Book 9 of 17

Final Status Survey
Final Report Phase IV

Appendix A8
Survey Unit Release Record
9106-0008, Discharge Canal

November 2006

CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
DISCHARGE CANAL
SURVEY UNIT 9106-0008

Prepared By: _____ Date: 11-14-02
FSS Engineer

Reviewed By: _____ Date: 11/14/06
FSS Engineer

Approved By: _____ Date: 11/14/06
Technical Support Manager

Revision 0

TABLE OF CONTENTS

1. SURVEY UNIT DESCRIPTION

Survey Unit 9106-0008 (Discharge Canal) is designated as Final Status Survey (FSS) Class 2 and consists of approximately 9,763 m^2 (2.41 acres) of water covered sediment in an area located approximately 0.92 miles from the reference coordinate system benchmark used at the Haddam Neck Plant (HNP) (see Attachment 1, Figure 1). The Discharge Canal is a man-made mile long waterway that runs parallel to, and ultimately communicates with the Connecticut River. The Discharge Canal is subdivided into fifteen (15) survey units including two (2) permanent wetland areas for FSS purposes. The survey unit is bounded as follows: Discharge Canal Survey Unit 9106-0007 is to the north (called north as orientated with the north to south flow of the Connecticut River), Survey Area 9523 is to the east, Discharge Canal Survey Unit 9106-0009 is to the south and South Peninsula Survey Area 9531 (formerly a part of 9530) is to the west. The survey unit comprises the canal sediments to the deeper of three feet or the original construction depth and it extends up the canal banks to the mean high water level.

The reference coordinates associated with this survey unit are E019 through E026 by S143 through S153 (refer to License Termination Plan Section 5.4.4). The reference coordinates provide the maximum dimensions of a rectangle containing this survey unit. Some areas contained in this rectangle may not be part of this survey unit. The boundary of the survey unit was defined using a Global Positioning System (GPS) based on the Connecticut State Plane System North American Datum (NAD) 1927.

2. CLASSIFICATION BASIS

The survey unit was classified in accordance with Procedure RPM 5.1-10, *"Survey Unit Classification."* The historical information, scoping analyses and characterization results provided sufficient data to designate Survey Unit 9106-0008 as Class 2 in May 2006.

The *"Classification Basis Summary"* conducted for this survey unit consisted of:

a) A review of the 10CFR50.75 (g) (1) database,

b) A review of the *"Initial Characterization Report"* and the *"Historic Site Assessment (HSA) Supplement,"*

c) Historic and current survey records review,

d) Visual inspections and a "walkdown."

e) Formal or informal interviews with cognizant personnel.

A review of the 10CFR50.75(g)(1) database report identified a number of events that may have impacted this survey unit. In 1986, samples were taken from the legacy dredge spoils removed in 1979 dredged spoils area and from recently dredged canal sediment. The sample analyses indicated that the

concentrations of Cs-137, Co-60 and other radionuclides were a small fraction of the DCGLs for those nuclides that could be identified by gamma spectroscopy. (refer to NE-86-RA-1142 dated 11-13-86). None the available historical information reviewed would support a conclusion that any residual activity in this survey unit is likely to be present at concentrations greater than the respective DCGLs.

Additional information was provided by several historical documents, including the *"Results of Scoping Survey"*, (completed 9/1/98), the *"Historical Site Assessment"*, and the HSA Supplement (dated 6-30-00). These documents presented the results of several sediment samples taken in 1997. These sample results indicated concentrations of 0.5 ρCi/g for Co-60, 0.024ρCi/g for Cs-134 and 0.722 ρCi/g for Cs-137.

An initial characterization survey was implemented during April and May of 2004. However, none of the sampling fell inside the footprint of 9106-0008. In an adjacent Survey Unit (9106-0009) six (6) samples from three (3) locations were obtained by biased sampling throughout the area. The samples were analyzed off-site by gamma spectroscopy and with radiochemical analyses for Sr-90 and Tritium. Hard-to-Detect analyses were also conducted on one (1) of the six (6) samples. The only plant-related dosimetrically significant radionuclides identified in the samples were Cs-137, Cobalt-60 and Ni-63. No samples indicated radioactive material in quantities above the ten (10) mrem/yr design DCGL. Cobalt-60 accounted for the majority of the dose in these samples with a maximum concentration of 0.57 pCi/g.

A final characterization was performed by Site Closure personnel in April of 2006. Six (6) sediment samples from six (6) locations were taken. All of the samples were analyzed by gamma spectroscopy. Based on the initial and final characterization results, the radionuclides of concern identified in the sample data for FSS planning purposes were Cesium-137, Cobalt-60 and Ni-63. Since HTD analyses were not performed for all radionuclides of interest during characterization, additional HTD analyses were performed as a part of the FSS. The statistics for each of the radionuclides of concern are listed in Table 1. Additionally, since Sr-90 was a radionuclide of concern in an adjacent Survey Unit (9106-0007), it was decided that testing for this isotope was an appropriate conservatism.

Table 1 – Basic Statistical Quantities for Cs-137, Co-60 and Ni-63 from the Characterization Survey

Parameter	Cs-137 (pCi/g)	Co-60 (pCi/g)	Ni-63 (pCi/g)
Minimum Value:	-4.53E-03	-3.24E-04	-1.68E+00
Maximum Value:	2.51E-01	5.87E-01	3.47E+01
Mean:	1.39E-01	3.28E-01	1.65E+01
Median:	1.42E-01	3.10E-01	1.65E+01
Standard Deviation:	9.84E-02	2.09E-01	2.57E+01

NOTE: The Operational DCGLs are 6.01 pCi/g for Cs-137, 2.90 pCi/g for Co-60 and 549 for Ni-63; these are used in conjunction with the unity rule to achieve nineteen (19) mrem/yr TEDE.

The FSS Engineer performed a visual inspection and walk-down during May 2006 to assess the physical condition of the survey unit, evaluate access points and travel paths and identify potentially hazardous conditions.

Based upon the historical information and the results of radiological surveys performed during characterization, it was concluded that there was a low probability for residual radioactivity to be present in this survey unit in concentrations greater than the Operational DCGLs justifying a final survey unit classification of Class 2 (refer to Section 3).

3. DATA QUALITY OBJECTIVES (DQO)

FSS design and planning is based on the Data Quality Objective (DQO) process as described by the LTP, Procedure RPM 5.1-11, *"Preparation of Final Status Survey Plan,"* and the *"Multi-Agency Radiation Survey and Site Investigation Manual"* (MARSSIM). A summary of the main features of the DQO process are provided herein.

The DQO process incorporates hypothesis testing and probabilistic sampling distributions to control decision errors during data analysis. Hypothesis testing is a process based on the scientific method that compares a baseline condition to an alternate condition. The baseline condition is technically known as the null hypothesis. Hypothesis testing rests on the premise that the null hypothesis is true and that sufficient evidence must be provided for rejection. In designing the survey plan, the underlying assumption, or null hypothesis was that residual activity in the survey unit exceeded the release criteria. Rejection of the null hypothesis would satisfy the release criteria objective of the FSS.

The primary objective of the Final Status Survey Plan (FSSP) was to demonstrate that the level of residual radioactivity in Survey Unit 9106-0008 did not exceed the release criteria specified in the LTP and that the potential dose from residual radioactivity is As Low As Reasonably Achievable (ALARA).

A fundamental precursor to survey design is to establish a relationship between the release criteria and some measurable quantity. This is done through the development of Derived Concentration Guideline Levels (DCGLs). The DCGLs represent the concentration of radioactivity above background, equivalent to a dose-based release criterion and is presented in terms of surface or mass activity concentrations. Chapter 6 of the LTP describes in detail the modeling used to develop the DCGLs for soil (called Base Case Soil DCGL), for existing groundwater radioactivity and for future groundwater radioactivity that will be contributed by building foundations and footings.

As described in detail in the LTP, the dose model applied to the discharge canal presumes that the canal sediments are dredged to a depth of three (3) feet below the top of the sediment layer and spread for the planting of crops per the Resident Farmer Scenario. Consequently, the soil DCGLs are directly applied to the canal sediment media.

The DCGLs presented in Chapter 6 of the LTP were developed for exposures from three (3) components, that is, residual radioactivity in soil, existing groundwater radioactivity, and future groundwater radioactivity from the burial of concrete foundations or footings from site buildings containing residual radioactivity. Equation 1 shows the mathematical relationship between the three (3) components and the total dose.

Equation 1:

$$H_{Total} = H_{Soil\ (sediment)} + H_{Existing\ GW} + H_{Future\ GW}$$

The total dose under the LTP criteria is twenty-five (25) mrem/yr TEDE from all three components. The allowable total dose under the Connecticut Department of Environmental Protection (CTDEP) radiological remediation standard for Connecticut Yankee (CY) is nineteen (19) mrem/yr TEDE. To satisfy both the LTP and CY CTDEP criteria, the dose from soil must be reduced when using the groundwater dose values discussed above.

This survey unit is not affected by either existing groundwater or by future groundwater (reference CY memo ISC 06-024). Therefore, dose contribution from both existing and future groundwater is zero (0) mrem/yr TEDE, based on field data.

Equation 2:

$$19\ mrem/yr_{Total} = 19\ mrem/yr_{Soil} + 0\ mrem/yr_{Existing\ GW} + 0\ mrem/yr_{Future\ GW}$$

The allowable dose for sediment in this survey unit is nineteen (19) mrem/yr TEDE as shown by Equation 2 above. The concentration of residual radioactivity resulting in nineteen (19) mrem/yr TEDE is designated as the Operational DCGL, and has been established for the radionuclides of concern

as provided in Table 2. Note: the survey design used a much smaller value for investigation than the Operational DCGL provided by Table 2 to conservatively account for the contribution to the total dose from existing and future groundwater which had not been established at the time of planning the FSS.

Table 2 – Radionuclide Specific Base Case Soil DCGL, Operational DCGLs and Required Minimum Detectable Concentrations

Radionuclide [1]	Base Case Soil DCGL (pCi/g) [2]	Operational DCGL (pCi/g) [3]	Required MDC (pCi/g) [4]
H-3	4.12E+02	3.13E+02	1.65E+01
C-14	5.66E+00	4.30E+00	2.26E-01
Mn-54	1.74E+01	1.32E+01	6.96E-01
Fe-55	2.74E+04	2.08E+04	1.10E+03
Co-60	3.81E+00	2.90E+00	1.52E-01
Ni-63	7.23E+02	5.49E+02	2.89E+01
Sr-90	1.55E+00	1.18E+00	6.20E-02
Nb-94	7.12E+00	5.41E+00	2.85E-01
Tc-99	1.26E+01	9.58E+00	5.04E-01
Ag-108m	7.14E+00	5.43E+00	2.86E-01
Cs-134	4.67E+00	3.55E+00	1.87E-01
Cs-137	7.91E+00	6.01E+00	3.16E-01
Eu-152	1.01E+01	7.68E+00	4.04E-01
Eu-154	9.29E+00	7.06E+00	3.72E-01
Eu-155	3.92E+02	2.98E+02	1.57E+01
Pu-238	2.96E+01	2.25E+01	1.18E+00
Pu-239/240	2.67E+01	2.03E+01	1.07E+00
Pu-241	8.70E+02	6.61E+02	3.48E+01
Am-241 [5]	2.58E+01	1.96E+01	1.03E+00
Cm-243/244	2.90E+01	2.20E+01	1.16E+00

(1) **Bold** indicates those radionuclides considered to be Hard to Detect (HTD)

(2) The Base Case Soil DCGLs for soil are specified by the LTP in Chapter 6 and are equivalent to twenty-five (25) mrem/yr TEDE

(3) The Operational DCGL is equivalent to nineteen (19) mrem/yr TEDE

(4) The required MDC is equivalent to one (1) mrem/yr TEDE

(5) Americium-241 can be analyzed by gamma and alpha spectroscopy and is considered to be Easy to Detect (ETD). The preferred result is the alpha spectroscopy's when both analyses are performed.

Another important facet of the DQO process is to identify the radionuclides of concern and determine the concentration variability. Characterization was completed in April of 2006 as discussed in Section 2. Cesium-137, Cobalt-60

and Nickel-63 were found to be the predominate radionuclides of concern. The basic statistical quantities (i.e., mean, standard deviation, median) for Cs-137, Co-60 and Ni-63 are provided in Table 1.

Laboratory DQOs and analysis results were to be reported as actual calculated results. Results reported as less than Minimum Detectable Concentration (<MDC) would not be accepted for FSS. Sample report summaries were to include unique sample identification, analytical method, radionuclide, result, and uncertainty of two standard deviations, laboratory data qualifiers, units, and the required and observed MDC.

4. SURVEY DESIGN

The level of effort associated with planning a survey is based on the complexity of the survey and nature of the hazards. To assist the FSS Engineers when preparing survey plans for FSS, guidance is provided in Procedure RPM 5.1-11, *"Preparation of Final Status Survey Plans"*. By design, the FSSP meets the ALARA criteria for soils as specified in Chapter 4 of the LTP. The FSSP uses an integrated sample design that combines scanning surveys and sampling which can be either random or biased.

Characterization was performed by Site Closure personnel in April and May 2006 to determine existing conditions and obtain radiological data for Final Status Survey (FSS). The DQO process determined that Cs-137, Co-60, Sr-90 and Ni-63 would be the radionuclides of concern (refer to Section 3). The sum of fractions or unity rule would be used with the individual Operational DCGLs because multiple radionuclides (Cs-137, Co-60, Sr-90 and Ni-63) were considered in the survey design. Other radionuclides identified during FSS would be evaluated to ensure adequate survey design and compliance with the unity rule.

Surrogate DCGLs were not required for this survey unit based on process knowledge from FSS of nearby adjacent areas and via screening process described in LTP Section 5.4.7.2, "Gross Activity DCGLs". Sr-90 concentrations in sediment and soil were ascertained by direct analysis.

Radionuclide screening or de-selection is a process where an individual radionuclide or aggregate may be considered insignificant and eliminated from the FSS. The criteria for de-selection are concentrations that are less than 5% for individual radionuclides and that are less than 10% for the aggregate of all radionuclides that are de-selected. This process was applied to analysis data for this survey unit.

The Elevated Measurement Comparison (EMC) did not apply to this survey unit since the survey unit is a Class 2 and discrete, elevated areas of contamination were not expected.

The Sign Test was selected as the non-parametric statistical test. The use of the Sign Test did not require the selection or use of a background reference area,

which simplified survey design and implementation. This approach was conservative since it included background Cs-137 as part of the sample set.

The number of sediment samples for FSS was determined in accordance with Procedure RPM 5.1-12, *"Determination of the Number of Samples for Final Status Survey."* The Lower Bound of the Gray Region (LBGR) was set in accordance with Procedure RPM 5.1-11 to 0.5 to maintain the relative shift (Δ/σ) in the range of 1 and 3. The resulting relative shift was 3.0. A Prospective Power Curve was generated using COMPASS, a software package developed under the sponsorship of the United States Nuclear Regulatory Commission (USNRC) for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR 20, Subpart E). The result of the COMPASS computer run showed adequate power for the survey design. This indicates that the survey unit has a high probability of rejecting the null hypothesis, assuming that the characterization data are representative of the FSS results. Survey design specified fourteen (14) sediment core samples for non-parametric statistical testing.

The grid pattern and locations of the sediment samples were determined using Visual Sample Plan (VSP) in accordance with Procedure RPM 5.1-14, *"Identifying, and Marking Surface Sample Locations for Final Status Survey."* Visual Sample Plan was created by Pacific Northwest National Laboratory (PNNL) for the United States Department of Energy. A systematic triangular grid pattern with a random starting point was selected for sample design, which is appropriate for a Class 2 area.

Sample locations were identified using AutoCAD-LT, a commercially available plotting software package with coordinates consistent with the Connecticut State Plane System. These coordinates were integrated with a GPS to locate sample locations in the field. Sample Measurement Locations for the design are listed with the GPS coordinates in Table 3.

Table 3 –Sample Measurement Locations with Associated GPS Coordinates

Designation	Northing	Easting
9106-0008-001F	234825.31	672724.61
9106-0008-002F	234825.31	672817.80
9106-0008-003F	234744.60	672771.20
9106-0008-004F	234744.60	672864.40
9106-0008-005F	234663.89	672817.80
9106-0008-006F	234663.89	672911.00
9106-0008-007F	234583.17	672864.40
9106-0008-008F	234583.17	672957.60
9106-0008-009F	234502.46	672911.00
9106-0008-010F	234502.46	673004.20
9106-0008-011F	234421.75	672957.60
9106-0008-012F	234421.75	673050.79
9106-0008-013F	234341.04	673004.20
9106-0008-014F	234341.04	673097.39

Four (4) sediment samples were analyzed for the full suite of radionuclides specified in Table 1, exceeding the requirement to analyze 5% of the sample population for HTD analysis specified in procedure RPM 5.1-11. Two (2) of the four (4) samples were randomly selected using the Microsoft Excel "RAND" function. The two (2) samples exhibiting the highest observed radionuclide concentrations by gamma analyses were also selected.

The implementation of survey specific quality control measures as referenced by Procedure RPM 5.1-24, *"Split Sample Assessment for Final Status Survey,"* included the collection of two (2) sediment samples for "split sample" analysis by the off-site laboratory. These locations were selected randomly using the Microsoft Excel "RAND" function. The number of quality control samples exceeded the 5% requirement.

The LTP specifies that scanning is not required for the FSS of the Discharge Canal. Table 4 provides a synopsis of the survey design.

Table 4 – Synopsis of the Survey Design (1)

Feature	Design Criteria	Basis
Survey Unit Land Area	9,763 m^2	Based on AutoCAD-LT and Visual Sample Plan calculations
Number of Measurements	14	Type 1 and Type 2 errors were 0.05, sigma was 0.166 the LBGR was set to 0.5 to maintain Relative Shift in the range of 1 and 3, Relative Shift was 3.0
Grid Spacing	28.4 m	Based on triangular grid
Design DCGL	3.16 ρCi/g Cs-137 1.52 ρCi/g Co-60 0.62 ρCi/g Sr-90 289 ρCi/g Ni-63	To achieve ten (10) mrem/yr TEDE
Operational DCGL	6.01 ρCi/g Cs-137 2.90 ρCi/g Co-60 1.18 ρCi/g Sr-90 549 ρCi/g Ni-63	To achieve nineteen (19) mrem/yr TEDE (2) to demonstrate compliance with Equation 2 of this Release Record
Scan Coverage	N/A	The LTP exempts this area
Sediment Investigation Level	6.01 ρCi/g Cs-137 2.90 ρCi/g Co-60 1.18 ρCi/g Sr-90 549 ρCi/g Ni-63	The Operational DCGL meets the LTP criteria for a Class 2 survey unit

(1) The survey design used a much smaller value for investigation than the Operational DCGL provided by Table 2 as the total dose from existing and future groundwater had not been established at the time of planning the FSS

5. SURVEY IMPLEMENTATION

Final status survey field activities were conducted under Work Plan and Inspection Record (WP&IR) 2006-0021. The WP&IR package included a detailed FSSP, job safety analysis, job planning checklist and related procedures for reference. Daily briefings were conducted to discuss the expectations for job performance and the safety aspects of the survey. The "Daily Survey Journal" was used to document field activities and other information pertaining to the FSS.

Measurement locations were identified in North American Datum (NAD) 1927 coordinates that were supplied to the sampling vendor, Ocean Survey, Inc. (OSI) of Old Saybrook, Connecticut. Discharge Canal sampling was accomplished using direct push technology to collect composite samples of bottom and mean high water mark sediments. Sediment cores from the Discharge Canal were obtained by OSI using a vibrating corer that is platform mounted on a sampling vessel. The core barrel was a three (3) inch diameter thin-walled aluminum tube which also served as a core liner (ten (10) feet or less). A core catcher was available to prevent the sample from sliding out of the bottom of the tube. Vessel positioning and the determination of sample

locations were accomplished using a GPS interfaced with a navigation and data logging system.

After extraction, water was drained from above the sample by drilling holes above the sediment. The liner was cut, capped, sealed, labeled and turned over to site personnel who processed and controlled the samples under Chain of Custody (COC) protocols in accordance with procedure RPM 5.1-5, *"Chain of Custody for Final Status Survey Samples."* Rinsing of the barrel and associated equipment was performed between sampling events. New aluminum tubes were used for each sample to prevent cross-contamination of subsequent samples.

The Fourteen (14) sediment samples were collected and packaged in accordance with Haddam Neck Plant (HNP) Procedure RPM 5.1-3, *"Collection of Sample Media for Final Status Survey"*. Samples were controlled, transported, stored, and transferred to the off-site laboratory using COC protocols.

Four (4) samples (9106-0008-006F, 9106-0008-007F, 9106-0008-008F and 9106-0008-012F) were selected for HTD radionuclide analysis by the off-site laboratory.

The implementation of survey specific quality control measures included the collection of two (2) split samples at locations 9106-0008-006F and 9106-0008-010F for "split sample" analysis by the off-site laboratory.

6. SURVEY RESULTS

The off-site laboratory employed for the radiological analyses of samples was General Engineering Laboratories (GEL) – Charleston, South Carolina. The laboratory analyzed the fourteen (14) samples taken for non-parametric statistical testing and the associated duplicates using gamma spectroscopy. Sr-90 was analyzed by gas flow proportional counting. All analyses were performed to the required MDC.

Cesium-137 was identified in nine (9), Co-60 was identified in seven (7), Sr-90 was identified in two (2) and Ni-63 in none of the fourteen (14) samples. The results reported for the remaining sample analyses indicated that activity was present at levels approaching or below the established detection limits in the remaining samples collected and analyzed for non-parametric testing.

Several other radionuclides which were positively identified (i.e., a result greater than two (2) standard deviations uncertainty) could be de-selected or excluded using the 5% and 10% rule described in Section 5.4.7.2 of the LTP.

The off-site laboratory also processed four (4) samples for full HTD analysis as required by the sample plan. The requested analyses included alpha spectroscopy and liquid scintillation depending upon the radionuclide and the

measurement method. All analyses were performed to the required MDC. Five (5) of the HTD radionuclides met the acceptance criteria for detection (i.e., a result greater than two standard deviations uncertainty) in more than one (1) sample; however, each of the positive results for HTD radionuclides could be de-selected based on the 5% and 10% rules.

None of the sample results exceeded the Operational DCGL or required further investigation. A summary of the sample results is provided in Table 5.

Table 5- Summary of Sediment Sample Results

Sample Number	Cs-137 pCi/g	Co-60 pCi/g	Sr-90 pCi/g	Ni-63 pCi/g	Fraction of the Operational DCGL (1)
9106-0008-001F	3.96E-01	1.33E-01	5.79E-03	2.33E-01	1.17E-01
9106-0008-002F	-8.91E-03	7.77E-03	2.03E-02	-4.84E+00	1.84E-02
9106-0008-003F	2.05E-01	3.24E-01	1.12E-02	-2.74E+00	1.55E-01
9106-0008-004F	4.32E-02	0.00E+00	-6.19E-03	-1.80E+00	1.94E-03
9106-0008-005F	2.66E-01	2.75E-02	8.28E-04	-8.58E-01	5.44E-02
9106-0008-006F	4.92E-01	7.79E-01	5.59E-03	2.28E+00	3.55E-01
9106-0008-007F	2.29E-02	2.68E-02	-8.81E-04	-2.33E+00	1.23E-02
9106-0008-008F	4.72E-01	9.17E-01	-2.69E-03	-4.12E-01	3.92E-01
9106-0008-009F	1.55E-02	-1.08E-02	-5.90E-03	-2.05E+00	-6.15E-03
9106-0008-010F	3.36E-01	2.46E-01	3.47E-03	1.23E-01	1.44E-01
9106-0008-011F	6.76E-02	1.22E-01	1.93E-02	-3.34E+00	6.97E-02
9106-0008-012F	1.84E-01	1.79E-01	-1.92E-02	8.39E-01	7.61E-02
9106-0008-013F	1.03E-02	2.99E-02	9.80E-03	-2.70E+00	2.03E-02
9106-0008-014F	-3.89E-03	-1.45E-02	5.40E-03	-1.72E+00	-1.07E-03

(1) The Operational DCGLs from Table 2 are 6.01 pCi/g for Cs-137, 2.90 pCi/g for Co-60, 1.18 for Sr-90 and 549 for Ni-63; these are used in conjunction with the unity rule to achieve nineteen (19) mrem/yr TEDE.

Biased sampling was not called for in the sample plan.

7. QUALITY CONTROL

The two (2) split samples taken for QC were analyzed by the off-site laboratory. The data were evaluated using USNRC acceptance criteria specified in Inspection Procedure 84750 and as detailed in HNP Procedure RPM 5.1-24, *"Split Sample Assessment for Final Status Survey."*

Split-sample number 9106-0008-006F/S did not meet the comparison criterion for Co-60. A possible cause for this anomaly could be the presence of Co-60 in the form of discrete particles. Such a physical form does not lend itself to homogenous mixing in a sediment matrix and, therefore, is not necessarily an indicator of inadequate sampling or sample preparation methodology. In this sample, K-40, a natural radioisotope, was found to be present at an acceptable level of agreement, therefore, the comparison was determined to be acceptable. Additionally, Cs-137 did meet the comparison criteria for the sample results.

However, Ni-63 and Sr-90 had resolutions of zero (0) and one (1) respectively and values <4 have not been addressed in NRC Inspection Procedure 84750. Therefore, a determination of the acceptability for resolution values of <4 can not be made.

For the second QC split sample number 9106-0008-010F/S there was an acceptable level of agreement between the samples for C0-60 and Cs-137. In this sample, K-40, a natural radioisotope, was found to be present at an acceptable level of agreement, therefore, the comparison was determined to be acceptable. However, Ni-63 and Sr-90 had resolutions of zero (0) and one (1) respectively and resolution values of <4 have not been addressed in NRC Inspection Procedure 84750. Therefore, a determination of the acceptability for values <4 can not be made.

The sample analysis vendor, GEL, maintained quality control and quality assurance plans as part of normal operation. Refer to Attachment 2 for data and data quality analysis results.

8. INVESTIGATIONS AND RESULTS

No Investigations were required to be performed since none of the sample results exceeded the investigation levels.

9. REMEDIATION AND RESULTS

Historically, no radiological remedial action as described by MARSSIM Section 5.4 was performed in this survey unit prior to or as a result of the FSS. Health Physics TSD BCY-HP-0078, *"ALARA Evaluation of Soil Remediation in Support of Final Status Survey,"* determined that remediation beyond that required to meet the release criteria to be unnecessary and that the remaining residual radioactivity in sediment was ALARA.

10. CHANGES FROM THE FINAL STATUS SURVEY PLAN

The survey was designed to ten (10) mrem/yr TEDE which was conservative and necessary at the time of FSS planning. It is no longer required as the total dose from existing and future groundwater has been established. The dose for sediment used to demonstrate compliance with the LTP criteria is nineteen (19) mrem/yr TEDE as discussed in Section 2 of this Release Record.

11. DATA QUALITY ASSESSMENT (DQA)

The DQO sample design and data were reviewed in accordance with Procedure RPM 5.1-23, *"Data Quality Assessment."* The sample design had adequate power as indicated by the Retrospective Power Curve. The Sign Test was performed on the data and compared to the original assumptions of the DQOs. The evaluation of the Sign Test results indicates that the survey unit passes the unrestricted release criterion, thus, the null hypothesis is rejected.

Documentation was complete and legible. Surveys and sample collection were consistent with the DQOs and were sufficient to ensure that the survey unit was properly designated as Class 2.

The preliminary data review consisted of calculating basic statistical quantities (e.g., mean, median, standard deviation). The standard deviation was slightly more than the value used for the survey design. This is represented by the shift in the retrospective power curve as shown in Attachment 2f. This would indicate a need to change the original LBGR in order to maintain the number of samples at fourteen (14) to meet the Operational DCGL. However, the value of the LBGR is not a critical issue as the survey unit has passed the statistical test, and the mean and median values are well below the Operational DCGL when used in conjunction with the unity rule. Also, the retrospective power curve shows that a sufficient number of samples were collected to achieve the desired power. Therefore, the survey unit meets the unrestricted release criterion with adequate power as required by the DQOs.

The range of the data, about 3.1 standard deviations, was not unusually large. The difference between the mean and median was 30% of the standard deviation which indicates some skewness in the data. The data was represented graphically through posting plots, a frequency plot, and a quantile plot. The frequency plot shows some positive skewness as confirmed by the calculated skew of 1.58.

All data, assessments, and graphical representations are provided in Attachment 2.

12. ANOMALIES

The anomaly associated with the disagreement between the field splits has been discussed in Section 7. The source of the disagreement for Co-60 was likely due to Co-60 being present in the form of discrete particles. Such a physical form does not lend itself to homogenous mixing in a sediment matrix.

13. CONCLUSION

Survey Unit 9106-0008 has demonstrated compliance with the dose based, unrestricted release criterion. The sample data passed the Sign Test and the null hypothesis was rejected. The ALARA criteria for soils as specified in Chapter 4 of the LTP were achieved. Reclassification and remediation of this survey unit was not required.

Graphical representation of data indicates some positive skewness that is probably due to localized differences in particulate deposition rates, hydraulic velocity and sedimentation rates. The Retrospective Power Curve generated using COMPASS shows adequate power was achieved. The survey unit was properly designated as a Class 2 survey unit.

The dose contribution from sediment is 1.9 mrem/yr TEDE based on the average concentration of the samples used for non-parametric statistical sampling.

This survey unit is not affected by existing groundwater (reference CY memo ISC 06-024). It has been determined that the dose contribution from groundwater sources is bounded by zero (0) mrem/yr TEDE.

This survey unit is also not considered impacted by future groundwater radioactive contamination, as there are no concrete foundations or footings containing residual radioactive material within the groundwater saturated zone in the area (reference CY memo ISC 06-024). The dose contribution from future groundwater, the third dose component is, therefore, zero (0) mrem/yr TEDE.

The average total dose from residual radioactivity in this survey unit, including that from sediment, will not exceed 1.9 mrem/yr Total Effective Dose Equivalent (TEDE).

14. ATTACHMENTS

14.1 Attachment 1 – Figures

14.2 Attachment 2 – Sample and Statistical Data

Attachment 1
Figures
(6 pages)

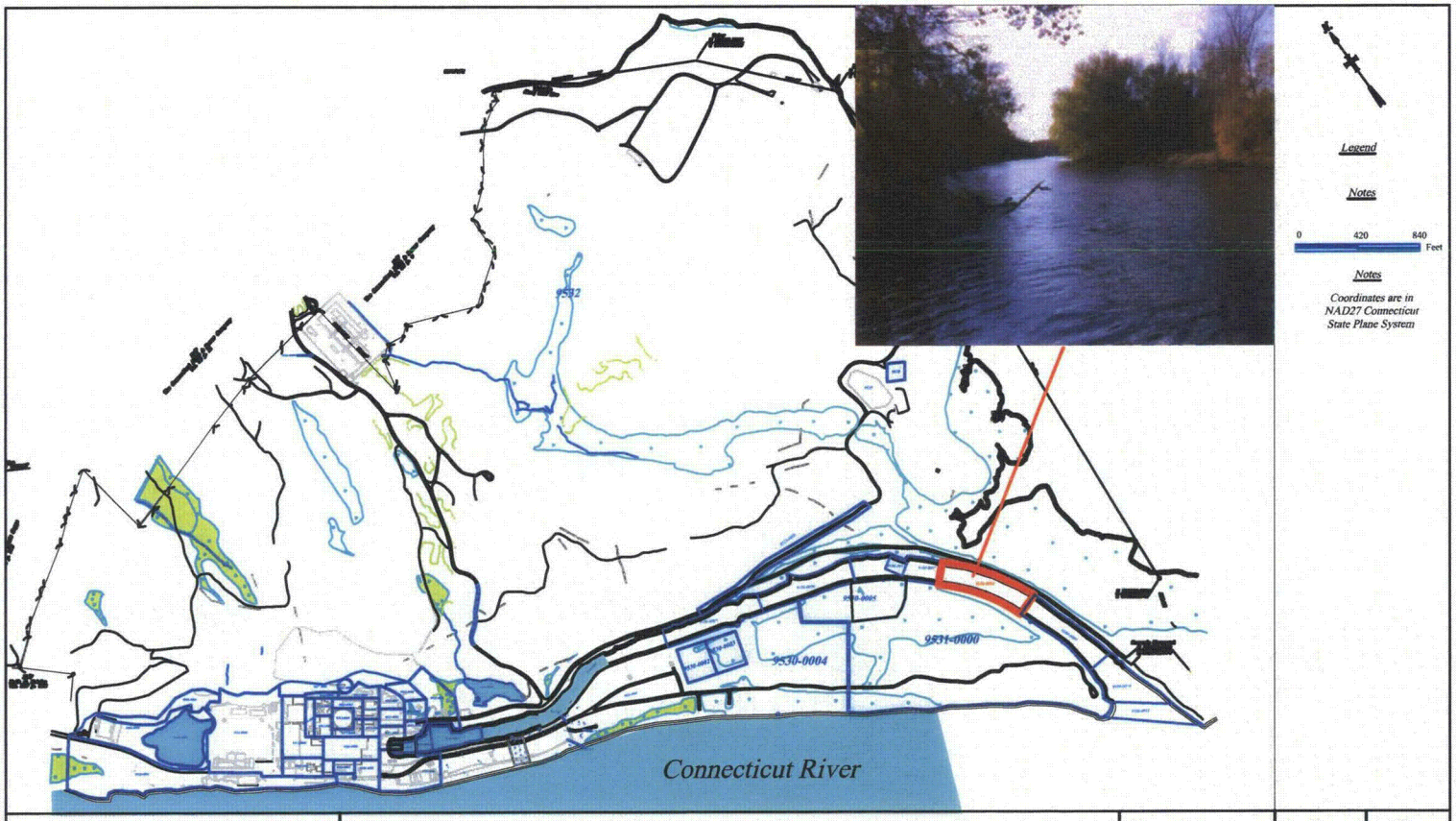


Figure 1	Connecticut Yankee Atomic Power Company Site MapWith Reference To Survey Unit 9106-0008	Date	By	Rev.
		October 2006	E. Sergent	0

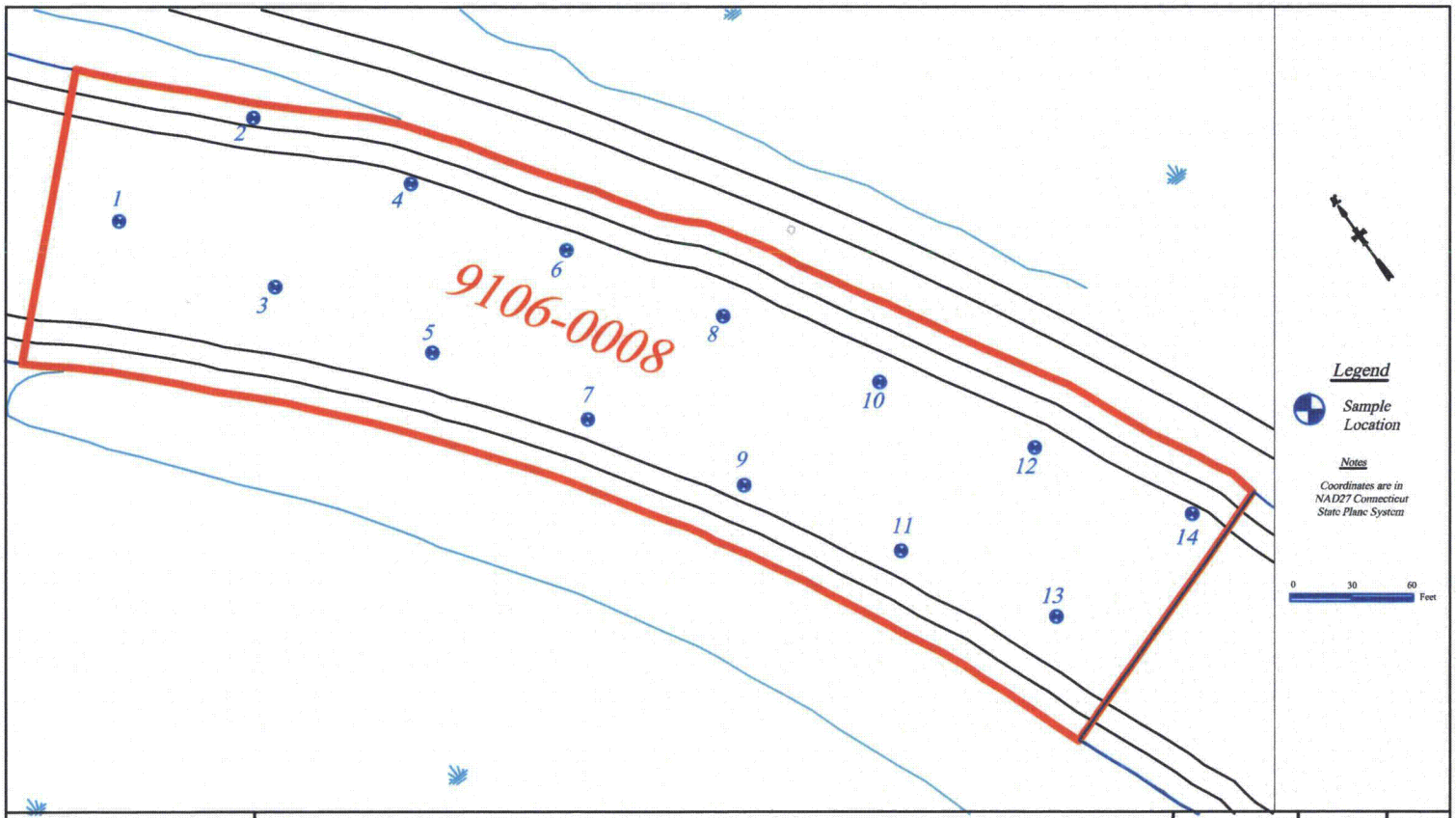


Figure 2	Connecticut Yankee Atomic Power Company 9106-0008 Final Status Survey Design	Date	By	Rev.
		October 2006	E. Sergent	0

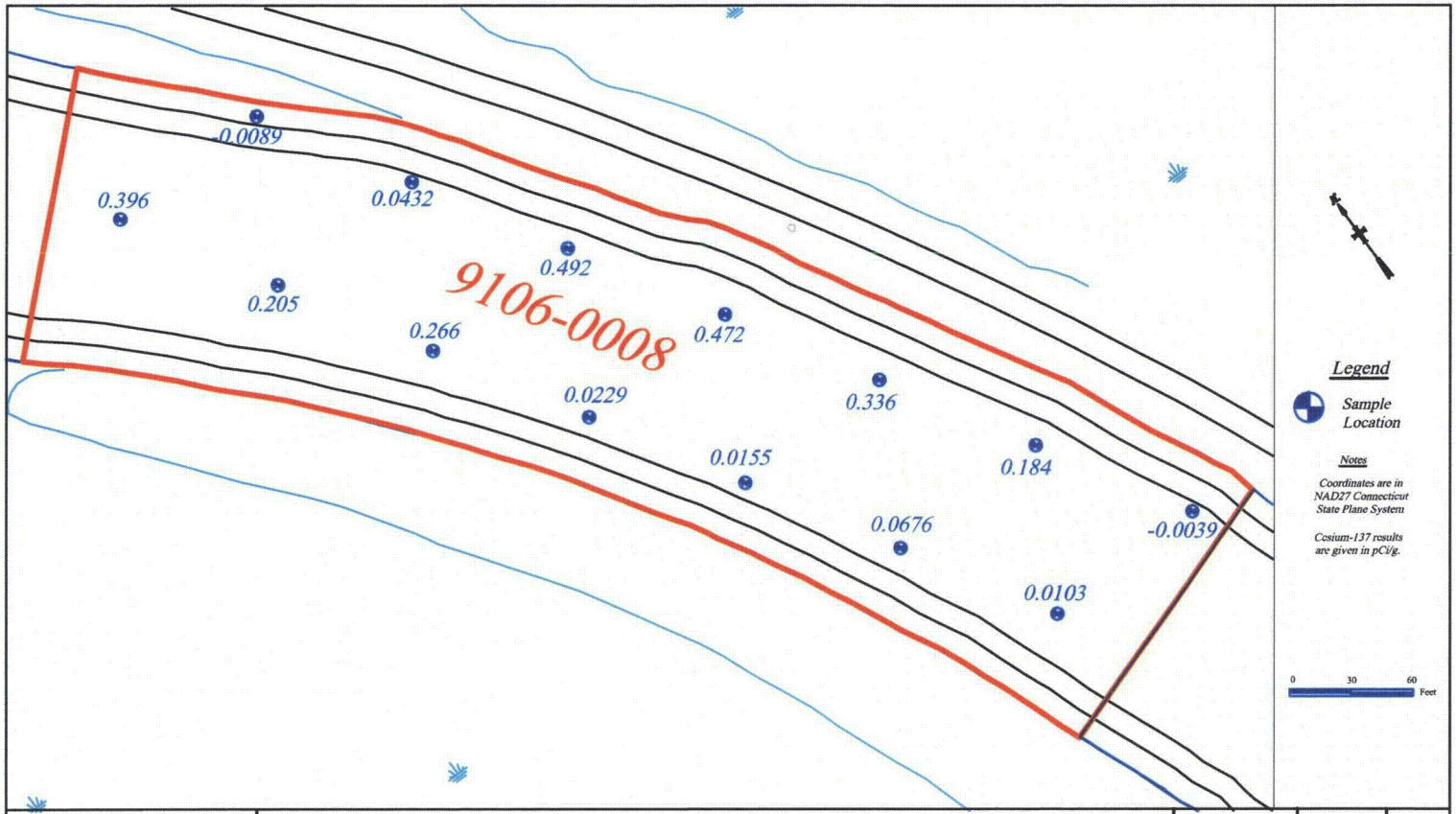


Figure 3	Connecticut Yankee Atomic Power Company 9106-0008 Final Status Survey Design Cesium-137 Posting Plot	Date	By	Rev.
		October 2006	E. Sergent	0

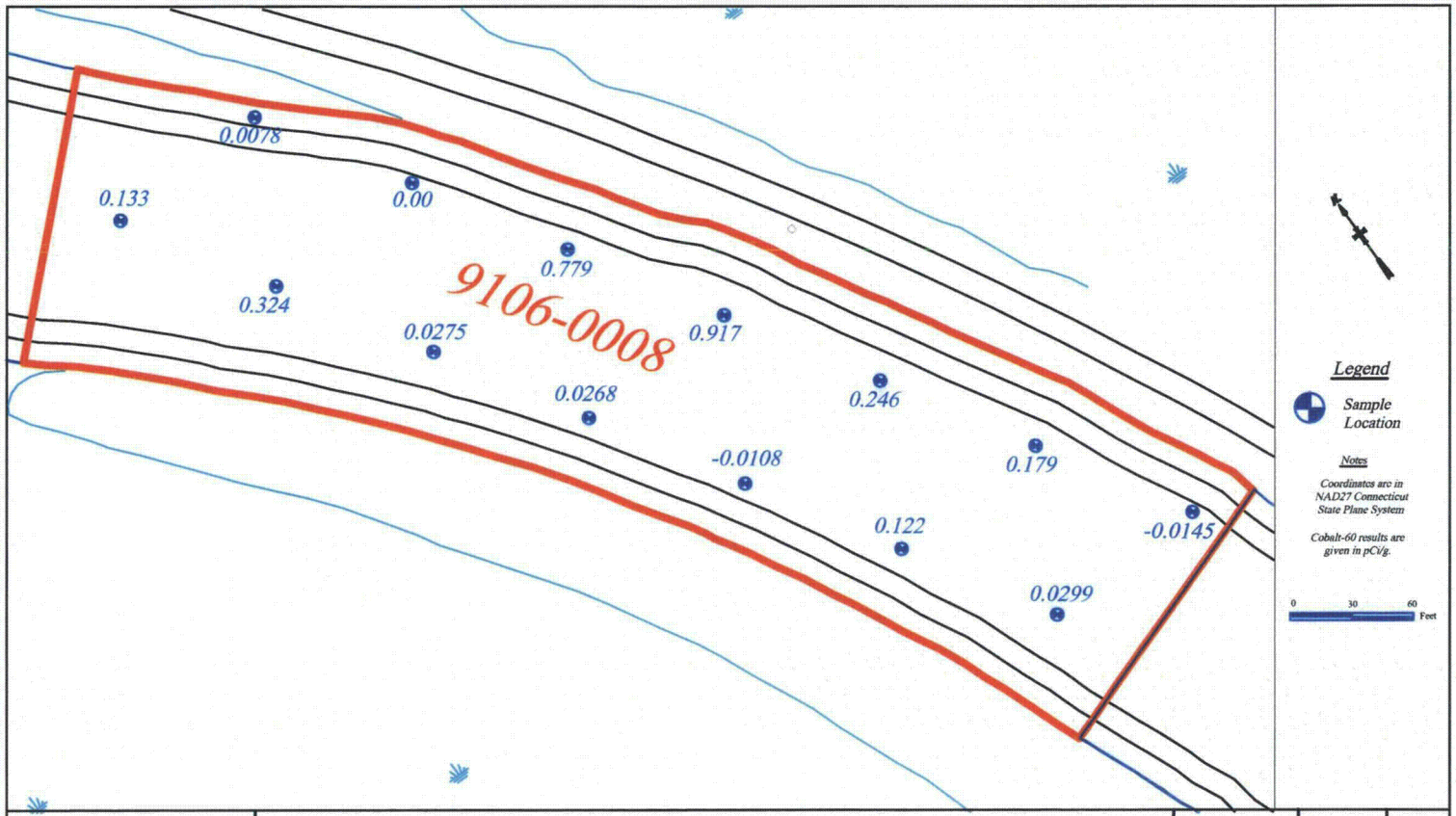


Figure 4	Connecticut Yankee Atomic Power Company 9106-0008 Final Status Survey Design Cobalt-60 Posting Plot	Date	By	Rev.
		October 2006	E. Sergent	0

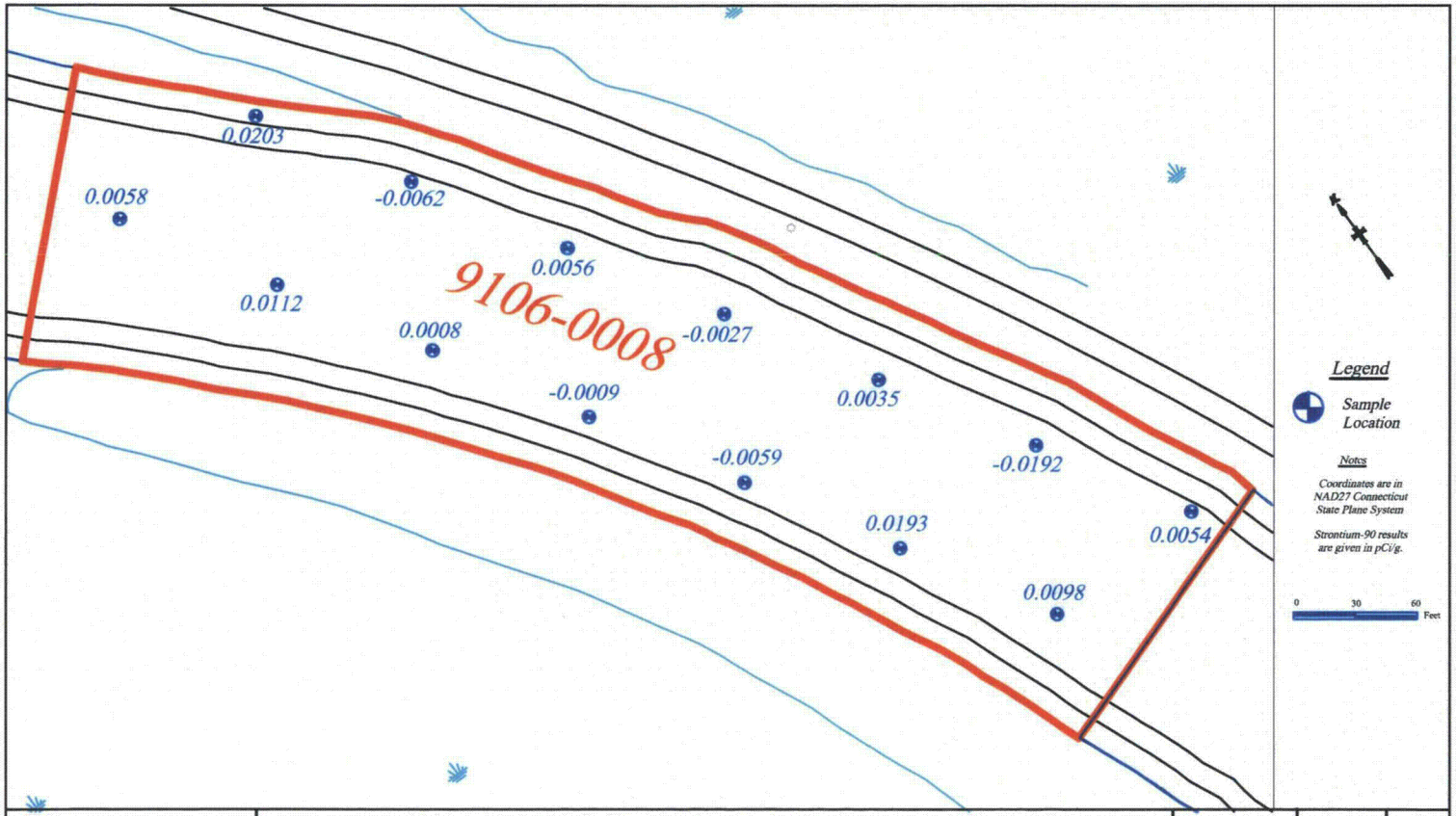


Figure 5	Connecticut Yankee Atomic Power Company 9106-0008 Final Status Survey Design Strontium-90 Posting Plot	Date	By	Rev.
		October 2006	E. Sergent	0

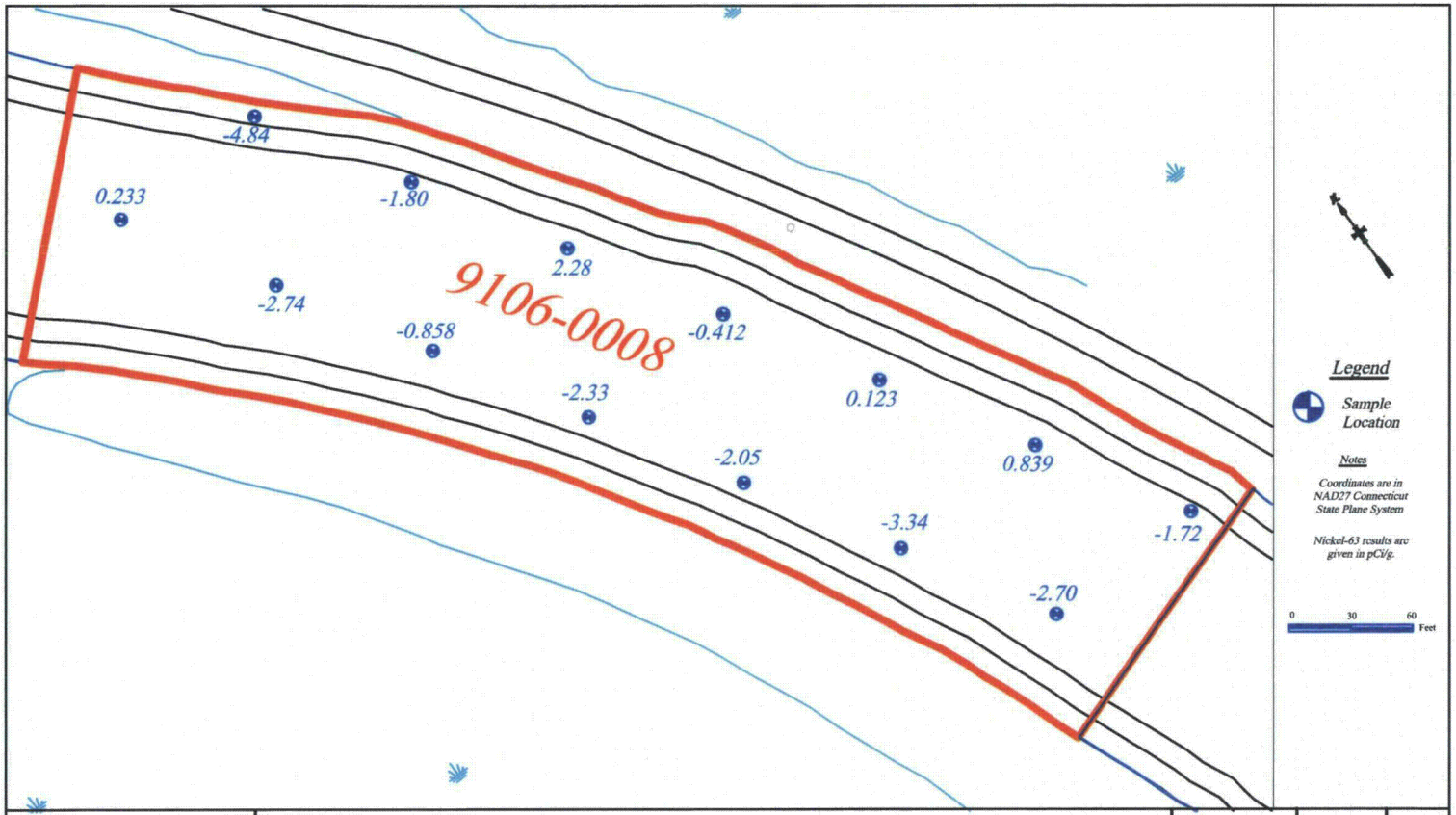


Figure 6	Connecticut Yankee Atomic Power Company 9106-0008 Final Status Survey Design Nickel-63 Posting Plot	Date	By	Rev.
		October 2006	E. Sergent	0

Attachment 2
Sample and Statistical Data

Attachment 2a
Sample Data
(178 Pages)

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Sediment
PO# 002332
Work Order: 163741
SDG: MSR #06-0743

June 19, 2006

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 sample(s) for this Project arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina on May 26, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures.

The laboratory received the following sample(s):

Sample ID	Client Sample ID
163741001	9106-0008-001F
163741002	9106-0008-003F
163741003	9106-0008-004F
163741004	9106-0008-005F
163741005	9106-0008-006F
163741006	9106-0008-006FS
163741007	9106-0008-002F
163741008	9106-0008-007F

GENERAL ENGINEERING LABORATORIES, LLC
a Member of THE GEL GROUP, INC.
P.O. Box 30712 • Charleston, SC 29417 • 2040 Savage Road (29407)
Phone (843) 556-8171 • Fax (843) 766-1178 • www.gel.com

Sample ID	Client Sample ID
163741009	9106-0008-008F
163741010	9106-0008-009F
163741011	9106-0008-010F
163741012	9106-0008-010FS
163741013	9106-0008-011F
163741014	9106-0008-013F
163741015	9106-0008-014F
163741016	9106-0008-012F

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:

Fourteen sediment samples were analyzed for FSSGAM, Sr-90 and Ni-63.
Two sediment samples were analyzed for FSSALL.

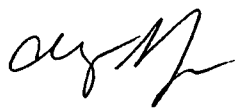
Internal Chain of Custody:

Custody was maintained for the sample(s).

Data Package:

The enclosed data package contains the following sections: Case Narrative, Chain of Custody and Supporting Documentation and all analytical fractions.

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

GENERAL ENGINEERING LABORATORIES, LLC
a Member of THE GEL GROUP, INC.
P.O. Box 30712 • Charleston, SC 29417 • 2040 Savage Road (29407)
Phone (843) 556-8171 • Fax (843) 766-1178 • www.gel.com

Chain of Custody and Supporting Documentation

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00367

163741

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Lab Use Only

Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Sr-90	Ni-63			Comment, Preservation	Lab Sample ID
9106-0008-001F	5/05/06	11:13	SE	C	BP	X		X	X			Transferred from COC # 2006-00324	
9106-0008-003F	5/5/06	13:35	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	
9106-0008-004F	5/5/06	13:51	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	
9106-0008-005F	5/5/06	14:17	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	
9106-0008-006F	5/5/06	14:36	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	
9106-0008-006FS	5/5/06	14:36	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	
9106-0008-007F	5/5/06	15:03	SE	C	BP		X					Transferred from COC # 2006-00325	
9106-0008-002F	5/5/06	13:10	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	

NOTES: PO #: 002332 MSR #: 06-0743 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
827515411 62

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
	5-25-06 0950		5/24/06 0930
3) Relinquished By	Date/Time	4) 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. 2006-00366

1637417.

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Sr-90	Ni-63			Comment, Preservation	Lab Sample ID
09	9106-0008-008F	5/08/06	08:01	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
10	9106-0008-009F	5/08/06	08:32	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
11	9106-0008-010F	5/08/06	09:09	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
12	9106-0008-010FS	5/08/06	09:09	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
13	9106-0008-011F	5/08/06	09:30	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
16	9106-0008-012F	5/08/06	09:53	SE	C	BP		X					Transferred from COC # 2006-00327	
14	9106-0008-013F	5/08/06	10:16	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
15	9106-0008-014F	5/08/06	10:47	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	

Lab Use Only

Comments:

NOTES: PO #: 002332 MSR #: 06-0743 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #

Internal Container Temp.: 21 Deg. C

Custody Sealed? Y ☐ N ☒

Custody Seal Intact? Y ☒ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
		C. Denicolo	5/26/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 5/24/06 0930

SDG#: MSR#06-0743

Work Order Number: 163741%

Shipping Container ID: 7927554 1162 Chain of Custody # 2006-00360

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 19°C
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] NA
6. Number of samples in shipping container: 8
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: 5/24/06 0930

Telephoned to: ____ On ____ By ____

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Conn. Yankee	SDG/ARCOC/Work Order: 163741
Date Received: 5/26/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By:	

	Sample Receipt Criteria	Yes	NA	No	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) 19°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	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			/	
8	Samples received within holding time?	/			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	/			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	/			Sample ID's affected:
11	Number of containers received match number indicated on COC?	/			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	/			
14	Air Bill ,Tracking #'s, & Additional Comments	7927 5154 1162			

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?	X	/		Maximum Counts Observed*: cpm 20 Per RSO
B	PCB Regulated?	/			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	/			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: _____ Initials _____ Date: 5/26/06

163741%

Figure 1. Sample Check-in List

Date/Time Received: 5/26/06 @ 0930

SDG#: USR#06-0743

Work Order Number: 163741%

Shipping Container ID: 792715154 1173 Chain of Custody # 2006-003666

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 21°C

5. Vermiculite/packing materials is: Wet [✓] Dry [ ]

6. Number of samples in shipping container: (8) eight

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): N/A

Sample Custodian/Laboratory: C. DeMicco Date: 5/26/06

Telephoned to: ______ On ______ By ______

GENERAL ENGINEERING LABORATORIES, LLC

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Yankee	SDG/ARCOC/Work Order: 163741'/.
Date Received: 5/26/06	PM(A) Review (ensure non-conforming items are resolved prior to signing): [signature]
Received By: C. [signature]	

	Sample Receipt Criteria	Yes	NA	No	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) 21°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	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			✓	
8	Samples received within holding time?	✓			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?			✓	not relinquished
14	Air Bill ,Tracking #'s, & Additional Comments	7927 5154 1173 COC # 2006-00566			

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # ______ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?		✓		Maximum Counts Observed*: 40 cpm
B	PCB Regulated?	✓			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: [initials] Initials 5/26/06 Date:

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 163741

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:	537411
Prep Batch Number:	534049
Dry Soil Prep GL-RAD-A-021 Batch Number:	534048

Sample ID	Client ID
163741008	9106-0008-007F
163741016	9106-0008-012F
1201110207	Method Blank (MB)
1201110208	163741008(9106-0008-007F) Sample Duplicate (DUP)
1201110209	163741008(9106-0008-007F) Matrix Spike (MS)
1201110210	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: 163741008 (9106-0008-007F).

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. A nonconformance report (NCR) was not generated for this SDG.

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

Additional Comments
Additional comments were not required for this sample set.

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:	537412
Prep Batch Number:	534049
Dry Soil Prep GL-RAD-A-021 Batch Number:	534048

Sample ID	Client ID
163741008	9106-0008-007F
163741016	9106-0008-012F
1201110215	Method Blank (MB)
1201110216	163741008(9106-0008-007F) Sample Duplicate (DUP)
1201110217	163741008(9106-0008-007F) Matrix Spike (MS)
1201110218	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: 163741008 (9106-0008-007F).

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. A nonconformance report (NCR) was not generated for this SDG.

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

Additional Comments
Additional comments were not required for this sample set.

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:	537417
Prep Batch Number:	534049
Dry Soil Prep GL-RAD-A-021 Batch Number:	534048

Sample ID	Client ID
163741008	9106-0008-007F
163741016	9106-0008-012F
1201110229	Method Blank (MB)
1201110230	163741008(9106-0008-007F) Sample Duplicate (DUP)
1201110231	163741008(9106-0008-007F) Matrix Spike (MS)
1201110232	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# 8.

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: 163741008 (9106-0008-007F).

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. A nonconformance report (NCR) was not generated for this SDG.

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

Additional Comments
Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

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:	534130
Prep Batch Number:	534048

Sample ID	Client ID
163741001	9106-0008-001F
163741002	9106-0008-003F
163741003	9106-0008-004F
163741004	9106-0008-005F
163741005	9106-0008-006F
163741006	9106-0008-006FS
163741007	9106-0008-002F
163741008	9106-0008-007F
163741009	9106-0008-008F
163741010	9106-0008-009F
163741011	9106-0008-010F
163741012	9106-0008-010FS
163741013	9106-0008-011F
163741014	9106-0008-013F
163741015	9106-0008-014F
163741016	9106-0008-012F
1201102649	Method Blank (MB)
1201102650	163741001(9106-0008-001F) Sample Duplicate (DUP)
1201102651	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# 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: 163741001 (9106-0008-001F).

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
The relative percent difference for Pb-214, in samples 1201102650 (9106-0008-001F) and 163741001 (9106-0008-001F), does not meet the standard requirements. However, when a relative error ratio is calculated, precision is shown at 2.38.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high Full-Width Half-Maximum.	Potassium-40	1201102649
UI	Data rejected due to interference.	Europium-155	163741016
		Manganese-54	163741004
UI	Data rejected due to low abundance.	Cesium-134	163741005
			163741007
			163741013
			163741014
			163741016
			1201102650
		Cobalt-60	163741003

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:	536483
Prep Batch Number:	534049
Dry Soil Prep GL-RAD-A-021 Batch Number:	534048

Sample ID	Client ID
163741001	9106-0008-001F
163741002	9106-0008-003F
163741003	9106-0008-004F
163741004	9106-0008-005F
163741005	9106-0008-006F
163741006	9106-0008-006FS
163741007	9106-0008-002F
163741008	9106-0008-007F
163741009	9106-0008-008F
163741010	9106-0008-009F
163741011	9106-0008-010F
163741012	9106-0008-010FS
163741013	9106-0008-011F
163741014	9106-0008-013F
163741015	9106-0008-014F
163741016	9106-0008-012F
1201108056	Method Blank (MB)
1201108057	163741001(9106-0008-001F) Sample Duplicate (DUP)
1201108058	163741001(9106-0008-001F) Matrix Spike (MS)
1201108059	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# 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: 163741001 (9106-0008-001F).

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 163741001 (9106-0008-001F), 163741005 (9106-0008-006F) and 163741011 (9106-0008-010F) were recounted due to high MDAs.

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

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:	536314

Sample ID	Client ID
163741008	9106-0008-007F
163741016	9106-0008-012F
1201107610	Method Blank (MB)
1201107611	163741008(9106-0008-007F) Sample Duplicate (DUP)
1201107612	163741008(9106-0008-007F) Matrix Spike (MS)
1201107613	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# 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: 163741008 (9106-0008-007F).

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

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:	538969
Prep Batch Number:	534049
Dry Soil Prep GL-RAD-A-021 Batch Number:	534048

Sample ID	Client ID
163741008	9106-0008-007F
163741016	9106-0008-012F
1201113887	Method Blank (MB)
1201113888	163741008(9106-0008-007F) Sample Duplicate (DUP)
1201113889	163741008(9106-0008-007F) Matrix Spike (MS)
1201113890	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# 3.

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: 163741008 (9106-0008-007F).

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

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:	538365
Prep Batch Number:	534049
Dry Soil Prep GL-RAD-A-021 Batch Number:	534048

Sample ID	Client ID
163741001	9106-0008-001F
163741002	9106-0008-003F
163741003	9106-0008-004F
163741004	9106-0008-005F
163741005	9106-0008-006F
163741006	9106-0008-006FS
163741007	9106-0008-002F
163741008	9106-0008-007F
163741009	9106-0008-008F
163741010	9106-0008-009F
163741011	9106-0008-010F
163741012	9106-0008-010FS
163741013	9106-0008-011F
163741014	9106-0008-013F
163741015	9106-0008-014F
163741016	9106-0008-012F
1201112555	Method Blank (MB)
1201112556	163741003(9106-0008-004F) Sample Duplicate (DUP)
1201112557	163741003(9106-0008-004F) Matrix Spike (MS)
1201112558	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# 8.

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: 163741003 (9106-0008-004F).

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

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:	535984

Sample ID	Client ID
163741008	9106-0008-007F
163741016	9106-0008-012F
1201106885	Method Blank (MB)
1201106886	163626016(9106-0007-001F) Sample Duplicate (DUP)
1201106887	163626016(9106-0007-001F) Matrix Spike (MS)
1201106888	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# 12.

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: 163626016 (9106-0007-001F).

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

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:	534837

Sample ID	Client ID
163741008	9106-0008-007F
163741016	9106-0008-012F
1201104384	Method Blank (MB)
1201104385	162335019(9106-0003-014F) Sample Duplicate (DUP)
1201104386	162335019(9106-0003-014F) Matrix Spike (MS)
1201104387	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# 8.

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: 162335019 (9106-0003-014F).

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 1201104385 (9106-0003-014F) and 163741016 (9106-0008-012F) were recounted due to high MDAs. 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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

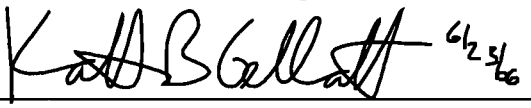
Certification Statement

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/Date:  6/25/16

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#06-0743 GEL Work Order: 163741

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

UI Gamma Spectroscopy--Uncertain identification

ND The analyte concentration is not detected above the reporting limit.

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: June 23, 2006

Client Sample ID:	9106 0008 001F	Project:	YANK01204
Sample ID:	163741001	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	05 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	38.9%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.817	+/ 0.177	0.0585	+/ 0.177	0.128	pCi/g		MJH1	06/15/06	1544	534130	1
Americium 241	U	0.0431	+/ 0.0977	0.0813	+/ 0.0977	0.168	pCi/g						
Bismuth 212		0.570	+/ 0.292	0.144	+/ 0.292	0.309	pCi/g						
Bismuth 214		0.568	+/ 0.0877	0.0366	+/ 0.0877	0.0777	pCi/g						
Cesium 134	U	0.0314	+/ 0.0354	0.0253	+/ 0.0354	0.0538	pCi/g						
Cesium 137		0.396	+/ 0.0588	0.0193	+/ 0.0588	0.0412	pCi/g						
Cobalt 60		0.133	+/ 0.0554	0.0195	+/ 0.0554	0.0431	pCi/g						
Europium 152	U	0.00717	+/ 0.0581	0.0513	+/ 0.0581	0.108	pCi/g						
Europium 154	U	0.040	+/ 0.0643	0.0578	+/ 0.0643	0.127	pCi/g						
Europium 155	U	0.0854	+/ 0.0769	0.0548	+/ 0.0769	0.113	pCi/g						
Lead 212		0.772	+/ 0.0707	0.0295	+/ 0.0707	0.0615	pCi/g						
Lead 214		0.585	+/ 0.0841	0.0353	+/ 0.0841	0.0742	pCi/g						
Manganese 54	U	0.0123	+/ 0.0261	0.0208	+/ 0.0261	0.0446	pCi/g						
Niobium 94	U	0.000522	+/ 0.0212	0.0176	+/ 0.0212	0.0375	pCi/g						
Potassium 40		12.1	+/ 0.950	0.178	+/ 0.950	0.396	pCi/g						
Radium 226		0.568	+/ 0.0877	0.0366	+/ 0.0877	0.0777	pCi/g						
Silver 108m	U	0.00495	+/ 0.0195	0.0171	+/ 0.0195	0.0361	pCi/g						
Thallium 208		0.300	+/ 0.0497	0.0177	+/ 0.0497	0.0379	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.00579	+/ 0.0116	0.0116	+/ 0.0116	0.0264	pCi/g		BXF1	06/22/06	1035	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	0.233	+/ 7.56	6.34	+/ 7.56	12.9	pCi/g		SLN1	06/20/06	0726	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL RAD A 021B	LXM2	05/28/06	1209	534049
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/26/06	1530	534048

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 001F
Sample ID: 163741001

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	DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	72	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	72	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0008 003F	Project:	YANK01204
Sample ID:	163741002	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	05 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	57.6%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		1.09	+/ 0.203	0.0952	+/ 0.203	0.201	pCi/g		MJH1	06/15/06	1544	534130	1
Americium 241	U	0.0256	+/ 0.140	0.082	+/ 0.140	0.169	pCi/g						
Bismuth 212		0.673	+/ 0.467	0.181	+/ 0.467	0.382	pCi/g						
Bismuth 214		0.775	+/ 0.123	0.0437	+/ 0.123	0.0917	pCi/g						
Cesium 134	U	0.0459	+/ 0.0366	0.0321	+/ 0.0366	0.0672	pCi/g						
Cesium 137		0.205	+/ 0.0706	0.0227	+/ 0.0706	0.0479	pCi/g						
Cobalt 60		0.324	+/ 0.0774	0.0292	+/ 0.0774	0.0625	pCi/g						
Europium 152	U	0.020	+/ 0.073	0.0599	+/ 0.073	0.124	pCi/g						
Europium 154	U	0.00145	+/ 0.104	0.0855	+/ 0.104	0.182	pCi/g						
Europium 155	U	0.0192	+/ 0.074	0.0571	+/ 0.074	0.117	pCi/g						
Lead 212		1.16	+/ 0.083	0.033	+/ 0.083	0.0682	pCi/g						
Lead 214		0.886	+/ 0.110	0.0409	+/ 0.110	0.0851	pCi/g						
Manganese 54	U	0.0289	+/ 0.0456	0.0244	+/ 0.0456	0.0516	pCi/g						
Niobium 94	U	0.0236	+/ 0.0269	0.0208	+/ 0.0269	0.0439	pCi/g						
Potassium 40		16.2	+/ 1.14	0.223	+/ 1.14	0.487	pCi/g						
Radium 226		0.775	+/ 0.123	0.0437	+/ 0.123	0.0917	pCi/g						
Silver 108m	U	0.00754	+/ 0.0258	0.0209	+/ 0.0258	0.0437	pCi/g						
Thallium 208		0.337	+/ 0.0676	0.0222	+/ 0.0676	0.0468	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.0112	+/ 0.0174	0.0173	+/ 0.0174	0.0387	pCi/g		BXF1	06/18/06	1006	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	2.74	+/ 5.74	4.87	+/ 5.74	9.92	pCi/g		SLN1	06/20/06	0813	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL RAD A 021B	LXM2	05/28/06	1209	534049
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/26/06	1530	534048

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 003F
Sample ID: 163741002

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
2	EPA 905.0 Modified												
3	DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	71	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	83	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0008 004F	Project:	YANK01204
Sample ID:	163741003	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	05 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	63.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		1.02	+/ 0.200	0.0517	+/ 0.200	0.109	pCi/g		MJH1	06/15/06	1544	534130	1
Americium 241	U	0.0417	+/ 0.0743	0.0608	+/ 0.0743	0.125	pCi/g						
Bismuth 212		0.935	+/ 0.288	0.128	+/ 0.288	0.269	pCi/g						
Bismuth 214		0.581	+/ 0.112	0.0343	+/ 0.112	0.0712	pCi/g						
Cesium 134	U	0.0381	+/ 0.0469	0.0215	+/ 0.0469	0.0448	pCi/g						
Cesium 137		0.0432	+/ 0.036	0.016	+/ 0.036	0.0334	pCi/g						
Cobalt 60	UI	0.00	+/ 0.0268	0.0258	+/ 0.0268	0.0538	pCi/g						
Europium 152	U	0.00954	+/ 0.0498	0.0406	+/ 0.0498	0.0841	pCi/g						
Europium 154	U	0.0501	+/ 0.0608	0.0457	+/ 0.0608	0.0975	pCi/g						
Europium 155	U	0.0526	+/ 0.0739	0.0508	+/ 0.0739	0.104	pCi/g						
Lead 212		0.937	+/ 0.0965	0.0253	+/ 0.0965	0.052	pCi/g						
Lead 214		0.739	+/ 0.119	0.0286	+/ 0.119	0.0594	pCi/g						
Manganese 54	U	0.0116	+/ 0.0212	0.017	+/ 0.0212	0.0357	pCi/g						
Niobium 94	U	0.00493	+/ 0.018	0.0153	+/ 0.018	0.0319	pCi/g						
Potassium 40		13.6	+/ 1.14	0.136	+/ 1.14	0.295	pCi/g						
Radium 226		0.581	+/ 0.112	0.0343	+/ 0.112	0.0712	pCi/g						
Silver 108m	U	0.0039	+/ 0.0169	0.0136	+/ 0.0169	0.0283	pCi/g						
Thallium 208		0.234	+/ 0.0565	0.0157	+/ 0.0565	0.0328	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.00619	+/ 0.0127	0.0157	+/ 0.0127	0.0354	pCi/g		BXF1	06/18/06	1006	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	1.8	+/ 4.81	4.07	+/ 4.81	8.29	pCi/g		SLN1	06/20/06	0901	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL RAD A 021B	LXM2	05/28/06	1209	534049
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/26/06	1530	534048

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 004F
Sample ID: 163741003

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
2	EPA 905.0 Modified												
3	DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	74	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	78	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0008 005F	Project:	YANK01204
Sample ID:	163741004	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	05 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	57.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.859	+/ 0.224	0.0761	+/ 0.224	0.170	pCi/g		MJH1	06/15/06	1650	534130	1
Americium 241	U	0.000334	+/ 0.0393	0.0331	+/ 0.0393	0.0687	pCi/g						
Bismuth 212		0.612	+/ 0.380	0.239	+/ 0.380	0.512	pCi/g						
Bismuth 214		0.792	+/ 0.157	0.0434	+/ 0.157	0.0941	pCi/g						
Cesium 134	U	0.0388	+/ 0.0682	0.0328	+/ 0.0682	0.0708	pCi/g						
Cesium 137		0.266	+/ 0.0822	0.0282	+/ 0.0822	0.0607	pCi/g						
Cobalt 60	U	0.0275	+/ 0.0345	0.0314	+/ 0.0345	0.0696	pCi/g						
Europium 152	U	0.0306	+/ 0.0864	0.0714	+/ 0.0864	0.150	pCi/g						
Europium 154	U	0.0128	+/ 0.0977	0.0818	+/ 0.0977	0.182	pCi/g						
Europium 155	U	0.0403	+/ 0.0709	0.0602	+/ 0.0709	0.125	pCi/g						
Lead 212		0.757	+/ 0.122	0.0365	+/ 0.122	0.0764	pCi/g						
Lead 214		0.677	+/ 0.132	0.0501	+/ 0.132	0.106	pCi/g						
Manganese 54	UI	0.00	+/ 0.0953	0.0265	+/ 0.0953	0.0579	pCi/g						
Niobium 94	U	0.0242	+/ 0.030	0.0222	+/ 0.030	0.0482	pCi/g						
Potassium 40		12.4	+/ 1.44	0.265	+/ 1.44	0.598	pCi/g						
Radium 226		0.792	+/ 0.157	0.0434	+/ 0.157	0.0941	pCi/g						
Silver 108m	U	0.0184	+/ 0.0271	0.0214	+/ 0.0271	0.0458	pCi/g						
Thallium 208		0.262	+/ 0.0789	0.0219	+/ 0.0789	0.0478	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.000828	+/ 0.0152	0.0169	+/ 0.0152	0.0376	pCi/g		BXF1	06/18/06	1006	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	0.858	+/ 4.37	3.69	+/ 4.37	7.51	pCi/g		SLN1	06/20/06	0948	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL RAD A 021B	LXM2	05/28/06	1209	534049
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/26/06	1530	534048

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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 : 362 Injun Hollow Rd

East Hampton, Connecticut 06424 Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 005F Project: YANK01204
Sample ID: 163741004 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
2	EPA 905.0 Modified												
3	DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	78	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	80	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0008 006F	Project:	YANK01204
Sample ID:	163741005	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	05 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	30.9%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.813	+/ 0.227	0.0748	+/ 0.227	0.160	pCi/g		MJH1	06/15/06	1838	534130	1
Americium 241	U	0.0977	+/ 0.116	0.0927	+/ 0.116	0.191	pCi/g						
Bismuth 212		0.817	+/ 0.336	0.146	+/ 0.336	0.311	pCi/g						
Bismuth 214		0.624	+/ 0.109	0.0355	+/ 0.109	0.0751	pCi/g						
Cesium 134	UI	0.00	+/ 0.0387	0.0266	+/ 0.0387	0.0562	pCi/g						
Cesium 137		0.492	+/ 0.0725	0.0214	+/ 0.0725	0.0452	pCi/g						
Cobalt 60		0.779	+/ 0.098	0.0183	+/ 0.098	0.0405	pCi/g						
Europium 152	U	0.0151	+/ 0.0601	0.0488	+/ 0.0601	0.102	pCi/g						
Europium 154	U	0.000763	+/ 0.0759	0.0637	+/ 0.0759	0.138	pCi/g						
Europium 155	U	0.0672	+/ 0.0612	0.0565	+/ 0.0612	0.116	pCi/g						
Lead 212		0.873	+/ 0.0951	0.030	+/ 0.0951	0.0622	pCi/g						
Lead 214		0.720	+/ 0.120	0.0351	+/ 0.120	0.0735	pCi/g						
Manganese 54	U	0.0138	+/ 0.0283	0.0242	+/ 0.0283	0.0511	pCi/g						
Niobium 94	U	0.00895	+/ 0.0211	0.0171	+/ 0.0211	0.0363	pCi/g						
Potassium 40		13.7	+/ 1.37	0.145	+/ 1.37	0.330	pCi/g						
Radium 226		0.624	+/ 0.109	0.0355	+/ 0.109	0.0751	pCi/g						
Silver 108m	U	0.00177	+/ 0.0192	0.0168	+/ 0.0192	0.0354	pCi/g						
Thallium 208		0.298	+/ 0.0652	0.0195	+/ 0.0652	0.0413	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.00559	+/ 0.013	0.0132	+/ 0.013	0.0302	pCi/g		BXF1	06/22/06	1035	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	2.28	+/ 10.1	8.45	+/ 10.1	17.2	pCi/g		SLN1	06/20/06	1035	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL RAD A 021B	LXM2	05/28/06	1209	534049
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/26/06	1530	534048

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 006F
Sample ID: 163741005

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	Mtd
2	EPA 905.0 Modified											
3	DOE RESL Ni 1, Modified											

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	59	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	54	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0008 006FS	Project:	YANK01204
Sample ID:	163741006	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	05 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	40.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		1.01	+/ 0.284	0.111	+/ 0.284	0.236	pCi/g		MJH1	06/15/06	1953	534130	1
Americium 241	U	0.0585	+/ 0.0523	0.0334	+/ 0.0523	0.0689	pCi/g						
Bismuth 212		0.587	+/ 0.428	0.199	+/ 0.428	0.427	pCi/g						
Bismuth 214		0.694	+/ 0.162	0.0485	+/ 0.162	0.103	pCi/g						
Cesium 134	U	0.0331	+/ 0.0414	0.0374	+/ 0.0414	0.0791	pCi/g						
Cesium 137		0.601	+/ 0.100	0.0292	+/ 0.100	0.0619	pCi/g						
Cobalt 60		1.34	+/ 0.140	0.024	+/ 0.140	0.0539	pCi/g						
Europium 152	U	0.00817	+/ 0.0797	0.0688	+/ 0.0797	0.144	pCi/g						
Europium 154	U	0.0337	+/ 0.0957	0.0757	+/ 0.0957	0.167	pCi/g						
Europium 155	U	0.106	+/ 0.115	0.0619	+/ 0.115	0.128	pCi/g						
Lead 212		0.866	+/ 0.135	0.0461	+/ 0.135	0.0951	pCi/g						
Lead 214		0.763	+/ 0.147	0.0479	+/ 0.147	0.101	pCi/g						
Manganese 54	U	0.0198	+/ 0.0388	0.0343	+/ 0.0388	0.0728	pCi/g						
Niobium 94	U	0.0228	+/ 0.0306	0.0233	+/ 0.0306	0.0499	pCi/g						
Potassium 40		14.9	+/ 1.49	0.237	+/ 1.49	0.532	pCi/g						
Radium 226		0.694	+/ 0.162	0.0485	+/ 0.162	0.103	pCi/g						
Silver 108m	U	0.000651	+/ 0.0283	0.0239	+/ 0.0283	0.0504	pCi/g						
Thallium 208		0.360	+/ 0.073	0.0275	+/ 0.073	0.0585	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.000875	+/ 0.0141	0.0156	+/ 0.0141	0.0355	pCi/g		BXF1	06/18/06	1007	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	0.188	+/ 6.10	5.12	+/ 6.10	10.4	pCi/g		SLN1	06/20/06	1122	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL RAD A 021B	LXM2	05/28/06	1209	534049
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/26/06	1530	534048

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 006FS
Sample ID: 163741006

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
2	EPA 905.0 Modified												
3	DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	71	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	84	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0008 002F	Project:	YANK01204
Sample ID:	163741007	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	05 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	40.6%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		1.20	+/ 0.150	0.0467	+/ 0.150	0.0976	pCi/g		MJH1	06/15/06	1953	534130	1
Americium 241	U	0.0887	+/ 0.0966	0.0733	+/ 0.0966	0.150	pCi/g						
Bismuth 212		0.731	+/ 0.231	0.102	+/ 0.231	0.213	pCi/g						
Bismuth 214		0.791	+/ 0.0864	0.0249	+/ 0.0864	0.0516	pCi/g						
Cesium 134	UI	0.00	+/ 0.022	0.0171	+/ 0.022	0.0355	pCi/g						
Cesium 137	U	0.00891	+/ 0.0193	0.0132	+/ 0.0193	0.0275	pCi/g						
Cobalt 60	U	0.00777	+/ 0.0188	0.0156	+/ 0.0188	0.0329	pCi/g						
Europium 152	U	0.00544	+/ 0.0415	0.035	+/ 0.0415	0.0722	pCi/g						
Europium 154	U	0.0213	+/ 0.0532	0.0443	+/ 0.0532	0.0929	pCi/g						
Europium 155	U	0.0635	+/ 0.0805	0.0424	+/ 0.0805	0.0869	pCi/g						
Lead 212		1.24	+/ 0.0603	0.0209	+/ 0.0603	0.0429	pCi/g						
Lead 214		0.965	+/ 0.081	0.0252	+/ 0.081	0.0519	pCi/g						
Manganese 54	U	0.0116	+/ 0.0185	0.016	+/ 0.0185	0.0331	pCi/g						
Niobium 94	U	0.000167	+/ 0.016	0.0129	+/ 0.016	0.0268	pCi/g						
Potassium 40		18.2	+/ 0.772	0.121	+/ 0.772	0.257	pCi/g						
Radium 226		0.791	+/ 0.0864	0.0249	+/ 0.0864	0.0516	pCi/g						
Silver 108m	U	0.00521	+/ 0.0142	0.0117	+/ 0.0142	0.0242	pCi/g						
Thallium 208		0.332	+/ 0.0409	0.0136	+/ 0.0409	0.0281	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.0203	+/ 0.0201	0.0182	+/ 0.0201	0.0413	pCi/g		BXF1	06/18/06	1007	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	4.84	+/ 5.47	4.68	+/ 5.47	9.53	pCi/g		SLN1	06/20/06	1209	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL RAD A 021B	LXM2	05/28/06	1209	534049
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/26/06	1530	534048

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 002F
Sample ID: 163741007

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
2	EPA 905.0 Modified												
3	DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	65	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	84	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: June 23, 2006

Client Sample ID:	9106 0008 007F	Project:	YANK01204
Sample ID:	163741008	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	05 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	36.4%		

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	0.0496	+/ 0.0968	0.062	+/ 0.097	0.209	pCi/g		JXG1	06/16/06	1312	537411	1
Curium 242	U	0.00	+/ 0.0738	0.00	+/ 0.0738	0.102	pCi/g						
Curium 243/244	U	0.00883	+/ 0.0669	0.0622	+/ 0.0669	0.210	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.00	+/ 0.110	0.00	+/ 0.110	0.151	pCi/g		JXG1	06/16/06	0928	537412	2
Plutonium 239/240	U	0.226	+/ 0.163	0.292	+/ 0.165	0.734	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	4.08	+/ 6.18	5.06	+/ 6.19	10.4	pCi/g		JXG1	06/20/06	1900	537417	3
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.525	+/ 0.175	0.0766	+/ 0.175	0.165	pCi/g		MJH1	06/15/06	2141	534130	4
Americium 241	U	0.098	+/ 0.113	0.0936	+/ 0.113	0.194	pCi/g						
Bismuth 212		0.357	+/ 0.278	0.166	+/ 0.278	0.355	pCi/g						
Bismuth 214		0.536	+/ 0.095	0.0335	+/ 0.095	0.0718	pCi/g						
Cesium 134	U	0.0289	+/ 0.0399	0.0228	+/ 0.0399	0.049	pCi/g						
Cesium 137	U	0.0229	+/ 0.0249	0.0227	+/ 0.0249	0.0481	pCi/g						
Cobalt 60	U	0.0268	+/ 0.0279	0.0241	+/ 0.0279	0.0529	pCi/g						
Europium 152	U	0.0567	+/ 0.0559	0.0502	+/ 0.0559	0.106	pCi/g						
Europium 154	U	0.0459	+/ 0.066	0.0605	+/ 0.066	0.133	pCi/g						
Europium 155	U	0.0973	+/ 0.107	0.0529	+/ 0.107	0.110	pCi/g						
Lead 212		0.755	+/ 0.0898	0.0301	+/ 0.0898	0.0627	pCi/g						
Lead 214		0.622	+/ 0.106	0.035	+/ 0.106	0.074	pCi/g						
Manganese 54	U	0.0153	+/ 0.0291	0.0202	+/ 0.0291	0.0437	pCi/g						
Niobium 94	U	0.00868	+/ 0.0196	0.0158	+/ 0.0196	0.0342	pCi/g						
Potassium 40		13.1	+/ 1.34	0.166	+/ 1.34	0.378	pCi/g						
Radium 226		0.536	+/ 0.095	0.0335	+/ 0.095	0.0718	pCi/g						
Silver 108m	U	0.00104	+/ 0.0168	0.0149	+/ 0.0168	0.032	pCi/g						
Thallium 208		0.225	+/ 0.0465	0.0196	+/ 0.0465	0.0418	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.000881	+/ 0.0151	0.0171	+/ 0.0151	0.038	pCi/g		BXF1	06/18/06	1007	536483	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	4.94	+/ 6.95	5.56	+/ 6.95	11.7	pCi/g		NXP1	06/17/06	1609	535984	6
Liquid Scint C14, Solid 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: June 23, 2006

Client Sample ID: 9106 0008 007F
Sample ID: 163741008

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													
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.015	+/ 0.126	0.106	+/ 0.126	0.216	pCi/g		ATH2	06/04/06	0432	534837	7
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	21.1	+/ 18.3	13.0	+/ 18.5	27.4	pCi/g		SLN1	06/21/06	0813	538969	8
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	2.33	+/ 5.91	5.00	+/ 5.91	10.2	pCi/g		SLN1	06/20/06	1256	538365	9
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.196	+/ 0.227	0.184	+/ 0.227	0.380	pCi/g		SXE1	06/14/06	1714	536314	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL RAD A 021B	LXM2	05/28/06	1209	534049
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/26/06	1530	534048

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	83	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	47	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	94	(25% 125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	79	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	83	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	80	(25% 125%)

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 : 362 Injun Hollow Rd

East Hampton, Connecticut 06424 Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 007F Project: YANK01204
Sample ID: 163741008 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	Mtd
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid ALL FS			84		(15% 125%)					

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0008 008F	Project:	YANK01204
Sample ID:	163741009	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	08 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	38.6%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.974	+/ 0.257	0.075	+/ 0.257	0.161	pCi/g		MJH1	06/15/06	2153	534130	1
Americium 241	U	0.0456	+/ 0.101	0.0814	+/ 0.101	0.169	pCi/g						
Bismuth 212		0.779	+/ 0.439	0.173	+/ 0.439	0.368	pCi/g						
Bismuth 214		0.569	+/ 0.134	0.0421	+/ 0.134	0.0889	pCi/g						
Cesium 134	U	0.0547	+/ 0.0378	0.0286	+/ 0.0378	0.0605	pCi/g						
Cesium 137		0.472	+/ 0.0788	0.023	+/ 0.0788	0.0488	pCi/g						
Cobalt 60		0.917	+/ 0.101	0.0202	+/ 0.101	0.0446	pCi/g						
Europium 152	U	0.0108	+/ 0.0749	0.056	+/ 0.0749	0.118	pCi/g						
Europium 154	U	0.0271	+/ 0.0787	0.0671	+/ 0.0787	0.145	pCi/g						
Europium 155	U	0.00728	+/ 0.0765	0.0657	+/ 0.0765	0.136	pCi/g						
Lead 212		0.929	+/ 0.106	0.0331	+/ 0.106	0.069	pCi/g						
Lead 214		0.729	+/ 0.114	0.0402	+/ 0.114	0.0845	pCi/g						
Manganese 54	U	0.030	+/ 0.0293	0.0266	+/ 0.0293	0.0564	pCi/g						
Niobium 94	U	0.026	+/ 0.0265	0.0202	+/ 0.0265	0.0428	pCi/g						
Potassium 40		14.5	+/ 1.35	0.191	+/ 1.35	0.422	pCi/g						
Radium 226		0.569	+/ 0.134	0.0421	+/ 0.134	0.0889	pCi/g						
Silver 108m	U	0.00585	+/ 0.0218	0.0188	+/ 0.0218	0.0398	pCi/g						
Thallium 208		0.274	+/ 0.0702	0.0206	+/ 0.0702	0.0439	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.00269	+/ 0.0189	0.0216	+/ 0.0189	0.0476	pCi/g		BXF1	06/18/06	1007	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	0.412	+/ 8.90	7.48	+/ 8.90	15.2	pCi/g		SLN1	06/20/06	1343	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/28/06	1412	534097

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 008F
Sample ID: 163741009
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	Mtd
3 DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	74	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	57	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: June 23, 2006

Client Sample ID:	9106 0008 009F	Project:	YANK01204
Sample ID:	163741010	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	08 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	36.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.741	+/ 0.207	0.0619	+/ 0.207	0.134	pCi/g		MJH1	06/16/06	0622	534130	1
Americium 241	U	0.0785	+/ 0.124	0.0788	+/ 0.124	0.163	pCi/g						
Bismuth 212		0.596	+/ 0.368	0.134	+/ 0.368	0.287	pCi/g						
Bismuth 214		0.667	+/ 0.109	0.0311	+/ 0.109	0.0663	pCi/g						
Cesium 134	U	0.0506	+/ 0.0431	0.0244	+/ 0.0431	0.0516	pCi/g						
Cesium 137	U	0.0155	+/ 0.0231	0.0183	+/ 0.0231	0.039	pCi/g						
Cobalt 60	U	0.0108	+/ 0.0254	0.0202	+/ 0.0254	0.0443	pCi/g						
Europium 152	U	0.0723	+/ 0.0543	0.0406	+/ 0.0543	0.0856	pCi/g						
Europium 154	U	0.051	+/ 0.0695	0.0535	+/ 0.0695	0.117	pCi/g						
Europium 155	U	0.0418	+/ 0.0558	0.0512	+/ 0.0558	0.106	pCi/g						
Lead 212		0.813	+/ 0.0899	0.0284	+/ 0.0899	0.0589	pCi/g						
Lead 214		0.782	+/ 0.120	0.0326	+/ 0.120	0.0685	pCi/g						
Manganese 54	U	0.0123	+/ 0.0257	0.0204	+/ 0.0257	0.0435	pCi/g						
Niobium 94	U	0.014	+/ 0.0192	0.017	+/ 0.0192	0.0361	pCi/g						
Potassium 40		14.8	+/ 1.41	0.147	+/ 1.41	0.333	pCi/g						
Radium 226		0.667	+/ 0.109	0.0311	+/ 0.109	0.0663	pCi/g						
Silver 108m	U	0.0119	+/ 0.0163	0.0135	+/ 0.0163	0.0287	pCi/g						
Thallium 208		0.306	+/ 0.0596	0.0159	+/ 0.0596	0.0339	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.0059	+/ 0.0171	0.0202	+/ 0.0171	0.0443	pCi/g		BXF1	06/18/06	1101	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	2.05	+/ 10.4	8.80	+/ 10.4	17.9	pCi/g		SLN1	06/20/06	1430	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/28/06	1412	534097

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 009F
Sample ID: 163741010

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	Mtd
3 DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	75	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	52	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: June 23, 2006

Client Sample ID:	9106 0008 010F	Project:	YANK01204
Sample ID:	163741011	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	08 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	42.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.840	+/ 0.226	0.0786	+/ 0.226	0.168	pCi/g		MJH1	06/16/06	0622	534130	1
Americium 241	U	0.0195	+/ 0.0317	0.0282	+/ 0.0317	0.0579	pCi/g						
Bismuth 212		0.758	+/ 0.371	0.162	+/ 0.371	0.345	pCi/g						
Bismuth 214		0.662	+/ 0.138	0.0422	+/ 0.138	0.0889	pCi/g						
Cesium 134	U	0.047	+/ 0.0343	0.0272	+/ 0.0343	0.0577	pCi/g						
Cesium 137		0.336	+/ 0.0689	0.0223	+/ 0.0689	0.0472	pCi/g						
Cobalt 60		0.246	+/ 0.0501	0.0226	+/ 0.0501	0.0494	pCi/g						
Europium 152	U	0.0238	+/ 0.0624	0.0526	+/ 0.0624	0.110	pCi/g						
Europium 154	U	0.00597	+/ 0.0975	0.0691	+/ 0.0975	0.150	pCi/g						
Europium 155	U	0.0474	+/ 0.0837	0.0461	+/ 0.0837	0.0952	pCi/g						
Lead 212		0.887	+/ 0.124	0.0287	+/ 0.124	0.0596	pCi/g						
Lead 214		0.705	+/ 0.116	0.0397	+/ 0.116	0.0828	pCi/g						
Manganese 54	U	0.00134	+/ 0.0286	0.0245	+/ 0.0286	0.0521	pCi/g						
Niobium 94	U	0.00916	+/ 0.026	0.0207	+/ 0.026	0.0439	pCi/g						
Potassium 40		12.5	+/ 1.26	0.187	+/ 1.26	0.415	pCi/g						
Radium 226		0.662	+/ 0.138	0.0422	+/ 0.138	0.0889	pCi/g						
Silver 108m	U	0.0162	+/ 0.0222	0.0196	+/ 0.0222	0.0411	pCi/g						
Thallium 208		0.316	+/ 0.0704	0.0195	+/ 0.0704	0.0415	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.00347	+/ 0.0121	0.0128	+/ 0.0121	0.0288	pCi/g		BXF1	06/22/06	1046	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	0.123	+/ 5.98	5.02	+/ 5.98	10.2	pCi/g		SLN1	06/20/06	1517	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/28/06	1412	534097

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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 : 362 Injun Hollow Rd

East Hampton, Connecticut 06424 Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 010F Project: YANK01204
Sample ID: 163741011 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	Mtd
2	EPA 905.0 Modified											
3	DOE RESL Ni 1, Modified											

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	69	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	84	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0008 010FS	Project:	YANK01204
Sample ID:	163741012	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	08 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	41.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.834	+/ 0.216	0.0744	+/ 0.216	0.157	pCi/g		MJH1	06/15/06	2338	534130	1
Americium 241	U	0.0216	+/ 0.0277	0.0248	+/ 0.0277	0.0509	pCi/g						
Bismuth 212		0.657	+/ 0.246	0.145	+/ 0.246	0.306	pCi/g						
Bismuth 214		0.640	+/ 0.127	0.0335	+/ 0.127	0.0706	pCi/g						
Cesium 134	U	0.0478	+/ 0.0354	0.0239	+/ 0.0354	0.0503	pCi/g						
Cesium 137		0.302	+/ 0.0573	0.0214	+/ 0.0573	0.0448	pCi/g						
Cobalt 60		0.328	+/ 0.0592	0.0204	+/ 0.0592	0.044	pCi/g						
Europium 152	U	0.0241	+/ 0.0519	0.0457	+/ 0.0519	0.0952	pCi/g						
Europium 154	U	0.0192	+/ 0.0711	0.0575	+/ 0.0711	0.124	pCi/g						
Europium 155	U	0.0699	+/ 0.049	0.0436	+/ 0.049	0.0894	pCi/g						
Lead 212		0.826	+/ 0.112	0.0257	+/ 0.112	0.053	pCi/g						
Lead 214		0.705	+/ 0.106	0.0338	+/ 0.106	0.0704	pCi/g						
Manganese 54	U	0.014	+/ 0.0231	0.0185	+/ 0.0231	0.0394	pCi/g						
Niobium 94	U	0.00643	+/ 0.0227	0.0183	+/ 0.0227	0.0385	pCi/g						
Potassium 40		12.7	+/ 1.18	0.161	+/ 1.18	0.355	pCi/g						
Radium 226		0.640	+/ 0.127	0.0335	+/ 0.127	0.0706	pCi/g						
Silver 108m	U	0.000137	+/ 0.0191	0.0163	+/ 0.0191	0.034	pCi/g						
Thallium 208		0.257	+/ 0.0533	0.0193	+/ 0.0533	0.0406	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.00859	+/ 0.017	0.0174	+/ 0.017	0.0387	pCi/g		BXF1	06/18/06	1101	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	1.63	+/ 6.69	5.65	+/ 6.69	11.5	pCi/g		SLN1	06/20/06	1604	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/28/06	1412	534097

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified

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 : 362 Injun Hollow Rd

East Hampton, Connecticut 06424 Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 010FS Project: YANK01204
Sample ID: 163741012 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	Mtd
3 DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	78	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	81	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: June 23, 2006

Client Sample ID:	9106 0008 011F	Project:	YANK01204
Sample ID:	163741013	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	08 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	65.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.894	+/ 0.285	0.121	+/ 0.285	0.255	pCi/g		MJH1	06/15/06	2338	534130	1
Americium 241	U	0.0065	+/ 0.0527	0.043	+/ 0.0527	0.088	pCi/g						
Bismuth 212	U	0.385	+/ 0.499	0.263	+/ 0.499	0.551	pCi/g						
Bismuth 214		0.528	+/ 0.139	0.0646	+/ 0.139	0.135	pCi/g						
Cesium 134	UI	0.00	+/ 0.0499	0.0436	+/ 0.0499	0.091	pCi/g						
Cesium 137	U	0.0676	+/ 0.0621	0.038	+/ 0.0621	0.079	pCi/g						
Cobalt 60		0.122	+/ 0.0837	0.0368	+/ 0.0837	0.0784	pCi/g						
Europium 152	U	0.0509	+/ 0.102	0.0819	+/ 0.102	0.170	pCi/g						
Europium 154	U	0.0134	+/ 0.124	0.103	+/ 0.124	0.218	pCi/g						
Europium 155		0.186	+/ 0.145	0.076	+/ 0.145	0.156	pCi/g						
Lead 212		1.01	+/ 0.0964	0.0434	+/ 0.0964	0.0896	pCi/g						
Lead 214		0.842	+/ 0.147	0.0595	+/ 0.147	0.123	pCi/g						
Manganese 54	U	0.0352	+/ 0.0459	0.0393	+/ 0.0459	0.0822	pCi/g						
Niobium 94	U	0.0177	+/ 0.0382	0.0309	+/ 0.0382	0.0647	pCi/g						
Potassium 40		16.3	+/ 1.25	0.275	+/ 1.25	0.598	pCi/g						
Radium 226		0.528	+/ 0.139	0.0646	+/ 0.139	0.135	pCi/g						
Silver 108m	U	0.0176	+/ 0.0361	0.0285	+/ 0.0361	0.0592	pCi/g						
Thallium 208		0.314	+/ 0.0793	0.0353	+/ 0.0793	0.0736	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.0193	+/ 0.017	0.0153	+/ 0.017	0.0344	pCi/g		BXF1	06/18/06	1106	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	3.34	+/ 6.23	5.29	+/ 6.23	10.8	pCi/g		SLN1	06/20/06	1651	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/28/06	1412	534097

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified

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 : 362 Injun Hollow Rd

East Hampton, Connecticut 06424 Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 011F Project: YANK01204
Sample ID: 163741013 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
3 DOE RESL Ni 1, Modified													

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	77	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	89	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0008 013F	Project:	YANK01204
Sample ID:	163741014	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	08 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	61.4%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		1.21	+/ 0.250	0.0775	+/ 0.250	0.165	pCi/g		MJH1	06/15/06	2354	534130	1
Americium 241	U	0.0448	+/ 0.116	0.0842	+/ 0.116	0.173	pCi/g						
Bismuth 212		0.622	+/ 0.272	0.166	+/ 0.272	0.352	pCi/g						
Bismuth 214		0.871	+/ 0.154	0.0439	+/ 0.154	0.0922	pCi/g						
Cesium 134	UI	0.00	+/ 0.0417	0.0281	+/ 0.0417	0.0593	pCi/g						
Cesium 137	U	0.0103	+/ 0.0281	0.0232	+/ 0.0281	0.0489	pCi/g						
Cobalt 60	U	0.0299	+/ 0.0305	0.0268	+/ 0.0305	0.0573	pCi/g						
Europium 152	U	0.0772	+/ 0.0721	0.0554	+/ 0.0721	0.116	pCi/g						
Europium 154	U	0.0345	+/ 0.0915	0.0761	+/ 0.0915	0.163	pCi/g						
Europium 155	U	0.0901	+/ 0.087	0.0707	+/ 0.087	0.146	pCi/g						
Lead 212		1.15	+/ 0.129	0.0377	+/ 0.129	0.0779	pCi/g						
Lead 214		1.00	+/ 0.172	0.041	+/ 0.172	0.0856	pCi/g						
Manganese 54	U	0.0151	+/ 0.0301	0.0256	+/ 0.0301	0.0541	pCi/g						
Niobium 94	U	0.0107	+/ 0.0253	0.0216	+/ 0.0253	0.0454	pCi/g						
Potassium 40		19.2	+/ 1.60	0.185	+/ 1.60	0.408	pCi/g						
Radium 226		0.871	+/ 0.154	0.0439	+/ 0.154	0.0922	pCi/g						
Silver 108m	U	0.0111	+/ 0.0239	0.0198	+/ 0.0239	0.0416	pCi/g						
Thallium 208		0.313	+/ 0.0665	0.0232	+/ 0.0665	0.0487	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.0098	+/ 0.0158	0.0157	+/ 0.0158	0.0353	pCi/g		BXF1	06/18/06	1106	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	2.7	+/ 5.98	5.07	+/ 5.98	10.3	pCi/g		SLN1	06/20/06	1738	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/28/06	1412	534097

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 013F
Sample ID: 163741014
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	Mtd
3 DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	77	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	83	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: June 23, 2006

Client Sample ID:	9106 0008 014F	Project:	YANK01204
Sample ID:	163741015	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	08 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	54.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.829	+/ 0.225	0.0682	+/ 0.225	0.147	pCi/g		MJH1	06/15/06	2346	534130	1
Americium 241	U	0.00581	+/ 0.113	0.089	+/ 0.113	0.184	pCi/g						
Bismuth 212		0.447	+/ 0.261	0.161	+/ 0.261	0.342	pCi/g						
Bismuth 214		0.758	+/ 0.126	0.0375	+/ 0.126	0.0792	pCi/g						
Cesium 134	U	0.0414	+/ 0.0279	0.0252	+/ 0.0279	0.0533	pCi/g						
Cesium 137	U	0.00389	+/ 0.0232	0.0189	+/ 0.0232	0.0402	pCi/g						
Cobalt 60	U	0.0145	+/ 0.0239	0.0182	+/ 0.0239	0.0404	pCi/g						
Europium 152	U	0.00738	+/ 0.0586	0.0474	+/ 0.0586	0.0995	pCi/g						
Europium 154	U	0.0016	+/ 0.076	0.0629	+/ 0.076	0.137	pCi/g						
Europium 155	U	0.0316	+/ 0.0628	0.0545	+/ 0.0628	0.113	pCi/g						
Lead 212		1.01	+/ 0.109	0.0282	+/ 0.109	0.0587	pCi/g						
Lead 214		0.746	+/ 0.119	0.0365	+/ 0.119	0.0763	pCi/g						
Manganese 54	U	0.00361	+/ 0.027	0.0217	+/ 0.027	0.0461	pCi/g						
Niobium 94	U	0.00521	+/ 0.0228	0.0184	+/ 0.0228	0.0391	pCi/g						
Potassium 40		14.7	+/ 1.47	0.205	+/ 1.47	0.450	pCi/g						
Radium 226		0.758	+/ 0.126	0.0375	+/ 0.126	0.0792	pCi/g						
Silver 108m	U	0.000405	+/ 0.0194	0.0165	+/ 0.0194	0.0348	pCi/g						
Thallium 208		0.326	+/ 0.0564	0.0209	+/ 0.0564	0.0441	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.0054	+/ 0.0153	0.0161	+/ 0.0153	0.0357	pCi/g		BXF1	06/18/06	1106	536483	2
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	1.72	+/ 7.06	5.96	+/ 7.06	12.1	pCi/g		SLN1	06/20/06	1825	538365	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/28/06	1412	534097

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	EPA 905.0 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 014F
Sample ID: 163741015

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	Mtd
3 DOE RESL Ni 1, Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	82	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	79	(25% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: June 23, 2006

Client Sample ID:	9106 0008 012F	Project:	YANK01204
Sample ID:	163741016	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	08 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	26.1%		

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	0.0299	+/ 0.151	0.144	+/ 0.151	0.392	pCi/g		JXG1	06/16/06	0803	537411	1
Curium 242	U	0.0126	+/ 0.0957	0.089	+/ 0.0957	0.300	pCi/g						
Curium 243/244	U	0.0383	+/ 0.218	0.218	+/ 0.218	0.540	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.00	+/ 0.0633	0.00	+/ 0.0633	0.0875	pCi/g		JXG1	06/16/06	0928	537412	2
Plutonium 239/240	U	0.0335	+/ 0.0944	0.0735	+/ 0.0945	0.234	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	0.179	+/ 10.9	9.12	+/ 10.9	18.8	pCi/g		JXG1	06/20/06	1931	537417	3
Rad Gamma Spec Analysis													
Gamma,Solid FSS GAM & ALL FSS													
Actinium 228		0.685	+/ 0.143	0.0394	+/ 0.143	0.0829	pCi/g		MJH1	06/16/06	0623	534130	4
Americium 241	U	0.000535	+/ 0.0924	0.0773	+/ 0.0924	0.159	pCi/g						
Bismuth 212		0.589	+/ 0.310	0.087	+/ 0.310	0.182	pCi/g						
Bismuth 214		0.445	+/ 0.0688	0.023	+/ 0.0688	0.0477	pCi/g						
Cesium 134	UI	0.00	+/ 0.0301	0.0151	+/ 0.0301	0.0313	pCi/g						
Cesium 137		0.184	+/ 0.0341	0.0108	+/ 0.0341	0.0226	pCi/g						
Cobalt 60		0.179	+/ 0.0378	0.0132	+/ 0.0378	0.028	pCi/g						
Europium 152	U	0.0299	+/ 0.0402	0.0309	+/ 0.0402	0.0637	pCi/g						
Europium 154	U	0.0105	+/ 0.0393	0.0338	+/ 0.0393	0.0718	pCi/g						
Europium 155	UI	0.00	+/ 0.0573	0.0318	+/ 0.0573	0.0653	pCi/g						
Lead 212		0.723	+/ 0.0792	0.0193	+/ 0.0792	0.0396	pCi/g						
Lead 214		0.586	+/ 0.0847	0.0213	+/ 0.0847	0.0441	pCi/g						
Manganese 54	U	0.003	+/ 0.0149	0.0125	+/ 0.0149	0.0261	pCi/g						
Niobium 94	U	0.00892	+/ 0.0123	0.0107	+/ 0.0123	0.0223	pCi/g						
Potassium 40		11.7	+/ 0.969	0.0946	+/ 0.969	0.205	pCi/g						
Radium 226		0.445	+/ 0.0688	0.023	+/ 0.0688	0.0477	pCi/g						
Silver 108m	U	0.00372	+/ 0.0119	0.0103	+/ 0.0119	0.0213	pCi/g						
Thallium 208		0.221	+/ 0.0359	0.0107	+/ 0.0359	0.0223	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.0192	+/ 0.0141	0.0192	+/ 0.0141	0.0418	pCi/g		BXF1	06/18/06	1109	536483	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	0.839	+/ 6.11	5.08	+/ 6.11	10.7	pCi/g		NXP1	06/17/06	1626	535984	6
Liquid Scint C14, Solid 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: June 23, 2006

Client Sample ID: 9106 0008 012F
Sample ID: 163741016

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													
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.165	+/ 0.117	0.095	+/ 0.117	0.193	pCi/g		ATH2	06/05/06	2139	534837	7
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	3.6	+/ 17.5	13.4	+/ 17.5	28.2	pCi/g		SLN1	06/21/06	0829	538969	8
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	2.17	+/ 8.55	7.22	+/ 8.55	14.7	pCi/g		SLN1	06/20/06	1912	538365	9
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.0182	+/ 0.216	0.182	+/ 0.216	0.375	pCi/g		SXE1	06/14/06	1730	536314	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM1	05/28/06	1412	534097

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	76	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	89	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	52	(25% 125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	85	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	91	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	63	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	83	(15% 125%)

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: June 23, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 012F
Sample ID: 163741016

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

QC Summary

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

East Hampton, Connecticut

Contact: Mr. Jack McCarthy

Workorder: 163741

Report Date: June 23, 2006

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 537411										
QC1201110208 163741008 DUP										
Americium-241	U	0.0496	U	0.0424	pCi/g	16		(0% - 100%)	JXG1	06/16/06 08:03
	Uncert:	+/-0.0968		+/-0.116						
	TPU:	+/-0.097		+/-0.116						
Curium-242	U	0.00	U	-0.0313	pCi/g	200		(0% - 100%)		
	Uncert:	+/-0.0738		+/-0.0354						
	TPU:	+/-0.0738		+/-0.0357						
Curium-243/244	U	0.00883	U	-0.0933	pCi/g	242		(0% - 100%)		
	Uncert:	+/-0.0669		+/-0.126						
	TPU:	+/-0.0669		+/-0.126						
QC1201110210 LCS										
Americium-241	13.0			12.7	pCi/g		98	(75%-125%)		
	Uncert:			+/-1.35						
	TPU:			+/-2.20						
Curium-242			U	0.0293	pCi/g					
	Uncert:			+/-0.0778						
	TPU:			+/-0.0779						
Curium-243/244	15.9			15.4	pCi/g		97	(75%-125%)		
	Uncert:			+/-1.50						
	TPU:			+/-2.59						
QC1201110207 MB										
Americium-241			U	-0.0328	pCi/g					
	Uncert:			+/-0.0912						
	TPU:			+/-0.0914						
Curium-242			U	-0.0112	pCi/g					
	Uncert:			+/-0.022						
	TPU:			+/-0.022						
Curium-243/244			U	-0.129	pCi/g					
	Uncert:			+/-0.123						
	TPU:			+/-0.124						
QC1201110209 163741008 MS										
Americium-241	13.6 U	0.0496		13.4	pCi/g		99	(75%-125%)		
	Uncert:	+/-0.0968		+/-1.46						
	TPU:	+/-0.097		+/-2.36						
Curium-242	U	0.00	U	0.0255	pCi/g					
	Uncert:	+/-0.0738		+/-0.102						
	TPU:	+/-0.0738		+/-0.102						
Curium-243/244	16.7 U	0.00883		16.3	pCi/g		98	(75%-125%)		
	Uncert:	+/-0.0669		+/-1.62						
	TPU:	+/-0.0669		+/-2.79						
Batch 537412										
QC1201110216 163741008 DUP										
Plutonium-238	U	0.00	U	0.00	pCi/g	0		(0% - 100%)	JXG1	06/16/06 09:28

QC Summary

Workorder: 163741

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 537412										
	Uncert:	+/-0.110		+/-0.0615						
	TPU:	+/-0.110		+/-0.0615						
Plutonium-239/240	U	-0.226	U	0.0326	pCi/g	267		(0% - 100%)		
	Uncert:	+/-0.163		+/-0.0917						
	TPU:	+/-0.165		+/-0.0918						
QC1201110218 LCS										
Plutonium-238			U	0.0301	pCi/g			(75%-125%)		
	Uncert:			+/-0.0797						
	TPU:			+/-0.0798						
Plutonium-239/240	12.0			10.9	pCi/g		91	(75%-125%)		
	Uncert:			+/-1.29						
	TPU:			+/-1.77						
QC1201110215 MB										
Plutonium-238			U	0.0798	pCi/g					
	Uncert:			+/-0.0991						
	TPU:			+/-0.0995						
Plutonium-239/240			U	0.044	pCi/g					
	Uncert:			+/-0.0824						
	TPU:			+/-0.0826						
QC1201110217 163741008 MS										
Plutonium-238	U	0.00	U	0.00901	pCi/g			(75%-125%)		
	Uncert:	+/-0.110		+/-0.0856						
	TPU:	+/-0.110		+/-0.0856						
Plutonium-239/240	12.6 U	-0.226		10.7	pCi/g		85	(75%-125%)		
	Uncert:	+/-0.163		+/-1.08						
	TPU:	+/-0.165		+/-1.51						
Batch 537417										
QC1201110230 163741008 DUP										
Plutonium-241	U	4.08	U	-4.3	pCi/g	0		(0% - 100%)	JXG1	06/20/06 20:33
	Uncert:	+/-6.18		+/-8.53						
	TPU:	+/-6.19		+/-8.54						
QC1201110232 LCS										
Plutonium-241	140			144	pCi/g		102	(75%-125%)		06/20/06 21:36
	Uncert:			+/-10.8						
	TPU:			+/-17.7						
QC1201110229 MB										
Plutonium-241			U	-2.16	pCi/g					06/20/06 20:02
	Uncert:			+/-6.46						
	TPU:			+/-6.47						
QC1201110231 163741008 MS										
Plutonium-241	142 U	4.08		129	pCi/g		91	(75%-125%)		06/20/06 21:05
	Uncert:	+/-6.18		+/-9.07						
	TPU:	+/-6.19		+/-14.8						
Rad Gamma Spec										
Batch 534130										
QC1201102650 163741001 DUP										
Actinium-228		0.817		0.702	pCi/g	15		(0% - 100%)	MJH1	06/16/06 06:30
	Uncert:	+/-0.177		+/-0.147						
				+/-0.147						

QC Summary

Workorder: 163741

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 534130											
	TPU:	+/-0.177									
Americium-241	U	0.0431	U	0.0617	pCi/g	36		(0% - 100%)			
	Uncert:	+/-0.0977		+/-0.0702							
	TPU:	+/-0.0977		+/-0.0702							
Bismuth-212		0.570		0.607	pCi/g	6		(0% - 100%)			
	Uncert:	+/-0.292		+/-0.297							
	TPU:	+/-0.292		+/-0.297							
Bismuth-214		0.568		0.650	pCi/g	14		(0% - 100%)			
	Uncert:	+/-0.0877		+/-0.103							
	TPU:	+/-0.0877		+/-0.103							
Cesium-134	U	0.0314	UI	0.0349	pCi/g	11		(0% - 100%)			
	Uncert:	+/-0.0354		+/-0.0245							
	TPU:	+/-0.0354		+/-0.0245							
Cesium-137		0.396		0.363	pCi/g	9		(0% - 100%)			
	Uncert:	+/-0.0588		+/-0.0539							
	TPU:	+/-0.0588		+/-0.0539							
Cobalt-60		0.133		0.105	pCi/g	24		(0% - 100%)			
	Uncert:	+/-0.0554		+/-0.0405							
	TPU:	+/-0.0554		+/-0.0405							
Europium-152	U	0.00717	U	-0.0343	pCi/g	306		(0% - 100%)			
	Uncert:	+/-0.0581		+/-0.061							
	TPU:	+/-0.0581		+/-0.061							
Europium-154	U	0.040	U	-0.0163	pCi/g	475		(0% - 100%)			
	Uncert:	+/-0.0643		+/-0.0693							
	TPU:	+/-0.0643		+/-0.0693							
Europium-155	U	0.0854	U	0.0232	pCi/g	115		(0% - 100%)			
	Uncert:	+/-0.0769		+/-0.0784							
	TPU:	+/-0.0769		+/-0.0784							
Lead-212		0.772		0.808	pCi/g	5		(0% - 20%)			
	Uncert:	+/-0.0707		+/-0.0864							
	TPU:	+/-0.0707		+/-0.0864							
Lead-214		0.585		0.742	pCi/g	24		(0% - 20%)			
	Uncert:	+/-0.0841		+/-0.099							
	TPU:	+/-0.0841		+/-0.099							
Manganese-54	U	0.0123	U	0.0098	pCi/g	22		(0% - 100%)			
	Uncert:	+/-0.0261		+/-0.022							
	TPU:	+/-0.0261		+/-0.022							
Niobium-94	U	-0.000522	U	0.00495	pCi/g	247		(0% - 100%)			
	Uncert:	+/-0.0212		+/-0.0175							
	TPU:	+/-0.0212		+/-0.0175							
Potassium-40		12.1		12.1	pCi/g	0		(0% - 20%)			
	Uncert:	+/-0.950		+/-1.08							
	TPU:	+/-0.950		+/-1.08							
Radium-226		0.568		0.650	pCi/g	14		(0% - 100%)			
	Uncert:	+/-0.0877		+/-0.103							
	TPU:	+/-0.0877		+/-0.103							
Silver-108m	U	0.00495	U	0.0141	pCi/g	96		(0% - 100%)			
	Uncert:	+/-0.0195		+/-0.018							

QC Summary

Workorder: 163741

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 534130										
	TPU:	+/-0.0195		+/-0.018						
Thallium-208		0.300		0.295	pCi/g	2		(0% - 100%)		
	Uncert:	+/-0.0497		+/-0.0475						
	TPU:	+/-0.0497		+/-0.0475						
QC1201102651 LCS										
Actinium-228			U	0.235	pCi/g					06/16/06 06:31
	Uncert:			+/-0.581						
	TPU:			+/-0.581						
Americium-241	23.4			23.0	pCi/g		98	(75%-125%)		
	Uncert:			+/-2.46						
	TPU:			+/-2.46						
Bismuth-212			U	0.778	pCi/g					
	Uncert:			+/-1.12						
	TPU:			+/-1.12						
Bismuth-214			U	-0.171	pCi/g					
	Uncert:			+/-0.298						
	TPU:			+/-0.298						
Cesium-134			U	0.0723	pCi/g					
	Uncert:			+/-0.160						
	TPU:			+/-0.160						
Cesium-137	9.63			10.5	pCi/g		109	(75%-125%)		
	Uncert:			+/-0.824						
	TPU:			+/-0.824						
Cobalt-60	15.0			15.1	pCi/g		101	(75%-125%)		
	Uncert:			+/-1.08						
	TPU:			+/-1.08						
Europium-152			U	0.042	pCi/g					
	Uncert:			+/-0.334						
	TPU:			+/-0.334						
Europium-154			U	0.289	pCi/g					
	Uncert:			+/-0.325						
	TPU:			+/-0.325						
Europium-155			U	-0.257	pCi/g					
	Uncert:			+/-0.387						
	TPU:			+/-0.387						
Lead-212			U	-0.101	pCi/g					
	Uncert:			+/-0.189						
	TPU:			+/-0.189						
Lead-214			U	0.233	pCi/g					
	Uncert:			+/-0.248						
	TPU:			+/-0.248						
Manganese-54			U	0.0621	pCi/g					
	Uncert:			+/-0.149						
	TPU:			+/-0.149						
Niobium-94			U	-0.0598	pCi/g					
	Uncert:			+/-0.129						
	TPU:			+/-0.129						
Potassium-40			U	0.576	pCi/g					

QC Summary

Workorder: 163741

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 534130											
	Uncert:			+/-1.23							
	TPU:			+/-1.23							
Radium-226			U	-0.171	pCi/g			(75%-125%)			
	Uncert:			+/-0.298							
	TPU:			+/-0.298							
Silver-108m			U	-0.0434	pCi/g						
	Uncert:			+/-0.123							
	TPU:			+/-0.123							
Thallium-208			U	0.144	pCi/g						
	Uncert:			+/-0.146							
	TPU:			+/-0.146							
QC1201102649 MB											
Actinium-228			U	0.0712	pCi/g					06/16/06	06:23
	Uncert:			+/-0.0472							
	TPU:			+/-0.0472							
Americium-241			U	0.00139	pCi/g						
	Uncert:			+/-0.0249							
	TPU:			+/-0.0249							
Bismuth-212			U	0.0152	pCi/g						
	Uncert:			+/-0.166							
	TPU:			+/-0.166							
Bismuth-214			U	0.0175	pCi/g						
	Uncert:			+/-0.0261							
	TPU:			+/-0.0261							
Cesium-134			U	0.00016	pCi/g						
	Uncert:			+/-0.0151							
	TPU:			+/-0.0151							
Cesium-137			U	-0.00376	pCi/g						
	Uncert:			+/-0.0123							
	TPU:			+/-0.0123							
Cobalt-60			U	0.00528	pCi/g						
	Uncert:			+/-0.0137							
	TPU:			+/-0.0137							
Europium-152			U	-0.0157	pCi/g						
	Uncert:			+/-0.0336							
	TPU:			+/-0.0336							
Europium-154			U	-0.0124	pCi/g						
	Uncert:			+/-0.0325							
	TPU:			+/-0.0325							
Europium-155			U	0.00213	pCi/g						
	Uncert:			+/-0.031							
	TPU:			+/-0.031							
Lead-212			U	0.000337	pCi/g						
	Uncert:			+/-0.0331							
	TPU:			+/-0.0331							
Lead-214			U	0.0225	pCi/g						
	Uncert:			+/-0.0398							
	TPU:			+/-0.0398							

QC Summary

Workorder: 163741

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 534130										
Manganese-54			U	-0.00637	pCi/g					
	Uncert:			+/-0.0124						
	TPU:			+/-0.0124						
Niobium-94			U	-0.00531	pCi/g					
	Uncert:			+/-0.0115						
	TPU:			+/-0.0115						
Potassium-40			UI	0.00	pCi/g					
	Uncert:			+/-0.267						
	TPU:			+/-0.267						
Radium-226			U	0.0175	pCi/g					
	Uncert:			+/-0.0261						
	TPU:			+/-0.0261						
Silver-108m			U	-0.00282	pCi/g					
	Uncert:			+/-0.0119						
	TPU:			+/-0.0119						
Thallium-208			U	0.000804	pCi/g					
	Uncert:			+/-0.0171						
	TPU:			+/-0.0171						
Rad Gas Flow										
Batch 536483										
QC1201108057 163741001 DUP										
Strontium-90	U	0.00579	U	0.0106	pCi/g	0		(0% - 100%)	BXF1	06/18/06 11:09
	Uncert:	+/-0.0116		+/-0.0165						
	TPU:	+/-0.0116		+/-0.0165						
QC1201108059 LCS										
Strontium-90	1.43			1.41	pCi/g		99	(75%-125%)		06/18/06 10:06
	Uncert:			+/-0.100						
	TPU:			+/-0.109						
QC1201108056 MB										
Strontium-90			U	-0.0118	pCi/g					06/18/06 11:09
	Uncert:			+/-0.0102						
	TPU:			+/-0.0102						
QC1201108058 163741001 MS										
Strontium-90	1.44 U	0.00579		1.23	pCi/g		86	(75%-125%)		06/18/06 11:09
	Uncert:	+/-0.0116		+/-0.0952						
	TPU:	+/-0.0116		+/-0.102						
Rad Liquid Scintillation										
Batch 534837										
QC1201104385 162335019 DUP										
Carbon-14	U	0.0228	U	0.0418	pCi/g	0		(0% - 100%)	ATH2	06/05/06 22:40
	Uncert:	+/-0.110		+/-0.121						
	TPU:	+/-0.110		+/-0.121						
QC1201104387 LCS										
Carbon-14	6.66			6.52	pCi/g		98	(75%-125%)		06/04/06 08:22
	Uncert:			+/-0.238						
	TPU:			+/-0.259						
QC1201104384 MB										
Carbon-14			U	0.0371	pCi/g					06/04/06 06:04

QC Summary

Workorder: 163741

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 534837										
	Uncert:			+/-0.125						
	TPU:			+/-0.125						
QC1201104386 162335019 MS										
Carbon-14	7.13 U	0.0228		7.04	pCi/g		99	(75%-125%)		06/04/06 07:36
	Uncert:	+/-0.110		+/-0.249						
	TPU:	+/-0.110		+/-0.272						
Batch 535984										
QC1201106886 163626016 DUP										
Tritium	U	0.738	U	-1.57	pCi/g	0		(0% - 100%)	NXP1	06/17/06 17:31
	Uncert:	+/-6.97		+/-7.27						
	TPU:	+/-6.97		+/-7.27						
QC1201106888 LCS										
Tritium	52.7			55.2	pCi/g		105	(75%-125%)		06/17/06 18:04
	Uncert:			+/-9.22						
	TPU:			+/-9.27						
QC1201106885 MB										
Tritium			U	-0.845	pCi/g					06/17/06 17:15
	Uncert:			+/-5.81						
	TPU:			+/-5.81						
QC1201106887 163626016 MS										
Tritium	53.0 U	0.738		44.6	pCi/g		84	(75%-125%)		06/17/06 17:47
	Uncert:	+/-6.97		+/-8.62						
	TPU:	+/-6.97		+/-8.66						
Batch 536314										
QC1201107611 163741008 DUP										
Technetium-99	U	0.196	U	0.273	pCi/g	0		(0% - 100%)	SXE1	06/14/06 18:37
	Uncert:	+/-0.227		+/-0.233						
	TPU:	+/-0.227		+/-0.233						
QC1201107613 LCS										
Technetium-99	13.1			11.5	pCi/g		87	(75%-125%)		06/14/06 19:11
	Uncert:			+/-0.471						
	TPU:			+/-0.540						
QC1201107610 MB										
Technetium-99			U	0.090	pCi/g					06/14/06 18:20
	Uncert:			+/-0.200						
	TPU:			+/-0.200						
QC1201107612 163741008 MS										
Technetium-99	12.7 U	0.196		11.2	pCi/g		88	(75%-125%)		06/14/06 18:54
	Uncert:	+/-0.227		+/-0.494						
	TPU:	+/-0.227		+/-0.557						
Batch 538365										
QC1201112556 163741003 DUP										
Nickel-63	U	-1.8	U	-2.43	pCi/g	0		(0% - 100%)	SLN1	06/20/06 20:47
	Uncert:	+/-4.81		+/-6.00						
	TPU:	+/-4.81		+/-6.00						
QC1201112558 LCS										
Nickel-63	356			287	pCi/g		81	(75%-125%)		06/20/06 21:50
	Uncert:			+/-13.5						
	TPU:			+/-15.5						

QC Summary

Workorder: 163741

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 538365										
QC1201112555 MB										
Nickel-63			U	-1.14	pCi/g					06/20/06 20:00
	Uncert:			+/-3.95						
	TPU:			+/-3.95						
QC1201112557 163741003 MS										
Nickel-63	413 U	-1.8		347	pCi/g		84	(75%-125%)		06/20/06 21:33
	Uncert:	+/-4.81		+/-16.5						
	TPU:	+/-4.81		+/-19.3						
Batch 538969										
QC1201113888 163741008 DUP										
Iron-55	U	21.1	U	-1.03	pCi/g	0		(0% - 100%)	SLN1	06/21/06 10:23
	Uncert:	+/-18.3		+/-16.3						
	TPU:	+/-18.5		+/-16.3						
QC1201113890 LCS										
Iron-55	575			529	pCi/g		92	(75%-125%)		06/21/06 10:40
	Uncert:			+/-44.0						
	TPU:			+/-86.2						
QC1201113887 MB										
Iron-55			U	5.38	pCi/g					06/21/06 09:51
	Uncert:			+/-26.8						
	TPU:			+/-26.8						
QC1201113889 163741008 MS										
Iron-55	594 U	21.1		546	pCi/g		92	(75%-125%)		06/21/06 10:07
	Uncert:	+/-18.3		+/-33.8						
	TPU:	+/-18.5		+/-74.0						

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

- * A quality control analyte recovery is outside of specified acceptance criteria
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B Target analyte was detected in the associated blank
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- H Analytical holding time was exceeded
- J Value is estimated
- N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y QC Samples were not spiked with this compound

RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL

QC Summary

Workorder: 163741

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

^

h Preparation or preservation holding time was 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.

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Soil
PO# 002332
Work Order: 168404
SDG: MSR #06-0652, 06-0675, 06-0687, 06-0688, 06-0707, 06-0743, 06-0755

August 15, 2006

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 sample(s) for this Project arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina on May 5, May 9, May 12, May 17, May 26, June 2, June 8, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures.

The laboratory received the following sample(s):

Sample ID	Client Sample ID
168404001	9106-0002-007F
168404002	9106-0002-011F
168404003	9106-0003-004F
168404004	9106-0003-015F
168404005	9106-0004-005F
168404006	9106-0004-015F
168404007	9106-0005-010F
168404008	9106-0005-014F
168404009	9106-0006-005F

168404010	9106-0008-006F
168404011	9106-0008-008F
168404012	9106-0009-002F
168404013	9106-0009-017F
168404014	9106-0010-001F
168404015	9106-0010-012F

Items of Note:

At the request of Dale Randall on July 20, 2006, GEL analyzed the above samples according to the spreadsheet in the attached email.

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:

Seven soil samples were reanalyzed for FSSALL, except gamma and Sr-90.
Four soil samples were reanalyzed for FSSALL, except gamma and Ni-63.
Two soil samples were reanalyzed for FSSALL, except gamma.
Two soil samples were reanalyzed for FSALL, except gamma, Sr-90 and Ni-63.

Internal Chain of Custody:

Custody was maintained for the sample(s).

Data Package:
The enclosed data package contains the following sections: Case Narrative, Chain of Custody and Supporting Documentation and all analytical fractions.

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

168404'1

Subject: Additional HTD analyses
From: "Dale Randall" <randall@cyapco.com>
Date: Thu, 20 Jul 2006 11:04:54 -0400
To: "Cheryl Jones" <cj@gel.com>
CC: "Clyde Newson" <Newson@CYAPCO.com>, "John McCarthy" <McCarthy@CYAPCO.com>

Cheryl:

Per our earlier discussion, attached is a list of samples that we would like to have analyzed to the FSSALL protocol. I have included a list of test protocols performed on each sample to date. Once you have had an opportunity to determine our options for each sample please call or e-mail me at your convenience.

Thank You,

Dale

(860) 267-3133

GEL FSSALL analyses request.xls	**Content-Description:**	GEL FSSALL analyses request.xls
	Content-Type:	application/vnd.ms-excel
	Content-Encoding:	base64

		Done			To be done								
Previous GEL ID	CY sample location IDs	FSS Gam	Sr-90	Ni-63	Am	Pu	Sr90	Pu241	Fe55	NI63	Tc99	H3	C14
164220008	9106-0002-007F	x	x		x	x		x	x	x	x	x	x
164220012	9106-0002-011F	x	x		x	x		x	x	x	x	x	x
162335004	9106-0003-004F	x			x	x	x	x	x	x	x	x	x
162335014	9106-0003-015F	x			x	x	x	x	x	x	x	x	x
162832015	9106-0004-005F	x	x		x	x		x	x	x	x	x	x
162832009	9106-0004-015F	x	x		x	x		x	x	x	x	x	x
162485008	9106-0005-010F	x	x		x	x		x	x	x	x	x	x
162485011	9106-0005-014F	x	x		x	x		x	x	x	x	x	x
162850014	9106-0006-005F	x	x		x	x		x	x	x	x	x	x
163741005	9106-0008-006F	x	x	x	x	x		x	x		x	x	x
163741009	9106-0008-008F	x	x	x	x	x		x	x		x	x	x
164542008	9106-0009-002F	x		x	x	x	x	x	x		x	x	x
164542003	9106-0009-017F	x		x	x	x	x	x	x		x	x	x
163105009	9106-0010-001F	x		x	x	x	x	x	x		x	x	x
163105016	9106-0010-012F	x		x	x	x	x	x	x		x	x	x

Chain of Custody and Supporting Documentation

Relog 168404

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

Chain of Custody Form

No. 2006-00371

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	FSSGAM	FSSALL	Sr-90				Comment, Preservation	Lab Sample ID
9106-0002-001F	5/17/06	10:42	SE	C	BP	X		X				Transferred from COC 2006-00357	
9106-0002-002F	5/18/06	09:43	SE	C	BP		X					Transferred from COC 2006-00361	
9106-0002-003F	5/18/06	10:14	SE	C	BP	X		X				Transferred from COC 2006-00361	
9106-0002-004F	5/18/06	10:39	SE	C	BP	X		X				Transferred from COC 2006-00361	
9106-0002-005F	5/18/06	12:49	SE	C	BP	X		X				Transferred from COC 2006-00364	
9106-0002-006F	5/18/06	13:14	SE	C	BP	X		X				Transferred from COC 2006-00364	
9106-0002-006FS	5/18/06	13:14	SE	C	BP	X		X				Transferred from COC 2006-00364	
9106-0002-007F	5/18/06	13:37	SE	C	BP	X		X				Transferred from COC 2006-00364	
9106-0002-008F	5/18/06	14:04	SE	C	BP	X		X				Transferred from COC 2006-00364	

Analyses Requested

Lab Use Only

Comments:

164220 1/

NOTES: PO #: 002332 MSR #: 06-0755 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
7909 4145 5710

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

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	6-06 0815	[signature]	6.02.06 9:20
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. 2006-00372

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL	Sr-90				Comment, Preservation	Lab Sample ID
9106-0002-009F	5/18/06	14:28	SE	C	BP		X					Transferred from COC 2006-00364	
9106-0002-010F	5/18/06	14:50	SE	C	BP	X		X				Transferred from COC 2006-00364	
9106-0002-011F	5/19/06	08:10	SE	C	BP	X		X				Transferred from COC 2006-00365	
9106-0002-012F	5/19/06	08:31	SE	C	BP	X		X				Transferred from COC 2006-00365	
9106-0002-013F	5/19/06	09:00	SE	C	BP	X		X				Transferred from COC 2006-00365	
9106-0002-014F	5/19/06	09:58	SE	C	BP	X		X				Transferred from COC 2006-00365	
9106-0002-014FS	5/19/06	09:58	SE	C	BP	X		X				Transferred from COC 2006-00365	
9106-0002-015F	5/19/06	10:29	SE	C	BP	X		X				Transferred from COC 2006-00365	
9106-0002-016F	5/19/06	13:19	SE	C	BP	X		X				Transferred from COC 2006-00365	

Lab Use Only

Comments:

NOTES: PO #: 002332 MSR #: 06-0755 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading # 7909 4145 5709

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

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	6/06 0815	[signature]	6-2-06 9:20
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: 6-2-06 9:20

SDG#: MSR#06-0755

Work Order Number: 164220'1.

Shipping Container ID: 7909 4145 5710 Chain of Custody # 2006-00371

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 23°
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] no packing but wet
6. Number of samples in shipping container: 9
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:

____tape	____hazard labels
X custody seals	____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: [signature] Date: 6-2-06

Telephoned to: ____ On ____ By ____

Figure 1. Sample Check-in List

Date/Time Received: 6-2-06 9:20

SDG#: MSR#06-0755

Work Order Number: 1642201

Shipping Container ID: 1909 4145 5709 Chain of Custody # 2006-00372

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 23°
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] no packing bottle wet
6. Number of samples in shipping container: 9
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:
   - X tape
   - ___ hazard labels
   - ___ custody seals
   - ___ 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: [signature] Date: 6-2-06

Telephoned to: ____________ On ____________ By ____________

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Connecticut Yankee	SDG/ARCOC/Work Order: 164220
Date Received: 6.2.06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By:	

	Sample Receipt Criteria	Yes	NA	No	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	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				
8	Samples received within holding time?				Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?				Sample ID's affected:
11	Number of containers received match number indicated on COC?				Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?				COC# 2006-0037
14	Air Bill ,Tracking #'s, & Additional Comments				

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	
A	Radiological Classification?		✓		RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
B	PCB Regulated?	✓			Maximum Counts Observed*: 20 cpm
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Comments: Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: Initials [signature] Date: 6/2/06

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Connecticut Yankee	SDG/ARCOC/Work Order: 164220
Date Received: 6-2-06	PM(A) Review (ensure non-conforming items are resolved prior to signing): [signature]
Received By: [initials]	

	Sample Receipt Criteria	Yes	NA	No	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	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				
8	Samples received within holding time?				Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?				Sample ID's affected:
11	Number of containers received match number indicated on COC?				Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?				COC # 2006-~~00371~~ 00372 [initials] 6/2/06
14	Air Bill ,Tracking #'s, & Additional Comments				

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # ________ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?		✓		Maximum Counts Observed*: 20 CPM
B	PCB Regulated?	✓			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: ________ Initials [initials] Date: 6/2/06

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00312

~~162334~~ 162335 CD 5/8/06

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	FSSGAM	FSSALL	Sr-90				Comment, Preservation	Lab Sample ID
9106-0003-001F	4/24/06	14:13	SE	C	BP	X						Transferred from COC2006-00221	
9106-0003-002F	4/24/06	14:39	SE	C	BP	X						Transferred from COC2006-00221	
9106-0003-003F	4/24/06	15:01	SE	C	BP	X						Transferred from COC2006-00221	
9106-0003-004F	4/25/06	08:41	SE	C	BP	X						Transferred from COC2006-00223	
9106-0003-004FS	4/25/06	08:41	SE	C	BP	X						Transferred from COC2006-00223	
9106-0003-005F	4/25/06	09:21	SE	C	BP	X						Transferred from COC2006-00223	
9106-0003-006F	4/25/06	09:46	SE	C	BP	X						Transferred from COC2006-00223	
9106-0003-007F	4/25/06	10:28	SE	C	BP	X						Transferred from COC2006-00223	
9106-0003-008F	4/25/06	11:15	SE	C	BP		X					Transferred from COC2006-00223	

NOTES: PO #: 002332 MSR #: 06-0652 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA
Combined samples 9106-0003-003F taken on 4/25/06 @08:19 and 9106-0003-003FB taken on 4/25/06 @ 08:19 in order to have sufficient sample for counting.

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
7920-8920-0240

Internal Container Temp. ____ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
Jaime Ricarte	5-4-06 / 13:30	C. Demicco	5/5/06 / 1015
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. 2006-00313

~~162334~~ 162335%

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Sr-90				Comment, Preservation	Lab Sample ID
009	9106-0003-009F	4/25/06	13:00	SE	C	BP	X						Transferred from COC 2006-00236	
010	9106-0003-010F	4/25/06	13:23	SE	C	BP	X						Transferred from COC 2006-00236	
011	9106-0003-010FS	4/25/06	13:23	SE	C	BP	X						Transferred from COC 2006-00236	
012	9106-0003-012F	4/25/06	15:12	SE	C	BP	X						Transferred from COC 2006-00236	
013	9106-0003-013F	4/25/06	14:21	SE	C	BP	X						Transferred from COC 2006-00236	
014	9106-0003-014F	4/25/06	14:48	SE	C	BP		X					Transferred from COC 2006-00236	
015	9106-0003-015F	4/26/06	08:16	SE	C	BP	X						Transferred from COC 2006-00237	
016	9106-0003-016F	4/26/06	09:41	SE	C	BP	X						Transferred from COC 2006-00237	
017	9106-0003-017F	4/26/06	09:18	SE	C	BP	X						Transferred from COC 2006-00237	
018	9106-0003-018F	4/26/06	08:59	SE	C	BP	X						Transferred from COC 2006-00237	

Lab Use Only
Comments:

NOTES: PO #: 002332 MSR #: 06-0652 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
7920-8920-0261

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

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE.	5-1-06 / 1330	C DeRiccio	5/5/06 / 1015
3) Relinquished By	Date/Time	4) Received By	Date/Time

Chem 1 162335

Figure 1. Sample Check-in List

Date/Time Received: 5/5/06 1015.

SDG#: MSR#06-0652

Work Order Number: 162335

Shipping Container ID: 7920 8920 0261 Chain of Custody # 2006-00312
" " 0240 2006-00313

1. Custody Seals on shipping container intact? Yes [ ] No [X]
2. Custody Seals dated and signed? Yes [ ] No [X]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 19°C
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] n/a
6. Number of samples in shipping container: [10] ten / [9] nine
7. Sample holding times exceeded? Yes [ ] No [X]

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 [X]
11. Description of anomalies (include sample numbers): _____

Sample Custodian/Laboratory: Cinderrocks Date: 5/5/06

Telephoned to: _____ On _____ By _____

SAMPLE RECEIPT & REVIEW FORM

PM use only 162335

Client: Yankee	SDG/ARCOC/Work Order:
Date Received: 5/5/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: C. Derricotte	

	Sample Receipt Criteria	Yes	NA	No	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 190 Peanutts
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	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			✓	
8	Samples received within holding time?	✓			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	✓			
14	Air Bill ,Tracking #'s, & Additional Comments	FedEx # 7920 8920 0261 " " 0240			

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	
A	Radiological Classification?		✓		RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation. Maximum Counts Observed*: 30 CPM
B	PCB Regulated?	✓			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: Initials _____ Date: 5/5/06

Page 17 of 25

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00336

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	FSSGAM	FSSALL	Sr-90				Comment, Preservation	Lab Sample ID
9106-0004-001F	05/3/06	09:37	SE	C	BP		X	X				Transferred from COC 2006-00316	
9106-0004-002F	05/3/06	09:56	SE	C	BP	X		X				Transferred from COC 2006-00316	
9106-0004-003F	05/3/06	10:28	SE	C	BP	X		X				Transferred from COC 2006-00316	
9106-0004-004F	05/3/06	10:48	SE	C	BP	X		X				Transferred from COC 2006-00316	
9106-0004-004FS	05/3/06	10:48	SE	C	BP	X		X				Transferred from COC 2006-00316	
9106-0004-005F	05/3/06	11:07	SE	C	BP	X		X				Transferred from COC 2006-00316	
9106-0004-006F	05/3/06	12:46	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0004-007F	05/4/06	07:55	SE	C	BP	X		X				Transferred from COC 2006-00320	
9106-0004-017F	05/4/06	09:27	SE	C	BP	X		X				Transferred from COC 2006-00320	

NOTES: PO #: 002332 MSR #: 06-0688 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading # 7919-3895-8881

Internal Container Temp.: ___ Deg. C

Custody Sealed? Y N
Custody Seal Intact? Y N

1) Relinquished By	Date/Time	2) Received By	Date/Time
		C. DeNicola	5/12/06 0920
3) Relinquished By	Date/Time	4) Received By	Date/Time

Chain of Custody Form

No. 2006-00337

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

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Lab Use Only
Comments

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	FSSGAM	FSSALL	Sr-90				Comment, Preservation	Lab Sample ID
9106-0004-008F	5/04/06	08:58	SE	C	BP	X		X				Transferred from COC 2006-00320	
9106-0004-009F	5/04/06	08:23	SE	C	BP	X		X				Transferred from COC 2006-00320	
9106-0004-010F	5/03/06	15:11	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0004-010FS	5/03/06	15:11	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0004-011F	5/03/06	13:08	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0004-012F	5/03/06	13:33	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0004-013F	5/03/06	13:54	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0004-014F	5/03/06	14:43	SE	C	BP		X	X				Transferred from COC 2006-00317	
9106-0004-015F	5/03/06	14:18	SE	C	BP	X		X				Transferred from COC 2006-00317	

NOTES: PO #: 002332 MSR #: 06-0698 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
7919 3875 8892

Internal Container Temp. Deg. C
Custody Sealed
Custody Seal Intact

1) Relinquished By	Date/Time	2) Received By	Date/Time
		[signature]	5.12.06 09:20
3) Relinquished By	Date/Time	4) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 5. 12. 06 09:20

SDG#: MSR#06-0688

Work Order Number: 162832 1.

Shipping Container ID: 7914 3895 8892 Chain of Custody # 2006-00337

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 N/A
5. Vermiculite/packing materials is: Wet [X] Dry [ ]
6. Number of samples in shipping container: 9
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:

X tape	____hazard labels
X custody seals	____appropriate sample labels

9. Samples are:

____in good condition	X leaking
____broken	____have air bubbles

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

Sample Custodian/Laboratory: Emily Mark Date: 5.12.06 09:20

Telephoned to:_____ On_____ By_____

Figure 1. Sample Check-in List

Date/Time Received: 5/12/06 @ 0920

SDG#: MSR #06-0688

Work Order Number: 162832 1.

Shipping Container ID: 7919 3895 8092 7920 Chain of Custody # 2006 - 00337

1. Custody Seals on shipping container intact? Yes [ ] No [X]
2. Custody Seals dated and signed? Yes [ ] No [X]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 17°C
5. Vermiculite/packing materials is: Wet [X] Dry [ ]
6. Number of samples in shipping container:
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:
   - [X] tape
   - [X] custody seals
   - [ ] hazard labels
   - [ ] appropriate sample labels

9. Samples are:
   - [ ] in good condition
   - [X] leaking
   - [ ] broken
   - [ ] have air bubbles

10. Were any anomalies identified in sample receipt? Yes [X] No [ ]
11. Description of anomalies (include sample numbers): soil was busting out of container bag

Sample Custodian/Laboratory: C. Demicco Date: 5/12/06

Telephoned to: On By

SAMPLE RECEIPT & REVIEW FORM
CONTINUATION FORM

Fed Ex Tek #	COC #	# of containers
7920 9480 6688	2006-00332	(7) seven
— — 6611	2006-00331	(6) six
— — 6655	2006-00330	(6) six
7919 3895 8881	2006-00336	(9) nine
— — 8892	2006-00337	(9) nine
(this cooler had a busted sample cooler & COC is w/ RSO Emily Martin)		

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: CT Yankee	SDG/ARCOC/Work Order: 162832
Date Received: 5.12.06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: E. Martin	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		X		Circle Coolant # ice bags blue ice dry ice none other describe)
3	Chain of custody documents included with shipment?	X			
4	Sample containers intact and sealed?			X	Circle Applicable: seals broken damaged container leaking container other (describe) SN: 9106-0004-0147
5	Samples requiring chemical preservation at proper pH?		X		Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			X	
8	Samples received within holding time?	X			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	X			Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?			X	Coc not relinquished
14	Air Bill ,Tracking #'s, & Additional Comments				7919 3895 8892

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?		X		Maximum Counts Observed*: < Bkgd.
B	PCB Regulated?	X			Comments: Bkgd = 40 cpm
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	X			Hazard Class Shipped: UN#: N/A

PM (or PMA) review of Hazard classification: _____ Initials _____ Date: 5/12/06

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Yankee	SDG/ARCOC/Work Order: 162832
Date Received: 5/12/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: CiDerricotte	

	Sample Receipt Criteria	Yes	NA	No	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) 17°C
3	Chain of custody documents included with shipment?	✓			COCs are wet
4	Sample containers intact and sealed?			✓	Circle Applicable: seals broken damaged container leaking container (other (describe)) busted bag w/ RSOs cooler 7970 9480 [illegible]
5	Samples requiring chemical preservation at proper pH?		✓		Sample ID's, containers affected and observed pH: 8892
6	VOA vials free of headspace (defined as < 6mm bubble)?		✓		Sample ID's and containers affected:
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			✓	
8	Samples received within holding time?	✓			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?			✓	no COCs are relinquished
14	Air Bill ,Tracking #'s, & Additional Comments	FedEx #'s see continuation sheet			

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?		✓		Maximum Counts Observed*: [illegible] 40 cpm
B	PCB Regulated?	✓			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: _____ Initials _____ Date: 5/12/06

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

Chain of Custody Form

No. 2006-00319

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL	Sr-90				Comment, Preservation	Lab Sample ID
9106-0005-010F	5/02/06	13:16	SE	C	BP	X		X				Transferred from COC 2006-00314	
9106-0005-011F	5/02/06	13:39	SE	C	BP	X		X				Transferred from COC 2006-00314	
9106-0005-013F	5/02/06	14:35	SE	C	BP	X		X				Transferred from COC 2006-00314	
9106-0005-014F	5/02/06	15:04	SE	C	BP	X		X				Transferred from COC 2006-00314	
9106-0005-016F	5/02/06	13:59	SE	C	BP	X		X				Transferred from COC 2006-00314	
9106-0005-015F	5/03/06	08:03	SE	C	BP	X		X				Transferred from COC 2006-00316	
9106-0005-017F	5/03/06	08:13	SE	C	BP	X		X				Transferred from COC 2006-00316	
9106-0005-018F	5/03/06	09:09	SE	C	BP	X		X				Transferred from COC 2006-00316	
9106-0005-018FS	5/03/06	09:09	SE	C	BP	X		X				Transferred from COC 2006-00316	

Lab Use Only
Comments:

NOTES: PO #: 002332 MSR #: 06-0675 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
7920 9195 4352

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	5-8-06 1440	[signature]	5/9/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time

Custody Seal(s)?
Y ☐ N ☐
Custody Seal Intact?
Y ☐ N ☐

Figure 1. Sample Check-in List

Date/Time Received: 5/9/06 0930

SDG#: MSR#06-0675

Work Order Number: 162485

Shipping Container ID: 7920 9195 4352, 4363 Chain of Custody # 2006-00318/00319

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 18°C, 19°C
5. Vermiculite/packing materials is: Wet [✓] Dry [ ]
6. Number of samples in shipping container: 18
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 (some bags)
   - [ ] 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: 5/9/06 0930

Telephoned to: On By

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: ATMC	SDG/ARCOC/Work Order: 162485
Date Received: 5/9/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: BHC	

	Sample Receipt Criteria	Yes	NA	No	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	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				BHC 5/9/06
8	Samples received within holding time?				Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?				Sample ID's affected:
11	Number of containers received match number indicated on COC?				Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?				
14	Air Bill ,Tracking #'s, & Additional Comments	Fed Ex 7920 9195 4352 → 19°C 4363 → 18°C			

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?		/		Maximum Counts Observed*: 80 CPM
B	PCB Regulated?	/			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	/			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: _____ Initials CAJ Date: 5/9/06

Page 27 of 38

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00332

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Sr-90				Comment, Preservation	Lab Sample ID
9106-0006-004F	4/28/06	12:46	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0006-005F	4/28/06	13:03	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0006-006F	4/28/06	13:22	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0006-007F	4/28/06	13:41	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0006-007FS	4/28/06	13:41	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0006-012F	5/01/06	13:40	SE	C	BP	X		X				Transferred from COC 2006-00317	
9106-0006-017F	5/01/06	14:03	SE	C	BP	X		X				Transferred from COC 2006-00317	

Lab Use Only
Comments:

NOTES: PO #: 002332 MSR #: 06-0687 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
7920-9480-6688

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

1) Relinquished By	Date/Time	2) Received By	Date/Time
		C. Dennicotto	5/2/06 0920
3) Relinquished By	Date/Time	4) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 5/12/06 @ 0920

SDG#: 11SR#06-0687

Work Order Number: 162850%

Shipping Container ID: See cont sheet Chain of Custody # See cont sheet

1. Custody Seals on shipping container intact? Yes [ ] No [X]
2. Custody Seals dated and signed? Yes [ ] No [X]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 17°C
5. Vermiculite/packing materials is: Wet [X] Dry [ ]
6. Number of samples in shipping container: See cont sheet
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:
   - [X] tape
   - [X] custody seals
   - [ ] hazard labels
   - [ ] appropriate sample labels

9. Samples are:
   - [X] in good condition
   - [ ] broken
   - [ ] leaking
   - [ ] have air bubbles

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

Sample Custodian/Laboratory: CHemtech Date: 5/12/06

Telephoned to: On By

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Yankee	SDG/ARCOC/Work Order: 162832, 162850
Date Received: 5/12/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: CiDevricotte	

	Sample Receipt Criteria	Yes	NA	No	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) 17°C
3	Chain of custody documents included with shipment?	✓			COCs are wet
4	Sample containers intact and sealed?			✓	Circle Applicable: seals broken damaged container leaking container (other (describe)) busted bag w/ RSOs cooler 7920 9480
5	Samples requiring chemical preservation at proper pH?		✓		Sample ID's, containers affected and observed pH: 8892
6	VOA vials free of headspace (defined as < 6mm bubble)?		✓		Sample ID's and containers affected:
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			✓	
8	Samples received within holding time?	✓			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?			✓	no COCs are relinquished
14	Air Bill ,Tracking #'s, & Additional Comments	FedEx #'s see continuation sheet			

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?		✓		Maximum Counts Observed*: 100 (CD) 40 cpm
B	PCB Regulated?	✓			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: _____ Initials _____ Date: 5/12/06

SAMPLE RECEIPT & REVIEW FORM
CONTINUATION FORM

YANK 162832, 162850

Fed Ex Trk #	COC #	# of containers
7920 9480 6698	2006-00332	(7) seven
— — 6611	2006-00331	(6) six
— — 6655	2006-00330	(6) six
7919 3895 8881	2006-00336	(9) nine
— — 8892	2006-00337	(9) nine
(this cooler had a busted sample cooler & COC is w/ RSO Emily Martin)		

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

Chain of Custody Form

No. 2006-00367

163741

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL	Sr-90	Ni-63			Comment, Preservation	Lab Sample ID
9106-0008-001F	5/05/06	11:13	SE	C	BP	X		X	X			Transferred from COC # 2006-00324	
9106-0008-003F	5/5/06	13:35	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	
9106-0008-004F	5/5/06	13:51	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	
9106-0008-005F	5/5/06	14:17	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	
9106-0008-006F	5/5/06	14:36	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	
9106-0008-006FS	5/5/06	14:36	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	
9106-0008-007F	5/5/06	15:03	SE	C	BP		X					Transferred from COC # 2006-00325	
9106-0008-002F	5/5/06	13:10	SE	C	BP	X		X	X			Transferred from COC # 2006-00325	

Lab Use Only
Comments:

NOTES: PO #: 002332 MSR #: 06-0743 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

1) Relinquished By	Date/Time	2) Received By	Date/Time
	5-25-06 0950		5/24/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
7927 5154 1162

Internal Container Temp.: ____ Deg. C

Custody Sealed?
Y ☐ N ☐

Custody Seal Intact?
Y ☐ N ☐

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00366

163741%.

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Lab Use Only

Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	FSSGAM	FSSALL	Sr-90	Ni-63			Comment, Preservation	Lab Sample ID
009	9106-0008-008F	5/08/06	08:01	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
010	9106-0008-009F	5/08/06	08:32	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
011	9106-0008-010F	5/08/06	09:09	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
012	9106-0008-010FS	5/08/06	09:09	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
013	9106-0008-011F	5/08/06	09:30	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
014	9106-0008-012F	5/08/06	09:53	SE	C	BP		X					Transferred from COC # 2006-00327	
015	9106-0008-013F	5/08/06	10:16	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	
	9106-0008-014F	5/08/06	10:47	SE	C	BP	X		X	X			Transferred from COC # 2006-00327	

NOTES: PO #: 002332 MSR #: 06-0743 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #

Internal Container Temp.: 21 Deg. C

Custody Sealed? Y ☐ N ☒

Custody Seal Intact? Y ☒ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
		C. Dennison	5/26/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time

163741%

Figure 1. Sample Check-in List

Date/Time Received: 5/24/06 0930

SDG#: _____

Work Order Number: _____

Shipping Container ID: 7927554 1162 Chain of Custody # 2006-00360

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 19°C
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] NA
6. Number of samples in shipping container: 8
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: 5/24/06

Telephoned to: _____ On _____ By _____

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Conn. Yankee	SDG/ARCOC/Work Order: 163741
Date Received: 5/26/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By:	

	Sample Receipt Criteria	Yes	NA	No	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 describ 19°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	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			/	
8	Samples received within holding time?	/			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	/			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	/			Sample ID's affected:
11	Number of containers received match number indicated on COC?	/			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	/			
14	Air Bill ,Tracking #'s, & Additional Comments	7927 5154 1162			

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?	X	✓		Maximum Counts Observed*: 4pm 20 Per RSO
B	PCB Regulated?	/			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	/			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: _____ Initials 5/26/06 Date:

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Yankee	SDG/ARCOC/Work Order: 163741'1.
Date Received: 5/26/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: C. Musicante	

	Sample Receipt Criteria	Yes	NA	No	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) 21°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	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			✓	
8	Samples received within holding time?	✓			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	✓		✓	not relinquished
14	Air Bill ,Tracking #'s, & Additional Comments	7927 5154 1173			COC # 2004-003 lab

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?	✓	✓		Maximum Counts Observed*: 90 cpm
B	PCB Regulated?	✓			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: _____ Initials 5/26/06 Date:

Figure 1. Sample Check-in List

Date/Time Received: 5/26/06 @ 0930

SDG#: _____

Work Order Number: _____

Shipping Container ID: 792154 1173 Chain of Custody # 2006-0036ese

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 2°c
5. Vermiculite/packing materials is: Wet [✓] Dry [ ]
6. Number of samples in shipping container: (8) eight
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): N/A

Sample Custodian/Laboratory: CoAnalytics Date: 5/26/06

Telephoned to: _____ On _____ By _____

164542-1.

Chain of Custody Form

No. 2006-00380

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

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Ni-63				Lab Use Only: Comment, Preservation	Lab Sample ID
001	9106-0009-016F	5/15/06	13:28	SE	C	BP	X		X				Transferred from COC 2006-00352	
002	9106-0009-016FS	5/15/06	13:28	SE	C	BP	X		X				Transferred from COC 2006-00352	
003	9106-0009-017F	5/15/06	14:03	SE	C	BP	X		X				Transferred from COC 2006-00352	
016	9106-0009-011F	5/15/06	08:05	SE	C	BP		X					Transferred from COC 2006-00351	
004	9106-0009-013F	5/15/06	08:35	SE	C	BP	X		X				Transferred from COC 2006-00351	
005	9106-0009-013FS	5/15/06	08:35	SE	C	BP	X		X				Transferred from COC 2006-00351	
017	9106-0009-014F	5/15/06	08:59	SE	C	BP		X					Transferred from COC 2006-00351	
006	9106-0009-015F	5/15/06	09:36	SE	C	BP	X		X				Transferred from COC 2006-00351	

Comments:

NOTES: PO #: 002332 MSR #: 06-0818 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
7921.1915 2869

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
Jane Richards	6-7-06/1100	[signature]	6-8-06 900
3) Relinquished By	Date/Time	4) 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. 2006-00381

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Analyses Requested

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	FSSGAM	FSSALL	Ni-63				Comment, Preservation	Lab Sample ID
007	9106-0009-001F	5/11/06	13:22	SE	C	BP	X		X				Transferred from COC 2006-00347	
008	9106-0009-002F	5/11/06	13:46	SE	C	BP	X		X				Transferred from COC 2006-00347	
009	9106-0009-003F	5/11/06	14:06	SE	C	BP	X		X				Transferred from COC 2006-00347	
010	9106-0009-004F	5/11/06	14:30	SE	C	BP	X		X				Transferred from COC 2006-00347	
011	9106-0009-005F	5/11/06	14:55	SE	C	BP	X		X				Transferred from COC 2006-00347	
012	9106-0009-007F	5/12/06	07:44	SE	C	BP	X		X				Transferred from COC 2006-00348	
013	9106-0009-008F	5/12/06	08:16	SE	C	BP	X		X				Transferred from COC 2006-00348	
014	9106-0009-009F	5/12/06	08:35	SE	C	BP	X		X				Transferred from COC 2006-00348	
016	9106-0009-010F	5/12/06	09:07	SE	C	BP	X		X				Transferred from COC 2006-00348	

NOTES: PO #: 002332 MSR #: 06- SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
7921 1915 2858

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	6-7-06/11:00	A Mosley	6/8/06 900
3) Relinquished By	Date/Time	4) Received By	Date/Time

Cheryl 164551% CPM 40

Figure 1. Sample Check-in List

Date/Time Received: 6-8-06 900

SDG#: MSR# 06-0819, 0818

Work Order Number:

Shipping Container ID: 7921-1915-2858 / " - " - 2869 / " - " - 8786 Chain of Custody # 2006-00382 / 2006-00380 / 2006-00381

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

8. Samples have:
   - X tape
   - ____ hazard labels
   - X custody seals
   - ____ 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: A Mosley Date: 6-8-06 900

Telephoned to: On By

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00349

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)
General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Analyses Requested

Lab Use Only
Comments:
163105 1.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	FSSGAM	FSSALL	Ni-63				Comment, Preservation	Lab Sample ID
9106-0010-001F	5/04/06	10:49	SE	C	BP	X		X				Transferred from COC 2006-00321	
9106-0010-002F	5/04/06	11:12	SE	C	BP	X		X				Transferred from COC 2006-00321	
9106-0010-004F	5/04/06	12:48	SE	C	BP	X		X				Transferred from COC 2006-00321	
9106-0010-006F	5/04/06	13:34	SE	C	BP	X		X				Transferred from COC 2006-00321	
9106-0010-007F	5/04/06	13:21	SE	C	BP	X		X				Transferred from COC 2006-00321	
9106-0010-009F	5/04/06	14:01	SE	C	BP	X		X				Transferred from COC 2006-00321	
9106-0010-010F	5/04/06	14:21	SE	C	BP	X		X				Transferred from COC 2006-00321	
9106-0010-012F	5/04/06	14:44	SE	C	BP	X		X				Transferred from COC 2006-00321	
9106-0010-013F	5/04/06	15:06	SE	C	BP		X					Transferred from COC 2006-00321	

NOTES: PO #: 002332 MSR #: 06- 0707 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:
☒ Fed Ex
☐ UPS
☐ Hand
☐ Other

Bill of Lading #
7904-3 113-8541

Internal Container Temp.: 17 Deg. C

Custody Sealed? Y ☑ N ☐

Custody Seal Intact? Y ☑ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
Jaime Ruarte	5-16-06 / 1150	A Mosley	5/17/06 945
3) Relinquished By	Date/Time	4) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 945 5/17/06

SDG#: MSR# 06-0707

Work Order Number: 163105

Shipping Container ID: 7904 3113 8541 Chain of Custody # 2006-00349

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 17°C
5. Vermiculite/packing materials is: Wet [X] Dry [ ]
6. Number of samples in shipping container: 9
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:

____tape	____hazard labels
X custody seals	____appropriate sample labels

9. Samples are:

X in good condition	AM 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: AMaley Date: 5-17-06

Telephoned to: ____ On ____ By ____

SAMPLE RECEIPT & REVIEW FORM

CHERYL

PM use only

Client: CONN. YANKEE	SDG/ARCOC/Work Order:
Date Received: 5-17-06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: ALM	

	Sample Receipt Criteria	Yes	NA	No	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	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			✓	
8	Samples received within holding time?	✓			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	✓			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11	Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?	✓			
14	Air Bill ,Tracking #'s, & Additional Comments	7904 3113 8541			

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?		✓		Maximum Counts Observed*: CPM 60
B	PCB Regulated?	✓			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: Initials CD Date: 5/17/06

List of current GEL Certifications as of 15 August 2006

State	Certification
Alaska	UST-062
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California	01151CA
Colorado	GenEngLabs
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA	WG-15J
Florida/NELAP	E87156
Georgia	E87156 (FL/NELAP)
Idaho	N/A
Illinois	200029
Indiana	C-SC-01
Kansas	E-10332
Kentucky	90129
Maryland	270
Massachusetts	M-SC012
Michigan	9903
Nevada	SC12
New Jersey	SC002
New York	11501
North Carolina	233
North Carolina Drinking W	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania	68-485
South Carolina	10120001/10585001/10120002
Tennessee	02934
Texas	TX213-2006A
U.S. Dept. of Agriculture	S-52597
US Army Corps of Engineer	N/A
Utah	8037697376 GEL
Vermont	N/A
Virginia	00151
Washington	C223

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 168404

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:	555696
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

Sample ID	Client ID
168404001	9106-0002-007F
168404002	9106-0002-011F
168404003	9106-0003-004F
168404004	9106-0003-015F
168404005	9106-0004-005F
168404006	9106-0004-015F
168404007	9106-0005-010F
168404008	9106-0005-014F
168404011	9106-0008-008F
168404012	9106-0009-002F
168404013	9106-0009-017F
168404014	9106-0010-001F
168404015	9106-0010-012F
1201153129	Method Blank (MB)
1201153130	168340011(9304-01-005C) Sample Duplicate (DUP)
1201153131	168340011(9304-01-005C) Matrix Spike (MS)
1201153132	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: 168340011 (9304-01-005C).

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 168404003 (9106-0003-004F) was recounted due to high MDA.

Miscellaneous Information:

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

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

Additional Comments
Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

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:	557837
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

Sample ID	Client ID
168404009	9106-0006-005F
168404010	9106-0008-006F
1201158316	Method Blank (MB)
1201158317	168404009(9106-0006-005F) Sample Duplicate (DUP)
1201158318	168404009(9106-0006-005F) Matrix Spike (MS)
1201158319	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: 168404009 (9106-0006-005F).

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. A nonconformance report (NCR) was not generated for this SDG.

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

Additional Comments
Additional comments were not required for this sample set.

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:	555697
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

Sample ID	Client ID
168404001	9106-0002-007F
168404002	9106-0002-011F
168404003	9106-0003-004F
168404004	9106-0003-015F
168404005	9106-0004-005F
168404006	9106-0004-015F
168404007	9106-0005-010F
168404008	9106-0005-014F
168404009	9106-0006-005F
168404010	9106-0008-006F
168404011	9106-0008-008F
168404012	9106-0009-002F
168404013	9106-0009-017F
168404014	9106-0010-001F
168404015	9106-0010-012F
1201153133	Method Blank (MB)
1201153134	168340011(9304-01-005C) Sample Duplicate (DUP)
1201153135	168340011(9304-01-005C) Matrix Spike (MS)
1201153136	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: 168340011 (9304-01-005C).

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. A nonconformance report (NCR) was not generated for this SDG.

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

Additional Comments
Additional comments were not required for this sample set.

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:	555698
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

Sample ID	Client ID
168404001	9106-0002-007F
168404002	9106-0002-011F
168404003	9106-0003-004F
168404004	9106-0003-015F
168404005	9106-0004-005F
168404006	9106-0004-015F
168404007	9106-0005-010F
168404008	9106-0005-014F
168404009	9106-0006-005F
168404010	9106-0008-006F
168404011	9106-0008-008F
168404012	9106-0009-002F
168404013	9106-0009-017F
168404014	9106-0010-001F
168404015	9106-0010-012F
1201153137	Method Blank (MB)
1201153138	168340011(9304-01-005C) Sample Duplicate (DUP)
1201153139	168340011(9304-01-005C) Matrix Spike (MS)
1201153140	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# 8.

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: 168340011 (9304-01-005C).

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. A nonconformance report (NCR) was not generated for this SDG.

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

Additional Comments
Additional comments were not required for this sample set.

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:	556350
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

Sample ID	Client ID
168404003	9106-0003-004F
168404004	9106-0003-015F
168404012	9106-0009-002F
168404013	9106-0009-017F
168404014	9106-0010-001F
168404015	9106-0010-012F
1201154644	Method Blank (MB)
1201154645	168404003(9106-0003-004F) Sample Duplicate (DUP)
1201154646	168404003(9106-0003-004F) Matrix Spike (MS)
1201154647	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# 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: 168404003 (9106-0003-004F).

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Samples 1201154644 (MB), 1201154645 (9106-0003-004F), 1201154646 (9106-0003-004F), 1201154647 (LCS), 168404003 (9106-0003-004F), 168404004 (9106-0003-015F), 168404012 (9106-0009-002F), 168404013 (9106-0009-017F), 168404014 (9106-0010-001F) and 168404015 (9106-0010-012F) were dried and reweighed due to low matrix spike/laboratory control sample recovery.

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:	554580

Sample ID	Client ID
168404001	9106-0002-007F
168404002	9106-0002-011F
168404003	9106-0003-004F
168404004	9106-0003-015F
168404005	9106-0004-005F
168404006	9106-0004-015F
168404007	9106-0005-010F
168404008	9106-0005-014F
168404009	9106-0006-005F
168404010	9106-0008-006F
168404011	9106-0008-008F
168404012	9106-0009-002F
168404013	9106-0009-017F
168404014	9106-0010-001F
168404015	9106-0010-012F
1201150561	Method Blank (MB)
1201150562	168340012(9304-02-003C) Sample Duplicate (DUP)
1201150563	168340012(9304-02-003C) Matrix Spike (MS)
1201150564	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# 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: 168340012 (9304-02-003C).

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

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:	555722
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

Sample ID	Client ID
168404001	9106-0002-007F
168404002	9106-0002-011F
168404003	9106-0003-004F
168404004	9106-0003-015F
168404005	9106-0004-005F
168404006	9106-0004-015F
168404007	9106-0005-010F
168404008	9106-0005-014F
168404009	9106-0006-005F
168404010	9106-0008-006F
168404011	9106-0008-008F
168404012	9106-0009-002F
168404013	9106-0009-017F
168404014	9106-0010-001F
168404015	9106-0010-012F
1201153222	Method Blank (MB)
1201153223	168340012(9304-02-003C) Sample Duplicate (DUP)
1201153224	168340012(9304-02-003C) Matrix Spike (MS)
1201153225	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# 3.

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: 168340012 (9304-02-003C).

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

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:	555723
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

Sample ID	Client ID
168404001	9106-0002-007F
168404002	9106-0002-011F
168404003	9106-0003-004F
168404004	9106-0003-015F
168404005	9106-0004-005F
168404006	9106-0004-015F
168404007	9106-0005-010F
168404008	9106-0005-014F
168404009	9106-0006-005F
1201153226	Method Blank (MB)
1201153227	168340012(9304-02-003C) Sample Duplicate (DUP)
1201153228	168340012(9304-02-003C) Matrix Spike (MS)
1201153229	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# 8.

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: 168340012 (9304-02-003C).

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

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:	554582

Sample ID	Client ID
168404001	9106-0002-007F
168404002	9106-0002-011F
168404003	9106-0003-004F
168404004	9106-0003-015F
168404005	9106-0004-005F
168404006	9106-0004-015F
168404007	9106-0005-010F
168404008	9106-0005-014F
168404009	9106-0006-005F
168404010	9106-0008-006F
168404011	9106-0008-008F
168404012	9106-0009-002F
168404013	9106-0009-017F
168404014	9106-0010-001F
168404015	9106-0010-012F
1201150569	Method Blank (MB)
1201150570	168340011(9304-01-005C) Sample Duplicate (DUP)
1201150571	168340011(9304-01-005C) Matrix Spike (MS)
1201150572	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# 12.

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: 168340011 (9304-01-005C).

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 168404010 (9106-0008-006F) was recounted due to high MDA.

Miscellaneous Information:

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

Additional Comments
Additional comments were not required for this sample set.

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:	554583

Sample ID	Client ID
168404001	9106-0002-007F
168404002	9106-0002-011F
168404003	9106-0003-004F
168404004	9106-0003-015F
168404005	9106-0004-005F
168404006	9106-0004-015F
168404007	9106-0005-010F
168404008	9106-0005-014F
168404009	9106-0006-005F
168404010	9106-0008-006F
168404011	9106-0008-008F
168404012	9106-0009-002F
168404013	9106-0009-017F
168404014	9106-0010-001F
168404015	9106-0010-012F
1201150573	Method Blank (MB)
1201150574	168404003(9106-0003-004F) Sample Duplicate (DUP)
1201150575	168404003(9106-0003-004F) Matrix Spike (MS)
1201150576	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# 8.

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: 168404003 (9106-0003-004F).

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. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments
Additional comments were not required for this sample set.

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/Date: Kathleen Bellatti 8/22/16

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: 168404 GEL Work Order: 168404

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

ND The analyte concentration is not detected above the detection limit.

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID:	9106 0002 007F	Project:	YANK01204
Sample ID:	168404001	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	18 MAY 06		
Receive Date:	02 JUN 06		
Collector:	Client		
Moisture:	20.9%		

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	0.0762	+/ 0.102	0.00	+/ 0.102	0.0956	pCi/g		BXL1	08/11/06	1336	555696	1
Curium 242	U	0.00	+/ 0.0995	0.00	+/ 0.0995	0.138	pCi/g						
Curium 243/244	U	0.00853	+/ 0.0717	0.0405	+/ 0.0717	0.177	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.199	+/ 0.228	0.181	+/ 0.229	0.444	pCi/g		BXL1	08/11/06	1633	555697	2
Plutonium 239/240	U	0.0341	+/ 0.129	0.120	+/ 0.129	0.323	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	10.0	+/ 6.64	5.08	+/ 6.72	10.7	pCi/g		BXL1	08/16/06	1220	555698	3
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	4.17	+/ 6.67	5.28	+/ 6.67	11.4	pCi/g		DFA1	08/09/06	1128	554582	4
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.0813	+/ 0.0797	0.0634	+/ 0.0797	0.132	pCi/g		ATH2	08/09/06	0324	554583	5
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	9.90	+/ 48.1	32.0	+/ 48.1	65.9	pCi/g		MXP1	08/12/06	1633	555722	6
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	7.02	+/ 6.39	5.18	+/ 6.40	10.6	pCi/g		MXP1	08/11/06	0738	555723	7
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.139	+/ 0.213	0.173	+/ 0.213	0.360	pCi/g		EGD1	08/11/06	2027	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 906.0 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0002 007F
Sample ID: 168404001
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
5	EPA EERF C 01 Modified												
6	DOE RESL Fe 1, Modified												
7	DOE RESL Ni 1, Modified												
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	80	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	100	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	98	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	75	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	76	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	74	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0002 011F	Project:	YANK01204
Sample ID:	168404002	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	19 MAY 06		
Receive Date:	02 JUN 06		
Collector:	Client		
Moisture:	17.4%		

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	0.120	+/ 0.154	0.0683	+/ 0.155	0.251	pCi/g		BXL1 08/11/06	1336	555696	1
Curium 242	U	0.0146	+/ 0.122	0.0692	+/ 0.123	0.303	pCi/g					
Curium 243/244	U	0.0103	+/ 0.0861	0.0487	+/ 0.0862	0.213	pCi/g					
Alphaspec Pu, Solid ALL FSS												
Plutonium 238	U	0.0121	+/ 0.125	0.127	+/ 0.125	0.344	pCi/g		BXL1 08/11/06	1633	555697	2
Plutonium 239/240	U	0.0254	+/ 0.0675	0.0381	+/ 0.0675	0.167	pCi/g					
Liquid Scint Pu241, Solid ALL FSS												
Plutonium 241	U	6.72	+/ 7.02	5.56	+/ 7.05	11.7	pCi/g		BXL1 08/16/06	1237	555698	3
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid HTD2,ALL FSS												
Tritium	U	0.521	+/ 7.03	5.94	+/ 7.03	12.8	pCi/g		DFA1 08/09/06	1143	554582	4
Liquid Scint C14, Solid All,FSS												
Carbon 14	U	0.023	+/ 0.0828	0.0685	+/ 0.0828	0.143	pCi/g		ATH2 08/09/06	0426	554583	5
Liquid Scint Fe55, Solid ALL FSS												
Iron 55	U	3.93	+/ 47.7	31.9	+/ 47.7	65.7	pCi/g		MXP1 08/12/06	1649	555722	6
Liquid Scint Ni63, Solid ALL FSS												
Nickel 63	U	7.52	+/ 5.81	4.68	+/ 5.81	9.60	pCi/g		MXP1 08/11/06	0825	555723	7
Liquid Scint Tc99, Solid ALL FSS												
Technetium 99	U	0.173	+/ 0.203	0.164	+/ 0.203	0.341	pCi/g		EGD1 08/11/06	2043	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 906.0 Modified
5	EPA EERF C 01 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0002 011F
Sample ID: 168404002
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
6	DOE RESL Fe 1, Modified												
7	DOE RESL Ni 1, Modified												
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	76	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	100	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	88	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	72	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	76	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	79	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0003 004F	Project:	YANK01204
Sample ID:	168404003	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	25 APR 06		
Receive Date:	05 MAY 06		
Collector:	Client		
Moisture:	23.5%		

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	0.027	+/ 0.117	0.153	+/ 0.117	0.488	pCi/g		BXL1	08/13/06	0819	555696	1
Curium 242	U	0.112	+/ 0.315	0.245	+/ 0.315	0.781	pCi/g						
Curium 243/244	U	0.0217	+/ 0.206	0.205	+/ 0.206	0.594	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.061	+/ 0.189	0.176	+/ 0.189	0.449	pCi/g		BXL1	08/11/06	1633	555697	2
Plutonium 239/240	U	0.0551	+/ 0.103	0.0584	+/ 0.103	0.215	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	8.31	+/ 5.73	4.40	+/ 5.78	9.25	pCi/g		BXL1	08/16/06	1253	555698	3
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.00343	+/ 0.0203	0.0172	+/ 0.0203	0.036	pCi/g		BXF1	08/14/06	0834	556350	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	0.603	+/ 8.25	6.87	+/ 8.25	14.8	pCi/g		DFA1	08/09/06	1159	554582	5
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.0937	+/ 0.0813	0.0642	+/ 0.0813	0.134	pCi/g		ATH2	08/09/06	0529	554583	6
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	7.68	+/ 51.2	34.2	+/ 51.2	70.4	pCi/g		MXP1	08/12/06	1706	555722	7
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	5.74	+/ 7.12	6.58	+/ 7.13	13.6	pCi/g		MXP1	08/11/06	0912	555723	8
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.0643	+/ 0.198	0.169	+/ 0.198	0.351	pCi/g		EGD1	08/11/06	2059	554580	9

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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

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 : 362 Injun Hollow Rd

East Hampton, Connecticut 06424 Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0003 004F Project: YANK01204
Sample ID: 168404003 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
3	DOE EML HASL 300, Pu 11 RC Modified												
4	EPA 905.0 Modified												
5	EPA 906.0 Modified												
6	EPA EERF C 01 Modified												
7	DOE RESL Fe 1, Modified												
8	DOE RESL Ni 1, Modified												
9	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	42	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	92	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	113	(25% 125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	59	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	71	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	83	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	76	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0003 004F
Sample ID: 168404003

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID:	9106 0003 015F	Project:	YANK01204
Sample ID:	168404004	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	25 APR 06		
Receive Date:	05 MAY 06		
Collector:	Client		
Moisture:	22.5%		

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	0.0456	+/ 0.155	0.139	+/ 0.155	0.387	pCi/g		BXL1	08/11/06	1434	555696	1
Curium 242	U	0.113	+/ 0.181	0.0733	+/ 0.182	0.321	pCi/g						
Curium 243/244	U	0.180	+/ 0.239	0.181	+/ 0.240	0.472	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.0196	+/ 0.121	0.118	+/ 0.121	0.324	pCi/g		BXL1	08/11/06	1633	555697	2
Plutonium 239/240	U	0.0326	+/ 0.0639	0.00	+/ 0.064	0.0884	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	6.63	+/ 6.19	4.86	+/ 6.22	10.2	pCi/g		BXL1	08/16/06	1309	555698	3
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.00477	+/ 0.0216	0.0179	+/ 0.0216	0.0375	pCi/g		BXF1	08/14/06	0834	556350	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	1.03	+/ 7.06	5.85	+/ 7.06	12.6	pCi/g		DFA1	08/09/06	1215	554582	5
Liquid Scint C14, Solid All,FSS													
Carbon 14		0.156	+/ 0.0912	0.0699	+/ 0.0913	0.146	pCi/g		ATH2	08/09/06	0632	554583	6
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	9.99	+/ 42.7	28.7	+/ 42.7	59.2	pCi/g		MXP1	08/12/06	1722	555722	7
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	0.939	+/ 10.1	10.3	+/ 10.1	21.6	pCi/g		MXP1	08/11/06	1001	555723	8
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.237	+/ 0.213	0.170	+/ 0.213	0.353	pCi/g		EGD1	08/11/06	2115	554580	9

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0003 015F
Sample ID: 168404004
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
3	DOE EML HASL 300, Pu 11 RC Modified												
4	EPA 905.0 Modified												
5	EPA 906.0 Modified												
6	EPA EERF C 01 Modified												
7	DOE RESL Fe 1, Modified												
8	DOE RESL Ni 1, Modified												
9	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	78	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	94	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	101	(25% 125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	58	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	75	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	62	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	75	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0003 015F
Sample ID: 168404004

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0004 005F	Project:	YANK01204
Sample ID:	168404005	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	03 MAY 06		
Receive Date:	12 MAY 06		
Collector:	Client		
Moisture:	15.4%		

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	0.036	+/ 0.123	0.157	+/ 0.123	0.437	pCi/g		BXL1	08/11/06	1434	555696	1
Curium 242	U	0.0169	+/ 0.033	0.080	+/ 0.0331	0.350	pCi/g						
Curium 243/244	U	0.0129	+/ 0.227	0.247	+/ 0.227	0.619	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.0217	+/ 0.163	0.181	+/ 0.163	0.444	pCi/g		BXL1	08/11/06	1633	555697	2
Plutonium 239/240	U	0.0708	+/ 0.0791	0.128	+/ 0.0795	0.337	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	9.52	+/ 6.00	4.57	+/ 6.07	9.61	pCi/g		BXL1	08/16/06	1326	555698	3
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	0.854	+/ 5.88	4.87	+/ 5.88	10.5	pCi/g		DFA1	08/09/06	1231	554582	4
Liquid Scint C14, Solid All,FSS													
Carbon 14		0.347	+/ 0.097	0.0674	+/ 0.0972	0.141	pCi/g		ATH2	08/09/06	0734	554583	5
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	1.57	+/ 46.0	30.7	+/ 46.0	63.2	pCi/g		MXP1	08/12/06	1738	555722	6
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	6.39	+/ 7.62	7.40	+/ 7.62	15.5	pCi/g		MXP1	08/11/06	1017	555723	7
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.0198	+/ 0.187	0.156	+/ 0.187	0.324	pCi/g		EGD1	08/11/06	2131	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 906.0 Modified
5	EPA EERF C 01 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0004 005F
Sample ID: 168404005
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
6	DOE RESL Fe 1, Modified												
7	DOE RESL Ni 1, Modified												
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	65	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	95	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	105	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	78	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	80	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	80	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID:	9106 0004 015F	Project:	YANK01204
Sample ID:	168404006	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	03 MAY 06		
Receive Date:	12 MAY 06		
Collector:	Client		
Moisture:	26.5%		

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	0.0823	+/ 0.203	0.178	+/ 0.203	0.469	pCi/g		BXL1	08/11/06	1434	555696	1
Curium 242	U	0.0154	+/ 0.0301	0.0729	+/ 0.0302	0.319	pCi/g						
Curium 243/244	U	0.0994	+/ 0.251	0.300	+/ 0.251	0.713	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.0466	+/ 0.213	0.210	+/ 0.213	0.521	pCi/g		BXL1	08/11/06	1633	555697	2
Plutonium 239/240	U	0.142	+/ 0.108	0.191	+/ 0.109	0.483	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	6.64	+/ 6.53	5.16	+/ 6.57	10.8	pCi/g		BXL1	08/16/06	1342	555698	3
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	2.9	+/ 7.59	6.60	+/ 7.59	14.2	pCi/g		DFA1	08/09/06	1247	554582	4
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.0352	+/ 0.0868	0.0713	+/ 0.0868	0.149	pCi/g		ATH2	08/09/06	0837	554583	5
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	1.88	+/ 46.8	31.3	+/ 46.8	64.4	pCi/g		MXP1	08/12/06	1754	555722	6
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	3.88	+/ 7.46	7.40	+/ 7.46	15.5	pCi/g		MXP1	08/11/06	1033	555723	7
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.0894	+/ 0.198	0.163	+/ 0.198	0.338	pCi/g		EGD1	08/11/06	2147	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 906.0 Modified
5	EPA EERF C 01 Modified

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 : 362 Injun Hollow Rd

East Hampton, Connecticut 06424 Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0004 015F Project: YANK01204
Sample ID: 168404006 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
6	DOE RESL Fe 1, Modified												
7	DOE RESL Ni 1, Modified												
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	72	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	72	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	94	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	73	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	80	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	78	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0005 010F	Project:	YANK01204
Sample ID:	168404007	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	02 MAY 06		
Receive Date:	09 MAY 06		
Collector:	Client		
Moisture:	56.2%		

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	0.128	+/ 0.0939	0.142	+/ 0.0942	0.385	pCi/g		BXL1	08/11/06	1434	555696	1
Curium 242	U	0.0115	+/ 0.128	0.147	+/ 0.128	0.450	pCi/g						
Curium 243/244	U	0.0333	+/ 0.122	0.149	+/ 0.122	0.401	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.0548	+/ 0.169	0.158	+/ 0.170	0.403	pCi/g		BXL1	08/11/06	1633	555697	2
Plutonium 239/240	U	0.0195	+/ 0.121	0.117	+/ 0.121	0.322	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	10.4	+/ 6.89	5.27	+/ 6.97	11.1	pCi/g		BXL1	08/16/06	1358	555698	3
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	0.00	+/ 6.86	5.76	+/ 6.86	12.4	pCi/g		DFA1	08/09/06	1303	554582	4
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.0636	+/ 0.0801	0.0644	+/ 0.0801	0.135	pCi/g		ATH2	08/09/06	1017	554583	5
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	36.1	+/ 44.1	28.7	+/ 44.1	59.0	pCi/g		MXP1	08/12/06	1811	555722	6
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	7.26	+/ 10.2	10.0	+/ 10.2	20.9	pCi/g		MXP1	08/11/06	1049	555723	7
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.05	+/ 0.199	0.169	+/ 0.199	0.351	pCi/g		EGD1	08/11/06	2203	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 906.0 Modified
5	EPA EERF C 01 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0005 010F
Sample ID: 168404007
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
6	DOE RESL Fe 1, Modified												
7	DOE RESL Ni 1, Modified												
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	85	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	91	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	92	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	81	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	64	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	77	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0005 014F	Project:	YANK01204
Sample ID:	168404008	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	02 MAY 06		
Receive Date:	09 MAY 06		
Collector:	Client		
Moisture:	32.3%		

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	0.00591	+/ 0.219	0.231	+/ 0.219	0.608	pCi/g		BXL1	08/11/06	1434	555696	1
Curium 242	U	0.04	+/ 0.0554	0.134	+/ 0.0557	0.494	pCi/g						
Curium 243/244	U	0.0634	+/ 0.261	0.249	+/ 0.261	0.646	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.0694	+/ 0.106	0.160	+/ 0.106	0.434	pCi/g		BXL1	08/11/06	1633	555697	2
Plutonium 239/240	U	0.0287	+/ 0.098	0.127	+/ 0.0981	0.369	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	4.68	+/ 8.01	6.48	+/ 8.02	13.6	pCi/g		BXL1	08/16/06	1415	555698	3
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	6.02	+/ 6.38	4.90	+/ 6.38	10.6	pCi/g		DFA1	08/09/06	1319	554582	4
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.0892	+/ 0.0827	0.0655	+/ 0.0827	0.137	pCi/g		ATH2	08/09/06	1424	554583	5
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	19.8	+/ 46.3	30.6	+/ 46.3	62.9	pCi/g		MXP1	08/12/06	1827	555722	6
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	5.41	+/ 7.91	7.77	+/ 7.91	16.2	pCi/g		MXP1	08/11/06	1106	555723	7
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.134	+/ 0.192	0.167	+/ 0.192	0.346	pCi/g		EGD1	08/11/06	2218	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 906.0 Modified
5	EPA EERF C 01 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID: 9106 0005 014F
Sample ID: 168404008

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
6	DOE RESL Fe 1, Modified												
7	DOE RESL Ni 1, Modified												
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	50	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	61	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	74	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	76	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	76	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	75	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID:	9106 0006 005F	Project:	YANK01204
Sample ID:	168404009	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	28 APR 06		
Receive Date:	12 MAY 06		
Collector:	Client		
Moisture:	16.5%		

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	0.0851	+/ 0.136	0.106	+/ 0.136	0.390	pCi/g		BXL1	08/16/06	0949	557837	1
Curium 242	U	0.0253	+/ 0.0495	0.120	+/ 0.0496	0.525	pCi/g						
Curium 243/244	U	0.0479	+/ 0.0542	0.131	+/ 0.0545	0.443	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.0183	+/ 0.113	0.110	+/ 0.113	0.303	pCi/g		BXL1	08/11/06	1633	555697	3
Plutonium 239/240	U	0.00122	+/ 0.0662	0.0694	+/ 0.0662	0.221	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	4.43	+/ 5.83	4.67	+/ 5.85	9.82	pCi/g		BXL1	08/16/06	1431	555698	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	2.02	+/ 6.67	5.76	+/ 6.67	12.4	pCi/g		DFA1	08/09/06	1335	554582	5
Liquid Scint C14, Solid All,FSS													
Carbon 14		0.142	+/ 0.0798	0.061	+/ 0.0799	0.127	pCi/g		ATH2	08/09/06	1719	554583	6
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	12.6	+/ 47.6	31.7	+/ 47.6	65.3	pCi/g		MXP1	08/12/06	1843	555722	7
Liquid Scint Ni63, Solid ALL FSS													
Nickel 63	U	7.70	+/ 9.56	9.31	+/ 9.56	19.5	pCi/g		MXP1	08/11/06	1122	555723	8
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.00659	+/ 0.185	0.156	+/ 0.185	0.323	pCi/g		EGD1	08/11/06	2234	554580	9

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL 300, Am 05 RC Modified
2	DOE EML HASL 300, Am 05 RC Modified
3	DOE EML HASL 300, Pu 11 RC Modified
4	DOE EML HASL 300, Pu 11 RC Modified
5	EPA 906.0 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID: 9106 0006 005F
Sample ID: 168404009

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
6	EPA EERF C 01 Modified												
7	DOE RESL Fe 1, Modified												
8	DOE RESL Ni 1, Modified												
9	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	76	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	93	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	105	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	72	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid ALL FS	64	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	81	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0008 006F	Project:	YANK01204
Sample ID:	168404010	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	05 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	34.8%		

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	0.129	+/ 0.195	0.0758	+/ 0.196	0.332	pCi/g		BXL1	08/16/06	0949	557837	1
Curium 242	U	0.103	+/ 0.202	0.00	+/ 0.203	0.280	pCi/g						
Curium 243/244	U	0.0161	+/ 0.0316	0.0766	+/ 0.0317	0.335	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.0276	+/ 0.0711	0.0967	+/ 0.0712	0.275	pCi/g		BXL1	08/11/06	1633	555697	3
Plutonium 239/240	U	0.00359	+/ 0.113	0.118	+/ 0.113	0.317	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241		14.9	+/ 6.37	4.64	+/ 6.51	9.75	pCi/g		BXL1	08/16/06	1447	555698	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	0.00	+/ 6.06	5.09	+/ 6.06	10.7	pCi/g		DFA1	08/10/06	2150	554582	5
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.107	+/ 0.0846	0.0664	+/ 0.0846	0.139	pCi/g		ATH2	08/09/06	1822	554583	6
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	15.1	+/ 41.4	27.5	+/ 41.4	56.6	pCi/g		MXP1	08/12/06	1900	555722	7
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.258	+/ 0.225	0.179	+/ 0.225	0.373	pCi/g		EGD1	08/11/06	2251	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL 300, Am 05 RC Modified
2	DOE EML HASL 300, Am 05 RC Modified
3	DOE EML HASL 300, Pu 11 RC Modified
4	DOE EML HASL 300, Pu 11 RC Modified
5	EPA 906.0 Modified
6	EPA EERF C 01 Modified
7	DOE RESL Fe 1, Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0008 006F
Sample ID: 168404010

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	77	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	94	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	103	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	72	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	71	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID:	9106 0008 008F	Project:	YANK01204
Sample ID:	168404011	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	08 MAY 06		
Receive Date:	26 MAY 06		
Collector:	Client		
Moisture:	35.7%		

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	0.0969	+/ 0.192	0.152	+/ 0.193	0.426	pCi/g		BXL1 08/11/06	1434	555696	1
Curium 242	U	0.0482	+/ 0.142	0.132	+/ 0.142	0.446	pCi/g					
Curium 243/244	U	0.0576	+/ 0.202	0.240	+/ 0.203	0.603	pCi/g					
Alphaspec Pu, Solid ALL FSS												
Plutonium 238	U	0.0397	+/ 0.096	0.125	+/ 0.096	0.328	pCi/g		BXL1 08/11/06	1633	555697	2
Plutonium 239/240	U	0.0315	+/ 0.114	0.137	+/ 0.114	0.353	pCi/g					
Liquid Scint Pu241, Solid ALL FSS												
Plutonium 241		11.5	+/ 6.72	5.08	+/ 6.80	10.7	pCi/g		BXL1 08/16/06	1504	555698	3
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid HTD2,ALL FSS												
Tritium	U	0.00	+/ 5.92	4.97	+/ 5.92	10.7	pCi/g		DFA1 08/09/06	1407	554582	4
Liquid Scint C14, Solid All,FSS												
Carbon 14	U	0.0238	+/ 0.0745	0.0636	+/ 0.0745	0.133	pCi/g		ATH2 08/09/06	1924	554583	5
Liquid Scint Fe55, Solid ALL FSS												
Iron 55	U	10.7	+/ 40.9	27.5	+/ 40.9	56.8	pCi/g		MXP1 08/12/06	1916	555722	6
Liquid Scint Tc99, Solid ALL FSS												
Technetium 99	U	0.0956	+/ 0.211	0.174	+/ 0.211	0.361	pCi/g		EGD1 08/11/06	2307	554580	7

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 906.0 Modified
5	EPA EERF C 01 Modified
6	DOE RESL Fe 1, Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID: 9106 0008 008F
Sample ID: 168404011

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
7 DOE EML HASL 300, Tc 02 RC Modified													

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	65	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	98	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	96	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	76	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	74	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID:	9106 0009 002F	Project:	YANK01204
Sample ID:	168404012	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	11 MAY 06		
Receive Date:	08 JUN 06		
Collector:	Client		
Moisture:	33%		

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	0.00144	+/ 0.155	0.166	+/ 0.155	0.458	pCi/g		BXL1	08/11/06	1434	555696	1
Curium 242	U	0.0192	+/ 0.145	0.135	+/ 0.145	0.455	pCi/g						
Curium 243/244	U	0.013	+/ 0.268	0.281	+/ 0.268	0.687	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.00587	+/ 0.0493	0.0279	+/ 0.0494	0.122	pCi/g		BXL1	08/11/06	1632	555697	2
Plutonium 239/240	U	0.0186	+/ 0.0492	0.0278	+/ 0.0493	0.122	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241		13.6	+/ 6.90	5.13	+/ 7.01	10.8	pCi/g		BXL1	08/16/06	1520	555698	3
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.0151	+/ 0.0146	0.0114	+/ 0.0146	0.0242	pCi/g		BXF1	08/14/06	0834	556350	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	4.12	+/ 8.36	6.70	+/ 8.36	14.5	pCi/g		DFA1	08/09/06	1422	554582	5
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.046	+/ 0.0755	0.0613	+/ 0.0755	0.128	pCi/g		ATH2	08/09/06	2027	554583	6
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	12.9	+/ 40.6	26.8	+/ 40.6	55.2	pCi/g		MXP1	08/12/06	1932	555722	7
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.078	+/ 0.203	0.168	+/ 0.203	0.348	pCi/g		EGD1	08/11/06	2323	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 905.0 Modified

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 : 362 Injun Hollow Rd

East Hampton, Connecticut 06424 Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0009 002F Project: YANK01204
Sample ID: 168404012 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
5	EPA 906.0 Modified												
6	EPA EERF C 01 Modified												
7	DOE RESL Fe 1, Modified												
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	61	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	98	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	94	(25% 125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	69	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	81	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	75	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0009 017F	Project:	YANK01204
Sample ID:	168404013	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	15 MAY 06		
Receive Date:	08 JUN 06		
Collector:	Client		
Moisture:	28.4%		

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	0.0755	+/ 0.242	0.230	+/ 0.243	0.574	pCi/g		BXL1	08/11/06	1434	555696	1
Curium 242	U	0.0957	+/ 0.220	0.171	+/ 0.220	0.509	pCi/g						
Curium 243/244	U	0.073	+/ 0.214	0.256	+/ 0.214	0.627	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.00629	+/ 0.0529	0.0299	+/ 0.0529	0.131	pCi/g		BXL1	08/11/06	1632	555697	2
Plutonium 239/240	U	0.0262	+/ 0.0513	0.00	+/ 0.0514	0.0709	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241		13.3	+/ 6.66	4.95	+/ 6.77	10.4	pCi/g		BXL1	08/16/06	1536	555698	3
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.0205	+/ 0.0151	0.0116	+/ 0.0151	0.0246	pCi/g		BXF1	08/14/06	0833	556350	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	0.583	+/ 7.98	6.65	+/ 7.98	14.4	pCi/g		DFA1	08/09/06	1438	554582	5
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.0271	+/ 0.0759	0.0625	+/ 0.0759	0.131	pCi/g		ATH2	08/09/06	2129	554583	6
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	61.9	+/ 150	102	+/ 150	210	pCi/g		MXP1	08/12/06	1949	555722	7
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.0628	+/ 0.200	0.165	+/ 0.200	0.343	pCi/g		EGD1	08/11/06	2338	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 905.0 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID: 9106 0009 017F
Sample ID: 168404013

Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
5	EPA 906.0 Modified												
6	EPA EERF C 01 Modified												
7	DOE RESL Fe 1, Modified												
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	64	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	91	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	96	(25% 125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	72	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	73	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	79	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0010 001F	Project:	YANK01204
Sample ID:	168404014	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	04 MAY 06		
Receive Date:	17 MAY 06		
Collector:	Client		
Moisture:	27.3%		

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	0.00677	+/ 0.227	0.238	+/ 0.227	0.628	pCi/g		BXL1	08/11/06	1434	555696	1
Curium 242	U	0.0854	+/ 0.167	0.00	+/ 0.168	0.231	pCi/g						
Curium 243/244	U	0.0361	+/ 0.242	0.241	+/ 0.242	0.634	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.173	+/ 0.181	0.143	+/ 0.182	0.331	pCi/g		BXL1	08/11/06	2250	555697	2
Plutonium 239/240	U	0.0342	+/ 0.0865	0.0951	+/ 0.0866	0.235	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241		13.0	+/ 6.44	4.78	+/ 6.54	10.0	pCi/g		BXL1	08/16/06	1553	555698	3
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.0128	+/ 0.0141	0.0125	+/ 0.0141	0.0262	pCi/g		BXF1	08/14/06	0833	556350	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	0.548	+/ 7.50	6.25	+/ 7.50	13.5	pCi/g		DFA1	08/09/06	1454	554582	5
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.0555	+/ 0.0809	0.0655	+/ 0.0809	0.137	pCi/g		ATH2	08/09/06	2232	554583	6
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	18.1	+/ 47.6	32.3	+/ 47.6	66.6	pCi/g		MXP1	08/12/06	2005	555722	7
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.134	+/ 0.205	0.167	+/ 0.205	0.347	pCi/g		EGD1	08/11/06	2354	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 905.0 Modified

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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0010 001F
Sample ID: 168404014
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
5	EPA 906.0 Modified												
6	EPA EERF C 01 Modified												
7	DOE RESL Fe 1, Modified												
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	50	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	85	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	99	(25% 125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	74	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	70	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	75	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was 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 : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106 0010 012F	Project:	YANK01204
Sample ID:	168404015	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	04 MAY 06		
Receive Date:	17 MAY 06		
Collector:	Client		
Moisture:	28.1%		

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	0.110	+/ 0.184	0.140	+/ 0.184	0.386	pCi/g		BXL1	08/11/06	1434	555696	1
Curium 242	U	0.0547	+/ 0.141	0.192	+/ 0.141	0.544	pCi/g						
Curium 243/244	U	0.126	+/ 0.184	0.245	+/ 0.185	0.597	pCi/g						
Alphaspec Pu, Solid ALL FSS													
Plutonium 238	U	0.00157	+/ 0.126	0.122	+/ 0.126	0.291	pCi/g		BXL1	08/11/06	2250	555697	2
Plutonium 239/240	U	0.0867	+/ 0.0869	0.0406	+/ 0.0872	0.128	pCi/g						
Liquid Scint Pu241, Solid ALL FSS													
Plutonium 241	U	8.31	+/ 6.16	4.77	+/ 6.21	10.0	pCi/g		BXL1	08/16/06	1609	555698	3
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid ALL FSS													
Strontium 90	U	0.00771	+/ 0.0144	0.0124	+/ 0.0144	0.0263	pCi/g		BXF1	08/14/06	0833	556350	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid HTD2,ALL FSS													
Tritium	U	0.896	+/ 6.17	5.11	+/ 6.17	11.0	pCi/g		DFA1	08/09/06	1510	554582	5
Liquid Scint C14, Solid All,FSS													
Carbon 14	U	0.0162	+/ 0.0763	0.0633	+/ 0.0763	0.132	pCi/g		ATH2	08/09/06	2334	554583	6
Liquid Scint Fe55, Solid ALL FSS													
Iron 55	U	23.3	+/ 49.3	32.5	+/ 49.3	67.0	pCi/g		MXP1	08/12/06	2021	555722	7
Liquid Scint Tc99, Solid ALL FSS													
Technetium 99	U	0.0577	+/ 0.206	0.171	+/ 0.206	0.354	pCi/g		EGD1	08/12/06	0010	554580	8

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL RAD A 021	LXM2	08/03/06	1534	554649

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 905.0 Modified

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 : 362 Injun Hollow Rd

East Hampton, Connecticut 06424 Report Date: August 21, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106 0010 012F Project: YANK01204
Sample ID: 168404015 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
5	EPA 906.0 Modified												
6	EPA EERF C 01 Modified												
7	DOE RESL Fe 1, Modified												
8	DOE EML HASL 300, Tc 02 RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium 243	Alphaspec Am241, Cm, Solid ALL	81	(15% 125%)
Plutonium 242	Alphaspec Pu, Solid ALL FSS	91	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid ALL FS	99	(25% 125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid ALL FSS	68	(25% 125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid ALL FS	74	(15% 125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid ALL FS	75	(15% 125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol condensation product
B Target analyte was detected in the associated blank
BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/ RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

QC Summary

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

East Hampton, Connecticut

Contact: Mr. Jack McCarthy

Workorder: 168404

Report Date: August 21, 2006

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 555696										
QC1201153130 168340011 DUP										
Americium-241	U	-0.000522	U	0.0578	pCi/g	204		(0% - 100%)	BXL1	08/11/06 14:34
	Uncert:	+/-0.0385		+/-0.278						
	TPU:	+/-0.0385		+/-0.279						
Curium-242	U	0.00	U	-0.0405	pCi/g	200		(0% - 100%)		
	Uncert:	+/-0.0756		+/-0.0562						
	TPU:	+/-0.0756		+/-0.0565						
Curium-243/244	U	-0.0177	U	-0.0517	pCi/g	98		(0% - 100%)		
	Uncert:	+/-0.0764		+/-0.257						
	TPU:	+/-0.0765		+/-0.257						
QC1201153132 LCS										
Americium-241	12.8			12.8	pCi/g		100	(75%-125%)		
	Uncert:			+/-1.84						
	TPU:			+/-2.70						
Curium-242			U	-0.0328	pCi/g					
	Uncert:			+/-0.0454						
	TPU:			+/-0.0457						
Curium-243/244	15.5			14.3	pCi/g		92	(75%-125%)		
	Uncert:			+/-1.94						
	TPU:			+/-2.92						
QC1201153129 MB										
Americium-241			U	0.0471	pCi/g					
	Uncert:			+/-0.157						
	TPU:			+/-0.157						
Curium-242			U	-0.0469	pCi/g					
	Uncert:			+/-0.0459						
	TPU:			+/-0.0464						
Curium-243/244			U	-0.00385	pCi/g					
	Uncert:			+/-0.210						
	TPU:			+/-0.210						
QC1201153131 168340011 MS										
Americium-241	13.3 U	-0.000522		12.0	pCi/g		91	(75%-125%)		
	Uncert:	+/-0.0385		+/-1.38						
	TPU:	+/-0.0385		+/-2.08						
Curium-242	U	0.00	U	0.0427	pCi/g					
	Uncert:	+/-0.0756		+/-0.0837						
	TPU:	+/-0.0756		+/-0.0839						
Curium-243/244	16.1 U	-0.0177		15.9	pCi/g		99	(75%-125%)		
	Uncert:	+/-0.0764		+/-1.58						
	TPU:	+/-0.0765		+/-2.61						
Batch 555697										
QC1201153134 168340011 DUP										
Plutonium-238	U	-0.0155	U	0.0237	pCi/g	956		(0% - 100%)	BXL1	08/11/06 22:51

QC Summary

Workorder: 168404

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 555697										
	Uncert:	+/-0.0215		+/-0.0465						
	TPU:	+/-0.0216		+/-0.0466						
Plutonium-239/240	U	0.0414	U	-0.0489	pCi/g	2410		(0% - 100%)		
	Uncert:	+/-0.0934		+/-0.124						
	TPU:	+/-0.0935		+/-0.124						
QC1201153136 LCS										
Plutonium-238			U	0.155	pCi/g			(75%-125%)		
	Uncert:			+/-0.141						
	TPU:			+/-0.142						
Plutonium-239/240	11.8			11.5	pCi/g		98	(75%-125%)		
	Uncert:			+/-0.856						
	TPU:			+/-1.32						
QC1201153133 MB										
Plutonium-238			U	0.0552	pCi/g					08/11/06 22:50
	Uncert:			+/-0.186						
	TPU:			+/-0.186						
Plutonium-239/240			U	-0.0978	pCi/g					
	Uncert:			+/-0.0892						
	TPU:			+/-0.0899						
QC1201153135 168340011 MS										
Plutonium-238	U	-0.0155	U	0.0539	pCi/g			(75%-125%)		08/11/06 22:51
	Uncert:	+/-0.0215		+/-0.112						
	TPU:	+/-0.0216		+/-0.112						
Plutonium-239/240	12.3 U	0.0414		10.3	pCi/g		84	(75%-125%)		
	Uncert:	+/-0.0934		+/-0.796						
	TPU:	+/-0.0935		+/-1.19						
Batch 555698										
QC1201153138 168340011 DUP										
Plutonium-241	U	7.28	U	10.1	pCi/g	0		(0% - 100%)	BXL1	08/16/06 16:41
	Uncert:	+/-6.30		+/-6.39						
	TPU:	+/-6.35		+/-6.46						
QC1201153140 LCS										
Plutonium-241	137			145	pCi/g		106	(75%-125%)		08/16/06 17:14
	Uncert:			+/-12.5						
	TPU:			+/-19.9						
QC1201153137 MB										
Plutonium-241			U	8.57	pCi/g					08/16/06 16:25
	Uncert:			+/-6.93						
	TPU:			+/-6.98						
QC1201153139 168340011 MS										
Plutonium-241	138 U	7.28		142	pCi/g		103	(75%-125%)		08/16/06 16:58
	Uncert:	+/-6.30		+/-12.4						
	TPU:	+/-6.35		+/-19.7						
Batch 557837										
QC1201158317 168404009 DUP										
Americium-241	U	-0.0851	U	0.167	pCi/g	616		(0% - 100%)	BXL1	08/16/06 09:49
	Uncert:	+/-0.136		+/-0.220						
	TPU:	+/-0.136		+/-0.221						
Curium-242	U	-0.0253	U	0.241	pCi/g	247		(0% - 100%)		

QC Summary

Workorder: 168404

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 557837										
	Uncert:	+/-0.0495		+/-0.334						
	TPU:	+/-0.0496		+/-0.335						
Curium-243/244	U	-0.0479	U	0.0761	pCi/g	879		(0% - 100%)		
	Uncert:	+/-0.0542		+/-0.149						
	TPU:	+/-0.0545		+/-0.149						
QC1201158319 LCS										
Americium-241	24.5			25.4	pCi/g		104	(75%-125%)		
	Uncert:			+/-2.47						
	TPU:			+/-4.16						
Curium-242			U	0.0477	pCi/g					
	Uncert:			+/-0.127						
	TPU:			+/-0.127						
Curium-243/244	29.7			27.0	pCi/g		91	(75%-125%)		
	Uncert:			+/-2.54						
	TPU:			+/-4.38						
QC1201158316 MB										
Americium-241			U	0.234	pCi/g					
	Uncert:			+/-0.275						
	TPU:			+/-0.277						
Curium-242			U	0.00	pCi/g					
	Uncert:			+/-0.152						
	TPU:			+/-0.152						
Curium-243/244			U	-0.0551	pCi/g					
	Uncert:			+/-0.0624						
	TPU:			+/-0.0628						
QC1201158318 168404009 MS										
Americium-241	26.4 U	-0.0851		29.1	pCi/g		110	(75%-125%)		
	Uncert:	+/-0.136		+/-2.97						
	TPU:	+/-0.136		+/-5.01						
Curium-242	U	-0.0253	U	0.126	pCi/g					
	Uncert:	+/-0.0495		+/-0.247						
	TPU:	+/-0.0496		+/-0.248						
Curium-243/244	32.4 U	-0.0479		31.7	pCi/g		98	(75%-125%)		
	Uncert:	+/-0.0542		+/-3.12						
	TPU:	+/-0.0545		+/-5.39						
Rad Gas Flow										
Batch 556350										
QC1201154645 168404003 DUP										
Strontium-90	U	-0.00343	U	-0.00637	pCi/g	0		(0% - 100%)	BXF1	08/14/06 08:33
	Uncert:	+/-0.0203		+/-0.0152						
	TPU:	+/-0.0203		+/-0.0152						
QC1201154647 LCS										
Strontium-90	1.56			1.30	pCi/g		83	(75%-125%)		
	Uncert:			+/-0.0563						
	TPU:			+/-0.0881						
QC1201154644 MB										
Strontium-90			U	0.0176	pCi/g					
	Uncert:			+/-0.018						
	TPU:			+/-0.018						

QC Summary

Workorder: 168404

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 556350										
QC1201154646 168404003 MS										
Strontium-90	1.58 U	-0.00343		1.29	pCi/g		82	(75%-125%)		
	Uncert:	+/-0.0203		+/-0.0535						
	TPU:	+/-0.0203		+/-0.0813						
Rad Liquid Scintillation										
Batch 554580										
QC1201150562 168340012 DUP										
Technetium-99	U	0.0338	U	0.266	pCi/g	0		(0% - 100%)	EGD1	08/12/06 00:42
	Uncert:	+/-0.192		+/-0.226						
	TPU:	+/-0.192		+/-0.226						
QC1201150564 LCS										
Technetium-99	13.1			13.6	pCi/g		103	(75%-125%)		08/12/06 01:14
	Uncert:			+/-0.496						
	TPU:			+/-0.599						
QC1201150561 MB										
Technetium-99			U	0.0311	pCi/g					08/12/06 00:26
	Uncert:			+/-0.177						
	TPU:			+/-0.177						
QC1201150563 168340012 MS										
Technetium-99	13.0 U	0.0338		12.0	pCi/g		92	(75%-125%)		08/12/06 00:58
	Uncert:	+/-0.192		+/-0.523						
	TPU:	+/-0.192		+/-0.602						
Batch 554582										
QC1201150570 168340011 DUP										
Tritium	U	1.77	U	1.62	pCi/g	0		(0% - 100%)	DFA1	08/09/06 15:42
	Uncert:	+/-8.20		+/-7.47						
	TPU:	+/-8.20		+/-7.47						
QC1201150572 LCS										
Tritium	68.3			76.2	pCi/g		111	(75%-125%)		08/09/06 16:14
	Uncert:			+/-14.0						
	TPU:			+/-14.1						
QC1201150569 MB										
Tritium			U	0.586	pCi/g					08/09/06 15:26
	Uncert:			+/-8.01						
	TPU:			+/-8.01						
QC1201150571 168340011 MS										
Tritium	61.3 U	1.77		61.8	pCi/g		101	(75%-125%)		08/09/06 15:58
	Uncert:	+/-8.20		+/-12.2						
	TPU:	+/-8.20		+/-12.3						
Batch 554583										
QC1201150574 168404003 DUP										
Carbon-14	U	0.0937	U	0.0422	pCi/g	0		(0% - 100%)	ATH2	08/10/06 01:39
	Uncert:	+/-0.0813		+/-0.075						
	TPU:	+/-0.0813		+/-0.0751						
QC1201150576 LCS										
Carbon-14	7.27			7.14	pCi/g		98	(75%-125%)		08/10/06 03:00
	Uncert:			+/-0.508						
	TPU:			+/-0.520						
QC1201150573 MB										

QC Summary

Workorder: 168404

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 554583										
Carbon-14			U	-0.0315	pCi/g					
	Uncert:			+/-0.0776						
	TPU:			+/-0.0776						
QC1201150575 168404003 MS										
Carbon-14	15.1 U	0.0937		13.8	pCi/g		92	(75%-125%)		08/10/06 02:43
	Uncert:	+/-0.0813		+/-1.00						
	TPU:	+/-0.0813		+/-1.03						
Batch 555722										
QC1201153223 168340012 DUP										
Iron-55	U	-26.5	U	5.83	pCi/g	0		(0% - 100%)	MXP1	08/12/06 20:54
	Uncert:	+/-65.1		+/-36.9						
	TPU:	+/-65.1		+/-36.9						
QC1201153225 LCS										
Iron-55	641			660	pCi/g		103	(75%-125%)		08/12/06 21:27
	Uncert:			+/-56.2						
	TPU:			+/-67.2						
QC1201153222 MB										
Iron-55			U	18.2	pCi/g					08/12/06 20:38
	Uncert:			+/-39.6						
	TPU:			+/-39.6						
QC1201153224 168340012 MS										
Iron-55	717 U	-26.5		688	pCi/g		96	(75%-125%)		08/12/06 21:11
	Uncert:	+/-65.1		+/-60.2						
	TPU:	+/-65.1		+/-71.6						
Batch 555723										
QC1201153227 168340012 DUP										
Nickel-63	U	3.79	U	6.68	pCi/g	0		(0% - 100%)	MXP1	08/11/06 11:55
	Uncert:	+/-5.39		+/-7.43						
	TPU:	+/-5.40		+/-7.43						
QC1201153229 LCS										
Nickel-63	512			479	pCi/g		94	(75%-125%)		08/11/06 12:27
	Uncert:			+/-22.4						
	TPU:			+/-27.1						
QC1201153226 MB										
Nickel-63			U	15.7	pCi/g					08/11/06 11:38
	Uncert:			+/-9.92						
	TPU:			+/-9.93						
QC1201153228 168340012 MS										
Nickel-63	530 U	3.79		511	pCi/g		96	(75%-125%)		08/11/06 12:11
	Uncert:	+/-5.39		+/-23.5						
	TPU:	+/-5.40		+/-28.7						

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
Result is greater than value reported

QC Summary

Workorder: 168404

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

>	
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
H	Analytical holding time was exceeded
J	Value is estimated
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
h	Preparation or preservation holding time was 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.

Attachment 2b
Split Sample Assessment Forms
(2 Pages)

Split Sample Assessment Form

Survey Area #: 9106	Survey Unit #: 0008	Survey Unit Name: Discharge Canal
Sample Plan or WPIR#: 2006-021		SML #: 9106-0008-006

Sample Description: Comparison of split samples collected from sample measurement location #03 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was 9106-0008-006F the comparison sample was 9106-0008-006FS.

	STANDARD				COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
Cs-137	4.92E-01	3.63E-02	14	0.6 - 1.66	6.01E-01	5.00E-02	1.22	Y
Co-60	7.79E-01	4.90E-02	16	0.75 - 1.33	1.34E+00	7.00E-02	1.72	N
Sr-90	5.59E-03	6.50E-03	1	NONE -	8.75E-04	7.05E-03	0.16	N/A
Ni-63	2.28E+00	5.05E+00	0	NONE	1.88E-01	3.05E+00	0.08	N/A
K-40	1.37E+01	6.85E-01	20	0.75 - 1.33	1.49E+01	7.45E-01	1.09	Y

Comments/Corrective Actions: In consideration of Sr-90 & Ni-63 results, guidance for agreement ranges, obtained from USNRC Inspection Procedure 84750, does not address resolution ratios less than 4, therefore, a determination of acceptability for such rations cannot be made. Co-60 has a likelyhood to be present in the sample matrix in particulate form, one would not neccassarily expect it to be homogenuously mixed from processing of the sample-split aliqot. Since Cs-137 and K-40 were found to be present at an acceptable levels of agreement, no further action is warranted.

Table is provided to show acceptance criteria used to assess split samples.

Resolution		Agreement Range	
4	7	0.50	2.00
8	15	0.60	1.66
16	50	0.75	1.33
51	200	0.80	1.25
> 200		0.85	1.18

Performed By:	Date:	Reviewed By:	Date:
Orel Rendall	10-31-06		11/1/06

WPIR – Work Plan and Inspection Record

SML – Sample Measurement Location designation

Split Sample Assessment Form

Survey Area#: 9106	Survey Unit #: 0008	Survey Unit Name: Discharge Canal
Sample Plan or WPIR#: 2006-0021		SML #: 9106-0008-010

Sample Description: Comparison of split samples collected from sample measurement location #10 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was 9106-0008-010F, the comparison sample was 9106-0008-010FS.

STANDARD					COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
Cs-137	3.36E-01	3.45E-02	10	0.6 - 1.66	3.02E-01	2.87E-02	0.90	Y
Co-60	2.46E-01	2.51E-02	10	0.6 - 1.66	3.28E-01	2.96E-02	1.33	Y
Sr-90	3.47E-03	6.05E-03	1	NONE	8.59E-03	8.50E-03	2.48	N/A
Ni-63	1.23E-01	2.99E+00	0	NONE	-1.63E+00	3.35E+00	-13.25	N/A
K-40	1.37E+01	6.85E-01	20	0.75 1.33	1.49E+01	7.45E-01	1.09	Y

Comments/Corrective Actions: In consideration of Sr-90 & Ni-63 results, guidance for agreement ranges, obtained from USNRC Inspection Procedure 84750, does not address resolution ratios less than 4, therefore, a determination of acceptability for such rations cannot be made. Since Cs-137, Co 60 and K-40 were found to be present at an acceptable levels of agreement, no further action is warranted.

Table is provided to show acceptance criteria used to assess split samples.

Resolution		Agreement Range	
4	7	0.50	2.00
8	15	0.60	1.66
16	50	0.75	1.33
51	200	0.80	1.25
> 200		0.85	1.18

Performed By:	Date:	Reviewed By:	Date:
Dal Randall	10-31-06		11/1/06

WPIR – Work Plan and Inspection Record

SML – Sample Measurement Location designation

Attachment 2c
Preliminary Data Form
(1 Page)

Preliminary Data Review Form - Samples for the Sign Test

Survey Unit: 9106- 0008
Survey Unit Name: Discharge Canal

Classification: 2
Survey Media: Soil
Type of Survey: Final Status Survey
Type of Measurement: Radionuclide Specific
Number of Measurements: 14
Operational DCGL: 1

BASIC STATISTICAL QUANTITIES

	Cs-137	Co-60	Sr-90	Ni-63
Minimum Value:	-8.91E-03	-1.45E-02	-1.92E-02	-4.84E+00
Maximum Value:	4.92E-01	9.17E-01	2.03E-02	2.28E+00
Mean:	1.78E-01	1.98E-01	3.34E-03	-1.38E+00
Median:	1.26E-01	7.60E-02	4.44E-03	-1.76E+00
Standard Deviation:	1.85E-01	2.95E-01	1.04E-02	1.87E+00

	RADIONUCLIDE CONCENTRATION (pCi/g)			
NUMBER	Cs-137	Co-60	Sr-90	Ni-63
9106-0008-001F	3.96E-01	1.33E-01	5.79E-03	2.33E-01
9106-0008-002F	-8.91E-03	7.77E-03	2.03E-02	-4.84E+00
9106-0008-003F	2.05E-01	3.24E-01	1.12E-02	-2.74E+00
9106-0008-004F	4.32E-02	0.00E+00	-6.19E-03	-1.80E+00
9106-0008-005F	2.66E-01	2.75E-02	8.28E-04	-8.58E-01
9106-0008-006F	4.92E-01	7.79E-01	5.59E-03	2.28E+00
9106-0008-007F	2.29E-02	2.68E-02	-8.81E-04	-2.33E+00
9106-0008-008F	4.72E-01	9.17E-01	-2.69E-03	-4.12E-01
9106-0008-009F	1.55E-02	-1.08E-02	-5.90E-03	-2.05E+00
9106-0008-010F	3.36E-01	2.46E-01	3.47E-03	1.23E-01
9106-0008-011F	6.76E-02	1.22E-01	1.93E-02	-3.34E+00
9106-0008-012F	1.84E-01	1.79E-01	-1.92E-02	8.39E-01
9106-0008-013F	1.03E-02	2.99E-02	9.80E-03	-2.70E+00
9106-0008-014F	-3.89E-03	-1.45E-02	5.40E-03	-1.72E+00

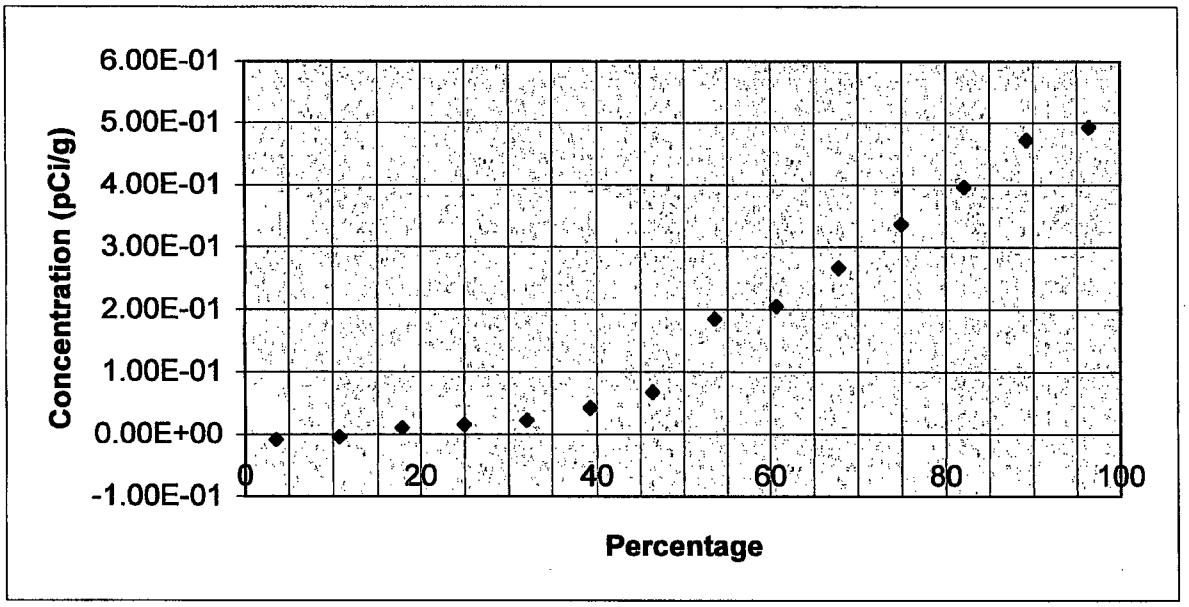
Performed By: Dale Randall Date: 10-31-06

Independent Review: [signature] Date: 10/31/06

Attachment 2d
Graphical Representation of Data
(8 Pages)

Quantile Plot For Cesium - 137

Survey Unit: 9106-0008
Survey Unit Name: Discharge Canal
Mean: 1.78E-01 pCi/g



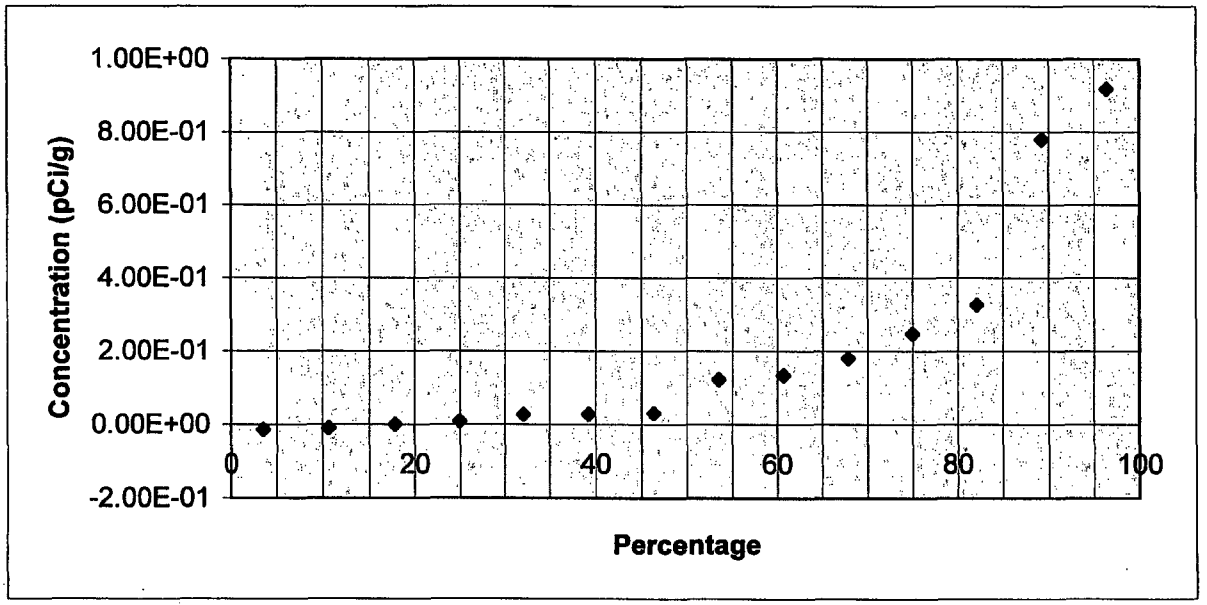
Cs-137	Rank	Percentage
-8.91E-03	1	4 %
-3.89E-03	2	11 %
1.03E-02	3	18 %
1.55E-02	4	25 %
2.29E-02	5	32 %
4.32E-02	6	39 %
6.76E-02	7	46 %
1.84E-01	8	54 %
2.05E-01	9	61 %
2.66E-01	10	68 %
3.36E-01	11	75 %
3.96E-01	12	82 %
4.72E-01	13	89 %
4.92E-01	14	96 %

Prepared By: Oak Ridge Date: 10-31-06

Reviewed By: [signature] Date: 11/1/06

Quantile Plot For Cobalt - 60

Survey Unit: 9106-0008
Survey Unit Name: Discharge Canal
Mean: 1.98E-01 pCi/g



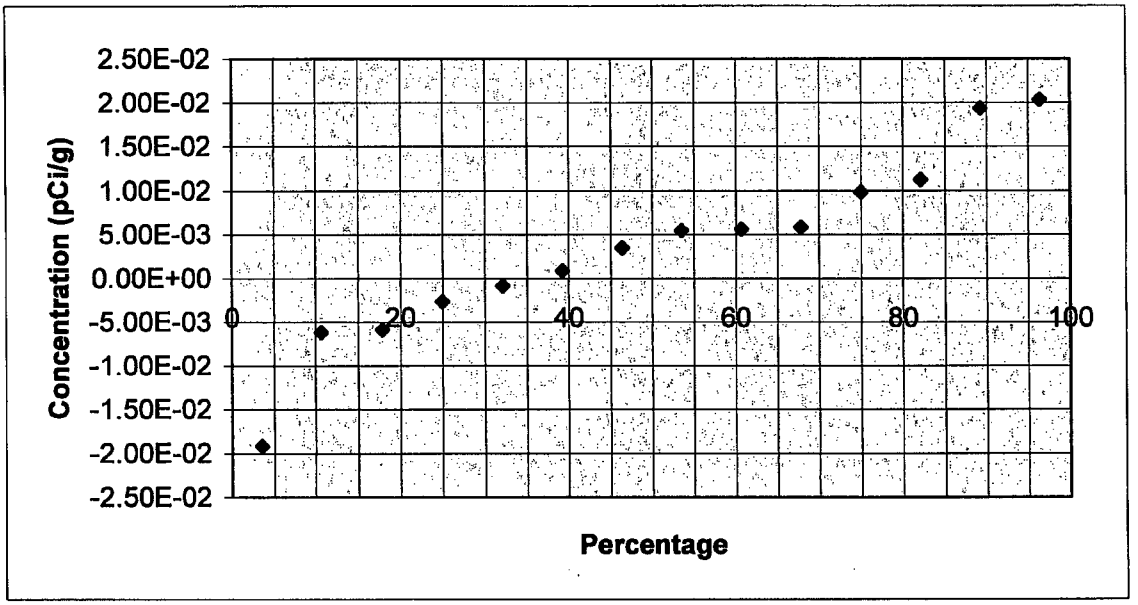
Co-60	Rank	Percentage
-1.45E-02	1	4 %
-1.08E-02	2	11 %
0.00E+00	3	18 %
7.77E-03	4	25 %
2.68E-02	5	32 %
2.75E-02	6	39 %
2.99E-02	7	46 %
1.22E-01	8	54 %
1.33E-01	9	61 %
1.79E-01	10	68 %
2.46E-01	11	75 %
3.24E-01	12	82 %
7.79E-01	13	89 %
9.17E-01	14	96 %

Prepared By: Dale Rudall Date: 10-31-06

Reviewed By: [signature] Date: 11/1/06

Quantile Plot For Strontium - 90

Survey Unit: 9106-0008
Survey Unit Name: Discharge Canal
Mean: 3.34E-03 pCi/g



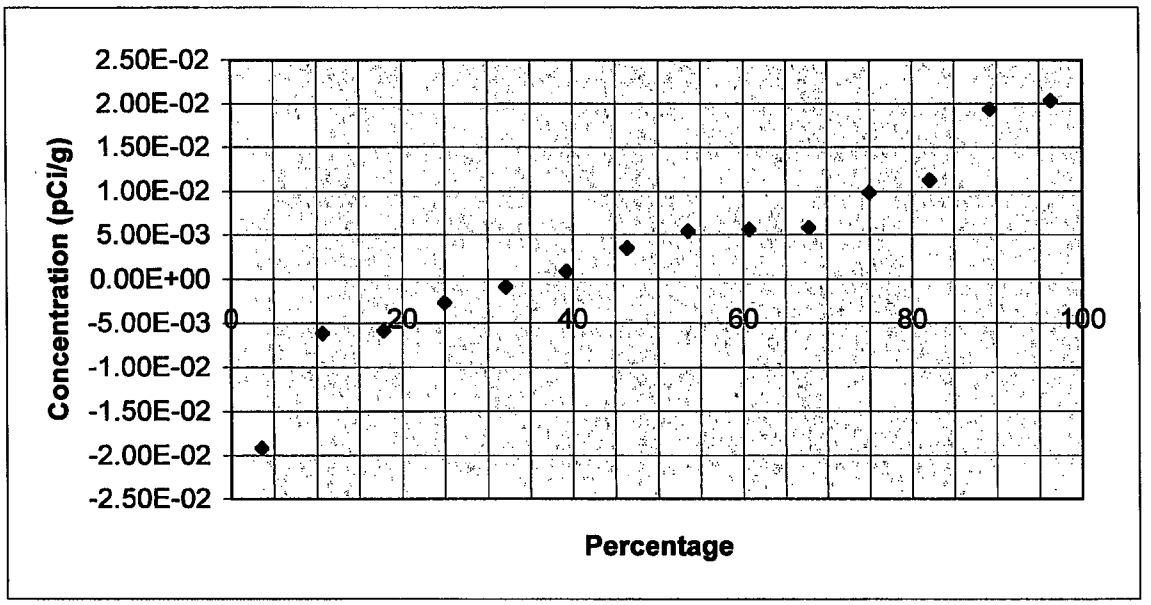
Sr-90	Rank	Percentage
-1.92E-02	1	4 %
-6.19E-03	2	11 %
-5.90E-03	3	18 %
-2.69E-03	4	25 %
-8.81E-04	5	32 %
8.28E-04	6	39 %
3.47E-03	7	46 %
5.40E-03	8	54 %
5.59E-03	9	61 %
5.79E-03	10	68 %
9.80E-03	11	75 %
1.12E-02	12	82 %
1.93E-02	13	89 %
2.03E-02	14	96 %

Prepared By: Dan Rudall Date: 10-31-06

Reviewed By: [signature] Date: 11/1/06

Quantile Plot For Nickel - 63

Survey Unit: 9106-0008
Survey Unit Name: Discharge Canal
Mean: -1.38E+00 pCi/g



Ni-63	Rank	Percentage
-4.84E+00	1	4 %
-3.34E+00	2	11 %
-2.74E+00	3	18 %
-2.70E+00	4	25 %
-2.33E+00	5	32 %
-2.05E+00	6	39 %
-1.80E+00	7	46 %
-1.72E+00	8	54 %
-8.58E-01	9	61 %
-4.12E-01	10	68 %
1.23E-01	11	75 %
2.33E-01	12	82 %
8.39E-01	13	89 %
2.28E+00	14	96 %

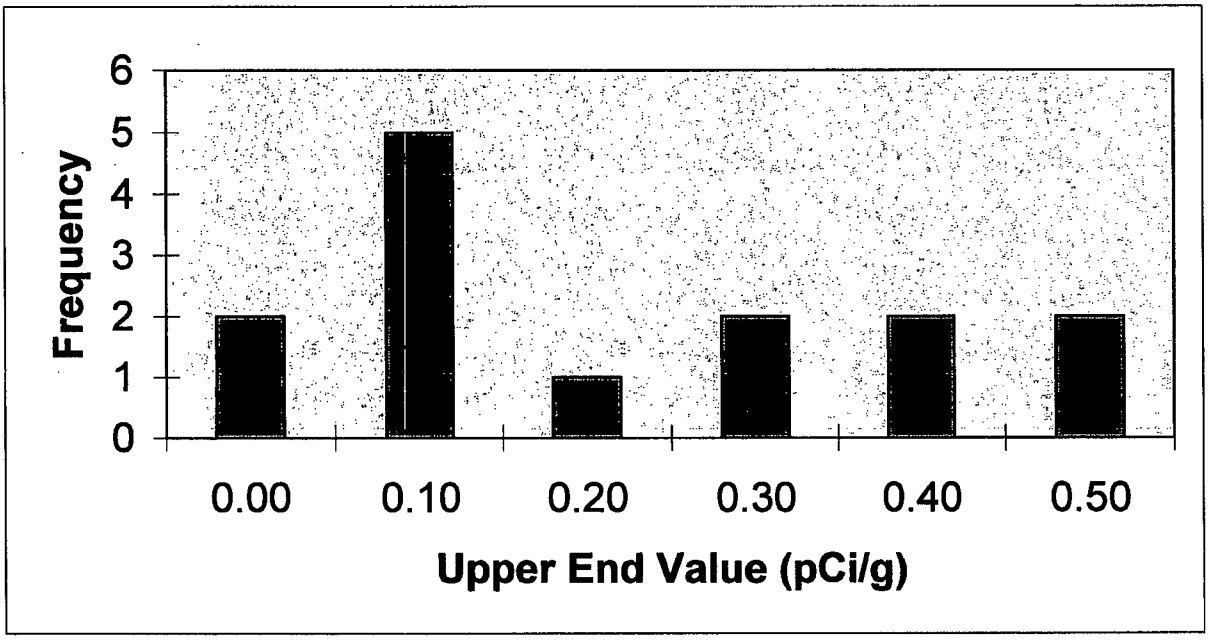
Prepared By: Dale Randall Date: 10-31-06

Reviewed By: [signature] Date: 11/1/06

Frequency Plot For Cesium-137

Survey Unit: 9106-0008
Survey Unit Name: Discharge Canal

Mean: 0.178 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
0.00	2	14%
0.10	5	36%
0.20	1	7%
0.30	2	14%
0.40	2	14%
0.50	2	14%
Total	14	100%

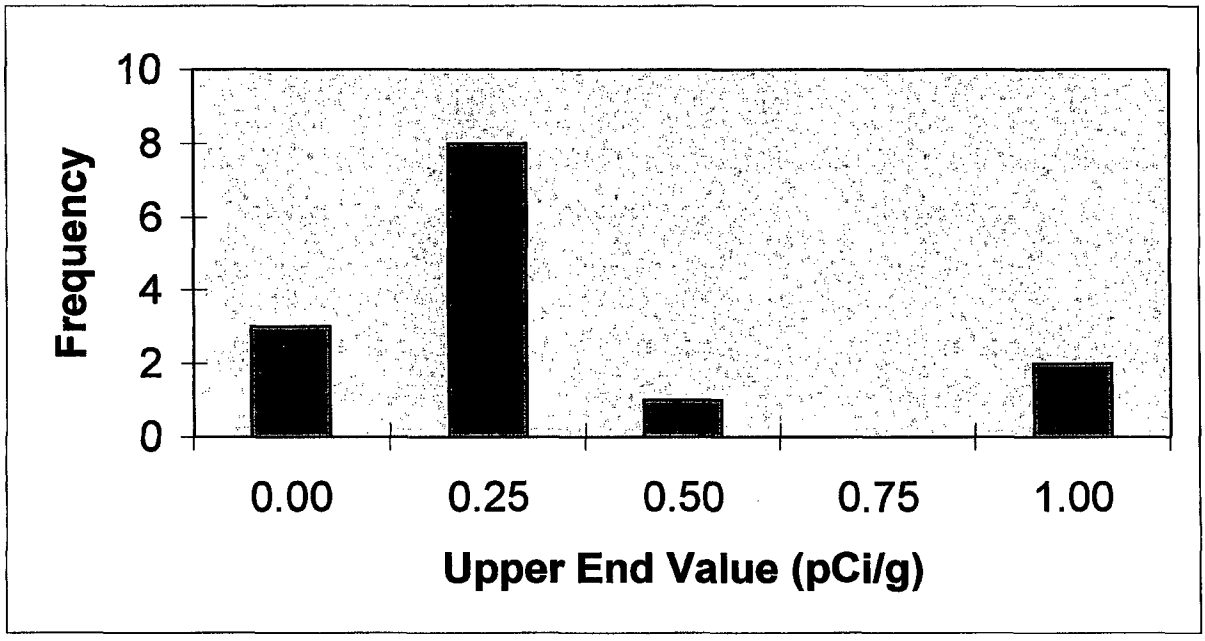
Prepared By: Dal Rendall Date: 10-31-06

Reviewed By: [signature] Date: 11/1/06

Frequency Plot For Cobalt-60

Survey Unit: 9106-0008
Survey Unit Name: Discharge Canal

Mean: 0.198 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
0.00	3	21%
0.25	8	57%
0.50	1	7%
0.75	0	0%
1.00	2	14%
Total	14	100%

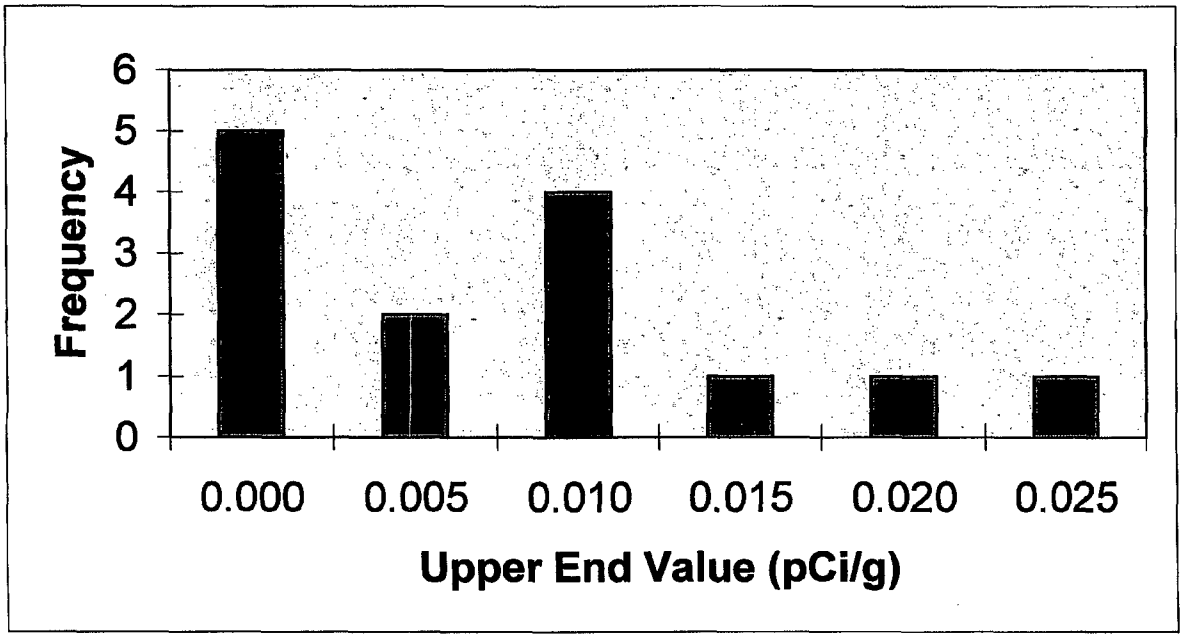
Prepared By: Carl Randall Date: 10-31-06

Reviewed By: [signature] Date: 11/1/06

Frequency Plot For Strontium-90

Survey Unit: 9106-0008
Survey Unit Name: Discharge Canal

Mean: 0.003 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
0.000	5	36%
0.005	2	14%
0.010	4	29%
0.015	1	7%
0.020	1	7%
0.025	1	7%
Total	14	100%

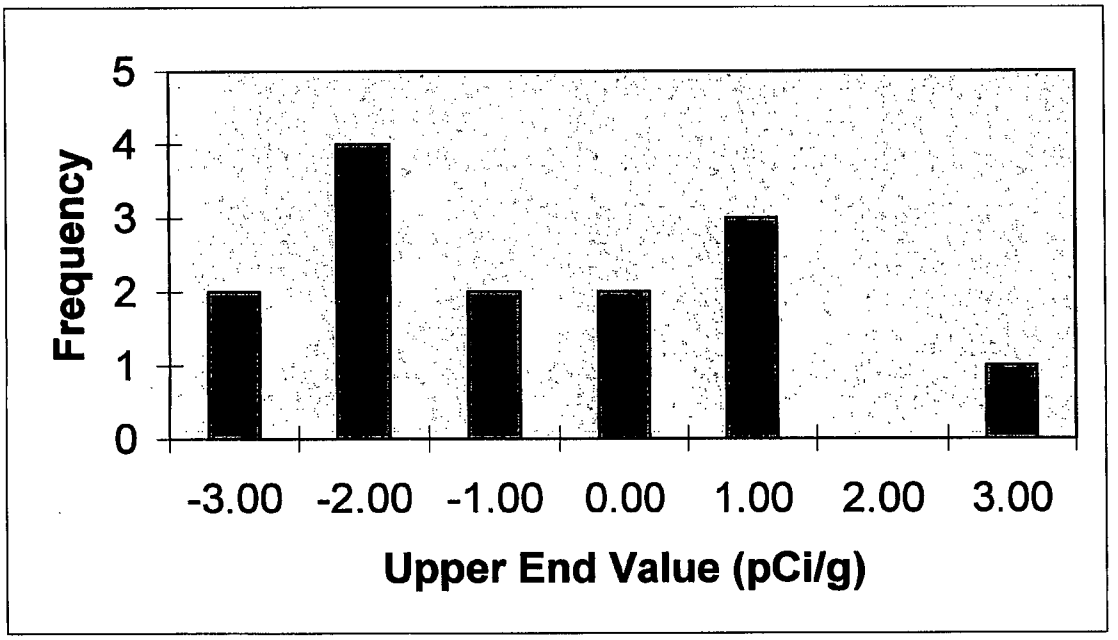
Prepared By: _____ Date: 11-1-06

Reviewed By: _____ Date: 11/1/06

Frequency Plot For Nickel-63

Survey Unit: 9106-0008
Survey Unit Name: Discharge Canal

Mean: -1.380 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
-3.00	2	14%
-2.00	4	29%
-1.00	2	14%
0.00	2	14%
1.00	3	21%
2.00	0	0%
3.00	1	7%
Total	14	100%

Prepared By: Dale Rudall Date: 11-1-06

Reviewed By: [signature] Date: 11/1/06

Attachment 2e
Sign Test Calculation
(1 Page)

Sign Test Calculation Sheet For Multiple Radionuclisdes

rvey Unit Numb 9106-0008

rvey Unit Name: Discharge Canal

WP&IR#: 2006-021

Classification : 2 | TYPE I (α error):0.05 | TYPE I (β error):0.05

Radionuclides:	Cs-137	Co-60	Sr-90	Ni-63
Survey Design DCGL (pCi/g):	6.01	2.9	1.18	549

Results Cs-137	Results Co-60	Results Sr-90	Results Ni-63	Weighted Sum (W_s)	DCGL-Result	Sign
3.96E-01	1.33E-01	1.33E-01	1.33E-01	1.17E-01	8.83E-01	1
-8.91E-03	7.77E-03	7.77E-03	7.77E-03	1.84E-02	9.82E-01	1
2.05E-01	3.24E-01	3.24E-01	3.24E-01	1.55E-01	8.45E-01	1
4.32E-02	0.00E+00	0.00E+00	0.00E+00	1.94E-03	9.98E-01	1
2.66E-01	2.75E-02	2.75E-02	2.75E-02	5.44E-02	9.46E-01	1
4.92E-01	7.79E-01	7.79E-01	7.79E-01	3.55E-01	6.45E-01	1
2.29E-02	2.68E-02	2.68E-02	2.68E-02	1.23E-02	9.88E-01	1
4.72E-01	9.17E-01	9.17E-01	9.17E-01	3.92E-01	6.08E-01	1
1.55E-02	-1.08E-02	-1.08E-02	-1.08E-02	-6.15E-03	1.00E+00	1
3.36E-01	2.46E-01	2.46E-01	2.46E-01	1.44E-01	8.56E-01	1
6.76E-02	1.22E-01	1.22E-01	1.22E-01	6.97E-02	9.30E-01	1
1.84E-01	1.79E-01	1.79E-01	1.79E-01	7.61E-02	9.24E-01	1
1.03E-02	2.99E-02	2.99E-02	2.99E-02	2.03E-02	9.80E-01	1
-3.89E-03	-1.45E-02	-1.45E-02	-1.45E-02	-1.07E-03	1.00E+00	1

Number of Positive Differences (S+): 14

Critical Value: 11 Survey Unit: Meets Acceptance Criterion

Performed By: Dale Rowell Date: 10-31-06

pendent Review: Date: 10/31/06

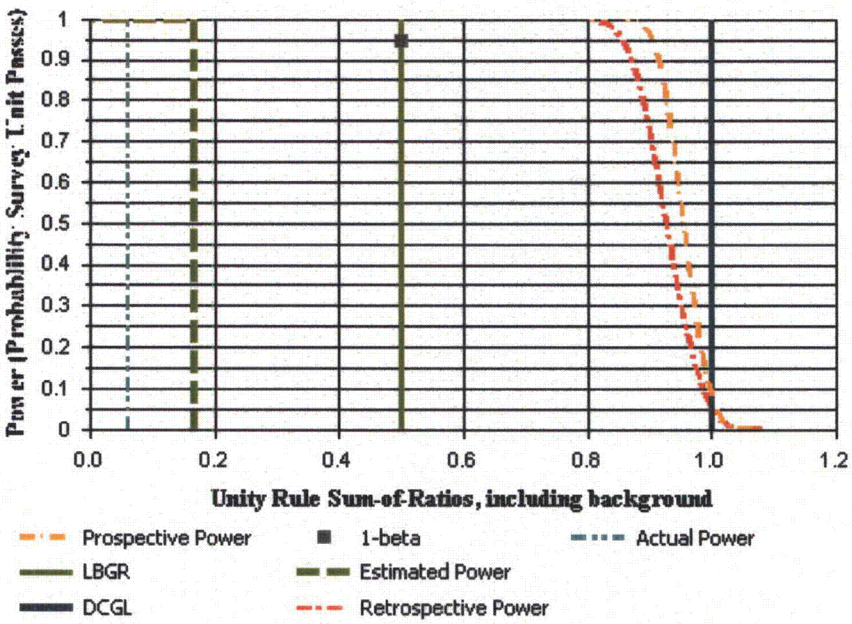
Attachment 2f
COMPASS DQA Surface Soil Report with Retrospective Power Curve
(4 Pages)

DQA Surface Soil Report

Assessment Summary

Site:	9106-0008 (19 mrem/yr)		
Planner(s):	Dale Randall		
Survey Unit Name:	9106-0008		
Report Number:	1		
Survey Unit Samples:	14		
Reference Area Samples:	0		
Test Performed:	Sign	Test Result:	Not Performed
Judgmental Samples:	0	EMC Result:	Not Performed
Assessment Conclusion:	***Reject Null Hypothesis (Survey Unit PASSES)***		

Retrospective Power Curve



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Co-60 (pCi/g)	Cs-137 (pCi/g)	Ni-63 (pCi/g)
9106-0008-001F	S	0.13	0.4	0.23
9106-0008-002F	S	0.01	-0.01	-4.84
9106-0008-003F	S	0.32	0.2	-2.74
9106-0008-004F	S	0	0.04	-1.8
9106-0008-005F	S	0.03	0.27	-0.86
9106-0008-006F	S	0.78	0.49	2.28
9106-0008-007F	S	0.03	0.02	-2.33
9106-0008-008F	S	0.92	0.47	-0.41
9106-0008-009F	S	-0.01	0.02	-2.05
9106-0008-010F	S	0.25	0.34	0.12
9106-0008-011F	S	0.12	0.07	-3.34
9106-0008-012F	S	0.18	0.18	0.84
9106-0008-013F	S	0.03	0.01	-2.7
9106-0008-014F	S	-0.01	0	-1.72

Sample Number	Type	SrY-90 (pCi/g)
9106-0008-001F	S	0.01
9106-0008-002F	S	0.02
9106-0008-003F	S	0.01
9106-0008-004F	S	-0.01
9106-0008-005F	S	0
9106-0008-006F	S	0.01
9106-0008-007F	S	0
9106-0008-008F	S	0
9106-0008-009F	S	-0.01
9106-0008-010F	S	0
9106-0008-011F	S	0.02
9106-0008-012F	S	-0.02
9106-0008-013F	S	0.01
9106-0008-014F	S	0.01

DQA Surface Soil Report

Modified Data (Unity Rule SOR)

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Sum-of-Ratios (SOR)
9106-0008-001F	S	0.12
9106-0008-002F	S	0.01
9106-0008-003F	S	0.15
9106-0008-004F	S	0
9106-0008-005F	S	0.05
9106-0008-006F	S	0.36
9106-0008-007F	S	0.01
9106-0008-008F	S	0.39
9106-0008-009F	S	-0.01
9106-0008-010F	S	0.14
9106-0008-011F	S	0.06
9106-0008-012F	S	0.08
9106-0008-013F	S	0.02
9106-0008-014F	S	0

DQA Surface Soil Report

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	14	N/A	N=13
Mean (SOR)	0.10	N/A	0.17
Median (SOR)	0.06	N/A	N/A
Std Dev (SOR)	0.13	N/A	0.09
High Value (SOR)	0.39	N/A	N/A
Low Value (SOR)	-0.01	N/A	N/A