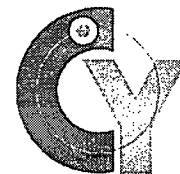




Final Status Survey Final Report Phase V

Appendix A2
Survey Unit Release Record
9520-0002, Southwest Site Storage Area

December 2006



CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
SOUTHWEST SITE STORAGE AREA
SURVEY UNIT 9520-0002

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SURVEY UNIT 9520-0002

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1. SURVEY UNIT DESCRIPTION

Survey Unit 9520-0002 (Southwest Site Storage Area) is designated as Final Status Survey (FSS) Class 2 and consists of 9,720 m² (2.4 acres) of uninhabited open land located approximately 1,167 feet from the reference coordinate system benchmark used at Haddam Neck Plant (HNP) (see Attachment 1). The survey unit is bounded as follows: land Survey Unit 9520-0001 to the north (called north as oriented with the north to south flow of the Connecticut River), the Discharge Canal to the east, land Survey Unit 9520-0003 to the south, and the Connecticut River to the west. The survey unit is relatively level open space in the middle of the peninsula. The restoration of the peninsula for FSS has removed most of the surface interference in the survey unit.

The reference coordinates associated with this survey unit are E003 through E007 by S078 through S086 (refer to License Termination Plan (LTP) 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 "Classification Basis Summary" conducted for Survey Unit 9520-0002 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 Supplement,"
- c) Historic and current survey records review,
- d) Visual inspections and a "walkdown."

A review of the 10CFR50.75(g)(1) database report and historical files shows a documented history of the use of this survey unit as a radioactive materials storage area. Additionally, at least one (1) case of contamination to underlying soil has been recorded (refer to survey performed 3/23/1985). Examples of some of the major events are provided below.

- a) Plant Incident Report (PIR) 80-37 reported the discovery of three (3) discrete sources of elevated activity on the Southeast Site Storage area in March 1980, along with other areas around the site. Two (2) of the discrete sources were identified within adjacent Survey Unit 9520-0001. The location of the third discrete source, identified as 3-24-2, was likely in Survey Unit 9520-0002 based on a review of the 1980 survey maps. PIR 80-37 gave the likely cause of the third discrete source (and others

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found around the Site) as a series of operational events that had occurred since January 1979 that released a burst of air or steam through the ventilation ducts and out the Primary Vent Stack. The report included isotopic analysis of the third discrete source, which indicates a mixture of short lived fission products (e.g., Cs-134, Zr-95). The elevated areas were removed upon detection according to the report.

- b) Health Physics surveys performed in 1983 and 1985 document the discovery of radioactive material (strainers, bolts, wood pallets, sections of pipe, etc.) on the peninsula. The 1985 survey documents the discovery of contaminated dirt under a pallet.
- c) Condition Report (CR) 05-0314: Documents the discovery of excavation spoils, intended for backfill, above the radiological criteria for use as backfill. These spoils were located south of 9520-0002, probably in Survey Units 9520-003 and 9520-0004. According to the CR closure documentation, the affected spoils were removed and packaged for disposal. Follow-up survey and sampling was performed and the results were below established action levels.

A review of the *"Initial and Supplemental Characterization Reports"* as well as the previous *"Classification Basis Summaries"* was performed. Survey Unit 9520-0002 was initially designated as Class 2 during the development of the LTP. The source documents, the *"Connecticut Yankee Haddam Neck Characterization Report"* and *"Initial Classification for Survey Areas at Connecticut Yankee"*, were incorporated by reference in LTP revision 0 (references 2-2 and 2-7 respectively). The second source document justified a Class 2 designation for those areas for which there was historical evidence of contamination above the Derived Concentration Guideline Levels (DCGLs - refer to Section 2 for definition and description of DCGL), but for which recent surveys had shown that decontamination efforts had occurred and that the radiological conditions were expected to be below the DCGLs. Additional justification for a Class 2 designation based on survey and sampling data was provided as another reference to the LTP by the *"Haddam Neck Plant Historical Site Assessment Supplement"*.

Removal of material and restoration of the peninsula for FSS has been ongoing since 2000, starting with the radiological release of the South Access Point and several abandoned trailers. The collapse of the Radioactive Material(s)-Area (RMA) boundary and removal of subsurface commodities has produced a large data set that has helped characterize the radiological contaminants of concern and extent of contamination. Although Co-60 has been identified in the past (refer to the *"Haddam Neck Plant Historical Site Assessment Supplement"*), Cs-137 has been the only radionuclide that has been consistently reported in concentrations above detection levels and with the potential to exceed the screening criteria (refer to Section 3).

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Characterization was performed in August 2006 to support final classification and FSS planning. Statistical quantities (mean, median and standard deviation) from the 2006 characterization survey conducted under SSWP 06-07-006 are provided in Table 1.

Table 1 - Basic Statistical Quantities for Cs-137 from the 2006 Characterization Survey

Minimum Observed Concentration (pCi/g) :	1.86E-02
Maximum Observed Concentration (pCi/g) :	1.13E-01
Mean (pCi/g):	6.06E-02
Median (pCi/g):	5.67E-02
Standard Deviation (pCi/g):	3.73E-02

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

This survey area is affected by existing groundwater (reference CY memo ISC 06-024) which will be a source of dose from residual radioactivity, as discussed in Section 3 under the Data Quality Objectives.

Based upon the results of radiological surveys performed over six years of restoration and the 2006 characterization survey, it was concluded that there was a low probability for residual radioactivity in concentrations greater than the DCGLs, justifying a final survey unit classification of Class 2 (refer to Section 3).

3. DATA QUALITY OBJECTIVES (DQO)

FSS design and planning used 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 incorporated 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 indicate that residual activity within the survey unit does not exceed the release criteria. Therefore, the survey unit does satisfy the primary objective of the FSS plan.

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The primary objective of the FSS plan was to demonstrate that the level of residual radioactivity in Survey Unit 9520-0002 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 DCGLs. The DCGLs represent average levels of radioactivity above background levels and are 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), existing groundwater radioactivity and future groundwater radioactivity that will be contributed by building basements and footings.

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

$$H_{\text{Total}} = H_{\text{Soil}} + H_{\text{Existing GW}} + H_{\text{Future GW}}$$

The total dose under the LTP criteria is twenty-five (25) mrem/yr TEDE from all three (3) components. The allowable total dose under the Connecticut Department of Environmental Protection (CTDEP) radiological remediation standard for 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 existing and future groundwater dose values discussed above.

This survey area is affected by existing groundwater (reference CY memo ISC 06-024). Therefore, the dose contribution from existing groundwater is bounded by two (2) mrem/yr TEDE.

This survey unit is not considered impacted by future groundwater radioactive contamination, as there are no buried 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.

Equation 2

$$19 \text{ mrem/yr}_{\text{Total}} = 17 \text{ mrem/yr}_{\text{Soil}} + 2 \text{ mrem/yr}_{\text{Existing GW}} + 0 \text{ mrem/yr}_{\text{Future GW}}$$

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The allowable dose for soil in this survey unit is seventeen (17) mrem/yr TEDE as shown by Equation 2 above. The concentration of residual radioactivity resulting in seventeen (17) mrem/yr TEDE is designated as the Operational DCGL, and has been established for the radionuclides of concern as provided in Table 2.

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	2.80E+02	1.65E+01
C-14	5.66E+00	3.85E+00	2.26E-01
Mn-54	1.74E+01	1.18E+01	6.96E-01
Fe-55	2.74E+04	1.86E+04	1.10E+03
Co-60	3.81E+00	2.59E+00	1.52E-01
Ni-63	7.23E+02	4.92E+02	2.89E+01
Sr-90	1.55E+00	1.05E+00	6.20E-02
Nb-94	7.12E+00	4.84E+00	2.85E-01
Tc-99	1.26E+01	8.57E+00	5.04E-01
Ag-108m	7.14E+00	4.86E+00	2.86E-01
Cs-134	4.67E+00	3.18E+00	1.87E-01
Cs-137	7.91E+00	5.38E+00	3.16E-01
Eu-152	1.01E+01	6.87E+00	4.04E-01
Eu-154	9.29E+00	6.32E+00	3.72E-01
Eu-155	3.92E+02	2.67E+02	1.57E+01
Pu-238	2.96E+01	2.01E+01	1.18E+00
Pu-239/240	2.67E+01	1.82E+01	1.07E+00
Pu-241	8.70E+02	5.92E+02	3.48E+01
Am-241 ⁽⁵⁾	2.58E+01	1.75E+01	1.03E+00
Cm-243/244	2.90E+01	1.97E+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 25 mrem/yr TEDE

(3) The Operational DCGL is equivalent to 17 mrem/yr TEDE

(4) The required MDC is equivalent to 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. Soil samples were collected in 2006 to establish the radiological condition of Survey Unit 9520-

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0002 for FSS. Cs-137 was the only gamma emitting radionuclide reported in concentrations with the potential for exceeding the screening criteria. The characterization data were used for the survey design and are provided in Table 1.

Instrument DQOs included a verification of the ability of the survey instrument to detect the radiation(s) of interest relative to the DCGL. Survey instrument response checks were required prior to issue and after the instrument had been used. Control and accountability of survey instruments was required to assure the quality and prevent the loss of data.

As part of the DQOs applied to laboratory processes, analysis results were reported as actual calculated results. Results reported as less than Minimum Detectable Concentration (MDC) were not accepted for FSS. Sample report summaries included unique sample identification, analytical method, radionuclide, result, and uncertainty to two (2) 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. Guidance for preparing FSS plans is provided in Procedure RPM 5.1-11, "*Preparation of Final Status Survey Plans*". The FSS plan uses an integrated sample design that combines scanning surveys and sampling which can be either random or biased.

The DQO process determined that Cs-137 would be the radionuclide of concern in Survey Unit 9520-0002 (refer to Section 3). Other radionuclides identified during this FSS would be evaluated to ensure adequate survey design.

Surrogate DCGLs were not required for this survey unit via screening under LTP Section 5.4.7.2, "*Gross Activity DCGLs*". Radionuclide screening or de-selection is a process where an individual radionuclide or aggregates may be considered insignificant and eliminated from the FSS. The criteria for de-selection are concentrations less than 5% for individual radionuclides and less than 10% for aggregates.

The Elevated Measurement Comparison (EMC) did not apply to this survey unit since it is a Class 2 area 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 soil samples for FSS was determined in accordance with Procedure RPM 5.1-12, "*Determination of the Number of Surface Samples for Final Status Survey*." The Lower Bound of the Gray Region (LBGR) was set in accordance with Procedure RPM 5.1-11 to 5.31 to maintain the relative shift

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(Δ/σ) in the range of 1 and 3. The resulting Adjusted Relative Shift was 2.0. 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. The survey design specified fifteen (15) surface soil samples for non-parametric statistical testing and five (5) samples at biased locations.

The grid pattern and locations of the soil 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.

Judgmental sampling was included as a feature of this survey design to account for any anomalies potentially identified in the field.

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
9520-0002-001F	235939.59	669151.81
9520-0002-002F	235939.59	669241.40
9520-0002-003F	235862.00	669107.01
9520-0002-004F	235862.00	669196.60
9520-0002-005F	235862.00	669286.19
9520-0002-006F	235862.00	669375.78
9520-0002-007F	235784.41	669151.81
9520-0002-008F	235784.41	669241.40
9520-0002-009F	235784.41	669330.99
9520-0002-010F	235784.41	669420.58
9520-0002-011F	235784.41	669510.16
9520-0002-012F	235706.83	669286.19

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Table 3 - Sample Measurement Locations with Associated GPS Coordinates		
Designation	Northing	Easting
9520-0002-013F	235706.83	669375.78
9520-0002-014F	235706.83	669465.37
9520-0002-015F	235629.24	669420.58
9520-0002-016F	235930.63	669114.38
9520-0002-017F	235945.94	669124.95
9520-0002-018F	235912.47	669322.50
9520-0002-019F	235814.98	669514.90
9520-0002-020F	235886.05	669156.64

Procedure RPM 5.1-11 specifies that 5% of the samples are required to be selected for HTD analysis. Two (2) soil samples, or about 10% of the number of samples that would be used for non-parametric statistical testing were randomly selected for HTD radionuclide analysis using the Microsoft Excel "RANDBETWEEN" function. Each sample was sent off-site for a full suite analysis of the HTD radionuclides specified in the LTP, Table 2-12, "*Radionuclides Potentially Present at Haddam Neck Plant*" and as provided in Table 2.

The implementation of quality control measures as referenced by Procedure RPM 5.1-24, "*Split Sample Assessment for Final Status Survey*," included the collection of two (2) soil samples for "split sample" analysis by the off-site laboratory. These locations were selected randomly using the Microsoft Excel "RANDBETWEEN" function. The number of quality control soil samples was about 10% of fifteen (15) samples.

The LTP specifies a required scanning coverage of 10% to 100% for outdoor Class 2 areas. The fraction of scanning coverage was determined during the DQO process with the total amount and location(s) based on the likelihood of finding elevated activity during FSS. Based on the historical site assessment, the characterization data available, and the use of the survey unit to store spoils from remediation, it was determined that scanning was required in four (4) separate areas. The total surface area to be scanned was approximately 40% of the survey unit. One of the scan areas provided 100% coverage of the area where, based on a review of the 1980 survey maps, the discrete source of elevated activity was found. A map of the scan grid locations is provided in Attachment 1.

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For this Class 2 survey unit, the "Investigation Level" for area scanning and soil sample measurement results are those levels specified in LTP, Table 5-8. Table 4 provides a synopsis of the survey design.

Table 4 - Synopsis of the Survey Design		
Feature	Design Criteria	Basis
Survey Unit Land Area	9,720 m ²	Based on AutoCAD-LT
Number of Measurements	20 (15 systematic grid) (5 biased)	Type 1 and Type 2 errors were 0.05, sigma was 0.037 pCi/g, the LBGR was adjusted to 5.31 to maintain Relative Shift in the range of 1 and 3
Grid Spacing	27.4 m	Based on triangular grid
Operational DCGL	5.38 pCi/g Cs-137	Administratively set to achieve 17 mrem/yr TEDE ⁽¹⁾
Soil Investigation Level	5.38 pCi/g Cs-137	The Operational DCGL meets the LTP criteria for a Class 2 survey unit
Scan Survey Area Coverage	Approximately 40% of the area	The LTP requires >10% area coverage for Class 2 survey units
Scan Investigation Level	Detectable over background	Administratively set to achieve 17 mrem/yr TEDE ⁽¹⁾

(1) The allowable dose for soil in this survey unit is 17 mrem/yr TEDE as the bounding dose from existing and future groundwater has been established based on field data (reference CY memo ISC 06-024)

5. SURVEY IMPLEMENTATION

FSS field activities were conducted under Work Plan and Inspection Record (WP&IR) 2006-0038. The WP&IR package included a detailed FSS plan, 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.

Four (4) scan areas were established that constituted approximately 40% of the surface area of Survey Unit 9520-0002. Grid lines, one meter wide, were painted on the ground of the scan area. A background survey was performed around the survey unit and it was determined that, using an Eberline E-600 with a SPA-3 sodium iodide detector, background ranged from 5,350 counts per minute (cpm) up to 8,940 cpm.

The scan areas were established and scanned for elevated readings (see Attachment 2 for all scan results). Scanning was performed with an Eberline E-600 using a SPA-3 sodium iodide detector. The E-600 was operated in the rate-meter mode and used with audio response. The probe was positioned as close

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to the ground as possible and was moved at a scan speed of about 0.5 meters per second. Approximately 40% of the survey unit was scanned.

Measurement locations were identified in North American Datum (NAD) 1927 coordinates using GPS coordinates; sample locations were identified and marked with a surveyor's flag or paint for identification. At each sample location, a one (1) meter radius around the sample flag or paint mark was scanned for elevated radiation levels.

Twenty-four (24) surface soil 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*" and FSS design. Samples were controlled, transported, stored, and transferred to the off-site laboratory using Chain-of-Custody (COC) protocol in accordance with Procedure RPM 5.1-5, "*Chain of Custody for Final Status Survey Samples.*"

Two (2) samples (9520-0002-008F and 9520-0002-015F) were randomly selected for HTD radionuclide analysis.

The implementation of survey specific quality control measures included the collection of two (2) samples (9520-0002-011F and 9520-0002-012F) for "split sample" analysis.

6. SURVEY RESULTS

All field survey activities were conducted between October 9, 2006 and October 16, 2006.

The sample locations identified in the FSS plan were scanned over approximately a one (1) meter radius for elevated radiation levels. Table 5 provides an overview of the scan results for sample measurement locations. Scan results are provided in Attachment 2.

Table 5 - Scan Results for Sample Measurement Locations

Sample Measurement Location	Highest Logged Reading (kcpm)	Action Level ⁽¹⁾ (kcpm)	> Action Level ⁽²⁾
1	8.24	8.87	NO
2	6.41	8.59	NO
3	10.40	10.00	YES
4	8.22	8.39	NO
5	7.53	9.96	NO
6	7.02	9.07	NO
7	7.03	7.50	NO
8	7.87	8.56	NO

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Table 5 - Scan Results for Sample Measurement Locations

Sample Measurement Location	Highest Logged Reading (kcpm)	Action Level ⁽¹⁾ (kcpm)	> Action Level ⁽²⁾
9	7.18	8.21	NO
10	6.01	6.76	NO
11	7.51	7.85	NO
12	6.97	7.02	NO
13	6.72	8.43	NO
14	7.07	8.48	NO
15	6.64	6.94	NO
16	7.38	10.00	NO
17	7.98	8.25	NO
18	6.36	6.98	NO
19	6.16	7.25	NO
20	8.00	8.50	NO

(1) The action level is based on a measurement above ambient background in accordance with the FSS plan

(2) The FSS plan requires movement of the sample measurement location to the area within the 1 meter radius yielding the response above the action level

The scan areas, that comprised approximately 40% of the total surface area for the survey unit, were scanned for elevated radiation levels. The areas were scanned in accordance with the FSS plan on October 9, 2006 through October 16, 2006. Several elevated measurement locations were identified during scanning. Table 6 provides an overview of the scan area survey. Scan results are provided in Attachment 2.

Table 6 - Scan Area Results

Scan Area	Highest Logged Reading (kcpm)	Action Level ⁽¹⁾ (kcpm)	Elevated Reading Identification ⁽²⁾	Investigation Sample
1	9.40	7.56	9520-02-ER-01-16-1	9520-0002-024F
2	7.88	9.17	None – no elevated areas identified	None

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Table 6 - Scan Area Results				
Scan Area	Highest Logged Reading (kcpm)	Action Level ⁽¹⁾ (kcpm)	Elevated Reading Identification ⁽²⁾	Investigation Sample
3	9.14	7.64	9520-02-ER-03-10-1	9520-0002-023F
4	9.43	9.03	9520-02-ER-04-10-1	9520-0002-021F
			9520-02-ER-04-10-2	9520-0002-022F

(1) The action level is based on a measurement above ambient background

(2) ER is an abbreviation associated with the barcodes used in the field where ER stands for Elevated Reading

The off-site laboratory employed for the radiological analyses of samples was General Engineering Laboratories, LLC. The laboratory analyzed the fifteen (15) samples collected for non-parametric statistical testing, the associated field splits, the five (5) biased samples, and the four (4) confirmatory samples using gamma spectroscopy. Gamma spectroscopy analysis was performed to the required MDCs. Gamma spectroscopy results identified some radionuclides meeting the accepted criteria for detection (i.e., a result greater than two standard deviations uncertainty). However, Cs-137 was the only radionuclide reported in concentrations exceeding the de-selection criteria.

Cs-137 was identified in thirteen (13) of the fifteen (15) samples collected for non-parametric statistical testing. Cs-137 was the primary radionuclide confirming the DQOs. The mean of the gamma spectroscopic analysis results for the sample population indicated that Cs-137 was present at levels lower than the concentrations of Cs-137 found in soil at off-site locations within the vicinity of the HNP as presented in the Health Physics TSD BCY-HP-0063.

A summary of the fifteen (15) samples collected for non-parametric statistical testing results is provided in Table 7.

Table 7 - Summary of Soil Sample Results for the Statistical Sample Population		
Sample Number	Cs-137 pCi/g	Fraction of the Operational DCG ⁽¹⁾
9520-0002-001F	3.86E-02	0.007
9520-0002-002F	9.53E-02	0.018
9520-0002-003F	3.16E-02	0.006
9520-0002-004F	1.13E-01	0.021
9520-0002-005F	0.00E+00	0.000

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Table 7 - Summary of Soil Sample Results for the Statistical Sample Population		
Sample Number	Cs-137 pCi/g	Fraction of the Operational DCGL ⁽¹⁾
9520-0002-006F	5.30E-02	0.010
9520-0002-007F	1.16E-01	0.022
9520-0002-008F	8.01E-02	0.015
9520-0002-009F	8.34E-02	0.016
9520-0002-010F	4.16E-02	0.008
9520-0002-011F	9.08E-02	0.017
9520-0002-012F	3.30E-01	0.061
9520-0002-013F	2.03E-01	0.038
9520-0002-014F	9.68E-02	0.018
9520-0002-015F	1.67E-01	0.031

(1) The Operational DCGL from Table 2 is 5.38 pCi/g for Cs-137 to achieve 17 mrem/yr TEDE

The off-site laboratory also processed two (2) samples for HTD analysis as required by the sample plan. The requested analyses included alpha spectroscopy, gas proportional counting, and liquid scintillation depending on the radionuclide and the measurement method. All analyses met the required MDC.

As previously stated in Section 4 of this report, the criteria for de-selection of a radionuclide is a concentration that is less than 5% of the Operational DCGL for individual radionuclides and less than 10% of the Operational DCGLs for aggregates. Sr-90 and Tc-99 were the only HTDs, which by analysis, met the criteria for detection (i.e., a result greater than two standard deviations uncertainty). The highest result for both Sr-90 and Tc-99 was at about 4% of the Operational DCGL.

Table 8 - Hard-to-Detect Sample Results				
Sample	Sr-90 (pCi/g)	Fraction of Operational DCGL ⁽¹⁾	Tc-99 (pCi/g)	Fraction of Operational DCGL ⁽¹⁾
9520-0002-008F	2.74E-02	0.026	1.48E-01	0.017
9520-0002-015F	3.54E-02	0.034	2.85E-01	0.033

(1) The Operational DCGL from Table 2 is 1.05 pCi/g for Sr-90 and 8.57 for Tc-99 to achieve 17 mrem/yr TEDE

SOUTHWEST SITE STORAGE AREA
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Five (5) biased samples were collected at locations selected by FSS Supervision based on professional judgment and observation. Gamma spectroscopy analysis was performed by the off-site laboratory to the required MDC.

Table 9 - Judgmental or Biased Sample Results		
Sample Number	Cs-137 pCi/g	Fraction of the Operational DCGL ⁽¹⁾
9520-0002-016F	5.30E-02	0.032
9520-0002-017F	4.22E-02	0.038
9520-0002-018F	1.19E-01	0.029
9520-0002-019F	1.07E-01	0.031
9520-0002-020F	6.19E-02	0.052

(1) The Operational DCGL from Table 2 is 5.38 pCi/g for Cs-137 to achieve 17 mrem/yr TEDE

7. QUALITY CONTROL

The off-site laboratory processed the split samples and performed gamma spectroscopy analysis. Ten percent (10%) of the samples were selected for analysis, which exceeds the 5% minimum required by the LTP. The data were evaluated using USNRC acceptance criteria specified in Inspection Procedure 84750 as detailed in HNP Procedure RPM 5.1-24, "*Split Sample Assessment for Final Status Survey*". There was acceptable agreement between the field split results at both locations (9520-0002-011 and 9520-0002-012).

The sample analysis vendor, General Engineering Laboratories, LLC, maintains quality control and quality assurance plans as part of normal operation. Refer to Attachment 4 for data and data quality analysis results.

8. INVESTIGATIONS AND RESULTS

Four confirmatory samples were collected from scan area 1, scan area 3 and scan area 4 at locations exhibiting elevated scan readings. The samples are denoted as shown in Table 6, with the sample results shown in Table 10 below.

Table 10 - Confirmatory Sample Results		
Sample Number	Cs-137 pCi/g	Fraction of the Operational DCGL ⁽¹⁾
9520-0002-021F	6.87E-02	0.038
9520-0002-022F	9.02E-02	0.024
9520-0002-023F	4.19E-02	0.026
9520-0002-024F	4.69E-02	0.026

(1) The Operational DCGL from Table 2 is 5.38 pCi/g for Cs-137 to achieve 17 mrem/yr TEDE

SOUTHWEST SITE STORAGE AREA
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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 is unnecessary and that the remaining residual radioactivity in soil was ALARA.

10. CHANGES FROM THE FINAL STATUS SURVEY PLAN

No changes were made to the FSS plan.

11. DATA QUALITY ASSESSMENT (DQA)

The DQO sample design and data were reviewed in accordance with Procedure RPM 5.1-23, "*Data Quality Assessment*," for completeness and consistency. The sampling 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 demonstrates that the survey unit passes the unrestricted release criteria, 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 mean and median values are well below the Operational DCGL. 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 criteria with adequate power as required by the DQOs.

For Cs-137, the range of the data, about four (4) standard deviations, was not a particularly large variation considering that the levels were essentially at existing environmental levels where such variation is to be expected. The difference between the mean and median was about 15% of the standard deviation which indicates slight skewness in the data. The data was represented graphically through posting plots, a frequency plot, and a quantile plot. The frequency plot indicates positive skewness as confirmed by the calculated skew of 1.66.

All data, assessments, and graphical representations are provided in Attachment 4.

12. ANOMALIES

No anomalies were noted.

SOUTHWEST SITE STORAGE AREA
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13. CONCLUSION

Survey Unit 9520-0002 has met the final DQOs of the FSS plan. The ALARA criteria for soils as specified in Chapter 4 of the LTP were achieved. Elevated Measurement Comparison and remediation was not required.

Cs-137 was used for statistical testing to determine the adequacy of the survey unit for FSS.

The sample data passed the Sign Test. The null hypothesis was rejected. The Retrospective Power Curve generated using COMPASS shows adequate power was achieved. The survey unit is properly designated as Class 2.

The dose contribution from soil is less than 1 mrem/yr TEDE based on the average concentration of the samples used for non-parametric statistical sampling.

This survey area is affected by existing groundwater (reference CY memo ISC 06-024); therefore the dose contribution from existing groundwater is bounded at two (2) mrem/yr TEDE.

This survey unit is not considered impacted by future groundwater radioactive contamination, as there are no underground structures, systems or components containing residual radioactive material within the groundwater saturated zone in the area (reference CY memo ISC 06-024); therefore, the dose contribution from future groundwater is zero (0) mrem/yr TEDE.

The average total dose from residual radioactivity in this survey unit, including exposures from the three (3) components as described in Section 3, 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, will not exceed 3 mrem/yr TEDE. Therefore, Survey Unit 9520-0002 is acceptable for unrestricted release.

14. ATTACHMENTS

14.1 Attachment 1 – Figures

14.2 Attachment 2 – Scan Results

14.3 Attachment 3 – Laboratory Results

14.4 Attachment 4 – DQA Results

SOUTHWEST SITE STORAGE AREA
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ATTACHMENT 1 (FIGURES)

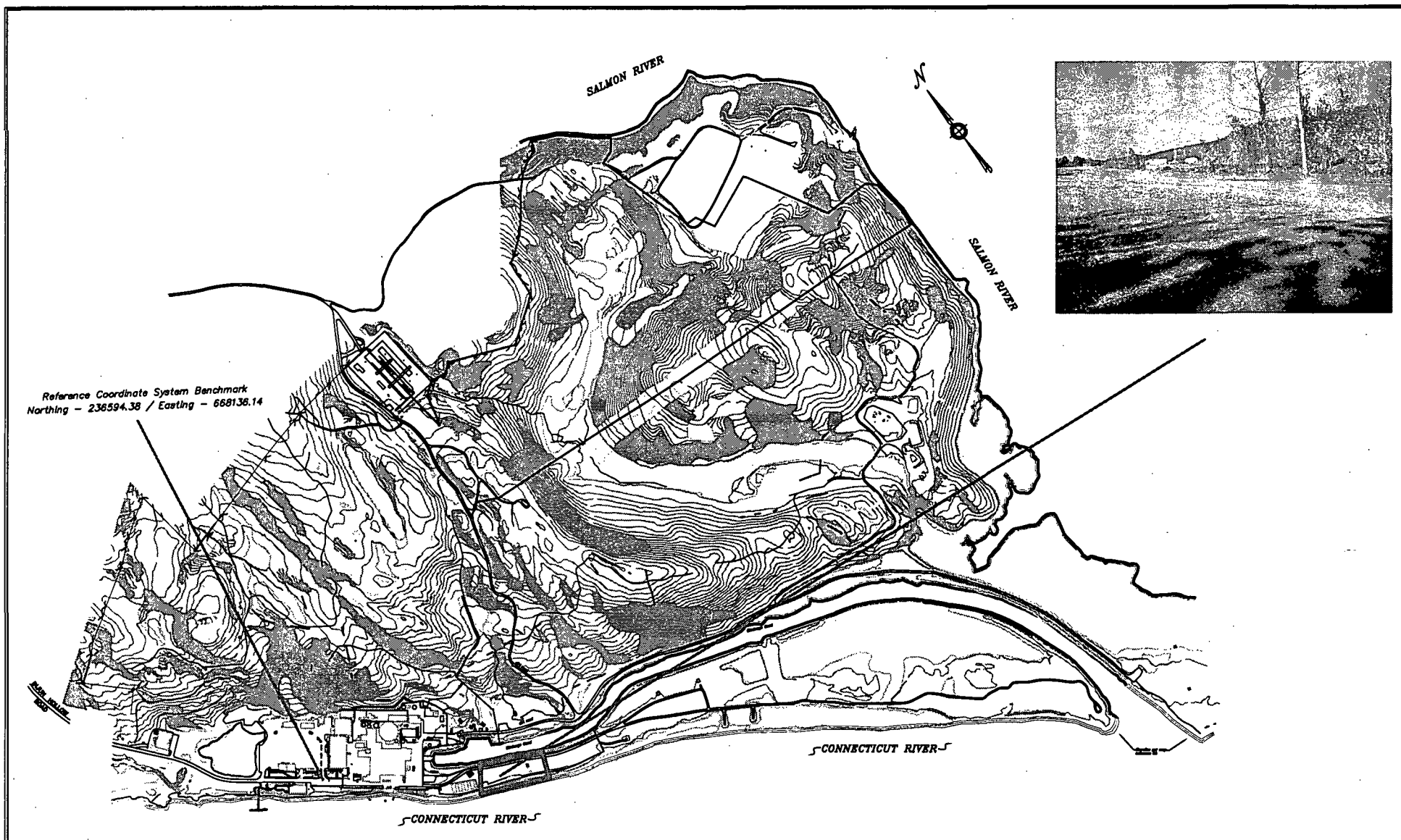


Figure 1



Connecticut Yankee Atomic Power Company
Site Map With Reference To Survey Unit 9520-0002

Date

By

November 2006

J. McC.

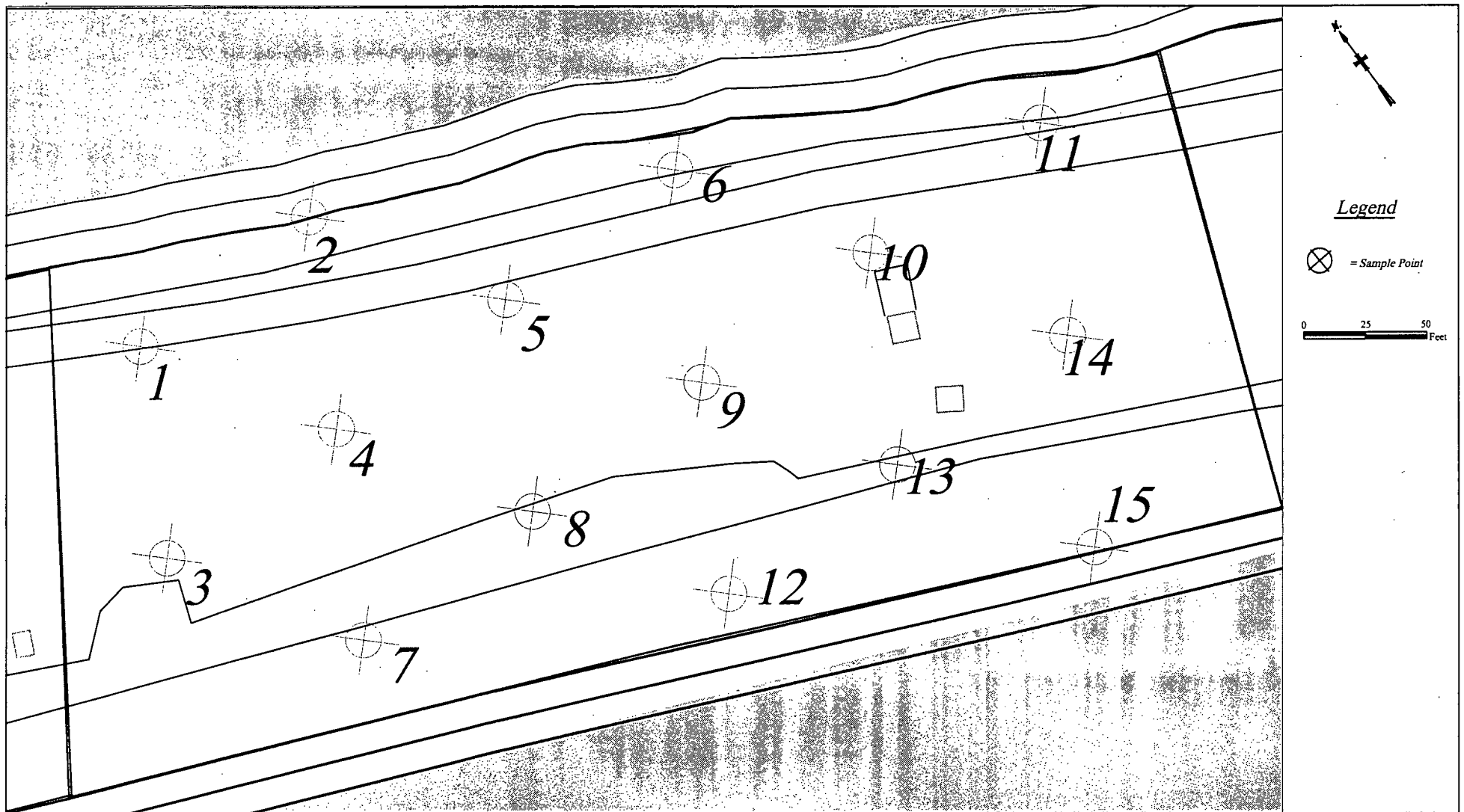


Figure 2



Connecticut Yankee Atomic Power Company
Survey Unit 9520-0002 Final Status Survey Design

Date	By
November 2006	J. McCarthy

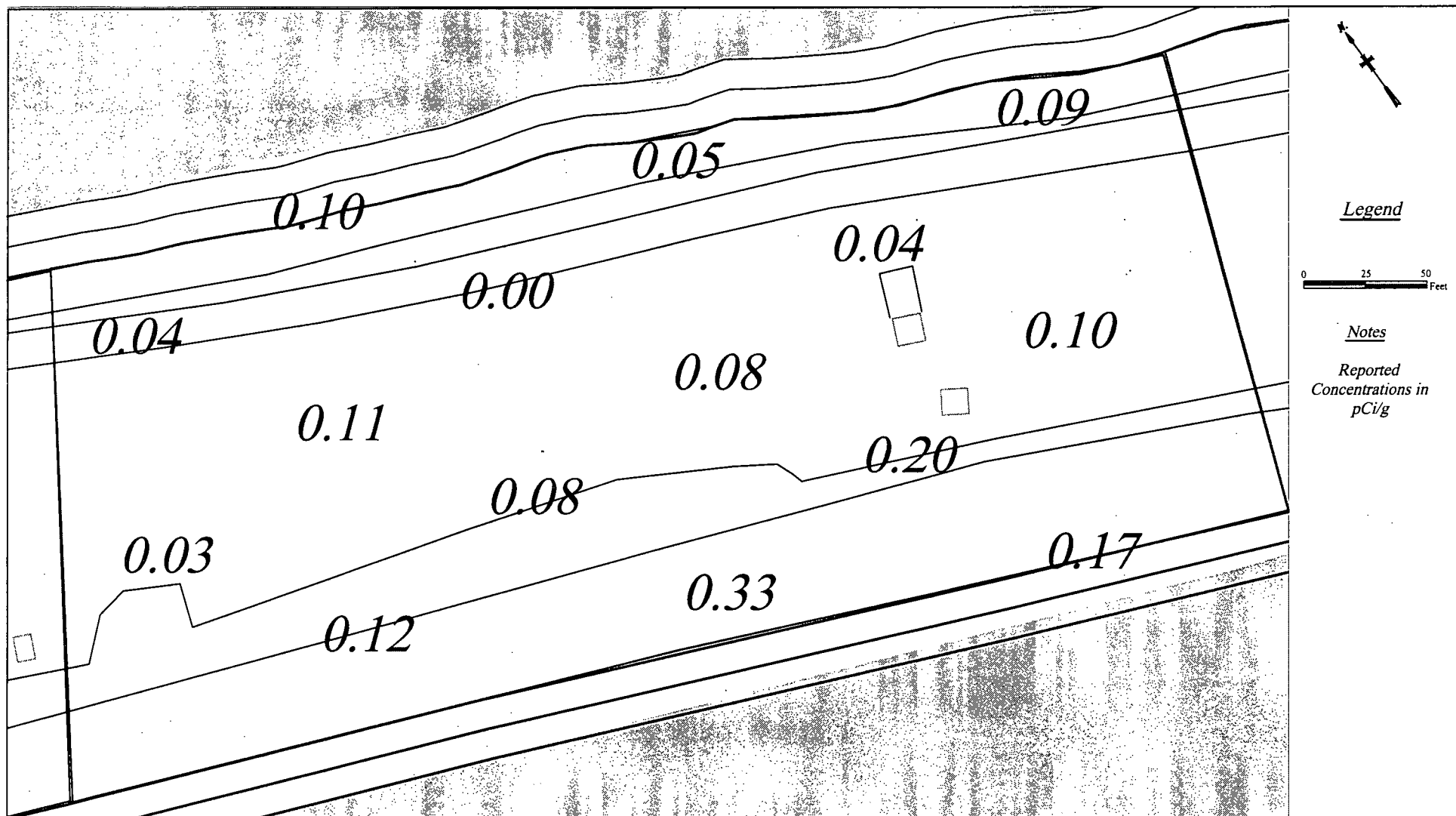
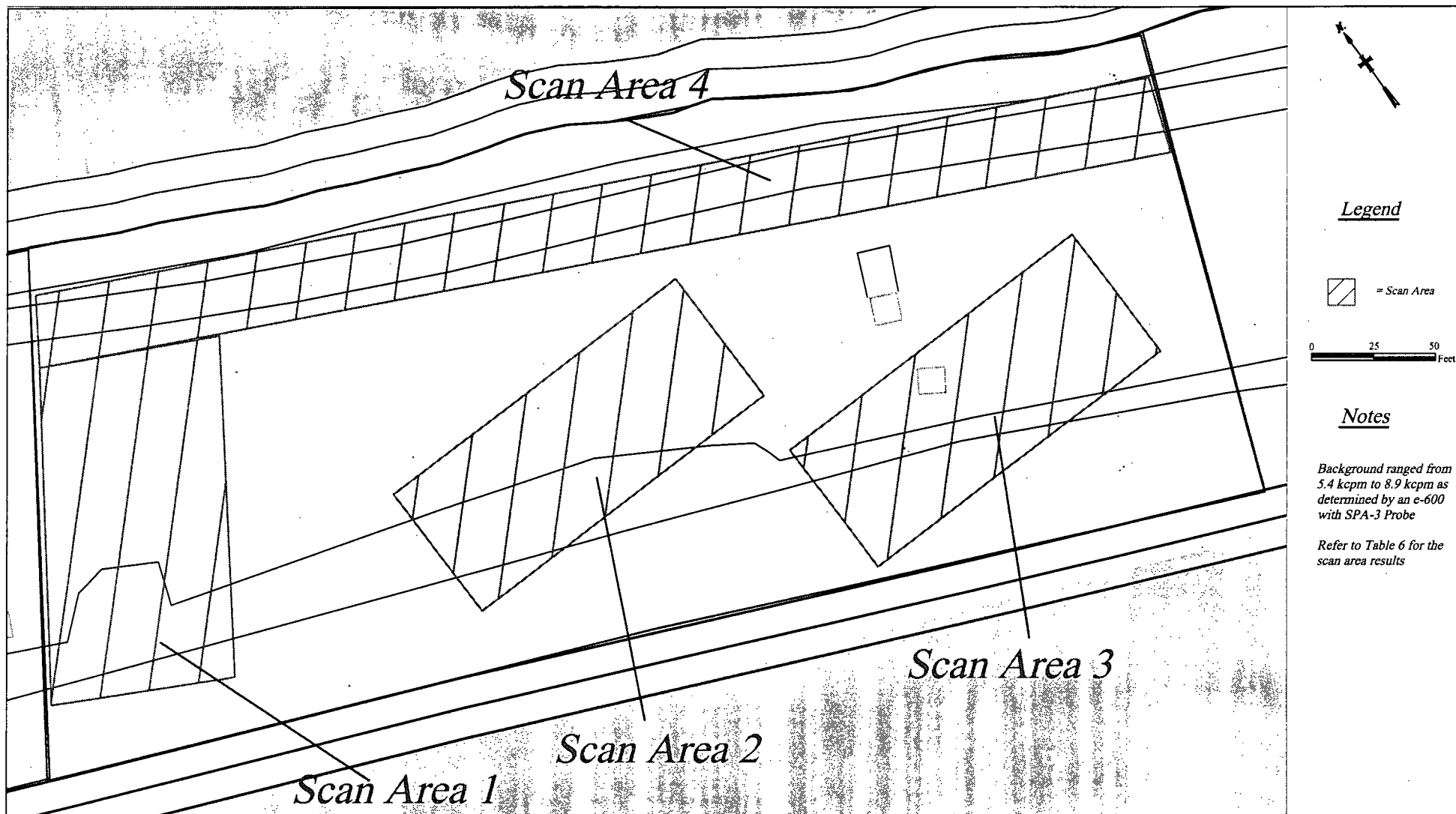


Figure 3




Connecticut Yankee Atomic Power Company
Survey Unit 9520-0002 Final Status Survey Cs-137 Posting Plot

Date	By
November 2006	J. McCarthy



Legend

 = Scan Area

0 25 50 Feet

Notes

Background ranged from 5.4 kcpm to 8.9 kcpm as determined by an e-600 with SPA-3 Probe

Refer to Table 6 for the scan area results

Figure 4



Connecticut Yankee Atomic Power Company

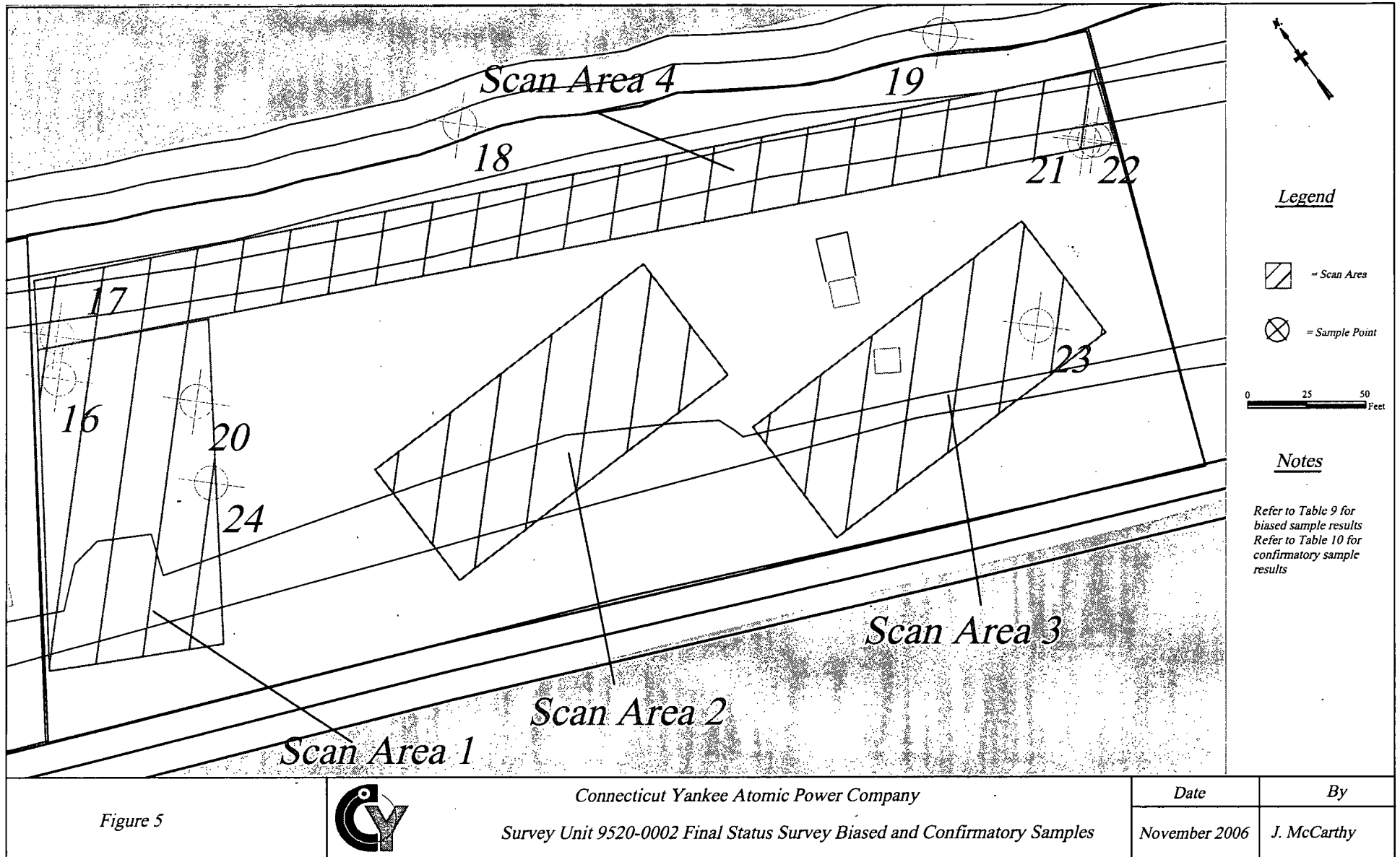
Survey Unit 9520-0002 Final Status Survey Scan Areas

Date

By

November 2006

J. McCarthy



SOUTHWEST SITE STORAGE AREA
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ATTACHMENT 2 (SCAN RESULTS)

Survey Release Record Sample Location Scan Results

Survey Unit 9520-0002

<u>Sample Name</u>	<u>Background (cpm)</u>	<u>Action Level (cpm)</u>	<u>Results (cpm)</u>	<u>Above AL</u>	<u>Log Date</u>	<u>Log Time</u>	<u>E600 S/N</u>	<u>Probe S/N</u>
9520-02-SL-00-01-0	7.62E+03	8.87E+03	8.24E+03		10/9/2006	10:49:00	1105	1012
9520-02-SL-00-02-0	7.36E+03	8.59E+03	6.41E+03		10/9/2006	11:01:00	1105	1012
9520-02-SL-00-03-0	8.67E+03	1.00E+04	1.04E+04	+	10/9/2006	7:48:00	1105	1012
9520-02-SL-00-04-0	7.18E+03	8.39E+03	8.22E+03		10/9/2006	8:12:00	1105	1012
9520-02-SL-00-05-0	8.63E+03	9.96E+03	7.53E+03		10/9/2006	9:45:00	1105	1012
9520-02-SL-00-06-0	7.81E+03	9.07E+03	7.02E+03		10/9/2006	10:23:00	1105	1012
9520-02-SL-00-07-0	6.36E+03	7.50E+03	7.03E+03		10/9/2006	11:11:00	1105	1012
9520-02-SL-00-08-0	7.34E+03	8.56E+03	7.87E+03		10/9/2006	9:30:00	1105	1012
9520-02-SL-00-09-0	7.01E+03	8.21E+03	7.18E+03		10/9/2006	10:08:00	1105	1012
9520-02-SL-00-10-0	5.68E+03	6.76E+03	6.01E+03		10/9/2006	13:12:00	1105	1012
9520-02-SL-00-11-0	6.68E+03	7.85E+03	7.51E+03		10/9/2006	13:46:00	1105	1012
9520-02-SL-00-12-0	5.92E+03	7.02E+03	6.97E+03		10/9/2006	11:25:00	1105	1012
9520-02-SL-00-13-0	7.22E+03	8.43E+03	6.72E+03		10/9/2006	13:37:00	1105	1012
9520-02-SL-00-14-0	7.26E+03	8.48E+03	7.07E+03		10/9/2006	13:35:00	1105	1012
9520-02-SL-00-15-0	5.85E+03	6.94E+03	6.64E+03		10/9/2006	14:12:00	1105	1012
9520-02-SL-00-16-0	8.67E+03	1.00E+04	7.38E+03		10/9/2006	7:34:00	1105	1012
9520-02-SL-00-17-0	7.05E+03	8.25E+03	7.98E+03		10/9/2006	10:35:00	1105	1012
9520-02-SL-00-18-0	5.88E+03	6.98E+03	6.36E+03		10/9/2006	14:27:00	1105	1012
9520-02-SL-00-19-0	6.13E+03	7.25E+03	6.16E+03		10/9/2006	13:57:00	1105	1012
9520-02-SL-00-20-0	7.28E+03	8.50E+03	8.00E+03		10/9/2006	7:59:00	1105	1012

Survey Release Record Scan Area Results

Survey Unit 9520-0002

9520-0002 SCAN AREA 1

<u>Sample Name</u>	<u>Background (cpm)</u>	<u>Action Level (cpm)</u>	<u>Results (cpm)</u>	<u>Above AL</u>	<u>Log Date</u>	<u>Log Time</u>	<u>E600 S/N</u>	<u>Probe S/N</u>
9520-02-SC-01-01-0	6.74E+03	7.91E+03	6.27E+03		10/13/2006	8:22:00	1107	1003
9520-02-SC-01-02-0	5.77E+03	6.85E+03	6.06E+03		10/13/2006	8:27:00	1107	1003
9520-02-SC-01-03-0	6.01E+03	7.12E+03	6.10E+03		10/13/2006	9:39:00	1107	1003
9520-02-SC-01-04-0	5.99E+03	7.10E+03	5.55E+03		10/13/2006	9:46:00	1107	1003
9520-02-SC-01-05-0	6.13E+03	7.25E+03	5.55E+03		10/13/2006	9:52:00	1107	1003
9520-02-SC-01-06-0	5.71E+03	6.79E+03	5.21E+03		10/13/2006	10:00:00	1107	1003
9520-02-SC-01-07-0	5.56E+03	6.62E+03	5.36E+03		10/13/2006	10:07:00	1107	1003
9520-02-SC-01-08-0	5.68E+03	6.76E+03	5.94E+03		10/13/2006	10:12:00	1107	1003
9520-02-SC-01-09-0	5.57E+03	6.64E+03	6.00E+03		10/13/2006	10:19:00	1107	1003
9520-02-SC-01-10-0	5.67E+03	6.75E+03	6.04E+03		10/13/2006	10:23:00	1107	1003
9520-02-SC-01-11-0	5.35E+03	6.39E+03	5.55E+03		10/13/2006	10:33:00	1107	1003
9520-02-SC-01-12-0	5.74E+03	6.82E+03	5.66E+03		10/13/2006	10:37:00	1107	1003
9520-02-SC-01-13-0	5.65E+03	6.72E+03	5.93E+03		10/13/2006	10:42:00	1107	1003
9520-02-SC-01-14-0	6.63E+03	7.79E+03	6.28E+03		10/13/2006	10:46:00	1107	1003
9520-02-SC-01-15-0	6.14E+03	7.26E+03	6.41E+03		10/13/2006	10:53:00	1107	1003
9520-02-SC-01-16-0	6.42E+03	7.56E+03	6.39E+03		10/13/2006	11:01:00	1107	1003
9520-02-ER-01-16-1	6.42E+03	7.56E+03	9.40E+03	+	10/16/2006	13:23:00	1105	1012
9520-02-SC-01-17-0	7.92E+03	9.19E+03	6.04E+03		10/13/2006	11:07:00	1107	1003
9520-02-SC-01-18-0	6.55E+03	7.71E+03	6.13E+03		10/13/2006	11:12:00	1107	1003
9520-02-SC-01-19-0	6.30E+03	7.43E+03	6.46E+03		10/13/2006	11:20:00	1107	1003
9520-02-SC-01-20-0	6.92E+03	8.11E+03	6.87E+03		10/13/2006	11:25:00	1107	1003
9520-02-SC-01-21-0	7.12E+03	8.32E+03	7.93E+03		10/13/2006	13:39:00	1111	1004
9520-02-SC-01-22-0	7.73E+03	8.99E+03	6.61E+03		10/13/2006	13:41:00	1111	1004
9520-02-SC-01-23-0	7.05E+03	8.25E+03	7.96E+03		10/13/2006	13:44:00	1111	1004
9520-02-SC-01-24-0	8.53E+03	9.85E+03	7.75E+03		10/13/2006	13:50:00	1111	1004
9520-02-SC-01-25-0	8.43E+03	9.74E+03	7.33E+03		10/13/2006	13:53:00	1111	1004
9520-02-SC-01-26-0	7.66E+03	8.91E+03	7.94E+03		10/13/2006	13:59:00	1111	1004
9520-02-SC-01-27-0	8.94E+03	1.03E+04	8.68E+03		10/13/2006	14:04:00	1111	1004
9520-02-SC-01-28-0	8.60E+03	9.92E+03	7.37E+03		10/13/2006	14:09:00	1111	1004

AL - Action Level

Survey Release Record Scan Area Results

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9520-02-SC-01-29-0	8.10E+03	9.39E+03	9.15E+03	10/13/2006	14:15:00	1111	1004
9520-02-SC-01-30-0	7.80E+03	9.06E+03	8.63E+03	10/13/2006	14:19:00	1111	1004
9520-02-SC-01-31-0	8.36E+03	9.67E+03	8.79E+03	10/13/2006	14:23:00	1111	1004
9520-02-SC-01-32-0	7.81E+03	9.07E+03	7.63E+03	10/13/2006	14:26:00	1111	1004
9520-02-SC-01-33-0	7.41E+03	8.64E+03	7.55E+03	10/13/2006	14:29:00	1111	1004
9520-02-SC-01-34-0	7.33E+03	8.55E+03	6.88E+03	10/13/2006	14:32:00	1111	1004
9520-02-SC-01-35-0	7.24E+03	8.46E+03	7.04E+03	10/13/2006	14:35:00	1111	1004
9520-02-SC-01-36-0	7.66E+03	8.91E+03	6.57E+03	10/13/2006	14:41:00	1111	1004
9520-02-SC-01-37-0	7.20E+03	8.41E+03	7.54E+03	10/13/2006	14:45:00	1111	1004
9520-02-SC-01-38-0	6.64E+03	7.80E+03	6.58E+03	10/13/2006	14:49:00	1111	1004
9520-02-SC-01-39-0	7.45E+03	8.68E+03	7.24E+03	10/13/2006	14:52:00	1111	1004
9520-02-SC-01-40-0	6.37E+03	7.51E+03	7.29E+03	10/13/2006	14:55:00	1111	1004
9520-02-SC-01-41-0	5.75E+03	6.83E+03	6.11E+03	10/13/2006	15:00:00	1111	1004
9520-02-SC-01-42-0	5.52E+03	6.58E+03	6.16E+03	10/13/2006	15:03:00	1111	1004

9520-0002 SCAN AREA 2

<u>Sample Name</u>	<u>Background (cpm)</u>	<u>Action Level (cpm)</u>	<u>Results (cpm)</u>	<u>Above AL</u>	<u>Log Date</u>	<u>Log Time</u>	<u>E600 S/N</u>	<u>Probe S/N</u>
9520-02-SC-02-01-0	7.13E+03	8.34E+03	6.03E+03		10/12/2006	10:14:00	1105	1012
9520-02-SC-02-02-0	7.12E+03	8.32E+03	6.71E+03		10/12/2006	10:19:00	1105	1012
9520-02-SC-02-03-0	7.22E+03	8.43E+03	6.81E+03		10/12/2006	10:24:00	1105	1012
9520-02-SC-02-04-0	6.43E+03	7.58E+03	6.42E+03		10/12/2006	10:30:00	1105	1012
9520-02-SC-02-05-0	7.90E+03	9.17E+03	7.88E+03		10/12/2006	10:54:00	1105	1012
9520-02-SC-02-06-0	6.27E+03	7.40E+03	7.29E+03		10/12/2006	11:00:00	1105	1012
9520-02-SC-02-07-0	7.07E+03	8.27E+03	6.28E+03		10/12/2006	11:03:00	1105	1012
9520-02-SC-02-08-0	7.24E+03	8.46E+03	7.55E+03		10/12/2006	11:08:00	1105	1012
9520-02-SC-02-09-0	6.60E+03	7.76E+03	6.59E+03		10/12/2006	11:12:00	1105	1012
9520-02-SC-02-10-0	6.94E+03	8.13E+03	6.20E+03		10/12/2006	11:17:00	1105	1012
9520-02-SC-02-11-0	6.92E+03	8.11E+03	6.99E+03		10/12/2006	11:20:00	1105	1012
9520-02-SC-02-12-0	6.80E+03	7.98E+03	6.33E+03		10/12/2006	13:02:00	1105	1012
9520-02-SC-02-13-0	6.53E+03	7.68E+03	6.84E+03		10/12/2006	13:06:00	1105	1012
9520-02-SC-02-14-0	7.10E+03	8.30E+03	6.58E+03		10/12/2006	13:08:00	1105	1012

AL - Action Level

Survey Release Record Scan Area Results

Survey Unit 9520-0002

9520-02-SC-02-15-0	7.05E+03	8.25E+03	6.72E+03	10/12/2006	13:13:00	1105	1012
9520-02-SC-02-16-0	6.66E+03	7.83E+03	6.64E+03	10/12/2006	13:16:00	1105	1012
9520-02-SC-02-17-0	6.85E+03	8.03E+03	7.12E+03	10/12/2006	13:21:00	1105	1012
9520-02-SC-02-18-0	6.50E+03	7.65E+03	6.93E+03	10/12/2006	13:24:00	1105	1012

9520-0002 SCAN AREA 3

<u>Sample Name</u>	<u>Background (cpm)</u>	<u>Action Level (cpm)</u>	<u>Results (cpm)</u>	<u>Above AL</u>	<u>Log Date</u>	<u>Log Time</u>	<u>E600 S/N</u>	<u>Probe S/N</u>
9520-02-SC-03-01-0	6.66E+03	7.83E+03	6.92E+03		10/11/2006	10:24:00	1105	1012
9520-02-SC-03-02-0	6.67E+03	7.84E+03	6.44E+03		10/11/2006	10:28:00	1105	1012
9520-02-SC-03-03-0	7.15E+03	8.36E+03	6.38E+03		10/11/2006	10:32:00	1105	1012
9520-02-SC-03-04-0	6.53E+03	7.68E+03	6.50E+03		10/11/2006	10:38:00	1105	1012
9520-02-SC-03-05-0	7.00E+03	8.19E+03	7.32E+03		10/11/2006	10:43:00	1105	1012
9520-02-SC-03-06-0	6.30E+03	7.43E+03	6.87E+03		10/11/2006	11:01:00	1105	1012
9520-02-SC-03-07-0	7.84E+03	9.10E+03	6.99E+03		10/11/2006	11:05:00	1105	1012
9520-02-SC-03-08-0	6.74E+03	7.91E+03	6.56E+03		10/11/2006	11:09:00	1105	1012
9520-02-SC-03-09-0	7.58E+03	8.82E+03	6.85E+03		10/11/2006	11:13:00	1105	1012
9520-02-SC-03-10-0	6.49E+03	7.64E+03	7.38E+03		10/11/2006	11:19:00	1105	1012
9520-02-ER-03-10-1	6.49E+03	7.64E+03	9.14E+03	+	10/12/2006	8:03:00	1105	1012
9520-02-SC-03-11-0	7.36E+03	8.59E+03	7.72E+03		10/11/2006	13:37:00	1105	1012
9520-02-SC-03-12-0	6.61E+03	7.77E+03	6.53E+03		10/11/2006	13:39:00	1105	1012
9520-02-SC-03-13-0	6.84E+03	8.02E+03	6.64E+03		10/11/2006	13:41:00	1105	1012
9520-02-SC-03-14-0	6.42E+03	7.56E+03	7.29E+03		10/11/2006	13:45:00	1105	1012
9520-02-SC-03-15-0	7.50E+03	8.74E+03	6.82E+03		10/11/2006	13:50:00	1105	1012
9520-02-SC-03-16-0	7.17E+03	8.38E+03	7.14E+03		10/11/2006	13:54:00	1105	1012
9520-02-SC-03-17-0	7.55E+03	8.79E+03	6.64E+03		10/11/2006	13:56:00	1105	1012
9520-02-SC-03-18-0	6.75E+03	7.92E+03	6.81E+03		10/11/2006	13:59:00	1105	1012
9520-02-SC-03-19-0	7.25E+03	8.47E+03	7.30E+03		10/11/2006	14:01:00	1105	1012
9520-02-SC-03-20-0	7.35E+03	8.57E+03	6.48E+03		10/11/2006	14:03:00	1105	1012
9520-02-SC-03-21-0	6.52E+03	7.67E+03	6.24E+03		10/11/2006	14:05:00	1105	1012
9520-02-SC-03-22-0	6.65E+03	7.81E+03	6.65E+03		10/11/2006	14:07:00	1105	1012
9520-02-SC-03-23-0	6.90E+03	8.09E+03	6.79E+03		10/11/2006	14:09:00	1105	1012

AL - Action Level

Survey Release Record Scan Area Results

Survey Unit 9520-0002

9520-02-SC-03-24-0	6.59E+03	7.75E+03	6.32E+03	10/11/2006	14:11:00	1105	1012
9520-02-SC-03-25-0	7.09E+03	8.29E+03	6.86E+03	10/11/2006	14:15:00	1105	1012
9520-02-SC-03-26-0	7.34E+03	8.56E+03	7.75E+03	10/11/2006	14:16:00	1105	1012
9520-02-SC-03-27-0	8.93E+03	1.03E+04	9.39E+03	10/11/2006	14:17:00	1105	1012
9520-02-SC-03-28-0	8.76E+03	1.01E+04	8.42E+03	10/11/2006	14:18:00	1105	1012

9520-0002 SCAN AREA 4

<u>Sample Name</u>	<u>Background (cpm)</u>	<u>Action Level (cpm)</u>	<u>Results (cpm)</u>	<u>Above AL</u>	<u>Log Date</u>	<u>Log Time</u>	<u>E600 S/N</u>	<u>Probe S/N</u>
9520-02-SC-04-01-0	7.31E+03	8.53E+03	6.94E+03		10/10/2006	9:30:00	1105	1012
9520-02-SC-04-02-0	7.81E+03	9.07E+03	7.45E+03		10/10/2006	9:37:00	1105	1012
9520-02-SC-04-03-0	7.58E+03	8.82E+03	7.19E+03		10/10/2006	9:49:00	1105	1012
9520-02-SC-04-04-0	7.47E+03	8.70E+03	7.67E+03		10/10/2006	10:02:00	1105	1012
9520-02-SC-04-05-0	7.60E+03	8.84E+03	6.91E+03		10/10/2006	10:33:00	1105	1012
9520-02-SC-04-06-0	7.53E+03	8.77E+03	7.33E+03		10/10/2006	10:41:00	1105	1012
9520-02-SC-04-07-0	7.73E+03	8.99E+03	7.74E+03		10/10/2006	10:51:00	1105	1012
9520-02-SC-04-08-0	7.39E+03	8.62E+03	7.68E+03		10/10/2006	12:53:00	1105	1012
9520-02-SC-04-09-0	7.26E+03	8.48E+03	7.02E+03		10/10/2006	13:01:00	1105	1012
9520-02-SC-04-10-0	7.77E+03	9.03E+03	8.28E+03		10/10/2006	13:12:00	1105	1012
9520-02-ER-04-10-1	7.77E+03	9.03E+03	9.43E+03	+	10/11/2006	8:30:00	1105	1012
9520-02-ER-04-10-2	7.77E+03	9.03E+03	8.96E+03		10/11/2006	8:31:00	1105	1012

SOUTHWEST SITE STORAGE AREA
SURVEY UNIT 9520-0002

RELEASE RECORD

ATTACHMENT 3 (LABORATORY DATA)

General Narrative

**General Narrative
for
Connecticut Yankee Atomic Power Co.
Work Order: 174224
SDG: MSR#06-1371**

October 23, 2006

Laboratory Identification:

General Engineering Laboratories, LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt

The samples arrived at General Engineering Laboratories, LLC, Charleston, South Carolina on October 17, 2006 for analysis. Shipping container temperatures were checked, documented, and within specifications. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage.

Sample Identification The laboratory received the following samples:

<u>Laboratory Identification</u>	<u>Sample Description</u>
174224001	9520-0002-016F
174224002	9520-0002-003F
174224003	9520-0002-020F
174224004	9520-0002-004F
174224005	9520-0002-005F
174224006	9520-0002-008F
174224007	9520-0002-009F
174224008	9520-0002-006F
174224009	9520-0002-017F
174224010	9520-0002-001F
174224011	9520-0002-002F
174224012	9520-0002-007F
174224013	9520-0002-012F
174224014	9520-0002-012FS
174224015	9520-0002-010F
174224016	9520-0002-014F
174224017	9520-0002-013F
174224018	9520-0002-011F
174224019	9520-0002-011FS
174224020	9520-0002-019F
174224021	9520-0002-015F
174224022	9520-0002-018F
174224023	9520-0002-021F
174224024	9520-0002-022F
174224025	9520-0002-023F

Items of Note

There are no items to note.

Case Narrative

Sample analyses were conducted using methodology as outlined in General Engineering Laboratories (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

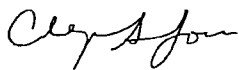
Analytical Request

Twenty-three soil samples were analyzed for FSSGAM. Two soil samples were analyzed for FSSALL.

Data Package

The enclosed data package contains the following sections: General Narrative, Chain of Custody and Supporting Documentation, Data Review Qualifier Definitions, and data from the following fractions: Radiochemistry.

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



Cheryl Jones
Project Manager

List of current GEL Certifications as of 23 October 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)
Hawaii	N/A
Idaho	N/A
Illinois	200029
Indiana	C-SC-01
Kansas	E-10332
Kentucky	90129
Louisiana	03046
Maryland	270
Massachusetts	M-SC012
Michigan	9903
Nevada	SC12
New Jersey	SC002
New Mexico	FL NELAP E87156
New York	11501
North Carolina	233
North Carolina Drinking W	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania	68-00485
South Carolina	10120001/10585001/10120002
Tennessee	02934
Texas	TX213-2006A
Texas NELAP	T104704235-06-TX
U.S. Dept. of Agriculture	S-52597
US Army Corps of Engineer	N/A
Utah	8037697376 GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Chain of Custody Form

No. 2006-00606

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

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size & Type Code	Analyses Requested						Lab Use Only		
Contact Name & Phone: Jack McCarthy 860-267-3924						FSSGAM	FSSALL							Comments:
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road. Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones														
Priority: <input type="checkbox"/> 30 D. <input checked="" type="checkbox"/> 14 D. <input checked="" type="checkbox"/> 7 D. <input type="checkbox"/> 3 D.														
Sample Designation	Date	Time	Comment, Preservation	Lab Sample ID										
9520-0002-016F	10/9/06	0738	TS G BP X											
9520-0002-003F	10/9/06	0751	TS G BP X											
9520-0002-020F	10/9/06	0802	TS G BP X											
9520-0002-004F	10/9/06	0815	TS G BP X											
9520-0002-005F	10/9/06	0947	TS G BP X											
9520-0002-008F	10/9/06	0933	TS G BP X											
9520-0002-009F	10/9/06	1010	TS G BP X											
9520-0002-006F	10/9/06	1025	TS G BP X											
9520-0002-017F	10/9/06	1037	TS G BP X											
9520-0002-001F	10/9/06	1053	TS G BP X											
9520-0002-002F	10/9/06	1104	TS G BP X											

NOTES: PO #: 002332 MSR #: 06-1371 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA			Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other	Internal Container Temp.: <u>22</u> Deg. C Custody Sealed? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
1) Relinquished By <u>[Signature]</u> Date/Time <u>10/16/06 1325</u>	2) Received By <u>[Signature]</u> Date/Time <u>10/17/06 9:30</u>	3) Relinquished By _____ Date/Time _____	4) Received By _____ Date/Time _____	Bill of Lading # <u>7915 6770 7847</u>

Chain of Custody Form

No. 2006-00607

Connecticut Yankee Atomic Power Company

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

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size- & Type Code	Analyses Requested						Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-3924						FSSGAM	FSSALL						Comments:		
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones															
Priority: <input type="checkbox"/> 30 D <input checked="" type="checkbox"/> 14 D <input checked="" type="checkbox"/> 7 D <input type="checkbox"/> 3 D.															
Sample Designation	Date	Time										Comment, Preservation	Lab Sample ID		
9520-0002-007F	10/9/06	1115	TS	G	BP	X									
9520-0002-012F	10/9/06	1128	TS	G	BP	X									
9520-0002-012FS	10/9/06	1128	TS	G	BP	X									
9520-0002-010F	10/9/06	1315	TS	G	BP	X									
9520-0002-014F	10/9/06	1338	TS	G	BP	X									
9520-0002-013F	10/9/06	1347	TS	G	BP	X									
9520-0002-011F	10/9/06	1355	TS	G	BP	X									
9520-0002-011FS	10/9/06	1355	TS	G	BP	X									
9520-0002-019F	10/9/06	1405	TS	G	BP	X									
9520-0002-015F	10/9/06	1420	TS	G	BP		X								
9520-0002-018F	10/9/06	1433	TS	G	BP	X									
NOTES: PO #: 002332 MSR #: 06-1371 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA												Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: <u>21</u> Deg. C Custody Sealed? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By <i>John J. [Signature]</i>			Date/Time <u>10/10/06 1325</u>			2) Received By <i>Jason [Signature]</i>			Date/Time <u>10/17/06 9:30</u>			Bill of Lading # <u>79156770 7836</u>			
3) Relinquished By			Date/Time			4) Received By			Date/Time						

Connecticut Yankee Atomic Power Company						Chain of Custody Form						No. 2006-00608			
362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556															
Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size & Type Code	Analyses Requested						Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-3924						FSSGAM	FSSALL							Comments:	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones															
Priority: <input type="checkbox"/> 30 D. <input checked="" type="checkbox"/> 14 D. <input type="checkbox"/> 7 D. <input type="checkbox"/> 3 D.															
Sample Designation	Date	Time										Comment, Preservation	Lab Sample ID		
9520-0002-021F	10/11/06	0838	TS	G	BP	X									
9520-0002-022F	10/11/06	0840	TS	G	BP	X									
NOTES: PO #: 002332 MSR #: 06- SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA												Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: <u>21</u> Deg. C Custody Sealed? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By <i>[Signature]</i>			Date/Time <u>10/16/06 1325</u>			2) Received By <i>[Signature]</i>			Date/Time <u>10/17/06 9:30</u>			Bill of Lading # <u>79156770 7836</u>			
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. 2006-00625			
Project Name: Haddam Neck Decommissioning						Analyses Requested						Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-3924						<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">FSSGAM</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">FSSALL</div> </div>						Comments:			
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones															
Priority: <input type="checkbox"/> 30 D. <input checked="" type="checkbox"/> 14 D. <input checked="" type="checkbox"/> 7 D. <input type="checkbox"/> 3 D.															
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- & Type Code							Comment, Preservation	Lab Sample ID		
9520-0002-023F	10/12/06	0807	TS	G	BP	X									
NOTES: PO #: 002332 MSR #: 06-1371 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA												Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: <u>22</u> Deg. C Custody Sealed? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By <u>[Signature]</u>			Date/Time <u>10/16/06 1325</u>			2) Received By <u>[Signature]</u>			Date/Time <u>10/17/06 9:30</u>			Bill of Lading # <u>7915 6770 7847</u>			
3) Relinquished By			Date/Time			4) Received By			Date/Time						

Figure 1. Sample Check-in List

Date/Time Received: 10/17/06 9:30

SDG#: MSR#06-1361, MSR#06-1371, MSR#06-1370

Work Order Number: 174221, 174224, 174228

Shipping Container ID: see cont. sheet Chain of Custody #: see cont. sheet

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 see cont. sheet
5. Vermiculite/packing materials is: Wet ☐ Dry ☒
6. Number of samples in shipping container: 48
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: Jason Peltis Date: 10/17/06

Telephoned to: _____ On _____ By _____



Date Received: 10/17/06

11

Data Review Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
-----------	-------------

*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
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
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
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
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 174224**

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: 580396
Prep Batch Number: 580008
Dry Soil Prep GL-RAD-A-021 Batch Number: 580006

Sample ID	Client ID
174224006	9520-0002-008F
174224021	9520-0002-015F
1201210037	Method Blank (MB)
1201210038	174224006(9520-0002-008F) Sample Duplicate (DUP)
1201210039	174224006(9520-0002-008F) Matrix Spike (MS)
1201210040	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: 174224006 (9520-0002-008F).

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 174224006 (9520-0002-008F) was recounted due to a negative result greater than three times the error.

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:	580398
Prep Batch Number:	580008
Dry Soil Prep GL-RAD-A-021 Batch Number:	580006

Sample ID	Client ID
174224006	9520-0002-008F
174224021	9520-0002-015F
1201210045	Method Blank (MB)
1201210046	174224006(9520-0002-008F) Sample Duplicate (DUP)
1201210047	174224006(9520-0002-008F) Matrix Spike (MS)
1201210048	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: 174224006 (9520-0002-008F).

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:	580400
Prep Batch Number:	580008
Dry Soil Prep GL-RAD-A-021 Batch Number:	580006

Sample ID	Client ID
174224006	9520-0002-008F

174224021	9520-0002-015F
1201210053	Method Blank (MB)
1201210054	174224006(9520-0002-008F) Sample Duplicate (DUP)
1201210055	174224006(9520-0002-008F) Matrix Spike (MS)
1201210056	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: 174224006 (9520-0002-008F).

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 226 Ingrowth Waived
Analytical Method: EML HASL 300, 4.5.2.3
Prep Method: Dry Soil Prep
Analytical Batch Number: 580184
Prep Batch Number: 580004

Sample ID	Client ID
174224001	9520-0002-016F
174224002	9520-0002-003F
174224003	9520-0002-020F
174224004	9520-0002-004F
174224005	9520-0002-005F
174224006	9520-0002-008F
174224007	9520-0002-009F
174224008	9520-0002-006F
174224009	9520-0002-017F
174224010	9520-0002-001F
174224011	9520-0002-002F
174224012	9520-0002-007F
174224013	9520-0002-012F
174224014	9520-0002-012FS
174224015	9520-0002-010F
174224016	9520-0002-014F
174224017	9520-0002-013F
174224018	9520-0002-011F
174224019	9520-0002-011FS
174224020	9520-0002-019F
1201209529	Method Blank (MB)
1201209530	174224001(9520-0002-016F) Sample Duplicate (DUP)
1201209531	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# 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: 174224001 (9520-0002-016F).

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

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high peak-width.	Bismuth-212	174224012
		Cesium-137	174224005
UI	Data rejected due to low abundance.	Cesium-134	174224002
			174224004
			174224005
			174224007
			174224008
			174224013
			174224014
			174224016
			174224017
		Niobium-94	174224002
UI	Data rejected due to no valid peak.	Lead-212	1201209529

Method/Analysis Information

Product: Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived
Analytical Method: EML HASL 300, 4.5.2.3
Prep Method: Dry Soil Prep
Analytical Batch Number: 580187
Prep Batch Number: 580006

Sample ID	Client ID
174224021	9520-0002-015F
174224022	9520-0002-018F
174224023	9520-0002-021F
174224024	9520-0002-022F
174224025	9520-0002-023F
1201209536	Method Blank (MB)
1201209537	174224021(9520-0002-015F) Sample Duplicate (DUP)
1201209538	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# 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: 174224021 (9520-0002-015F).

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 sample and the duplicate, 1201209537 (9520-0002-015F) and 174224021 (9520-0002-015F), for TI-208 did not meet the relative percent difference requirement, however they do meet the relative error ratio requirement with value of 1.4356.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to low abundance.	Americium-241	174224023
		Cesium-134	174224022
			174224023
			174224024

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:	580488
Prep Batch Number:	580008
Dry Soil Prep GL-RAD-A-021 Batch Number:	580006

Sample ID	Client ID
174224006	9520-0002-008F
174224021	9520-0002-015F
1201210298	Method Blank (MB)
1201210299	174224006(9520-0002-008F) Sample Duplicate (DUP)
1201210300	174224006(9520-0002-008F) Matrix Spike (MS)
1201210301	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: 174224006 (9520-0002-008F).

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 1201210299 (9520-0002-008F) was recounted due to high MDA.

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: 580399

Sample ID	Client ID
174224006	9520-0002-008F
174224021	9520-0002-015F

1201210049 Method Blank (MB)
1201210050 174224006(9520-0002-008F) Sample Duplicate
(DUP)
1201210051 174224006(9520-0002-008F) Matrix Spike (MS)
1201210052 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: 174224006 (9520-0002-008F).

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:	580395
Prep Batch Number:	580008
Dry Soil Prep GL-RAD-A-021 Batch Number:	580006

Sample ID	Client ID
174224006	9520-0002-008F
174224021	9520-0002-015F
1201210033	Method Blank (MB)
1201210034	174224006(9520-0002-008F) Sample Duplicate (DUP)
1201210035	174224006(9520-0002-008F) Matrix Spike (MS)
1201210036	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: 174224006 (9520-0002-008F).

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:	580397
Prep Batch Number:	580008
Dry Soil Prep GL-RAD-A-021 Batch Number:	580006

Sample ID	Client ID
174224006	9520-0002-008F
174224021	9520-0002-015F
1201210041	Method Blank (MB)
1201210042	174224021(9520-0002-015F) Sample Duplicate (DUP)
1201210043	174224021(9520-0002-015F) Matrix Spike (MS)
1201210044	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: 174224021 (9520-0002-015F).

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: 580401

Sample ID	Client ID
174224006	9520-0002-008F
174224021	9520-0002-015F
1201210057	Method Blank (MB)
1201210058	174224006(9520-0002-008F) Sample Duplicate (DUP)
1201210059	174224006(9520-0002-008F) Matrix Spike (MS)
1201210060	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# 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: 174224006 (9520-0002-008F).

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 1201210058 (9520-0002-008F), 174224006 (9520-0002-008F) and 174224021 (9520-0002-015F) were recounted due to high MDAs.

Miscellaneous Information:

NCR Documentation

Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. 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: 580402

Sample ID	Client ID
174224006	9520-0002-008F

174224021	9520-0002-015F
1201210061	Method Blank (MB)
1201210062	174224021(9520-0002-015F) Sample Duplicate (DUP)
1201210063	174224021(9520-0002-015F) Matrix Spike (MS)
1201210064	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: 174224021 (9520-0002-015F).

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: _____

Pamela Williams 10/24/06

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#06-1371 GEL Work Order: 174224

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 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: October 24, 2006

Client Sample ID:	9520-0002-016F	Project: YANK01204
Sample ID:	174224001	Client ID: YANK001
Matrix:	TS	Vol. Recv.:
Collect Date:	09-OCT-06	
Receive Date:	17-OCT-06	
Collector:	Client	
Moisture:	4.86%	

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.656	+/-0.149	0.051	+/-0.149	0.111	pCi/g		MJH1	10/23/06	1057	580184	1
Americium-241	U	-0.0484	+/-0.120	0.0938	+/-0.120	0.195	pCi/g						
Bismuth-212		0.740	+/-0.207	0.117	+/-0.207	0.252	pCi/g						
Bismuth-214		0.521	+/-0.0704	0.0282	+/-0.0704	0.060	pCi/g						
Cesium-134	U	0.0423	+/-0.0387	0.020	+/-0.0387	0.0425	pCi/g						
Cesium-137		0.053	+/-0.0324	0.0153	+/-0.0324	0.0327	pCi/g						
Cobalt-60	U	0.00102	+/-0.0188	0.0164	+/-0.0188	0.0359	pCi/g						
Europium-152	U	-0.00774	+/-0.0461	0.0413	+/-0.0461	0.0871	pCi/g						
Europium-154	U	-0.0447	+/-0.0569	0.0453	+/-0.0569	0.0994	pCi/g						
Europium-155	U	0.035	+/-0.0562	0.0541	+/-0.0562	0.113	pCi/g						
Lead-212		0.730	+/-0.0581	0.025	+/-0.0581	0.0523	pCi/g						
Lead-214		0.572	+/-0.0735	0.0321	+/-0.0735	0.0674	pCi/g						
Manganese-54	U	0.002	+/-0.0188	0.0165	+/-0.0188	0.0353	pCi/g						
Niobium-94	U	0.00326	+/-0.0161	0.0145	+/-0.0161	0.031	pCi/g						
Potassium-40		10.7	+/-0.758	0.130	+/-0.758	0.293	pCi/g						
Radium-226		0.521	+/-0.0704	0.0282	+/-0.0704	0.060	pCi/g						
Silver-108m	U	-0.00426	+/-0.0157	0.0136	+/-0.0157	0.0289	pCi/g						
Thallium-208		0.249	+/-0.0433	0.0129	+/-0.0433	0.0278	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	11:27	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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: October 24, 2006

Client Sample ID: 9520-0002-016F
Sample ID: 174224001

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

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

- > 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: October 24, 2006

Client Sample ID: 9520-0002-003F
Sample ID: 174224002
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 7.79%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.15	+/-0.192	0.0672	+/-0.192	0.144	pCi/g						
Americium-241	U	0.0214	+/-0.0897	0.0825	+/-0.0897	0.170	pCi/g						
Bismuth-212		0.798	+/-0.308	0.140	+/-0.308	0.298	pCi/g						
Bismuth-214		0.975	+/-0.113	0.036	+/-0.113	0.0761	pCi/g						
Cesium-134	UI	0.00	+/-0.042	0.0254	+/-0.042	0.0536	pCi/g						
Cesium-137	U	0.0316	+/-0.0243	0.0201	+/-0.0243	0.0425	pCi/g						
Cobalt-60	U	0.00195	+/-0.0229	0.0191	+/-0.0229	0.0417	pCi/g						
Europium-152	U	-0.0409	+/-0.0572	0.0482	+/-0.0572	0.101	pCi/g						
Europium-154	U	-0.0259	+/-0.0666	0.0528	+/-0.0666	0.115	pCi/g						
Europium-155	U	0.114	+/-0.114	0.0608	+/-0.114	0.126	pCi/g						
Lead-212		1.19	+/-0.0781	0.0329	+/-0.0781	0.0682	pCi/g						
Lead-214		1.03	+/-0.104	0.037	+/-0.104	0.0774	pCi/g						
Manganese-54	U	0.0228	+/-0.0241	0.0221	+/-0.0241	0.0467	pCi/g						
Niobium-94	UI	0.00	+/-0.0416	0.0182	+/-0.0416	0.0385	pCi/g						
Potassium-40		16.9	+/-1.06	0.175	+/-1.06	0.384	pCi/g						
Radium-226		0.975	+/-0.113	0.036	+/-0.113	0.0761	pCi/g						
Silver-108m	U	-0.0113	+/-0.020	0.0166	+/-0.020	0.035	pCi/g						
Thallium-208		0.345	+/-0.0494	0.0182	+/-0.0494	0.0386	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd

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

Report Date: October 24, 2006

Client Sample ID: 9520-0002-003F
Sample ID: 174224002

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-020F
Sample ID: 174224003
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 5.48%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.906	+/-0.257	0.0872	+/-0.257	0.190	pCi/g						
Americium-241	U	0.00899	+/-0.0408	0.0372	+/-0.0408	0.077	pCi/g						
Bismuth-212	U	0.346	+/-0.505	0.182	+/-0.505	0.395	pCi/g						
Bismuth-214		0.588	+/-0.118	0.0471	+/-0.118	0.101	pCi/g						
Cesium-134	U	0.0432	+/-0.0547	0.0356	+/-0.0547	0.0758	pCi/g						
Cesium-137	U	0.0619	+/-0.0517	0.0293	+/-0.0517	0.0624	pCi/g						
Cobalt-60	U	-0.00849	+/-0.0374	0.0306	+/-0.0374	0.0671	pCi/g						
Europium-152	U	-0.0343	+/-0.0771	0.0641	+/-0.0771	0.135	pCi/g						
Europium-154	U	-0.0334	+/-0.099	0.0804	+/-0.099	0.177	pCi/g						
Europium-155	U	-0.00124	+/-0.0668	0.0575	+/-0.0668	0.120	pCi/g						
Lead-212		0.645	+/-0.091	0.0543	+/-0.091	0.112	pCi/g						
Lead-214		0.627	+/-0.126	0.0485	+/-0.126	0.102	pCi/g						
Manganese-54	U	0.0354	+/-0.0353	0.0322	+/-0.0353	0.0684	pCi/g						
Niobium-94	U	0.0287	+/-0.0306	0.0282	+/-0.0306	0.0598	pCi/g						
Potassium-40		12.0	+/-1.08	0.234	+/-1.08	0.527	pCi/g						
Radium-226		0.588	+/-0.118	0.0471	+/-0.118	0.101	pCi/g						
Silver-108m	U	0.00743	+/-0.0239	0.0221	+/-0.0239	0.0469	pCi/g						
Thallium-208		0.222	+/-0.0588	0.0279	+/-0.0588	0.0594	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

- * A quality control analyte recovery is outside of specified acceptance criteria
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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: October 24, 2006

Client Sample ID: 9520-0002-020F
Sample ID: 174224003

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-004F
Sample ID: 174224004
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 5.76%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.885	+/-0.223	0.100	+/-0.223	0.201	pCi/g		MJH1	10/23/06	1244	580184	1
Americium-241	U	0.0457	+/-0.0472	0.0392	+/-0.0472	0.0784	pCi/g						
Bismuth-212	U	0.453	+/-0.315	0.296	+/-0.315	0.592	pCi/g						
Bismuth-214		0.592	+/-0.130	0.0529	+/-0.130	0.106	pCi/g						
Cesium-134	UI	0.00	+/-0.0631	0.0417	+/-0.0631	0.0833	pCi/g						
Cesium-137		0.113	+/-0.0551	0.0282	+/-0.0551	0.0563	pCi/g						
Cobalt-60	U	0.00471	+/-0.0431	0.0365	+/-0.0431	0.0729	pCi/g						
Europium-152	U	-0.0789	+/-0.111	0.0667	+/-0.111	0.133	pCi/g						
Europium-154	U	-0.0433	+/-0.139	0.112	+/-0.139	0.224	pCi/g						
Europium-155	U	0.0401	+/-0.0704	0.0635	+/-0.0704	0.127	pCi/g						
Lead-212		0.739	+/-0.101	0.0372	+/-0.101	0.0744	pCi/g						
Lead-214		0.702	+/-0.146	0.0493	+/-0.146	0.0986	pCi/g						
Manganese-54	U	0.00374	+/-0.0374	0.0327	+/-0.0374	0.0653	pCi/g						
Niobium-94	U	0.00532	+/-0.0328	0.0291	+/-0.0328	0.0582	pCi/g						
Potassium-40		11.0	+/-1.24	0.325	+/-1.24	0.650	pCi/g						
Radium-226		0.592	+/-0.130	0.0529	+/-0.130	0.106	pCi/g						
Silver-108m	U	-0.0374	+/-0.029	0.0221	+/-0.029	0.0442	pCi/g						
Thallium-208		0.204	+/-0.0904	0.0271	+/-0.0904	0.0542	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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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: October 24, 2006

Client Sample ID: 9520-0002-004F
Sample ID: 174224004

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-005F
Sample ID: 174224005
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 3.28%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.586	+/-0.145	0.0501	+/-0.145	0.108	pCi/g		MJH1	10/23/06	1258	580184	1
Americium-241	U	-0.0266	+/-0.0889	0.0712	+/-0.0889	0.147	pCi/g						
Bismuth-212		0.391	+/-0.229	0.114	+/-0.229	0.242	pCi/g						
Bismuth-214		0.498	+/-0.0639	0.0278	+/-0.0639	0.0588	pCi/g						
Cesium-134	UI	0.00	+/-0.0308	0.0187	+/-0.0308	0.0395	pCi/g						
Cesium-137	UI	0.00	+/-0.0483	0.0128	+/-0.0483	0.0274	pCi/g						
Cobalt-60	U	0.0103	+/-0.0191	0.0171	+/-0.0191	0.037	pCi/g						
Europium-152	U	0.000548	+/-0.0428	0.0366	+/-0.0428	0.0768	pCi/g						
Europium-154	U	-0.0126	+/-0.0535	0.0444	+/-0.0535	0.0968	pCi/g						
Europium-155	U	0.0307	+/-0.0437	0.0421	+/-0.0437	0.087	pCi/g						
Lead-212		0.679	+/-0.0518	0.0209	+/-0.0518	0.0435	pCi/g						
Lead-214		0.560	+/-0.0799	0.0245	+/-0.0799	0.0516	pCi/g						
Manganese-54	U	0.0146	+/-0.0172	0.0155	+/-0.0172	0.0331	pCi/g						
Niobium-94	U	0.00268	+/-0.0155	0.0134	+/-0.0155	0.0285	pCi/g						
Potassium-40		10.5	+/-0.750	0.135	+/-0.750	0.300	pCi/g						
Radium-226		0.498	+/-0.0639	0.0278	+/-0.0639	0.0588	pCi/g						
Silver-108m	U	0.0072	+/-0.0154	0.0127	+/-0.0154	0.0268	pCi/g						
Thallium-208		0.186	+/-0.0432	0.0135	+/-0.0432	0.0287	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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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: October 24, 2006

Client Sample ID: 9520-0002-005F
Sample ID: 174224005

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

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

- > 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.

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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: October 24, 2006

Client Sample ID: 9520-0002-008F
Sample ID: 174224006
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 8.78%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	-0.00901	+/-0.0461	0.0494	+/-0.0461	0.204	pCi/g	MXA	10/23/06	1039	580396	1	1
Curium-242	U	0.00	+/-0.0812	0.00	+/-0.0812	0.112	pCi/g						
Curium-243/244	U	0.00	+/-0.0764	0.00	+/-0.0764	0.106	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.00905	+/-0.086	0.0672	+/-0.086	0.211	pCi/g	MXA	10/20/06	0813	580398	2	1
Plutonium-239/240	U	-0.0532	+/-0.0721	0.0879	+/-0.0723	0.252	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	-4.06	+/-7.84	6.76	+/-7.84	14.2	pCi/g	MXA	10/21/06	1632	580400	3	1
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.02	+/-0.218	0.0722	+/-0.218	0.163	pCi/g	MJH1	10/23/06	1259	580184	4	
Americium-241	U	0.00802	+/-0.0383	0.0354	+/-0.0383	0.0734	pCi/g						
Bismuth-212		0.677	+/-0.537	0.185	+/-0.537	0.405	pCi/g						
Bismuth-214		0.675	+/-0.121	0.0505	+/-0.121	0.109	pCi/g						
Cesium-134	U	0.0465	+/-0.0461	0.0323	+/-0.0461	0.0699	pCi/g						
Cesium-137		0.0801	+/-0.0347	0.0273	+/-0.0347	0.0591	pCi/g						
Cobalt-60	U	-0.00558	+/-0.0307	0.0252	+/-0.0307	0.0574	pCi/g						
Europium-152	U	-0.0291	+/-0.0742	0.0643	+/-0.0742	0.137	pCi/g						
Europium-154	U	0.0675	+/-0.091	0.0851	+/-0.091	0.189	pCi/g						
Europium-155	U	0.0469	+/-0.0657	0.0606	+/-0.0657	0.126	pCi/g						
Lead-212		0.855	+/-0.0857	0.0351	+/-0.0857	0.0739	pCi/g						
Lead-214		0.785	+/-0.110	0.0422	+/-0.110	0.0902	pCi/g						
Manganese-54	U	0.0191	+/-0.0302	0.027	+/-0.0302	0.0588	pCi/g						
Niobium-94	U	0.00807	+/-0.0284	0.0247	+/-0.0284	0.0533	pCi/g						
Potassium-40		12.3	+/-1.22	0.228	+/-1.22	0.526	pCi/g						
Radium-226		0.675	+/-0.121	0.0505	+/-0.121	0.109	pCi/g						
Silver-108m	U	-0.00392	+/-0.0242	0.0209	+/-0.0242	0.0451	pCi/g						
Thallium-208		0.312	+/-0.0585	0.023	+/-0.0585	0.0501	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0274	+/-0.0243	0.019	+/-0.0243	0.0402	pCi/g	KSD1	10/20/06	1940	580488	5	
Rad Liquid Scintillation Analysis													

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Certificate of Analysis

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

Report Date: October 24, 2006

Client Sample ID: 9520-0002-008F
Sample ID: 174224006

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													
<i>LSC, Tritium Dist, Solid-HTD2, ALL FSS</i>													
Tritium	U	-0.10	+/-2.79	2.35	+/-2.79	4.82	pCi/g		DFA1	10/23/06	1236	580401	6
<i>Liquid Scint C14, Solid All, FSS</i>													
Carbon-14	U	-0.0573	+/-0.109	0.0931	+/-0.109	0.191	pCi/g		AXD2	10/21/06	1450	580402	8
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	2.10	+/-28.7	20.9	+/-28.7	43.9	pCi/g		MXP1	10/23/06	0015	580395	9
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	-4.05	+/-8.06	6.95	+/-8.06	14.6	pCi/g		MXP1	10/22/06	2003	580397	10
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.148	+/-0.198	0.161	+/-0.198	0.334	pCi/g		KXR1	10/24/06	1317	580399	11

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

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 906.0 Modified
8	EPA EERF C-01 Modified
9	DOE RESL Fe-1, Modified
10	DOE RESL Ni-1, Modified
11	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	93	(15%-125%)
Plutonium-241	Liquid Scint Pu241, Solid-ALL FS	84	(25%-125%)
Strontium-90	GFPC, Sr90, solid-ALL FSS	87	(25%-125%)

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-008F

Sample ID: 174224006

Project: YANK01204

Client ID: YANK001

Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			87		(25%-125%)						
Iron-55		Liquid Scint Fe55, Solid-ALL FS			63		(15%-125%)						
Nickel-63		Liquid Scint Ni63, Solid-ALL FS			87		(25%-125%)						
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-ALL FS			87		(25%-125%)						
Technetium-99		Liquid Scint Tc99, Solid-ALL FS			84		(15%-125%)						
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.

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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: October 24, 2006

Client Sample ID: 9520-0002-009F
Sample ID: 174224007
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 8.34%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.840	+/-0.110	0.0417	+/-0.110	0.0883	pCi/g						
Americium-241	U	-0.073	+/-0.105	0.0789	+/-0.105	0.162	pCi/g						
Bismuth-212		0.536	+/-0.181	0.0985	+/-0.181	0.207	pCi/g						
Bismuth-214		0.611	+/-0.0743	0.0254	+/-0.0743	0.053	pCi/g						
Cesium-134	UI	0.00	+/-0.0281	0.0163	+/-0.0281	0.034	pCi/g						
Cesium-137		0.0834	+/-0.0244	0.0134	+/-0.0244	0.028	pCi/g						
Cobalt-60	U	-0.00486	+/-0.0144	0.012	+/-0.0144	0.0258	pCi/g						
Europium-152	U	-0.0103	+/-0.0393	0.0343	+/-0.0393	0.0713	pCi/g						
Europium-154	U	-0.012	+/-0.0484	0.0409	+/-0.0484	0.087	pCi/g						
Europium-155	U	0.058	+/-0.0643	0.0446	+/-0.0643	0.0916	pCi/g						
Lead-212		0.832	+/-0.0505	0.0224	+/-0.0505	0.046	pCi/g						
Lead-214		0.804	+/-0.0676	0.0253	+/-0.0676	0.0525	pCi/g						
Manganese-54	U	-0.00243	+/-0.0176	0.013	+/-0.0176	0.0272	pCi/g						
Niobium-94	U	0.0208	+/-0.0127	0.0127	+/-0.0127	0.0265	pCi/g						
Potassium-40		12.5	+/-0.669	0.109	+/-0.669	0.237	pCi/g						
Radium-226		0.611	+/-0.0743	0.0254	+/-0.0743	0.053	pCi/g						
Silver-108m	U	0.00572	+/-0.0131	0.0116	+/-0.0131	0.0241	pCi/g						
Thallium-208		0.261	+/-0.0305	0.0128	+/-0.0305	0.0267	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-009F
Sample ID: 174224007

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-006F
Sample ID: 174224008
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 5.61%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mid
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.428	+/-0.128	0.0429	+/-0.128	0.0936	pCi/g						
Americium-241	U	0.00445	+/-0.0695	0.060	+/-0.0695	0.124	pCi/g						
Bismuth-212		0.522	+/-0.186	0.107	+/-0.186	0.230	pCi/g						
Bismuth-214		0.441	+/-0.0666	0.0259	+/-0.0666	0.0552	pCi/g						
Cesium-134	UI	0.00	+/-0.0224	0.0178	+/-0.0224	0.0379	pCi/g						
Cesium-137		0.053	+/-0.0324	0.0122	+/-0.0324	0.0264	pCi/g						
Cobalt-60	U	0.0111	+/-0.0152	0.014	+/-0.0152	0.0308	pCi/g						
Europium-152	U	0.0327	+/-0.0445	0.0378	+/-0.0445	0.0796	pCi/g						
Europium-154	U	-0.0039	+/-0.0476	0.0395	+/-0.0476	0.0868	pCi/g						
Europium-155	U	-0.00205	+/-0.050	0.046	+/-0.050	0.0956	pCi/g						
Lead-212		0.544	+/-0.0517	0.0244	+/-0.0517	0.0508	pCi/g						
Lead-214		0.425	+/-0.0752	0.0263	+/-0.0752	0.0554	pCi/g						
Manganese-54	U	0.0171	+/-0.0174	0.0149	+/-0.0174	0.0318	pCi/g						
Niobium-94	U	0.00344	+/-0.0139	0.0126	+/-0.0139	0.027	pCi/g						
Potassium-40		11.5	+/-0.739	0.110	+/-0.739	0.248	pCi/g						
Radium-226		0.441	+/-0.0666	0.0259	+/-0.0666	0.0552	pCi/g						
Silver-108m	U	-0.00111	+/-0.0144	0.0127	+/-0.0144	0.0269	pCi/g						
Thallium-208		0.165	+/-0.0315	0.0146	+/-0.0315	0.031	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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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: October 24, 2006

Client Sample ID: 9520-0002-006F
Sample ID: 174224008

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

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

- > 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.

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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: October 24, 2006

Client Sample ID: 9520-0002-017F
Sample ID: 174224009
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 3.13%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.807	+/-0.242	0.095	+/-0.242	0.206	pCi/g		MJH1	10/23/06	1427	580184	1
Americium-241	U	-0.0127	+/-0.0439	0.036	+/-0.0439	0.0746	pCi/g						
Bismuth-212		0.452	+/-0.407	0.204	+/-0.407	0.439	pCi/g						
Bismuth-214		0.664	+/-0.111	0.0468	+/-0.111	0.100	pCi/g						
Cesium-134	U	0.0329	+/-0.0352	0.0324	+/-0.0352	0.0692	pCi/g						
Cesium-137	U	0.0422	+/-0.0375	0.0295	+/-0.0375	0.0629	pCi/g						
Cobalt-60	U	-0.00349	+/-0.0369	0.0264	+/-0.0369	0.0585	pCi/g						
Europium-152	U	-0.0308	+/-0.072	0.060	+/-0.072	0.127	pCi/g						
Europium-154	U	-0.02	+/-0.101	0.0831	+/-0.101	0.182	pCi/g						
Europium-155	U	0.0387	+/-0.0863	0.0573	+/-0.0863	0.119	pCi/g						
Lead-212		0.649	+/-0.0898	0.0521	+/-0.0898	0.108	pCi/g						
Lead-214		0.646	+/-0.111	0.0488	+/-0.111	0.103	pCi/g						
Manganese-54	U	0.016	+/-0.0335	0.0294	+/-0.0335	0.0629	pCi/g						
Niobium-94	U	0.0104	+/-0.0316	0.0278	+/-0.0316	0.0591	pCi/g						
Potassium-40		10.9	+/-1.03	0.200	+/-1.03	0.459	pCi/g						
Radium-226		0.664	+/-0.111	0.0468	+/-0.111	0.100	pCi/g						
Silver-108m	U	-0.00279	+/-0.0246	0.022	+/-0.0246	0.0468	pCi/g						
Thallium-208		0.269	+/-0.0571	0.0235	+/-0.0571	0.0504	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd

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

Report Date: October 24, 2006

Client Sample ID: 9520-0002-017F
Sample ID: 174224009

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

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

- > 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.

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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: October 24, 2006

Client Sample ID: 9520-0002-001F
Sample ID: 174224010
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 3.58%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth													
Waived													
Actinium-228		0.850	+/-0.240	0.108	+/-0.240	0.215	pCi/g						
Americium-241	U	0.0152	+/-0.0475	0.0384	+/-0.0475	0.0767	pCi/g						
Bismuth-212	U	0.495	+/-0.330	0.250	+/-0.330	0.499	pCi/g						
Bismuth-214		0.708	+/-0.158	0.0489	+/-0.158	0.0977	pCi/g						
Cesium-134	U	0.0361	+/-0.0592	0.0379	+/-0.0592	0.0758	pCi/g						
Cesium-137	U	0.0386	+/-0.0553	0.0279	+/-0.0553	0.0557	pCi/g						
Cobalt-60	U	0.0104	+/-0.0336	0.0296	+/-0.0336	0.0592	pCi/g						
Europium-152	U	0.0404	+/-0.0883	0.0668	+/-0.0883	0.134	pCi/g						
Europium-154	U	0.0452	+/-0.131	0.114	+/-0.131	0.228	pCi/g						
Europium-155	U	0.0253	+/-0.075	0.0623	+/-0.075	0.125	pCi/g						
Lead-212		0.730	+/-0.102	0.0375	+/-0.102	0.075	pCi/g						
Lead-214		0.616	+/-0.125	0.0491	+/-0.125	0.0982	pCi/g						
Manganese-54	U	-0.0293	+/-0.0418	0.0274	+/-0.0418	0.0549	pCi/g						
Niobium-94	U	0.00228	+/-0.0309	0.0273	+/-0.0309	0.0545	pCi/g						
Potassium-40		11.4	+/-1.23	0.191	+/-1.23	0.382	pCi/g						
Radium-226		0.708	+/-0.158	0.0489	+/-0.158	0.0977	pCi/g						
Silver-108m	U	0.00402	+/-0.0285	0.0249	+/-0.0285	0.0498	pCi/g						
Thallium-208		0.219	+/-0.0701	0.0256	+/-0.0701	0.0512	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-001F
Sample ID: 174224010

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-002F
Sample ID: 174224011
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 11.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.596	+/-0.142	0.0526	+/-0.142	0.118	pCi/g		MJH1	10/23/06	1506	580184	1
Americium-241	U	-0.0475	+/-0.0993	0.0894	+/-0.0993	0.187	pCi/g						
Bismuth-212		0.553	+/-0.215	0.131	+/-0.215	0.287	pCi/g						
Bismuth-214		0.445	+/-0.0684	0.0285	+/-0.0684	0.0623	pCi/g						
Cesium-134	U	0.0112	+/-0.0224	0.0205	+/-0.0224	0.0446	pCi/g						
Cesium-137		0.0953	+/-0.0395	0.0182	+/-0.0395	0.0396	pCi/g						
Cobalt-60	U	0.0103	+/-0.0192	0.0179	+/-0.0192	0.0408	pCi/g						
Europium-152	U	0.0402	+/-0.052	0.0487	+/-0.052	0.104	pCi/g						
Europium-154	U	0.000834	+/-0.077	0.0575	+/-0.077	0.128	pCi/g						
Europium-155	U	0.0343	+/-0.0529	0.0536	+/-0.0529	0.112	pCi/g						
Lead-212		0.577	+/-0.0577	0.0273	+/-0.0577	0.0574	pCi/g						
Lead-214		0.427	+/-0.0859	0.0298	+/-0.0859	0.0639	pCi/g						
Manganese-54	U	0.0316	+/-0.0225	0.0165	+/-0.0225	0.0364	pCi/g						
Niobium-94	U	-0.000249	+/-0.0177	0.0155	+/-0.0177	0.0338	pCi/g						
Potassium-40		9.03	+/-0.878	0.156	+/-0.878	0.362	pCi/g						
Radium-226		0.445	+/-0.0684	0.0285	+/-0.0684	0.0623	pCi/g						
Silver-108m	U	0.00371	+/-0.0168	0.0141	+/-0.0168	0.0304	pCi/g						
Thallium-208		0.184	+/-0.0408	0.0164	+/-0.0408	0.0356	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-002F
Sample ID: 174224011

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
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- > 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: October 24, 2006

Client Sample ID: 9520-0002-007F
Sample ID: 174224012
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 16.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.712	+/-0.189	0.0909	+/-0.189	0.198	pCi/g		MJH1	10/23/06	1507	580184	1
Americium-241	U	0.017	+/-0.0337	0.0326	+/-0.0337	0.0675	pCi/g						
Bismuth-212	UI	0.508	+/-0.366	0.176	+/-0.366	0.383	pCi/g						
Bismuth-214		0.706	+/-0.123	0.0416	+/-0.123	0.0898	pCi/g						
Cesium-134	U	0.042	+/-0.028	0.0277	+/-0.028	0.060	pCi/g						
Cesium-137		0.116	+/-0.0416	0.0201	+/-0.0416	0.044	pCi/g						
Cobalt-60	U	0.0184	+/-0.024	0.0267	+/-0.024	0.0595	pCi/g						
Europium-152	U	0.00172	+/-0.0619	0.0564	+/-0.0619	0.120	pCi/g						
Europium-154	U	-0.0194	+/-0.0733	0.0601	+/-0.0733	0.137	pCi/g						
Europium-155	U	0.0486	+/-0.0825	0.0478	+/-0.0825	0.100	pCi/g						
Lead-212		0.755	+/-0.0749	0.0274	+/-0.0749	0.058	pCi/g						
Lead-214		0.634	+/-0.113	0.0414	+/-0.113	0.0878	pCi/g						
Manganese-54	U	-0.0102	+/-0.0244	0.0194	+/-0.0244	0.043	pCi/g						
Niobium-94	U	-0.0022	+/-0.0234	0.0199	+/-0.0234	0.0432	pCi/g						
Potassium-40		10.0	+/-1.04	0.235	+/-1.04	0.531	pCi/g						
Radium-226		0.706	+/-0.123	0.0416	+/-0.123	0.0898	pCi/g						
Silver-108m	U	0.0107	+/-0.022	0.0204	+/-0.022	0.0436	pCi/g						
Thallium-208		0.259	+/-0.0535	0.0215	+/-0.0535	0.0465	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-007F
Sample ID: 174224012

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-012F
Sample ID: 174224013
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 7.67%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid – FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.572	+/-0.141	0.051	+/-0.141	0.109	pCi/g						
Americium-241	U	0.0415	+/-0.108	0.0879	+/-0.108	0.182	pCi/g						
Bismuth-212		0.341	+/-0.204	0.111	+/-0.204	0.237	pCi/g						
Bismuth-214		0.444	+/-0.0719	0.0284	+/-0.0719	0.0599	pCi/g						
Cesium-134	UI	0.00	+/-0.0316	0.0192	+/-0.0316	0.0406	pCi/g						
Cesium-137		0.330	+/-0.0357	0.0158	+/-0.0357	0.0335	pCi/g						
Cobalt-60	U	0.00219	+/-0.0159	0.0139	+/-0.0159	0.0305	pCi/g						
Europium-152	U	-0.0182	+/-0.0439	0.0384	+/-0.0439	0.0807	pCi/g						
Europium-154	U	-0.024	+/-0.0518	0.0428	+/-0.0518	0.0931	pCi/g						
Europium-155	U	0.0138	+/-0.0551	0.0514	+/-0.0551	0.106	pCi/g						
Lead-212		0.652	+/-0.0534	0.0246	+/-0.0534	0.0511	pCi/g						
Lead-214		0.530	+/-0.0743	0.0279	+/-0.0743	0.0585	pCi/g						
Manganese-54	U	-0.00187	+/-0.0168	0.0144	+/-0.0168	0.0308	pCi/g						
Niobium-94	U	-0.0032	+/-0.0161	0.014	+/-0.0161	0.0297	pCi/g						
Potassium-40		14.4	+/-0.799	0.123	+/-0.799	0.273	pCi/g						
Radium-226		0.444	+/-0.0719	0.0284	+/-0.0719	0.0599	pCi/g						
Silver-108m		0.0281	+/-0.0208	0.0123	+/-0.0208	0.0261	pCi/g						
Thallium-208		0.240	+/-0.0408	0.015	+/-0.0408	0.0317	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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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: October 24, 2006

Client Sample ID: 9520-0002-012F
Sample ID: 174224013

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-012FS
Sample ID: 174224014
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 7.64%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.639	+/-0.169	0.0421	+/-0.169	0.0929	pCi/g		MJH1	10/23/06	1535	580184	1
Americium-241	U	-0.0317	+/-0.072	0.0658	+/-0.072	0.136	pCi/g						
Bismuth-212		0.385	+/-0.257	0.113	+/-0.257	0.244	pCi/g						
Bismuth-214		0.466	+/-0.112	0.0303	+/-0.112	0.0643	pCi/g						
Cesium-134	UI	0.00	+/-0.0243	0.0192	+/-0.0243	0.0408	pCi/g						
Cesium-137		0.350	+/-0.0443	0.0185	+/-0.0443	0.0392	pCi/g						
Cobalt-60	U	-0.016	+/-0.0199	0.0148	+/-0.0199	0.0327	pCi/g						
Europium-152	U	-0.0154	+/-0.048	0.0418	+/-0.048	0.0881	pCi/g						
Europium-154	U	0.00846	+/-0.0537	0.0456	+/-0.0537	0.0999	pCi/g						
Europium-155	U	0.0527	+/-0.0592	0.0554	+/-0.0592	0.115	pCi/g						
Lead-212		0.710	+/-0.0607	0.0246	+/-0.0607	0.0515	pCi/g						
Lead-214		0.534	+/-0.0867	0.0307	+/-0.0867	0.0647	pCi/g						
Manganese-54	U	0.000606	+/-0.019	0.0166	+/-0.019	0.0354	pCi/g						
Niobium-94	U	0.0156	+/-0.0162	0.0153	+/-0.0162	0.0325	pCi/g						
Potassium-40		12.8	+/-0.881	0.144	+/-0.881	0.321	pCi/g						
Radium-226		0.466	+/-0.112	0.0303	+/-0.112	0.0643	pCi/g						
Silver-108m	U	0.00742	+/-0.0165	0.0148	+/-0.0165	0.0314	pCi/g						
Thallium-208		0.232	+/-0.0384	0.0163	+/-0.0384	0.0346	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-012FS
Sample ID: 174224014

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-010F
Sample ID: 174224015
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 6.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid--FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.806	+/-0.237	0.101	+/-0.237	0.218	pCi/g						
Americium-241	U	0.0289	+/-0.0408	0.0376	+/-0.0408	0.0779	pCi/g						
Bismuth-212	U	0.436	+/-0.325	0.210	+/-0.325	0.452	pCi/g						
Bismuth-214		0.577	+/-0.133	0.0467	+/-0.133	0.100	pCi/g						
Cesium-134	U	0.0203	+/-0.0334	0.0361	+/-0.0334	0.0769	pCi/g						
Cesium-137	U	0.0416	+/-0.0366	0.0341	+/-0.0366	0.0723	pCi/g						
Cobalt-60	U	-0.00187	+/-0.034	0.0283	+/-0.034	0.0627	pCi/g						
Europium-152	U	-0.00333	+/-0.0733	0.0623	+/-0.0733	0.132	pCi/g						
Europium-154	U	0.0337	+/-0.102	0.0893	+/-0.102	0.195	pCi/g						
Europium-155	U	0.0473	+/-0.0692	0.0613	+/-0.0692	0.127	pCi/g						
Lead-212		0.653	+/-0.0885	0.0492	+/-0.0885	0.102	pCi/g						
Lead-214		0.566	+/-0.115	0.050	+/-0.115	0.105	pCi/g						
Manganese-54	U	0.0119	+/-0.0384	0.0292	+/-0.0384	0.0627	pCi/g						
Niobium-94	U	-0.0138	+/-0.0298	0.0244	+/-0.0298	0.0523	pCi/g						
Potassium-40		11.9	+/-1.21	0.220	+/-1.21	0.502	pCi/g						
Radium-226		0.577	+/-0.133	0.0467	+/-0.133	0.100	pCi/g						
Silver-108m	U	0.0137	+/-0.0256	0.0238	+/-0.0256	0.0504	pCi/g						
Thallium-208		0.261	+/-0.0682	0.0259	+/-0.0682	0.0556	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-010F
Sample ID: 174224015

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-014F
Sample ID: 174224016
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 8.04%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.503	+/-0.121	0.0443	+/-0.121	0.0951	pCi/g						
Americium-241	U	0.00401	+/-0.0983	0.0771	+/-0.0983	0.160	pCi/g						
Bismuth-212		0.353	+/-0.187	0.0969	+/-0.187	0.207	pCi/g						
Bismuth-214		0.372	+/-0.0718	0.0252	+/-0.0718	0.0532	pCi/g						
Cesium-134	UI	0.00	+/-0.022	0.0156	+/-0.022	0.0332	pCi/g						
Cesium-137		0.0968	+/-0.0282	0.0126	+/-0.0282	0.0268	pCi/g						
Cobalt-60	U	0.00121	+/-0.0177	0.0153	+/-0.0177	0.033	pCi/g						
Europium-152	U	-0.0129	+/-0.0385	0.0336	+/-0.0385	0.0706	pCi/g						
Europium-154	U	-0.0158	+/-0.0456	0.038	+/-0.0456	0.0826	pCi/g						
Europium-155	U	0.0505	+/-0.0505	0.0478	+/-0.0505	0.0987	pCi/g						
Lead-212		0.545	+/-0.046	0.0206	+/-0.046	0.0428	pCi/g						
Lead-214		0.478	+/-0.0792	0.025	+/-0.0792	0.0526	pCi/g						
Manganese-54	U	-0.000989	+/-0.0161	0.0138	+/-0.0161	0.0293	pCi/g						
Niobium-94	U	-0.00587	+/-0.0143	0.0122	+/-0.0143	0.0259	pCi/g						
Potassium-40		8.79	+/-0.682	0.121	+/-0.682	0.266	pCi/g						
Radium-226		0.372	+/-0.0718	0.0252	+/-0.0718	0.0532	pCi/g						
Silver-108m	U	-0.00393	+/-0.0138	0.0118	+/-0.0138	0.0249	pCi/g						
Thallium-208		0.192	+/-0.0327	0.0131	+/-0.0327	0.0277	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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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: October 24, 2006

Client Sample ID: 9520-0002-014F
Sample ID: 174224016

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-013F
Sample ID: 174224017
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 16.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid - FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.730	+/-0.126	0.0412	+/-0.126	0.0882	pCi/g						
Americium-241	U	-0.029	+/-0.0586	0.0533	+/-0.0586	0.110	pCi/g						
Bismuth-212		0.522	+/-0.218	0.101	+/-0.218	0.213	pCi/g						
Bismuth-214		0.582	+/-0.0711	0.0243	+/-0.0711	0.0512	pCi/g						
Cesium-134	UI	0.00	+/-0.0278	0.0163	+/-0.0278	0.0344	pCi/g						
Cesium-137		0.203	+/-0.036	0.0128	+/-0.036	0.027	pCi/g						
Cobalt-60		0.0472	+/-0.0221	0.0118	+/-0.0221	0.0259	pCi/g						
Europium-152	U	-0.043	+/-0.0405	0.0339	+/-0.0405	0.0709	pCi/g						
Europium-154	U	0.012	+/-0.049	0.0417	+/-0.049	0.0893	pCi/g						
Europium-155	U	0.0235	+/-0.0505	0.046	+/-0.0505	0.0945	pCi/g						
Lead-212		0.727	+/-0.0508	0.020	+/-0.0508	0.0414	pCi/g						
Lead-214		0.582	+/-0.0746	0.0261	+/-0.0746	0.0545	pCi/g						
Manganese-54	U	0.021	+/-0.0252	0.0137	+/-0.0252	0.029	pCi/g						
Niobium-94	U	0.00768	+/-0.0138	0.0126	+/-0.0138	0.0264	pCi/g						
Potassium-40		12.4	+/-0.663	0.0915	+/-0.663	0.205	pCi/g						
Radium-226		0.582	+/-0.0711	0.0243	+/-0.0711	0.0512	pCi/g						
Silver-108m	U	-0.00125	+/-0.0132	0.0114	+/-0.0132	0.0239	pCi/g						
Thallium-208		0.235	+/-0.0332	0.0132	+/-0.0332	0.0279	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1127	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-013F
Sample ID: 174224017

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-011F
Sample ID: 174224018
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 8.65%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.632	+/-0.230	0.0998	+/-0.230	0.200	pCi/g						
Americium-241	U	0.0295	+/-0.0488	0.0357	+/-0.0488	0.0714	pCi/g						
Bismuth-212	U	0.409	+/-0.332	0.207	+/-0.332	0.415	pCi/g						
Bismuth-214		0.462	+/-0.125	0.0436	+/-0.125	0.0872	pCi/g						
Cesium-134	U	0.0581	+/-0.0394	0.0368	+/-0.0394	0.0735	pCi/g						
Cesium-137		0.0908	+/-0.0712	0.0288	+/-0.0712	0.0575	pCi/g						
Cobalt-60	U	0.0282	+/-0.0376	0.0321	+/-0.0376	0.0641	pCi/g						
Europium-152	U	-0.0458	+/-0.119	0.0672	+/-0.119	0.134	pCi/g						
Europium-154	U	0.0228	+/-0.142	0.105	+/-0.142	0.210	pCi/g						
Europium-155	U	0.0319	+/-0.066	0.060	+/-0.066	0.120	pCi/g						
Lead-212		0.711	+/-0.0965	0.0337	+/-0.0965	0.0673	pCi/g						
Lead-214		0.557	+/-0.126	0.0465	+/-0.126	0.0929	pCi/g						
Manganese-54	U	0.00341	+/-0.0382	0.0289	+/-0.0382	0.0578	pCi/g						
Niobium-94	U	0.00939	+/-0.0327	0.0282	+/-0.0327	0.0564	pCi/g						
Potassium-40		11.1	+/-1.34	0.241	+/-1.34	0.482	pCi/g						
Radium-226		0.462	+/-0.125	0.0436	+/-0.125	0.0872	pCi/g						
Silver-108m	U	-0.0147	+/-0.0284	0.0236	+/-0.0284	0.0472	pCi/g						
Thallium-208		0.240	+/-0.0636	0.0268	+/-0.0636	0.0536	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1128	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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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: October 24, 2006

Client Sample ID: 9520-0002-011F
Sample ID: 174224018

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-011FS
Sample ID: 174224019
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 8.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.633	+/-0.160	0.065	+/-0.160	0.139	pCi/g						
Americium-241	U	0.0304	+/-0.0425	0.0269	+/-0.0425	0.0554	pCi/g						
Bismuth-212		0.357	+/-0.290	0.151	+/-0.290	0.320	pCi/g						
Bismuth-214		0.411	+/-0.0995	0.0372	+/-0.0995	0.0782	pCi/g						
Cesium-134	U	0.00458	+/-0.0269	0.0233	+/-0.0269	0.0493	pCi/g						
Cesium-137		0.0841	+/-0.0353	0.0197	+/-0.0353	0.0417	pCi/g						
Cobalt-60	U	0.0115	+/-0.0221	0.0198	+/-0.0221	0.043	pCi/g						
Europium-152	U	-0.0189	+/-0.0519	0.0445	+/-0.0519	0.0933	pCi/g						
Europium-154	U	0.127	+/-0.110	0.0645	+/-0.110	0.138	pCi/g						
Europium-155	U	0.0527	+/-0.0708	0.0431	+/-0.0708	0.0889	pCi/g						
Lead-212		0.556	+/-0.0586	0.0362	+/-0.0586	0.0743	pCi/g						
Lead-214		0.576	+/-0.0765	0.0307	+/-0.0765	0.0645	pCi/g						
Manganese-54	U	0.0188	+/-0.0216	0.0197	+/-0.0216	0.0418	pCi/g						
Niobium-94	U	-0.00992	+/-0.0222	0.0187	+/-0.0222	0.0395	pCi/g						
Potassium-40		10.2	+/-0.809	0.153	+/-0.809	0.341	pCi/g						
Radium-226		0.411	+/-0.0995	0.0372	+/-0.0995	0.0782	pCi/g						
Silver-108m	U	0.00271	+/-0.0178	0.0165	+/-0.0178	0.0347	pCi/g						
Thallium-208		0.196	+/-0.0449	0.0198	+/-0.0449	0.0418	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1128	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-011FS

Sample ID: 174224019

Project: YANK01204

Client ID: YANK001

Vol. Recv.:

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

- > 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
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 - U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
 - UI Gamma Spectroscopy--Uncertain identification
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 - 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.

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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: October 24, 2006

Client Sample ID: 9520-0002-019F
Sample ID: 174224020
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 9.97%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.709	+/-0.150	0.060	+/-0.150	0.130	pCi/g						
Americium-241	U	-0.0317	+/-0.119	0.0823	+/-0.119	0.171	pCi/g						
Bismuth-212		0.464	+/-0.206	0.119	+/-0.206	0.257	pCi/g						
Bismuth-214		0.472	+/-0.0905	0.0318	+/-0.0905	0.068	pCi/g						
Cesium-134	U	0.0308	+/-0.0347	0.023	+/-0.0347	0.049	pCi/g						
Cesium-137		0.107	+/-0.0312	0.0169	+/-0.0312	0.0363	pCi/g						
Cobalt-60	U	0.0134	+/-0.0223	0.0202	+/-0.0223	0.0445	pCi/g						
Europium-152	U	0.0229	+/-0.0505	0.0444	+/-0.0505	0.0937	pCi/g						
Europium-154	U	0.0133	+/-0.0576	0.0504	+/-0.0576	0.112	pCi/g						
Europium-155	U	0.0476	+/-0.055	0.0531	+/-0.055	0.110	pCi/g						
Lead-212		0.735	+/-0.0682	0.0324	+/-0.0682	0.0671	pCi/g						
Lead-214		0.587	+/-0.0883	0.0335	+/-0.0883	0.0705	pCi/g						
Manganese-54	U	0.0188	+/-0.0228	0.0205	+/-0.0228	0.0437	pCi/g						
Niobium-94	U	0.0147	+/-0.0182	0.0167	+/-0.0182	0.0356	pCi/g						
Potassium-40		10.7	+/-0.939	0.176	+/-0.939	0.392	pCi/g						
Radium-226		0.472	+/-0.0905	0.0318	+/-0.0905	0.068	pCi/g						
Silver-108m	U	0.0181	+/-0.0173	0.0165	+/-0.0173	0.035	pCi/g						
Thallium-208		0.250	+/-0.0421	0.0154	+/-0.0421	0.0332	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1128	580004

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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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: October 24, 2006

Client Sample ID: 9520-0002-019F
Sample ID: 174224020

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-015F
Sample ID: 174224021
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 11.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.176	+/-0.185	0.0813	+/-0.187	0.263	pCi/g		MXA	10/20/06	0813	580396	1
									1				
Curium-242	U	0.0202	+/-0.0803	0.0493	+/-0.0804	0.204	pCi/g						
Curium-243/244	U	0.126	+/-0.203	0.129	+/-0.204	0.358	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.00	+/-0.0536	0.00	+/-0.0536	0.0741	pCi/g		MXA	10/20/06	0813	580398	2
									1				
Plutonium-239/240	U	-0.0186	+/-0.0635	0.0649	+/-0.0635	0.204	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	-3.63	+/-7.43	6.39	+/-7.43	13.4	pCi/g		MXA	10/21/06	1649	580400	3
									1				
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.767	+/-0.217	0.0823	+/-0.217	0.176	pCi/g		MJH1	10/23/06	2156	580187	4
Americium-241	U	0.00809	+/-0.0352	0.0313	+/-0.0352	0.0645	pCi/g						
Bismuth-212		0.594	+/-0.317	0.152	+/-0.317	0.327	pCi/g						
Bismuth-214		0.499	+/-0.120	0.0436	+/-0.120	0.0919	pCi/g						
Cesium-134	U	0.0488	+/-0.0474	0.029	+/-0.0474	0.0613	pCi/g						
Cesium-137		0.167	+/-0.0526	0.0245	+/-0.0526	0.0517	pCi/g						
Cobalt-60	U	0.0189	+/-0.0291	0.026	+/-0.0291	0.0563	pCi/g						
Europium-152	U	0.0113	+/-0.0668	0.0572	+/-0.0668	0.120	pCi/g						
Europium-154	U	-0.0108	+/-0.0836	0.0694	+/-0.0836	0.150	pCi/g						
Europium-155	U	0.0838	+/-0.096	0.0467	+/-0.096	0.0968	pCi/g						
Lead-212		0.608	+/-0.0803	0.0413	+/-0.0803	0.085	pCi/g						
Lead-214		0.587	+/-0.0952	0.0413	+/-0.0952	0.0863	pCi/g						
Manganese-54	U	-0.00162	+/-0.0278	0.023	+/-0.0278	0.0491	pCi/g						
Niobium-94	U	0.0142	+/-0.026	0.0229	+/-0.026	0.0483	pCi/g						
Potassium-40		10.9	+/-1.01	0.207	+/-1.01	0.456	pCi/g						
Radium-226		0.499	+/-0.120	0.0436	+/-0.120	0.0919	pCi/g						
Silver-108m	U	-0.000455	+/-0.0224	0.0199	+/-0.0224	0.0419	pCi/g						
Thallium-208		0.243	+/-0.053	0.0224	+/-0.053	0.0473	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90		0.0354	+/-0.0229	0.0142	+/-0.0229	0.0337	pCi/g		KSD1	10/20/06	1939	580488	5

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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: October 24, 2006

Client Sample ID: 9520-0002-015F
Sample ID: 174224021

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													
<i>LSC, Tritium Dist, Solid-HTD2, ALL FSS</i>													
Tritium	U	-2.18	+/-3.33	2.85	+/-3.33	5.85	pCi/g	DFA1	10/23/06	1538	580401	6	
<i>Liquid Scint C14, Solid ALL FSS</i>													
Carbon-14	U	-0.105	+/-0.111	0.0955	+/-0.111	0.196	pCi/g	AXD2	10/21/06	1537	580402	8	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	1.29	+/-30.8	22.5	+/-30.8	47.2	pCi/g	MXPI	10/23/06	0032	580395	9	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	-2.58	+/-9.45	8.04	+/-9.45	16.9	pCi/g	MXPI	10/22/06	2019	580397	10	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.285	+/-0.255	0.210	+/-0.255	0.427	pCi/g	KXR1	10/24/06	0830	580399	11	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1131	580006

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 906.0 Modified
8	EPA EERF C-01 Modified
9	DOE RESL Fe-1, Modified
10	DOE RESL Ni-1, Modified
11	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	82	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	95	(15%-125%)
Plutonium-241	Liquid Scint Pu241, Solid-ALL FS	91	(25%-125%)
Strontium-90	GFPC, Sr90, solid-ALL FSS	98	(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
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: October 24, 2006

Client Sample ID: 9520-0002-015F
Sample ID: 174224021

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			98		(25%-125%)						
Iron-55		Liquid Scint Fe55, Solid-ALL FS			64		(15%-125%)						
Nickel-63		Liquid Scint Ni63, Solid-ALL FS			85		(25%-125%)						
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-ALL FS			85		(25%-125%)						
Technetium-99		Liquid Scint Tc99, Solid-ALL FS			41		(15%-125%)						
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-ALL FS			41		(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.

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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: October 24, 2006

Client Sample ID: 9520-0002-018F
Sample ID: 174224022
Matrix: TS
Collect Date: 09-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 9.08%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid - FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.699	+/-0.111	0.039	+/-0.111	0.083	pCi/g						
Americium-241	U	0.0248	+/-0.0556	0.0489	+/-0.0556	0.101	pCi/g						
Bismuth-212		0.638	+/-0.174	0.082	+/-0.174	0.174	pCi/g						
Bismuth-214		0.425	+/-0.0601	0.0225	+/-0.0601	0.0473	pCi/g						
Cesium-134	UI	0.00	+/-0.0336	0.0138	+/-0.0336	0.0291	pCi/g						
Cesium-137		0.119	+/-0.0293	0.0111	+/-0.0293	0.0235	pCi/g						
Cobalt-60	U	0.0133	+/-0.0145	0.0131	+/-0.0145	0.0281	pCi/g						
Europium-152	U	0.0025	+/-0.0361	0.0328	+/-0.0361	0.0683	pCi/g						
Europium-154	U	0.0155	+/-0.040	0.0349	+/-0.040	0.0748	pCi/g						
Europium-155	U	0.0641	+/-0.0415	0.0406	+/-0.0415	0.0835	pCi/g						
Lead-212		0.660	+/-0.044	0.0185	+/-0.044	0.0383	pCi/g						
Lead-214		0.525	+/-0.0554	0.0225	+/-0.0554	0.0469	pCi/g						
Manganese-54	U	0.013	+/-0.0122	0.0115	+/-0.0122	0.0244	pCi/g						
Niobium-94	U	-0.00495	+/-0.0115	0.00997	+/-0.0115	0.0211	pCi/g						
Potassium-40		10.6	+/-0.599	0.0937	+/-0.599	0.206	pCi/g						
Radium-226		0.425	+/-0.0601	0.0225	+/-0.0601	0.0473	pCi/g						
Silver-108m	U	-0.000768	+/-0.0124	0.0096	+/-0.0124	0.0202	pCi/g						
Thallium-208		0.217	+/-0.0293	0.0104	+/-0.0293	0.022	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1131	580006

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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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: October 24, 2006

Client Sample ID: 9520-0002-018F
Sample ID: 174224022

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-021F
Sample ID: 174224023
Matrix: TS
Collect Date: 11-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 2.93%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.13	+/-0.239	0.0919	+/-0.239	0.184	pCi/g						
Americium-241	UI	0.00	+/-0.0435	0.0368	+/-0.0435	0.0735	pCi/g						
Bismuth-212		0.950	+/-0.349	0.214	+/-0.349	0.428	pCi/g						
Bismuth-214		0.878	+/-0.146	0.0484	+/-0.146	0.0968	pCi/g						
Cesium-134	UI	0.00	+/-0.0525	0.0329	+/-0.0525	0.0657	pCi/g						
Cesium-137		0.0687	+/-0.0378	0.0291	+/-0.0378	0.0582	pCi/g						
Cobalt-60	U	0.0468	+/-0.0414	0.031	+/-0.0414	0.062	pCi/g						
Europium-152	U	0.0503	+/-0.0926	0.0592	+/-0.0926	0.118	pCi/g						
Europium-154	U	-0.0343	+/-0.107	0.0864	+/-0.107	0.173	pCi/g						
Europium-155	U	0.037	+/-0.0631	0.057	+/-0.0631	0.114	pCi/g						
Lead-212		1.02	+/-0.114	0.0333	+/-0.114	0.0665	pCi/g						
Lead-214		0.986	+/-0.146	0.0425	+/-0.146	0.085	pCi/g						
Manganese-54	U	-0.0021	+/-0.0322	0.0278	+/-0.0322	0.0555	pCi/g						
Niobium-94	U	0.0104	+/-0.0274	0.0247	+/-0.0274	0.0493	pCi/g						
Potassium-40		14.8	+/-1.23	0.219	+/-1.23	0.437	pCi/g						
Radium-226		0.878	+/-0.146	0.0484	+/-0.146	0.0968	pCi/g						
Silver-108m	U	-0.0337	+/-0.0263	0.021	+/-0.0263	0.0419	pCi/g						
Thallium-208		0.331	+/-0.0749	0.0254	+/-0.0749	0.0508	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMBI	10/17/06	1131	580006

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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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: October 24, 2006

Client Sample ID: 9520-0002-021F
Sample ID: 174224023

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-022F
Sample ID: 174224024
Matrix: TS
Collect Date: 11-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 3.14%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.23	+/-0.171	0.0614	+/-0.171	0.131	pCi/g						
Americium-241	U	0.0453	+/-0.117	0.0851	+/-0.117	0.175	pCi/g						
Bismuth-212		0.711	+/-0.245	0.122	+/-0.245	0.258	pCi/g						
Bismuth-214		0.833	+/-0.0947	0.0292	+/-0.0947	0.0616	pCi/g						
Cesium-134	UI	0.00	+/-0.0299	0.0225	+/-0.0299	0.0472	pCi/g						
Cesium-137		0.0902	+/-0.0242	0.0168	+/-0.0242	0.0355	pCi/g						
Cobalt-60		0.0813	+/-0.0353	0.0174	+/-0.0353	0.0377	pCi/g						
Europium-152	U	-0.0581	+/-0.0517	0.0414	+/-0.0517	0.0864	pCi/g						
Europium-154	U	0.0196	+/-0.0608	0.0532	+/-0.0608	0.115	pCi/g						
Europium-155	U	0.0461	+/-0.0522	0.0503	+/-0.0522	0.103	pCi/g						
Lead-212		1.02	+/-0.060	0.0252	+/-0.060	0.0521	pCi/g						
Lead-214		0.965	+/-0.0961	0.0306	+/-0.0961	0.0638	pCi/g						
Manganese-54	U	0.00576	+/-0.0199	0.0171	+/-0.0199	0.0362	pCi/g						
Niobium-94	U	0.00741	+/-0.0184	0.0162	+/-0.0184	0.034	pCi/g						
Potassium-40		15.7	+/-0.914	0.137	+/-0.914	0.304	pCi/g						
Radium-226		0.833	+/-0.0947	0.0292	+/-0.0947	0.0616	pCi/g						
Silver-108m	U-0.000439		+/-0.0162	0.0145	+/-0.0162	0.0303	pCi/g						
Thallium-208		0.325	+/-0.0417	0.0167	+/-0.0417	0.0352	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1131	580006

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-022F
Sample ID: 174224024

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

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

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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: October 24, 2006

Client Sample ID: 9520-0002-023F
Sample ID: 174224025
Matrix: TS
Collect Date: 12-OCT-06
Receive Date: 17-OCT-06
Collector: Client
Moisture: 14.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.715	+/-0.112	0.0454	+/-0.112	0.0967	pCi/g						
Americium-241	U	0.0307	+/-0.102	0.083	+/-0.102	0.171	pCi/g						
Bismuth-212		0.421	+/-0.170	0.104	+/-0.170	0.219	pCi/g						
Bismuth-214		0.581	+/-0.0767	0.026	+/-0.0767	0.0545	pCi/g						
Cesium-134	U	0.0251	+/-0.0205	0.0167	+/-0.0205	0.0351	pCi/g						
Cesium-137		0.0419	+/-0.0255	0.0119	+/-0.0255	0.0253	pCi/g						
Cobalt-60	U-0.000261		+/-0.0154	0.0132	+/-0.0154	0.0287	pCi/g						
Europium-152	U	-0.0287	+/-0.0411	0.0358	+/-0.0411	0.0746	pCi/g						
Europium-154	U	-0.0129	+/-0.0501	0.0425	+/-0.0501	0.091	pCi/g						
Europium-155	U	0.0243	+/-0.0505	0.0477	+/-0.0505	0.0984	pCi/g						
Lead-212		0.746	+/-0.0499	0.0211	+/-0.0499	0.0437	pCi/g						
Lead-214		0.670	+/-0.0636	0.027	+/-0.0636	0.0562	pCi/g						
Manganese-54	U	0.0143	+/-0.0174	0.0159	+/-0.0174	0.0333	pCi/g						
Niobium-94	U	0.00291	+/-0.0148	0.0133	+/-0.0148	0.0279	pCi/g						
Potassium-40		13.1	+/-0.725	0.117	+/-0.725	0.257	pCi/g						
Radium-226		0.581	+/-0.0767	0.026	+/-0.0767	0.0545	pCi/g						
Silver-108m	U	-0.00378	+/-0.0136	0.0118	+/-0.0136	0.0247	pCi/g						
Thallium-208		0.234	+/-0.0322	0.0126	+/-0.0322	0.0265	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	10/17/06	1131	580006

The following Analytical Methods were performed

Method	Description
I	EML HASL 300, 4.5.2.3

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

GENERAL ENGINEERING LABORATORIES, LLC

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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: October 24, 2006

Client Sample ID: 9520-0002-023F
Sample ID: 174224025

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

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

GENERAL ENGINEERING LABORATORIES, LLC

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

QC Summary

Report Date: October 24, 2006

Page 1 of 12

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

Contact: East Hampton, Connecticut
Mr. Jack McCarthy

Workorder: 174224

Partrname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	580396										
QC1201210038	174224006	DUP									
Americium-241		U	-0.00901	U	-0.0356	pCi/g	119	(0% - 100%)	AXA1	10/20/06	08:13
		Uncert:	+/-0.0461		+/-0.035						
		TPU:	+/-0.0461		+/-0.0352						
Curium-242		U	0.00	U	-0.0155	pCi/g	200	(0% - 100%)			
		Uncert:	+/-0.0812		+/-0.0215						
		TPU:	+/-0.0812		+/-0.0216						
Curium-243/244		U	0.00	U	-0.0556	pCi/g	200	(0% - 100%)			
		Uncert:	+/-0.0764		+/-0.123						
		TPU:	+/-0.0764		+/-0.123						
QC1201210040	LCS										
Americium-241	2.72				2.33	pCi/g		86 (75%-125%)		10/20/06	08:13
	Uncert:				+/-0.266						
	TPU:				+/-0.392						
Curium-242				U	0.00823	pCi/g					
	Uncert:				+/-0.0232						
	TPU:				+/-0.0232						
Curium-243/244	3.27				3.55	pCi/g		109 (75%-125%)			
	Uncert:				+/-0.330						
	TPU:				+/-0.549						
QC1201210037	MB										
Americium-241				U	2.200E-05	pCi/g					10/20/06 08:13
	Uncert:				+/-0.0261						
	TPU:				+/-0.0261						
Curium-242				U	0.00	pCi/g					
	Uncert:				+/-0.0134						
	TPU:				+/-0.0134						
Curium-243/244				U	-0.00919	pCi/g					
	Uncert:				+/-0.0222						
	TPU:				+/-0.0222						
QC1201210039	174224006	MS									
Americium-241	13.3	U	-0.00901		13.9	pCi/g		105 (75%-125%)		10/20/06	08:13
	Uncert:		+/-0.0461		+/-1.44						
	TPU:		+/-0.0461		+/-2.27						
Curium-242		U	0.00	U	0.0808	pCi/g					
	Uncert:		+/-0.0812		+/-0.112						
	TPU:		+/-0.0812		+/-0.112						
Curium-243/244	16.1	U	0.00		18.4	pCi/g		114 (75%-125%)			
	Uncert:		+/-0.0764		+/-1.66						
	TPU:		+/-0.0764		+/-2.87						
Batch	580398										
QC1201210046	174224006	DUP									
Plutonium-238		U	0.00905	U	0.0116	pCi/g	25	(0% - 100%)	AXA1	10/20/06	08:13

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Parname		NOM		Sample	Qual	QC	Units	RPD %	REC %	Range	Anlst	Date	Time
Rad Alpha Spec													
Batch	580398												

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Parname	NOM	Sample	Qual	QC	Units	RPD %	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 580184											
Americium-241	TPU:	+/-0.149									
	U	-0.0484	U	-0.009	pCi/g	137		(0% - 100%)			
	Uncert:	+/-0.120		+/-0.0993							
Bismuth-212	TPU:	+/-0.120		+/-0.0993							
		0.740		0.587	pCi/g	23		(0% - 100%)			
	Uncert:	+/-0.207		+/-0.190							
Bismuth-214	TPU:	+/-0.207		+/-0.190							
		0.521		0.572	pCi/g	9		(0% - 100%)			
	Uncert:	+/-0.0704		+/-0.0709							
Cesium-134	TPU:	+/-0.0704		+/-0.0709							
	U	0.0423	U	0.0299	pCi/g	34		(0% - 100%)			
	Uncert:	+/-0.0387		+/-0.0245							
Cesium-137	TPU:	+/-0.0387		+/-0.0245							
		0.053	U	0.0266	pCi/g	66		(0% - 100%)			
	Uncert:	+/-0.0324		+/-0.0247							
Cobalt-60	TPU:	+/-0.0324		+/-0.0247							
	U	0.00102	U	0.000496	pCi/g	69		(0% - 100%)			
	Uncert:	+/-0.0188		+/-0.0137							
Europium-152	TPU:	+/-0.0188		+/-0.0137							
	U	-0.00774	U	0.0158	pCi/g	583		(0% - 100%)			
	Uncert:	+/-0.0461		+/-0.0371							
Europium-154	TPU:	+/-0.0461		+/-0.0371							
	U	-0.0447	U	-0.0102	pCi/g	126		(0% - 100%)			
	Uncert:	+/-0.0569		+/-0.0472							
Europium-155	TPU:	+/-0.0569		+/-0.0472							
	U	0.035	U	0.0663	pCi/g	62		(0% - 100%)			
	Uncert:	+/-0.0562		+/-0.0598							
Lead-212	TPU:	+/-0.0562		+/-0.0598							
		0.730		0.681	pCi/g	7		(0% - 20%)			
	Uncert:	+/-0.0581		+/-0.0478							
Lead-214	TPU:	+/-0.0581		+/-0.0478							
		0.572		0.586	pCi/g	2		(0% - 20%)			
	Uncert:	+/-0.0735		+/-0.0627							
Manganese-54	TPU:	+/-0.0735		+/-0.0627							
	U	0.002	U	0.019	pCi/g	162		(0% - 100%)			
	Uncert:	+/-0.0188		+/-0.0175							
Niobium-94	TPU:	+/-0.0188		+/-0.0175							
	U	0.00326	U	0.0155	pCi/g	131		(0% - 100%)			
	Uncert:	+/-0.0161		+/-0.0162							
Potassium-40	TPU:	+/-0.0161		+/-0.0162							
		10.7		10.9	pCi/g	2		(0% - 20%)			
	Uncert:	+/-0.758		+/-0.617							
Radium-226	TPU:	+/-0.758		+/-0.617							
		0.521		0.572	pCi/g	9		(0% - 100%)			
	Uncert:	+/-0.0704		+/-0.0709							
Silver-108m	TPU:	+/-0.0704		+/-0.0709							
	U	-0.00426	U	-0.00499	pCi/g	16		(0% - 100%)			
	Uncert:	+/-0.0157		+/-0.0125							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	580184										
Thallium-208	TPU:	+/-0.0157		+/-0.0125	pCi/g	9		(0% - 100%)			
		0.249		0.228							
	Uncert:	+/-0.0433		+/-0.0352							
	TPU:	+/-0.0433		+/-0.0352							
QC1201209531 LCS											
Actinium-228			U	0.0686	pCi/g					10/23/06	18:35
	Uncert:			+/-0.595							
Americium-241	TPU:			+/-0.595	pCi/g						
	23.4			25.1			107	(75%-125%)			
	Uncert:			+/-1.41							
	TPU:			+/-1.41							
Bismuth-212			U	-0.18	pCi/g						
	Uncert:			+/-0.939							
	TPU:			+/-0.939							
Bismuth-214			U	-0.0765	pCi/g						
	Uncert:			+/-0.206							
	TPU:			+/-0.206							
Cesium-134			U	0.141	pCi/g						
	Uncert:			+/-0.115							
	TPU:			+/-0.115							
Cesium-137	9.55			10.1	pCi/g		106	(75%-125%)			
	Uncert:			+/-0.480							
	TPU:			+/-0.480							
Cobalt-60	14.2			14.8	pCi/g		104	(75%-125%)			
	Uncert:			+/-0.669							
	TPU:			+/-0.669							
Europium-152			U	0.426	pCi/g						
	Uncert:			+/-0.272							
	TPU:			+/-0.272							
Europium-154			U	-0.119	pCi/g						
	Uncert:			+/-0.260							
	TPU:			+/-0.260							
Europium-155			U	-0.057	pCi/g						
	Uncert:			+/-0.272							
	TPU:			+/-0.272							
Lead-212			U	0.0794	pCi/g						
	Uncert:			+/-0.141							
	TPU:			+/-0.141							
Lead-214			U	0.122	pCi/g						
	Uncert:			+/-0.202							
	TPU:			+/-0.202							
Manganese-54			U	-0.0237	pCi/g						
	Uncert:			+/-0.129							
	TPU:			+/-0.129							
Niobium-94			U	-0.0208	pCi/g						
	Uncert:			+/-0.108							
	TPU:			+/-0.108							
Potassium-40			U	0.464	pCi/g						

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Parmname	NOM	Sample Qual	QC	Units	RPD %	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	580184									
			Uncert:							
			TPU:							
Radium-226		U	-0.0765	pCi/g			(75%-125%)			
			Uncert:							
			TPU:							
Silver-108m		U	0.0616	pCi/g						
			Uncert:							
			TPU:							
Thallium-208		U	0.180	pCi/g						
			Uncert:							
			TPU:							
QC1201209529 MB										
Actinium-228		U	0.00591	pCi/g					10/23/06	21:55
			Uncert:							
			TPU:							
Americium-241		U	-0.00933	pCi/g						
			Uncert:							
			TPU:							
Bismuth-212		U	-0.0657	pCi/g						
			Uncert:							
			TPU:							
Bismuth-214		U	0.0217	pCi/g						
			Uncert:							
			TPU:							
Cesium-134		U	0.0108	pCi/g						
			Uncert:							
			TPU:							
Cesium-137		U	-0.0074	pCi/g						
			Uncert:							
			TPU:							
Cobalt-60		U	-0.00733	pCi/g						
			Uncert:							
			TPU:							
Europium-152		U	0.0152	pCi/g						
			Uncert:							
			TPU:							
Europium-154		U	0.00447	pCi/g						
			Uncert:							
			TPU:							
Europium-155		U	-0.0125	pCi/g						
			Uncert:							
			TPU:							
Lead-212		UI	0.00	pCi/g						
			Uncert:							
			TPU:							
Lead-214		U	0.0313	pCi/g						
			Uncert:							
			TPU:							

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Parname	NOM	Sample Qual	QC	Units	RPD %	REC %	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	580184									
Manganese-54		U	-0.00428	pCi/g						
	Uncert:		+/-0.0125							
	TPU:		+/-0.0125							
Niobium-94		U	0.00916	pCi/g						
	Uncert:		+/-0.0116							
	TPU:		+/-0.0116							
Potassium-40		U	0.0648	pCi/g						
	Uncert:		+/-0.114							
	TPU:		+/-0.114							
Radium-226		U	0.0217	pCi/g						
	Uncert:		+/-0.0605							
	TPU:		+/-0.0605							
Silver-108m		U	0.00203	pCi/g						
	Uncert:		+/-0.00957							
	TPU:		+/-0.00957							
Thallium-208		U	-0.00106	pCi/g						
	Uncert:		+/-0.0125							
	TPU:		+/-0.0125							
Batch	580187									
QC1201209537	174224021	DUP								
Actinium-228			0.767	0.652	pCi/g	16	(0% - 100%)	MJH1	10/24/06	08:02
	Uncert:		+/-0.217	+/-0.144						
	TPU:		+/-0.217	+/-0.144						
Americium-241	U	0.00809	U	-0.00863	pCi/g	6190	(0% - 100%)			
	Uncert:		+/-0.0352	+/-0.0585						
	TPU:		+/-0.0352	+/-0.0585						
Bismuth-212			0.594	0.486	pCi/g	20	(0% - 100%)			
	Uncert:		+/-0.317	+/-0.244						
	TPU:		+/-0.317	+/-0.244						
Bismuth-214			0.499	0.519	pCi/g	4	(0% - 100%)			
	Uncert:		+/-0.120	+/-0.0642						
	TPU:		+/-0.120	+/-0.0642						
Cesium-134	U	0.0488	U	0.0182	pCi/g	91	(0% - 100%)			
	Uncert:		+/-0.0474	+/-0.0194						
	TPU:		+/-0.0474	+/-0.0194						
Cesium-137			0.167	0.162	pCi/g	3	(0% - 100%)			
	Uncert:		+/-0.0526	+/-0.0267						
	TPU:		+/-0.0526	+/-0.0267						
Cobalt-60	U	0.0189	U	0.000551	pCi/g	189	(0% - 100%)			
	Uncert:		+/-0.0291	+/-0.0152						
	TPU:		+/-0.0291	+/-0.0152						
Europium-152	U	0.0113	U	0.015	pCi/g	28	(0% - 100%)			
	Uncert:		+/-0.0668	+/-0.0384						
	TPU:		+/-0.0668	+/-0.0384						
Europium-154	U	-0.0108	U	0.0378	pCi/g	359	(0% - 100%)			
	Uncert:		+/-0.0836	+/-0.0469						
	TPU:		+/-0.0836	+/-0.0469						
Europium-155	U	0.0838	U	-0.000498	pCi/g	202	(0% - 100%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	580187										
Lead-212		Uncert:		+/-0.096							
		TPU:		+/-0.096							
				0.608							
Lead-214		Uncert:		+/-0.0803							
		TPU:		+/-0.0803							
				0.587							
Manganese-54	U	Uncert:		+/-0.0952							
		TPU:		+/-0.0952							
				-0.00162							
Niobium-94	U	Uncert:		+/-0.0278							
		TPU:		+/-0.0278							
				0.0142							
Potassium-40		Uncert:		+/-0.026							
		TPU:		+/-0.026							
				10.9							
Radium-226		Uncert:		+/-1.01							
		TPU:		+/-1.01							
				0.499							
Silver-108m	U	Uncert:		+/-0.120							
		TPU:		+/-0.120							
				-0.000455							
Thallium-208		Uncert:		+/-0.0224							
		TPU:		+/-0.0224							
				0.243							
Actinium-228		Uncert:		+/-0.053							
		TPU:		+/-0.053							
				-0.0897							
Americium-241	23.4	Uncert:		+/-0.577							
		TPU:		+/-0.577							
				24.3							
Bismuth-212		Uncert:		+/-1.14							
		TPU:		+/-1.14							
				-0.369							
Bismuth-214	U	Uncert:		+/-0.925							
		TPU:		+/-0.925							
				0.128							
Cesium-134		Uncert:		+/-0.218							
		TPU:		+/-0.218							
				-0.0937							
Cesium-137	9.55	Uncert:		+/-0.140							
		TPU:		+/-0.140							
				9.91							
Cobalt-60	14.2	Uncert:		+/-0.493							
		TPU:		+/-0.493							
				14.8							
		Uncert:		+/-0.650							
		TPU:		+/-0.650							

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	580187									
Europium-152		U	-0.0694	pCi/g						
	Uncert:		+/-0.284							
	TPU:		+/-0.284							
Europium-154		U	-0.104	pCi/g						
	Uncert:		+/-0.261							
	TPU:		+/-0.261							
Europium-155		U	-0.0225	pCi/g						
	Uncert:		+/-0.279							
	TPU:		+/-0.279							
Lead-212		U	0.101	pCi/g						
	Uncert:		+/-0.140							
	TPU:		+/-0.140							
Lead-214		U	0.197	pCi/g						
	Uncert:		+/-0.213							
	TPU:		+/-0.213							
Manganese-54		U	0.0802	pCi/g						
	Uncert:		+/-0.131							
	TPU:		+/-0.131							
Niobium-94		U	-0.0585	pCi/g						
	Uncert:		+/-0.108							
	TPU:		+/-0.108							
Potassium-40		U	-0.227	pCi/g						
	Uncert:		+/-0.915							
	TPU:		+/-0.915							
Radium-226		U	0.128	pCi/g			(75%-125%)			
	Uncert:		+/-0.218							
	TPU:		+/-0.218							
Silver-108m		U	-0.0271	pCi/g						
	Uncert:		+/-0.105							
	TPU:		+/-0.105							
Thallium-208		U	0.134	pCi/g						
	Uncert:		+/-0.116							
	TPU:		+/-0.116							
QC1201209536	MB									
Actinium-228		U	-0.0025	pCi/g					10/24/06	06:30
	Uncert:		+/-0.0518							
	TPU:		+/-0.0518							
Americium-241		U	-0.000862	pCi/g						
	Uncert:		+/-0.0133							
	TPU:		+/-0.0133							
Bismuth-212		U	-0.0126	pCi/g						
	Uncert:		+/-0.120							
	TPU:		+/-0.120							
Bismuth-214		U	0.0408	pCi/g						
	Uncert:		+/-0.0373							
	TPU:		+/-0.0373							
Cesium-134		U	0.00104	pCi/g						
	Uncert:		+/-0.027							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	580187										
Cesium-137	TPU:			+/-0.027							
		U		0.00755	pCi/g						
	Uncert:			+/-0.0324							
Cobalt-60	TPU:			+/-0.0324							
		U		0.00568	pCi/g						
	Uncert:			+/-0.0178							
Europium-152	TPU:			+/-0.0178							
		U		-0.00618	pCi/g						
	Uncert:			+/-0.0385							
Europium-154	TPU:			+/-0.0385							
		U		-0.0333	pCi/g						
	Uncert:			+/-0.0578							
Europium-155	TPU:			+/-0.0578							
		U		0.020	pCi/g						
	Uncert:			+/-0.0245							
Lead-212	TPU:			+/-0.0245							
		U		0.0108	pCi/g						
	Uncert:			+/-0.0301							
Lead-214	TPU:			+/-0.0301							
		U		0.0223	pCi/g						
	Uncert:			+/-0.0434							
Manganese-54	TPU:			+/-0.0434							
		U		0.00703	pCi/g						
	Uncert:			+/-0.0177							
Niobium-94	TPU:			+/-0.0177							
		U		0.00524	pCi/g						
	Uncert:			+/-0.016							
Potassium-40	TPU:			+/-0.016							
		U		0.0126	pCi/g						
	Uncert:			+/-0.174							
Radium-226	TPU:			+/-0.174							
		U		0.0408	pCi/g						
	Uncert:			+/-0.0373							
Silver-108m	TPU:			+/-0.0373							
		U		0.00672	pCi/g						
	Uncert:			+/-0.0132							
Thallium-208	TPU:			+/-0.0132							
		U		0.00821	pCi/g						
	Uncert:			+/-0.0182							
	TPU:			+/-0.0182							
Rad Gas Flow											
Batch	580488										
QC1201210299 174224006 DUP											
Strontium-90		U	0.0274	U	0.019	pCi/g	0	(0% - 100%) KSDI		10/23/06	14:39
	Uncert:		+/-0.0243		+/-0.0165						
	TPU:		+/-0.0243		+/-0.0165						
QC1201210301 LCS											
Strontium-90		1.48			1.21	pCi/g	82	(75%-125%)		10/21/06	08:50

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow										
Batch 580488										
			Uncert:							
			TPU:							
QC1201210298 MB										
Strontium-90		U	-0.000851	pCi/g					10/21/06	08:50
			Uncert:							
			TPU:							
QC1201210300 174224006 MS										
Strontium-90	3.12	U	0.0274	2.73	pCi/g	88	(75%-125%)		10/21/06	08:50
			Uncert:							
			TPU:							
Rad Liquid Scintillation										
Batch 580395										
QC1201210034 174224006 DUP										
Iron-55		U	2.10	U	6.20	pCi/g	0	(0% - 100%)	MXPI	10/23/06 02:29
			Uncert:							
			TPU:							
QC1201210036 LCS										
Iron-55	607		623	pCi/g		103	(75%-125%)		10/23/06	03:02
			Uncert:							
			TPU:							
QC1201210033 MB										
Iron-55		U	2.58	pCi/g					10/23/06	02:12
			Uncert:							
			TPU:							
QC1201210035 174224006 MS										
Iron-55	666	U	2.10	631	pCi/g	95	(75%-125%)		10/23/06	02:45
			Uncert:							
			TPU:							
Batch 580397										
QC1201210042 174224021 DUP										
Nickel-63		U	-2.58	U	-5.26	pCi/g	0	(0% - 100%)	MXPI	10/22/06 22:13
			Uncert:							
			TPU:							
QC1201210044 LCS										
Nickel-63	180		158	pCi/g		88	(75%-125%)		10/22/06	22:46
			Uncert:							
			TPU:							
QC1201210041 MB										
Nickel-63		U	0.00	pCi/g					10/22/06	21:57
			Uncert:							
			TPU:							
QC1201210043 174224021 MS										
Nickel-63	577	U	-2.58	446	pCi/g	77	(75%-125%)		10/22/06	22:30
			Uncert:							
			TPU:							
Batch 580399										
QC1201210050 174224006 DUP										
Technetium-99		U	0.148	U	0.00881	pCi/g	0	(0% - 100%)	KXR1	10/24/06 14:39

GENERAL ENGINEERING LABORATORIES, LLC

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QC Summary

Workorder: 174224

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Parmname		NOM		Sample	Qual	QC	Units	RPD %	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation													
Batch	580399												
				Uncert:		+/-0.198							
				TPU:		+/-0.198							
QC1201210052	LCS												
Technetium-99		13.0				12.5	pCi/g		96	(75%-125%)		10/24/06	15:12
		Uncert:				+/-0.470							
		TPU:				+/-0.548							
QC1201210049	MB												
Technetium-99					U	0.0518	pCi/g					10/24/06	14:23
		Uncert:				+/-0.182							
		TPU:				+/-0.182							
QC1201210051	174224006	MS											
Technetium-99		13.1	U	0.148		12.3	pCi/g		94	(75%-125%)		10/24/06	14:55
		Uncert:		+/-0.198		+/-0.495							
		TPU:		+/-0.198		+/-0.569							
Batch	580401												
QC1201210058	174224006	DUP											
Tritium			U	-0.10	U	0.102	pCi/g	0		(0% - 100%) DFA1		10/23/06	17:41
		Uncert:		+/-2.79		+/-2.85							
		TPU:		+/-2.79		+/-2.85							
QC1201210060	LCS												
Tritium		10.7				10.7	pCi/g		100	(75%-125%)		10/20/06	00:59
		Uncert:				+/-2.15							
		TPU:				+/-2.16							
QC1201210057	MB												
Tritium					U	1.20	pCi/g					10/20/06	00:10
		Uncert:				+/-1.56							
		TPU:				+/-1.56							
QC1201210059	174224006	MS											
Tritium		48.4	U	-0.10		51.7	pCi/g		107	(75%-125%)		10/20/06	00:43
		Uncert:		+/-2.79		+/-10.2							
		TPU:		+/-2.79		+/-10.3							
Batch	580402												
QC1201210062	174224021	DUP											
Carbon-14			U	-0.105	U	-0.0719	pCi/g	0		(0% - 100%) AXD2		10/21/06	19:32
		Uncert:		+/-0.111		+/-0.109							
		TPU:		+/-0.111		+/-0.109							
QC1201210064	LCS												
Carbon-14		6.99				7.04	pCi/g		101	(75%-125%)		10/21/06	21:06
		Uncert:				+/-0.236							
		TPU:				+/-0.261							
QC1201210061	MB												
Carbon-14					U	-0.0996	pCi/g					10/21/06	18:45
		Uncert:				+/-0.108							
		TPU:				+/-0.108							
QC1201210063	174224021	MS											
Carbon-14		7.06	U	-0.105		6.82	pCi/g		97	(75%-125%)		10/21/06	20:19
		Uncert:		+/-0.111		+/-0.237							
		TPU:		+/-0.111		+/-0.260							

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QC Summary

Workorder: 174224

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

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

** Indicates analyte is a surrogate compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

General Narrative

**General Narrative
for
Connecticut Yankee Atomic Power Co.
Work Order: 174341
SDG: MSR#06-1376**

October 24, 2006

Laboratory Identification:

General Engineering Laboratories, LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary

Sample receipt

The sample arrived at General Engineering Laboratories, LLC, Charleston, South Carolina on October 18, 2006 for analysis. Shipping container temperature was checked, documented, and within specifications. The sample was delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage.

Sample Identification The laboratory received the following sample:

<u>Laboratory Identification</u>	<u>Sample Description</u>
174341001	9520-0002-024F

Items of Note

There are no items to note.

Case Narrative

Sample analyses were conducted using methodology as outlined in General Engineering Laboratories (GEL) Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

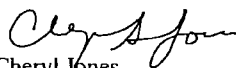
Analytical Request

One soil sample was analyzed for FSSGAM.

Data Package

The enclosed data package contains the following sections: General Narrative, Chain of Custody and Supporting Documentation, Data Review Qualifier Definitions, and data from the following fractions: Radiochemistry.

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


Cheryl Jones
Project Manager

List of current GEL Certifications as of 24 October 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)
Hawaii	N/A
Idaho	N/A
Illinois	200029
Indiana	C-SC-01
Kansas	E-10332
Kentucky	.90129
Louisiana	03046
Maryland	270
Massachusetts	M-SC012
Michigan	9903
Nevada	SC12
New Jersey	SC002
New Mexico	FL NELAP E87156
New York	11501
North Carolina	233
North Carolina Drinking W	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania	68-00485
South Carolina	10120001/10585001/10120002
Tennessee	02934
Texas	TX213-2006A
Texas NELAP	T104704235-06-TX
U.S. Dept. of Agriculture	S-52597
US Army Corps of Engineer	N/A
Utah	8037697376 GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

[illegible]

Figure 1. Sample Check-in List

Date/Time Received: 10-18-6 9:30 AM

SDG#: MSR#06-1375, MSR#06-1376

Work Order Number: 174346, 174341

Shipping Container ID: 78902082 9064 Chain of Custody #: 2006-00630, 00631, 00635

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☐ No ☐ NA
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature 18°
5. Vermiculite/packing materials is: Wet ☐ Dry ☐ NA
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

40 cpm

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: R. Limer Date: 10-18-6

Telephoned to: _____ On _____ By _____

Data Review Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
-----------	-------------

*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
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
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
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
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 174341**

Method/Analysis Information

Product: Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived
Analytical Method: EML HASL 300, 4.5.2.3
Prep Method: Dry Soil Prep
Analytical Batch Number: 581675
Prep Batch Number: 580480

Sample ID	Client ID
174341001	9520-0002-024F
1201213157	Method Blank (MB)
1201213158	174346001(9520-0004-001F) Sample Duplicate (DUP)
1201213159	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# 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: 174346001 (9520-0004-001F).

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

Sample 174341001 (9520-0002-024F) 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

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high counting uncertainty.	Potassium-40	1201213157

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: _____

 12/26/06

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#06-1376 GEL Work Order: 174341

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 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: October 26, 2006

Client Sample ID: 9520-0002-024F
Sample ID: 174341001
Matrix: Soil
Collect Date: 16-OCT-06
Receive Date: 18-OCT-06
Collector: Client
Moisture: 5.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.995	+/-0.191	0.0671	+/-0.191	0.144	pCi/g						
Americium-241	U	0.0843	+/-0.113	0.097	+/-0.113	0.200	pCi/g		MJH1	10/25/06	1522	581675	1
Bismuth-212		0.775	+/-0.282	0.138	+/-0.282	0.294	pCi/g						
Bismuth-214		0.881	+/-0.0992	0.0322	+/-0.0992	0.0683	pCi/g						
Cesium-134	U	0.043	+/-0.0318	0.0249	+/-0.0318	0.0524	pCi/g						
Cesium-137		0.0469	+/-0.0259	0.0177	+/-0.0259	0.0377	pCi/g						
Cobalt-60	U	0.011	+/-0.0225	0.0202	+/-0.0225	0.0441	pCi/g						
Europium-152	U	-0.00948	+/-0.0515	0.0439	+/-0.0515	0.0923	pCi/g						
Europium-154	U	0.006	+/-0.0634	0.0547	+/-0.0634	0.119	pCi/g						
Europium-155	U	0.0556	+/-0.0732	0.0501	+/-0.0732	0.104	pCi/g						
Lead-212		1.06	+/-0.0676	0.026	+/-0.0676	0.054	pCi/g						
Lead-214		1.02	+/-0.0948	0.0309	+/-0.0948	0.065	pCi/g						
Manganese-54	U	0.0177	+/-0.020	0.017	+/-0.020	0.0365	pCi/g						
Niobium-94	U	-0.00361	+/-0.0192	0.0163	+/-0.0192	0.0347	pCi/g						
Potassium-40		13.6	+/-0.909	0.149	+/-0.909	0.335	pCi/g						
Radium-226		0.881	+/-0.0992	0.0322	+/-0.0992	0.0683	pCi/g						
Silver-108m	U	0.0137	+/-0.0161	0.0154	+/-0.0161	0.0325	pCi/g						
Thallium-208		0.337	+/-0.0436	0.0145	+/-0.0436	0.0312	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	10/18/06	1634	580480

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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: October 26, 2006

Client Sample ID: 9520-0002-024F
Sample ID: 174341001

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

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

GENERAL ENGINEERING LABORATORIES, LLC

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

QC Summary

Report Date: October 26, 2006

Page 1 of 5

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

Contact: East Hampton, Connecticut
Mr. Jack McCarthy

Workorder: 174341

Parmname	NOM	Sample	Qual	QC	Units	RPD %	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	581675										
QC1201213158	174346001	DUP									
Actinium-228		0.739		0.528	pCi/g	33		(0% - 100%)	MJH1	10/25/06	11:04
		Uncert: +/-0.156		+/-0.123							
		TPU: +/-0.156		+/-0.123							
Americium-241	U	-0.00139	U	0.0268	pCi/g	222		(0% - 100%)			
		Uncert: +/-0.0236		+/-0.0262							
		TPU: +/-0.0236		+/-0.0262							
Bismuth-212		0.368		0.431	pCi/g	16		(0% - 100%)			
		Uncert: +/-0.265		+/-0.250							
		TPU: +/-0.265		+/-0.250							
Bismuth-214		0.442		0.468	pCi/g	6		(0% - 100%)			
		Uncert: +/-0.0807		+/-0.0892							
		TPU: +/-0.0807		+/-0.0892							
Cesium-134	UI	0.00	U	0.0283	pCi/g	75		(0% - 100%)			
		Uncert: +/-0.0441		+/-0.0245							
		TPU: +/-0.0441		+/-0.0245							
Cesium-137	U	0.0319		0.0366	pCi/g	14		(0% - 100%)			
		Uncert: +/-0.0333		+/-0.0293							
		TPU: +/-0.0333		+/-0.0293							
Cobalt-60	U	-0.00636	U	0.020	pCi/g	387		(0% - 100%)			
		Uncert: +/-0.0198		+/-0.0248							
		TPU: +/-0.0198		+/-0.0248							
Europium-152	U	0.00386	U	0.00827	pCi/g	73		(0% - 100%)			
		Uncert: +/-0.0449		+/-0.0545							
		TPU: +/-0.0449		+/-0.0545							
Europium-154	U	0.0267	U	0.0258	pCi/g	3		(0% - 100%)			
		Uncert: +/-0.0569		+/-0.0664							
		TPU: +/-0.0569		+/-0.0664							
Europium-155	U	0.0194	U	0.0266	pCi/g	31		(0% - 100%)			
		Uncert: +/-0.0412		+/-0.0399							
		TPU: +/-0.0412		+/-0.0399							
Lead-212		0.412		0.485	pCi/g	16		(0% - 100%)			
		Uncert: +/-0.0541		+/-0.0603							
		TPU: +/-0.0541		+/-0.0603							
Lead-214		0.499		0.530	pCi/g	6		(0%-20%)			
		Uncert: +/-0.0827		+/-0.0836							
		TPU: +/-0.0827		+/-0.0836							
Manganese-54	U	0.00185	U	0.0212	pCi/g	168		(0% - 100%)			
		Uncert: +/-0.0195		+/-0.0239							
		TPU: +/-0.0195		+/-0.0239							
Niobium-94	U	-0.00452	U	0.0106	pCi/g	496		(0% - 100%)			
		Uncert: +/-0.0184		+/-0.0182							
		TPU: +/-0.0184		+/-0.0182							

GENERAL ENGINEERING LABORATORIES, LLC

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QC Summary

Workorder: 174341

Page 2 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD %	REC %	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	581675										
Potassium-40		6.70		7.13	pCi/g	6		(0% - 20%)			
	Uncert:	+/-0.609		+/-0.710							
	TPU:	+/-0.609		+/-0.710							
Radium-226		0.442		0.468	pCi/g	6		(0% - 100%)			
	Uncert:	+/-0.0807		+/-0.0892							
	TPU:	+/-0.0807		+/-0.0892							
Silver-108m	U	0.00712	U	-0.00779	pCi/g	4430		(0% - 100%)			
	Uncert:	+/-0.0152		+/-0.0154							
	TPU:	+/-0.0152		+/-0.0154							
Thallium-208		0.183		0.186	pCi/g	2		(0% - 100%)			
	Uncert:	+/-0.0403		+/-0.0412							
	TPU:	+/-0.0403		+/-0.0412							
QC1201213159 LCS											
Actinium-228			U	0.743	pCi/g					10/25/06	07:15
	Uncert:			+/-0.554							
	TPU:			+/-0.554							
Americium-241	23.4			24.4	pCi/g		104	(75%-125%)			
	Uncert:			+/-1.27							
	TPU:			+/-1.27							
Bismuth-212			U	-0.111	pCi/g						
	Uncert:			+/-1.11							
	TPU:			+/-1.11							
Bismuth-214			U	0.247	pCi/g						
	Uncert:			+/-0.204							
	TPU:			+/-0.204							
Cesium-134			U	0.0584	pCi/g						
	Uncert:			+/-0.143							
	TPU:			+/-0.143							
Cesium-137	9.55			9.67	pCi/g		101	(75%-125%)			
	Uncert:			+/-0.437							
	TPU:			+/-0.437							
Cobalt-60	14.2			14.6	pCi/g		102	(75%-125%)			
	Uncert:			+/-0.633							
	TPU:			+/-0.633							
Europium-152			U	0.219	pCi/g						
	Uncert:			+/-0.293							
	TPU:			+/-0.293							
Europium-154			U	-0.0828	pCi/g						
	Uncert:			+/-0.303							
	TPU:			+/-0.303							
Europium-155			U	0.164	pCi/g						
	Uncert:			+/-0.307							
	TPU:			+/-0.307							
Lead-212			U	0.0745	pCi/g						
	Uncert:			+/-0.163							
	TPU:			+/-0.163							
Lead-214			U	0.247	pCi/g						
	Uncert:			+/-0.350							

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QC Summary

Workorder: 174341

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Paramname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch 581675										
Manganese-54	TPU:	U	+/-0.350 0.00541	pCi/g						
	Uncert:		+/-0.137							
Niobium-94	TPU:	U	+/-0.137 -0.0757	pCi/g						
	Uncert:		+/-0.111							
Potassium-40	TPU:	U	+/-0.111 -0.178	pCi/g						
	Uncert:		+/-0.986							
Radium-226	TPU:	U	+/-0.986 0.247	pCi/g			(75%-125%)			
	Uncert:		+/-0.204							
Silver-108m	TPU:	U	+/-0.204 0.0371	pCi/g						
	Uncert:		+/-0.113							
Thallium-208	TPU:	U	+/-0.113 0.0403	pCi/g						
	Uncert:		+/-0.114							
	TPU:		+/-0.114							
QC1201213157 MB										
Actinium-228		U	0.0547	pCi/g					10/25/06	10:33
	Uncert:		+/-0.0339							
	TPU:		+/-0.0339							
Americium-241		U	0.035	pCi/g						
	Uncert:		+/-0.0503							
	TPU:		+/-0.0503							
Bismuth-212		U	0.0861	pCi/g						
	Uncert:		+/-0.0721							
	TPU:		+/-0.0721							
Bismuth-214		U	0.0234	pCi/g						
	Uncert:		+/-0.0389							
	TPU:		+/-0.0389							
Cesium-134		U	0.00174	pCi/g						
	Uncert:		+/-0.00859							
	TPU:		+/-0.00859							
Cesium-137		U	-0.00489	pCi/g						
	Uncert:		+/-0.00879							
	TPU:		+/-0.00879							
Cobalt-60		U	-0.00292	pCi/g						
	Uncert:		+/-0.00844							
	TPU:		+/-0.00844							
Europium-152		U	-0.0124	pCi/g						
	Uncert:		+/-0.0226							
	TPU:		+/-0.0226							
Europium-154		U	-0.0125	pCi/g						
	Uncert:		+/-0.0235							
	TPU:		+/-0.0235							
Europium-155		U	-0.00752	pCi/g						

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QC Summary

Workorder: 174341

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Parmname	NOM	Sample Qual	QC	Units	RPD %	REC %	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	581675									
			Uncert:							
			TPU:							
Lead-212		U	0.00708	pCi/g						
			Uncert:							
			TPU:							
Lead-214		U	0.0307	pCi/g						
			Uncert:							
			TPU:							
Manganese-54		U	-0.003	pCi/g						
			Uncert:							
			TPU:							
Niobium-94		U	0.0088	pCi/g						
			Uncert:							
			TPU:							
Potassium-40		UI	0.00	pCi/g						
			Uncert:							
			TPU:							
Radium-226		U	0.0234	pCi/g						
			Uncert:							
			TPU:							
Silver-108m		U	-0.00204	pCi/g						
			Uncert:							
			TPU:							
Thallium-208		U	0.00488	pCi/g						
			Uncert:							
			TPU:							

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

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QC Summary

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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 acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

SOUTHWEST SITE STORAGE AREA
SURVEY UNIT 9520-0002

RELEASE RECORD

ATTACHMENT 4 (DQA RESULTS)

SOUTHWEST SITE STORAGE AREA
SURVEY UNIT 9520-0002

RELEASE RECORD

ATTACHMENT 4A (PRELIMINARY DATA REVIEW)

PRELIMINARY DATA REVIEW FORM


Survey Unit : 9520-0002
 Survey Unit Name : Southwest Site Storage area
 Classification : 2
 Survey Media : Soil
 Type of Survey : Final Status Survey
 Type of Measurement : Radionuclide Specific
 Number of Measurements : 15

BASIC STATISTICAL QUANTITIES

Cs-137
 Target Level (pCi/g) : 5.38E+00
 Minimum Value : 0.00E+00
 Maximum Value : 3.30E-01
 Mean : 1.03E-01
 Median : 9.08E-02
 Standard Deviation : 8.16E-02

Reported Results

Sample Identification	Cs-137 Concentration (pCi/g)	Detect?	Fraction of Target Level
9520-0002-001F	3.86E-02		0.007
9520-0002-002F	9.53E-02	+	0.018
9520-0002-003F	3.16E-02	+	0.006
9520-0002-004F	1.13E-01	+	0.021
9520-0002-005F	0.00E+00		0.000
9520-0002-006F	5.30E-02	+	0.010
9520-0002-007F	1.16E-01	+	0.022
9520-0002-008F	8.01E-02	+	0.015
9520-0002-009F	8.34E-02	+	0.016
9520-0002-010F	4.16E-02	+	0.008
9520-0002-011F	9.08E-02	+	0.017
9520-0002-012F	3.30E-01	+	0.061
9520-0002-013F	2.03E-01	+	0.038
9520-0002-014F	9.68E-02	+	0.018
9520-0002-015F	1.67E-01	+	0.031


 Submitted by/Date 11/6/06

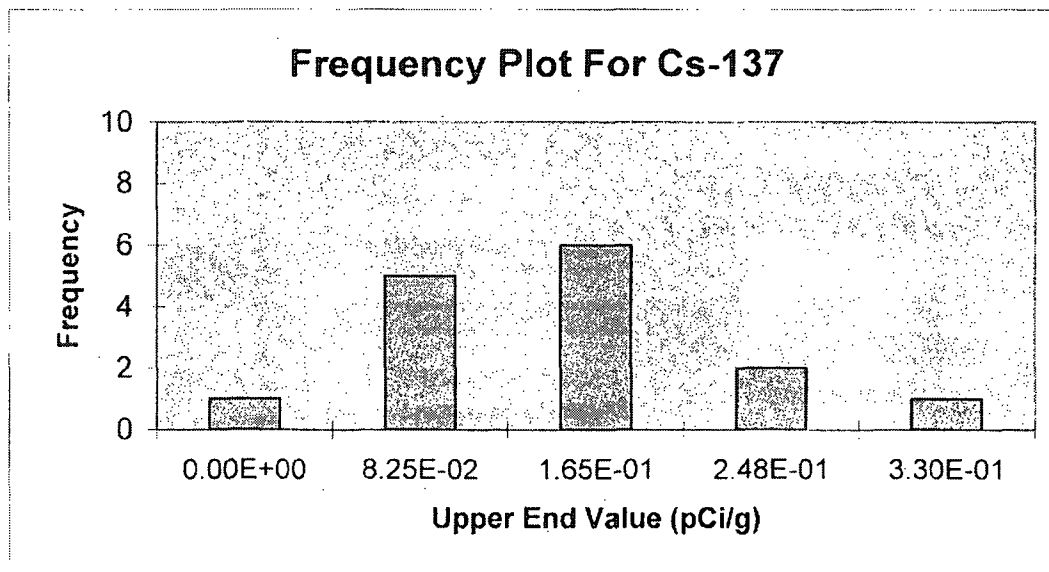
SOUTHWEST SITE STORAGE AREA
SURVEY UNIT 9520-0002

RELEASE RECORD

ATTACHMENT 4B (GRAPHICAL REPRESENTATION OF DATA)

FREQUENCY PLOT FOR CESIUM-137

Survey Unit: 9520-0002
 Survey Unit Name: Southwest Site Storage Area
 Mean: 1.03E-01 pCi/g



Upper End Value	Observation Frequency	Observation Frequency
0.00E+00	1	7%
8.25E-02	5	33%
1.65E-01	6	40%
2.48E-01	2	13%
3.30E-01	1	7%
Total:	15	100%

Jack M. Conroy
 Submitted by/Date

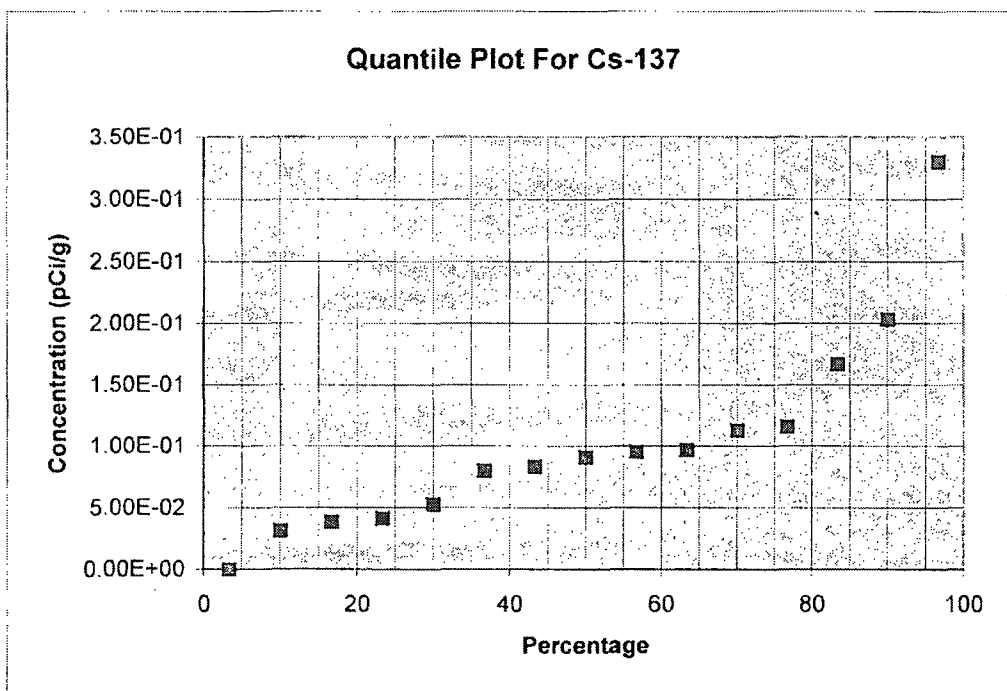
BT 11/8/06

[Signature]
 Reviewed by/Date

11/8/06

QUANTILE PLOT FOR CESIUM-137

Survey Unit: 9520-0002
 Survey Unit Name: Southwest Site Storage Area
 Mean: 1.03E-01 pCi/g



Cs-137	Rank	Percentage
0.00E+00	1	3%
3.16E-02	2	10%
3.86E-02	3	17%
4.16E-02	4	23%
5.30E-02	5	30%
8.01E-02	6	37%
8.34E-02	7	43%
9.08E-02	8	50%
9.53E-02	9	57%
9.68E-02	10	63%
1.13E-01	11	70%
1.16E-01	12	77%
1.67E-01	13	83%
2.03E-01	14	90%
3.30E-01	15	97%

Submitted by/Date J. K. [Signature] 11/8/06

Reviewed by/Date [Signature] 11/8/06

SOUTHWEST SITE STORAGE AREA
SURVEY UNIT 9520-0002

RELEASE RECORD

ATTACHMENT 4C (SIGN TEST)

Sign Test Calculation Sheet For A Single Radionuclide or Gross Activity Measurements

Survey Area Number: 9520		
Survey Unit Number: 0002		
Survey Area Name: Southwest Site Storage Area		
WPIR#: 2006-0038		
Classification: 2	Type I (α error): 0.05	(N): 15
Radionuclide: Cs-137	DCGL: 5.38	
Results (pCi/g)	DCGL - Results	Sign
3.86E-02	5.34E+00	1
9.53E-02	5.28E+00	1
3.16E-02	5.35E+00	1
1.13E-01	5.27E+00	1
0.00E+00	5.38E+00	1
5.30E-02	5.33E+00	1
1.16E-01	5.26E+00	1
8.01E-02	5.30E+00	1
8.34E-02	5.30E+00	1
4.16E-02	5.34E+00	1
9.08E-02	5.29E+00	1
3.30E-01	5.05E+00	1
2.03E-01	5.18E+00	1
9.68E-02	5.28E+00	1
1.67E-01	5.21E+00	1
Number of positive differences (S+): 15		

Critical Value: 11

Survey Unit Meets Acceptance Criterion

Performed by: Jack McLaughlin

Date: 11/8/06

Independent Review by: [Signature]

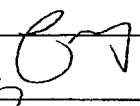
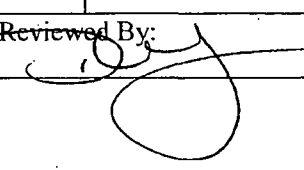
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SOUTHWEST SITE STORAGE AREA
SURVEY UNIT 9520-0002


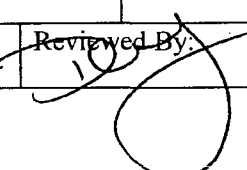
RELEASE RECORD

ATTACHMENT 4D (QC SPLIT RESULTS)

Split Sample Assessment Form

Survey Area#: 9520		Survey Unit #: 0002		Survey Unit name: Southwest Site Storage Area																
Sample Plan or WPIR#: 2005-0038						SML#: 9520-0002-011														
Sample Description: Comparison of split samples collected from sample measurement location #11 and analyzed using gamma spectroscopy by off-site Vendor Laboratory. The standard sample was 9520-0002-011F, the comparison sample was 9520-0002-011FS.																				
STANDARD					COMPARISON															
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)												
K-40	11.1	6.7E-1	16	0.75 - 1.33	10.2	4.05E-1	0.92	Y												
Comments/Corrective Actions: Not enough Cs-137 to yield an acceptable Resolution					Table is provided to show acceptance criteria used to assess split samples.															
					<table> <tr> <td><u>Resolution</u></td> <td><u>Agreement Range</u></td> </tr> <tr> <td>4 - 7</td> <td>0.5 - 2.0</td> </tr> <tr> <td>8 - 15</td> <td>0.6 - 1.66</td> </tr> <tr> <td>16 - 50</td> <td>0.75 - 1.33</td> </tr> <tr> <td>51 - 200</td> <td>0.80 - 1.25</td> </tr> <tr> <td>>200</td> <td>0.85 - 1.18</td> </tr> </table>				<u>Resolution</u>	<u>Agreement Range</u>	4 - 7	0.5 - 2.0	8 - 15	0.6 - 1.66	16 - 50	0.75 - 1.33	51 - 200	0.80 - 1.25	>200	0.85 - 1.18
<u>Resolution</u>	<u>Agreement Range</u>																			
4 - 7	0.5 - 2.0																			
8 - 15	0.6 - 1.66																			
16 - 50	0.75 - 1.33																			
51 - 200	0.80 - 1.25																			
>200	0.85 - 1.18																			
Performed By: 		Date: 11/6/06		Reviewed By: 		Date: 11/8/06														

Split Sample Assessment Form

Survey Area#: 9520		Survey Unit #: 0002		Survey Unit name: Southwest Site Storage Area						
Sample Plan or WPIR#: 2005-0038						SML#: 9520-0002-012				
Sample Description: Comparison of split samples collected from sample measurement location #12 and analyzed using gamma spectroscopy by off-site Vendor Laboratory. The standard sample was 9520-0002-012F, the comparison sample was 9520-0002-012FS.										
STANDARD					COMPARISON					
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)		
Cs-137	3.3E-1	1.78E-2	18	0.75 – 1.33	3.5E-1	2.21E-2	1.06	Y		
Comments/Corrective Actions: N/A					Table is provided to show acceptance criteria used to assess split samples.					
							<u>Resolution</u>	<u>Agreement Range</u>		
							4 - 7	0.5 - 2.0		
							8 - 15	0.6 - 1.66		
							16 - 50	0.75 - 1.33		
							51 - 200	0.80 - 1.25		
							>200	0.85 - 1.18		
Performed By: 		Date: 11/6/06		Reviewed By: 		Date: 11/9/06				

SOUTHWEST SITE STORAGE AREA
SURVEY UNIT 9520-0002

RELEASE RECORD

ATTACHMENT 4E (COMPASS DQA WITH POWER CURVE)



DQA Surface Soil Report

Assessment Summary

Site:	9520-0002 FSS		
Planner(s):	McCarthy		
Survey Unit Name:	Southwest Site Storage Area		
Report Number:	1		
Survey Unit Samples:	15		
Reference Area Samples:	0		
Test Performed:	Sign	Test Result:	Not Performed
Judgmental Samples:	0	EMC Result:	Not Performed
Assessment Conclusion:	<i>Reject Null Hypothesis (Survey Unit PASSES)</i>		

Retrospective Power Curve

