			g	
K-40	*9.12E+00*		1.80E+00	1.80E+00	1.89E-01	pCi/g		*(48.3)*	4/18/05 02:55 p		389.0	GER11S1
								(10.1)			g	
MN-54	*8.88E-03*	U	1.74E-02	1.74E-02	3.20E-02	pCi/g		*0.28*	4/18/05 02:55 p		389.0	GER11S1
							6.50E-01	*(1.)*			g	
NB-94	*4.20E-03*	U	1.94E-02	1.94E-02	3.45E-02	pCi/g		*0.12*	4/18/05 02:55 p		389.0	GER11S1
							2.50E-01	*0.43*			g	
PB-212	*5.77E-01*		1.09E-01	1.09E-01	6.03E-02	pCi/g		*(9.6)*	4/18/05 02:55 p		389.0	GER11S1
								(10.6)			g	
PB-214	*5.83E-01*		1.19E-01	1.19E-01	7.30E-02	pCi/g		*(8.)*	4/18/05 02:55 p		389.0	GER11S1
								(9.8)			g	
RA-226	*5.38E-01*		1.02E-01	1.02E-01	6.34E-02	pCi/g		*(8.5)*	4/18/05 02:55 p		389.0	GER11S1
								(10.5)			g	
TL-208	*1.94E-01*		4.44E-02	4.44E-02	3.35E-02	pCi/g		*(5.8)*	4/18/05 02:55 p		389.0	GER11S1
								(8.7)			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/12/2005 8:19:00 AM
Lot-Sample No.:	J5D150180-43	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-039-RA	COC No. :		Matrix:	SOIL

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/13/2005 10:12:00 AM
Lot-Sample No.:	J5D150180-42	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-040-RA-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order:	G8FT41AD		Report DB ID:	9G8FT410				
STRONTIUM	*3.31E+00*		5.65E-02	8.63E-01	1.73E-02	pCi/g	76%	*(191.2)*	4/20/05 05:31 p		25.03	GPC28A
						8.33E-03	5.00E-02	*(7.7)*			G	
Batch: 5105287	RICHRC5037			Work Order:	G8FT41AC		Report DB ID:	9G8FT410				
H-3	*5.59E-01*	J	3.60E-02	4.37E-02	3.44E-02	pCi/g	100%	*(16.3)*	4/21/05 05:58 a		100.3	LSC3
						1.58E-02	1.50E+01	*(25.6)*			G	
Batch: 5105297	RICHRC5017			Work Order:	G8FT41AA		Report DB ID:	9G8FT410				
AC-228	*4.81E-01*		2.08E-01	2.08E-01	1.95E-01	pCi/g		*(2.5)*	4/18/05 02:54 p		229.9	GER7$1
								(4.6)			g	
AG-108M	*-1.31E-03*	U	2.66E-02	2.66E-02	4.72E-02	pCi/g		*-0.03*	4/18/05 02:54 p		229.9	GER7$1
								-0.1			g	
AM-241	*1.02E-02*	U	1.12E-01	1.12E-01	1.93E-01	pCi/g		*0.05*	4/18/05 02:54 p		229.9	GER7$1
								0.18			g	
BI-212	*5.82E-01*	U	4.51E-01	4.51E-01	9.38E-01	pCi/g		*0.62*	4/18/05 02:54 p		229.9	GER7$1
								(2.6)			g	
BI-214	*4.74E-01*	U	1.38E-01	1.38E-01	2.34E-01	pCi/g		*(2.)*	4/18/05 02:54 p		229.9	GER7$1
								(6.9)			g	
CO-60	*3.10E-02*	U	3.80E-02	3.80E-02	7.99E-02	pCi/g		*0.39*	4/18/05 02:54 p		229.9	GER7$1
							1.50E-01	*(1.6)*			g	
CS-134	*2.39E-02*	U	3.85E-02	3.85E-02	7.51E-02	pCi/g		*0.32*	4/18/05 02:54 p		229.9	GER7$1
							1.80E-01	*(1.2)*			g	

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/13/2005 10:12:00 AM
Lot-Sample No.:	J5D150180-42	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-040-RA-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	*-3.15E-02*	U	3.69E-02	3.69E-02	5.89E-02	pCi/g		*-0.53*	4/18/05 02:54 p		229.9	GER7S1
							3.00E-01	*-(1.7)*			g	
EU-152	*-4.75E-02*	U	8.24E-02	8.24E-02	1.37E-01	pCi/g		*-0.35*	4/18/05 02:54 p		229.9	GER7S1
							4.00E-01	*-(1.2)*			g	
EU-154	*2.20E-02*	U	1.12E-01	1.12E-01	2.16E-01	pCi/g		*0.1*	4/18/05 02:54 p		229.9	GER7S1
							3.50E-01	*0.39*			g	
EU-155	*-1.58E-02*	U	9.09E-02	9.09E-02	1.58E-01	pCi/g		*-0.1*	4/18/05 02:54 p		229.9	GER7S1
							1.50E+01	*-0.35*			g	
K-40	*8.13E+00*		1.60E+00	1.60E+00	5.21E-01	pCi/g		*(15.6)*	4/18/05 02:54 p		229.9	GER7S1
								(10.2)			g	
MN-54	*-1.16E-02*	U	3.28E-02	3.28E-02	5.72E-02	pCi/g		*-0.2*	4/18/05 02:54 p		229.9	GER7S1
							6.50E-01	*-0.71*			g	
NB-94	*1.13E-02*	U	3.59E-02	3.59E-02	6.72E-02	pCi/g		*0.17*	4/18/05 02:54 p		229.9	GER7S1
							2.50E-01	*0.63*			g	
PB-212	*4.98E-01*		1.27E-01	1.27E-01	1.27E-01	pCi/g		*(3.9)*	4/18/05 02:54 p		229.9	GER7S1
								(7.8)			g	
PB-214	*5.99E-01*		1.61E-01	1.61E-01	1.19E-01	pCi/g		*(5.)*	4/18/05 02:54 p		229.9	GER7S1
								(7.4)			g	
RA-226	*4.74E-01*	U	1.38E-01	1.38E-01	2.34E-01	pCi/g		*(2.)*	4/18/05 02:54 p		229.9	GER7S1
								(6.9)			g	
TL-208	*1.57E-01*		6.15E-02	6.15E-02	6.52E-02	pCi/g		*(2.4)*	4/18/05 02:54 p		229.9	GER7S1
								(5.1)			g	

STL Richland
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V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/13/2005 10:12:00 AM
Lot-Sample No.:	J5D150180-42	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-040-RA-01	COC No.:		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland
rptSTLRchSample
V4.12 A97

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FORM I

SAMPLE RESULTS

Date: 21-Apr-05

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/13/2005 10:12:00 AM
Lot-Sample No.:	J5D150180-42	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	9801-0000-040-RA-01	COC No. :		Matrix:	SOLID

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

STL Richland
rptSTLRchSample
V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

STL RICHLAND

FORM II

Date: 21-Apr-05

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-1	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-01 DUP	COC No. :		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105267	RICHRC5006			Work Order: G8FQQ1AF		Report DB ID: G8FQQ1FR			Orig Sa DB ID: 9G8FQQ10			
STRONTIUM	3.25E-02		9.72E-03	1.29E-02	1.66E-02	pCi/g	84%	(2.)	4/20/05 09:53 a		25.03	GPC26B
	2.62E-02		RER2 0.7			1.00E-02		(5.)			G	
Batch: 5105290	RICHRC5017			Work Order: G8FQQ1AH		Report DB ID: G8FQQ1HR			Orig Sa DB ID: 9G8FQQ10			
AC-228	4.47E-01	U	1.77E-01	1.77E-01	3.46E-01	pCi/g		(1.3)	4/18/05 06:04 a		273.4	GER1$1
	4.10E-01	U	RER2 0.3					(5.1)			g	
AG-108M	-1.48E-02	U	2.85E-02	2.85E-02	4.83E-02	pCi/g		-0.31	4/18/05 06:04 a		273.4	GER1$1
	1.60E-02	U	RER2 1.6					-(1.)			g	
AM-241	-2.48E-01	U	1.41E-01	1.41E-01	2.13E-01	pCi/g		-(1.2)	4/18/05 06:04 a		273.4	GER1S1
	1.78E-02	U	RER2 3.2					-(3.5)			g	
BI-212	2.85E-01	U	4.58E-01	4.58E-01	8.55E-01	pCi/g		0.33	4/18/05 06:04 a		273.4	GER1$1
	5.33E-01	U	RER2 0.8					(1.2)			g	
BI-214	4.65E-01	U	1.23E-01	1.23E-01	2.02E-01	pCi/g		(2.3)	4/18/05 06:04 a		273.4	GER1$1
	3.21E-01	U	RER2 1.4					(7.5)			g	
CO-60	1.93E-02	U	3.36E-02	3.36E-02	6.64E-02	pCi/g		0.29	4/18/05 06:04 a		273.4	GER1S1
	1.89E-02	U	RER2 0.0			3.00E+00		(1.1)			g	
CS-134	3.08E-02	U	3.76E-02	3.76E-02	7.11E-02	pCi/g		0.43	4/18/05 06:04 a		273.4	GER1$1
	2.99E-03	U	RER2 1.1			1.00E+01		(1.6)			g	
CS-137	1.50E-02	U	3.29E-02	3.29E-02	6.08E-02	pCi/g		0.25	4/18/05 06:04 a		273.4	GER1S1
	1.15E-02	U	RER2 0.2			2.00E+01		0.91			g	
EU-152	-2.61E-01	U	1.36E-01	1.36E-01	1.56E-01	pCi/g		-(1.7)	4/18/05 06:04 a		273.4	GER1S1
	-6.49E-02	U	RER2 2.4			9.00E+00		-(3.8)			g	

STL Richland
rptSTLRchDupV4.1
2 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 21-Apr-05

DUPLICATE RESULTS

Lab Name: STL Richland
SDG: 28704
Collection Date: 4/7/2005 1:50:00 PM
Lot-Sample No.: J5D150180-1
Report No. : 28635
Received Date: 4/15/2005 9:00:00 AM
Client Sample ID: 3107-0000-194-C-1C-01 DUP
COC No. :
Matrix: SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
EU-154	-4.81E-02	U	1.13E-01	1.13E-01	1.93E-01	pCi/g		-0.25	4/18/05 06:04 a		273.4	GER1$1
	-6.34E-02	U	RER2 0.2			7.00E+00		-0.85			g	
EU-155	3.23E-02	U	9.83E-02	9.83E-02	1.71E-01	pCi/g		0.19	4/18/05 06:04 a		273.4	GER1$1
	7.20E-02	U	RER2 0.7			3.00E+02		0.66			g	
K-40	7.12E+00		1.40E+00	1.40E+00	5.05E-01	pCi/g		(14.1)	4/18/05 06:04 a		273.4	GER1$1
	7.92E+00		RER2 0.8					(10.2)			g	
MN-54	-4.06E-03	U	3.06E-02	3.06E-02	5.45E-02	pCi/g		-0.07	4/18/05 06:04 a		273.4	GER1$1
	2.50E-03	U	RER2 0.3			2.00E+00		-0.27			g	
NB-94	1.24E-02	U	2.74E-02	2.74E-02	5.24E-02	pCi/g		0.24	4/18/05 06:04 a		273.4	GER1$1
	-8.07E-03	U	RER2 1.1			3.00E-01		0.91			g	
PB-212	6.00E-01		1.42E-01	1.42E-01	9.07E-02	pCi/g		(6.6)	4/18/05 06:04 a		273.4	GER1$1
	3.97E-01		RER2 2.3					(8.4)			g	
PB-214	2.48E-01		1.04E-01	1.04E-01	1.03E-01	pCi/g		(2.4)	4/18/05 06:04 a		273.4	GER1$1
	3.17E-01		RER2 0.7					(4.7)			g	
RA-226	4.65E-01	U	1.23E-01	1.23E-01	2.02E-01	pCi/g		(2.3)	4/18/05 06:04 a		273.4	GER1$1
	3.21E-01	U	RER2 1.4					(7.5)			g	
TL-208	1.17E-01	U	6.76E-02	6.76E-02	8.84E-02	pCi/g		(1.3)	4/18/05 06:04 a		273.4	GER1$1
	1.75E-01	U	RER2 1.3					(3.5)			g	

No. of Results: 19 Comments:

STL Richland
rptSTLRchDupV4.1
2 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 21-Apr-05

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/7/2005 1:50:00 PM
Lot-Sample No.:	J5D150180-4	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-194-C-1C-04 DUP	COC No. :		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105278	RICHRC5037			Work Order:	G8FQ11AF	Report DB ID:	G8FQ11FR		Orig Sa DB ID:	9G8FQ110		
H-3	1.12E+01		1.54E-01	4.92E-01	3.83E-02	pCi/g	100%	(292.8)	4/18/05 10:47 p		100.4	LSC3
	1.12E+01		RER2 0.0			3.00E+00		(45.6)			G	

No. of Results: 1 Comments:

STL Richland RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
rptSTLRchDupV4.1 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
2 A97

FORM II

Date: 21-Apr-05

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 10:15:00 AM
Lot-Sample No.:	J5D150180-16	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-2C-04 DUP	COC No. :		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105292	RICHRC5017			Work Order: G8FRQ1AH		Report DB ID: G8FRQ1HR			Orig Sa DB ID: 9G8FRQ10			
AC-228	5.84E-01	U	2.27E-01	2.27E-01	3.81E-01	pCi/g		(1.5)	4/16/05 10:10 a		255.3	GER4$1
	7.46E-01	U	RER2 1.1					(5.1)			g	
AG-108M	-4.47E-03	U	2.69E-02	2.69E-02	4.65E-02	pCi/g		-0.1	4/16/05 10:10 a		255.3	GER4$1
	1.13E-02	U	RER2 1.0					-0.33			g	
AM-241	-6.59E-02	U	1.60E-01	1.60E-01	2.62E-01	pCi/g		-0.25	4/16/05 10:10 a		255.3	GER4$1
	-3.08E-02	U	RER2 0.4					-0.82			g	
BI-212	1.26E+00	U	5.35E-01	5.35E-01	1.02E+00	pCi/g		(1.2)	4/16/05 10:10 a		255.3	GER4$1
	1.12E+00	U	RER2 0.3					(4.7)			g	
BI-214	5.52E-01	U	1.62E-01	1.62E-01	2.44E-01	pCi/g		(2.3)	4/16/05 10:10 a		255.3	GER4$1
	5.45E-01		RER2 0.1					(6.8)			g	
CO-60	3.82E-03	U	3.58E-02	3.58E-02	6.85E-02	pCi/g		0.06	4/16/05 10:10 a		255.3	GER4$1
	1.20E-04	U	RER2 0.2			3.00E+00		0.21			g	
CS-134	8.36E-02	U	3.48E-02	3.48E-02	7.97E-02	pCi/g		(1.)	4/16/05 10:10 a		255.3	GER4$1
	4.48E-02	U	RER2 1.7			1.00E+01		(4.8)			g	
CS-137	-1.53E-02	U	3.35E-02	3.35E-02	5.63E-02	pCi/g		-0.27	4/16/05 10:10 a		255.3	GER4$1
	-1.35E-03	U	RER2 0.7			2.00E+01		-0.92			g	
EU-152	-1.78E-02	U	7.92E-02	7.92E-02	1.38E-01	pCi/g		-0.13	4/16/05 10:10 a		255.3	GER4$1
	2.07E-02	U	RER2 0.8			9.00E+00		-0.45			g	
EU-154	6.78E-02	U	1.11E-01	1.11E-01	2.22E-01	pCi/g		0.31	4/16/05 10:10 a		255.3	GER4$1
	-1.01E-02	U	RER2 1.1			7.00E+00		(1.2)			g	
EU-155	1.14E-02	U	9.39E-02	9.39E-02	1.65E-01	pCi/g		0.07	4/16/05 10:10 a		255.3	GER4$1
	6.13E-03	U	RER2 0.1			3.00E+02		0.24			g	

STL Richland
rptSTLRchDupV4.1
2 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on Instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 21-Apr-05

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 10:15:00 AM
Lot-Sample No.:	J5D150180-16	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-196-C-2C-04 DUP	COC No. :		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
K-40	7.72E+00		1.51E+00	1.51E+00	4.50E-01	pCi/g		(17.1)	4/16/05 10:10 a		255.3	GER4$1
	9.10E+00		RER2 1.3					(10.2)			g	
MN-54	2.18E-02	U	2.89E-02	2.89E-02	5.77E-02	pCi/g		0.38	4/16/05 10:10 a		255.3	GER4$1
	-7.91E-03	U	RER2 1.6			2.00E+00		(1.5)			g	
NB-94	-1.65E-02	U	2.91E-02	2.91E-02	4.87E-02	pCi/g		-0.34	4/16/05 10:10 a		255.3	GER4$1
	1.62E-02	U	RER2 1.8			3.00E-01		-(1.1)			g	
PB-212	5.13E-01		1.37E-01	1.37E-01	1.13E-01	pCi/g		(4.6)	4/16/05 10:10 a		255.3	GER4$1
	6.34E-01		RER2 1.3					(7.5)			g	
PB-214	5.66E-01		1.42E-01	1.42E-01	1.06E-01	pCi/g		(5.3)	4/16/05 10:10 a		255.3	GER4$1
	5.66E-01		RER2 0.0					(8.)			g	
RA-226	5.52E-01	U	1.62E-01	1.62E-01	2.44E-01	pCi/g		(2.3)	4/16/05 10:10 a		255.3	GER4$1
	5.45E-01		RER2 0.1					(6.8)			g	
TL-208	2.04E-01		6.87E-02	6.87E-02	5.42E-02	pCi/g		(3.8)	4/16/05 10:10 a		255.3	GER4$1
	1.63E-01		RER2 1.0					(5.9)			g	

No. of Results: 18 Comments:

STL Richland RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
rptSTLRchDupV4.1 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
2 A97 U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

Date: 21-Apr-05

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-21	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-03 DUP	COC No. :		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order: G8FRX1AF		Report DB ID: G8FRX1FR			Orig Sa DB ID: 9G8FRX10			
STRONTIUM	1.97E-01		1.36E-02	5.35E-02	1.28E-02	pCi/g	100%	(15.4)	4/20/05 01:52 p		25.08	GPC27C
	7.55E-02		RER2 4.2			1.00E-02		(7.4)			G	

No. of Results: 1 Comments:

STL Richland RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT ROA.

rptSTLRchDupV4.1 MDC|MDA,Lc - Detection, Decision Level based on Instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

2 A97

FORM II

Date: 21-Apr-05

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/6/2005 2:50:00 PM
Lot-Sample No.:	J5D150180-23	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-197-C-1C-05 DUP	COC No. :		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105284	RICHRC5037			Work Order:	G8FR31AF	Report DB ID:	G8FR31FR		Orig Sa DB ID:	9G8FR310		
H-3	4.87E+00		7.97E-02	2.22E-01	2.42E-02	pCi/g	100%	(200.9)	4/20/05 03:41 a		100.4	LSC8
	3.71E+00		RER2 8.2			3.00E+00		(43.9)			G	

No. of Results: 1 Comments:

STL Richland RER2 - Replicate Error Ratio = (S-D)/|sqrt(sq(TPUs)+sq(TPUd))| as defined by ICPT BOA.

rptSTLRchDupV4.1 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

2 A97

FORM II

Date: 21-Apr-05

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-31	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-01 DUP	COC No.:		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105275	RICHRC5006			Work Order: G8FTG1AF		Report DB ID: G8FTG1FR			Orig Sa DB ID: 9G8FTG10			
STRONTIUM	4.17E-01		2.48E-02	1.14E-01	2.17E-02	pCi/g	54%	(19.2)	4/20/05 05:31 p		24.66	GPC32B
	5.71E-01		RER2 1.6			1.00E-02		(7.3)			G	
Batch: 5105287	RICHRC5037			Work Order: G8FTG1AG		Report DB ID: G8FTG1GR			Orig Sa DB ID: 9G8FTG10			
H-3	1.84E+00	J	7.12E-02	1.05E-01	4.49E-02	pCi/g	100%	(40.9)	4/20/05 10:12 p		96.9	LSC3
	1.77E+00	J	RER2 0.8			3.00E+00		(34.9)			G	
Batch: 5105297	RICHRC5017			Work Order: G8FTG1AH		Report DB ID: G8FTG1HR			Orig Sa DB ID: 9G8FTG10			
AC-228	3.99E-01		1.81E-01	1.81E-01	1.51E-01	pCi/g		(2.6)	4/18/05 11:20 a		47.1	GER1$1
	6.54E-01		RER2 2.1					(4.4)			g	
AG-108M	3.72E-03	U	1.95E-02	1.95E-02	3.32E-02	pCi/g		0.11	4/18/05 11:20 a		47.1	GER1$1
	1.25E-02	U	RER2 0.7					0.38			g	
AM-241	-1.51E-01	U	7.99E-02	7.99E-02	1.24E-01	pCi/g		-(1.2)	4/18/05 11:20 a		47.1	GER1$1
	1.64E-02	U	RER2 4.0					-(3.8)			g	
BI-212	4.00E-01	U	3.69E-01	3.69E-01	6.38E-01	pCi/g		0.63	4/18/05 11:20 a		47.1	GER1$1
	5.44E-01	U	RER2 0.6					(2.2)			g	
BI-214	3.74E-01	U	1.09E-01	1.09E-01	1.22E-01	pCi/g		(3.1)	4/18/05 11:20 a		47.1	GER1$1
	3.99E-01		RER2 0.3					(6.9)			g	
CO-60	1.44E-03	U	2.67E-02	2.67E-02	4.56E-02	pCi/g		0.03	4/18/05 11:20 a		47.1	GER1$1
	-3.54E-03	U	RER2 0.3			3.00E+00		0.11			g	
CS-134	1.19E-02	U	2.87E-02	2.87E-02	4.90E-02	pCi/g		0.24	4/18/05 11:20 a		47.1	GER1$1
	2.69E-02	U	RER2 0.9			1.00E+01		0.83			g	

STL Richland
rptSTLRchDupV4.1
2 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on Instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

STL RICHLAND

FORM II

Date: 21-Apr-05

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-31	Report No. :	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-01 DUP	COC No. :		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	2.30E-02	U	2.57E-02	2.57E-02	4.48E-02	pCi/g		0.51	4/18/05 11:20 a		47.1	GER1S1
	2.63E-03	U	RER2 1.3			2.00E+01		(1.8)			g	
EU-152	3.44E-02	U	9.29E-02	9.29E-02	1.07E-01	pCi/g		0.32	4/18/05 11:20 a		47.1	GER1S1
	1.98E-02	U	RER2 0.3			9.00E+00		0.74			g	
EU-154	-5.16E-02	U	7.88E-02	7.88E-02	1.29E-01	pCi/g		-0.4	4/18/05 11:20 a		47.1	GER1S1
	-1.81E-02	U	RER2 0.7			7.00E+00		-(1.3)			g	
EU-155	6.63E-02	U	5.57E-02	5.57E-02	9.43E-02	pCi/g		0.7	4/18/05 11:20 a		47.1	GER1S1
	5.06E-03	U	RER2 1.9			3.00E+02		(2.4)			g	
K-40	7.51E+00		1.50E+00	1.50E+00	3.63E-01	pCi/g		(20.7)	4/18/05 11:20 a		47.1	GER1S1
	7.24E+00		RER2 0.3					(10.)			g	
MN-54	5.00E-03	U	2.56E-02	2.56E-02	4.40E-02	pCi/g		0.11	4/18/05 11:20 a		47.1	GER1S1
	1.31E-02	U	RER2 0.5			2.00E+00		0.39			g	
NB-94	6.73E-04	U	2.38E-02	2.38E-02	4.07E-02	pCi/g		0.02	4/18/05 11:20 a		47.1	GER1S1
	-1.88E-04	U	RER2 0.1			3.00E-01		0.06			g	
PB-212	5.64E-01		1.15E-01	1.15E-01	5.47E-02	pCi/g		(10.3)	4/18/05 11:20 a		47.1	GER1S1
	3.12E-01		RER2 3.7					(9.8)			g	
PB-214	4.34E-01		1.03E-01	1.03E-01	7.30E-02	pCi/g		(5.9)	4/18/05 11:20 a		47.1	GER1S1
	4.20E-01		RER2 0.2					(8.4)			g	
RA-226	3.74E-01	U	1.09E-01	1.09E-01	1.22E-01	pCi/g		(3.1)	4/18/05 11:20 a		47.1	GER1S1
	3.99E-01		RER2 0.3					(6.9)			g	
TL-208	1.35E-01		3.69E-02	3.69E-02	3.91E-02	pCi/g		(3.4)	4/18/05 11:20 a		47.1	GER1S1
	1.58E-01		RER2 0.9					(7.3)			g	

STL Richland
rptSTLRchDupV4.1
2 A97

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

STL RICHLAND

FORM II

Date: 21-Apr-05

DUPLICATE RESULTS

Lab Name:	STL Richland	SDG:	28704	Collection Date:	4/5/2005 2:00:00 PM
Lot-Sample No.:	J5D150180-31	Report No.:	28635	Received Date:	4/15/2005 9:00:00 AM
Client Sample ID:	3107-0000-199-C-1C-01 DUP	COC No.:		Matrix:	SOLID

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector

No. of Results: 20 Comments:

STL Richland RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

rptSTLRchDupV4.1 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

2 A97

FORM II

BLANK RESULTS

Date: 21-Apr-05

Lab Name: STL Richland

Matrix: SOLID

SDG: 28704

Report No.: 28635

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105278	RICHRC5037			Work Order:	G8GDP1AA		Report DB ID:	G8GDP1AB				
H-3	-3.76E-02	U	1.36E-01	1.46E-01	3.47E-01	pCi/g	100%	-0.11	4/18/05 06:33 p		10.0	LSC3
					1.61E-01	3.00E+00		-0.51			G	
Batch: 5105284	RICHRC5037			Work Order:	G8GFG1AA		Report DB ID:	G8GFG1AB				
H-3	-8.33E-02	U	8.08E-02	8.75E-02	2.17E-01	pCi/g	100%	-0.38	4/19/05 08:47 p		10.0	LSC8
					1.01E-01	3.00E+00		-(1.9)			G	
Batch: 5105287	RICHRC5037			Work Order:	G8GF01AA		Report DB ID:	G8GF01AB				
H-3	-9.29E-02	U	1.24E-01	1.34E-01	3.29E-01	pCi/g	100%	-0.28	4/20/05 08:05 p		10.0	LSC3
					1.52E-01	3.00E+00		-(1.4)			G	
Batch: 5105290	RICHRC5017			Work Order:	G8GGE1AA		Report DB ID:	G8GGE1AB				
AC-228	-1.34E-02	U	8.15E-02	8.15E-02	1.46E-01	pCi/g		-0.09	4/16/05 12:15 p		200.0	GER12S1
								-0.33			g	
AG-108M	-6.03E-03	U	1.43E-02	1.43E-02	2.47E-02	pCi/g		-0.24	4/16/05 12:15 p		200.0	GER12S1
								-0.84			g	
AM-241	-7.00E-03	U	4.73E-02	4.73E-02	8.43E-02	pCi/g		-0.08	4/16/05 12:15 p		200.0	GER12S1
								-0.3			g	
BI-212	6.79E-02	U	3.13E-01	3.13E-01	5.95E-01	pCi/g		0.11	4/16/05 12:15 p		200.0	GER12S1
								0.43			g	
BI-214	-3.98E-02	U	5.64E-02	5.64E-02	9.44E-02	pCi/g		-0.42	4/16/05 12:15 p		200.0	GER12S1
								-(1.4)			g	
CO-60	-1.75E-02	U	2.39E-02	2.39E-02	3.94E-02	pCi/g		-0.45	4/16/05 12:15 p		200.0	GER12S1
						3.00E+00		-(1.5)			g	
CS-134	4.53E-03	U	2.33E-02	2.33E-02	4.45E-02	pCi/g		0.1	4/16/05 12:15 p		200.0	GER12S1
						1.00E+01		0.39			g	

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V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
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FORM II

BLANK RESULTS

Date: 21-Apr-05

Lab Name: STL Richland

Matrix: SOLID

SDG: 28704

Report No.: 28635

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	-1.31E-03	U	2.23E-02	2.23E-02	4.04E-02	pCi/g		-0.03	4/16/05 12:15 p		200.0	GER12S1
						2.00E+01		-0.12			g	
EU-152	-5.06E-03	U	5.26E-02	5.26E-02	9.54E-02	pCi/g		-0.05	4/16/05 12:15 p		200.0	GER12S1
						9.00E+00		-0.19			g	
EU-154	-3.82E-02	U	6.27E-02	6.27E-02	1.07E-01	pCi/g		-0.36	4/16/05 12:15 p		200.0	GER12S1
						7.00E+00		-(1.2)			g	
EU-155	3.09E-03	U	4.09E-02	4.09E-02	7.63E-02	pCi/g		0.04	4/16/05 12:15 p		200.0	GER12S1
						3.00E+02		0.15			g	
K-40	-1.07E-01	U	4.77E-01	4.77E-01	1.03E+00	pCi/g		-0.1	4/16/05 12:15 p		200.0	GER12S1
								-0.45			g	
MN-54	2.00E-02	U	2.11E-02	2.11E-02	4.37E-02	pCi/g		0.46	4/16/05 12:15 p		200.0	GER12S1
						2.00E+00		(1.9)			g	
NB-94	5.95E-03	U	2.12E-02	2.12E-02	4.08E-02	pCi/g		0.15	4/16/05 12:15 p		200.0	GER12S1
						3.00E-01		0.56			g	
PB-212	5.85E-03	U	2.85E-02	2.85E-02	5.21E-02	pCi/g		0.11	4/16/05 12:15 p		200.0	GER12S1
								0.41			g	
PB-214	-3.91E-02	U	4.39E-02	4.39E-02	7.57E-02	pCi/g		-0.52	4/16/05 12:15 p		200.0	GER12S1
								-(1.8)			g	
RA-226	-3.99E-02	U	5.63E-02	5.63E-02	9.44E-02	pCi/g		-0.42	4/16/05 12:15 p		200.0	GER12S1
								-(1.4)			g	
TL-208	9.91E-03	U	2.37E-02	2.37E-02	4.38E-02	pCi/g		0.23	4/16/05 12:15 p		200.0	GER12S1
								0.84			g	
Batch: 5105292	RICHRC5017			Work Order:	G8GHF1AA		Report DB ID:	G8GHF1AB				
AC-228	7.73E-03	U	6.88E-02	6.88E-02	1.32E-01	pCi/g		0.06	4/16/05 10:16 a		200.0	GER12S1
								0.22			g	

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V4.12 A97

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FORM II
BLANK RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
Matrix: SOLID

SDG: 28704
Report No.: 28635

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
AG-108M	4.12E-03	U	1.72E-02	1.72E-02	3.19E-02	pCi/g		0.13	4/16/05 10:16 a		200.0	GER12$1
								0.48			g	
AM-241	5.04E-02	U	4.47E-02	4.47E-02	8.99E-02	pCi/g		0.56	4/16/05 10:16 a		200.0	GER12$1
								(2.3)			g	
BI-212	-1.09E-01	U	2.80E-01	2.80E-01	4.97E-01	pCi/g		-0.22	4/16/05 10:16 a		200.0	GER12$1
								-0.78			g	
BI-214	-1.56E-02	U	5.31E-02	5.31E-02	9.33E-02	pCi/g		-0.17	4/16/05 10:16 a		200.0	GER12$1
								-0.59			g	
CO-60	-2.60E-03	U	2.38E-02	2.38E-02	4.51E-02	pCi/g		-0.06	4/16/05 10:16 a		200.0	GER12$1
						3.00E+00		-0.22			g	
CS-134	2.41E-03	U	2.35E-02	2.35E-02	4.44E-02	pCi/g		0.05	4/16/05 10:16 a		200.0	GER12$1
						1.00E+01		0.2			g	
CS-137	1.57E-02	U	2.43E-02	2.43E-02	4.71E-02	pCi/g		0.33	4/16/05 10:16 a		200.0	GER12$1
						2.00E+01		(1.3)			g	
EU-152	-2.06E-02	U	5.35E-02	5.35E-02	9.39E-02	pCi/g		-0.22	4/16/05 10:16 a		200.0	GER12$1
						9.00E+00		-0.77			g	
EU-154	1.69E-02	U	7.10E-02	7.10E-02	1.41E-01	pCi/g		0.12	4/16/05 10:16 a		200.0	GER12$1
						7.00E+00		0.48			g	
EU-155	-1.39E-02	U	4.04E-02	4.04E-02	7.22E-02	pCi/g		-0.19	4/16/05 10:16 a		200.0	GER12$1
						3.00E+02		-0.69			g	
K-40	6.92E-02	U	5.06E-01	5.06E-01	1.09E+00	pCi/g		0.06	4/16/05 10:16 a		200.0	GER12$1
								0.27			g	
MN-54	-3.28E-03	U	1.87E-02	1.87E-02	3.42E-02	pCi/g		-0.1	4/16/05 10:16 a		200.0	GER12$1
						2.00E+00		-0.35			g	

STL Richland
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V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II

BLANK RESULTS

Date: 21-Apr-05

Lab Name: STL Richland

Matrix: SOLID

SDG: 28704

Report No.: 28635

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
NB-94	1.93E-02	U	2.34E-02	2.34E-02	4.71E-02	pCi/g		0.41	4/16/05 10:16 a		200.0	GER12$1
						3.00E-01		(1.6)			g	
PB-212	-5.22E-03	U	2.64E-02	2.64E-02	4.68E-02	pCi/g		-0.11	4/16/05 10:16 a		200.0	GER12S1
								-0.4			g	
PB-214	3.08E-02	U	5.65E-02	5.65E-02	9.03E-02	pCi/g		0.34	4/16/05 10:16 a		200.0	GER12S1
								(1.1)			g	
RA-226	-1.56E-02	U	5.31E-02	5.31E-02	9.33E-02	pCi/g		-0.17	4/16/05 10:16 a		200.0	GER12S1
								-0.59			g	
TL-208	1.42E-02	U	2.42E-02	2.42E-02	4.55E-02	pCi/g		0.31	4/16/05 10:16 a		200.0	GER12S1
								(1.2)			g	
Batch: 5105297	RICHRC5017			Work Order:	G8GHT1AA		Report DB ID:	G8GHT1AB				
AC-228	-3.28E-02	U	7.56E-02	7.56E-02	1.32E-01	pCi/g		-0.25	4/18/05 09:32 a		200.0	GER12S1
								-0.87			g	
AG-108M	-1.67E-02	U	1.84E-02	1.84E-02	2.96E-02	pCi/g		-0.56	4/18/05 09:32 a		200.0	GER12S1
								-(1.8)			g	
AM-241	1.71E-02	U	4.43E-02	4.43E-02	8.34E-02	pCi/g		0.2	4/18/05 09:32 a		200.0	GER12$1
								0.77			g	
BI-212	1.28E-01	U	2.79E-01	2.79E-01	5.46E-01	pCi/g		0.23	4/18/05 09:32 a		200.0	GER12S1
								0.92			g	
BI-214	1.51E-02	U	4.84E-02	4.84E-02	9.13E-02	pCi/g		0.17	4/18/05 09:32 a		200.0	GER12$1
								0.63			g	
CO-60	6.87E-03	U	2.09E-02	2.09E-02	4.35E-02	pCi/g		0.16	4/18/05 09:32 a		200.0	GER12$1
						1.50E-01		0.66			g	
CS-134	-3.91E-03	U	2.00E-02	2.00E-02	3.71E-02	pCi/g		-0.11	4/18/05 09:32 a		200.0	GER12$1
						1.80E-01		-0.39			g	

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V4.12 A97

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FORM II
BLANK RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
Matrix: SOLID

SDG: 28704
Report No.: 28635

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
CS-137	6.46E-03	U	2.05E-02	2.05E-02	3.96E-02	pCi/g		0.16	4/18/05 09:32 a		200.0	GER12$1
						3.00E-01		0.63			g	
EU-152	-3.91E-02	U	4.98E-02	4.98E-02	7.95E-02	pCi/g		-0.49	4/18/05 09:32 a		200.0	GER12$1
						4.00E-01		-(1.6)			g	
EU-154	-4.26E-02	U	7.00E-02	7.00E-02	1.18E-01	pCi/g		-0.36	4/18/05 09:32 a		200.0	GER12$1
						3.50E-01		-(1.2)			g	
EU-155	-1.64E-02	U	4.17E-02	4.17E-02	7.36E-02	pCi/g		-0.22	4/18/05 09:32 a		200.0	GER12$1
						1.50E+01		-0.78			g	
K-40	-3.47E-02	U	4.71E-01	4.71E-01	1.03E+00	pCi/g		-0.03	4/18/05 09:32 a		200.0	GER12$1
								-0.15			g	
MN-54	1.46E-02	U	2.02E-02	2.02E-02	4.14E-02	pCi/g		0.35	4/18/05 09:32 a		200.0	GER12$1
						6.50E-01		(1.4)			g	
NB-94	-8.58E-03	U	1.99E-02	1.99E-02	3.49E-02	pCi/g		-0.25	4/18/05 09:32 a		200.0	GER12$1
						2.50E-01		-0.86			g	
PB-212	1.78E-02	U	2.79E-02	2.79E-02	5.31E-02	pCi/g		0.33	4/18/05 09:32 a		200.0	GER12$1
								(1.3)			g	
PB-214	-1.86E-02	U	4.60E-02	4.60E-02	7.87E-02	pCi/g		-0.24	4/18/05 09:32 a		200.0	GER12$1
								-0.81			g	
RA-226	1.27E-02	U	4.87E-02	4.87E-02	9.14E-02	pCi/g		0.14	4/18/05 09:32 a		200.0	GER12$1
								0.52			g	
TL-208	6.95E-03	U	2.00E-02	2.00E-02	3.87E-02	pCi/g		0.18	4/18/05 09:32 a		200.0	GER12$1
								0.7			g	
Batch: 5105267	RICHRC5006			Work Order:	G8GCJ1AA		Report DB ID:	G8GCJ1AB				
STRONTIUM	2.42E-03	U	8.08E-03	8.11E-03	1.62E-02	pCi/g	89%	0.15	4/20/05 09:53 a		25.0	GPC32A
					7.82E-03	1.00E-02		0.6			G	

STL Richland
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V4.12 A97

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FORM II

BLANK RESULTS

Date: 21-Apr-05

Lab Name: STL Richland

Matrix: SOLID

SDG: 28704

Report No.: 28635

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Rpt Unit, CRDL	Yield	Rst/MDC, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 5105271	RICHRC5006			Work Order:	G8GC11AA		Report DB ID:	G8GC11AB				
STRONTIUM	-6.21E-04	U	7.46E-03	7.47E-03	1.53E-02	pCi/g	91%	-0.04	4/20/05 01:53 p		25.0	GPC32A
					7.37E-03	1.00E-02		-0.17			G	
Batch: 5105275	RICHRC5006			Work Order:	G8GDD1AA		Report DB ID:	G8GDD1AB				
STRONTIUM	-5.18E-04	U	7.08E-03	7.08E-03	1.45E-02	pCi/g	92%	-0.04	4/20/05 05:31 p		25.0	GPC28C
					6.99E-03	1.00E-02		-0.15			G	

No. of Results: 60 Comments:

STL Richland
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V4.12 A97

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for, but the result is less than the Mdc/Mda|Total Uncert or gamma scan software did not identify the nuclide.

FORM II
LCS RESULTS

Date: 21-Apr-05

Lab Name: STL Richland
Matrix: SOLID

SDG: 28704
Report No.: 28635

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC|MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 5105278	RICHRC5037			Work Order:	G8GDP1AC		Report DB ID:	G8GDP1CS					
H-3	1.19E+00		2.06E-01	2.18E-01	3.50E-01	pCi/g	100%	1.36E+00	4.55E-02	87%	4/18/05 07:15 p	10.0	LSC3
							Rec Limits:	70	130	-0.1		G	
Batch: 5105284	RICHRC5037			Work Order:	G8GFG1AC		Report DB ID:	G8GFG1CS					
H-3	5.54E+00		2.67E-01	3.27E-01	2.16E-01	pCi/g	100%	6.81E+00	2.27E-01	81%	4/19/05 09:28 p	10.0	LSC8
							Rec Limits:	70	130	-0.2		G	
Batch: 5105287	RICHRC5037			Work Order:	G8GF01AC		Report DB ID:	G8GF01CS					
H-3	6.26E+00		3.71E-01	4.26E-01	3.32E-01	pCi/g	100%	6.82E+00	2.27E-01	92%	4/20/05 08:48 p	10.0	LSC3
							Rec Limits:	70	130	-0.1		G	
Batch: 5105290	RICHRC5017			Work Order:	G8GGE1AC		Report DB ID:	G8GGE1CS					
CS-137	1.14E+00		1.63E-01	1.63E-01	4.52E-02	pCi/g		1.02E+00	2.07E-02	112%	4/18/05 06:06 a	200.0	GER12$1
							Rec Limits:	70	130	0.1		g	
Batch: 5105292	RICHRC5017			Work Order:	G8GHF1AC		Report DB ID:	G8GHF1CS					
CS-137	1.13E+00		1.77E-01	1.77E-01	5.52E-02	pCi/g		1.02E+00	2.07E-02	111%	4/16/05 12:10 p	200.0	GER8$1
							Rec Limits:	70	130	0.1		g	
Batch: 5105297	RICHRC5017			Work Order:	G8GHT1AC		Report DB ID:	G8GHT1CS					
CS-137	1.17E+00		1.88E-01	1.88E-01	6.51E-02	pCi/g		1.02E+00	2.08E-02	115%	4/18/05 04:59 p	200.0	GER7S1
							Rec Limits:	70	130	0.1		g	
Batch: 5105267	RICHRC5008			Work Order:	G8GCJ1AC		Report DB ID:	G8GCJ1CS					
STRONTIUM	2.48E-01		1.64E-02	6.85E-02	1.55E-02	pCi/g	87%	2.72E-01	3.22E-03	91%	4/20/05 09:53 a	25.0	GPC32B
							Rec Limits:	20	115	-0.1		G	
Batch: 5105271	RICHRC5006			Work Order:	G8GC11AC		Report DB ID:	G8GC11CS					

STL Richland Bias = (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchLcs
V4.12 A97

STL RICHLAND

FORM II

LCS RESULTS

Date: 21-Apr-05

Lab Name: STL Richland

Matrix: SOLID

SDG: 28704

Report No. : 28635

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDC/MDA	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
STRONTIUM	2.46E-01		1.73E-02	6.80E-02	1.70E-02	pCi/g	74%	2.72E-01	3.21E-03	90%	4/20/05 01:53 p	25.0	GPC32B
							Rec Limits:	20	115	-0.1		G	
Batch: 5105275	RICHRC5006			Work Order:	G8GDD1AC		Report DB ID:	G8GDD1CS					
STRONTIUM	2.55E-01		1.61E-02	6.82E-02	1.43E-02	pCi/g	91%	2.73E-01	3.23E-03	94%	4/20/05 05:31 p	25.0	GPC28D
							Rec Limits:	20	115	-0.1		G	

No. of Results: 9 Comments:

STL Richland Bias - (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchLcs
V4.12 A97

STL RICHLAND

Chain of Custody Form

No. 2005-00136

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Severn Trent Labs-Richland
2800 George Washington Way
Richland, WA 99352
Attn: Jackie Waddell (509-375-3131)

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
TRK# 7910 4009 8772

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90				Comment, Preservation	Lab Sample ID
3107-0000-194-C-1C-01	4/7/05	1350	CT	CR	BP	X	X	X					
3107-0000-194-C-1C-02	4/7/05	1350	CT	CR	BP	X	X	X					
3107-0000-194-C-1C-03	4/7/05	1350	CT	CR	BP	X	X	X					
3107-0000-194-C-1C-04	4/7/05	1350	CT	CR	BP	X	X	X					
3107-0000-194-C-1C-05	4/7/05	1350	CT	CR	BP	X	X	X					
3107-0000-194-C-2C-06	4/7/05	1410	CT	CR	BP	X	X	X					
3107-0000-195-C-1C-01	4/7/05	1110	CT	CR	BP	X	X	X					
3107-0000-195-C-1C-02	4/7/05	1110	CT	CR	BP	X	X	X					
3107-0000-195-C-1C-03	4/7/05	1110	CT	CR	BP	X	X	X					
3107-0000-195-C-1C-04	4/7/05	1110	CT	CR	BP	X	X	X					

NOTES: PO #: ~~002092~~ 002133 MSR #: 05-1144 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By: [signature]	Date/Time: 4-14-05/1320
2) Received By: [signature]	Date/Time: 4-15-05/1000
3) Relinquished By	Date/Time
4) Received By	Date/Time
5) Relinquished By	Date/Time
6) Received By	Date/Time

STL RICHLAND

Connecticut Yankee Atomic Power Company

362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Chain of Custody Form

No. 2005-00137

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Severn Trent Labs-Richland
2800 George Washington Way
Richland, WA 99352
Attn: Jackie Waddell (509-375-3131)

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
TAT= 7910 4009 8772

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90				Comment, Preservation	Lab Sample ID
3107-0000-195-C-2C-05	4/7/05	1135	CT	CR	BP	X	X	X					
3107-0000-195-C-2C-06	4/7/05	1135	CT	CR	BP	X	X	X					
3107-0000-196-C-1C-01	4/5/05	1550	CT	CR	BP	X	X	X					
3107-0000-196-C-1C-02	4/5/05	1550	CT	CR	BP	X	X	X					
3107-0000-196-C-1C-03	4/5/05	1550	CT	CR	BP	X	X	X					
3107-0000-196-C-2C-04	4/6/05	1015	CT	CR	BP	X	X	X					
3107-0000-196-C-2C-05	4/6/05	1015	CT	CR	BP	X	X	X					
3107-0000-196-C-2C-06	4/6/05	1015	CT	CR	BP	X	X	X					
3107-0000-197-C-1C-01	4/6/05	1450	CT	CR	BP	X	X	X					
3107-0000-197-C-1C-02	4/6/05	1450	CT	CR	BP	X	X	X				REBAR	

NOTES: PO #: ~~002092~~ 002133 MSR #: 05-1144 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time 4-14-05/1320
2) Received By	Date/Time 4-15-05/1000
3) Relinquished By	Date/Time
4) Received By	Date/Time
5) Relinquished By	Date/Time
6) Received By	Date/Time

STL RICHLAND

Chain of Custody Form

No. 2005-00138

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Severn Trent Labs-Richland
2800 George Washington Way
Richland, WA 99352
Attn: Jackie Waddell (509-375-3131)

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
TRK# 7910 4009 8972

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	CHGAM	H-3	Sr-90				Comment, Preservation	Lab Sample ID
3107-0000-197-C-1C-03	4/6/05	1450	CT	CR	BP	X	X	X					
3107-0000-197-C-1C-04	4/6/05	1450	CT	CR	BP	X	X	X					
3107-0000-197-C-1C-05	4/6/05	1450	CT	CR	BP	X	X	X					
3107-0000-197-C-1C-06	4/6/05	1450	CT	CR	BP	X	X	X				REBAR	
3107-0000-198-C-1C-01	4/6/05	1515	CT	CR	BP	X	X	X					
3107-0000-198-C-1C-02	4/6/05	1515	CT	CR	BP	X	X	X				REBAR	
3107-0000-198-C-1C-03	4/6/05	1515	CT	CR	BP	X	X	X					
3107-0000-198-C-1C-04	4/6/05	1515	CT	CR	BP	X	X	X					
3107-0000-198-C-1C-05	4/6/05	1515	CT	CR	BP	X	X	X					
3107-0000-198-C-1C-06	4/6/05	1515	CT	CR	BP	X	X	X					

NOTES: PO #: 002092 MSR #: 05-1144 ☒ LTP QA ☐ Radwaste QA ☐ Non QA
002133

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	4-14-05/1320	[signature]	4-15-05 1000
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
Bill of Lading #

Internal Container Temp.: ____ Deg. C
Custody Sealed? Y ☐ N ☐
Custody Seal Intact? Y ☐ N ☐

STL RICHLAND

Chain of Custody Form

No. 2005-00139

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Severn Trent Labs-Richland
2800 George Washington Way
Richland, WA 99352
Attn: Jackie Waddell (509-375-3131)

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
TRK # 7910 4009 8772

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90				Comment, Preservation	Lab Sample ID
3107-0000-199-C-1C-01	4/5/05	1400	CT	CR	BP	X	X	X					
3107-0000-199-C-1C-02	4/5/05	1400	CT	CR	BP	X	X	X					
3107-0000-199-C-1C-03	4/5/05	1400	CT	CR	BP	X	X	X					
3107-0000-199-C-1C-04	4/5/05	1400	CT	CR	BP	X	X	X					
3107-0000-199-C-1C-05	4/5/05	1400	CT	CR	BP	X	X	X					
3107-0000-199-C-2C-06	4/5/05	1410	CT	CR	BP	X	X	X					

NOTES: PO #: ~~002092~~ 002133 MSR #: 05-1144 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____

Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y☐ N☐

Custody Seal Intact? Y☐ N☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	7-14-05/1320	[signature]	4-15-05
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Chain of Custody Form

No. 2005-00140

Connecticut Yankee Atomic Power Company
362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Pete Hollenbeck 860-267-3923

Severn Trent Labs-Richland
2800 George Washington Way
Richland, WA 99352
Attn: Jackie Waddell (509-375-3131)

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
TRK # 7910 4009 8772

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	CHGAM	H-3	Sr-90				Comment, Preservation..	Lab Sample ID
9801-0000-030-RA-01	4/11/05	1010	B	CR	BP	X	X	X					
9801-0000-031-RA-01	4/11/05	1340	B	CR	BP	X	X	X					
9801-0000-032-RA-01	4/11/05	1515	B	CR	BP	X	X	X					
9801-0000-033-RA-01	4/12/05	1005	B	CR	BP	X	X	X					
9801-0000-034-RA-01	4/12/05	1325	B	CR	BP	X	X	X					
9801-0000-040-RA-01	4/13/05	1012	B	CR	BP	X	X	X				ORISE SAMPLE #6	
9801-0000-039-RA	4/12/05	0819	TS	G	BP	X	X	X					

NOTES: PO #: ~~002692~~ 002133 MSR #: 05-1144 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other ____
Bill of Lading #

Internal Container Temp.: ____ Deg. C
Custody Sealed? Y☐ N☐
Custody Seal Intact? Y☐ N☐

1) Relinquished By: [signature]	Date/Time 7-14-05 / 1320	2) Received By: [signature]	Date/Time 4-15-05 1000
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Attachment 5.4

Sample Notification Sheet

To: Jackie Waddell

From: Pete Hollenbach

Telephone #: 860-267-3923

Date: 4/14/05

Please be advised that the samples in this package may contain trace amounts of radioactive material that has been determined to be below the Department of Transportation (DOT) requirement to be regulated in commerce. Please handle them with standard laboratory practices.

Signature: P Hollenbach

SEVERN TRENT STL

Sample Check-in List

Date/Time Received: 4-15 1000

Client: CH/A SDG #: _____ NA [ ] SAF #: _____ NA [✓]

Work Order Number: _____ Chain of Custody # Yes

Shipping Container ID: Yes Air Bill # Yes

1. Custody Seals on shipping container intact? NA [ ] Yes [ ] No [✓]
2. Custody Seals dated and signed? NA [ ] Yes [ ] No [✓]
3. Chain of Custody record present? Yes [✓] No [ ]
4. Cooler temperature: _____ NA [✓] 5. Vermiculite/packing materials is NA [✓] Wet [ ] Dry [ ]
6. Number of samples in shipping container: 43
7. Sample holding times exceeded? NA [ ] Yes [ ] No [✓]
8. Samples have:
   - ____ tape
   - ____ custody seals
   - ✓ hazard labels
   - ✓ appropriate samples labels
9. Samples are:
   - ✓ in good condition
   - ____ broken
   - ____ leaking
   - ____ have air bubbles (Only for samples requiring head space)
10. Sample pH taken? NA [✓] pH<2 [ ] pH>2 [ ] pH>9 [ ]
11. Sample Location, Sample Collector Listed? * Yes [ ] No [✓]
    *For documentation only. No corrective action needed.
12. Were any anomalies identified in sample receipt? Yes [ ] No [✓]
13. Description of anomalies (include sample numbers): _____

Sample Custodian: [signature] Date: 4-15-05

Client Sample ID	Analysis Requested	Condition	Comments/Action

Client Informed on _____ by _____ Person contacted _____

[ ] No action necessary; process as is.

Project Manager _____ Date _____

LS-023, 9/03, Rev. 5

```
*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00122.CNF

Report Generated On	: 1/12/2005 2:04:47 PM
Sample Title	: 06-00122
Sample Description	: With Digital inspector
Sample Identification	: 06-00122
Sample Type	: rck
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 1/11/2005 2:51:00 PM
Acquisition Started	: 1/11/2005 2:50:49 PM
Live Time	: 1200.0 seconds
Real Time	: 1201.8 seconds
Dead Time	: 0.15 %

Energy Calibration Used Done On	: 1/11/2005
Efficiency Calibration Used Done On	: 1/12/2005
Efficiency ID	: 3953-GEOM17

RJB
5-24-05

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00122
Peak Analysis Performed on: 1/12/2005 2:04:47 PM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	108-	116	113.06	74.89	2.54	2.40E+002	57.91	5.62E+002
F	2	443-	452	445.88	295.25	1.12	4.78E+001	20.39	1.38E+002
F	3	528-	535	531.55	351.97	1.41	1.11E+002	25.94	8.95E+001
F	4	913-	926	919.88	609.07	1.69	1.40E+002	25.55	5.71E+001
F	5	1373-	1380	1376.44	911.35	1.65	4.10E+001	15.26	2.30E+001
F	6	2201-	2212	2206.16	1460.69	2.16	2.36E+002	30.88	1.37E+001
F	7	3945-	3956	3951.03	2615.93	2.29	4.60E+001	13.54	0.00E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 1/12/2005 2:04:47 PM Page 3

```
*****************************************************************************
*****        B A C K G R O U N D   S U B T R A C T   R E P O R T        *****
*****************************************************************************
```

Detector Name: DET06
Sample Title: 06-00122
Peak Analysis Performed on: 1/12/2005 2:04:47 PM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	74.89	2.40E+002	57.91	8.90E+001	3.03E+001	1.51E+002	6.54E+001
F	2	295.25	4.78E+001	20.39			4.78E+001	2.04E+001
F	3	351.97	1.11E+002	25.94			1.11E+002	2.59E+001
F	4	609.07	1.40E+002	25.55			1.40E+002	2.55E+001
F	5	911.35	4.10E+001	15.26			4.10E+001	1.53E+001
F	6	1460.69	2.36E+002	30.88	5.50E+001	1.53E+001	1.81E+002	3.45E+001
F	7	2615.93	4.60E+001	13.54	1.10E+001	6.50E+000	3.50E+001	1.50E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/12/2005 2:04:47 PM Page 4

```
*************************************************************************
*****  N U C L I D E   I D E N T I F I C A T I O N   R E P O R T  *****
*************************************************************************
```

Sample Title: 06-00122
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	0.999	1460.81*	10.67	1.00382E+006	2.07589E+005
PB-214	0.558	74.81*	6.33	8.30910E+005	3.95653E+005
		77.11	10.70		
		87.20	3.70		
		89.80	1.03		
		241.98	7.49		
		295.21*	19.20	6.50528E+004	2.95806E+004
		351.92*	37.20	8.47203E+004	2.38102E+004
		785.91	1.10		

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV
Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/12/2005 2:04:47 PM Page 5

****
***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	0.999	1.003816E+006	2.075890E+005
PB-214	0.558	7.864086E+004	1.852764E+004

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 1/12/2005 2:04:47 PM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
F	4	609.07	1.1674E-001	18.24
F	5	911.35	3.4174E-002	37.22
F	7	2615.93	2.9137E-002	42.95

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: 06-00122
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	2.5554E+005	2.56E+005	1.0038E+006
	CO-60	1173.22	100.00	2.7437E+004	2.03E+004	2.8947E+004
		1332.49	100.00	2.0313E+004		-5.2711E+003
	AG-108m	79.13	6.60	8.3527E+005	2.21E+004	-1.0436E+006
		433.94	90.50	2.2088E+004		3.7323E+003
		614.28	89.80	3.3727E+004		-1.0227E+004
		722.94	90.80	2.2099E+004		-1.1472E+003
	CS-134	475.35	1.46	1.3387E+006	2.45E+004	5.5481E+005
		563.23	8.38	2.6965E+005		3.9385E+004
		569.32	15.43	1.4232E+005		-3.2619E+004
		604.70	97.60	3.1681E+004		2.6707E+003
		795.84	85.40	2.4511E+004		-1.4381E+003
		801.93	8.73	2.4840E+005		7.9622E+003
		1038.57	1.00	1.9642E+006		3.6603E+005
		1167.94	1.80	1.5622E+006		1.4308E+006
		1365.15	3.04	5.8882E+005		2.1910E+005
	CS-137	661.65	85.12	2.5375E+004	2.54E+004	1.8009E+003
	EU-154	123.07	40.40	7.4880E+004	5.67E+004	-6.2453E+003
		247.93	6.83	3.3908E+005		-4.7510E+005
		591.76	4.91	4.3334E+005		-4.7588E+005
		692.42	1.78	1.1654E+006		-1.3387E+005
		722.30	20.00	1.0139E+005		2.4255E+004
		756.86	4.50	4.5749E+005		-2.1868E+005
		873.20	12.09	1.7010E+005		1.2695E+004
		996.30	10.34	1.8472E+005		-4.8931E+004
		1004.76	17.90	1.1061E+005		2.5230E+004
		1274.51	34.40	5.6748E+004		-2.8331E+004
		1596.45	1.80	1.0924E+006		1.0401E+006
	EU-155	60.01	1.21	5.6477E+006	1.36E+005	-7.7262E+005
		86.54	32.80	1.3553E+005		-3.4010E+003
		105.31	21.80	1.6216E+005		-4.5861E+004
	TL-208	72.80	2.02	3.0995E+006	2.83E+004	-1.1416E+006
		74.97	3.41	1.7745E+006		2.1459E+006
		84.90	1.51	3.0645E+006		1.4863E+006
		277.36	6.31	3.6111E+005		8.9056E+004
		510.77	22.60	1.0663E+005		8.6611E+004
		583.19	84.50	2.8320E+004		2.2065E+004
		763.13	1.81	1.2539E+006		6.2793E+005
		860.56	12.42	1.7540E+005		9.8239E+003
		2614.53	99.16	3.3799E+004		4.3890E+004
	BI-214	609.31	46.30	6.5256E+004	6.53E+004	1.1128E+005
		768.36	5.04	4.5368E+005		2.5760E+005

Nuclide MDA Report 1/12/2005 2:04:47 PM Page 7

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
	BI-214	806.17	1.23	1.7580E+006	6.53E+004	1.9250E+005
		934.06	3.21	6.7307E+005		2.7373E+005
		1120.29	15.10	1.8018E+005		1.0634E+005
		1155.19	1.69	1.2711E+006		-2.5077E+005
		1238.11	5.94	4.3495E+005		9.5689E+004
		1280.96	1.47	1.4258E+006		8.1741E+005
		1377.67	4.11	4.6119E+005		3.6934E+005
		1401.50	1.39	1.3083E+006		3.4403E+005
		1407.98	2.48	7.5511E+005		2.3247E+005
		1509.19	2.19	6.9451E+005		-3.3741E+005
		1661.28	1.15	1.0406E+006		-5.4176E+005
		1729.60	3.05	4.3405E+005		-1.4756E+004
		1764.49	15.80	1.2849E+005		1.1380E+005
		1847.44	2.12	5.1982E+005		-3.3871E+005
		2118.54	1.21	1.1629E+006		-5.9459E+005
+	PB-214	74.81*	6.33	7.7265E+005	3.83E+004	8.3091E+005
		77.11	10.70	5.5071E+005		-3.1822E+005
		87.20	3.70	1.1802E+006		-2.6673E+005
		89.80	1.03	4.1575E+006		3.0891E+006
		241.98	7.49	3.6044E+005		4.3073E+005
		295.21*	19.20	8.8785E+004		6.5053E+004
		351.92*	37.20	3.8332E+004		8.4720E+004
		785.91	1.10	1.8287E+006		-9.3666E+005
	TH-234	63.29	4.50	1.4823E+006	1.48E+006	1.0049E+006
		92.38	2.60	1.5819E+006		-3.7394E+005
		92.80	2.60	1.5719E+006		-2.1163E+005

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

```
*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00123.CNF

Report Generated On	: 1/12/2005 2:41:09 PM
Sample Title	: 06-00123
Sample Description	: With Digital inspector
Sample Identification	: 06-00123
Sample Type	: rck
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 1/11/2005 3:12:00 PM
Acquisition Started	: 1/11/2005 3:12:16 PM
Live Time	: 1200.0 seconds
Real Time	: 1201.7 seconds
Dead Time	: 0.14 %

Energy Calibration Used Done On	: 1/11/2005
Efficiency Calibration Used Done On	: 1/12/2005
Efficiency ID	: 3953-GEOM18

TSB
5-24-05

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00123
Peak Analysis Performed on: 1/12/2005 2:41:08 PM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	527-	535	531.59	351.99	1.26	9.99E+001	24.59	9.88E+001
F	2	913-	926	920.04	609.18	1.60	8.84E+001	21.12	5.60E+001
F	3	2201-	2212	2206.25	1460.75	1.95	2.31E+002	30.31	1.03E+001
F	4	3947-	3956	3951.33	2616.13	1.93	3.36E+001	11.66	1.07E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 1/12/2005 2:41:09 PM Page 3

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00123
Peak Analysis Performed on: 1/12/2005 2:41:08 PM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	351.99	9.99E+001	24.59			9.99E+001	2.46E+001
F	2	609.18	8.84E+001	21.12			8.84E+001	2.11E+001
F	3	1460.75	2.31E+002	30.31	5.50E+001	1.53E+001	1.76E+002	3.39E+001
F	4	2616.13	3.36E+001	11.66	1.10E+001	6.50E+000	2.26E+001	1.34E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/12/2005 2:41:09 PM Page 4

```
*************************************************************************
*****  N U C L I D E   I D E N T I F I C A T I O N   R E P O R T  *****
*************************************************************************
```

Sample Title: 06-00123
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	1.000	1460.81*	10.67	9.75416E+005	2.04299E+005

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV
Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/12/2005 2:41:09 PM Page 5

****
***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	1.000	9.754159E+005	2.042994E+005

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 1/12/2005 2:41:08 PM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
F	1	351.99	8.3290E-002	24.61
F	2	609.18	7.3655E-002	23.90
F	4	2616.13	1.8847E-002	59.04

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: 06-00123
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	2.4839E+005	2.48E+005	9.7542E+005
	CO-60	1173.22	100.00	1.9964E+004	2.00E+004	7.6896E+003
		1332.49	100.00	2.2301E+004		1.0393E+004
	AG-108m	79.13	6.60	8.2829E+005	2.01E+004	-6.3577E+005
		433.94	90.50	2.0147E+004		2.3763E+003
		614.28	89.80	3.0310E+004		7.9008E+002
		722.94	90.80	2.1769E+004		9.8782E+003
	CS-134	475.35	1.46	1.2908E+006	2.43E+004	-3.4275E+005
		563.23	8.38	2.5524E+005		-7.4435E+004
		569.32	15.43	1.4713E+005		1.0765E+005
		604.70	97.60	2.7370E+004		-7.7926E+002
		795.84	85.40	2.4278E+004		2.9136E+003
		801.93	8.73	2.2425E+005		2.2691E+004
		1038.57	1.00	1.8817E+006		9.5637E+005
		1167.94	1.80	1.0967E+006		-1.7435E+005
		1365.15	3.04	5.6473E+005		7.7623E+004
	CS-137	661.65	85.12	2.4893E+004	2.49E+004	1.2654E+004
	EU-154	123.07	40.40	7.4953E+004	5.87E+004	-1.7320E+004
		247.93	6.83	3.2875E+005		-2.2583E+005
		591.76	4.91	4.0261E+005		-3.1512E+005
		692.42	1.78	1.0834E+006		2.4303E+003
		722.30	20.00	9.9363E+004		5.9236E+004
		756.86	4.50	4.7572E+005		2.1816E+005
		873.20	12.09	1.5442E+005		-5.7621E+004
		996.30	10.34	1.9951E+005		2.4986E+004
		1004.76	17.90	1.1654E+005		-4.0434E+004
		1274.51	34.40	5.8728E+004		2.8555E+004
		1596.45	1.80	7.7205E+005		-6.0731E+004
	EU-155	60.01	1.21	5.8143E+006	1.37E+005	-6.5637E+005
		86.54	32.80	1.3724E+005		6.5038E+004
		105.31	21.80	1.6244E+005		-4.4467E+003
	TL-208	72.80	2.02	3.1592E+006	2.51E+004	5.2369E+006
		74.97	3.41	1.7984E+006		2.2688E+006
		84.90	1.51	3.1456E+006		4.6673E+006
		277.36	6.31	3.2349E+005		-2.7328E+005
		510.77	22.60	1.0653E+005		1.0505E+005
		583.19	84.50	2.5097E+004		1.4699E+003
		763.13	1.81	1.1625E+006		2.9001E+005
		860.56	12.42	1.5938E+005		4.7771E+004
		2614.53	99.16	3.0273E+004		3.4241E+004
	BI-214	609.31	46.30	5.8976E+004	5.90E+004	8.1646E+004
		768.36	5.04	4.0278E+005		-3.3585E+004

Nuclide MDA Report 1/12/2005 2:41:09 PM Page 7

Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
BI-214	806.17	1.23	1.5534E+006	5.90E+004	-9.9455E+005
	934.06	3.21	6.3167E+005		2.9583E+005
	1120.29	15.10	1.5932E+005		1.2278E+005
	1155.19	1.69	1.2831E+006		8.6375E+005
	1238.11	5.94	4.1239E+005		3.0857E+005
	1280.96	1.47	1.2805E+006		-2.5018E+005
	1377.67	4.11	4.1366E+005		4.0533E+004
	1401.50	1.39	1.1565E+006		2.7137E+005
	1407.98	2.48	7.3613E+005		6.9664E+005
	1509.19	2.19	5.7697E+005		3.2349E+004
	1661.28	1.15	1.3395E+006		8.9630E+004
	1729.60	3.05	4.6412E+005		2.2641E+005
	1764.49	15.80	1.2290E+005		3.6774E+004
	1847.44	2.12	8.4648E+005		2.2095E+005
	2118.54	1.21	1.1167E+006		5.6071E+005
PB-214	74.81	6.33	9.6750E+005	6.97E+004	1.2789E+006
	77.11	10.70	5.5156E+005		7.8470E+005
	87.20	3.70	1.1925E+006		1.0649E+005
	89.80	1.03	4.1941E+006		3.8909E+006
	241.98	7.49	3.2212E+005		1.9273E+005
	295.21	19.20	1.1091E+005		4.2376E+004
	351.92	37.20	6.9691E+004		8.6830E+004
	785.91	1.10	1.9985E+006		1.1128E+006
TH-234	63.29	4.50	1.4815E+006	1.48E+006	3.5140E+005
	92.38	2.60	1.5531E+006		-1.1724E+006
	92.80	2.60	1.5408E+006		-9.2192E+005

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

```
***************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00124.CNF

Report Generated On	: 1/12/2005 4:02:43 PM
Sample Title	: 06-00124
Sample Description	: With Digital inspector
Sample Identification	: 06-00124
Sample Type	: rck
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 1/11/2005 3:38:00 PM
Acquisition Started	: 1/11/2005 3:38:03 PM
Live Time	: 1200.0 seconds
Real Time	: 1202.0 seconds
Dead Time	: 0.17 %

Energy Calibration Used Done On	: 1/11/2005
Efficiency Calibration Used Done On	: 1/12/2005
Efficiency ID	: 3953-GEOM19

TJB
5-24-05

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00124
Peak Analysis Performed on: 1/12/2005 4:02:43 PM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	108-	118	112.90	74.79	3.32	3.15E+002	64.27	6.89E+002
F	2	525-	536	531.61	352.01	1.66	9.21E+001	24.36	1.06E+002
F	3	916-	925	920.00	609.15	1.36	6.43E+001	19.24	5.72E+001
F	4	992-	1002	998.95	661.42	1.30	4.49E+001	17.28	5.77E+001
F	5	1372-	1379	1375.90	910.99	1.41	3.93E+001	14.85	2.57E+001
F	6	1768-	1778	1772.26	1173.41	1.63	5.62E+001	17.40	3.58E+001
F	7	2006-	2016	2012.38	1332.40	1.53	7.27E+001	17.80	1.27E+001
F	8	2202-	2211	2206.40	1460.85	1.77	2.02E+002	28.28	7.50E+000
F	9	3946-	3956	3951.08	2615.96	2.14	3.82E+001	12.19	0.00E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 1/12/2005 4:02:43 PM Page 3

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00124
Peak Analysis Performed on: 1/12/2005 4:02:43 PM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	74.79	3.15E+002	64.27	8.90E+001	3.03E+001	2.26E+002	7.11E+001
F	2	352.01	9.21E+001	24.36			9.21E+001	2.44E+001
F	3	609.15	6.43E+001	19.24			6.43E+001	1.92E+001
F	4	661.42	4.49E+001	17.28			4.49E+001	1.73E+001
F	5	910.99	3.93E+001	14.85			3.93E+001	1.48E+001
F	6	1173.41	5.62E+001	17.40	1.19E+001	8.40E+000	4.43E+001	1.93E+001
F	7	1332.40	7.27E+001	17.80	1.33E+001	9.93E+000	5.95E+001	2.04E+001
F	8	1460.85	2.02E+002	28.28	5.50E+001	1.53E+001	1.47E+002	3.21E+001
F	9	2615.96	3.82E+001	12.19	1.10E+001	6.50E+000	2.72E+001	1.38E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/12/2005 4:02:43 PM Page 4

```
*************************************************************************
*****  N U C L I D E   I D E N T I F I C A T I O N   R E P O R T  *****
*************************************************************************
```

Sample Title: 06-00124
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	1.000	1460.81*	10.67	8.24746E+005	1.92490E+005
CO-60	0.999	1173.22*	100.00	2.34201E+004	1.03743E+004
		1332.49*	100.00	3.36806E+004	1.18440E+004
CS-137	0.998	661.65*	85.12	2.15388E+004	8.65915E+003

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV
Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/12/2005 4:02:43 PM Page 5

****
***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	1.000	8.247464E+005	1.924900E+005
CO-60	0.999	2.787456E+004	7.803931E+003
CS-137	0.998	2.153882E+004	8.659154E+003

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 1/12/2005 4:02:43 PM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
F	1	74.79	1.8823E-001	31.47
F	2	352.01	7.6767E-002	26.44
F	3	609.15	5.3619E-002	29.90
F	5	910.99	3.2732E-002	37.80
F	9	2615.96	2.2650E-002	50.84

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: 06-00124
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	2.4400E+005	2.44E+005	8.2475E+005
+	CO-60	1173.22*	100.00	2.1654E+004	1.82E+004	2.3420E+004
		1332.49*	100.00	1.8193E+004		3.3681E+004
	AG-108m	79.13	6.60	8.9326E+005	2.41E+004	-6.5362E+005
		433.94	90.50	2.4051E+004		-5.2059E+003
		614.28	89.80	3.0364E+004		-9.6314E+003
		722.94	90.80	2.4104E+004		8.4195E+002
	CS-134	475.35	1.46	1.3710E+006	2.74E+004	-3.4582E+005
		563.23	8.38	3.0327E+005		1.0927E+005
		569.32	15.43	1.6656E+005		1.2943E+005
		604.70	97.60	2.8574E+004		-6.9802E+003
		795.84	85.40	2.7384E+004		-6.0793E+003
		801.93	8.73	2.7741E+005		1.7215E+005
		1038.57	1.00	2.4065E+006		-4.7595E+005
		1167.94	1.80	1.8190E+006		-7.0332E+005
		1365.15	3.04	5.2627E+005		-2.0764E+005
+	CS-137	661.65*	85.12	2.1294E+004	2.13E+004	2.1539E+004
	EU-154	123.07	40.40	7.7734E+004	6.23E+004	-9.1919E+002
		247.93	6.83	3.5009E+005		-4.0223E+005
		591.76	4.91	4.5773E+005		-3.1116E+005
		692.42	1.78	1.1204E+006		4.4201E+004
		722.30	20.00	1.0939E+005		-8.9119E+003
		756.86	4.50	4.7388E+005		-3.0369E+005
		873.20	12.09	1.8787E+005		7.4214E+004
		996.30	10.34	2.3835E+005		1.1829E+005
		1004.76	17.90	1.3089E+005		-6.9374E+004
		1274.51	34.40	6.2328E+004		4.2746E+004
		1596.45	1.80	8.2536E+005		1.8863E+005
	EU-155	60.01	1.21	6.3947E+006	1.47E+005	-4.4387E+005
		86.54	32.80	1.4673E+005		6.1514E+004
		105.31	21.80	1.7428E+005		-3.2379E+004
	TL-208	72.80	2.02	3.4222E+006	2.99E+004	-1.4450E+006
		74.97	3.41	1.9528E+006		3.1128E+006
		84.90	1.51	3.3113E+006		2.1463E+006
		277.36	6.31	3.7636E+005		-1.1133E+004
		510.77	22.60	1.1001E+005		8.7133E+004
		583.19	84.50	2.9854E+004		1.3776E+004
		763.13	1.81	1.2444E+006		2.9609E+005
		860.56	12.42	1.9030E+005		5.0026E+004
		2614.53	99.16	3.1407E+004		3.6532E+004
	BI-214	609.31	46.30	6.0023E+004	6.00E+004	5.6818E+004
		768.36	5.04	4.3501E+005		-5.8221E+004

Nuclide MDA Report 1/12/2005 4:02:43 PM Page 7

Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
BI-214	806.17	1.23	1.9032E+006	6.00E+004	-7.5036E+005
	934.06	3.21	7.0556E+005		-4.1744E+005
	1120.29	15.10	1.9086E+005		1.6513E+005
	1155.19	1.69	1.4090E+006		2.4062E+005
	1238.11	5.94	4.2367E+005		1.2031E+005
	1280.96	1.47	1.4496E+006		-1.7452E+005
	1377.67	4.11	4.3099E+005		1.7548E+005
	1401.50	1.39	1.2104E+006		-8.4057E+004
	1407.98	2.48	7.5461E+005		2.8938E+005
	1509.19	2.19	7.0373E+005		5.5819E+005
	1661.28	1.15	1.3570E+006		5.7769E+005
	1729.60	3.05	4.2453E+005		1.6385E+005
	1764.49	15.80	1.3952E+005		1.0454E+005
	1847.44	2.12	7.4681E+005		3.9226E+005
	2118.54	1.21	1.1836E+006		-8.7215E+005
PB-214	74.81	6.33	1.0531E+006	6.70E+004	1.8750E+006
	77.11	10.70	5.9353E+005		-1.0353E+005
	87.20	3.70	1.2802E+006		5.3412E+005
	89.80	1.03	4.5291E+006		4.8801E+006
	241.98	7.49	3.4797E+005		2.0924E+005
	295.21	19.20	1.2677E+005		4.7077E+004
	351.92	37.20	6.7044E+004		4.8941E+004
	785.91	1.10	2.0234E+006		-3.2967E+005
TH-234	63.29	4.50	1.6218E+006	1.62E+006	5.0110E+005
	92.38	2.60	1.7014E+006		-5.5995E+005
	92.80	2.60	1.6731E+006		-8.8542E+005

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

```
***************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00126.CNF

Report Generated On	: 1/17/2005 10:12:09 AM
Sample Title	: 06-00126
Sample Description	: With Digital inspector
Sample Identification	: 06-00126
Sample Type	: rck
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 1/13/2005 11:29:00 AM
Acquisition Started	: 1/13/2005 11:30:08 AM
Live Time	: 1200.0 seconds
Real Time	: 1203.4 seconds
Dead Time	: 0.28 %

Energy Calibration Used Done On	: 1/11/2005
Efficiency Calibration Used Done On	: 1/17/2005
Efficiency ID	: 3953-GEOM20

TJB
5-24-05

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00126
Peak Analysis Performed on: 1/17/2005 10:12:09 AM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	108-	118	113.63	75.27	1.36	1.09E+002	36.23	4.52E+002
F	2	2201-	2214	2207.35	1461.48	2.09	2.85E+002	33.21	3.13E+000
F	3	3948-	3958	3953.81	2617.77	1.95	2.76E+001	11.47	8.21E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 1/17/2005 10:12:09 AM Page 3

```
*************************************************************************
*****        B A C K G R O U N D   S U B T R A C T   R E P O R T      *****
*************************************************************************
```

Detector Name: DET06
Sample Title: 06-00126
Peak Analysis Performed on: 1/17/2005 10:12:09 AM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	75.27	1.09E+002	36.23	3.63E+001	3.12E+001	7.26E+001	4.78E+001
F	2	1461.48	2.85E+002	33.21	3.86E+001	1.42E+001	2.47E+002	3.61E+001
F	3	2617.77	2.76E+001	11.47	6.11E+000	7.40E+000	2.15E+001	1.37E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:12:09 AM Page 4

```
*************************************************************************
*****  N U C L I D E   I D E N T I F I C A T I O N   R E P O R T  *****
*************************************************************************
```

Sample Title: 06-00126
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	0.982	1460.81*	10.67	1.36794E+006	2.28699E+005

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV
Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:12:09 AM Page 5

****
***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	0.982	1.367936E+006	2.286986E+005

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 1/17/2005 10:12:09 AM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
F	1	75.27	6.0518E-002	65.85
F	3	2617.77	1.7948E-002	63.40

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: 06-00126
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	2.1006E+005	2.10E+005	1.3679E+006
	CO-60	1173.22	100.00	2.2685E+004	1.63E+004	7.4155E+003
		1332.49	100.00	1.6343E+004		2.0936E+003
	AG-108m	79.13	6.60	6.4541E+005	1.84E+004	-3.8068E+005
		433.94	90.50	1.8360E+004		-4.1507E+003
		614.28	89.80	2.0965E+004		1.0284E+004
		722.94	90.80	1.9013E+004		-8.5431E+003
	CS-134	475.35	1.46	1.0799E+006	2.06E+004	9.5223E+004
		563.23	8.38	2.3271E+005		3.8803E+004
		569.32	15.43	1.3223E+005		1.0533E+005
		604.70	97.60	2.0604E+004		1.7272E+004
		795.84	85.40	2.1676E+004		6.1079E+003
		801.93	8.73	1.9689E+005		2.4737E+004
		1038.57	1.00	1.7902E+006		1.3908E+005
		1167.94	1.80	1.1571E+006		1.5139E+005
		1365.15	3.04	4.0264E+005		-2.7965E+005
	CS-137	661.65	85.12	2.1107E+004	2.11E+004	9.3230E+003
	EU-154	123.07	40.40	6.2858E+004	6.14E+004	4.5899E+004
		247.93	6.83	2.8434E+005		-1.1387E+005
		591.76	4.91	3.8348E+005		-3.0941E+005
		692.42	1.78	1.0153E+006		1.0161E+005
		722.30	20.00	8.4965E+004		-6.4783E+004
		756.86	4.50	4.3585E+005		-3.7442E+004
		873.20	12.09	1.5100E+005		-2.6220E+004
		996.30	10.34	1.6430E+005		6.8962E+004
		1004.76	17.90	9.1173E+004		-5.7250E+003
		1274.51	34.40	6.1403E+004		4.7898E+004
		1596.45	1.80	7.7210E+005		1.6022E+005
	EU-155	60.01	1.21	4.4591E+006	1.11E+005	1.0135E+006
		86.54	32.80	1.1052E+005		1.0677E+005
		105.31	21.80	1.3165E+005		-6.4039E+003
	TL-208	72.80	2.02	2.5014E+006	2.28E+004	-8.3315E+005
		74.97	3.41	1.4251E+006		1.9401E+006
		84.90	1.51	2.4613E+006		1.5930E+006
		277.36	6.31	2.8257E+005		-6.8086E+004
		510.77	22.60	8.4946E+004		2.1100E+004
		583.19	84.50	2.2774E+004		-4.7247E+003
		763.13	1.81	1.1005E+006		-6.2201E+004
		860.56	12.42	1.6047E+005		2.2438E+004
		2614.53	99.16	3.2111E+004		1.8871E+004
	BI-214	609.31	46.30	4.0911E+004	4.09E+004	8.7247E+002
		768.36	5.04	3.9867E+005		1.7621E+005

Nuclide MDA Report 1/17/2005 10:12:10 AM Page 7

Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
BI-214	806.17	1.23	1.4238E+006	4.09E+004	2.8123E+005
	934.06	3.21	6.0116E+005		3.3929E+005
	1120.29	15.10	1.5745E+005		3.1019E+004
	1155.19	1.69	1.0968E+006		5.4829E+004
	1238.11	5.94	3.9890E+005		1.9143E+005
	1280.96	1.47	1.4662E+006		9.2894E+005
	1377.67	4.11	4.1872E+005		1.1441E+005
	1401.50	1.39	1.0218E+006		-2.6722E+005
	1407.98	2.48	6.0015E+005		4.2211E+005
	1509.19	2.19	6.1280E+005		2.1348E+005
	1661.28	1.15	1.0428E+006		2.4779E+005
	1729.60	3.05	4.9248E+005		3.4445E+005
	1764.49	15.80	1.1064E+005		7.8512E+004
	1847.44	2.12	4.5647E+005		3.0667E+004
	2118.54	1.21	1.1141E+006		-6.1120E+005
PB-214	74.81	6.33	7.6929E+005	5.02E+004	1.2509E+006
	77.11	10.70	4.2910E+005		-6.0651E+004
	87.20	3.70	9.5718E+005		6.9255E+005
	89.80	1.03	3.3323E+006		2.9082E+006
	241.98	7.49	2.7687E+005		1.8070E+005
	295.21	19.20	9.5870E+004		7.9829E+004
	351.92	37.20	5.0173E+004		2.3777E+004
	785.91	1.10	1.6740E+006		4.6197E+005
TH-234	63.29	4.50	1.1446E+006	1.14E+006	2.1235E+005
	92.38	2.60	1.2370E+006		-7.3773E+005
	92.80	2.60	1.2259E+006		-5.7986E+005

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

```
*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00127.CNF

Report Generated On	: 1/17/2005 10:13:36 AM
Sample Title	: 06-00127
Sample Description	: With Digital inspector
Sample Identification	: 06-00127
Sample Type	: rck
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 1/13/2005 1:12:00 PM
Acquisition Started	: 1/13/2005 1:11:39 PM
Live Time	: 1200.0 seconds
Real Time	: 1201.8 seconds
Dead Time	: 0.15 %

Energy Calibration Used Done On	: 1/11/2005
Efficiency Calibration Used Done On	: 1/12/2005
Efficiency ID	: 3953-GEOM18

TSB
5-24-05

Peak Analysis Report 1/17/2005 10:13:36 AM Page 2

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00127
Peak Analysis Performed on: 1/17/2005 10:13:36 AM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	109-	117	112.51	74.53	3.25	2.28E+002	23.38	5.40E+002
F	2	525-	535	531.82	352.14	1.15	3.89E+001	17.61	1.02E+002
F	3	915-	926	920.30	609.35	1.42	4.84E+001	16.57	4.57E+001
F	4	996-	1003	999.20	661.59	1.08	2.76E+001	12.67	2.65E+001
F	5	1601-	1613	1606.72	1063.81	2.13	4.66E+001	14.69	1.33E+001
F	6	2200-	2214	2207.01	1461.25	2.03	3.04E+002	34.49	7.24E+000
F	7	3947-	3957	3952.12	2616.65	2.58	3.02E+001	10.97	0.00E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 1/17/2005 10:13:36 AM Page 3

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00127
Peak Analysis Performed on: 1/17/2005 10:13:36 AM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	74.53	2.28E+002	23.38	3.63E+001	3.12E+001	1.92E+002	3.90E+001
F	2	352.14	3.89E+001	17.61			3.89E+001	1.76E+001
F	3	609.35	4.84E+001	16.57			4.84E+001	1.66E+001
F	4	661.59	2.76E+001	12.67			2.76E+001	1.27E+001
F	5	1063.81	4.66E+001	14.69	2.44E+001	1.53E+001	2.22E+001	2.12E+001
F	6	1461.25	3.04E+002	34.49	3.86E+001	1.42E+001	2.66E+002	3.73E+001
F	7	2616.65	3.02E+001	10.97	6.11E+000	7.40E+000	2.41E+001	1.32E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:13:37 AM Page 4

```
*************************************************************************
*****  N U C L I D E   I D E N T I F I C A T I O N   R E P O R T  *****
*************************************************************************
```

Sample Title: 06-00127
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	0.992	1460.81*	10.67	1.47575E+006	2.38988E+005
CS-137	1.000	661.65*	85.12	1.29367E+004	6.13131E+003

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV
Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:13:37 AM Page 5

****
***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	0.992	1.475752E+006	2.389878E+005
CS-137	1.000	1.293670E+004	6.131308E+003

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 1/17/2005 10:13:36 AM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
F	1	74.53	1.5969E-001	20.35
F	2	352.14	3.2417E-002	45.26
F	3	609.35	4.0294E-002	34.28
F	5	1063.81	1.8469E-002	95.71
F	7	2616.65	2.0054E-002	55.01

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: 06-00127
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	2.2214E+005	2.22E+005	1.4758E+006
	CO-60	1173.22	100.00	2.2962E+004	2.05E+004	-5.5839E+003
		1332.49	100.00	2.0542E+004		1.3510E+004
	AG-108m	79.13	6.60	8.0933E+005	2.23E+004	-1.2060E+006
		433.94	90.50	2.2256E+004		7.0490E+003
		614.28	89.80	2.5793E+004		-2.2603E+003
		722.94	90.80	2.3108E+004		6.6867E+003
	CS-134	475.35	1.46	1.2749E+006	2.39E+004	1.7416E+004
		563.23	8.38	2.6658E+005		1.6012E+005
		569.32	15.43	1.5347E+005		1.5279E+005
		604.70	97.60	2.4270E+004		-5.2447E+003
		795.84	85.40	2.3859E+004		8.1410E+003
		801.93	8.73	2.2713E+005		7.9960E+004
		1038.57	1.00	2.0439E+006		-3.6378E+005
		1167.94	1.80	1.2021E+006		-5.0473E+005
		1365.15	3.04	4.7162E+005		1.0521E+004
+	CS-137	661.65*	85.12	1.3551E+004	1.36E+004	1.2937E+004
	EU-154	123.07	40.40	7.4570E+004	5.52E+004	1.4920E+004
		247.93	6.83	3.2376E+005		-1.8169E+005
		591.76	4.91	3.7302E+005		-6.6976E+005
		692.42	1.78	1.0381E+006		9.1497E+004
		722.30	20.00	1.0433E+005		2.7939E+004
		756.86	4.50	4.3232E+005		1.6993E+005
		873.20	12.09	1.6026E+005		1.9698E+004
		996.30	10.34	1.9372E+005		5.5797E+004
		1004.76	17.90	1.1898E+005		5.2406E+004
		1274.51	34.40	5.5172E+004		-2.6969E+004
		1596.45	1.80	8.9401E+005		6.2961E+005
	EU-155	60.01	1.21	5.9822E+006	1.36E+005	-1.1395E+006
		86.54	32.80	1.3568E+005		9.3339E+004
		105.31	21.80	1.6227E+005		-2.3304E+004
	TL-208	72.80	2.02	3.1661E+006	2.40E+004	-2.4322E+006
		74.97	3.41	1.7855E+006		2.4229E+006
		84.90	1.51	3.0606E+006		2.2069E+006
		277.36	6.31	3.1753E+005		-7.8866E+004
		510.77	22.60	1.0596E+005		9.0957E+004
		583.19	84.50	2.3964E+004		-1.6231E+003
		763.13	1.81	1.1563E+006		6.5663E+005
		860.56	12.42	1.4468E+005		-8.0686E+004
		2614.53	99.16	2.8008E+004		2.4097E+004
	BI-214	609.31	46.30	5.0160E+004	5.02E+004	1.7683E+004
		768.36	5.04	3.9574E+005		2.7722E+004

Nuclide MDA Report 1/17/2005 10:13:37 AM Page 7

Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
BI-214	806.17	1.23	1.5745E+006	5.02E+004	2.7091E+005
	934.06	3.21	6.5319E+005		5.9575E+005
	1120.29	15.10	1.5068E+005		8.1108E+004
	1155.19	1.69	1.3485E+006		8.2321E+005
	1238.11	5.94	4.0452E+005		-2.3147E+004
	1280.96	1.47	1.2510E+006		-3.4297E+005
	1377.67	4.11	4.3842E+005		2.5735E+005
	1401.50	1.39	1.4128E+006		1.6170E+005
	1407.98	2.48	7.4613E+005		-5.2554E+004
	1509.19	2.19	7.2513E+005		5.0734E+005
	1661.28	1.15	9.4987E+005		-1.1370E+006
	1729.60	3.05	4.1888E+005		1.2699E+005
	1764.49	15.80	1.4273E+005		9.2528E+004
	1847.44	2.12	4.1755E+005		-1.2072E+005
	2118.54	1.21	1.0074E+006		2.0470E+005
PB-214	74.81	6.33	9.6668E+005	5.81E+004	1.7396E+006
	77.11	10.70	5.4037E+005		-3.3104E+005
	87.20	3.70	1.1920E+006		1.0481E+006
	89.80	1.03	4.1487E+006		2.4596E+006
	241.98	7.49	3.1717E+005		1.3187E+005
	295.21	19.20	1.1749E+005		6.6714E+004
	351.92	37.20	5.8082E+004		2.3148E+004
	785.91	1.10	1.7641E+006		-4.7736E+005
TH-234	63.29	4.50	1.5791E+006	1.55E+006	1.5725E+006
	92.38	2.60	1.5524E+006		-1.1898E+006
	92.80	2.60	1.5471E+006		-5.7225E+005

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

```
*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00128.CNF

Report Generated On	: 1/17/2005 10:14:29 AM
Sample Title	: 06-00128
Sample Description	: With Digital inspector
Sample Identification	: 06-00128
Sample Type	: rck
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 1/13/2005 1:34:00 PM
Acquisition Started	: 1/13/2005 1:33:30 PM
Live Time	: 1200.0 seconds
Real Time	: 1201.9 seconds
Dead Time	: 0.16 %

Energy Calibration Used Done On	: 1/11/2005
Efficiency Calibration Used Done On	: 1/12/2005
Efficiency ID	: 3953-GEOM18

TSB
5-24-05

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00128
Peak Analysis Performed on: 1/17/2005 10:14:28 AM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	526-	537	531.78	352.12	1.05	7.26E+001	21.08	1.29E+002
F	2	916-	925	920.14	609.24	1.52	8.43E+001	21.22	5.12E+001
F	3	994-	1005	998.81	661.33	1.44	6.03E+001	18.07	4.80E+001
F	4	1373-	1380	1376.30	911.26	1.66	3.87E+001	15.65	2.95E+001
F	5	2199-	2212	2206.87	1461.16	2.02	2.85E+002	33.27	3.88E+000
F	6	3947-	3958	3952.49	2616.90	2.46	3.64E+001	11.91	0.00E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 1/17/2005 10:14:29 AM Page 3

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00128
Peak Analysis Performed on: 1/17/2005 10:14:28 AM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	352.12	7.26E+001	21.08			7.26E+001	2.11E+001
F	2	609.24	8.43E+001	21.22			8.43E+001	2.12E+001
F	3	661.33	6.03E+001	18.07			6.03E+001	1.81E+001
F	4	911.26	3.87E+001	15.65			3.87E+001	1.56E+001
F	5	1461.16	2.85E+002	33.27	3.86E+001	1.42E+001	2.47E+002	3.62E+001
F	6	2616.90	3.64E+001	11.91	6.11E+000	7.40E+000	3.03E+001	1.40E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:14:29 AM Page 4

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*************************************************************************
*****  N U C L I D E   I D E N T I F I C A T I O N   R E P O R T  *****
*************************************************************************
```

Sample Title: 06-00128
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	0.995	1460.81*	10.67	1.36958E+006	2.29321E+005
CS-137	0.996	661.65*	85.12	2.82697E+004	9.10185E+003

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV
Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:14:29 AM Page 5

****
***** INTERFERENCE CORRECTED REPORT *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	0.995	1.369582E+006	2.293206E+005
CS-137	0.996	2.826967E+004	9.101850E+003

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** UNIDENTIFIED PEAKS **********

Peak Locate Performed on: 1/17/2005 10:14:28 AM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
F	1	352.12	6.0480E-002	29.05
F	2	609.24	7.0253E-002	25.17
F	4	911.26	3.2255E-002	40.42
F	6	2616.90	2.5241E-002	46.29

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: 06-00128
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	2.1367E+005	2.14E+005	1.3696E+006
	CO-60	1173.22	100.00	2.5588E+004	2.07E+004	1.3207E+004
		1332.49	100.00	2.0745E+004		-4.1434E+002
	AG-108m	79.13	6.60	9.1527E+005	2.43E+004	1.5692E+004
		433.94	90.50	2.4303E+004		1.1627E+004
		614.28	89.80	3.0921E+004		-8.1388E+002
		722.94	90.80	2.5458E+004		1.1837E+004
	CS-134	475.35	1.46	1.4582E+006	2.55E+004	6.1315E+005
		563.23	8.38	2.8872E+005		1.6934E+005
		569.32	15.43	1.5678E+005		1.5208E+005
		604.70	97.60	2.7156E+004		-2.2520E+004
		795.84	85.40	2.5493E+004		1.0278E+004
		801.93	8.73	2.3965E+005		6.9552E+004
		1038.57	1.00	1.9646E+006		-1.6176E+006
		1167.94	1.80	1.4487E+006		2.6935E+005
		1365.15	3.04	5.4752E+005		-2.8257E+005
+	CS-137	661.65*	85.12	1.9472E+004	1.95E+004	2.8270E+004
	EU-154	123.07	40.40	8.0440E+004	6.97E+004	-5.9791E+003
		247.93	6.83	3.6392E+005		-5.8928E+005
		591.76	4.91	4.6072E+005		-3.7330E+005
		692.42	1.78	1.1022E+006		-3.5634E+005
		722.30	20.00	1.1602E+005		3.5877E+004
		756.86	4.50	4.7328E+005		1.0506E+005
		873.20	12.09	1.5795E+005		-3.2601E+004
		996.30	10.34	1.9664E+005		6.2809E+004
		1004.76	17.90	1.0251E+005		-9.3368E+004
		1274.51	34.40	6.9653E+004		2.5546E+004
		1596.45	1.80	9.3066E+005		2.0030E+005
	EU-155	60.01	1.21	6.3713E+006	1.47E+005	2.1597E+006
		86.54	32.80	1.4721E+005		1.4660E+005
		105.31	21.80	1.7512E+005		1.9548E+004
	TL-208	72.80	2.02	3.4679E+006	2.84E+004	5.6396E+006
		74.97	3.41	1.9685E+006		2.3896E+006
		84.90	1.51	3.3636E+006		3.5645E+006
		277.36	6.31	3.7160E+005		-1.5940E+003
		510.77	22.60	1.1125E+005		5.4446E+004
		583.19	84.50	2.8390E+004		2.5765E+004
		763.13	1.81	1.1625E+006		-1.5364E+005
		860.56	12.42	1.5501E+005		-7.5505E+004
		2614.53	99.16	3.0987E+004		3.6044E+004
	BI-214	609.31	46.30	5.9418E+004	5.94E+004	7.3488E+004
		768.36	5.04	4.2317E+005		8.4408E+004

Nuclide MDA Report 1/17/2005 10:14:29 AM Page 7

Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
BI-214	806.17	1.23	1.6056E+006	5.94E+004	-3.3914E+005
	934.06	3.21	6.1837E+005		2.9878E+004
	1120.29	15.10	1.6117E+005		-3.0273E+004
	1155.19	1.69	1.3932E+006		5.7909E+005
	1238.11	5.94	3.8265E+005		-2.0317E+004
	1280.96	1.47	1.5663E+006		6.0644E+005
	1377.67	4.11	4.9442E+005		2.3632E+005
	1401.50	1.39	1.3451E+006		-8.9053E+003
	1407.98	2.48	7.7526E+005		3.6709E+005
	1509.19	2.19	8.0723E+005		3.6391E+005
	1661.28	1.15	9.4987E+005		2.8164E+005
	1729.60	3.05	5.2981E+005		3.3197E+005
	1764.49	15.80	1.5080E+005		1.3564E+005
	1847.44	2.12	7.3641E+005		7.2430E+004
	2118.54	1.21	1.3455E+006		-1.8245E+005
PB-214	74.81	6.33	1.0567E+006	6.54E+004	1.2012E+006
	77.11	10.70	5.9850E+005		7.2711E+005
	87.20	3.70	1.2792E+006		1.1002E+006
	89.80	1.03	4.3372E+006		1.2019E+006
	241.98	7.49	3.7884E+005		6.4375E+005
	295.21	19.20	1.2563E+005		3.9734E+004
	351.92	37.20	6.5444E+004		6.2232E+004
	785.91	1.10	1.7868E+006		-3.7908E+005
TH-234	63.29	4.50	1.6267E+006	1.60E+006	-1.8462E+005
	92.38	2.60	1.6231E+006		-1.0108E+006
	92.80	2.60	1.5966E+006		-1.2868E+006

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

```
*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00129.CNF

Report Generated On	: 1/17/2005 10:15:57 AM
Sample Title	: 06-00129
Sample Description	: With Digital inspector
Sample Identification	: 06-00129
Sample Type	: rck
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 1/13/2005 1:55:00 PM
Acquisition Started	: 1/13/2005 1:54:50 PM
Live Time	: 1200.0 seconds
Real Time	: 1203.3 seconds
Dead Time	: 0.28 %

Energy Calibration Used Done On	: 1/11/2005
Efficiency Calibration Used Done On	: 1/12/2005
Efficiency ID	: 3953-GEOM18

TSB
5-24-05

Peak Analysis Report 1/17/2005 10:15:57 AM Page 2

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*****************************************************************************
*****          P E A K   A N A L Y S I S   R E P O R T              *****
*****************************************************************************
```

Detector Name: DET06
Sample Title: 06-00129
Peak Analysis Performed on: 1/17/2005 10:15:57 AM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	108-	118	113.66	75.29	1.04	1.58E+002	46.21	9.16E+002
F	2	125-	133	128.54	85.14	0.49	1.18E+002	311.81	7.55E+002
F	3	440-	448	445.74	295.15	1.08	5.87E+001	22.23	1.43E+002
F	4	526-	535	531.61	352.01	0.94	8.18E+001	23.60	1.50E+002
F	5	765-	776	771.59	510.89	1.91	6.91E+001	22.36	9.04E+001
F	6	877-	886	880.73	583.15	1.45	6.08E+001	19.61	6.56E+001
F	7	913-	926	920.33	609.37	1.33	8.83E+001	21.07	6.97E+001
F	8	996-	1006	999.44	661.75	1.54	8.19E+001	20.60	4.44E+001
F	9	1688-	1696	1692.32	1120.49	1.38	3.77E+001	14.95	3.25E+001
F	10	1769-	1777	1772.52	1173.58	0.98	3.47E+001	13.60	2.75E+001
F	11	2006-	2019	2013.24	1332.96	2.08	5.37E+001	15.66	1.57E+001
F	12	2201-	2213	2206.86	1461.16	1.86	3.72E+002	38.94	8.59E+000
F	13	2662-	2672	2666.58	1765.53	1.90	2.73E+001	11.27	7.05E+000
F	14	3946-	3958	3952.13	2616.66	2.37	5.12E+001	14.32	0.00E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 1/17/2005 10:15:57 AM Page 3

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00129
Peak Analysis Performed on: 1/17/2005 10:15:57 AM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	75.29	1.58E+002	46.21	3.63E+001	3.12E+001	1.21E+002	5.58E+001
F	2	85.14	1.18E+002	311.81	4.53E+001	2.69E+001	7.32E+001	3.13E+002
F	3	295.15	5.87E+001	22.23			5.87E+001	2.22E+001
F	4	352.01	8.18E+001	23.60			8.18E+001	2.36E+001
F	5	510.89	6.91E+001	22.36	2.13E+001	1.71E+001	4.78E+001	2.81E+001
F	6	583.15	6.08E+001	19.61			6.08E+001	1.96E+001
F	7	609.37	8.83E+001	21.07			8.83E+001	2.11E+001
F	8	661.75	8.19E+001	20.60			8.19E+001	2.06E+001
F	9	1120.49	3.77E+001	14.95			3.77E+001	1.50E+001
F	10	1173.58	3.47E+001	13.60	7.00E+000	9.48E+000	2.77E+001	1.66E+001
F	11	1332.96	5.37E+001	15.66	1.72E+001	1.44E+001	3.65E+001	2.13E+001
F	12	1461.16	3.72E+002	38.94	3.86E+001	1.42E+001	3.33E+002	4.14E+001
F	13	1765.53	2.73E+001	11.27	1.30E+001	9.00E+000	1.43E+001	1.44E+001
F	14	2616.66	5.12E+001	14.32	6.11E+000	7.40E+000	4.51E+001	1.61E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:15:57 AM Page 4

****
***** N U C L I D E I D E N T I F I C A T I O N R E P O R T *****
****

Sample Title: 06-00129
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	0.995	1460.81*	10.67	1.84940E+006	2.74459E+005
CO-60	0.993	1173.22*	100.00	1.43705E+004	8.68609E+003
		1332.49*	100.00	2.04694E+004	1.20506E+004
CS-137	1.000	661.65*	85.12	3.84029E+004	1.06649E+004
BI-214	0.516	609.31*	46.30	7.28079E+004	1.95521E+004
		768.36	5.04		
		806.17	1.23		
		934.06	3.21		
		1120.29*	15.10	1.26748E+005	5.14200E+004
		1155.19	1.69		
		1238.11	5.94		
		1280.96	1.47		
		1377.67	4.11		
		1401.50	1.39		
		1407.98	2.48		
		1509.19	2.19		
		1661.28	1.15		
		1729.60	3.05		
		1764.49*	15.80	6.01081E+004	6.07582E+004
		1847.44	2.12		
		2118.54	1.21		
PB-214	0.557	74.81*	6.33	6.75664E+005	3.37576E+005
		77.11	10.70		
		87.20	3.70		
		89.80	1.03		
		241.98	7.49		
		295.21*	19.20	8.08911E+004	3.31789E+004
		351.92*	37.20	6.30322E+004	2.07064E+004
		785.91	1.10		

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV
Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:15:57 AM Page 5

****
***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	0.995	1.849402E+006	2.744595E+005
CO-60	0.993	1.645581E+004	7.046386E+003
CS-137	1.000	3.840294E+004	1.066489E+004
BI-214	0.516	7.800268E+004	1.750098E+004
PB-214	0.557	6.967901E+004	1.754247E+004

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 1/17/2005 10:15:57 AM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
F	2	85.14	6.0989E-002	427.64
F	5	510.89	3.9844E-002	58.82
F	6	583.15	5.0689E-002	32.24
F	14	2616.66	3.7586E-002	35.73

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: 06-00129
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	2.2494E+005	2.25E+005	1.8494E+006
+	CO-60	1173.22*	100.00	1.8883E+004	1.89E+004	1.4371E+004
		1332.49*	100.00	2.2772E+004		2.0469E+004
	AG-108m	79.13	6.60	9.1871E+005	2.53E+004	-5.0851E+004
		433.94	90.50	2.5262E+004		-9.7905E+003
		614.28	89.80	3.2538E+004		3.9123E+003
		722.94	90.80	2.8369E+004		2.0577E+004
	CS-134	475.35	1.46	1.6241E+006	2.85E+004	1.9256E+005
		563.23	8.38	3.2761E+005		2.6862E+005
		569.32	15.43	1.7691E+005		1.3536E+005
		604.70	97.60	2.9158E+004		1.6394E+003
		795.84	85.40	2.8465E+004		-1.4414E+004
		801.93	8.73	2.8842E+005		2.2201E+005
		1038.57	1.00	2.3987E+006		1.7625E+006
		1167.94	1.80	1.6176E+006		-1.6766E+006
		1365.15	3.04	5.4752E+005		-2.1911E+005
+	CS-137	661.65*	85.12	1.8440E+004	1.84E+004	3.8403E+004
	EU-154	123.07	40.40	8.3160E+004	7.01E+004	1.7552E+004
		247.93	6.83	3.9671E+005		-1.8644E+005
		591.76	4.91	4.6236E+005		-5.6366E+004
		692.42	1.78	1.2087E+006		-2.6623E+005
		722.30	20.00	1.2788E+005		6.2843E+004
		756.86	4.50	5.2191E+005		6.5809E+004
		873.20	12.09	1.9696E+005		7.1745E+004
		996.30	10.34	2.2610E+005		5.3077E+004
		1004.76	17.90	1.2446E+005		-1.3475E+004
		1274.51	34.40	7.0128E+004		4.6650E+004
		1596.45	1.80	9.6575E+005		2.5784E+005
	EU-155	60.01	1.21	6.7123E+006	1.47E+005	-2.1661E+006
		86.54	32.80	1.4672E+005		2.2083E+004
		105.31	21.80	1.7863E+005		-1.6027E+004
	TL-208	72.80	2.02	3.5467E+006	3.25E+004	-1.7859E+006
		74.97	3.41	2.0309E+006		3.2760E+006
		84.90	1.51	3.3660E+006		2.3655E+006
		277.36	6.31	3.8334E+005		-2.2920E+005
		510.77	22.60	1.2671E+005		1.2139E+005
		583.19	84.50	3.2496E+004		2.5228E+004
		763.13	1.81	1.3665E+006		-2.3918E+005
		860.56	12.42	1.8325E+005		-6.3249E+004
		2614.53	99.16	3.6750E+004		4.1186E+004
+	BI-214	609.31*	46.30	4.2562E+004	4.26E+004	7.2808E+004
		768.36	5.04	5.1604E+005		1.4532E+005

Nuclide MDA Report 1/17/2005 10:15:58 AM Page 7

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	BI-214	806.17	1.23	1.9794E+006	4.26E+004	-2.3044E+005
		934.06	3.21	6.9804E+005		-2.4426E+005
		1120.29*	15.10	1.0837E+005		1.2675E+005
		1155.19	1.69	1.4699E+006		-3.3841E+005
		1238.11	5.94	4.6814E+005		-2.9266E+005
		1280.96	1.47	1.6237E+006		8.7825E+005
		1377.67	4.11	5.1497E+005		2.4522E+005
		1401.50	1.39	1.4128E+006		-6.3402E+004
		1407.98	2.48	8.3016E+005		2.4050E+005
		1509.19	2.19	6.1350E+005		-1.0295E+005
		1661.28	1.15	1.2727E+006		7.0584E+005
		1729.60	3.05	4.6412E+005		1.3431E+005
		1764.49*	15.80	1.1822E+005		6.0108E+004
		1847.44	2.12	8.2929E+005		1.6057E+005
		2118.54	1.21	1.2144E+006		-8.1841E+005
+	PB-214	74.81*	6.33	9.9012E+005	5.21E+004	6.7566E+005
		77.11	10.70	6.1320E+005		3.5248E+004
		87.20	3.70	1.2787E+006		8.7461E+004
		89.80	1.03	4.4887E+006		-8.8448E+005
		241.98	7.49	3.9213E+005		4.2224E+005
		295.21*	19.20	8.8415E+004		8.0891E+004
		351.92*	37.20	5.2131E+004		6.3032E+004
		785.91	1.10	2.0672E+006		-3.5366E+005
	TH-234	63.29	4.50	1.7273E+006	1.68E+006	-1.6561E+005
		92.38	2.60	1.6960E+006		-5.2315E+005
		92.80	2.60	1.6839E+006		-3.3945E+005

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

```
***************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
***************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00130.CNF

Report Generated On	: 1/17/2005 10:16:37 AM
Sample Title	: 06-00130
Sample Description	: With Digital inspector
Sample Identification	: 06-00130
Sample Type	: rck
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 1/13/2005 2:15:00 PM
Acquisition Started	: 1/13/2005 2:16:02 PM
Live Time	: 1200.0 seconds
Real Time	: 1201.6 seconds
Dead Time	: 0.13 %

Energy Calibration Used Done On	: 1/11/2005
Efficiency Calibration Used Done On	: 1/12/2005
Efficiency ID	: 3953-GEOM18

TSB
5-24-05

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00130
Peak Analysis Performed on: 1/17/2005 10:16:37 AM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	527-	537	531.81	352.13	1.78	6.17E+001	21.07	7.97E+001
F	2	914-	924	920.13	609.24	1.45	4.00E+001	15.56	4.01E+001
F	3	2200-	2214	2206.88	1461.16	2.01	1.40E+002	23.67	9.23E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 1/17/2005 10:16:37 AM Page 3

```
*************************************************************************
*****        B A C K G R O U N D   S U B T R A C T   R E P O R T      *****
*************************************************************************
```

Detector Name: DET06
Sample Title: 06-00130
Peak Analysis Performed on: 1/17/2005 10:16:37 AM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	352.13	6.17E+001	21.07			6.17E+001	2.11E+001
F	2	609.24	4.00E+001	15.56			4.00E+001	1.56E+001
F	3	1461.16	1.40E+002	23.67	3.86E+001	1.42E+001	1.02E+002	2.76E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:16:37 AM Page 4

```
*************************************************************************
*****  N U C L I D E   I D E N T I F I C A T I O N   R E P O R T  *****
*************************************************************************
```

Sample Title: 06-00130
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	0.995	1460.81*	10.67	5.64068E+005	1.59787E+005

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV
Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:16:37 AM Page 5

```
*************************************************************************
*****  I N T E R F E R E N C E   C O R R E C T E D   R E P O R T  *****
*************************************************************************
```

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	0.995	5.640677E+005	1.597867E+005

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 1/17/2005 10:16:37 AM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
F	1	352.13	5.1446E-002	34.13
F	2	609.24	3.3338E-002	38.90

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: 06-00130
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	2.2755E+005	2.28E+005	5.6407E+005
	CO-60	1173.22	100.00	2.0321E+004	2.03E+004	-6.8114E+002
		1332.49	100.00	2.1146E+004		1.9159E+004
	AG-108m	79.13	6.60	7.2169E+005	1.83E+004	-9.1541E+005
		433.94	90.50	1.9665E+004		-1.4592E+003
		614.28	89.80	2.4285E+004		-8.7271E+003
		722.94	90.80	1.8337E+004		5.3529E+003
	CS-134	475.35	1.46	1.2960E+006	2.10E+004	2.1133E+005
		563.23	8.38	2.2862E+005		1.6225E+004
		569.32	15.43	1.1816E+005		-2.3235E+004
		604.70	97.60	2.2067E+004		-2.7274E+003
		795.84	85.40	2.0992E+004		-1.9475E+004
		801.93	8.73	2.0444E+005		7.0133E+004
		1038.57	1.00	1.7027E+006		-1.3464E+005
		1167.94	1.80	1.0659E+006		-2.0677E+005
		1365.15	3.04	5.7311E+005		3.7303E+005
	CS-137	661.65	85.12	2.1006E+004	2.10E+004	2.8977E+003
	EU-154	123.07	40.40	6.5461E+004	5.46E+004	1.4082E+004
		247.93	6.83	3.0403E+005		-1.3423E+005
		591.76	4.91	3.6470E+005		-1.0465E+005
		692.42	1.78	1.0960E+006		8.8568E+004
		722.30	20.00	8.4577E+004		4.2513E+004
		756.86	4.50	3.7749E+005		-3.2371E+005
		873.20	12.09	1.3663E+005		5.5304E+004
		996.30	10.34	1.7673E+005		-1.6218E+004
		1004.76	17.90	9.9637E+004		-6.1475E+004
		1274.51	34.40	5.4555E+004		-1.8085E+004
		1596.45	1.80	9.1254E+005		3.9278E+005
	EU-155	60.01	1.21	5.2016E+006	1.21E+005	-1.0914E+006
		86.54	32.80	1.2117E+005		7.9890E+004
		105.31	21.80	1.4494E+005		-4.3266E+003
	TL-208	72.80	2.02	2.8472E+006	2.15E+004	3.9203E+006
		74.97	3.41	1.6151E+006		2.3651E+006
		84.90	1.51	2.7649E+006		2.9164E+006
		277.36	6.31	3.1213E+005		-1.5574E+004
		510.77	22.60	1.0335E+005		1.1340E+005
		583.19	84.50	2.1505E+004		-5.5169E+002
		763.13	1.81	9.6490E+005		-3.7029E+005
		860.56	12.42	1.3731E+005		2.9798E+004
		2614.53	99.16	2.7206E+004		2.7033E+004
	BI-214	609.31	46.30	4.6897E+004	4.69E+004	3.1388E+004
		768.36	5.04	3.7876E+005		2.0438E+005

Nuclide MDA Report 1/17/2005 10:16:38 AM Page 7

Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
BI-214	806.17	1.23	1.3841E+006	4.69E+004	-9.8798E+005
	934.06	3.21	5.3627E+005		1.8655E+005
	1120.29	15.10	1.3609E+005		7.6569E+003
	1155.19	1.69	1.1293E+006		-2.1370E+005
	1238.11	5.94	3.3753E+005		6.1375E+004
	1280.96	1.47	1.2359E+006		-2.6493E+005
	1377.67	4.11	3.8016E+005		-6.1150E+004
	1401.50	1.39	1.2165E+006		5.4248E+005
	1407.98	2.48	6.2639E+005		2.9146E+005
	1509.19	2.19	5.9556E+005		-1.0784E+005
	1661.28	1.15	1.2377E+006		4.0333E+005
	1729.60	3.05	4.3458E+005		-7.5215E+004
	1764.49	15.80	1.1890E+005		9.3012E+004
	1847.44	2.12	5.2051E+005		-5.2885E+004
	2118.54	1.21	9.4681E+005		-1.4433E+006
PB-214	74.81	6.33	8.6719E+005	5.66E+004	1.0896E+006
	77.11	10.70	4.9251E+005		7.0715E+005
	87.20	3.70	1.0522E+006		5.9879E+005
	89.80	1.03	3.6461E+006		2.4047E+006
	241.98	7.49	2.9425E+005		6.0635E+004
	295.21	19.20	1.0106E+005		3.8160E+004
	351.92	37.20	5.6625E+004		6.9304E+004
	785.91	1.10	1.6208E+006		-7.2395E+005
TH-234	63.29	4.50	1.3600E+006	1.35E+006	3.4905E+005
	92.38	2.60	1.3690E+006		-6.7394E+005
	92.80	2.60	1.3545E+006		-7.5299E+005

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

```
*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00131.CNF

Report Generated On	: 1/17/2005 10:26:02 AM
Sample Title	: 06-00131
Sample Description	: With Digital inspector
Sample Identification	: 06-00131
Sample Type	: rck
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 1/13/2005 2:42:00 PM
Acquisition Started	: 1/13/2005 2:45:16 PM
Live Time	: 1200.0 seconds
Real Time	: 1202.8 seconds
Dead Time	: 0.23 %

Energy Calibration Used Done On	: 1/11/2005
Efficiency Calibration Used Done On	: 1/17/2005
Efficiency ID	: 3953-GEOM21

TSB
5-24-05

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00131
Peak Analysis Performed on: 1/17/2005 10:26:01 AM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	108-	118	113.75	75.35	1.22	3.22E+002	62.55	1.56E+003
F	2	125-	133	128.38	85.04	0.91	1.76E+002	55.09	1.41E+003
F	3	357-	366	360.52	238.73	1.43	1.34E+002	39.83	4.57E+002
F	4	440-	451	446.03	295.34	1.43	8.52E+001	32.15	3.86E+002
F	5	527-	536	531.52	351.95	1.51	1.48E+002	32.67	2.11E+002
F	6	915-	925	920.14	609.24	1.44	1.75E+002	30.32	1.16E+002
F	7	993-	1003	999.45	661.75	1.67	1.42E+002	28.07	9.59E+001
F	8	1373-	1380	1376.05	911.09	1.54	3.30E+001	16.84	5.41E+001
	9	1459-	1468	1463.78	969.17	1.76	2.26E+001	24.55	5.84E+001
F	10	1688-	1695	1691.98	1120.27	1.49	4.07E+001	17.18	4.71E+001
F	11	1866-	1874	1870.26	1238.30	1.42	3.71E+001	16.41	5.26E+001
F	12	2008-	2017	2012.85	1332.70	1.36	4.36E+001	14.69	2.33E+001
F	13	2200-	2213	2206.77	1461.10	2.02	6.64E+002	52.69	1.24E+001
F	14	2661-	2671	2666.01	1765.14	2.26	5.94E+001	15.98	7.14E+000
F	15	3947-	3957	3951.98	2616.56	2.22	6.49E+001	16.30	3.97E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 1/17/2005 10:26:02 AM Page 3

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET06
Sample Title: 06-00131
Peak Analysis Performed on: 1/17/2005 10:26:01 AM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	75.35	3.22E+002	62.55	3.63E+001	3.12E+001	2.86E+002	6.99E+001
F	2	85.04	1.76E+002	55.09	4.53E+001	2.69E+001	1.31E+002	6.13E+001
F	3	238.73	1.34E+002	39.83			1.34E+002	3.98E+001
F	4	295.34	8.52E+001	32.15			8.52E+001	3.22E+001
F	5	351.95	1.48E+002	32.67			1.48E+002	3.27E+001
F	6	609.24	1.75E+002	30.32			1.75E+002	3.03E+001
F	7	661.75	1.42E+002	28.07			1.42E+002	2.81E+001
F	8	911.09	3.30E+001	16.84			3.30E+001	1.68E+001
	9	969.17	2.26E+001	24.55			2.26E+001	2.45E+001
F	10	1120.27	4.07E+001	17.18			4.07E+001	1.72E+001
F	11	1238.30	3.71E+001	16.41			3.71E+001	1.64E+001
F	12	1332.70	4.36E+001	14.69	1.72E+001	1.44E+001	2.64E+001	2.06E+001
F	13	1461.10	6.64E+002	52.69	3.86E+001	1.42E+001	6.26E+002	5.46E+001
F	14	1765.14	5.94E+001	15.98	1.30E+001	9.00E+000	4.64E+001	1.83E+001
F	15	2616.56	6.49E+001	16.30	6.11E+000	7.40E+000	5.88E+001	1.79E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:26:02 AM Page 4

****
***** N U C L I D E I D E N T I F I C A T I O N R E P O R T *****
****

Sample Title: 06-00131
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	0.997	1460.81*	10.67	1.34874E+006	1.60506E+005
CS-137	1.000	661.65*	85.12	2.91533E+004	6.71579E+003
PB-212	0.511	74.81*	9.60	7.79796E+005	2.44564E+005
		77.11	17.50		
		87.20	6.30		
		89.80	1.75		
		238.63*	44.60	3.63390E+004	1.21777E+004
		300.09	3.41		
BI-214	0.589	609.31*	46.30	6.39056E+004	1.35904E+004
		768.36	5.04		
		806.17	1.23		
		934.06	3.21		
		1120.29*	15.10	5.61334E+004	2.41782E+004
		1155.19	1.69		
		1238.11*	5.94	1.34969E+005	6.06589E+004
		1280.96	1.47		
		1377.67	4.11		
		1401.50	1.39		
		1407.98	2.48		
		1509.19	2.19		
		1661.28	1.15		
		1729.60	3.05		
		1764.49*	15.80	7.29101E+004	2.93593E+004
		1847.44	2.12		
		2118.54	1.21		
PB-214	0.589	74.81*	6.33	1.18263E+006	3.70903E+005
		77.11	10.70		
		87.20	3.70		
		89.80	1.03		
		241.98	7.49		
		295.21*	19.20	5.73371E+004	2.34267E+004
		351.92*	37.20	5.45452E+004	1.47468E+004
		785.91	1.10		

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV
Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 1/17/2005 10:26:02 AM Page 5

****
***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	0.997	1.348740E+006	1.605056E+005
CS-137	1.000	2.915335E+004	6.715788E+003
PB-212	0.511	3.808555E+004	1.216260E+004
BI-214	0.589	6.582978E+004	1.081048E+004
PB-214	0.589	5.654706E+004	1.247298E+004

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 1/17/2005 10:26:01 AM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
F	2	85.04	1.0891E-001	46.93
F	8	911.09	2.7529E-002	50.97
	9	969.17	1.8827E-002	108.66
F	12	1332.70	2.1972E-002	78.14
F	15	2616.56	4.8975E-002	30.47

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: 06-00131
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	9.1204E+004	9.12E+004	1.3487E+006
	CO-60	1173.22	100.00	1.5882E+004	1.29E+004	2.1580E+004
		1332.49	100.00	1.2860E+004		1.2152E+004
	AG-108m	79.13	6.60	8.8100E+005	1.45E+004	-4.7133E+005
		433.94	90.50	1.5109E+004		-1.0888E+004
		614.28	89.80	1.9056E+004		-2.1798E+003
		722.94	90.80	1.4525E+004		1.6279E+003
	CS-134	475.35	1.46	9.4690E+005	1.48E+004	4.6352E+005
		563.23	8.38	1.6819E+005		7.7360E+004
		569.32	15.43	9.0950E+004		3.9904E+004
		604.70	97.60	1.7422E+004		-9.5112E+002
		795.84	85.40	1.4783E+004		-4.2687E+003
		801.93	8.73	1.4333E+005		2.6487E+003
		1038.57	1.00	1.2306E+006		6.0190E+005
		1167.94	1.80	8.6246E+005		6.7902E+005
		1365.15	3.04	3.0980E+005		-3.0590E+003
+	CS-137	661.65*	85.12	1.1503E+004	1.15E+004	2.9153E+004
	EU-154	123.07	40.40	6.5101E+004	3.51E+004	-3.5492E+003
		247.93	6.83	2.5743E+005		-1.2656E+005
		591.76	4.91	2.7135E+005		-3.0214E+005
		692.42	1.78	6.8510E+005		-2.1198E+005
		722.30	20.00	6.5769E+004		-1.0633E+004
		756.86	4.50	2.6959E+005		1.4686E+005
		873.20	12.09	1.0665E+005		8.3497E+004
		996.30	10.34	1.0219E+005		-1.3636E+003
		1004.76	17.90	5.9500E+004		-3.5432E+004
		1274.51	34.40	3.5070E+004		-7.3589E+003
		1596.45	1.80	4.3405E+005		2.2261E+005
	EU-155	60.01	1.21	7.7569E+006	1.35E+005	-8.4620E+005
		86.54	32.80	1.3489E+005		1.2689E+005
		105.31	21.80	1.4986E+005		-4.6971E+004
	TL-208	72.80	2.02	3.6442E+006	1.41E+004	-1.8476E+006
		74.97	3.41	2.0236E+006		4.2319E+006
		84.90	1.51	3.1006E+006		3.3672E+006
		277.36	6.31	2.5408E+005		-1.2435E+005
		510.77	22.60	6.7967E+004		6.8053E+004
		583.19	84.50	1.7768E+004		1.5874E+004
		763.13	1.81	6.5212E+005		-3.6017E+005
		860.56	12.42	9.8077E+004		-6.3039E+004
		2614.53	99.16	1.4104E+004		2.2688E+004
+	BI-214	609.31*	46.30	2.2441E+004	2.24E+004	6.3906E+004
		768.36	5.04	2.4245E+005		-3.2798E+004

Nuclide MDA Report 1/17/2005 10:26:02 AM Page 7

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	BI-214	806.17	1.23	1.0073E+006	2.24E+004	2.4100E+005
		934.06	3.21	3.7030E+005		6.4601E+004
		1120.29*	15.10	5.1248E+004		5.6133E+004
		1155.19	1.69	7.5116E+005		-6.3771E+005
		1238.11*	5.94	1.4619E+005		1.3497E+005
		1280.96	1.47	7.9722E+005		3.2034E+005
		1377.67	4.11	2.3675E+005		2.2678E+004
		1401.50	1.39	6.5320E+005		4.2686E+005
		1407.98	2.48	3.4812E+005		9.5562E+004
		1509.19	2.19	3.6175E+005		2.5103E+005
		1661.28	1.15	5.5369E+005		3.0005E+005
		1729.60	3.05	2.3236E+005		3.0255E+004
		1764.49*	15.80	4.4385E+004		7.2910E+004
		1847.44	2.12	3.3769E+005		7.4069E+004
		2118.54	1.21	5.5221E+005		-1.4235E+005
+	PB-214	74.81*	6.33	9.3570E+005	2.92E+004	1.1826E+006
		77.11	10.70	6.0106E+005		-8.3574E+004
		87.20	3.70	1.1663E+006		6.9450E+005
		89.80	1.03	4.0074E+006		-9.2513E+005
		241.98	7.49	2.6146E+005		3.4861E+005
		295.21*	19.20	7.5251E+004		5.7337E+004
		351.92*	37.20	2.9234E+004		5.4545E+004
		785.91	1.10	1.1653E+006		-2.6984E+005
	TH-234	63.29	4.50	1.8787E+006	1.47E+006	-8.4096E+005
		92.38	2.60	1.4840E+006		-5.2120E+005
		92.80	2.60	1.4727E+006		-4.6290E+005

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

```
*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00137.CNF

Report Generated On	: 4/13/2005 1:06:56 PM
Sample Title	: WDB location 1
Sample Description	: 90 deg collimator
Sample Identification	: wdb1
Sample Type	: 90d
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 4/13/2005 10:36:00 AM
Acquisition Started	: 4/13/2005 10:35:44 AM
Live Time	: 900.0 seconds
Real Time	: 901.1 seconds
Dead Time	: 0.13 %

Energy Calibration Used Done On	: 4/13/2005
Efficiency Calibration Used Done On	: 4/13/2005
Efficiency ID	: 3953-GEOM22

TSB
4-13-05

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: WDB location 1
Peak Analysis Performed on: 4/13/2005 1:06:55 PM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	112-	119	115.71	76.35	0.85	1.55E+002	42.67	6.61E+002
F	2	358-	366	362.81	240.02	0.90	1.16E+002	32.62	3.23E+002
F	3	443-	451	448.31	296.66	0.74	5.91E+001	19.88	1.92E+002
F	4	529-	538	533.74	353.24	1.28	1.65E+002	30.77	1.54E+002
F	5	878-	887	882.88	584.50	1.42	8.18E+001	21.88	7.52E+001
F	6	917-	927	922.55	610.78	1.22	1.82E+002	28.14	5.22E+001
F	7	1373-	1383	1378.10	912.53	1.60	5.87E+001	17.91	3.97E+001
F	8	1691-	1699	1693.93	1121.73	1.13	3.51E+001	14.11	3.42E+001
F	9	2203-	2213	2207.86	1462.14	1.83	4.59E+002	43.77	1.22E+001
F	10	2661-	2670	2666.23	1765.75	1.71	5.00E+001	14.90	8.75E+000
F	11	3944-	3955	3949.35	2615.66	2.11	5.25E+001	14.20	0.00E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 4/13/2005 1:06:56 PM Page 3

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET06
Sample Title: WDB location 1
Peak Analysis Performed on: 4/13/2005 1:06:55 PM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	76.35	1.55E+002	42.67	4.77E+001	2.43E+001	1.08E+002	4.91E+001
F	2	240.02	1.16E+002	32.62			1.16E+002	3.26E+001
F	3	296.66	5.91E+001	19.88			5.91E+001	1.99E+001
F	4	353.24	1.65E+002	30.77			1.65E+002	3.08E+001
F	5	584.50	8.18E+001	21.88			8.18E+001	2.19E+001
F	6	610.78	1.82E+002	28.14			1.82E+002	2.81E+001
F	7	912.53	5.87E+001	17.91			5.87E+001	1.79E+001
F	8	1121.73	3.51E+001	14.11			3.51E+001	1.41E+001
F	9	1462.14	4.59E+002	43.77	3.78E+001	1.36E+001	4.21E+002	4.58E+001
F	10	1765.75	5.00E+001	14.90			5.00E+001	1.49E+001
F	11	2615.66	5.25E+001	14.20	1.70E+001	8.08E+000	3.55E+001	1.63E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 4/13/2005 1:06:56 PM Page 4

```
*************************************************************************
*****  N U C L I D E   I D E N T I F I C A T I O N   R E P O R T  *****
*************************************************************************
```

Sample Title: WDB location 1
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	0.932	1460.81*	10.67	3.90912E+006	5.30246E+005
TL-208	0.584	72.80	2.02		
		74.97*	3.41	2.64088E+006	1.32337E+006
		84.90	1.51		
		277.36	6.31		
		510.77	22.60		
		583.19*	84.50	6.64011E+004	1.96559E+004
		763.13	1.81		
		860.56	12.42		
		2614.53*	99.16	5.04544E+004	2.35864E+004
PB-212	0.581	74.81	9.60		
		77.11*	17.50	5.14595E+005	2.55808E+005
		87.20	6.30		
		89.80	1.75		
		238.63*	44.60	1.27138E+005	4.10288E+004
		300.09	3.41		
BI-214	0.461	609.31*	46.30	2.75246E+005	5.43003E+004
		768.36	5.04		
		806.17	1.23		
		934.06	3.21		
		1120.29*	15.10	2.01353E+005	8.27410E+004
		1155.19	1.69		
		1238.11	5.94		
		1280.96	1.47		
		1377.67	4.11		
		1401.50	1.39		
		1407.98	2.48		
		1509.19	2.19		
		1661.28	1.15		
		1729.60	3.05		
		1764.49*	15.80	3.44457E+005	1.06178E+005
		1847.44	2.12		
		2118.54	1.21		
PB-214	0.738	74.81	6.33		
		77.11*	10.70	8.41627E+005	4.18377E+005
		87.20	3.70		
		89.80	1.03		
		241.98*	7.49	7.57054E+005	2.44311E+005
		295.21*	19.20	1.62060E+005	6.01410E+004
		351.92*	37.20	2.47918E+005	6.03626E+004
		785.91	1.10		

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV

Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 4/13/2005 1:06:56 PM Page 6

****
***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	0.932	3.909119E+006	5.302461E+005
TL-208	0.584	6.006421E+004	1.508552E+004
PB-212	0.581	9.927570E+004	4.121944E+004
BI-214	0.461	2.671365E+005	4.174196E+004
PB-214	0.738	2.082299E+005	4.249141E+004

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 4/13/2005 1:06:55 PM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty	
F	7	912.53	6.5176E-002	30.54	Ac-228

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: WDB location 1
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	3.7671E+005	3.77E+005	3.9091E+006
	CO-60	1173.22	100.00	3.6779E+004	3.36E+004	-1.6609E+004
		1332.49	100.00	3.3610E+004		2.3641E+002
	AG-108m	79.13	6.60	1.7665E+006	3.72E+004	-5.3224E+005
		433.94	90.50	4.0589E+004		-1.4296E+004
		614.28	89.80	6.5178E+004		-1.1411E+004
		722.94	90.80	3.7207E+004		-3.3082E+004
	CS-134	475.35	1.46	2.5698E+006	3.85E+004	-3.7633E+005
		563.23	8.38	4.6543E+005		1.4126E+005
		569.32	15.43	2.4694E+005		-1.9150E+004
		604.70	97.60	3.8546E+004		4.9057E+003
		795.84	85.40	4.6405E+004		1.5516E+004
		801.93	8.73	4.0789E+005		-1.1928E+005
		1038.57	1.00	3.4908E+006		1.0673E+005
		1167.94	1.80	1.9116E+006		-1.4567E+006
		1365.15	3.04	8.7622E+005		-2.5976E+005
	CS-137	661.65	85.12	4.4051E+004	4.41E+004	1.3621E+004
	EU-154	123.07	40.40	1.4599E+005	9.93E+004	-2.5908E+004
		247.93	6.83	7.4999E+005		-2.2175E+005
		591.76	4.91	7.4552E+005		-4.7399E+005
		692.42	1.78	2.1892E+006		8.5906E+005
		722.30	20.00	1.7313E+005		-6.4856E+004
		756.86	4.50	8.7480E+005		3.7634E+005
		873.20	12.09	2.7130E+005		-2.5595E+004
		996.30	10.34	3.0569E+005		-1.0149E+005
		1004.76	17.90	1.9267E+005		-2.6955E+004
		1274.51	34.40	9.9276E+004		2.4521E+004
		1596.45	1.80	1.2795E+006		-6.1347E+004
	EU-155	60.01	1.21	1.3264E+007	2.85E+005	-5.5467E+006
		86.54	32.80	2.8514E+005		1.7681E+005
		105.31	21.80	3.2887E+005		1.4616E+003
+	TL-208	72.80	2.02	6.3800E+006	3.34E+004	-3.2690E+006
		74.97*	3.41	3.4580E+006		2.6409E+006
		84.90	1.51	6.3524E+006		8.7325E+005
		277.36	6.31	7.5887E+005		2.8117E+004
		510.77	22.60	2.0179E+005		2.1193E+005
		583.19*	84.50	3.9869E+004		6.6401E+004
		763.13	1.81	1.9711E+006		-2.5553E+006
		860.56	12.42	2.8421E+005		1.1773E+004
		2614.53*	99.16	3.3422E+004		5.0454E+004
+	BI-214	609.31*	46.30	6.3489E+004	6.35E+004	2.7525E+005
		768.36	5.04	7.7734E+005		4.0180E+005

Nuclide MDA Report 4/13/2005 1:06:56 PM Page 8

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	BI-214	806.17	1.23	2.8278E+006	6.35E+004	9.2351E+005
		934.06	3.21	1.2168E+006		1.1826E+006
		1120.29*	15.10	1.9081E+005		2.0135E+005
		1155.19	1.69	2.1475E+006		-2.2678E+005
		1238.11	5.94	7.3223E+005		2.2830E+005
		1280.96	1.47	2.3069E+006		-2.4318E+005
		1377.67	4.11	8.1365E+005		2.7747E+005
		1401.50	1.39	2.1379E+006		-2.9879E+005
		1407.98	2.48	1.3932E+006		5.7679E+005
		1509.19	2.19	1.1588E+006		2.6426E+005
		1661.28	1.15	2.1568E+006		4.8212E+005
		1729.60	3.05	9.1019E+005		6.4311E+005
		1764.49*	15.80	1.2826E+005		3.4446E+005
		1847.44	2.12	9.8462E+005		1.3538E+005
		2118.54	1.21	2.0992E+006		1.0496E+006
+	PB-214	74.81	6.33	2.1283E+006	1.03E+005	-6.6534E+005
		77.11*	10.70	1.1020E+006		8.4163E+005
		87.20	3.70	2.4745E+006		1.6263E+006
		89.80	1.03	8.3010E+006		1.8578E+006
		241.98*	7.49	6.2164E+005		7.5705E+005
		295.21*	19.20	2.0294E+005		1.6206E+005
		351.92*	37.20	1.0255E+005		2.4792E+005
		785.91	1.10	3.0950E+006		-4.2945E+005
	TH-234	63.29	4.50	3.3010E+006	3.05E+006	1.3581E+005
		92.38	2.60	3.0925E+006		-2.1387E+006
		92.80	2.60	3.0479E+006		-2.2267E+006

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

Geometry Composer Report

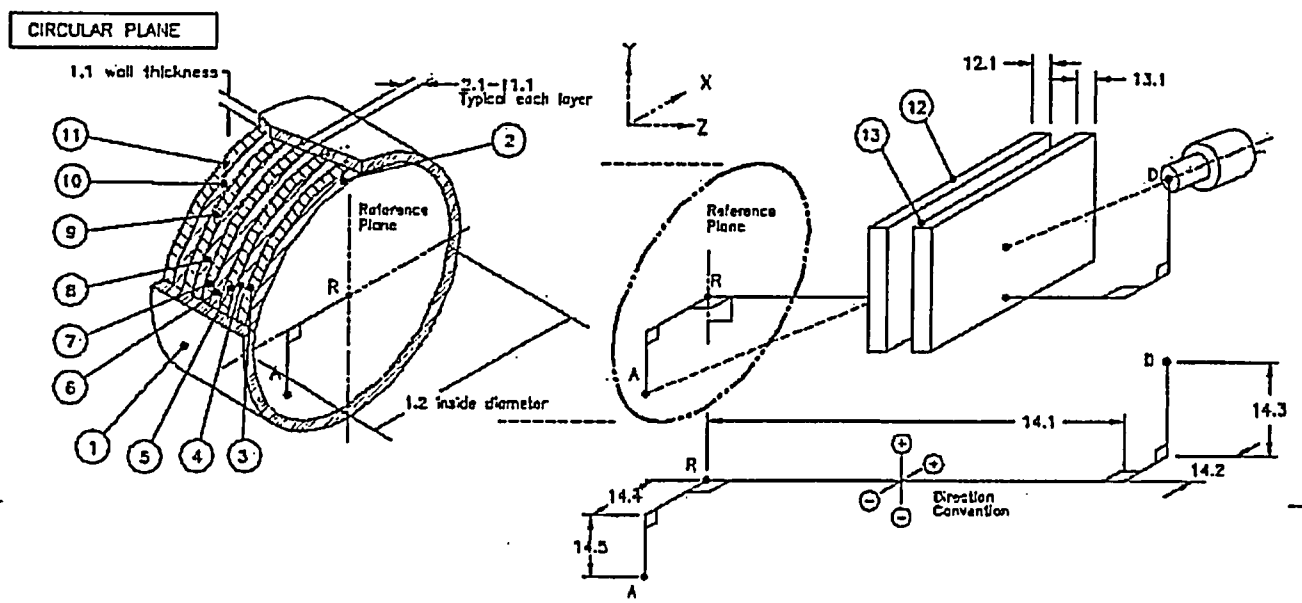
Date: Wednesday, April 13, 2005
Description: 3953-geom22
Comment: 5cm_depth
File Name: C:\GENIE2K\isocs\data\GEOMETRY\In-Situ\CIRCULAR_PLANE\3953-geom22.geo
Software: ISOCS
Template: CIRCULAR_PLANE, Version: default
Detector: 3953
Environment: Temperature= 22 C, Pressure= 760 mmHg, Rel.Humidity= 30%
Integration: Convergence= 1.00%, MDRPN= 2^(4) CRPN= 2^(4)

#	Geometry Compon.	Dimensions (m): d1	d2	d3	d4	d5	d6	Material	D(g/cm3)	R.Conc.
1	Side Walls		4.00					none		
2	Layer 1	0.05						bedrock	2.68	1.00
3	Layer 2							none		
4	Layer 3							none		
5	Layer 4							none		
6	Layer 5							none		
7	Layer 6							none		
8	Layer 7							none		
9	Layer 8							none		
10	Layer 9							none		
11	Layer 10							none		
12	Absorber1							none		
13	Absorber2							none		
14	Source-Detector	2.00								

Collimator: 50mm-90d_old
oldISOCS_50mm_side_90deg_collimation_[large_hole_collimator]

List of energies for efficiency curve generation:

59.5 88.0 122.1 165.9 391.7 661.7 898.0 1173.2 1332.5 1836.0
2200.0 2700.0 3200.0 4000.0 5500.0 7000.0



```
*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00138.CNF

Report Generated On	: 4/13/2005 1:07:57 PM
Sample Title	: WDB location 2
Sample Description	: 90 deg collimator
Sample Identification	: wdb2
Sample Type	: 90d
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 4/13/2005 10:53:00 AM
Acquisition Started	: 4/13/2005 10:52:23 AM
Live Time	: 900.0 seconds
Real Time	: 901.4 seconds
Dead Time	: 0.15 %

Energy Calibration Used Done On	: 4/13/2005
Efficiency Calibration Used Done On	: 4/13/2005
Efficiency ID	: 3953-GEOM22

TSB
4-13-05

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: WDB location 2
Peak Analysis Performed on: 4/13/2005 1:07:56 PM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	111-	119	115.64	76.30	1.16	2.04E+002	51.66	9.13E+002
F	2	358-	366	362.60	239.89	1.09	1.04E+002	35.43	4.31E+002
F	3	444-	452	448.32	296.66	1.06	8.55E+001	28.99	2.77E+002
F	4	529-	538	533.67	353.20	1.22	2.00E+002	34.91	2.01E+002
F	5	878-	886	882.85	584.48	1.55	8.95E+001	23.64	7.68E+001
F	6	917-	927	922.30	610.62	1.40	2.07E+002	31.38	9.42E+001
F	7	1689-	1699	1693.82	1121.65	1.81	8.52E+001	21.34	4.68E+001
F	8	2202-	2213	2207.97	1462.21	1.86	3.76E+002	39.51	1.35E+001
F	9	2660-	2671	2666.33	1765.82	1.82	7.95E+001	17.78	4.57E+000
F	10	3944-	3955	3949.57	2615.80	2.36	8.06E+001	17.87	1.59E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 4/13/2005 1:07:57 PM Page 3

****
***** B A C K G R O U N D S U B T R A C T R E P O R T *****
****

Detector Name: DET06
Sample Title: WDB location 2
Peak Analysis Performed on: 4/13/2005 1:07:56 PM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	76.30	2.04E+002	51.66	4.77E+001	2.43E+001	1.56E+002	5.71E+001
F	2	239.89	1.04E+002	35.43			1.04E+002	3.54E+001
F	3	296.66	8.55E+001	28.99			8.55E+001	2.90E+001
F	4	353.20	2.00E+002	34.91			2.00E+002	3.49E+001
F	5	584.48	8.95E+001	23.64			8.95E+001	2.36E+001
F	6	610.62	2.07E+002	31.38			2.07E+002	3.14E+001
F	7	1121.65	8.52E+001	21.34			8.52E+001	2.13E+001
F	8	1462.21	3.76E+002	39.51	3.78E+001	1.36E+001	3.39E+002	4.18E+001
F	9	1765.82	7.95E+001	17.78			7.95E+001	1.78E+001
F	10	2615.80	8.06E+001	17.87	1.70E+001	8.08E+000	6.36E+001	1.96E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 4/13/2005 1:07:57 PM Page 4

****
***** N U C L I D E I D E N T I F I C A T I O N R E P O R T *****
****

Sample Title: WDB location 2
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	0.925	1460.81*	10.67	3.14290E+006	4.63871E+005
TL-208	0.579	72.80	2.02		
		74.97*	3.41	3.83792E+006	1.61189E+006
		84.90	1.51		
		277.36	6.31		
		510.77	22.60		
		583.19*	84.50	7.26566E+004	2.12895E+004
		763.13	1.81		
		860.56	12.42		
		2614.53*	99.16	9.05750E+004	2.87985E+004
PB-212	0.588	74.81	9.60		
		77.11*	17.50	7.47847E+005	3.10509E+005
		87.20	6.30		
		89.80	1.75		
		238.63*	44.60	1.13884E+005	4.28395E+004
		300.09	3.41		
BI-214	0.468	609.31*	46.30	3.12721E+005	6.09917E+004
		768.36	5.04		
		806.17	1.23		
		934.06	3.21		
		1120.29*	15.10	4.89035E+005	1.29174E+005
		1155.19	1.69		
		1238.11	5.94		
		1280.96	1.47		
		1377.67	4.11		
		1401.50	1.39		
		1407.98	2.48		
		1509.19	2.19		
		1661.28	1.15		
		1729.60	3.05		
		1764.49*	15.80	5.47887E+005	1.29866E+005
		1847.44	2.12		
		2118.54	1.21		
PB-214	0.600	74.81	6.33		
		77.11*	10.70	1.22311E+006	5.07841E+005
		87.20	3.70		
		89.80	1.03		
		241.98	7.49		
		295.21*	19.20	2.34356E+005	8.75699E+004
		351.92*	37.20	3.00909E+005	7.05087E+004
		785.91	1.10		

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV

Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 4/13/2005 1:07:57 PM Page 6

****
***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	0.925	3.142898E+006	4.638707E+005
TL-208	0.579	7.923437E+004	1.710146E+004
PB-212	0.588	1.222038E+005	4.244218E+004
BI-214	0.468	3.758855E+005	5.076451E+004
PB-214	0.600	2.830932E+005	5.460686E+004

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 4/13/2005 1:07:56 PM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty

All peaks were identified.

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: WDB location 2
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	3.8389E+005	3.84E+005	3.1429E+006
	CO-60	1173.22	100.00	4.2928E+004	4.12E+004	3.3081E+004
		1332.49	100.00	4.1234E+004		2.5204E+004
	AG-108m	79.13	6.60	2.0157E+006	4.06E+004	-4.1718E+005
		433.94	90.50	4.6264E+004		1.1417E+003
		614.28	89.80	7.2056E+004		3.9012E+002
		722.94	90.80	4.0605E+004		-2.5230E+004
	CS-134	475.35	1.46	2.7752E+006	4.29E+004	-1.2810E+006
		563.23	8.38	5.0185E+005		-1.5143E+005
		569.32	15.43	3.0474E+005		1.7693E+005
		604.70	97.60	4.2915E+004		2.8969E+003
		795.84	85.40	4.7305E+004		7.2430E+003
		801.93	8.73	4.4149E+005		-2.5264E+005
		1038.57	1.00	3.6996E+006		1.2329E+006
		1167.94	1.80	2.2175E+006		-1.1998E+006
		1365.15	3.04	1.0058E+006		-5.6350E+005
	CS-137	661.65	85.12	5.0954E+004	5.10E+004	1.9205E+004
	EU-154	123.07	40.40	1.6184E+005	1.17E+005	-4.2790E+004
		247.93	6.83	8.2590E+005		-3.6066E+005
		591.76	4.91	8.5717E+005		-8.9913E+005
		692.42	1.78	2.0855E+006		-1.4007E+006
		722.30	20.00	1.8429E+005		-1.2674E+005
		756.86	4.50	8.7059E+005		-5.4100E+004
		873.20	12.09	3.0096E+005		-9.0285E+004
		996.30	10.34	3.4261E+005		-1.0033E+005
		1004.76	17.90	2.0419E+005		3.0777E+004
		1274.51	34.40	1.1694E+005		-1.1998E+004
		1596.45	1.80	1.6005E+006		-9.1847E+005
	EU-155	60.01	1.21	1.4698E+007	3.18E+005	-6.5260E+006
		86.54	32.80	3.1832E+005		3.1813E+005
		105.31	21.80	3.6320E+005		-5.8668E+004
+	TL-208	72.80	2.02	7.2006E+006	3.51E+004	-2.5211E+006
		74.97*	3.41	4.0753E+006		3.8379E+006
		84.90	1.51	7.0455E+006		1.9545E+006
		277.36	6.31	8.4200E+005		3.0891E+005
		510.77	22.60	2.3359E+005		3.0404E+005
		583.19*	84.50	3.8880E+004		7.2657E+004
		763.13	1.81	2.0398E+006		-3.1543E+006
		860.56	12.42	3.3209E+005		4.1223E+004
		2614.53*	99.16	3.5144E+004		9.0575E+004
+	BI-214	609.31*	46.30	8.3703E+004	8.37E+004	3.1272E+005
		768.36	5.04	8.8050E+005		6.1626E+005

Nuclide MDA Report 4/13/2005 1:07:57 PM Page 8

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	BI-214	806.17	1.23	3.1876E+006	8.37E+004	1.3860E+006
		934.06	3.21	1.2304E+006		3.2196E+005
		1120.29*	15.10	2.3003E+005		4.8904E+005
		1155.19	1.69	2.5944E+006		9.5464E+005
		1238.11	5.94	8.5497E+005		6.2322E+005
		1280.96	1.47	2.8922E+006		-3.6186E+005
		1377.67	4.11	9.9141E+005		4.7590E+005
		1401.50	1.39	2.5061E+006		1.9545E+005
		1407.98	2.48	1.4511E+006		4.1533E+005
		1509.19	2.19	1.5623E+006		2.1830E+005
		1661.28	1.15	2.3657E+006		1.2561E+006
		1729.60	3.05	9.8323E+005		7.1546E+005
		1764.49*	15.80	1.0321E+005		5.4789E+005
		1847.44	2.12	1.2348E+006		2.6752E+005
		2118.54	1.21	2.1669E+006		-1.8633E+005
+	PB-214	74.81	6.33	2.4066E+006	1.17E+005	-4.6588E+005
		77.11*	10.70	1.2988E+006		1.2231E+006
		87.20	3.70	2.7964E+006		3.3334E+006
		89.80	1.03	9.1545E+006		-6.1574E+006
		241.98	7.49	8.9298E+005		5.3023E+004
		295.21*	19.20	2.4205E+005		2.3436E+005
		351.92*	37.20	1.1668E+005		3.0091E+005
		785.91	1.10	3.4989E+006		9.9734E+004
	TH-234	63.29	4.50	3.6710E+006	3.51E+006	4.2149E+005
		92.38	2.60	3.5672E+006		3.4979E+005
		92.80	2.60	3.5103E+006		-1.1099E+005

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

Geometry Composer Report

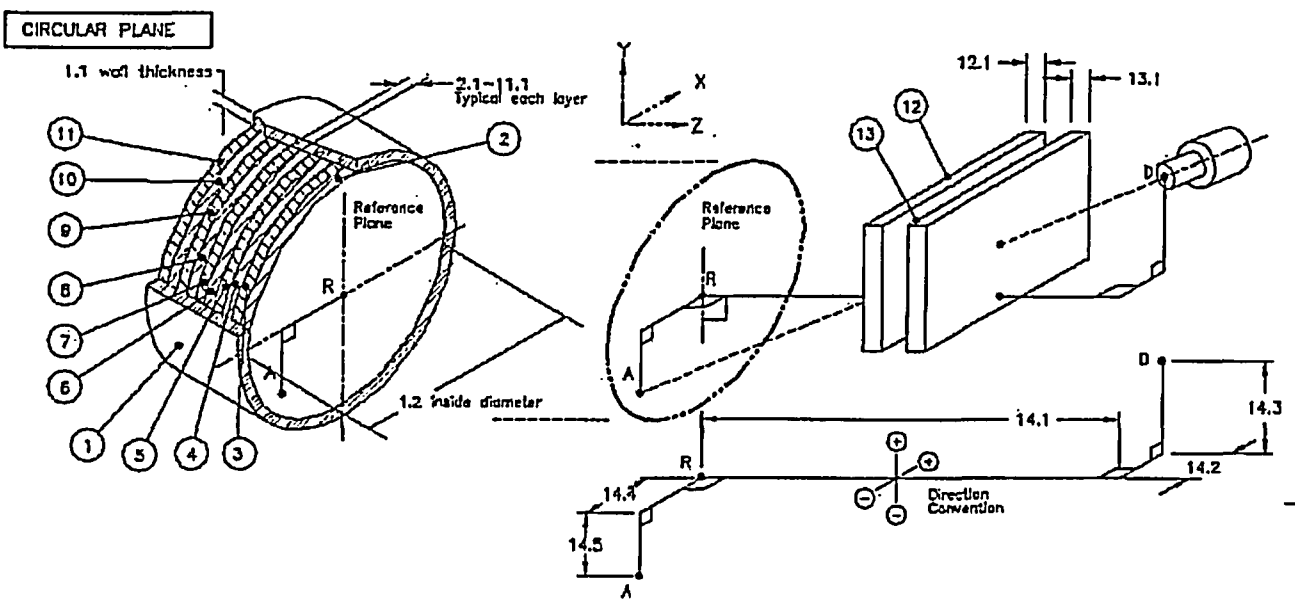
Date: Wednesday, April 13, 2005
Description: 3953-geom22
Comment: 5cm_depth
File Name: C:\GENIE2K\isocs\data\GEOMETRY\In-Situ\CIRCULAR_PLANE\3953-geom22.geo
Software: ISOCS
Template: CIRCULAR_PLANE, Version: default
Detector: 3953
Environment: Temperature= 22 C, Pressure= 760 mmHg, Rel.Humidity= 30%
Integration: Convergence= 1.00%, MDRPN= 2^(4) CRPN= 2^(4)

#	Geometry Compon.	Dimensions (m): d1	d2	d3	d4	d5	d6	Material	D(g/cm3)	R.Conc.
1	Side Walls		4.00					none		
2	Layer 1	0.05						bedrock	2.68	1.00
3	Layer 2							none		
4	Layer 3							none		
5	Layer 4							none		
6	Layer 5							none		
7	Layer 6							none		
8	Layer 7							none		
9	Layer 8							none		
10	Layer 9							none		
11	Layer 10							none		
12	Absorber1							none		
13	Absorber2							none		
14	Source-Detector	2.00								

Collimator: 50mm-90d_old
oldISOCS_50mm_side_90deg_collimation_[large_hole_collimator]

List of energies for efficiency curve generation:

59.5 88.0 122.1 165.9 391.7 661.7 898.0 1173.2 1332.5 1836.0
2200.0 2700.0 3200.0 4000.0 5500.0 7000.0



```
*************************************************************************
*****        G A M M A   S P E C T R U M   A N A L Y S I S        *****
*************************************************************************
```

Filename: C:\GENIE2K\CAMFILES\06-00139.CNF

Report Generated On	: 4/13/2005 1:13:13 PM
Sample Title	: WDB location 3
Sample Description	: 90 deg collimator
Sample Identification	: wdb3
Sample Type	: 90d
Sample Geometry	:
Peak Locate Threshold	: 4.00
Peak Locate Range (in channels)	: 60 - 4096
Peak Area Range (in channels)	: 60 - 4096
Identification Energy Tolerance	: 2.000 keV
Sample Size	: 1.000E+000 m^2
Sample Taken On	: 4/13/2005 11:09:00 AM
Acquisition Started	: 4/13/2005 11:09:34 AM
Live Time	: 900.0 seconds
Real Time	: 901.1 seconds
Dead Time	: 0.13 %

Energy Calibration Used Done On	: 4/13/2005
Efficiency Calibration Used Done On	: 4/13/2005
Efficiency ID	: 3953-GEOM23

YSB
4-13-05

****
***** P E A K A N A L Y S I S R E P O R T *****
****

Detector Name: DET06
Sample Title: WDB location 3
Peak Analysis Performed on: 4/13/2005 1:13:12 PM
Peak Analysis From Channel: 60
Peak Analysis To Channel: 4096

	Peak No.	ROI start	ROI end	Peak centroid	Energy (keV)	FWHM (keV)	Net Peak Area	Net Area Uncert.	Continuum Counts
F	1	112-	119	115.71	76.35	0.93	1.87E+002	46.22	6.85E+002
F	2	358-	366	362.73	239.97	0.83	7.46E+001	27.45	3.06E+002
F	3	444-	452	448.04	296.48	1.16	7.66E+001	26.68	2.22E+002
F	4	529-	538	533.92	353.36	1.01	1.19E+002	26.02	1.43E+002
F	5	878-	888	883.20	584.71	1.52	9.64E+001	23.36	8.02E+001
F	6	917-	927	922.40	610.68	1.37	1.64E+002	27.48	5.92E+001
F	7	996-	1006	1001.36	662.98	1.26	6.24E+001	18.61	5.81E+001
F	8	1375-	1383	1378.35	912.69	1.52	5.97E+001	18.48	4.22E+001
F	9	1462-	1469	1465.22	970.23	1.08	3.42E+001	14.56	4.07E+001
F	10	1689-	1698	1694.00	1121.77	1.39	4.66E+001	15.61	2.95E+001
F	11	2202-	2213	2207.94	1462.19	1.97	3.34E+002	36.75	8.91E+000
F	12	2662-	2670	2665.93	1765.56	1.83	5.20E+001	14.78	3.78E+000
F	13	3944-	3956	3949.61	2615.83	2.53	8.17E+001	17.75	0.00E+000

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Background Subtract Report 4/13/2005 1:13:13 PM Page 3

```
*************************************************************************
*****        B A C K G R O U N D   S U B T R A C T   R E P O R T      *****
*************************************************************************
```

Detector Name: DET06
Sample Title: WDB location 3
Peak Analysis Performed on: 4/13/2005 1:13:12 PM

Env. Background File: C:\GENIE2K\CAMFILES\PBS-06.CNF

	Peak No.	Energy (keV)	Original Area	Orig. Area Uncert.	Ambient Background	Backgr. Uncert.	Subtracted Area	Subtracted Uncert.
F	1	76.35	1.87E+002	46.22	4.77E+001	2.43E+001	1.40E+002	5.22E+001
F	2	239.97	7.46E+001	27.45			7.46E+001	2.75E+001
F	3	296.48	7.66E+001	26.68			7.66E+001	2.67E+001
F	4	353.36	1.19E+002	26.02			1.19E+002	2.60E+001
F	5	584.71	9.64E+001	23.36			9.64E+001	2.34E+001
F	6	610.68	1.64E+002	27.48			1.64E+002	2.75E+001
F	7	662.98	6.24E+001	18.61			6.24E+001	1.86E+001
F	8	912.69	5.97E+001	18.48			5.97E+001	1.85E+001
F	9	970.23	3.42E+001	14.56			3.42E+001	1.46E+001
F	10	1121.77	4.66E+001	15.61			4.66E+001	1.56E+001
F	11	1462.19	3.34E+002	36.75	3.78E+001	1.36E+001	2.96E+002	3.92E+001
F	12	1765.56	5.20E+001	14.78			5.20E+001	1.48E+001
F	13	2615.83	8.17E+001	17.75	1.70E+001	8.08E+000	6.47E+001	1.95E+001

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

Interference Corrected Activity Report 4/13/2005 1:13:13 PM Page 4

****
***** N U C L I D E I D E N T I F I C A T I O N R E P O R T *****
****

Sample Title: WDB location 3
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

..... IDENTIFIED NUCLIDES .....

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty
K-40	0.927	1460.81*	10.67	2.80589E+006	4.35135E+005
CS-137	0.931	661.65*	85.12	5.46640E+004	1.75244E+004
TL-208	0.570	72.80	2.02		
		74.97*	3.41	3.64907E+006	1.55817E+006
		84.90	1.51		
		277.36	6.31		
		510.77	22.60		
		583.19*	84.50	8.07945E+004	2.20911E+004
		763.13	1.81		
		860.56	12.42		
		2614.53*	99.16	9.35010E+004	2.91049E+004
PB-212	0.585	74.81	9.60		
		77.11*	17.50	7.11048E+005	3.00275E+005
		87.20	6.30		
		89.80	1.75		
		238.63*	44.60	8.57152E+004	3.42922E+004
		300.09	3.41		
BI-214	0.467	609.31*	46.30	2.56068E+005	5.31067E+004
		768.36	5.04		
		806.17	1.23		
		934.06	3.21		
		1120.29*	15.10	2.73637E+005	9.45386E+004
		1155.19	1.69		
		1238.11	5.94		
		1280.96	1.47		
		1377.67	4.11		
		1401.50	1.39		
		1407.98	2.48		
		1509.19	2.19		
		1661.28	1.15		
		1729.60	3.05		
		1764.49*	15.80	3.65206E+005	1.07624E+005
		1847.44	2.12		
		2118.54	1.21		
PB-214	0.599	74.81	6.33		
		77.11*	10.70	1.16293E+006	4.91103E+005
		87.20	3.70		
		89.80	1.03		
		241.98	7.49		
		295.21*	19.20	2.18847E+005	8.36043E+004
		351.92*	37.20	1.86250E+005	5.00104E+004
		785.91	1.10		

Interference Corrected Activity Report 4/13/2005 1:13:13 PM Page 5

Nuclide Name	Id Confidence	Energy (keV)	Yield (%)	Activity (pCi/m^2)	Activity Uncertainty

* = Energy line found in the spectrum.
@ = Energy line not used for Weighted Mean Activity
Energy Tolerance : 2.000 keV
Nuclide confidence index threshold = 0.40
Errors quoted at 1.960 sigma

Interference Corrected Activity Report 4/13/2005 1:13:13 PM Page 6

****
***** I N T E R F E R E N C E C O R R E C T E D R E P O R T *****
****

Nuclide Name	Nuclide Id Confidence	Wt mean Activity (pCi/m^2)	Wt mean Activity Uncertainty
K-40	0.927	2.805889E+006	4.351351E+005
CS-137	0.931	5.466402E+004	1.752436E+004
TL-208	0.570	8.574885E+004	1.757558E+004
PB-212	0.585	9.196996E+004	3.407242E+004
BI-214	0.467	2.766687E+005	4.253235E+004
PB-214	0.599	2.008302E+005	4.275712E+004

? = nuclide is part of an undetermined solution
X = nuclide rejected by the interference analysis
@ = nuclide contains energy lines not used in Weighted Mean Activity

Errors quoted at 1.960 sigma

********** U N I D E N T I F I E D P E A K S **********

Peak Locate Performed on: 4/13/2005 1:13:12 PM
Peak Locate From Channel: 60
Peak Locate To Channel: 4096

	Peak No.	Energy (keV)	Peak Size in Counts per Second	Peak CPS % Uncertainty
F	8	912.69	6.6347E-002	30.96 ? Ac-228
F	9	970.23	3.7992E-002	42.59 ?

M = First peak in a multiplet region
m = Other peak in a multiplet region
F = Fitted singlet

Errors quoted at 1.960 sigma

****
***** N U C L I D E M D A R E P O R T *****
****

Detector Name: DET06
Sample Geometry:
Sample Title: WDB location 3
Nuclide Library Used: C:\GENIE2K\CAMFILES\FSS-STD.NLB

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	K-40	1460.81*	10.67	3.7380E+005	3.74E+005	2.8059E+006
	CO-60	1173.22	100.00	4.1413E+004	4.14E+004	1.8389E+004
		1332.49	100.00	4.3551E+004		3.9895E+004
	AG-108m	79.13	6.60	1.9651E+006	3.95E+004	-5.7383E+005
		433.94	90.50	4.2930E+004		3.7691E+003
		614.28	89.80	6.7334E+004		-1.9028E+004
		722.94	90.80	3.9487E+004		-2.8999E+004
	CS-134	475.35	1.46	2.6595E+006	3.94E+004	4.9266E+003
		563.23	8.38	4.7866E+005		-5.4067E+004
		569.32	15.43	2.8823E+005		1.8084E+005
		604.70	97.60	3.9402E+004		-3.9781E+003
		795.84	85.40	4.1409E+004		-1.4041E+004
		801.93	8.73	4.2171E+005		1.1860E+004
		1038.57	1.00	3.4058E+006		-1.2084E+006
		1167.94	1.80	2.0866E+006		-2.9953E+006
		1365.15	3.04	9.2598E+005		-1.8249E+005
+	CS-137	661.65*	85.12	3.8866E+004	3.89E+004	5.4664E+004
	EU-154	123.07	40.40	1.5853E+005	9.84E+004	4.4331E+004
		247.93	6.83	7.9751E+005		5.7406E+004
		591.76	4.91	7.9019E+005		-1.3174E+005
		692.42	1.78	2.1027E+006		2.9997E+005
		722.30	20.00	1.8029E+005		-1.3827E+005
		756.86	4.50	7.9853E+005		-3.0334E+005
		873.20	12.09	3.2207E+005		1.2538E+005
		996.30	10.34	3.5867E+005		-1.4155E+005
		1004.76	17.90	2.2172E+005		4.9328E+004
		1274.51	34.40	9.8432E+004		-1.7175E+004
		1596.45	1.80	1.6887E+006		1.0820E+006
	EU-155	60.01	1.21	1.5446E+007	3.15E+005	8.7083E+006
		86.54	32.80	3.1500E+005		4.7979E+005
		105.31	21.80	3.4485E+005		-1.3760E+003
+	TL-208	72.80	2.02	7.0705E+006	3.39E+004	-3.1758E+006
		74.97*	3.41	3.7224E+006		3.6491E+006
		84.90	1.51	6.9284E+006		3.1546E+006
		277.36	6.31	7.6329E+005		1.0285E+005
		510.77	22.60	2.1810E+005		2.4087E+005
		583.19*	84.50	4.3119E+004		8.0795E+004
		763.13	1.81	2.0506E+006		-4.6777E+005
		860.56	12.42	3.0669E+005		7.3030E+004
		2614.53*	99.16	3.3924E+004		9.3501E+004
+	BI-214	609.31*	46.30	6.9474E+004	6.95E+004	2.5607E+005
		768.36	5.04	7.6722E+005		2.1248E+005

Nuclide MDA Report 4/13/2005 1:13:13 PM Page 8

	Nuclide Name	Energy (keV)	Yield (%)	Line MDA (pCi/m^2)	Nuclide MDA (pCi/m^2)	Activity (pCi/m^2)
+	BI-214	806.17	1.23	2.9980E+006	6.95E+004	1.0195E+006
		934.06	3.21	1.1214E+006		2.7841E+005
		1120.29*	15.10	1.8587E+005		2.7364E+005
		1155.19	1.69	2.3123E+006		-6.0984E+005
		1238.11	5.94	6.8591E+005		5.6917E+004
		1280.96	1.47	2.2856E+006		4.0753E+005
		1377.67	4.11	8.7564E+005		5.8344E+005
		1401.50	1.39	2.0172E+006		-6.2805E+005
		1407.98	2.48	1.3281E+006		5.2991E+005
		1509.19	2.19	1.4155E+006		2.5863E+005
		1661.28	1.15	2.0212E+006		1.7213E+005
		1729.60	3.05	9.0751E+005		3.5542E+005
		1764.49*	15.80	9.4579E+004		3.6521E+005
		1847.44	2.12	1.2570E+006		3.9434E+005
		2118.54	1.21	1.9104E+006		7.6765E+005
+	PB-214	74.81	6.33	2.3800E+006	1.03E+005	-3.5104E+005
		77.11*	10.70	1.1863E+006		1.1629E+006
		87.20	3.70	2.7353E+006		3.9825E+006
		89.80	1.03	8.6752E+006		-5.8902E+006
		241.98	7.49	8.0557E+005		-3.5948E+004
		295.21*	19.20	2.2676E+005		2.1885E+005
		351.92*	37.20	1.0297E+005		1.8625E+005
		785.91	1.10	3.4250E+006		1.1784E+006
	TH-234	63.29	4.50	3.7068E+006	3.23E+006	-3.6572E+005
		92.38	2.60	3.2864E+006		-1.9788E+006
		92.80	2.60	3.2287E+006		-2.3039E+006

+ = Nuclide identified during the nuclide identification
* = Energy line found in the spectrum
> = MDA value not calculated
@ = Half-life too short to be able to perform the decay correction

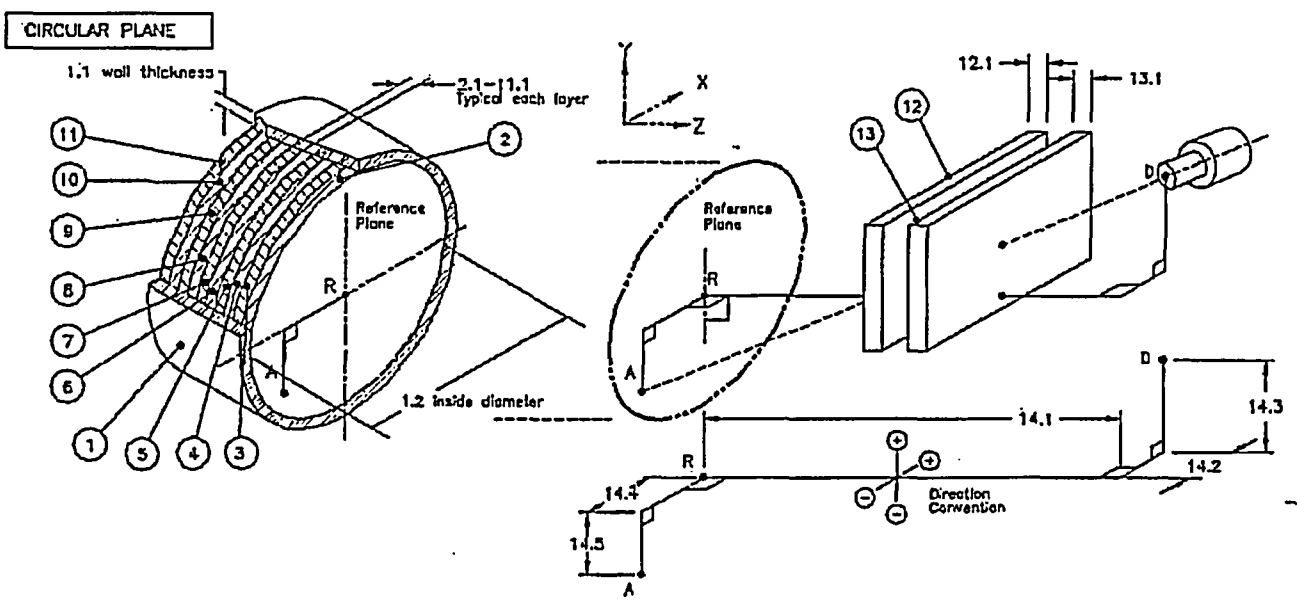
Geometry Composer Report

Date: Wednesday, April 13, 2005
Description: 3953-geom23
Comment: 5cm_depth
File Name: c:\genie2k\isocs\data\geometry\in-situ\circular_plane\3953-geom23.geo
Software: ISOCS
Template: CIRCULAR_PLANE, Version: default
Detector: 3953
Environment: Temperature= 22 C, Pressure= 760 mmHg, Rel.Humidity= 30%
Integration: Convergence= 1.00%, MDRPN= 2^(4) CRPN= 2^(4)

#	Geometry Compon.	d1	d2	d3	d4	d5	d6	Material	D(g/cm3)	R.Conc.
		Dimensions (m):								
1	Side Walls		4.00					none		
2	Layer 1	0.05						bedrock	2.68	1.00
3	Layer 2							none		
4	Layer 3							none		
5	Layer 4							none		
6	Layer 5							none		
7	Layer 6							none		
8	Layer 7							none		
9	Layer 8							none		
10	Layer 9							none		
11	Layer 10							none		
12	Absorber1	0.003						water	1.00	
13	Absorber2							none		
14	Source-Detector	2.00								

YFB 4-13-05

Collimator: 50mm-90d_old
oldISOCS_50mm_side_90deg_collimation_[large_hole_collimator]

List of energies for efficiency curve generation:

59.5 88.0 122.1 165.9 391.7 661.7 898.0 1173.2 1332.5 1836.0
2200.0 2700.0 3200.0 4000.0 5500.0 7000.0