

Final Status Survey Final Report Phase VI

**Appendix A12
Survey Unit Release Record
9522-0007, Southeast Site Grounds
(Non-Protected Area)**

February 2007



CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

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1. SURVEY UNIT DESCRIPTION

Survey Unit 9522-0007 Southeast Site Grounds (non-protected area) is designated as Final Status Survey (FSS) Class 1 and consists of approximately one thousand, nine hundred and fifty two square meters (1,952 m²) of uninhabited, undeveloped land and is located approximately eight hundred and fifty two feet (852 ft) 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 9312-0007 and land Survey Unit 9312-0010 to the north (called north as oriented with the north to south flow of the Connecticut River), land Survey Unit 9522-0006 to the west, land Survey Unit 9522-0002 and land Survey Unit 9522-0007 to the south, and land Survey Unit 9527-0005 to the east. The survey unit is located in the northeast corner of Survey Area 9522. The majority of the survey unit is flat and de-vegetated. This is a result of soil grading in support of previous remediation. Rock outcroppings, underbrush and trees populate the east edge of the survey unit. The survey unit has a moderate slope running from east to west.

The reference coordinates associated with this survey unit are E012 through E015 by S074 through S076 (refer to "*HNP 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 9522-0007 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 "walk-down."

A review of the "*Initial and Supplemental Characterization Reports*" as well as the previous "*Classification Basis Summaries*" was performed. Survey Area 9522 includes a former survey area, 9308, that was consolidated into Survey Area 9522 in 2006. This survey area was initially designated as Class 2 during the development of the LTP.

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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. Survey Unit 9522-0002 was created in 2006 under Revision 4 of the LTP and was designated as Class 1.

Open land Survey Area 9522 was at one time an area immediately adjacent to the southern boundary of the Radiologically Controlled Area (RCA) and security fences. Initially, only a small section of the north side of the unit was paved, with the remainder of the unit gradually sloping down to the original site elevation. The industrial area was expanded to support plant operations and control exposure to radiation. According to the "*Haddam Neck Plant Historic Site Assessment Supplement*," plant photos revealed that the area was gradually filled in from approximately 1972 to between 1974 and 1976, with soil that may have originated from on-site sources. The introduction of fill material raised the elevation up to site grade and thereby facilitating a reconfiguration and expansion of the RCA and security protected area. Photos taken in 1976 show that the area was landscaped with grass and small trees and was probably given the name "ball-field" at that time. Over the next several years, additional fill was brought in. By 1987, photos show that half of the survey area was paved and occupied with buildings. It is estimated that the elevation in the survey area may have increased by up to five (5) feet from the original site grade.

Survey Area 9522 was impacted by several radiologically significant events during plant operations. These include the discovery of several discrete sources of elevated activity on the ball-field in March 1980, the spill of radioactive liquid into an uncontrolled drain system in February of 1989 and the discovery of several discrete particles outside of the RCA in 1995. Additionally, a portion of Survey Area 9522 was used as a temporary laydown area for the Steam Generator Lower Assemblies (SGLAs) and the Pressurizer until these components were shipped off-site for disposal in 2001. All of these events occurred in the northern portion of Survey Area 9522.

According to Plant Information Report (PIR) 89-35, a section of Survey Area 9522 was contaminated in February 1989 following the release of radioactive material into an uncontrolled drain in the Spent Fuel Building. The drain discharged directly to an open trench that drained into a marshy area of the site. Freezing conditions limited the amount of radioactive material that left the protected area. The unanticipated release of radioactive material was identified during a routine radiological surveillance of the site. The area was remediated in 1989 to the established release criteria at the time ($1\text{E-5 } \mu\text{Ci/g}$) and, according to memo CH 89-854, the Chemistry Group initiated a sampling program at the drainage site to monitor activity.

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Adverse Condition Report (ACR) 95-0250 states that in 1995, several discrete particles were found outside of the RCA, but within the Industrial Area in Survey Area 9522. In addition, two (2) other areas exhibiting elevated activity were identified in 1997. In all cases, the areas of elevated activity were removed upon discovery.

In May of 2005, a Survey and Sampling Work Plan (SSWP №. 05-05-008) was developed and implemented to characterize the surface soil in this survey area. Seventeen (17) soil samples were collected as part of the effort to provide sample data with regard to types and quantities of radioactive material present in the surface soil. The soil samples were analyzed by the on-site laboratory. A review of this sample data shows Cs-137 and Co-60 to be the primary radionuclides of concern, with both isotopes reported at fairly low concentrations.

As part of the groundwater characterization effort, a large number of surface and sub-surface soil samples were taken and analyzed for the full suite of "Hard-to-Detect" (HTD) radionuclides specified in the LTP, Table 2-12, "*Radionuclides Potentially Present at Haddam Neck Plant*" and as provided in Table 2. In some cases, soil was removed to meet the screening criteria in effect for groundwater dose compliance. No HTD radionuclides were positively identified in concentrations greater than the screening criteria upon completion of these surveys and the restoration of the affected areas using off-site fill. 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. Based upon the results of the previous surveys, it was determined to be unlikely that HTD radionuclides would be present in any significant concentration. Therefore, none of the soil samples taken as part of this characterization survey were analyzed for HTD radionuclides. Statistical quantities (mean, median and standard deviation) from the 2005 characterization survey conducted under SSWP 05-05-008 are provided in Table 1.

Table 1 – Basic Statistical Quantities for Cs-137 and Co-60 from the 2005 Characterization Survey

	Cs-137 (pCi/g)	Co-60 (pCi/g)
Minimum Value :	6.98E-05	-6.69E-02
Maximum Value :	4.01E+00	1.16E+00
Mean :	9.85E-01	1.60E-01
Median :	3.50E-01	2.10E-02
Standard Deviation :	1.28E+00	3.52E-01

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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, 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 previous identification of radioactive material above the Derived Concentration Guideline Levels (DCGLs), and the need for radiological remediation, it was concluded that there was some probability for residual radioactivity in concentrations greater than the DCGLs, justifying a final survey unit classification of Class 1 (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 would satisfy the primary objective of the FSS plan.

The primary objective of the FSS plan was to demonstrate that the level of residual radioactivity in Survey Unit 9522-0007 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.

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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 Total Effective Dose Equivalent (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 considered impacted by future groundwater radioactive contamination, as there are underground foundations 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 bounded by two (2) mrem/yr TEDE.

Equation 2

$$19 \text{ mrem/yr}_{\text{Total}} = 15 \text{ mrem/yr}_{\text{Soil}} + 2 \text{ mrem/yr}_{\text{Existing GW}} + 2 \text{ mrem/yr}_{\text{Future GW}}$$

The allowable dose for soil in this survey unit is fifteen (15) mrem/yr TEDE as shown by Equation 2 above. The concentration of residual radioactivity resulting in fifteen (15) mrem/yr TEDE is designated as the Operational DCGL (DCGL_{op}), and has been established for the radionuclides of concern as provided in Table 2.

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

Radionuclide ⁽¹⁾	Base Case Soil DCGL (pC/g) ⁽²⁾	Operational DCGL (pC/g) ⁽³⁾	Required MDC (pC/g) ⁽⁴⁾
H-3	4.12E+02	2.47E+02	1.65E+01
C-14	5.66E+00	3.40E+00	2.26E-01
Mn-54	1.74E+01	1.04E+01	6.96E-01
Fe-55	2.74E+04	1.64E+04	1.10E+03
Co-60	3.81E+00	2.29E+00	1.52E-01
Ni-63	7.23E+02	4.34E+02	2.89E+01
Sr-90	1.55E+00	9.30E-01	6.20E-02
Nb-94	7.12E+00	4.27E+00	2.85E-01
Tc-99	1.26E+01	7.56E+00	5.04E-01
Ag-108m	7.14E+00	4.28E+00	2.86E-01
Cs-134	4.67E+00	2.80E+00	1.87E-01
Cs-137	7.91E+00	4.75E+00	3.16E-01
Eu-152	1.01E+01	6.06E+00	4.04E-01
Eu-154	9.29E+00	5.57E+00	3.72E-01
Eu-155	3.92E+02	2.35E+02	1.57E+01
Pu-238	2.96E+01	1.78E+01	1.18E+00
Pu-239/240	2.67E+01	1.60E+01	1.07E+00
Am-241 ⁽⁵⁾	2.58E+01	1.55E+01	1.03E+00
Pu-241	8.70E+02	5.22E+02	3.48E+01
Cm-243/244	2.90E+01	1.74E+01	1.16E+00

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

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

(3) The Operational DCGL is equivalent to achieving fifteen (15) mrem/yr TEDE

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

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

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Another important facet of the DQO process is to identify the radionuclides of concern and determine the concentration variability. Surface soil samples were collected in 2005 to establish the radiological condition of Survey Area 9522 for FSS. Cs-137 and Co-60 were the only two (2) gamma emitting radionuclides 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 both Cs-137 and Co-60 would be the radionuclides of concern in Survey Unit 9522-0007 (refer to Section 3). The characterization survey did not include any HTD radionuclides of concern for this survey unit. Based on other survey data, surrogate DCGLs were not required as part of the survey design for this survey unit via screening under LTP Section 5.4.7.2, "*Gross Activity DCGLs*". Other radionuclides that were positively identified in concentrations greater than the screening criteria during the performance of this FSS would be evaluated to ensure adequate survey design.

As the survey unit is classified as a Class 1 surface soils area, and discrete, elevated areas of contamination was possible, the application of the Elevated Measurement Comparison (EMC) remained an option.

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.

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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 0.5 to maintain the relative shift (Δ/σ) in the range of 1 and 3. The resulting relative shift was 1.61. 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 (10CFR20, Subpart E). The result of the COMPASS computer run showed adequate power for the survey design. The survey design specified seventeen (17) surface soil samples for non-parametric statistical testing. Based upon a review of the historical information and characterization survey data, the acquisition of additional judgmental surface soil samples from within this survey unit was deemed unnecessary.

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 1 area.

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

Table 3 - Sample Measurement Locations with Associated GPS Coordinates

Designation	Northing	Easting
9522-0007-001F	236604.06	669055.30
9522-0007-002F	236571.19	669093.26
9522-0007-003F	236571.19	669093.26
9522-0007-004F	236538.31	669036.33
9522-0007-005F	236538.31	669074.28
9522-0007-006F	236538.31	669112.24
9522-0007-007F	236505.44	669017.35
9522-0007-008F	236505.44	669055.30
9522-0007-009F	236505.44	669093.26

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Table 3 - (continued)

Designation	Northing	Easting
9522-0007-010F	236505.44	669131.22
9522-0007-011F	236472.57	669036.33
9522-0007-012F	236472.57	669074.28
9522-0007-013F	236472.57	669112.24
9520-0003-014F	236472.57	669150.20
9522-0007-015F	236439.69	669093.26
9522-0007-016F	236439.69	669131.22
9522-0007-017F	236406.82	669112.24

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 one (1) soil sample for "split sample" analysis by the off-site laboratory. This location was selected randomly using the Microsoft Excel "RANDBETWEEN" function.

The LTP specifies a required scanning coverage of 100% for outdoor Class 1 areas.

For this Class 1 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.

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Table 4 – Synopsis of the Survey Design

Feature	Design Criteria	Basis
Survey Unit Land Area	1,952 m ²	Based on AutoCAD-LT
Number of Measurements	17 (17 systematic grid)	Type 1 and Type 2 errors were 0.05, sigma was 0.31 pCi/g, the LBGR was set at 0.5 to maintain Relative Shift in the range of 1 and 3
Grid Spacing	11.89 m	Based on triangular grid
Operational DCGL	4.75 pCi/g Cs-137 2.29 pCi/g Co-60	Administratively set to achieve fifteen (15) mrem/yr TEDE ⁽¹⁾
Soil Investigation Level	4.75 pCi/g Cs-137 2.29 pCi/g Co-60	The Operational DCGL meets the LTP criteria for a Class 1 survey unit
Scan Survey Area Coverage	Approximately 100% of the area	The LTP requires 100% area coverage for Class 1 survey units
Scan Investigation Level	An instrument response greater than the Scan MDC(DCGL _{EMC}) of 2,744 cpm	Based upon a Minimum Detectable Count Rate (MDCR) of 1,597 cpm and a corresponding MDC _{scan} of 7 pCi/g Cs-137 and 1.83 pCi/g Co-60

- (1) The allowable dose for soil in this survey unit is fifteen (15) 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)

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5. SURVEY IMPLEMENTATION

Final status survey field activities were conducted under Work Plan and Inspection Record (WP&IR) 2006-0047. 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.

A single scan area was established that constituted approximately 100% of the surface area of Survey Unit 9522-0007. Grid lines, one (1) 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 7,510 counts per minute (cpm) up to 13,200 cpm.

The scan area was 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 to the ground as possible and was moved at a scan speed of about 0.5 meters per second. 100% of the surface area within the survey unit was scanned.

Measurement locations were identified in North American Datum (NAD) 1927 coordinates using GPS; 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.

Seventeen (17) 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 (9522-0007-003F and 9522-0007-010F) were randomly selected for HTD radionuclide analysis.

The implementation of survey specific quality control measures included the collection of one (1) sample (9522-0007-004F) for "split sample" analysis.

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6. SURVEY RESULTS

All field survey activities were conducted between November 17, 2006 and December 04, 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 for the entire survey unit 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	14.5	13.4	YES
2	14.9	14.4	YES
3	12.0	12.1	NO
4	13.1	14.1	NO
5	9.35	12.0	NO
6	10.2	10.7	NO
7	11.5	12.2	NO
8	10.1	11.2	NO
9	9.16	11.6	NO
10	10.4	11.0	NO
11	9.67	11.1	NO
12	10.4	10.2	YES
13	11.2	12.6	NO
14	8.33	10.3	NO
15	10.8	12.4	NO
16	10.6	10.7	NO
17	9.45	11.4	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. Sample locations 9522-0007-001F, 9522-0007-002F and 9522-0007-012F were moved accordingly.

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The scan areas, that comprised approximately 100% 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 November 30, 2006 through December 04, 2006. Several elevated measurement locations were identified during scanning. Table 6 provides an overview of the scan area survey. Complete scan results are provided in Attachment 2.

Table 6 - Scan Area Results

Scan Strips	Highest Logged Reading (kcpm)	Action Level ⁽¹⁾ (kcpm)	Elevated Reading Identification ⁽²⁾	Investigation Sample
1 thru 10	30.20	9.41	9522-07-ER-00-04-1	9522-0007-018I
			9522-07-ER-00-09-1	9522-0007-019I
11 thru 20	11.30	10.30	9522-07-ER-00-14-1	9522-0007-020I
			9522-07-ER-00-15-1	9522-0007-021I
			9522-07-ER-00-19-1	9522-0007-022I
			9522-07-ER-00-19-2	9522-0007-023I
			9522-07-ER-00-20-1	9522-0007-024I
21 thru 30	11.80	9.92	9522-07-ER-00-21-1	9522-0007-025I
			9522-07-ER-00-24-1	9522-0007-026I
			9522-07-ER-00-25-1	9522-0007-027I
			9522-07-ER-00-29-1	9522-0007-028I
31 thru 40	9.74	10.20	9522-07-ER-00-31-1	9522-0007-029I
			9522-07-ER-00-32-2	9522-0007-030I
41 thru 50	13.80	11.30	9522-07-ER-00-50-1	9522-0007-031I
51 thru 60	13.50	14.40	9522-07-ER-00-51-1	9522-0007-032I
			9522-07-ER-00-53-1	9522-0007-033I
			9522-07-ER-00-54-1	9522-0007-034I
			9522-07-ER-00-57-1	9522-0007-035I

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

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

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The off-site laboratory employed for the radiological analyses of samples was General Engineering Laboratories, LLC. The laboratory analyzed the seventeen (17) samples collected for non-parametric statistical testing, the associated field split and the eighteen (18) investigative 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 (2) standard deviations uncertainty). However, Cs-137 and Co-60 were the only gamma-emitting radionuclides reported in concentrations exceeding the de-selection criteria.

Cs-137 was identified in all and Co-60 was identified in four (4) of the seventeen (17) samples collected for non-parametric statistical testing. 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 seventeen (17) samples collected for non-parametric statistical testing results is provided in Table 7.

**Table 7 - Summary of Gamma Spectroscopy Results for Surface Soil
Samples Comprising the Statistical Sample Population**

Sample Number	Cs-137 pCi/g	Co-60 pCi/g
9522-0007-001F	4.52E-01	3.65E-02
9522-0007-002F	4.20E-01	0.00E+00
9522-0007-003F	5.82E-01	9.27E-02
9522-0007-004F	4.94E-01	7.20E-02
9522-0007-005F	2.37E-01	1.78E-02
9522-0007-006F	1.03E-01	6.80E-03
9522-0007-007F	2.21E-01	-1.93E-03
9522-0007-008F	1.21E-01	-2.61E-03
9522-0007-009F	5.76E-02	3.03E-02
9522-0007-010F	1.19E-01	-1.85E-02
9522-0007-011F	2.16E-01	2.36E-02
9522-0007-012F	1.15E-01	1.04E-02
9522-0007-013F	1.22E-01	1.97E-02
9522-0007-014F	2.18E-01	1.04E-02

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Table 7 - (continued)

Sample Number	Cs-137 pCi/g	Co-60 pCi/g
9522-0007-015F	6.12E-02	-3.69E-03
9522-0007-016F	6.30E-02	0.00E+00
9522-0007-017F	3.57E-02	-5.36E-03

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 performed met the required minimum 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. HTD radionuclides were not present in concentrations sufficient for detection (i.e., a result greater than two (2) standard deviations uncertainty) in the two (2) samples selected for HTD analysis. Subsequently, no HTD radionuclides will be considered in the final dose determination for this survey unit.

The “sum-of-fractions” or “unity rule” is the mathematical test used to evaluate compliance with radiological criteria for license termination when more than one radionuclide has been determined to be potentially present. The unity rule is:

Equation 3

$$\frac{C_1}{DCGL_1} + \frac{C_2}{DCGL_2} + \dots + \frac{C_n}{DCGL_n} \leq 1$$

Where: C_n = concentration of radionuclide n and
 $DCGL_n$ = DCGL of radionuclide n .

The results of the unity rule calculation for the radionuclides of concern in the statistical sample population for Survey Unit 9522-0007 are provided in Table 8 below.

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**Table 8 – Results of Unity Calculation for Surface Soil Samples
Comprising the Statistical Sample Population**

Sample Number	Fraction of the Operational DCGL ⁽¹⁾⁽²⁾		Unity
	Cs-137	Co-60	
9522-0007-001F	0.10	-	0.10
9522-0007-002F	0.09	-	0.09
9522-0007-003F	0.12	0.04	0.16
9522-0007-004F	0.10	0.03	0.14
9522-0007-005F	0.05	-	0.05
9522-0007-006F	0.02	-	0.02
9522-0007-007F	0.05	-	0.05
9522-0007-008F	0.03	-	0.03
9522-0007-009F	0.01	-	0.01
9522-0007-010F	0.03	-	0.03
9522-0007-011F	0.05	0.01	0.06
9522-0007-012F	0.02	-	0.02
9522-0007-013F	0.03	0.01	0.03
9522-0007-014F	0.05	-	0.05
9522-0007-015F	0.01	-	0.01
9522-0007-016F	0.01	-	0.01
9522-0007-017F	0.01	-	0.01

(1) The Operational DCGL from Table 2 is 4.75 pCi/g for Cs-137 and 2.29 pCi/g for Co-60 to achieve fifteen (15) mrem/yr TEDE respectively.

(2) - indicates that the radionuclide was not positively detected in the sample

7. QUALITY CONTROL

The off-site laboratory processed the split samples and performed gamma spectroscopy analysis. One sample location was 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". Cs-137 was detected in sufficient quantities in the field split results at locations 9522-0007-004F and 9522-0007-004FS to evaluate in accordance with procedure. Evaluation using the reported results resulted in acceptable agreement between the field-split results at this location. The sample analysis vendor,

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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

Eighteen (18) investigation surface soil samples were collected from scan areas exhibiting elevated scan readings. The investigation soil samples were analyzed for Cs-137 and Co-60 in accordance with the DQOs used during the survey design. The samples are denoted as shown in Table 6, with the sample results shown in Table 9 below.

Table 9 - Investigation Sample Results

Sample Number	Cs-137 pCi/g	Co-60 pCi/g	Unity Fraction (1)(2)
9522-0007-018I	1.20E+00	1.19E-02	0.25
9522-0007-019I	7.38E-02	5.95E-03	0.02
9522-0007-020I ⁽²⁾	4.05E-03	-8.34E-03	-
9522-0007-021I	2.60E-02	5.40E-03	0.01
9522-0007-022I	8.55E-02	5.98E-02	0.02
9522-0007-023I	5.25E-02	2.08E-02	0.01
9522-0007-024I	6.61E-02	3.83E-03	0.01
9522-0007-025I	4.73E-02	1.23E-02	0.01
9522-0007-026I	2.00E-01	5.25E-02	0.07
9522-0007-027I	9.05E-02	-1.08E-02	0.02
9522-0007-028I	1.35E-01	6.24E-03	0.03
9522-0007-029I	1.17E-01	8.28E-03	0.02
9522-0007-030I	1.58E-01	1.82E-02	0.03
9522-0007-031I	5.22E-02	3.04E-02	0.02
9522-0007-032I	4.58E-01	0.00E+00	0.10
9522-0007-033I	2.23E-01	0.00E+00	0.05
9522-0007-034I	8.19E-01	0.00E+00	0.17
9522-0007-035I	3.43E-01	4.37E-02	0.09

(1) The Operational DCGL from Table 2 is 4.75 pCi/g for Cs-137 and 2.29 pCi/g for Co-60 to achieve fifteen (15) mrem/yr TEDE respectively.

(2) - indicates that no radionuclides were positively detected in the sample

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9. REMEDIATION AND RESULTS

Significant remediation activities occurred in this survey unit prior to FSS. All above grade and below grade commodities and facility systems were removed and properly dispositioned. Contaminated soils that exceeded the screening criteria in effect for groundwater dose compliance were identified, excavated and removed as part of the "Zone 12" and "Excavation 7" remediation projects. All excavations were characterized and backfilled with "clean" fill prior to performing FSS. As a byproduct of remediation activities, the ground area is comprised of barren dirt with no vegetation, and the soils have been graded relatively flat to the corresponding elevation of the survey units to the north and east. The western edge of this survey unit is comprised of a steep bank along the discharge canal. 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 for this survey unit.

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 1.

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. The basic statistical quantities for the statistical sample population are provided below in Table 10.

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Table 10 – Basic Statistical Quantities for Cs-137 and Co-60 from the Final Status Survey

	Cs-137 pCi/g	Co-60 pCi/g
DCGL _{op} :	4.75E+00	2.29E+00
Minimum Value:	3.57E-02	-1.85E-02
Maximum Value:	5.82E-01	9.27E-02
Mean:	2.14E-01	1.69E-02
Median:	1.22E-01	1.04E-02
Standard Deviation:	1.70E-01	2.86E-02

For Cs-137, the range of the data, about three (3) 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 50% of the standard deviation which indicates some skewness in the data. The data was represented graphically through posting plots, a frequency plot, and a quantile plot. The frequency plot indicates positive skewness as confirmed by the calculated skew of 1.04.

Co-60, although included in the FSS plan for compliance purposes, was positively identified in only four (4) of the seventeen (17) samples collected for non-parametric statistical testing. Data assessment and graphical representation of Co-60 was not considered useful given the limited number of data points to represent the distribution.

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

12. ANOMALIES

No anomalies were noted.

13. CONCLUSION

Survey Unit 9522-0007 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 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 1.

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The dose contribution from soil is 0.787 mrem/yr TEDE based on the average radionuclide concentrations in 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 considered impacted by future groundwater radioactive contamination, as there are underground foundations 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 bounded by two (2) 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 4.787 mrem/yr TEDE. Therefore, Survey Unit 9522-0007 is acceptable for unrestricted release.

14. ATTACHMENTS

14.1 Attachment 1 – Figures

14.2 Attachment 2 – Scan Results

14.3 Attachment 3 – Laboratory Data

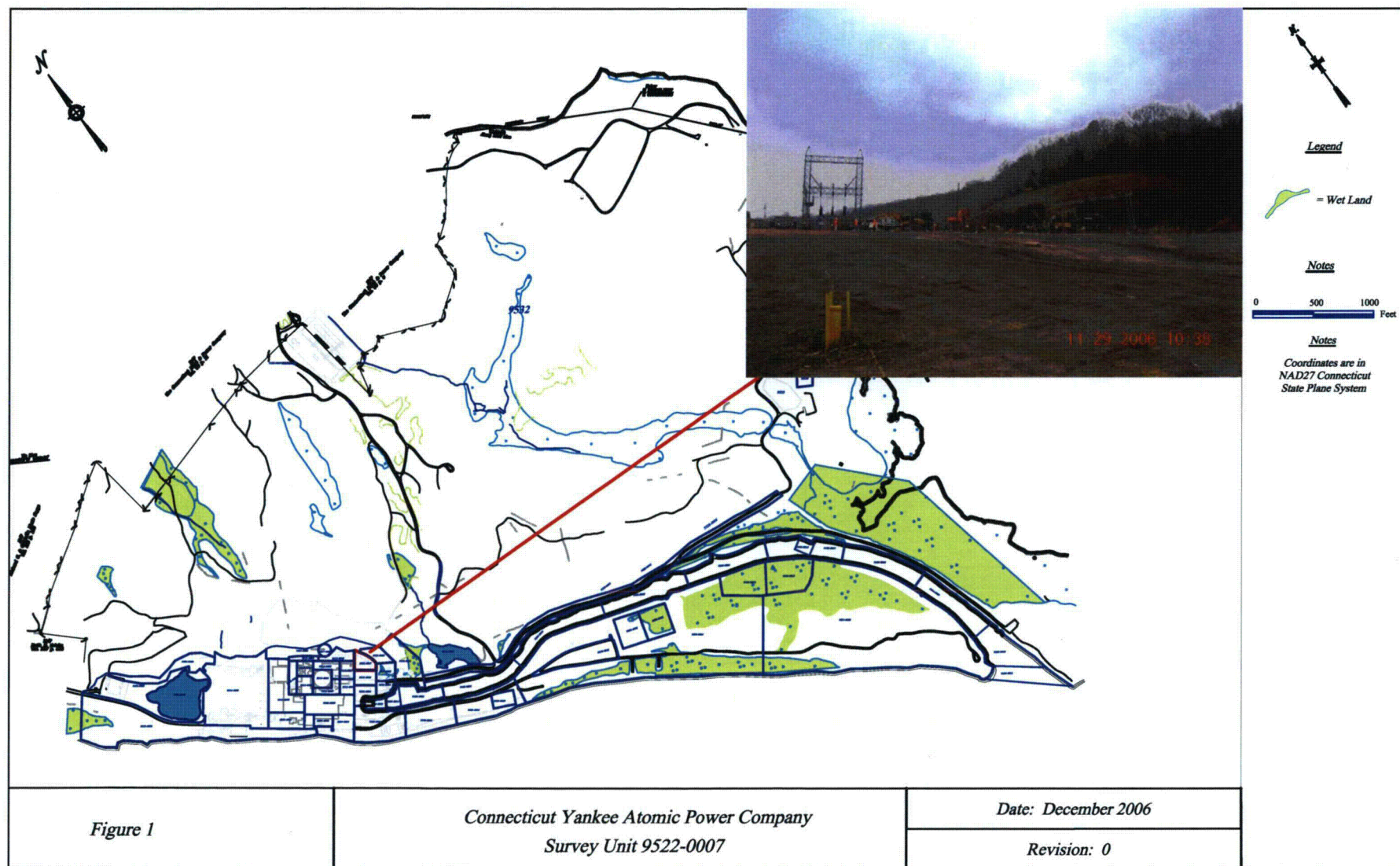
14.4 Attachment 4 – DQA Results

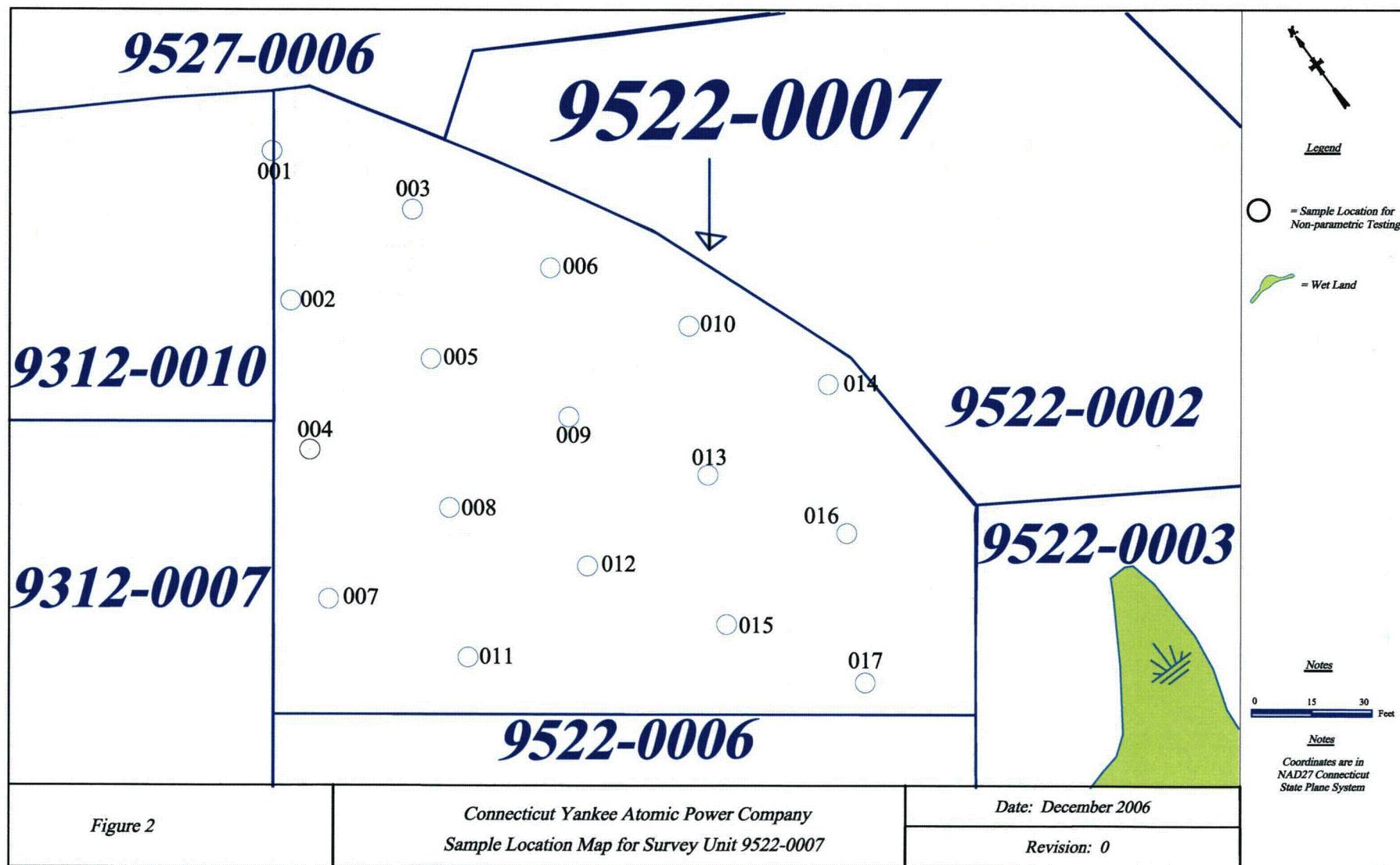
SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)

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ATTACHMENT 1 (FIGURES)





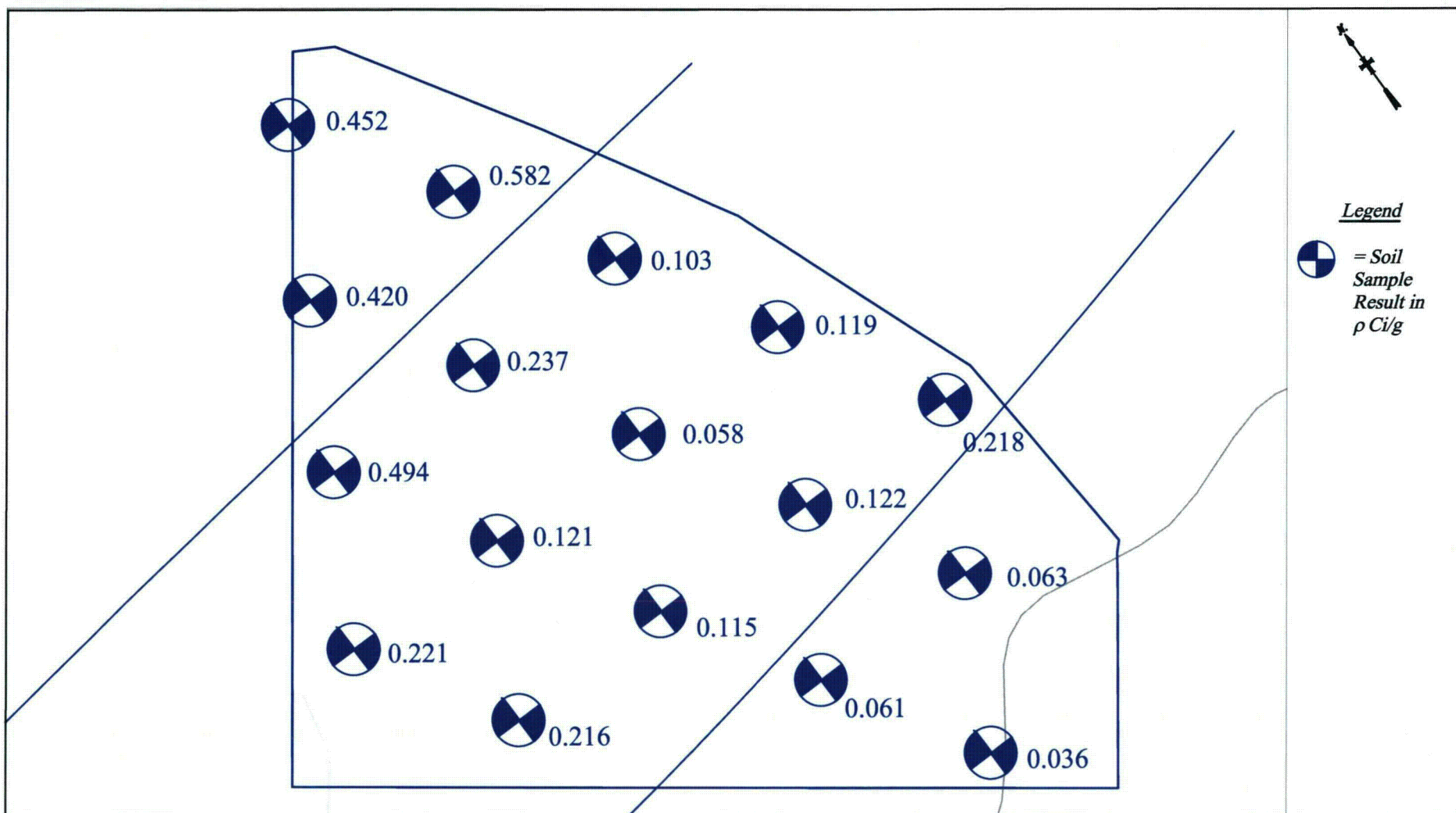
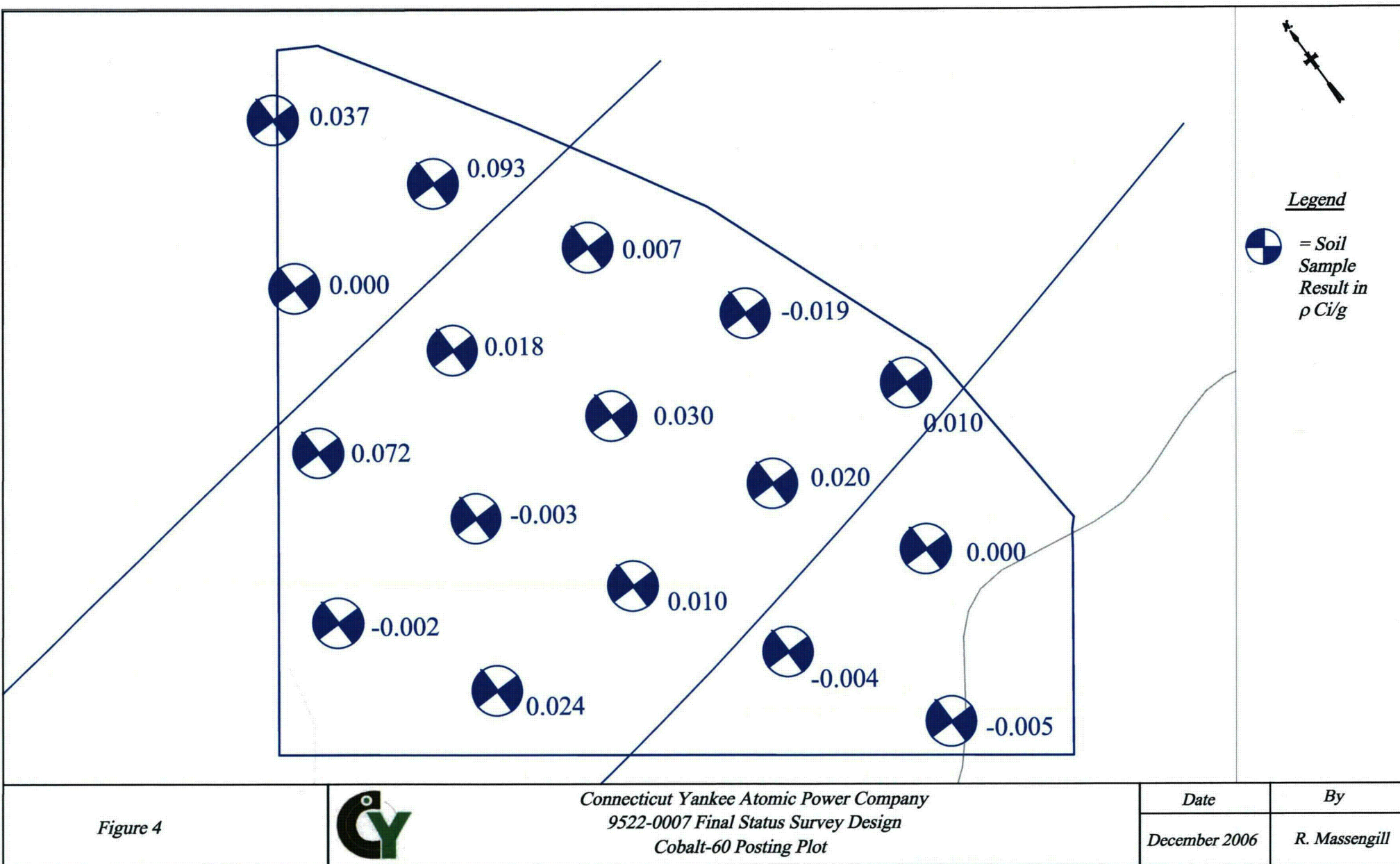


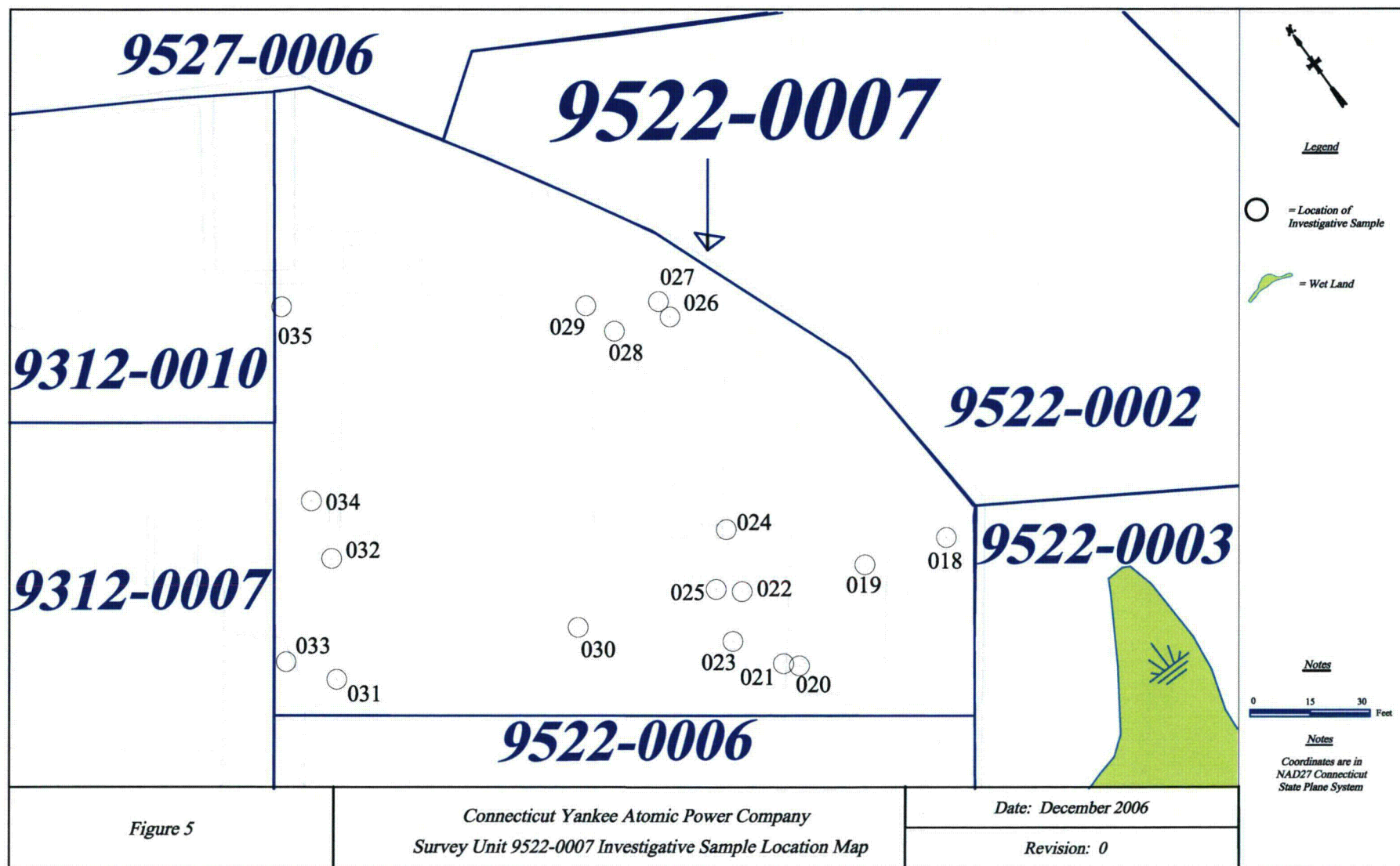
Figure 3

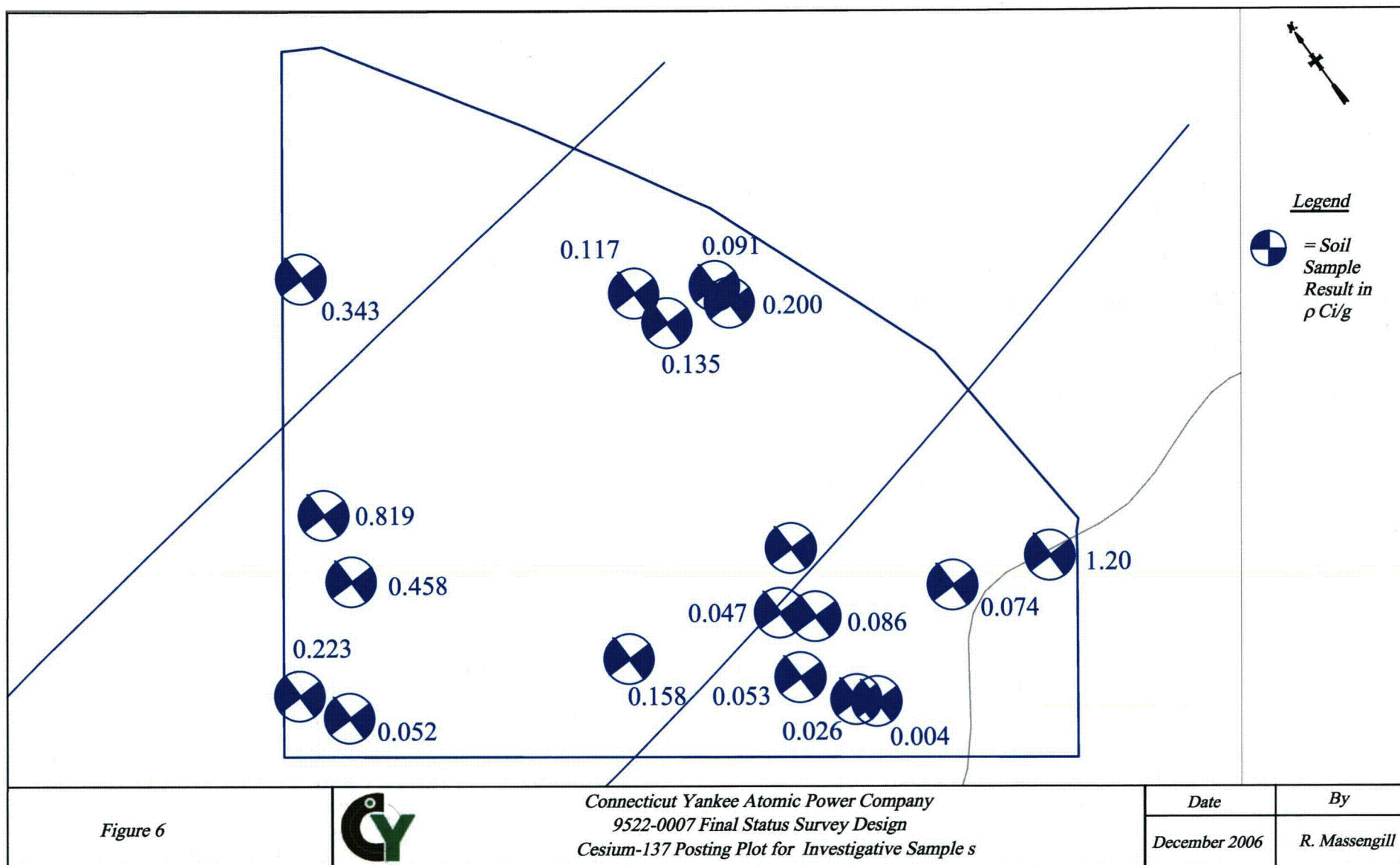


Connecticut Yankee Atomic Power Company
9522-0007 Final Status Survey Design
Cesium-137 Posting Plot

Date	By
December 2006	R. Massengill







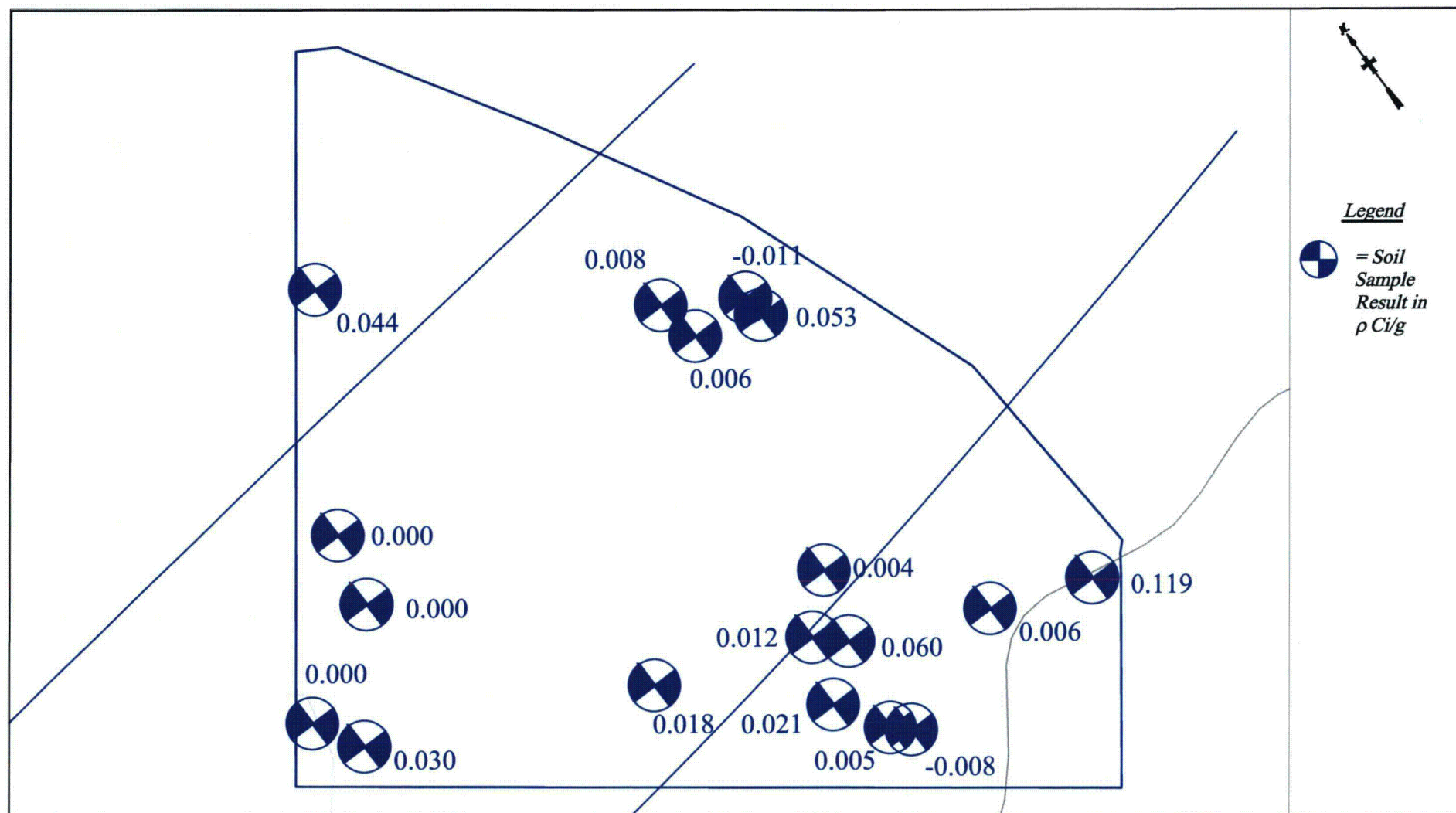


Figure 7



Connecticut Yankee Atomic Power Company
 9522-0007 Final Status Survey Design
 Cobalt-60 Posting Plot for Investigative Sample s

Date

December 2006

By

R. Massengill

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
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ATTACHMENT 2 (SCAN RESULTS)

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SCAN RESULTS @ SAMPLE LOCATIONS

Survey Location	Log Date	Log Time	Reading	Alarm Level	>Alarm Level	E-600 S/N	Probe S/N
9522-07-BL-00-01-0	11/17/2006	13:16:00	1.18E+04			1114	1014
9522-07-SL-00-01-0	11/17/2006	13:17:00	1.45E+04	1.34E+04	+	1114	1014
9522-07-BL-00-02-0	11/17/2006	13:18:00	1.28E+04			1114	1014
9522-07-SL-00-02-0	11/17/2006	13:19:00	1.49E+04	1.44E+04	+	1114	1014
9522-07-BL-00-03-0	11/17/2006	13:20:00	1.06E+04			1114	1014
9522-07-SL-00-03-0	11/17/2006	13:20:00	1.20E+04	1.21E+04		1114	1014
9522-07-BL-00-04-0	11/17/2006	13:41:00	1.25E+04			1114	1014
9522-07-SL-00-04-0	11/17/2006	13:42:00	1.31E+04	1.41E+04		1114	1014
9522-07-BL-00-05-0	11/17/2006	13:43:00	1.05E+04			1114	1014
9522-07-SL-00-05-0	11/17/2006	13:44:00	9.35E+03	1.20E+04		1114	1014
9522-07-BL-00-06-0	11/17/2006	13:44:00	9.33E+03			1114	1014
9522-07-SL-00-06-0	11/17/2006	13:45:00	1.02E+04	1.07E+04		1114	1014
9522-07-BL-00-07-0	11/17/2006	14:00:00	1.07E+04			1114	1014
9522-07-SL-00-07-0	11/17/2006	14:01:00	1.15E+04	1.22E+04		1114	1014
9522-07-BL-00-08-0	11/17/2006	14:02:00	9.82E+03			1114	1014
9522-07-SL-00-08-0	11/17/2006	14:03:00	1.01E+04	1.12E+04		1114	1014
9522-07-BL-00-09-0	11/17/2006	14:03:00	1.02E+04			1114	1014
9522-07-SL-00-09-0	11/17/2006	14:04:00	9.16E+03	1.16E+04		1114	1014
9522-07-BL-00-10-0	11/20/2006	7:42:00	9.61E+03			1114	1014
9522-07-SL-00-10-0	11/20/2006	7:42:00	1.04E+04	1.10E+04		1114	1014
9522-07-BL-00-11-0	11/20/2006	7:43:00	9.73E+03			1114	1014
9522-07-SL-00-11-0	11/20/2006	7:45:00	9.67E+03	1.11E+04		1114	1014
9522-07-BL-00-12-0	11/20/2006	7:45:00	8.86E+03			1114	1014
9522-07-SL-00-12-0	11/20/2006	7:46:00	1.04E+04	1.02E+04	+	1114	1014
9522-07-BL-00-13-0	11/20/2006	7:47:00	1.11E+04			1114	1014
9522-07-SL-00-13-0	11/20/2006	7:48:00	1.12E+04	1.26E+04		1114	1014
9522-07-BL-00-14-0	11/20/2006	7:56:00	8.91E+03			1114	1014
9522-07-SL-00-14-0	11/20/2006	7:57:00	8.33E+03	1.03E+04		1114	1014
9522-07-BL-00-15-0	11/20/2006	7:58:00	1.09E+04			1114	1014
9522-07-SL-00-15-0	11/20/2006	7:59:00	1.08E+04	1.24E+04		1114	1014
9522-07-BL-00-16-0	11/20/2006	8:00:00	9.28E+03			1114	1014
9522-07-SL-00-16-0	11/20/2006	8:01:00	1.06E+04	1.07E+04		1114	1014
9522-07-BL-00-17-0	11/20/2006	8:02:00	9.98E+03			1114	1014
9522-07-SL-00-17-0	11/20/2006	8:03:00	9.45E+03	1.14E+04		1114	1014

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Attachment 2

SCAN RESULTS FOR SCAN STRIPS

Survey Location	Log Date	Log Time	Reading	Alarm Level	>Alarm Level	E-600 S/N	Probe S/N
9522-07-BC-00-01-0	11/30/2006	8:24:00	8.93E+03			1116	1006
9522-07-SC-00-01-0	11/30/2006	8:28:00	8.51E+03	1.03E+04		1116	1006
9522-07-BC-00-02-0	11/30/2006	8:29:00	8.97E+03			1116	1006
9522-07-SC-00-02-0	11/30/2006	8:32:00	9.38E+03	1.03E+04		1116	1006
9522-07-BC-00-03-0	11/30/2006	9:45:00	8.72E+03			1117	1008
9522-07-SC-00-03-0	11/30/2006	9:48:00	8.12E+03	1.01E+04		1117	1008
9522-07-BC-00-04-0	11/30/2006	9:48:00	8.12E+03			1117	1008
9522-07-SC-00-04-0	11/30/2006	9:52:00	8.44E+03	9.41E+03		1117	1008
9522-07-ER-00-04-1	12/4/2006	7:47:00	3.02E+04	9.41E+03	+	1111	1004
9522-07-BC-00-05-0	11/30/2006	9:53:00	7.51E+03			1117	1008
9522-07-SC-00-05-0	11/30/2006	9:59:00	8.17E+03	8.75E+03		1117	1008
9522-07-BC-00-06-0	11/30/2006	9:59:00	8.20E+03			1117	1008
9522-07-SC-00-06-0	11/30/2006	10:04:00	8.15E+03	9.49E+03		1117	1008
9522-07-BC-00-07-0	11/30/2006	10:08:00	9.09E+03			1117	1008
9522-07-SC-00-07-0	11/30/2006	10:13:00	8.04E+03	1.05E+04		1117	1008
9522-07-BC-00-08-0	11/30/2006	10:14:00	7.81E+03			1117	1008
9522-07-SC-00-08-0	11/30/2006	10:19:00	7.43E+03	9.07E+03		1117	1008
9522-07-BC-00-09-0	11/30/2006	10:19:00	8.15E+03			1117	1008
9522-07-SC-00-09-0	11/30/2006	10:25:00	6.75E+03	9.44E+03		1117	1008
9522-07-ER-00-09-1	12/4/2006	8:00:00	1.01E+04	9.44E+03	+	1111	1004
9522-07-BC-00-10-0	11/30/2006	10:25:00	7.92E+03			1117	1008
9522-07-SC-00-10-0	11/30/2006	10:29:00	8.72E+03	9.19E+03		1117	1008
9522-07-BC-00-11-0	11/30/2006	10:32:00	9.59E+03			1117	1008
9522-07-SC-00-11-0	11/30/2006	10:36:00	9.16E+03	1.10E+04		1117	1008
9522-07-BC-00-12-0	11/30/2006	10:36:00	9.26E+03			1117	1008
9522-07-SC-00-12-0	11/30/2006	10:42:00	9.99E+03	1.06E+04		1117	1008
9522-07-BC-00-13-0	11/30/2006	10:43:00	9.81E+03			1117	1008
9522-07-SC-00-13-0	11/30/2006	10:46:00	9.08E+03	1.12E+04		1117	1008
9522-07-BC-00-14-0	11/30/2006	10:46:00	8.77E+03			1117	1008
9522-07-SC-00-14-0	11/30/2006	10:52:00	9.23E+03	1.01E+04		1117	1008
9522-07-ER-00-14-1	12/4/2006	8:13:00	8.91E+03	1.01E+04		1111	1004
9522-07-BC-00-15-0	11/30/2006	10:53:00	8.77E+03			1117	1008
9522-07-SC-00-15-0	11/30/2006	10:59:00	8.46E+03	1.01E+04		1117	1008
9522-07-ER-00-15-1	12/4/2006	8:15:00	9.62E+03	1.01E+04		1111	1004
9522-07-BC-00-16-0	11/30/2006	10:59:00	8.44E+03			1117	1008

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Attachment 2

9522-07-SC-00-16-0	11/30/2006	11:06:00	9.23E+03	9.75E+03		1117	1008
Survey Location	Log Date	Log Time	Reading	Alarm Level	>Alarm Level	E-600 S/N	Probe S/N
9522-07-BC-00-17-0	11/30/2006	11:07:00	9.89E+03			1117	1008
9522-07-SC-00-17-0	11/30/2006	11:11:00	7.95E+03	1.13E+04		1117	1008
9522-07-BC-00-18-0	11/30/2006	11:12:00	9.17E+03			1117	1008
9522-07-SC-00-18-0	11/30/2006	11:16:00	7.77E+03	1.05E+04		1117	1008
9522-07-BC-00-19-0	11/30/2006	11:17:00	8.96E+03			1117	1008
9522-07-SC-00-19-0	11/30/2006	11:29:00	8.89E+03	1.03E+04		1117	1008
9522-07-ER-00-19-1	12/4/2006	8:27:00	1.07E+04	1.03E+04	+	1111	1004
9522-07-ER-00-19-2	12/4/2006	9:30:00	1.13E+04	1.03E+04	+	1111	1004
9522-07-BC-00-20-0	11/30/2006	13:11:00	9.20E+03			1117	1008
9522-07-SC-00-20-0	11/30/2006	13:17:00	8.13E+03	1.06E+04		1117	1008
9522-07-ER-00-20-1	12/4/2006	9:38:00	1.09E+04			1111	1004
9522-07-BC-00-21-0	11/30/2006	13:18:00	8.68E+03			1117	1008
9522-07-SC-00-21-0	11/30/2006	13:25:00	8.04E+03	1.00E+04		1117	1008
9522-07-ER-00-21-1	12/4/2006	9:46:00	1.11E+04	1.00E+04	+	1111	1004
9522-07-BC-00-22-0	11/30/2006	13:26:00	9.11E+03			1117	1008
9522-07-SC-00-22-0	11/30/2006	13:31:00	9.24E+03	1.05E+04		1117	1008
9522-07-BC-00-23-0	11/30/2006	13:32:00	9.64E+03			1117	1008
9522-07-SC-00-23-0	11/30/2006	13:36:00	9.24E+03	1.10E+04		1117	1008
9522-07-BC-00-24-0	11/30/2006	13:37:00	8.60E+03			1117	1008
9522-07-SC-00-24-0	11/30/2006	13:43:00	9.46E+03	9.92E+03		1117	1008
9522-07-ER-00-24-1	12/4/2006	9:56:00	1.18E+04	9.92E+03	+	1111	1004
9522-07-BC-00-25-0	11/30/2006	13:44:00	9.13E+03			1117	1008
9522-07-SC-00-25-0	11/30/2006	13:50:00	9.25E+03	1.05E+04		1117	1008
9522-07-ER-00-25-1	12/4/2006	10:03:00	1.08E+04	1.05E+04	+	1111	1004
9522-07-BC-00-26-0	11/30/2006	13:52:00	9.31E+03			1117	1008
9522-07-SC-00-26-0	11/30/2006	13:57:00	8.25E+03	1.07E+04		1117	1008
9522-07-BC-00-27-0	11/30/2006	13:58:00	9.33E+03			1117	1008
9522-07-SC-00-27-0	11/30/2006	14:01:00	9.92E+03	1.07E+04		1117	1008
9522-07-BC-00-28-0	11/30/2006	14:02:00	9.36E+03			1117	1008
9522-07-SC-00-28-0	11/30/2006	14:05:00	7.80E+03	1.07E+04		1117	1008
9522-07-BC-00-29-0	11/30/2006	14:06:00	8.57E+03			1117	1008
9522-07-SC-00-29-0	11/30/2006	14:10:00	9.06E+03	9.89E+03		1117	1008
9522-07-ER-00-29-2	12/4/2006	10:09:00	1.01E+04	9.89E+03	+	1111	1004
9522-07-BC-00-30-0	11/30/2006	14:11:00	9.27E+03			1117	1008
9522-07-SC-00-30-0	11/30/2006	14:14:00	8.54E+03	1.06E+04		1117	1008
9522-07-BC-00-31-0	11/30/2006	14:15:00	7.66E+03			1117	1008
9522-07-SC-00-31-0	11/30/2006	14:18:00	8.58E+03	8.91E+03		1117	1008

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

RELEASE RECORD

Attachment 2

9522-07-ER-00-31-1	12/4/2006	10:10:00	9.58E+03	8.91E+03	+	1111	1004
Survey Location	Log Date	Log Time	Reading	Alarm Level	>Alarm Level	E-600 S/N	Probe S/N
9522-07-BC-00-32-0	11/30/2006	14:20:00	8.10E+03			1117	1008
9522-07-SC-00-32-0	11/30/2006	14:25:00	7.97E+03	9.39E+03		1117	1008
9522-07-ER-00-32-1	12/4/2006	10:18:00	9.39E+03	9.39E+03	+	1111	1004
9522-07-BC-00-33-0	11/30/2006	14:12:00	8.98E+03			1105	1009
9522-07-SC-00-33-0	11/30/2006	14:18:00	7.15E+03	1.03E+04		1105	1009
9522-07-BC-00-34-0	11/30/2006	14:19:00	8.49E+03			1105	1009
9522-07-SC-00-34-0	11/30/2006	14:24:00	8.63E+03	9.81E+03		1105	1009
9522-07-BC-00-35-0	11/30/2006	14:27:00	8.73E+03			1105	1009
9522-07-SC-00-35-0	11/30/2006	14:31:00	8.82E+03	1.01E+04		1105	1009
9522-07-BC-00-36-0	11/30/2006	14:32:00	9.29E+03			1105	1009
9522-07-SC-00-36-0	11/30/2006	14:35:00	9.14E+03	1.07E+04		1105	1009
9522-07-BC-00-37-0	12/4/2006	8:04:00	9.08E+03			1117	1008
9522-07-SC-00-37-0	12/4/2006	8:08:00	8.66E+03	1.04E+04		1117	1008
9522-07-BC-00-38-0	12/4/2006	8:08:00	8.81E+03			1117	1008
9522-07-SC-00-38-0	12/4/2006	8:12:00	9.74E+03	1.02E+04		1117	1008
9522-07-BC-00-39-0	12/4/2006	8:13:00	9.26E+03			1117	1008
9522-07-SC-00-39-0	12/4/2006	8:16:00	9.29E+03	1.06E+04		1117	1008
9522-07-BC-00-40-0	12/4/2006	8:17:00	8.00E+03			1117	1008
9522-07-SC-00-40-0	12/4/2006	8:20:00	8.23E+03	9.28E+03		1117	1008
9522-07-SC-00-41-0	12/4/2006	8:21:00	1.01E+04			1117	1008
9522-07-BC-00-41-0	12/4/2006	8:23:00	8.02E+03	1.15E+04		1117	1008
9522-07-SC-00-42-0	12/4/2006	8:24:00	8.88E+03			1117	1008
9522-07-BC-00-42-0	12/4/2006	8:27:00	1.07E+04	1.02E+04	+	1117	1008
9522-07-SC-00-43-0	12/4/2006	8:28:00	9.51E+03			1117	1008
9522-07-BC-00-43-0	12/4/2006	8:32:00	8.41E+03	1.09E+04		1117	1008
9522-07-BC-00-44-0	12/4/2006	8:33:00	8.41E+03			1117	1008
9522-07-SC-00-44-0	12/4/2006	8:37:00	9.34E+03	9.72E+03		1117	1008
9522-07-BC-00-45-0	12/4/2006	9:29:00	9.51E+03			1117	1008
9522-07-SC-00-45-0	12/4/2006	9:32:00	8.72E+03	1.09E+04		1117	1008
9522-07-BC-00-46-0	12/4/2006	9:33:00	8.90E+03			1117	1008
9522-07-SC-00-46-0	12/4/2006	9:35:00	9.76E+03	1.02E+04		1117	1008
9522-07-BC-00-47-0	12/4/2006	9:36:00	1.18E+04			1117	1008
9522-07-SC-00-47-0	12/4/2006	9:39:00	9.15E+03	1.34E+04		1117	1008
9522-07-BC-00-48-0	12/4/2006	9:40:00	8.22E+03			1117	1008
9522-07-SC-00-48-0	12/4/2006	9:47:00	7.57E+03	9.51E+03		1117	1008

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

RELEASE RECORD
Attachment 2

9522-07-BC-00-49-0	12/4/2006	9:54:00	1.32E+04			1117	1008
9522-07-SC-00-49-0	12/4/2006	9:58:00	9.27E+03	1.48E+04		1117	1008
Survey Location	Log Date	Log Time	Reading	Alarm Level	>Alarm Level	E-600 S/N	Probe S/N
9522-07-BC-00-50-0	12/4/2006	10:00:00	9.92E+03			1117	1008
9522-07-SC-00-50-0	12/4/2006	10:04:00	1.05E+04	1.13E+04		1117	1008
9522-07-ER-00-50-1	12/4/2006	13:34:00	1.38E+04	1.13E+04	+	1117	1008
9522-07-BC-00-51-0	12/4/2006	10:07:00	9.25E+03			1117	1008
9522-07-SC-00-51-0	12/4/2006	10:15:00	9.84E+03	1.06E+04		1117	1008
9522-07-ER-00-51-1	12/4/2006	13:37:00	1.22E+04	1.06E+04	+	1117	1008
9522-07-BC-00-52-0	12/4/2006	10:17:00	1.16E+04			1117	1008
9522-07-SC-00-52-0	12/4/2006	10:21:00	1.04E+04	1.31E+04		1117	1008
9522-07-BC-00-53-0	12/4/2006	10:22:00	1.03E+04			1117	1008
9522-07-SC-00-53-0	12/4/2006	10:28:00	1.05E+04	1.17E+04		1117	1008
9522-07-ER-00-53-1	12/4/2006	13:39:00	1.16E+04	1.17E+04		1117	1008
9522-07-BC-00-54-0	12/4/2006	10:30:00	1.18E+04			1117	1008
9522-07-SC-00-54-0	12/4/2006	10:36:00	1.23E+04	1.34E+04		1117	1008
9522-07-ER-00-54-1	12/4/2006	13:42:00	1.32E+04	1.34E+04		1117	1008
9522-07-BC-00-55-0	12/4/2006	10:37:00	9.97E+03			1117	1008
9522-07-SC-00-55-0	12/4/2006	10:41:00	1.05E+04	1.14E+04		1117	1008
9522-07-BC-00-56-0	12/4/2006	10:42:00	1.17E+04			1117	1008
9522-07-SC-00-56-0	12/4/2006	10:45:00	1.17E+04	1.32E+04		1117	1008
9522-07-BC-00-57-0	12/4/2006	10:47:00	1.28E+04			1117	1008
9522-07-SC-00-57-0	12/4/2006	10:56:00	1.24E+04	1.44E+04		1117	1008
9522-07-ER-00-57-1	12/4/2006	13:42:00	1.35E+04	1.44E+04		1117	1008
9522-07-BC-00-58-0	12/4/2006	10:57:00	1.17E+04			1117	1008
9522-07-SC-00-58-0	12/4/2006	10:58:00	1.07E+04	1.32E+04		1117	1008

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

RELEASE RECORD

ATTACHMENT 3 (LABORATORY DATA)

General Narrative

**General Narrative
for
Connecticut Yankee Atomic Power Co.
Work Order: 177164
SDG: MSR#06-1525**

December 12, 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 December 06, 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>
177164001	9522-0007-001F
177164002	9522-0007-002F
177164003	9522-0007-004F
177164004	9522-0007-004FS
177164005	9522-0007-005F
177164006	9522-0007-006F
177164007	9522-0007-007F
177164008	9522-0007-008F
177164009	9522-0007-009F
177164010	9522-0007-011F
177164011	9522-0007-012F
177164012	9522-0007-013F
177164013	9522-0007-014F
177164014	9522-0007-015F
177164015	9522-0007-016F
177164016	9522-0007-017F
177164017	9522-0007-018-I
177164018	9522-0007-019-I
177164019	9522-0007-020-I
177164020	9522-0007-021-I
177164021	9522-0007-022-I
177164022	9522-0007-023-I
177164023	9522-0007-024-I
177164024	9522-0007-025-I
177164025	9522-0007-026-I

177164026	9522-0007-027-I
177164027	9522-0007-028-I
177164028	9522-0007-029-I
177164029	9522-0007-030-I
177164030	9522-0007-031-I
177164031	9522-0007-032-I
177164032	9522-0007-033-I
177164033	9522-0007-034-I
177164034	9522-0007-035-I
177164035	9522-0007-003F
177164036	9522-0007-010F

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.

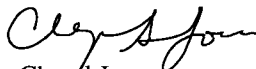
Analytical Request

Thirty-four 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 12 December 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. 2006-00680

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: 177164	Comment, Preservation	Lab Sample ID
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 type="checkbox"/> 14 D. <input checked="" type="checkbox"/> 7 D. <input type="checkbox"/> 3 D.															
Sample Designation	Date	Time													
9522-0007-001F	11/17/06	1321	TS	G	BP	X									
9522-0007-002F	11/17/06	1323	TS	G	BP	X									
9522-0007-003F	11/17/06	1325	TS	G	BP		X								
9522-0007-004F	11/17/06	1342	TS	G	BP	X									
9522-0007-004FS	11/17/06	1342	TS	G	BP	X									
9522-0007-005F	11/17/06	1344	TS	G	BP	X									
9522-0007-006F	11/17/06	1346	TS	G	BP	X									
9522-0007-007F	11/17/06	1400	TS	G	BP	X									
9522-0007-008F	11/17/06	1402	TS	G	BP	X									
9522-0007-009F	11/17/06	1406	TS	G	BP	X									
NOTES: PO #: 002332 MSR #: 06-1381 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA															
1) Relinquished By <u>Hand</u> 12/5/06 1300 Date/Time												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>12</u> Deg. C Custody Sealed? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
3) Relinquished By Date/Time												Bill of Lading #			
2) Received By <u>K. Wright</u> 12/16/06 0930 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. 2006-00681			
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 type="checkbox"/> 14 D. <input checked="" type="checkbox"/> 7 D. <input type="checkbox"/> 3 D.															
Sample Designation		Date	Time									Comment, Preservation	Lab Sample ID		
9522-0007- 010 F		11/10/06	0742	TS	G	BP		X							
9522-0007- 011 F		11/10/06	0746	TS	G	BP	X								
9522-0007- 012 F		11/10/06	0746	TS	G	BP	X								
9522-0007- 013 F		11/10/06	0748	TS	G	BP	X								
9522-0007- 014 F		11/10/06	0757	TS	G	BP	X								
9522-0007- 015 F		11/10/06	0800	TS	G	BP	X								
9522-0007- 016 F		11/10/06	0801	TS	G	BP	X								
9522-0007- 017 F		11/10/06	0802	TS	G	BP	X								
NOTES: PO #: 002332 MSR #: 06-1281 12/5/06 1525 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.: 12 Deg. C Custody Sealed? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By: <u>H. Land</u>			Date/Time: <u>12/15/06 1300</u>			2) Received By: <u>K. Wright</u>			Date/Time: <u>12/16/06 0930</u>			Bill of Lading #			
3) Relinquished By:			Date/Time:			4) Received By:			Date/Time:						

Chain of Custody Form

No. 2006-00696

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

Project Name: Haddam Neck Decommissioning													Lab Use Only					
Contact Name & Phone: Jack McCarthy 860-267-3924													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 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	FSSGAM	FSSALL							Comment, Preservation	Lab Sample ID	
9522-0007-018-I			12/4/06	0750	TS	G	BP	X										
9522-0007-019-I			12/4/06	0808	TS	G	BP	X										
9522-0007-020-I			12/4/06	0813	TS	G	BP	X										
9522-0007-021-I			12/4/06	0815	TS	G	BP	X										
9522-0007-022-I			12/4/06	0827	TS	G	BP	X										
9522-0007-023-I			12/4/06	0930	TS	G	BP	X										
9522-0007-024-I			12/4/06	0938	TS	G	BP	X										
9522-0007-025-I			12/4/06	0947	TS	G	BP	X										
9522-0007-026-I			12/4/06	0955	TS	G	BP	X										
9522-0007-027-I			12/4/06	1002	TS	G	BP	X										
9522-0007-028-I			12/4/06	1009	TS	G	BP	X										
NOTES: PO #: 002332 MSR #: 06-1381 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA 12/5/06 26-1525															Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: 12 Deg. C Custody Sealed? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By [Signature] Date/Time 12/5/06 1300					2) Received By K. Wright Date/Time 12/6/06 0930					Bill of Lading #								
3) Relinquished By _____ Date/Time _____					4) Received By _____ Date/Time _____													

Chain of Custody Form

No. 2006-00697

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

Project Name: Haddam Neck Decommissioning												
Contact Name & Phone: Jack McCarthy 860-267-3924												
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 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	FSSGAM	FSSALL				
9522-0007-029-I		12/4/06	1011	TS	G	BP	X					
9522-0007-030-I		12/4/06	1018	TS	G	BP	X					
NOTES: PO #: 002332 MSR #: 06-1381 AM 12/5/06 1525 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA												
1) Relinquished By <i>[Signature]</i> Date/Time 12/5/06 1300						2) Received By <i>K. Wright</i> Date/Time 12/4/06 0935						
3) Relinquished By _____ Date/Time _____						4) Received By _____ Date/Time _____						
						Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other						
						Internal Container Temp.: 12 Deg. C Custody Sealed? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>						
						Bill of Lading # _____						

Chain of Custody Form

No. 2006-00698

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

Project Name: Haddam Neck Decommissioning						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 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		
9522-0007-031-I	12/04/06	1345	TS	G	BP	X									
9522-0007-032-I	12/04/06	1343	TS	G	BP	X									
9522-0007-033-I	12/04/06	1345	TS	G	BP	X									
9522-0007-034-I	12/04/06	1348	TS	G	BP	X									
9522-0007-035-I	12/04/06	1351	TS	G	BP	X									
NOTES: PO #: 002332 MSR #: 06-1381 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.: 12 Deg. C Custody Sealed? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By <i>Cheryl Jones</i> Date/Time 12/5/06 1300			2) Received By <i>K. Wright</i> Date/Time 12/6/06 0930									Bill of Lading #			
3) Relinquished By Date/Time			4) Received By Date/Time												



SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: <u>Com. Tank</u>	SDG/ARCOC/Work Order: <u>177164</u>
Date Received: <u>12/6/06</u>	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: <u>(Signature)</u>	<u>(Signature)</u>

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	/			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		/		Circle Coolant # ice bags blue ice dry ice none other (describe)
3 Chain of custody documents included with shipment?				
4 Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				
8 Samples received within holding time?				ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?				Sample ID's affected:
11 Number of containers received match number indicated on COC?				Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?				
14 Air Bill, Tracking #'s, & Additional Comments				
Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A Radiological Classification?	/			Maximum Counts Observed*: <u>Cpm 20</u>
B PCB Regulated?	/			
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	/			Hazard Class Shipped: UN#:
D Regulated as a Foreign Soil?	/			
PM (or PMA) review of Hazard classification:				Initials <u>ATN</u> Date: <u>12/6/06</u>

Figure 1. Sample Check-in List

Date/Time Received: 12/6/06 0930

SDG#: MSR #06-1525

Work Order Number: 177164

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

1. Custody Seals on shipping container intact? Yes ☐ No ☐ N/A
2. Custody Seals dated and signed? Yes ☐ No ☐ N/A
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature see cont sheet
5. Vermiculite/packing materials is: Wet ☐ Dry ☐ N/A
6. Number of samples in shipping container: 36 total
7. Sample holding times exceeded? Yes ☐ No ☒

8. Samples have:

☒ tape ☐ hazard labels
☒ custody seals ☒ appropriate sample labels

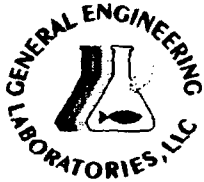
9. Samples are:

☒ 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: K. W. H. G. S. T. Date: 12/6/04

Telephoned to: _____ On _____ By _____



SAMPLE RECEIPT & REVIEW FORM CONTINUATION FORM

Client:

Date Received:

7901 2972 8490 12°C
7901 2972 8527 12°C
7901 2972 8516 12°C
7901 2972 8549 12°C

Chain #'s

2006-00681

2006-00697

2006-00698

2006-00680

2006-00696

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 177164**

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:	593610
Prep Batch Number:	593524
Dry Soil Prep GL-RAD-A-021 Batch Number:	593523

Sample ID	Client ID
177164035	9522-0007-003F
177164036	9522-0007-010F
1201241516	Method Blank (MB)
1201241517	177084014(9804-0000-036F) Sample Duplicate (DUP)
1201241518	177084014(9804-0000-036F) Matrix Spike (MS)
1201241519	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: 177084014 (9804-0000-036F).

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

The sample and the duplicate, 1201241517 (9804-0000-036F), did not meet the relative percent difference requirement for Am-241, however they do meet the relative error ratio requirement with a value of 1.47.

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:	593611
Prep Batch Number:	593524
Dry Soil Prep GL-RAD-A-021 Batch Number:	593523

Sample ID	Client ID
177164035	9522-0007-003F
177164036	9522-0007-010F
1201241524	Method Blank (MB)
1201241525	177084014(9804-0000-036F) Sample Duplicate (DUP)
1201241526	177084014(9804-0000-036F) Matrix Spike (MS)
1201241527	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: 177084014 (9804-0000-036F).

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

The sample and the duplicate, 1201241525 (9804-0000-036F), did not meet the relative percent difference requirement for Pu-239/240, however they do meet the relative error ratio requirement with a value of 1.61.

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:	593612
Prep Batch Number:	593524
Dry Soil Prep GL-RAD-A-021 Batch Number:	593523

Sample ID	Client ID
177164035	9522-0007-003F
177164036	9522-0007-010F
1201241528	Method Blank (MB)
1201241529	177084014(9804-0000-036F) Sample Duplicate (DUP)
1201241530	177084014(9804-0000-036F) Matrix Spike (MS)
1201241531	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: 177084014 (9804-0000-036F).

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:	594411
Prep Batch Number:	593522

Sample ID	Client ID
177164001	9522-0007-001F
177164002	9522-0007-002F
177164003	9522-0007-004F
177164004	9522-0007-004FS
177164005	9522-0007-005F
177164006	9522-0007-006F
177164007	9522-0007-007F
177164008	9522-0007-008F
177164009	9522-0007-009F
177164010	9522-0007-011F
177164011	9522-0007-012F
177164012	9522-0007-013F
177164013	9522-0007-014F
177164014	9522-0007-015F
177164015	9522-0007-016F
177164016	9522-0007-017F
177164017	9522-0007-018-I
177164018	9522-0007-019-I
177164019	9522-0007-020-I
177164020	9522-0007-021-I
1201243202	Method Blank (MB)
1201243203	177164001(9522-0007-001F) Sample Duplicate (DUP)
1201243204	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: 177164001 (9522-0007-001F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high peak-width.	Cobalt-60	177164002
UI	Data rejected due to interference.	Europium-155	177164002
			177164011
			177164014
		Manganese-54	177164007
			177164012
UI	Data rejected due to low abundance.	Cesium-134	177164001
			177164002
			177164003
			177164004
			177164005
			177164006
			177164009
			177164010
			177164012
			177164013
			177164014
			177164015
			177164016
			177164017
			177164018
			177164019
			177164020
			1201243203
		Cobalt-60	177164015
		Lead-212	1201243202
UI	Data rejected due to no valid peak.	Bismuth-214	1201243202
		Radium-226	1201243202

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: 594412
Prep Batch Number: 593523

Sample ID	Client ID
177164021	9522-0007-022-I
177164022	9522-0007-023-I
177164023	9522-0007-024-I
177164024	9522-0007-025-I
177164025	9522-0007-026-I
177164026	9522-0007-027-I
177164027	9522-0007-028-I
177164028	9522-0007-029-I
177164029	9522-0007-030-I
177164030	9522-0007-031-I
177164031	9522-0007-032-I
177164032	9522-0007-033-I
177164033	9522-0007-034-I
177164034	9522-0007-035-I
177164035	9522-0007-003F
177164036	9522-0007-010F
1201243208	Method Blank (MB)
1201243209	177164021(9522-0007-022-I) Sample Duplicate (DUP)
1201243210	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: 177164021 (9522-0007-022-I).

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 interference.	Europium-155	177164023
		Manganese-54	177164023
UI	Data rejected due to low abundance.	Cesium-134	177164021
			177164024
			177164025
			177164026
			177164027
			177164030
			177164031
			177164035
			1201243209
		Cobalt-60	177164032
			177164033
		Manganese-54	177164031
UI	Data rejected due to no valid peak.	Cobalt-60	177164031

Method/Analysis Information

Product:	GFPC, Sr90, solid - 0.025 pCi/g
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:	593617
Prep Batch Number:	593524
Dry Soil Prep GL-RAD-A-021 Batch Number:	593523

Sample ID	Client ID
177164035	9522-0007-003F
177164036	9522-0007-010F
1201241539	Method Blank (MB)
1201241540	177164035(9522-0007-003F) Sample Duplicate (DUP)
1201241541	177164035(9522-0007-003F) Matrix Spike (MS)
1201241542	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: 177164035 (9522-0007-003F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries

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

Miscellaneous Information:

NCR Documentation

Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: NCR 391629 was generated due to Other. 1. The Sr-90 calibration used to process this batch expired on 11/30/06, but was extended and is currently in the process of being recalibrated. Laboratory Control Samples, Matrix Spikes, and daily efficiencies are being monitored to ensure proper instrument performance. 1. Reporting results.

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: 593639

Sample ID	Client ID
177164035	9522-0007-003F
177164036	9522-0007-010F
1201241574	Method Blank (MB)
1201241575	177164035(9522-0007-003F) Sample Duplicate (DUP)
1201241576	177164035(9522-0007-003F) Matrix Spike (MS)
1201241577	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: 177164035 (9522-0007-003F).

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:	593708
Prep Batch Number:	593524
Dry Soil Prep GL-RAD-A-021 Batch Number:	593523

Sample ID	Client ID
177164035	9522-0007-003F
177164036	9522-0007-010F
1201241695	Method Blank (MB)
1201241696	177164035(9522-0007-003F) Sample Duplicate (DUP)
1201241697	177164035(9522-0007-003F) Matrix Spike (MS)
1201241698	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: 177164035 (9522-0007-003F).

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:	593707
Prep Batch Number:	593524
Dry Soil Prep GL-RAD-A-021 Batch Number:	593523

Sample ID	Client ID
177164035	9522-0007-003F
177164036	9522-0007-010F
1201241691	Method Blank (MB)
1201241692	177164035(9522-0007-003F) Sample Duplicate (DUP)
1201241693	177164035(9522-0007-003F) Matrix Spike (MS)
1201241694	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: 177164035 (9522-0007-003F).

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 - 3 pCi/g

Analytical Method: EPA 906.0 Modified

Analytical Batch Number: 593704

Sample ID	Client ID
177164035	9522-0007-003F
177164036	9522-0007-010F
1201241679	Method Blank (MB)
1201241680	177164035(9522-0007-003F) Sample Duplicate (DUP)
1201241681	177164035(9522-0007-003F) Matrix Spike (MS)
1201241682	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: 177164035 (9522-0007-003F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

None of the samples in this sample set required reprep or reanalysis.

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint C14, Solid All,FSS
Analytical Method:	EPA EERF C-01 Modified
Analytical Batch Number:	593705

Sample ID	Client ID
177164035	9522-0007-003F
177164036	9522-0007-010F
1201241683	Method Blank (MB)
1201241684	177164035(9522-0007-003F) Sample Duplicate (DUP)
1201241685	177164035(9522-0007-003F) Matrix Spike (MS)
1201241686	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: 177164035 (9522-0007-003F).

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: _____

 12/13/06

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr. 13-DEC-06	Division: Radiochemistry	Quality Criteria: SOP	Type: Process
Instrument Type: GFPC	Test / Method: EPA 905.0 Modified	Matrix Type: Solid	Client Code: YANK
Batch ID: 593617	Sample Numbers: 1201241539		
Potentially affected work order(s)(SDG): 177164(MSR#06-1525) Application Issues: Other			
Specification and Requirements Nonconformance Description:		NRG Disposition:	
1. The Sr-90 calibration used to process this batch expired on 11/30/06, but was extended and is currently in the process of being recalibrated. Laboratory Control Samples, Matrix Spikes, and daily efficiencies are being monitored to ensure proper instrument performance.		1. Reporting results.	

Originator's Name:

Melanie Aycock 13-DEC-06

Data Validator/Group Leader:

Heather Anderson 13-DEC-06

Quality Review:

Director:

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis Report for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#06-1525 GEL Work Order: 177164

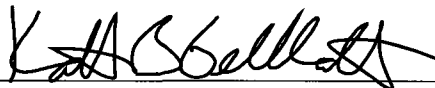
The Qualifiers in this report are defined as follows:

- * 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: December 13, 2006

Client Sample ID: 9522-0007-001F
Sample ID: 177164001
Matrix: TS
Collect Date: 17-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 11.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		1.11	+/-0.191	0.0799	+/-0.191	0.172	pCi/g		MJH1	12/09/06	0903	594411
Americium-241	U	0.0244	+/-0.0398	0.0336	+/-0.0398	0.0689	pCi/g					
Bismuth-212		1.01	+/-0.414	0.167	+/-0.414	0.357	pCi/g					
Bismuth-214		1.38	+/-0.139	0.0374	+/-0.139	0.0798	pCi/g					
Cesium-134	UI	0.00	+/-0.0346	0.0312	+/-0.0346	0.0659	pCi/g					
Cesium-137		0.452	+/-0.0567	0.0221	+/-0.0567	0.0472	pCi/g					
Cobalt-60	U	0.0365	+/-0.0427	0.0225	+/-0.0427	0.0496	pCi/g					
Europium-152	U	-0.0672	+/-0.0652	0.055	+/-0.0652	0.115	pCi/g					
Europium-154	U	0.000457	+/-0.103	0.0756	+/-0.103	0.164	pCi/g					
Europium-155	U	0.0505	+/-0.0764	0.0542	+/-0.0764	0.112	pCi/g					
Lead-212		1.10	+/-0.0795	0.034	+/-0.0795	0.0704	pCi/g					
Lead-214		1.39	+/-0.119	0.0406	+/-0.119	0.0849	pCi/g					
Manganese-54	U	0.029	+/-0.0337	0.0236	+/-0.0337	0.0504	pCi/g					
Niobium-94	U	0.0428	+/-0.0372	0.0238	+/-0.0372	0.0503	pCi/g					
Potassium-40		17.6	+/-1.22	0.185	+/-1.22	0.416	pCi/g					
Radium-226		1.38	+/-0.139	0.0374	+/-0.139	0.0798	pCi/g					
Silver-108m	U	0.0126	+/-0.0235	0.0212	+/-0.0235	0.0445	pCi/g					
Thallium-208		0.456	+/-0.0638	0.0212	+/-0.0638	0.045	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-001F
Sample ID: 177164001

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-002F
Sample ID: 177164002
Matrix: TS
Collect Date: 17-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 10.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		1.68	+/-0.287	0.0681	+/-0.287	0.143	pCi/g		MJH1	12/09/06	0903	594411
Americium-241	U	-0.019	+/-0.117	0.0897	+/-0.117	0.183	pCi/g					
Bismuth-212		0.942	+/-0.319	0.144	+/-0.319	0.301	pCi/g					
Bismuth-214		2.09	+/-0.236	0.0352	+/-0.236	0.0733	pCi/g					
Cesium-134	UI	0.00	+/-0.0465	0.0272	+/-0.0465	0.0564	pCi/g					
Cesium-137		0.420	+/-0.0559	0.0193	+/-0.0559	0.0403	pCi/g					
Cobalt-60	UI	0.00	+/-0.052	0.0196	+/-0.052	0.0419	pCi/g					
Europium-152	U	-0.0324	+/-0.0556	0.0483	+/-0.0556	0.0996	pCi/g					
Europium-154	U	-0.116	+/-0.0769	0.0561	+/-0.0769	0.119	pCi/g					
Europium-155	UI	0.00	+/-0.0958	0.0543	+/-0.0958	0.111	pCi/g					
Lead-212		1.73	+/-0.150	0.0284	+/-0.150	0.0582	pCi/g					
Lead-214		2.18	+/-0.209	0.0359	+/-0.209	0.074	pCi/g					
Manganese-54	U	0.0151	+/-0.0215	0.0193	+/-0.0215	0.0404	pCi/g					
Niobium-94	U	-0.000683	+/-0.0218	0.0182	+/-0.0218	0.0378	pCi/g					
Potassium-40		25.6	+/-1.95	0.182	+/-1.95	0.390	pCi/g					
Radium-226		2.09	+/-0.236	0.0352	+/-0.236	0.0733	pCi/g					
Silver-108m	U	0.00216	+/-0.0194	0.017	+/-0.0194	0.0352	pCi/g					
Thallium-208		0.588	+/-0.0741	0.0191	+/-0.0741	0.0397	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-002F
Sample ID: 177164002

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-004F
Sample ID: 177164003
Matrix: TS
Collect Date: 17-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 8.52%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.09	+/-0.229	0.066	+/-0.229	0.142	pCi/g						
Americium-241	U	-0.0245	+/-0.096	0.0879	+/-0.096	0.181	pCi/g						
Bismuth-212		0.400	+/-0.432	0.147	+/-0.432	0.314	pCi/g						
Bismuth-214		0.930	+/-0.133	0.0369	+/-0.133	0.0778	pCi/g						
Cesium-134	UI	0.00	+/-0.0423	0.0248	+/-0.0423	0.0524	pCi/g						
Cesium-137		0.494	+/-0.0626	0.0198	+/-0.0626	0.042	pCi/g						
Cobalt-60		0.072	+/-0.0287	0.0173	+/-0.0287	0.0383	pCi/g						
Europium-152	U	-0.0417	+/-0.057	0.0487	+/-0.057	0.102	pCi/g						
Europium-154	U	0.00254	+/-0.0693	0.0584	+/-0.0693	0.127	pCi/g						
Europium-155	U	0.073	+/-0.064	0.0595	+/-0.064	0.123	pCi/g						
Lead-212		0.954	+/-0.0996	0.0295	+/-0.0996	0.0611	pCi/g						
Lead-214		1.10	+/-0.144	0.0355	+/-0.144	0.0743	pCi/g						
Manganese-54	U	0.0221	+/-0.0294	0.0217	+/-0.0294	0.0459	pCi/g						
Niobium-94	U	0.00168	+/-0.0243	0.0179	+/-0.0243	0.0379	pCi/g						
Potassium-40		15.9	+/-1.48	0.139	+/-1.48	0.315	pCi/g						
Radium-226		0.930	+/-0.133	0.0369	+/-0.133	0.0778	pCi/g						
Silver-108m	U	-0.0074	+/-0.0203	0.0173	+/-0.0203	0.0364	pCi/g						
Thallium-208		0.333	+/-0.0595	0.0192	+/-0.0595	0.0406	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-004F
Sample ID: 177164003

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-004FS
Sample ID: 177164004
Matrix: TS
Collect Date: 17-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 8.55%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		1.28	+/-0.225	0.0641	+/-0.225	0.137	pCi/g		MJH1	12/09/06	0905	594411
Americium-241	U	0.148	+/-0.0867	0.0736	+/-0.0867	0.150	pCi/g					
Bismuth-212		0.768	+/-0.416	0.159	+/-0.416	0.334	pCi/g					
Bismuth-214		1.06	+/-0.132	0.0351	+/-0.132	0.0739	pCi/g					
Cesium-134	UI	0.00	+/-0.0216	0.0239	+/-0.0216	0.0504	pCi/g					
Cesium-137		0.500	+/-0.0672	0.0183	+/-0.0672	0.0388	pCi/g					
Cobalt-60		0.0748	+/-0.0325	0.0156	+/-0.0325	0.0346	pCi/g					
Europium-152	U	-0.0405	+/-0.0682	0.0509	+/-0.0682	0.106	pCi/g					
Europium-154	U	-0.0487	+/-0.0774	0.0629	+/-0.0774	0.135	pCi/g					
Europium-155	U	0.0714	+/-0.0734	0.059	+/-0.0734	0.121	pCi/g					
Lead-212		1.07	+/-0.105	0.0334	+/-0.105	0.0686	pCi/g					
Lead-214		1.24	+/-0.141	0.0329	+/-0.141	0.0688	pCi/g					
Manganese-54	U	0.00532	+/-0.0251	0.0215	+/-0.0251	0.0452	pCi/g					
Niobium-94	U	0.0154	+/-0.0185	0.0184	+/-0.0185	0.0386	pCi/g					
Potassium-40		17.2	+/-1.36	0.144	+/-1.36	0.320	pCi/g					
Radium-226		1.06	+/-0.132	0.0351	+/-0.132	0.0739	pCi/g					
Silver-108m	U	0.0343	+/-0.0233	0.0188	+/-0.0233	0.0392	pCi/g					
Thallium-208		0.405	+/-0.0545	0.0213	+/-0.0545	0.0445	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522–0007–004FS
Sample ID: 177164004

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-005F
Sample ID: 177164005
Matrix: TS
Collect Date: 17-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 9.51%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.791	+/-0.157	0.0597	+/-0.157	0.129	pCi/g		MJH1	12/09/06	0905	594411	
Americium-241	U	-0.0563	+/-0.145	0.0835	+/-0.145	0.172	pCi/g						
Bismuth-212		0.552	+/-0.202	0.132	+/-0.202	0.284	pCi/g						
Bismuth-214		0.713	+/-0.104	0.0332	+/-0.104	0.0707	pCi/g						
Cesium-134	UI	0.00	+/-0.0344	0.0226	+/-0.0344	0.048	pCi/g						
Cesium-137		0.237	+/-0.0444	0.0194	+/-0.0444	0.0413	pCi/g						
Cobalt-60	U	0.0178	+/-0.0234	0.0211	+/-0.0234	0.0462	pCi/g						
Europium-152	U	-0.0178	+/-0.0588	0.0494	+/-0.0588	0.104	pCi/g						
Europium-154	U	-0.0224	+/-0.0639	0.0505	+/-0.0639	0.112	pCi/g						
Europium-155	U	0.0317	+/-0.063	0.0581	+/-0.063	0.120	pCi/g						
Lead-212		0.749	+/-0.0637	0.0294	+/-0.0637	0.061	pCi/g						
Lead-214		0.679	+/-0.0826	0.0399	+/-0.0826	0.0831	pCi/g						
Manganese-54	U	0.00288	+/-0.021	0.0182	+/-0.021	0.039	pCi/g						
Niobium-94	U	0.0141	+/-0.0196	0.0179	+/-0.0196	0.0379	pCi/g						
Potassium-40		10.3	+/-0.841	0.137	+/-0.841	0.313	pCi/g						
Radium-226		0.713	+/-0.104	0.0332	+/-0.104	0.0707	pCi/g						
Silver-108m	U	0.00492	+/-0.0206	0.0156	+/-0.0206	0.0329	pCi/g						
Thallium-208		0.240	+/-0.0438	0.0168	+/-0.0438	0.0359	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	12/06/06	1505	593522

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

Report Date: December 13, 2006

Client Sample ID: 9522-0007-005F
Sample ID: 177164005

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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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Address : 362 Injun Hollow Rd

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

Report Date: December 13, 2006

Client Sample ID: 9522-0007-006F
Sample ID: 177164006
Matrix: TS
Collect Date: 17-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 9.82%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	NA
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.786	+/-0.148	0.0637	+/-0.148	0.136	pCi/g		MJH1	12/09/06	0906	594411	
Americium-241	U	0.00511	+/-0.0257	0.0233	+/-0.0257	0.0479	pCi/g						
Bismuth-212		0.765	+/-0.227	0.115	+/-0.227	0.248	pCi/g						
Bismuth-214		0.774	+/-0.0897	0.0294	+/-0.0897	0.0626	pCi/g						
Cesium-134	UI	0.00	+/-0.0411	0.0224	+/-0.0411	0.0473	pCi/g						
Cesium-137		0.103	+/-0.0413	0.0198	+/-0.0413	0.0419	pCi/g						
Cobalt-60	U	0.0068	+/-0.0195	0.0172	+/-0.0195	0.0378	pCi/g						
Europium-152	U	-0.0106	+/-0.0503	0.0426	+/-0.0503	0.0892	pCi/g						
Europium-154	U	0.0213	+/-0.0431	0.0567	+/-0.0431	0.123	pCi/g						
Europium-155	U	0.0107	+/-0.0497	0.0395	+/-0.0497	0.0814	pCi/g						
Lead-212		0.891	+/-0.0549	0.0237	+/-0.0549	0.0492	pCi/g						
Lead-214		1.01	+/-0.0923	0.0326	+/-0.0923	0.068	pCi/g						
Manganese-54	U	0.0132	+/-0.0214	0.0189	+/-0.0214	0.0402	pCi/g						
Niobium-94	U	0.0215	+/-0.0176	0.0165	+/-0.0176	0.035	pCi/g						
Potassium-40		11.6	+/-0.889	0.157	+/-0.889	0.349	pCi/g						
Radium-226		0.774	+/-0.0897	0.0294	+/-0.0897	0.0626	pCi/g						
Silver-108m	U	0.00257	+/-0.0167	0.0152	+/-0.0167	0.032	pCi/g						
Thallium-208		0.301	+/-0.0414	0.0156	+/-0.0414	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	12/06/06	1505	593522

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

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Certificate of Analysis

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Address : 362 Injun Hollow Rd

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

Report Date: December 13, 2006

Client Sample ID: 9522–0007–006F
Sample ID: 177164006

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

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

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Address : 362 Injun Hollow Rd

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

Report Date: December 13, 2006

Client Sample ID: 9522-0007-007F
Sample ID: 177164007
Matrix: TS
Collect Date: 17-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 2.23%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.701	+/-0.169	0.069	+/-0.169	0.151	pCi/g					
Americium-241	U	0.0125	+/-0.0297	0.0273	+/-0.0297	0.0566	pCi/g					
Bismuth-212		0.518	+/-0.333	0.165	+/-0.333	0.355	pCi/g					
Bismuth-214		0.632	+/-0.125	0.0402	+/-0.125	0.0859	pCi/g					
Cesium-134	U	0.0578	+/-0.037	0.0277	+/-0.037	0.0593	pCi/g					
Cesium-137		0.221	+/-0.0535	0.0205	+/-0.0535	0.0443	pCi/g					
Cobalt-60	U	-0.00193	+/-0.028	0.0228	+/-0.028	0.0506	pCi/g					
Europium-152	U	0.0528	+/-0.0569	0.0529	+/-0.0569	0.112	pCi/g					
Europium-154	U	0.0437	+/-0.0749	0.0669	+/-0.0749	0.148	pCi/g					
Europium-155	U	0.0623	+/-0.0487	0.0452	+/-0.0487	0.0938	pCi/g					
Lead-212		0.720	+/-0.0633	0.0268	+/-0.0633	0.0562	pCi/g					
Lead-214		0.695	+/-0.0857	0.0335	+/-0.0857	0.0712	pCi/g					
Manganese-54	UI	0.00	+/-0.0392	0.0186	+/-0.0392	0.0408	pCi/g					
Niobium-94	U	-0.00954	+/-0.0218	0.0185	+/-0.0218	0.0398	pCi/g					
Potassium-40		10.0	+/-1.02	0.164	+/-1.02	0.379	pCi/g					
Radium-226		0.632	+/-0.125	0.0402	+/-0.125	0.0859	pCi/g					
Silver-108m	U	0.00356	+/-0.0215	0.0187	+/-0.0215	0.0396	pCi/g					
Thallium-208		0.244	+/-0.0569	0.0198	+/-0.0569	0.0425	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	12/06/06	1505	593522

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

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- < 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: December 13, 2006

Client Sample ID: 9522-0007-007F
Sample ID: 177164007

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-008F
Sample ID: 177164008
Matrix: TS
Collect Date: 17-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 9.22%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.623	+/-0.159	0.0507	+/-0.159	0.110	pCi/g						
Americium-241	U	-0.0176	+/-0.0518	0.0444	+/-0.0518	0.0919	pCi/g						
Bismuth-212		0.481	+/-0.210	0.134	+/-0.210	0.285	pCi/g						
Bismuth-214		0.617	+/-0.0961	0.0312	+/-0.0961	0.0662	pCi/g						
Cesium-134	U	0.0252	+/-0.0209	0.0197	+/-0.0209	0.0421	pCi/g						
Cesium-137		0.121	+/-0.0307	0.0149	+/-0.0307	0.032	pCi/g						
Cobalt-60	U	-0.00261	+/-0.018	0.0144	+/-0.018	0.0323	pCi/g						
Europium-152	U	0.00129	+/-0.0482	0.0416	+/-0.0482	0.0876	pCi/g						
Europium-154	U	-0.0119	+/-0.0626	0.0505	+/-0.0626	0.110	pCi/g						
Europium-155	U	0.0452	+/-0.0472	0.0456	+/-0.0472	0.0942	pCi/g						
Lead-212		0.675	+/-0.0772	0.024	+/-0.0772	0.050	pCi/g						
Lead-214		0.657	+/-0.104	0.0293	+/-0.104	0.0616	pCi/g						
Manganese-54	U	0.0131	+/-0.0193	0.0175	+/-0.0193	0.0374	pCi/g						
Niobium-94	U	0.00559	+/-0.0158	0.0142	+/-0.0158	0.0304	pCi/g						
Potassium-40		11.8	+/-1.08	0.120	+/-1.08	0.275	pCi/g						
Radium-226		0.617	+/-0.0961	0.0312	+/-0.0961	0.0662	pCi/g						
Silver-108m	U	0.00849	+/-0.0174	0.0153	+/-0.0174	0.0322	pCi/g						
Thallium-208		0.223	+/-0.0454	0.0152	+/-0.0454	0.0324	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	12/06/06	1505	593522

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

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

Report Date: December 13, 2006

Client Sample ID: 9522-0007-008F
Sample ID: 177164008

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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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Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd

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

Report Date: December 13, 2006

Client Sample ID: 9522-0007-009F
Sample ID: 177164009
Matrix: TS
Collect Date: 17-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 5.47%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.579	+/-0.206	0.0754	+/-0.206	0.151	pCi/g		MJH1	12/09/06	0912	594411	
Americium-241	U	0.0346	+/-0.0437	0.0311	+/-0.0437	0.0623	pCi/g						
Bismuth-212		0.573	+/-0.450	0.166	+/-0.450	0.332	pCi/g						
Bismuth-214		0.568	+/-0.127	0.0356	+/-0.127	0.0711	pCi/g						
Cesium-134	UI	0.00	+/-0.0454	0.0283	+/-0.0454	0.0566	pCi/g						
Cesium-137		0.0576	+/-0.0447	0.0224	+/-0.0447	0.0448	pCi/g						
Cobalt-60	U	0.0303	+/-0.037	0.0243	+/-0.037	0.0486	pCi/g						
Europium-152	U	-0.0331	+/-0.0822	0.0529	+/-0.0822	0.106	pCi/g						
Europium-154	U	-0.0299	+/-0.089	0.0718	+/-0.089	0.144	pCi/g						
Europium-155	U	0.0563	+/-0.055	0.0492	+/-0.055	0.0983	pCi/g						
Lead-212		0.634	+/-0.0788	0.0271	+/-0.0788	0.0542	pCi/g						
Lead-214		0.633	+/-0.107	0.0372	+/-0.107	0.0743	pCi/g						
Manganese-54	U	0.00309	+/-0.0241	0.0212	+/-0.0241	0.0424	pCi/g						
Niobium-94	U	-0.00401	+/-0.0237	0.0206	+/-0.0237	0.0413	pCi/g						
Potassium-40		9.41	+/-1.01	0.209	+/-1.01	0.417	pCi/g						
Radium-226		0.568	+/-0.127	0.0356	+/-0.127	0.0711	pCi/g						
Silver-108m	U	0.0126	+/-0.0203	0.0185	+/-0.0203	0.037	pCi/g						
Thallium-208		0.183	+/-0.0522	0.0208	+/-0.0522	0.0416	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-009F
Sample ID: 177164009

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-011F
Sample ID: 177164010
Matrix: TS
Collect Date: 20-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 7.86%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.714	+/-0.0875	0.0306	+/-0.0875	0.0646	pCi/g						
Americium-241	U	0.0121	+/-0.0542	0.0488	+/-0.0542	0.0998	pCi/g						
Bismuth-212		0.357	+/-0.159	0.0682	+/-0.159	0.143	pCi/g						
Bismuth-214		0.545	+/-0.047	0.0179	+/-0.047	0.0372	pCi/g						
Cesium-134	UI	0.00	+/-0.0183	0.0125	+/-0.0183	0.026	pCi/g						
Cesium-137		0.216	+/-0.0208	0.0092	+/-0.0208	0.0192	pCi/g						
Cobalt-60	U	0.0236	+/-0.0166	0.0114	+/-0.0166	0.0241	pCi/g						
Europium-152	U	0.0158	+/-0.0293	0.0258	+/-0.0293	0.0532	pCi/g						
Europium-154	U	-0.00636	+/-0.0378	0.0318	+/-0.0378	0.0673	pCi/g						
Europium-155	U	0.0198	+/-0.0454	0.0288	+/-0.0454	0.0588	pCi/g						
Lead-212		0.661	+/-0.0355	0.0151	+/-0.0355	0.0309	pCi/g						
Lead-214		0.611	+/-0.0517	0.0184	+/-0.0517	0.0381	pCi/g						
Manganese-54	U	0.00848	+/-0.0121	0.0106	+/-0.0121	0.0222	pCi/g						
Niobium-94	U	0.00376	+/-0.00997	0.00876	+/-0.00997	0.0183	pCi/g						
Potassium-40		10.5	+/-0.511	0.0846	+/-0.511	0.183	pCi/g						
Radium-226		0.545	+/-0.047	0.0179	+/-0.047	0.0372	pCi/g						
Silver-108m	U	-0.00411	+/-0.0092	0.00816	+/-0.0092	0.017	pCi/g						
Thallium-208		0.236	+/-0.0254	0.00929	+/-0.0254	0.0194	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-011F
Sample ID: 177164010

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-012F
Sample ID: 177164011
Matrix: TS
Collect Date: 20-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 7.58%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.756	+/-0.119	0.040	+/-0.119	0.084	pCi/g		MJH1	12/09/06	1326	594411
Americium-241	U	0.00185	+/-0.0173	0.0162	+/-0.0173	0.0329	pCi/g					
Bismuth-212		0.597	+/-0.166	0.0874	+/-0.166	0.183	pCi/g					
Bismuth-214		0.649	+/-0.0623	0.0208	+/-0.0623	0.0432	pCi/g					
Cesium-134	U	0.0241	+/-0.0206	0.0142	+/-0.0206	0.0296	pCi/g					
Cesium-137		0.115	+/-0.0245	0.0107	+/-0.0245	0.0223	pCi/g					
Cobalt-60	U	0.0104	+/-0.0183	0.0137	+/-0.0183	0.029	pCi/g					
Europium-152	U	-0.00982	+/-0.0306	0.0272	+/-0.0306	0.0563	pCi/g					
Europium-154	U	-0.0158	+/-0.0407	0.0338	+/-0.0407	0.0717	pCi/g					
Europium-155	UI	0.00	+/-0.0577	0.0265	+/-0.0577	0.0541	pCi/g					
Lead-212		0.728	+/-0.038	0.0155	+/-0.038	0.0319	pCi/g					
Lead-214		0.702	+/-0.0541	0.0194	+/-0.0541	0.0401	pCi/g					
Manganese-54	U	0.0206	+/-0.0167	0.0111	+/-0.0167	0.0233	pCi/g					
Niobium-94	U	0.00515	+/-0.0123	0.0107	+/-0.0123	0.0222	pCi/g					
Potassium-40		12.1	+/-0.571	0.105	+/-0.571	0.226	pCi/g					
Radium-226		0.649	+/-0.0623	0.0208	+/-0.0623	0.0432	pCi/g					
Silver-108m	U	-0.00262	+/-0.011	0.00963	+/-0.011	0.020	pCi/g					
Thallium-208		0.243	+/-0.0323	0.0105	+/-0.0323	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-012F
Sample ID: 177164011

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-013F
Sample ID: 177164012
Matrix: TS
Collect Date: 20-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 7.87%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.925	+/-0.169	0.0389	+/-0.169	0.0817	pCi/g		MJH1	12/09/06	1327	594411
Americium-241	U	0.037	+/-0.0596	0.0513	+/-0.0596	0.105	pCi/g					
Bismuth-212		0.693	+/-0.182	0.0913	+/-0.182	0.190	pCi/g					
Bismuth-214		0.687	+/-0.0894	0.0203	+/-0.0894	0.0422	pCi/g					
Cesium-134	UI	0.00	+/-0.0278	0.0148	+/-0.0278	0.0308	pCi/g					
Cesium-137		0.122	+/-0.028	0.0116	+/-0.028	0.0242	pCi/g					
Cobalt-60	U	0.0197	+/-0.0147	0.0134	+/-0.0147	0.0282	pCi/g					
Europium-152	U	-0.0239	+/-0.0317	0.0275	+/-0.0317	0.0568	pCi/g					
Europium-154	U	-0.00396	+/-0.0407	0.0337	+/-0.0407	0.0715	pCi/g					
Europium-155	U	0.00888	+/-0.0448	0.0319	+/-0.0448	0.0652	pCi/g					
Lead-212		0.829	+/-0.0752	0.0183	+/-0.0752	0.0375	pCi/g					
Lead-214		0.719	+/-0.0847	0.0199	+/-0.0847	0.0411	pCi/g					
Manganese-54	UI	0.00	+/-0.0378	0.0112	+/-0.0378	0.0234	pCi/g					
Niobium-94	U	0.00518	+/-0.0125	0.0107	+/-0.0125	0.0223	pCi/g					
Potassium-40		12.2	+/-0.953	0.109	+/-0.953	0.234	pCi/g					
Radium-226		0.687	+/-0.0894	0.0203	+/-0.0894	0.0422	pCi/g					
Silver-108m	U	-0.00145	+/-0.0112	0.00973	+/-0.0112	0.0202	pCi/g					
Thallium-208		0.266	+/-0.0381	0.0117	+/-0.0381	0.0242	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-013F
Sample ID: 177164012

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-014F
Sample ID: 177164013
Matrix: TS
Collect Date: 20-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 7.02%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.775	+/-0.139	0.0358	+/-0.139	0.0752	pCi/g		MJH1	12/09/06	1328	594411	
Americium-241	U	0.00533	+/-0.0544	0.0452	+/-0.0544	0.0923	pCi/g						
Bismuth-212		0.373	+/-0.226	0.0775	+/-0.226	0.162	pCi/g						
Bismuth-214		0.649	+/-0.0797	0.0191	+/-0.0797	0.0398	pCi/g						
Cesium-134	UI	0.00	+/-0.0197	0.0128	+/-0.0197	0.0267	pCi/g						
Cesium-137		0.218	+/-0.0321	0.0104	+/-0.0321	0.0217	pCi/g						
Cobalt-60	U	0.0104	+/-0.0174	0.0111	+/-0.0174	0.0236	pCi/g						
Europium-152	U	-0.0525	+/-0.0306	0.0253	+/-0.0306	0.0523	pCi/g						
Europium-154	U	-0.0218	+/-0.0405	0.0327	+/-0.0405	0.069	pCi/g						
Europium-155	U	0.0457	+/-0.0479	0.0298	+/-0.0479	0.0609	pCi/g						
Lead-212		0.741	+/-0.0702	0.0153	+/-0.0702	0.0315	pCi/g						
Lead-214		0.747	+/-0.0892	0.0193	+/-0.0892	0.0398	pCi/g						
Manganese-54	U	0.00756	+/-0.0118	0.0106	+/-0.0118	0.0222	pCi/g						
Niobium-94	U	-0.00367	+/-0.0115	0.00947	+/-0.0115	0.0197	pCi/g						
Potassium-40		10.4	+/-0.880	0.0962	+/-0.880	0.206	pCi/g						
Radium-226		0.649	+/-0.0797	0.0191	+/-0.0797	0.0398	pCi/g						
Silver-108m	U	-0.00447	+/-0.0105	0.00898	+/-0.0105	0.0186	pCi/g						
Thallium-208		0.247	+/-0.0337	0.0106	+/-0.0337	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-014F
Sample ID: 177164013

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-015F
Sample ID: 177164014
Matrix: TS
Collect Date: 20-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 10.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.892	+/-0.133	0.0331	+/-0.133	0.0686	pCi/g		MJH1	12/09/06	1306	594411
Americium-241	U	-0.00329	+/-0.0875	0.070	+/-0.0875	0.142	pCi/g					
Bismuth-212		0.580	+/-0.164	0.073	+/-0.164	0.151	pCi/g					
Bismuth-214		0.595	+/-0.0708	0.0174	+/-0.0708	0.0359	pCi/g					
Cesium-134	UI	0.00	+/-0.0186	0.0119	+/-0.0186	0.0245	pCi/g					
Cesium-137		0.0612	+/-0.0134	0.00909	+/-0.0134	0.0188	pCi/g					
Cobalt-60	U	-0.00369	+/-0.0117	0.00987	+/-0.0117	0.0207	pCi/g					
Europium-152	U	0.00102	+/-0.0333	0.0254	+/-0.0333	0.052	pCi/g					
Europium-154	U	0.0218	+/-0.0372	0.0329	+/-0.0372	0.0683	pCi/g					
Europium-155	UI	0.00	+/-0.0428	0.0297	+/-0.0428	0.0602	pCi/g					
Lead-212		0.921	+/-0.0798	0.0144	+/-0.0798	0.0292	pCi/g					
Lead-214		0.700	+/-0.076	0.0176	+/-0.076	0.036	pCi/g					
Manganese-54	U	0.0179	+/-0.0129	0.00942	+/-0.0129	0.0195	pCi/g					
Niobium-94	U	0.0015	+/-0.0111	0.00871	+/-0.0111	0.018	pCi/g					
Potassium-40		16.1	+/-1.16	0.0794	+/-1.16	0.168	pCi/g					
Radium-226		0.595	+/-0.0708	0.0174	+/-0.0708	0.0359	pCi/g					
Silver-108m	U	0.000242	+/-0.00996	0.00852	+/-0.00996	0.0175	pCi/g					
Thallium-208		0.316	+/-0.0362	0.00875	+/-0.0362	0.0181	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522–0007–015F
Sample ID: 177164014

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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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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: December 13, 2006

Client Sample ID: 9522-0007-016F
Sample ID: 177164015
Matrix: TS
Collect Date: 20-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 6.95%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.916	+/-0.150	0.0367	+/-0.150	0.0767	pCi/g						
Americium-241	U	0.0599	+/-0.0486	0.0393	+/-0.0486	0.0798	pCi/g						
Bismuth-212		0.647	+/-0.190	0.0813	+/-0.190	0.169	pCi/g						
Bismuth-214		0.623	+/-0.0786	0.0197	+/-0.0786	0.0408	pCi/g						
Cesium-134	UI	0.00	+/-0.025	0.015	+/-0.025	0.0309	pCi/g						
Cesium-137		0.063	+/-0.0247	0.0118	+/-0.0247	0.0244	pCi/g						
Cobalt-60	UI	0.00	+/-0.0155	0.012	+/-0.0155	0.0252	pCi/g						
Europium-152	U	-0.0407	+/-0.0348	0.0295	+/-0.0348	0.0606	pCi/g						
Europium-154	U	-0.00245	+/-0.0399	0.0338	+/-0.0399	0.0712	pCi/g						
Europium-155	U	0.0591	+/-0.0415	0.031	+/-0.0415	0.0631	pCi/g						
Lead-212		0.892	+/-0.0792	0.0195	+/-0.0792	0.0397	pCi/g						
Lead-214		0.742	+/-0.081	0.021	+/-0.081	0.0431	pCi/g						
Manganese-54	U	0.00885	+/-0.0123	0.0103	+/-0.0123	0.0215	pCi/g						
Niobium-94	U	0.00123	+/-0.0144	0.0106	+/-0.0144	0.022	pCi/g						
Potassium-40		13.7	+/-0.965	0.0898	+/-0.965	0.193	pCi/g						
Radium-226		0.623	+/-0.0786	0.0197	+/-0.0786	0.0408	pCi/g						
Silver-108m	U	0.00562	+/-0.0117	0.0103	+/-0.0117	0.0213	pCi/g						
Thallium-208		0.298	+/-0.0369	0.0103	+/-0.0369	0.0213	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-016F
Sample ID: 177164015

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-017F
Sample ID: 177164016
Matrix: TS
Collect Date: 20-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 8.16%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	A
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.623	+/-0.0966	0.037	+/-0.0966	0.0777	pCi/g						
Americium-241	U	-0.0228	+/-0.0794	0.0465	+/-0.0794	0.0948	pCi/g						
Bismuth-212		0.457	+/-0.158	0.0822	+/-0.158	0.171	pCi/g						
Bismuth-214		0.593	+/-0.0583	0.0192	+/-0.0583	0.040	pCi/g						
Cesium-134	UI	0.00	+/-0.0203	0.0136	+/-0.0203	0.0282	pCi/g						
Cesium-137		0.0357	+/-0.016	0.00978	+/-0.016	0.0204	pCi/g						
Cobalt-60	U	-0.00536	+/-0.0133	0.0106	+/-0.0133	0.0226	pCi/g						
Europium-152	U	0.0127	+/-0.0344	0.0289	+/-0.0344	0.0595	pCi/g						
Europium-154	U	-0.0536	+/-0.0415	0.0311	+/-0.0415	0.066	pCi/g						
Europium-155	U	0.065	+/-0.0486	0.0341	+/-0.0486	0.0695	pCi/g						
Lead-212		0.673	+/-0.0383	0.0179	+/-0.0383	0.0365	pCi/g						
Lead-214		0.549	+/-0.0511	0.0207	+/-0.0511	0.0426	pCi/g						
Manganese-54	U	0.0133	+/-0.0164	0.0117	+/-0.0164	0.0243	pCi/g						
Niobium-94	U	-0.00833	+/-0.0118	0.00982	+/-0.0118	0.0204	pCi/g						
Potassium-40		10.7	+/-0.540	0.0828	+/-0.540	0.180	pCi/g						
Radium-226		0.593	+/-0.0583	0.0192	+/-0.0583	0.040	pCi/g						
Silver-108m	U	0.0109	+/-0.00942	0.00926	+/-0.00942	0.0192	pCi/g						
Thallium-208		0.233	+/-0.028	0.0103	+/-0.028	0.0214	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522–0007–017F
Sample ID: 177164016

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-018-I
Sample ID: 177164017
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-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	M
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.792	+/-0.118	0.0496	+/-0.118	0.103	pCi/g						
Americium-241	U	0.00885	+/-0.0221	0.0196	+/-0.0221	0.0398	pCi/g						
Bismuth-212		0.561	+/-0.247	0.107	+/-0.247	0.223	pCi/g						
Bismuth-214		0.527	+/-0.0821	0.0266	+/-0.0821	0.055	pCi/g						
Cesium-134	UI	0.00	+/-0.024	0.0174	+/-0.024	0.036	pCi/g						
Cesium-137		1.20	+/-0.0562	0.016	+/-0.0562	0.0329	pCi/g						
Cobalt-60	U	0.0119	+/-0.0352	0.0145	+/-0.0352	0.0305	pCi/g						
Europium-152	U	-0.0333	+/-0.0422	0.0347	+/-0.0422	0.0713	pCi/g						
Europium-154	U	-0.0467	+/-0.0519	0.0412	+/-0.0519	0.0866	pCi/g						
Europium-155	U	0.0284	+/-0.0472	0.0313	+/-0.0472	0.0638	pCi/g						
Lead-212		0.702	+/-0.0551	0.0273	+/-0.0551	0.0554	pCi/g						
Lead-214		0.590	+/-0.0718	0.0264	+/-0.0718	0.0541	pCi/g						
Manganese-54	U	0.0096	+/-0.0281	0.0135	+/-0.0281	0.028	pCi/g						
Niobium-94	U	0.00284	+/-0.0182	0.0136	+/-0.0182	0.0281	pCi/g						
Potassium-40		11.6	+/-0.638	0.126	+/-0.638	0.267	pCi/g						
Radium-226		0.527	+/-0.0821	0.0266	+/-0.0821	0.055	pCi/g						
Silver-108m	U	-0.00266	+/-0.0152	0.0134	+/-0.0152	0.0276	pCi/g						
Thallium-208		0.260	+/-0.0385	0.0136	+/-0.0385	0.0281	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522–0007–018–I
Sample ID: 177164017

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-019-I
Sample ID: 177164018
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 6.44%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.983	+/-0.153	0.0379	+/-0.153	0.0758	pCi/g		MJH1	12/09/06	1310	594411	
Americium-241	U	0.0242	+/-0.0508	0.0385	+/-0.0508	0.077	pCi/g						
Bismuth-212		0.644	+/-0.248	0.081	+/-0.248	0.162	pCi/g						
Bismuth-214		0.629	+/-0.0733	0.019	+/-0.0733	0.0379	pCi/g						
Cesium-134	UI	0.00	+/-0.0237	0.0143	+/-0.0237	0.0286	pCi/g						
Cesium-137		0.0738	+/-0.0238	0.0104	+/-0.0238	0.0209	pCi/g						
Cobalt-60	U	0.00595	+/-0.0147	0.0126	+/-0.0147	0.0252	pCi/g						
Europium-152	U	-0.022	+/-0.0415	0.029	+/-0.0415	0.0579	pCi/g						
Europium-154	U	0.0175	+/-0.0417	0.0359	+/-0.0417	0.0717	pCi/g						
Europium-155	U	0.0408	+/-0.0416	0.033	+/-0.0416	0.0659	pCi/g						
Lead-212		0.908	+/-0.0812	0.0167	+/-0.0812	0.0333	pCi/g						
Lead-214		0.641	+/-0.0725	0.0214	+/-0.0725	0.0428	pCi/g						
Manganese-54	U	0.0182	+/-0.0132	0.0107	+/-0.0132	0.0215	pCi/g						
Niobium-94	U	0.00111	+/-0.0136	0.0104	+/-0.0136	0.0207	pCi/g						
Potassium-40		15.9	+/-1.11	0.101	+/-1.11	0.201	pCi/g						
Radium-226		0.629	+/-0.0733	0.019	+/-0.0733	0.0379	pCi/g						
Silver-108m	U	-0.00911	+/-0.012	0.0101	+/-0.012	0.0202	pCi/g						
Thallium-208		0.265	+/-0.038	0.0104	+/-0.038	0.0207	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-019-I
Sample ID: 177164018

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-020-I
Sample ID: 177164019
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 6.19%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	NA
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.983	+/-0.144	0.0319	+/-0.144	0.0638	pCi/g						
Americium-241	U	0.0551	+/-0.076	0.0639	+/-0.076	0.128	pCi/g						
Bismuth-212		0.604	+/-0.156	0.0701	+/-0.156	0.140	pCi/g						
Bismuth-214		0.592	+/-0.0733	0.0177	+/-0.0733	0.0354	pCi/g						
Cesium-134	UI	0.00	+/-0.0219	0.0131	+/-0.0219	0.0263	pCi/g						
Cesium-137	U	0.00405	+/-0.0135	0.00898	+/-0.0135	0.018	pCi/g						
Cobalt-60	U	-0.00834	+/-0.0127	0.00932	+/-0.0127	0.0186	pCi/g						
Europium-152	U	-0.0402	+/-0.036	0.0255	+/-0.036	0.051	pCi/g						
Europium-154	U	-0.0237	+/-0.0365	0.0298	+/-0.0365	0.0595	pCi/g						
Europium-155	U	0.0222	+/-0.0443	0.0363	+/-0.0443	0.0726	pCi/g						
Lead-212		0.996	+/-0.0854	0.0157	+/-0.0854	0.0313	pCi/g						
Lead-214		0.735	+/-0.0788	0.0184	+/-0.0788	0.0368	pCi/g						
Manganese-54	U	-0.00684	+/-0.014	0.00935	+/-0.014	0.0187	pCi/g						
Niobium-94	U	-0.00167	+/-0.0122	0.00861	+/-0.0122	0.0172	pCi/g						
Potassium-40		17.4	+/-1.12	0.0791	+/-1.12	0.158	pCi/g						
Radium-226		0.592	+/-0.0733	0.0177	+/-0.0733	0.0354	pCi/g						
Silver-108m	U	-0.00653	+/-0.0121	0.00837	+/-0.0121	0.0167	pCi/g						
Thallium-208		0.313	+/-0.0369	0.0089	+/-0.0369	0.0178	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-020-I
Sample ID: 177164019

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-021-I
Sample ID: 177164020
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 6.61%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.961	+/-0.146	0.0397	+/-0.146	0.0794	pCi/g		MJH1	12/09/06	1311	594411	
Americium-241	U	0.0434	+/-0.0573	0.047	+/-0.0573	0.094	pCi/g						
Bismuth-212		0.677	+/-0.213	0.0871	+/-0.213	0.174	pCi/g						
Bismuth-214		0.599	+/-0.0757	0.0208	+/-0.0757	0.0416	pCi/g						
Cesium-134	UI	0.00	+/-0.0219	0.0157	+/-0.0219	0.0313	pCi/g						
Cesium-137		0.026	+/-0.0171	0.0113	+/-0.0171	0.0226	pCi/g						
Cobalt-60	U	0.0054	+/-0.0145	0.0126	+/-0.0145	0.0251	pCi/g						
Europium-152	U	-0.0237	+/-0.0439	0.0311	+/-0.0439	0.0622	pCi/g						
Europium-154	U	-0.0805	+/-0.051	0.0364	+/-0.051	0.0728	pCi/g						
Europium-155	U	0.0214	+/-0.0479	0.0354	+/-0.0479	0.0707	pCi/g						
Lead-212		0.969	+/-0.0892	0.0181	+/-0.0892	0.0361	pCi/g						
Lead-214		0.697	+/-0.0794	0.0217	+/-0.0794	0.0434	pCi/g						
Manganese-54	U	0.0107	+/-0.0129	0.0123	+/-0.0129	0.0246	pCi/g						
Niobium-94	U	-0.00426	+/-0.0127	0.0106	+/-0.0127	0.0211	pCi/g						
Potassium-40		16.0	+/-1.13	0.0993	+/-1.13	0.198	pCi/g						
Radium-226		0.599	+/-0.0757	0.0208	+/-0.0757	0.0416	pCi/g						
Silver-108m	U	0.00719	+/-0.0129	0.0101	+/-0.0129	0.0201	pCi/g						
Thallium-208		0.305	+/-0.0375	0.0111	+/-0.0375	0.0222	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	12/06/06	1505	593522

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: December 13, 2006

Client Sample ID: 9522-0007-021-I
Sample ID: 177164020

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-022-I
Sample ID: 177164021
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 8.54%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		1.29	+/-0.219	0.076	+/-0.219	0.164	pCi/g		MJH1	12/11/06	1143	594412
Americium-241	U	-0.0328	+/-0.0341	0.0302	+/-0.0341	0.0621	pCi/g					
Bismuth-212		0.862	+/-0.389	0.159	+/-0.389	0.341	pCi/g					
Bismuth-214		0.842	+/-0.115	0.0369	+/-0.115	0.079	pCi/g					
Cesium-134	UI	0.0783	+/-0.0425	0.0303	+/-0.0425	0.0641	pCi/g					
Cesium-137		0.0855	+/-0.0371	0.0216	+/-0.0371	0.0462	pCi/g					
Cobalt-60	U	0.0598	+/-0.0894	0.0281	+/-0.0894	0.0608	pCi/g					
Europium-152	U	0.0246	+/-0.0608	0.0552	+/-0.0608	0.116	pCi/g					
Europium-154	U	0.0232	+/-0.0808	0.0707	+/-0.0808	0.154	pCi/g					
Europium-155	U	0.097	+/-0.0803	0.0484	+/-0.0803	0.100	pCi/g					
Lead-212		1.02	+/-0.0764	0.0321	+/-0.0764	0.0666	pCi/g					
Lead-214		0.911	+/-0.107	0.0408	+/-0.107	0.0856	pCi/g					
Manganese-54	U	0.00719	+/-0.0283	0.0241	+/-0.0283	0.0514	pCi/g					
Niobium-94	U	-0.00181	+/-0.0259	0.0217	+/-0.0259	0.0461	pCi/g					
Potassium-40		15.8	+/-1.12	0.207	+/-1.12	0.461	pCi/g					
Radium-226		0.842	+/-0.115	0.0369	+/-0.115	0.079	pCi/g					
Silver-108m	U	-0.00381	+/-0.021	0.0181	+/-0.021	0.0384	pCi/g					
Thallium-208		0.355	+/-0.053	0.0174	+/-0.053	0.0375	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522-0007-022-I
Sample ID: 177164021

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522–0007–023–I
Sample ID: 177164022
Matrix: TS
Collect Date: 04–DEC–06
Receive Date: 06–DEC–06
Collector: Client
Moisture: 5.58%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
Gamma, Solid–FSS GAM & ALL FSS 226 Ingrowth												
Waived												
Actinium–228		0.987	+/-0.224	0.077	+/-0.224	0.165	pCi/g		MJH1	12/11/06	1143	594412
Americium–241	U	–0.0061	+/-0.0453	0.0326	+/-0.0453	0.067	pCi/g					
Bismuth–212		0.835	+/-0.374	0.164	+/-0.374	0.350	pCi/g					
Bismuth–214		0.692	+/-0.126	0.0455	+/-0.126	0.0955	pCi/g					
Cesium–134	U	0.0593	+/-0.0429	0.0301	+/-0.0429	0.0633	pCi/g					
Cesium–137		0.0525	+/-0.0277	0.0228	+/-0.0277	0.0482	pCi/g					
Cobalt–60	U	0.0208	+/-0.0286	0.0257	+/-0.0286	0.0554	pCi/g					
Europium–152	U	–0.0322	+/-0.0658	0.0547	+/-0.0658	0.114	pCi/g					
Europium–154	U	–0.135	+/-0.0907	0.0658	+/-0.0907	0.143	pCi/g					
Europium–155	U	0.0784	+/-0.080	0.0511	+/-0.080	0.105	pCi/g					
Lead–212		1.00	+/-0.0827	0.049	+/-0.0827	0.100	pCi/g					
Lead–214		0.746	+/-0.107	0.0439	+/-0.107	0.0914	pCi/g					
Manganese–54	U	0.0287	+/-0.0284	0.0209	+/-0.0284	0.0445	pCi/g					
Niobium–94	U	–0.0164	+/-0.0251	0.0205	+/-0.0251	0.0433	pCi/g					
Potassium–40		15.9	+/-1.17	0.208	+/-1.17	0.456	pCi/g					
Radium–226		0.692	+/-0.126	0.0455	+/-0.126	0.0955	pCi/g					
Silver–108m	U	–0.00687	+/-0.021	0.0185	+/-0.021	0.039	pCi/g					
Thallium–208		0.351	+/-0.0633	0.0223	+/-0.0633	0.0471	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522–0007–023–I
Sample ID: 177164022

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-024-I
Sample ID: 177164023
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 10%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.03	+/-0.171	0.0634	+/-0.171	0.137	pCi/g		MJH1	12/11/06	1144	594412	
Americium-241	U	0.0106	+/-0.0308	0.025	+/-0.0308	0.0515	pCi/g						
Bismuth-212		0.699	+/-0.337	0.148	+/-0.337	0.315	pCi/g						
Bismuth-214		0.727	+/-0.0969	0.0359	+/-0.0969	0.0762	pCi/g						
Cesium-134	U	0.0385	+/-0.0314	0.0248	+/-0.0314	0.0525	pCi/g						
Cesium-137		0.0661	+/-0.0341	0.0213	+/-0.0341	0.0452	pCi/g						
Cobalt-60	U	0.00383	+/-0.024	0.0204	+/-0.024	0.0448	pCi/g						
Europium-152	U	0.00933	+/-0.0552	0.0468	+/-0.0552	0.0982	pCi/g						
Europium-154	U	0.0491	+/-0.0759	0.0679	+/-0.0759	0.147	pCi/g						
Europium-155	UI	0.00	+/-0.0596	0.0396	+/-0.0596	0.082	pCi/g						
Lead-212		1.07	+/-0.0655	0.0253	+/-0.0655	0.0527	pCi/g						
Lead-214		0.790	+/-0.0896	0.0345	+/-0.0896	0.0722	pCi/g						
Manganese-54	UI	0.00	+/-0.027	0.0202	+/-0.027	0.0431	pCi/g						
Niobium-94	U	0.0246	+/-0.0202	0.0187	+/-0.0202	0.0396	pCi/g						
Potassium-40		16.0	+/-1.09	0.151	+/-1.09	0.344	pCi/g						
Radium-226		0.727	+/-0.0969	0.0359	+/-0.0969	0.0762	pCi/g						
Silver-108m	U	-0.00937	+/-0.0179	0.0153	+/-0.0179	0.0324	pCi/g						
Thallium-208		0.337	+/-0.056	0.0188	+/-0.056	0.0399	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522-0007-024-I
Sample ID: 177164023

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-025-I
Sample ID: 177164024
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 11.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.04	+/-0.170	0.055	+/-0.170	0.116	pCi/g		MJH1	12/11/06	1144	594412	
Americium-241	U	0.0416	+/-0.0738	0.0624	+/-0.0738	0.128	pCi/g						
Bismuth-212		0.844	+/-0.296	0.126	+/-0.296	0.265	pCi/g						
Bismuth-214		0.682	+/-0.0908	0.0302	+/-0.0908	0.0631	pCi/g						
Cesium-134	UI	0.00	+/-0.043	0.0218	+/-0.043	0.0453	pCi/g						
Cesium-137		0.0473	+/-0.0249	0.017	+/-0.0249	0.0355	pCi/g						
Cobalt-60	U	0.0123	+/-0.0182	0.0164	+/-0.0182	0.0351	pCi/g						
Europium-152	U	0.0255	+/-0.0587	0.0449	+/-0.0587	0.0929	pCi/g						
Europium-154	U	0.00733	+/-0.0556	0.0481	+/-0.0556	0.103	pCi/g						
Europium-155	U	0.0357	+/-0.0565	0.0509	+/-0.0565	0.105	pCi/g						
Lead-212		1.08	+/-0.0615	0.0247	+/-0.0615	0.051	pCi/g						
Lead-214		0.814	+/-0.0767	0.0286	+/-0.0767	0.0594	pCi/g						
Manganese-54	U	-0.0185	+/-0.0212	0.0146	+/-0.0212	0.0308	pCi/g						
Niobium-94	U	0.0136	+/-0.0191	0.0146	+/-0.0191	0.0306	pCi/g						
Potassium-40		17.9	+/-0.829	0.142	+/-0.829	0.307	pCi/g						
Radium-226		0.682	+/-0.0908	0.0302	+/-0.0908	0.0631	pCi/g						
Silver-108m	U	-0.00192	+/-0.0159	0.0139	+/-0.0159	0.0291	pCi/g						
Thallium-208		0.326	+/-0.0427	0.0158	+/-0.0427	0.0331	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522-0007-025-I
Sample ID: 177164024

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-026-I
Sample ID: 177164025
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 9.61%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.01	+/-0.143	0.0651	+/-0.143	0.140	pCi/g		MJH1	12/11/06	1157	594412	
Americium-241	U	0.0876	+/-0.150	0.0928	+/-0.150	0.191	pCi/g						
Bismuth-212		0.774	+/-0.402	0.149	+/-0.402	0.317	pCi/g						
Bismuth-214		0.815	+/-0.0995	0.0357	+/-0.0995	0.0756	pCi/g						
Cesium-134	UI	0.0562	+/-0.0444	0.0252	+/-0.0444	0.0534	pCi/g						
Cesium-137		0.200	+/-0.0578	0.0205	+/-0.0578	0.0435	pCi/g						
Cobalt-60	U	0.0525	+/-0.0343	0.026	+/-0.0343	0.056	pCi/g						
Europium-152	U	-0.0553	+/-0.067	0.0545	+/-0.067	0.114	pCi/g						
Europium-154	U	0.0364	+/-0.0824	0.0711	+/-0.0824	0.153	pCi/g						
Europium-155	U	0.0481	+/-0.0685	0.0634	+/-0.0685	0.130	pCi/g						
Lead-212		0.975	+/-0.0692	0.0331	+/-0.0692	0.0683	pCi/g						
Lead-214		1.00	+/-0.103	0.0424	+/-0.103	0.0883	pCi/g						
Manganese-54	U	-0.000708	+/-0.0216	0.0184	+/-0.0216	0.0395	pCi/g						
Niobium-94	U	0.0269	+/-0.0272	0.0169	+/-0.0272	0.0361	pCi/g						
Potassium-40		14.9	+/-1.02	0.197	+/-1.02	0.432	pCi/g						
Radium-226		0.815	+/-0.0995	0.0357	+/-0.0995	0.0756	pCi/g						
Silver-108m	U	-0.0126	+/-0.0227	0.0185	+/-0.0227	0.0388	pCi/g						
Thallium-208		0.291	+/-0.0483	0.019	+/-0.0483	0.0403	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522-0007-026-I
Sample ID: 177164025

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-027-I
Sample ID: 177164026
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 10.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		1.27	+/-0.259	0.0743	+/-0.259	0.158	pCi/g		MJH1	12/11/06	1320	594412
Americium-241	U	-0.0881	+/-0.109	0.0859	+/-0.109	0.176	pCi/g					
Bismuth-212		1.15	+/-0.377	0.140	+/-0.377	0.299	pCi/g					
Bismuth-214		1.57	+/-0.188	0.0373	+/-0.188	0.0784	pCi/g					
Cesium-134	UI	0.00	+/-0.0359	0.0277	+/-0.0359	0.0581	pCi/g					
Cesium-137		0.0905	+/-0.0402	0.0223	+/-0.0402	0.0468	pCi/g					
Cobalt-60	U	-0.0108	+/-0.0261	0.0213	+/-0.0261	0.0463	pCi/g					
Europium-152	U	0.0523	+/-0.0641	0.0552	+/-0.0641	0.115	pCi/g					
Europium-154	U	0.0745	+/-0.0818	0.0747	+/-0.0818	0.159	pCi/g					
Europium-155	U	0.0087	+/-0.0673	0.0597	+/-0.0673	0.122	pCi/g					
Lead-212		1.43	+/-0.139	0.0309	+/-0.139	0.0637	pCi/g					
Lead-214		1.81	+/-0.200	0.0347	+/-0.200	0.0726	pCi/g					
Manganese-54	U	-0.0123	+/-0.0272	0.019	+/-0.0272	0.0403	pCi/g					
Niobium-94	U	0.0098	+/-0.0227	0.0197	+/-0.0227	0.0415	pCi/g					
Potassium-40		23.3	+/-1.97	0.167	+/-1.97	0.371	pCi/g					
Radium-226		1.57	+/-0.188	0.0373	+/-0.188	0.0784	pCi/g					
Silver-108m	U	0.0107	+/-0.0204	0.0183	+/-0.0204	0.0383	pCi/g					
Thallium-208		0.521	+/-0.0718	0.0203	+/-0.0718	0.0427	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522–0007–027–I
Sample ID: 177164026

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-028-I
Sample ID: 177164027
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 10.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.859	+/-0.108	0.0435	+/-0.108	0.091	pCi/g						
Americium-241	U	0.020	+/-0.0734	0.0587	+/-0.0734	0.120	pCi/g						
Bismuth-212		0.437	+/-0.192	0.0865	+/-0.192	0.181	pCi/g						
Bismuth-214		0.780	+/-0.0681	0.0213	+/-0.0681	0.0442	pCi/g						
Cesium-134	UI	0.00	+/-0.0218	0.014	+/-0.0218	0.029	pCi/g						
Cesium-137		0.135	+/-0.0228	0.0127	+/-0.0228	0.0263	pCi/g						
Cobalt-60	U	0.00624	+/-0.0199	0.0149	+/-0.0199	0.0314	pCi/g						
Europium-152	U	-0.0312	+/-0.0357	0.0289	+/-0.0357	0.0597	pCi/g						
Europium-154	U	0.0226	+/-0.044	0.0385	+/-0.044	0.0813	pCi/g						
Europium-155	U	0.0233	+/-0.0423	0.0338	+/-0.0423	0.0691	pCi/g						
Lead-212		0.861	+/-0.043	0.0176	+/-0.043	0.036	pCi/g						
Lead-214		0.911	+/-0.0683	0.0212	+/-0.0683	0.0437	pCi/g						
Manganese-54	U	-0.00211	+/-0.0145	0.012	+/-0.0145	0.025	pCi/g						
Niobium-94	U	0.000967	+/-0.0126	0.0107	+/-0.0126	0.0223	pCi/g						
Potassium-40		13.1	+/-0.628	0.109	+/-0.628	0.234	pCi/g						
Radium-226		0.780	+/-0.0681	0.0213	+/-0.0681	0.0442	pCi/g						
Silver-108m	U	-0.00208	+/-0.0112	0.00989	+/-0.0112	0.0205	pCi/g						
Thallium-208		0.301	+/-0.0335	0.0105	+/-0.0335	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	LXM2	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522-0007-028-I
 Sample ID: 177164027

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-029-I
Sample ID: 177164028
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 10%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.832	+/-0.101	0.035	+/-0.101	0.0738	pCi/g		MJH1	12/11/06	1321	594412	
Americium-241	U	0.0174	+/-0.0829	0.0656	+/-0.0829	0.134	pCi/g						
Bismuth-212		0.435	+/-0.183	0.0795	+/-0.183	0.166	pCi/g						
Bismuth-214		0.742	+/-0.0614	0.0207	+/-0.0614	0.0431	pCi/g						
Cesium-134	U	0.0277	+/-0.0196	0.0142	+/-0.0196	0.0295	pCi/g						
Cesium-137		0.117	+/-0.0282	0.0116	+/-0.0282	0.0241	pCi/g						
Cobalt-60	U	0.00828	+/-0.0145	0.0126	+/-0.0145	0.0268	pCi/g						
Europium-152	U	-0.0123	+/-0.0343	0.0283	+/-0.0343	0.0584	pCi/g						
Europium-154	U	-0.0177	+/-0.0484	0.034	+/-0.0484	0.072	pCi/g						
Europium-155	U	0.0551	+/-0.0375	0.033	+/-0.0375	0.0674	pCi/g						
Lead-212		0.828	+/-0.0421	0.0188	+/-0.0421	0.0385	pCi/g						
Lead-214		0.838	+/-0.066	0.0213	+/-0.066	0.044	pCi/g						
Manganese-54	U	0.00473	+/-0.0129	0.011	+/-0.0129	0.0229	pCi/g						
Niobium-94	U	0.00694	+/-0.0119	0.0104	+/-0.0119	0.0216	pCi/g						
Potassium-40		11.3	+/-0.592	0.0931	+/-0.592	0.201	pCi/g						
Radium-226		0.742	+/-0.0614	0.0207	+/-0.0614	0.0431	pCi/g						
Silver-108m	U	0.00622	+/-0.0108	0.00974	+/-0.0108	0.0202	pCi/g						
Thallium-208		0.261	+/-0.0315	0.0106	+/-0.0315	0.0221	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522-0007-029-I
Sample ID: 177164028

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-030-I
Sample ID: 177164029
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 7.72%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.997	+/-0.220	0.0675	+/-0.220	0.146	pCi/g		MJH1	12/11/06	1321	594412	
Americium-241	U	0.0476	+/-0.105	0.084	+/-0.105	0.174	pCi/g						
Bismuth-212		0.477	+/-0.269	0.153	+/-0.269	0.328	pCi/g						
Bismuth-214		0.904	+/-0.138	0.0341	+/-0.138	0.0729	pCi/g						
Cesium-134	U	0.0441	+/-0.0301	0.0247	+/-0.0301	0.0526	pCi/g						
Cesium-137		0.158	+/-0.0508	0.0213	+/-0.0508	0.0453	pCi/g						
Cobalt-60	U	0.0182	+/-0.0255	0.023	+/-0.0255	0.0502	pCi/g						
Europium-152	U	0.0491	+/-0.0668	0.0458	+/-0.0668	0.0966	pCi/g						
Europium-154	U	0.110	+/-0.0689	0.0673	+/-0.0689	0.146	pCi/g						
Europium-155	U	0.0451	+/-0.0626	0.0581	+/-0.0626	0.120	pCi/g						
Lead-212		0.795	+/-0.0881	0.0268	+/-0.0881	0.0558	pCi/g						
Lead-214		0.827	+/-0.116	0.0349	+/-0.116	0.0735	pCi/g						
Manganese-54	U	0.00957	+/-0.0223	0.0201	+/-0.0223	0.043	pCi/g						
Niobium-94	U	-0.00287	+/-0.0206	0.017	+/-0.0206	0.0364	pCi/g						
Potassium-40		13.8	+/-1.33	0.169	+/-1.33	0.382	pCi/g						
Radium-226		0.904	+/-0.138	0.0341	+/-0.138	0.0729	pCi/g						
Silver-108m	U	-0.0142	+/-0.0183	0.015	+/-0.0183	0.0321	pCi/g						
Thallium-208		0.223	+/-0.059	0.0182	+/-0.059	0.0389	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522–0007–030–I
Sample ID: 177164029

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-031-I
Sample ID: 177164030
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 7.75%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.17	+/-0.218	0.0626	+/-0.218	0.133	pCi/g		MJH1	12/11/06	1322	594412	
Americium-241	U	-0.024	+/-0.0948	0.0851	+/-0.0948	0.174	pCi/g						
Bismuth-212		0.761	+/-0.368	0.136	+/-0.368	0.288	pCi/g						
Bismuth-214		1.29	+/-0.151	0.0357	+/-0.151	0.0748	pCi/g						
Cesium-134	UI	0.00	+/-0.0444	0.0253	+/-0.0444	0.0529	pCi/g						
Cesium-137		0.0522	+/-0.0221	0.0172	+/-0.0221	0.0364	pCi/g						
Cobalt-60	U	0.0304	+/-0.0244	0.0224	+/-0.0244	0.048	pCi/g						
Europium-152	U	-0.0235	+/-0.0542	0.0467	+/-0.0542	0.0971	pCi/g						
Europium-154	U	0.0528	+/-0.0718	0.0635	+/-0.0718	0.135	pCi/g						
Europium-155	U	0.00513	+/-0.0617	0.0545	+/-0.0617	0.112	pCi/g						
Lead-212		1.21	+/-0.113	0.0321	+/-0.113	0.066	pCi/g						
Lead-214		1.45	+/-0.164	0.0339	+/-0.164	0.0705	pCi/g						
Manganese-54	U	-0.0164	+/-0.0217	0.0179	+/-0.0217	0.0379	pCi/g						
Niobium-94	U	0.00486	+/-0.0196	0.0166	+/-0.0196	0.035	pCi/g						
Potassium-40		19.8	+/-1.70	0.177	+/-1.70	0.384	pCi/g						
Radium-226		1.29	+/-0.151	0.0357	+/-0.151	0.0748	pCi/g						
Silver-108m	U	0.000202	+/-0.0187	0.0161	+/-0.0187	0.0337	pCi/g						
Thallium-208		0.450	+/-0.0636	0.0167	+/-0.0636	0.0353	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522–0007–031–I
Sample ID: 177164030

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-032-I
Sample ID: 177164031
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 7.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.584	+/-0.151	0.050	+/-0.151	0.109	pCi/g		MJH1	12/11/06	1322	594412
Americium-241	U	0.0825	+/-0.0715	0.0603	+/-0.0715	0.124	pCi/g					
Bismuth-212		0.622	+/-0.219	0.127	+/-0.219	0.271	pCi/g					
Bismuth-214		0.563	+/-0.0922	0.0291	+/-0.0922	0.0617	pCi/g					
Cesium-134	UI	0.00	+/-0.0318	0.0212	+/-0.0318	0.0448	pCi/g					
Cesium-137		0.458	+/-0.0649	0.0169	+/-0.0649	0.0359	pCi/g					
Cobalt-60	UI	0.00	+/-0.0214	0.0148	+/-0.0214	0.0329	pCi/g					
Europium-152	U	-0.0678	+/-0.051	0.042	+/-0.051	0.0881	pCi/g					
Europium-154	U	-0.0167	+/-0.0633	0.0528	+/-0.0633	0.115	pCi/g					
Europium-155	U	-0.00435	+/-0.0568	0.0508	+/-0.0568	0.104	pCi/g					
Lead-212		0.669	+/-0.0742	0.027	+/-0.0742	0.0559	pCi/g					
Lead-214		0.665	+/-0.0857	0.0337	+/-0.0857	0.0703	pCi/g					
Manganese-54	UI	0.00	+/-0.0196	0.015	+/-0.0196	0.0323	pCi/g					
Niobium-94	U	0.00802	+/-0.018	0.0159	+/-0.018	0.0336	pCi/g					
Potassium-40		10.0	+/-0.957	0.167	+/-0.957	0.368	pCi/g					
Radium-226		0.563	+/-0.0922	0.0291	+/-0.0922	0.0617	pCi/g					
Silver-108m	U	-0.00322	+/-0.0178	0.0155	+/-0.0178	0.0325	pCi/g					
Thallium-208		0.211	+/-0.0453	0.0166	+/-0.0453	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	LXM2	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522-0007-032-I
Sample ID: 177164031

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-033-I
Sample ID: 177164032
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 7.71%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.820	+/-0.156	0.0629	+/-0.156	0.126	pCi/g		MJH1	12/11/06	1326	594412	
Americium-241	U	0.0523	+/-0.0943	0.0768	+/-0.0943	0.154	pCi/g						
Bismuth-212		0.702	+/-0.283	0.138	+/-0.283	0.275	pCi/g						
Bismuth-214		0.768	+/-0.105	0.0319	+/-0.105	0.0637	pCi/g						
Cesium-134	U	0.0493	+/-0.0399	0.0249	+/-0.0399	0.0497	pCi/g						
Cesium-137		0.223	+/-0.0447	0.0208	+/-0.0447	0.0417	pCi/g						
Cobalt-60	UI	0.00	+/-0.0467	0.0248	+/-0.0467	0.0495	pCi/g						
Europium-152	U	-0.0877	+/-0.0672	0.0488	+/-0.0672	0.0975	pCi/g						
Europium-154	U	-0.0362	+/-0.0758	0.0609	+/-0.0758	0.122	pCi/g						
Europium-155	U	0.0682	+/-0.0658	0.0602	+/-0.0658	0.120	pCi/g						
Lead-212		0.791	+/-0.092	0.030	+/-0.092	0.060	pCi/g						
Lead-214		0.820	+/-0.110	0.0395	+/-0.110	0.079	pCi/g						
Manganese-54	U	0.00638	+/-0.0226	0.020	+/-0.0226	0.040	pCi/g						
Niobium-94	U	0.0232	+/-0.0224	0.0181	+/-0.0224	0.0362	pCi/g						
Potassium-40		13.2	+/-1.21	0.145	+/-1.21	0.290	pCi/g						
Radium-226		0.768	+/-0.105	0.0319	+/-0.105	0.0637	pCi/g						
Silver-108m	U	-0.000608	+/-0.0219	0.0182	+/-0.0219	0.0364	pCi/g						
Thallium-208		0.289	+/-0.0498	0.0177	+/-0.0498	0.0355	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522-0007-033-I
Sample ID: 177164032

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-034-I
Sample ID: 177164033
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 7.31%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		1.35	+/-0.305	0.136	+/-0.305	0.271	pCi/g		MJH1	12/11/06	1327	594412
Americium-241	U	0.0391	+/-0.0745	0.0558	+/-0.0745	0.112	pCi/g					
Bismuth-212		1.43	+/-0.547	0.266	+/-0.547	0.531	pCi/g					
Bismuth-214		1.74	+/-0.258	0.069	+/-0.258	0.138	pCi/g					
Cesium-134	U	0.0693	+/-0.0719	0.0473	+/-0.0719	0.0946	pCi/g					
Cesium-137		0.819	+/-0.137	0.0383	+/-0.137	0.0765	pCi/g					
Cobalt-60	UI	0.00	+/-0.074	0.0635	+/-0.074	0.127	pCi/g					
Europium-152	U	0.0147	+/-0.180	0.0919	+/-0.180	0.184	pCi/g					
Europium-154	U	-0.0353	+/-0.156	0.127	+/-0.156	0.254	pCi/g					
Europium-155	U	0.0183	+/-0.106	0.0817	+/-0.106	0.163	pCi/g					
Lead-212		1.23	+/-0.148	0.0494	+/-0.148	0.0988	pCi/g					
Lead-214		1.77	+/-0.215	0.0658	+/-0.215	0.132	pCi/g					
Manganese-54	U	0.0361	+/-0.0786	0.0411	+/-0.0786	0.0822	pCi/g					
Niobium-94	U	-0.0205	+/-0.0374	0.0312	+/-0.0374	0.0623	pCi/g					
Potassium-40		23.3	+/-2.02	0.236	+/-2.02	0.472	pCi/g					
Radium-226		1.74	+/-0.258	0.069	+/-0.258	0.138	pCi/g					
Silver-108m	U	0.00781	+/-0.0397	0.0346	+/-0.0397	0.0691	pCi/g					
Thallium-208		0.464	+/-0.0994	0.0364	+/-0.0994	0.0727	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522-0007-034-I
Sample ID: 177164033

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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.geel.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: December 13, 2006

Client Sample ID: 9522-0007-035-I
Sample ID: 177164034
Matrix: TS
Collect Date: 04-DEC-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 8.16%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		1.84	+/-0.328	0.121	+/-0.328	0.262	pCi/g		MJH1	12/11/06	1549	594412
Americium-241	U	0.0648	+/-0.0392	0.0475	+/-0.0392	0.0979	pCi/g					
Bismuth-212		1.14	+/-0.613	0.247	+/-0.613	0.534	pCi/g					
Bismuth-214		2.23	+/-0.225	0.0662	+/-0.225	0.141	pCi/g					
Cesium-134	U	0.0872	+/-0.052	0.0496	+/-0.052	0.105	pCi/g					
Cesium-137		0.343	+/-0.0786	0.0379	+/-0.0786	0.0809	pCi/g					
Cobalt-60	U	0.0437	+/-0.0433	0.0409	+/-0.0433	0.0897	pCi/g					
Europium-152	U	-0.0352	+/-0.102	0.0875	+/-0.102	0.184	pCi/g					
Europium-154	U	0.000316	+/-0.141	0.119	+/-0.141	0.260	pCi/g					
Europium-155	U	0.140	+/-0.132	0.0853	+/-0.132	0.176	pCi/g					
Lead-212		1.91	+/-0.125	0.0479	+/-0.125	0.0999	pCi/g					
Lead-214		2.32	+/-0.187	0.0658	+/-0.187	0.138	pCi/g					
Manganese-54	U	0.0528	+/-0.0431	0.0395	+/-0.0431	0.0843	pCi/g					
Niobium-94	U	0.00935	+/-0.0393	0.0335	+/-0.0393	0.0715	pCi/g					
Potassium-40		29.7	+/-2.14	0.312	+/-2.14	0.703	pCi/g					
Radium-226		2.23	+/-0.225	0.0662	+/-0.225	0.141	pCi/g					
Silver-108m	U	0.0217	+/-0.0407	0.033	+/-0.0407	0.0696	pCi/g					
Thallium-208		0.686	+/-0.0978	0.0414	+/-0.0978	0.0875	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	12/06/06	1518	593523

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: December 13, 2006

Client Sample ID: 9522-0007-035-I
Sample ID: 177164034

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
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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: December 13, 2006

Client Sample ID: 9522-0007-003F
Sample ID: 177164035
Matrix: TS
Collect Date: 17-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 11.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	-0.00567	+/-0.0211	0.0282	+/-0.0211	0.142	pCi/g		DXH2	12/08/06	1309	593610	
Curium-242	U	0.00	+/-0.0675	0.00	+/-0.0675	0.0933	pCi/g						
Curium-243/244	U	0.00	+/-0.0617	0.00	+/-0.0617	0.0853	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.0303	+/-0.088	0.0876	+/-0.088	0.249	pCi/g		DXH2	12/08/06	1309	593611	
Plutonium-239/240	U	-0.00325	+/-0.103	0.0875	+/-0.103	0.248	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	0.430	+/-8.49	7.11	+/-8.49	14.9	pCi/g		DXH2	12/12/06	1007	593612	
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.872	+/-0.147	0.0641	+/-0.147	0.137	pCi/g		MJH1	12/11/06	1549	594412	
Americium-241	U	-0.00678	+/-0.0957	0.0837	+/-0.0957	0.172	pCi/g						
Bismuth-212		0.514	+/-0.230	0.133	+/-0.230	0.283	pCi/g						
Bismuth-214		0.742	+/-0.0775	0.0277	+/-0.0775	0.0591	pCi/g						
Cesium-134	UI	0.0671	+/-0.0339	0.0224	+/-0.0339	0.0472	pCi/g						
Cesium-137		0.582	+/-0.0541	0.0177	+/-0.0541	0.0375	pCi/g						
Cobalt-60		0.0927	+/-0.0311	0.0155	+/-0.0311	0.0343	pCi/g						
Europium-152	U	-0.0549	+/-0.0557	0.047	+/-0.0557	0.0981	pCi/g						
Europium-154	U	-0.0314	+/-0.0649	0.0519	+/-0.0649	0.113	pCi/g						
Europium-155	U	0.0198	+/-0.061	0.0594	+/-0.061	0.122	pCi/g						
Lead-212		0.856	+/-0.0591	0.0301	+/-0.0591	0.0622	pCi/g						
Lead-214		0.698	+/-0.0826	0.0364	+/-0.0826	0.0757	pCi/g						
Manganese-54	U	0.0114	+/-0.0191	0.0176	+/-0.0191	0.0374	pCi/g						
Niobium-94	U	0.00869	+/-0.0167	0.0154	+/-0.0167	0.0327	pCi/g						
Potassium-40		11.4	+/-0.808	0.149	+/-0.808	0.330	pCi/g						
Radium-226		0.742	+/-0.0775	0.0277	+/-0.0775	0.0591	pCi/g						
Silver-108m	U	0.00194	+/-0.0216	0.0166	+/-0.0216	0.0348	pCi/g						
Thallium-208		0.305	+/-0.049	0.0176	+/-0.049	0.0372	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid - 0.025 pCi/g</i>													
Strontium-90	U	-0.0161	+/-0.00948	0.00848	+/-0.00948	0.0176	pCi/g		KSD1	12/11/06	2138	593617	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid - 3 pCi/g</i>													
Tritium	U	0.449	+/-1.49	1.22	+/-1.49	2.63	pCi/g		DFA1	12/07/06	1916	593704	

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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: December 13, 2006

Client Sample ID: 9522-0007-003F
Sample ID: 177164035

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Liquid Scintillation Analysis												
<i>Liquid Scint C14, Solid ALL, FSS</i>												
Carbon-14	U	0.0582	+/-0.0966	0.0798	+/-0.0966	0.164	pCi/g		AXD2	12/07/06	2326	593705
<i>Liquid Scint Fe55, Solid-ALL FSS</i>												
Iron-55	U	9.81	+/-29.6	22.2	+/-29.6	47.0	pCi/g		MXP1	12/09/06	0530	593708
<i>Liquid Scint Ni63, Solid-ALL FSS</i>												
Nickel-63	U	9.17	+/-10.2	8.11	+/-10.2	17.1	pCi/g		MXP1	12/09/06	0200	593707
<i>Liquid Scint Tc99, Solid-ALL FSS</i>												
Technetium-99	U	0.0783	+/-0.234	0.194	+/-0.234	0.402	pCi/g		KXR1	12/11/06	1325	593639

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	12/06/06	1518	593523

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EML HASL 300, 4.5.2.3
5	EPA 905.0 Modified
6	EPA 906.0 Modified
7	EPA EERF C-01 Modified
8	DOE RESL Fe-1, Modified
9	DOE RESL Ni-1, Modified
10	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	87	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	104	(15%-125%)
Plutonium-241	Liquid Scint Pu241, Solid-ALL FS	88	(25%-125%)
Strontium-90	GFPC, Sr90, solid - 0.025 pCi/g	67	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid - 0.025 pCi/g	67	(25%-125%)
Iron-55	Liquid Scint Fe55, Solid-ALL FS	65	(15%-125%)
Nickel-63	Liquid Scint Ni63, Solid-ALL FS	74	(25%-125%)

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Certificate of Analysis

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Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: December 13, 2006

Client Sample ID: 9522-0007-003F
Sample ID: 177164035

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time Batch	N
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-ALL FS			74		(25%-125%)					
Technetium-99		Liquid Scint Tc99, Solid-ALL FS			72		(15%-125%)					
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-ALL FS			72		(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: December 13, 2006

Client Sample ID: 9522-0007-010F
Sample ID: 177164036
Matrix: TS
Collect Date: 20-NOV-06
Receive Date: 06-DEC-06
Collector: Client
Moisture: 10.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.0731	+/-0.098	0.00	+/-0.0985	0.0927	pCi/g		DXH2	12/08/06	1309	593610	
Curium-242	U	0.00	+/-0.0726	0.00	+/-0.0726	0.100	pCi/g						
Curium-243/244	U	0.0685	+/-0.095	0.00	+/-0.0954	0.0929	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.0222	+/-0.0655	0.048	+/-0.0655	0.180	pCi/g		DXH2	12/08/06	1309	593611	
Plutonium-239/240	U	-0.0518	+/-0.0384	0.0733	+/-0.0388	0.230	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	1.30	+/-8.38	6.98	+/-8.38	14.6	pCi/g		DXH2	12/12/06	0950	593612	
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.25	+/-0.229	0.0857	+/-0.229	0.185	pCi/g		MJH1	12/11/06	1549	594412	
Americium-241	U	0.00637	+/-0.0481	0.0416	+/-0.0481	0.0856	pCi/g						
Bismuth-212		0.910	+/-0.451	0.203	+/-0.451	0.433	pCi/g						
Bismuth-214		1.22	+/-0.141	0.0501	+/-0.141	0.106	pCi/g						
Cesium-134	U	0.0568	+/-0.0503	0.0371	+/-0.0503	0.0783	pCi/g						
Cesium-137		0.119	+/-0.0504	0.031	+/-0.0504	0.0654	pCi/g						
Cobalt-60	U	-0.0185	+/-0.0354	0.0283	+/-0.0354	0.0617	pCi/g						
Europium-152	U	-0.00212	+/-0.0751	0.0657	+/-0.0751	0.138	pCi/g						
Europium-154	U	-0.0603	+/-0.0958	0.0761	+/-0.0958	0.166	pCi/g						
Europium-155	U	0.00406	+/-0.0729	0.0649	+/-0.0729	0.134	pCi/g						
Lead-212		1.05	+/-0.0814	0.0383	+/-0.0814	0.0796	pCi/g						
Lead-214		1.13	+/-0.124	0.0478	+/-0.124	0.100	pCi/g						
Manganese-54	U	0.00952	+/-0.0328	0.0285	+/-0.0328	0.0608	pCi/g						
Niobium-94	U	0.0132	+/-0.0297	0.0266	+/-0.0297	0.0562	pCi/g						
Potassium-40		16.6	+/-1.33	0.288	+/-1.33	0.627	pCi/g						
Radium-226		1.22	+/-0.141	0.0501	+/-0.141	0.106	pCi/g						
Silver-108m	U	-0.0138	+/-0.0249	0.0221	+/-0.0249	0.0466	pCi/g						
Thallium-208		0.361	+/-0.0704	0.0265	+/-0.0704	0.0562	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid - 0.025 pCi/g</i>													
Strontium-90	U	-0.000781	+/-0.00734	0.00619	+/-0.00734	0.0129	pCi/g		KSD1	12/11/06	2138	593617	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid - 3 pCi/g</i>													
Tritium	U	1.10	+/-1.57	1.24	+/-1.57	2.67	pCi/g		DFA1	12/07/06	1932	593704	

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Certificate of Analysis

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Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: December 13, 2006

Client Sample ID: 9522-0007-010F
Sample ID: 177164036

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	A
Rad Liquid Scintillation Analysis													
<i>Liquid Scint C14, Solid ALL FSS</i>													
Carbon-14	U	-0.034	+/-0.0952	0.0806	+/-0.0952	0.165	pCi/g		AXD2	12/08/06	0028	593705	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	-6.72	+/-26.2	20.0	+/-26.2	42.3	pCi/g		MPX1	12/09/06	0546	593708	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	0.561	+/-9.07	7.59	+/-9.07	16.0	pCi/g		MPX1	12/09/06	0216	593707	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.116	+/-0.234	0.193	+/-0.234	0.400	pCi/g		KXR1	12/11/06	1431	593639	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	12/06/06	1518	593523

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EML HASL 300, 4.5.2.3
5	EPA 905.0 Modified
6	EPA 906.0 Modified
7	EPA EERF C-01 Modified
8	DOE RESL Fe-1, Modified
9	DOE RESL Ni-1, Modified
10	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	82	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	89	(15%-125%)
Plutonium-241	Liquid Scint Pu241, Solid-ALL FS	83	(25%-125%)
Strontium-90	GFPC, Sr90, solid - 0.025 pCi/g	83	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid - 0.025 pCi/g	83	(25%-125%)
Iron-55	Liquid Scint Fe55, Solid-ALL FS	76	(15%-125%)
Nickel-63	Liquid Scint Ni63, Solid-ALL FS	85	(25%-125%)

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power

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Contact: Mr. Jack McCarthy

Project: Soils PO# 002332

Report Date: December 13, 2006

Client Sample ID: 9522-0007-010F
Sample ID: 177164036

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-ALL FS			85		(25%-125%)						
Technetium-99		Liquid Scint Tc99, Solid-ALL FS			72		(15%-125%)						
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-ALL FS			72		(15%-125%)						

Notes:

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- > Result is greater than value reported
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- 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: December 13, 2006

Page 1 of 12

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

Contact: East Hampton, Connecticut
Mr. Jack McCarthy

Workorder: 177164

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	593610										
QC1201241517	177084014	DUP									
Americium-241	U	0.0351		0.252	pCi/g	151		(0% - 100%)	DXH2	12/08/06	13:09
	Uncert:	+/-0.202		+/-0.206							
	TPU:	+/-0.202		+/-0.208							
Curium-242	U	0.00	U	0.00	pCi/g	0		(0% - 100%)			
	Uncert:	+/-0.122		+/-0.0851							
	TPU:	+/-0.122		+/-0.0851							
Curium-243/244	U	0.115		0.125	pCi/g	8		(0% - 100%)			
	Uncert:	+/-0.309		+/-0.142							
	TPU:	+/-0.310		+/-0.143							
QC1201241519	LCS										
Americium-241	13.2			12.9	pCi/g		98	(75%-125%)			
	Uncert:			+/-1.28							
	TPU:			+/-2.03							
Curium-242			U	0.0253	pCi/g						
	Uncert:			+/-0.0671							
	TPU:			+/-0.0672							
Curium-243/244	11.4			10.2	pCi/g		90	(75%-125%)			
	Uncert:			+/-1.14							
	TPU:			+/-1.69							
QC1201241516	MB										
Americium-241			U	0.0825	pCi/g						
	Uncert:			+/-0.129							
	TPU:			+/-0.129							
Curium-242			U	0.00	pCi/g						
	Uncert:			+/-0.0619							
	TPU:			+/-0.0619							
Curium-243/244			U	-0.0363	pCi/g						
	Uncert:			+/-0.0755							
	TPU:			+/-0.0756							
QC1201241518	177084014	MS									
Americium-241	13.5	U	0.0351	12.2	pCi/g		90	(75%-125%)			
	Uncert:		+/-0.202	+/-1.22							
	TPU:		+/-0.202	+/-1.91							
Curium-242		U	0.00	0.00	pCi/g						
	Uncert:		+/-0.122	+/-0.0641							
	TPU:		+/-0.122	+/-0.0641							
Curium-243/244	11.7	U	0.115	9.96	pCi/g		85	(75%-125%)			
	Uncert:		+/-0.309	+/-1.10							
	TPU:		+/-0.310	+/-1.62							
Batch	593611										
QC1201241525	177084014	DUP									
Plutonium-238	U	-0.0285	U	-0.063	pCi/g	75		(0% - 100%)	DXH2	12/08/06	13:09

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QC Summary

Workorder: 177164

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time	
Rad Alpha Spec												
Batch	593611											
Plutonium-239/240	U	Uncert:	+/-0.0645	+/-0.077	pCi/g	344	(0% - 100%)					
		TPU:	+/-0.0645	+/-0.0773								
		0.0261	-0.0986									
		Uncert:	+/-0.127	+/-0.0831								
QC1201241527	LCS	TPU:	+/-0.127	+/-0.0837								
Plutonium-238			U	0.0649	pCi/g		(75%-125%)			12/08/06	13:09	
Plutonium-239/240	12.2	Uncert:		+/-0.112	pCi/g	93	(75%-125%)					
		TPU:		+/-0.112								
		11.3										
		Uncert:	+/-1.18									
QC1201241524	MB	TPU:		+/-1.65								
Plutonium-238			U	0.00439	pCi/g					12/08/06	13:09	
Plutonium-239/240	U	Uncert:		+/-0.138	pCi/g							
		TPU:		+/-0.138								
		-0.0161										
		Uncert:	+/-0.0831									
QC1201241526	177084014	MS	TPU:	+/-0.0832								
Plutonium-238	U	-0.0285	U	0.0821	pCi/g		(75%-125%)			12/08/06	13:09	
		Uncert:	+/-0.0645	+/-0.109								
		TPU:	+/-0.0645	+/-0.109								
		12.5	U	0.0261	12.7	pCi/g	102	(75%-125%)				
		Uncert:	+/-0.127	+/-1.15								
		TPU:	+/-0.127	+/-1.69								
Batch	593612											
QC1201241529	177084014	DUP	U	-4.41	U	-5.33	pCi/g	0	(0% - 100%)	DXH2	12/12/06	09:18
				Uncert:	+/-7.46	+/-7.90						
				TPU:	+/-7.46	+/-7.90						
QC1201241531	LCS	138		115	pCi/g	84	(75%-125%)			12/12/06	08:45	
				Uncert:	+/-11.6							
				TPU:	+/-16.0							
QC1201241528	MB	U		-5.28	pCi/g					12/12/06	09:34	
				Uncert:	+/-6.97							
				TPU:	+/-6.97							
QC1201241530	177084014	MS	141	U	-4.41	130	pCi/g	92	(75%-125%)		12/12/06	09:02
				Uncert:	+/-7.46	+/-12.3						
				TPU:	+/-7.46	+/-17.4						
Rad Gamma Spec												
Batch	594411											
QC1201243203	177164001	DUP		1.11		1.26	pCi/g	13	(0% - 100%)	MJH1	12/09/06	13:35
				Uncert:	+/-0.191	+/-0.201						
						+/-0.201						

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QC Summary

Workorder: 177164

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 594411											
Americium-241		TPU:	+/-0.191								
	U		0.0244	U	0.0441	pCi/g	58	(0% - 100%)			
		Uncert:	+/-0.0398		+/-0.0354						
Bismuth-212		TPU:	+/-0.0398		+/-0.0354						
			1.01		0.799	pCi/g	24	(0% - 100%)			
		Uncert:	+/-0.414		+/-0.271						
Bismuth-214		TPU:	+/-0.414		+/-0.271						
			1.38		1.26	pCi/g	9	(0% - 20%)			
		Uncert:	+/-0.139		+/-0.163						
Cesium-134		TPU:	+/-0.139		+/-0.163						
	UI		0.00	UI	0.00	pCi/g	8	(0% - 100%)			
		Uncert:	+/-0.0346		+/-0.0345						
Cesium-137		TPU:	+/-0.0346		+/-0.0345						
			0.452		0.430	pCi/g	5	(0% - 100%)			
		Uncert:	+/-0.0567		+/-0.0557						
Cobalt-60		TPU:	+/-0.0567		+/-0.0557						
	U		0.0365	U	0.0257	pCi/g	35	(0% - 100%)			
		Uncert:	+/-0.0427		+/-0.0341						
Europium-152		TPU:	+/-0.0427		+/-0.0341						
	U		-0.0672	U	-0.0138	pCi/g	132	(0% - 100%)			
		Uncert:	+/-0.0652		+/-0.0661						
Europium-154		TPU:	+/-0.0652		+/-0.0661						
	U		0.000457	U	-0.0657	pCi/g	203	(0% - 100%)			
		Uncert:	+/-0.103		+/-0.0763						
Europium-155		TPU:	+/-0.103		+/-0.0763						
	U		0.0505	U	0.0131	pCi/g	117	(0% - 100%)			
		Uncert:	+/-0.0764		+/-0.0432						
Lead-212		TPU:	+/-0.0764		+/-0.0432						
			1.10		1.24	pCi/g	12	(0% - 20%)			
		Uncert:	+/-0.0795		+/-0.119						
Lead-214		TPU:	+/-0.0795		+/-0.119						
			1.39		1.34	pCi/g	4	(0% - 20%)			
		Uncert:	+/-0.119		+/-0.145						
Manganese-54		TPU:	+/-0.119		+/-0.145						
	U		0.029	U	0.0169	pCi/g	53	(0% - 100%)			
		Uncert:	+/-0.0337		+/-0.0181						
Niobium-94		TPU:	+/-0.0337		+/-0.0181						
	U		0.0428	U	0.0158	pCi/g	92	(0% - 100%)			
		Uncert:	+/-0.0372		+/-0.0204						
Potassium-40		TPU:	+/-0.0372		+/-0.0204						
			17.6		17.3	pCi/g	1	(0% - 20%)			
		Uncert:	+/-1.22		+/-1.01						
Radium-226		TPU:	+/-1.22		+/-1.01						
			1.38		1.26	pCi/g	9	(0% - 100%)			
		Uncert:	+/-0.139		+/-0.163						
Silver-108m		TPU:	+/-0.139		+/-0.163						
	U		0.0126	U	0.0055	pCi/g	78	(0% - 100%)			
		Uncert:	+/-0.0235		+/-0.0182						

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Parmname	NOM	Sample	Qual	QC	Units	RPD %	REC %	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	594411										
Thallium-208	TPU:	+/-0.0235		+/-0.0182							
		0.456		0.401	pCi/g	13		(0% - 20%)			
	Uncert:	+/-0.0638		+/-0.0576							
	TPU:	+/-0.0638		+/-0.0576							
QC1201243204	LCS										
Actinium-228			U	0.456	pCi/g					12/09/06	12:12
	Uncert:			+/-0.613							
	TPU:			+/-0.613							
Americium-241	23.4			24.4	pCi/g		104	(75%-125%)			
	Uncert:			+/-0.616							
	TPU:			+/-0.616							
Bismuth-212			U	-0.603	pCi/g						
	Uncert:			+/-0.981							
	TPU:			+/-0.981							
Bismuth-214			U	0.0954	pCi/g						
	Uncert:			+/-0.217							
	TPU:			+/-0.217							
Cesium-134			U	-0.0676	pCi/g						
	Uncert:			+/-0.149							
	TPU:			+/-0.149							
Cesium-137	9.52			10.2	pCi/g		107	(75%-125%)			
	Uncert:			+/-0.506							
	TPU:			+/-0.506							
Cobalt-60	14.0			15.4	pCi/g		110	(75%-125%)			
	Uncert:			+/-0.684							
	TPU:			+/-0.684							
Europium-152			U	0.085	pCi/g						
	Uncert:			+/-0.258							
	TPU:			+/-0.258							
Europium-154				0.759	pCi/g						
	Uncert:			+/-0.369							
	TPU:			+/-0.369							
Europium-155			U	0.0309	pCi/g						
	Uncert:			+/-0.220							
	TPU:			+/-0.220							
Lead-212			U	0.0311	pCi/g						
	Uncert:			+/-0.140							
	TPU:			+/-0.140							
Lead-214			U	0.248	pCi/g						
	Uncert:			+/-0.193							
	TPU:			+/-0.193							
Manganese-54			U	-0.0379	pCi/g						
	Uncert:			+/-0.130							
	TPU:			+/-0.130							
Niobium-94			U	0.0495	pCi/g						
	Uncert:			+/-0.115							
	TPU:			+/-0.115							
Potassium-40				1.93	pCi/g						

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	594411									
Radium-226	Uncert: +/-1.36 TPU: +/-1.36	U	0.0954	pCi/g			(75%-125%)			
Silver-108m	Uncert: +/-0.217 TPU: +/-0.217	U	-0.0718	pCi/g						
Thallium-208	Uncert: +/-0.108 TPU: +/-0.108	U	0.0485	pCi/g						
QC1201243202 MB	Uncert: +/-0.112 TPU: +/-0.112									
Actinium-228		U	0.016	pCi/g					12/09/06	13:30
Americium-241	Uncert: +/-0.0536 TPU: +/-0.0536	U	-0.00219	pCi/g						
Bismuth-212	Uncert: +/-0.0158 TPU: +/-0.0158	U	-0.024	pCi/g						
Bismuth-214	Uncert: +/-0.0564 TPU: +/-0.0564	UI	0.00	pCi/g						
Cesium-134	Uncert: +/-0.0235 TPU: +/-0.0235	U	-0.0023	pCi/g						
Cesium-137	Uncert: +/-0.00731 TPU: +/-0.00731	U	-0.00445	pCi/g						
Cobalt-60	Uncert: +/-0.00666 TPU: +/-0.00666	U	0.00394	pCi/g						
Europium-152	Uncert: +/-0.00637 TPU: +/-0.00637	U	-0.00738	pCi/g						
Europium-154	Uncert: +/-0.0201 TPU: +/-0.0201	U	-0.00803	pCi/g						
Europium-155	Uncert: +/-0.0189 TPU: +/-0.0189	U	-0.0027	pCi/g						
Lead-212	Uncert: +/-0.0155 TPU: +/-0.0155	UI	0.00	pCi/g						
Lead-214	Uncert: +/-0.0136 TPU: +/-0.0136	U	0.0122	pCi/g						
	Uncert: +/-0.0235 TPU: +/-0.0235									

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Parmname	NOM	Sample	Qual	QC	Units	RPD %	REC %	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	594411										
Manganese-54			U	0.00223	pCi/g						
	Uncert:			+/-0.00704							
	TPU:			+/-0.00704							
Niobium-94			U	-0.00629	pCi/g						
	Uncert:			+/-0.00672							
	TPU:			+/-0.00672							
Potassium-40			U	0.0448	pCi/g						
	Uncert:			+/-0.137							
	TPU:			+/-0.137							
Radium-226			UI	0.00	pCi/g						
	Uncert:			+/-0.0235							
	TPU:			+/-0.0235							
Silver-108m			U	0.00614	pCi/g						
	Uncert:			+/-0.00646							
	TPU:			+/-0.00646							
Thallium-208			U	0.00769	pCi/g						
	Uncert:			+/-0.014							
	TPU:			+/-0.014							
Batch	594412										
QC1201243209 177164021 DUP											
Actinium-228		1.29		1.08	pCi/g	18		(0% - 100%)	MJH1	12/11/06	15:51
	Uncert:	+/-0.219		+/-0.145							
	TPU:	+/-0.219		+/-0.145							
Americium-241	U	-0.0328	U	0.0508	pCi/g	929		(0% - 100%)			
	Uncert:	+/-0.0341		+/-0.0819							
	TPU:	+/-0.0341		+/-0.0819							
Bismuth-212		0.862		0.561	pCi/g	42		(0% - 100%)			
	Uncert:	+/-0.389		+/-0.239							
	TPU:	+/-0.389		+/-0.239							
Bismuth-214		0.842		0.784	pCi/g	7		(0% - 100%)			
	Uncert:	+/-0.115		+/-0.0899							
	TPU:	+/-0.115		+/-0.0899							
Cesium-134	UI	0.0783	UI	0.0542	pCi/g	36		(0% - 100%)			
	Uncert:	+/-0.0425		+/-0.0298							
	TPU:	+/-0.0425		+/-0.0298							
Cesium-137		0.0855		0.0729	pCi/g	16		(0% - 100%)			
	Uncert:	+/-0.0371		+/-0.0383							
	TPU:	+/-0.0371		+/-0.0383							
Cobalt-60	U	0.0598	U	0.00383	pCi/g	176		(0% - 100%)			
	Uncert:	+/-0.0894		+/-0.0202							
	TPU:	+/-0.0894		+/-0.0202							
Europium-152	U	0.0246	U	-0.00725	pCi/g	367		(0% - 100%)			
	Uncert:	+/-0.0608		+/-0.0584							
	TPU:	+/-0.0608		+/-0.0584							
Europium-154	U	0.0232	U	-0.0434	pCi/g	658		(0% - 100%)			
	Uncert:	+/-0.0808		+/-0.0672							
	TPU:	+/-0.0808		+/-0.0672							
Europium-155	U	0.097	U	0.0336	pCi/g	97		(0% - 100%)			

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	594412										
Lead-212	Uncert:	+/-0.0803		+/-0.0603	pCi/g	1		(0% - 20%)			
	TPU:	+/-0.0803		+/-0.0603							
		1.02		1.03							
Lead-214	Uncert:	+/-0.0764		+/-0.0637	pCi/g	1		(0% - 20%)			
	TPU:	+/-0.0764		+/-0.0637							
		0.911		0.902							
Manganese-54	Uncert:	+/-0.107		+/-0.0973	pCi/g	107		(0% - 100%)			
	TPU:	+/-0.107		+/-0.0973							
	U	0.00719	U	0.0237							
Niobium-94	Uncert:	+/-0.0283		+/-0.0223	pCi/g	242		(0% - 100%)			
	TPU:	+/-0.0283		+/-0.0223							
	U	-0.00181	U	0.0192							
Potassium-40	Uncert:	+/-0.0259		+/-0.0269	pCi/g	8		(0% - 20%)			
	TPU:	+/-0.0259		+/-0.0269							
		15.8		17.1							
Radium-226	Uncert:	+/-1.12		+/-0.844	pCi/g	7		(0% - 100%)			
	TPU:	+/-1.12		+/-0.844							
		0.842		0.784							
Silver-108m	Uncert:	+/-0.115		+/-0.0899	pCi/g	74		(0% - 100%)			
	TPU:	+/-0.115		+/-0.0899							
	U	-0.00381	U	-0.00176							
Thallium-208	Uncert:	+/-0.021		+/-0.0165	pCi/g	0		(0% - 100%)			
	TPU:	+/-0.021		+/-0.0165							
		0.355		0.355							
Actinium-228	Uncert:	+/-0.053		+/-0.0415	pCi/g			(0% - 100%)			
	TPU:	+/-0.053		+/-0.0415							
	QC1201243210	LCS									
Americium-241			U	-0.703	pCi/g		113	(75%-125%)			12/11/06 15:55
	Uncert:			+/-0.836							
	TPU:			+/-0.836							
Bismuth-212	23.4			26.5	pCi/g			(75%-125%)			
	Uncert:			+/-2.18							
	TPU:			+/-2.18							
Bismuth-214			U	0.447	pCi/g			(75%-125%)			
	Uncert:			+/-1.32							
	TPU:			+/-1.32							
Cesium-134			U	-0.127	pCi/g			(75%-125%)			
	Uncert:			+/-0.288							
	TPU:			+/-0.288							
Cesium-137			U	-0.155	pCi/g			(75%-125%)			
	Uncert:			+/-0.193							
	TPU:			+/-0.193							
Cobalt-60	9.52			10.4	pCi/g		106	(75%-125%)			
	Uncert:			+/-1.11							
	TPU:			+/-1.11							
	14.0			14.9	pCi/g		106	(75%-125%)			
	Uncert:			+/-0.821							
	TPU:			+/-0.821							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	594412										
Europium-152			U	-0.0215	pCi/g						
	Uncert:			+/-0.352							
	TPU:			+/-0.352							
Europium-154			U	0.0788	pCi/g						
	Uncert:			+/-0.422							
	TPU:			+/-0.422							
Europium-155			U	-0.132	pCi/g						
	Uncert:			+/-0.290							
	TPU:			+/-0.290							
Lead-212			U	0.152	pCi/g						
	Uncert:			+/-0.177							
	TPU:			+/-0.177							
Lead-214			U	-0.0504	pCi/g						
	Uncert:			+/-0.238							
	TPU:			+/-0.238							
Manganese-54			U	0.101	pCi/g						
	Uncert:			+/-0.177							
	TPU:			+/-0.177							
Niobium-94			U	0.00189	pCi/g						
	Uncert:			+/-0.149							
	TPU:			+/-0.149							
Potassium-40			U	0.357	pCi/g						
	Uncert:			+/-1.11							
	TPU:			+/-1.11							
Radium-226			U	-0.127	pCi/g			(75%-125%)			
	Uncert:			+/-0.288							
	TPU:			+/-0.288							
Silver-108m			U	0.0865	pCi/g						
	Uncert:			+/-0.141							
	TPU:			+/-0.141							
Thallium-208			U	0.00999	pCi/g						
	Uncert:			+/-0.146							
	TPU:			+/-0.146							
QC1201243208	MB										
Actinium-228			U	0.0146	pCi/g					12/11/06	15:50
	Uncert:			+/-0.0379							
	TPU:			+/-0.0379							
Americium-241			U	0.000422	pCi/g						
	Uncert:			+/-0.029							
	TPU:			+/-0.029							
Bismuth-212			U	-0.0107	pCi/g						
	Uncert:			+/-0.109							
	TPU:			+/-0.109							
Bismuth-214			U	-0.00457	pCi/g						
	Uncert:			+/-0.0239							
	TPU:			+/-0.0239							
Cesium-134			U	0.00515	pCi/g						
	Uncert:			+/-0.0138							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	594412										
Cesium-137	TPU:			+/-0.0138							
			U	0.00793	pCi/g						
	Uncert:			+/-0.0107							
Cobalt-60	TPU:			+/-0.0107							
			U	0.0148	pCi/g						
	Uncert:			+/-0.047							
Europium-152	TPU:			+/-0.047							
			U	0.0213	pCi/g						
	Uncert:			+/-0.0312							
Europium-154	TPU:			+/-0.0312							
			U	-0.0302	pCi/g						
	Uncert:			+/-0.0345							
Europium-155	TPU:			+/-0.0345							
			U	-0.0141	pCi/g						
	Uncert:			+/-0.0261							
Lead-212	TPU:			+/-0.0261							
			U	0.0245	pCi/g						
	Uncert:			+/-0.0337							
Lead-214	TPU:			+/-0.0337							
			U	0.0307	pCi/g						
	Uncert:			+/-0.0395							
Manganese-54	TPU:			+/-0.0395							
			U	0.00885	pCi/g						
	Uncert:			+/-0.0112							
Niobium-94	TPU:			+/-0.0112							
			U	0.00627	pCi/g						
	Uncert:			+/-0.0122							
Potassium-40	TPU:			+/-0.0122							
			U	0.101	pCi/g						
	Uncert:			+/-0.300							
Radium-226	TPU:			+/-0.300							
			U	-0.00457	pCi/g						
	Uncert:			+/-0.0239							
Silver-108m	TPU:			+/-0.0239							
			U	0.00304	pCi/g						
	Uncert:			+/-0.0108							
Thallium-208	TPU:			+/-0.0108							
			U	0.0083	pCi/g						
	Uncert:			+/-0.0215							
	TPU:			+/-0.0215							
Rad Gas Flow											
Batch	593617										
QC1201241540 177164035 DUP											
Strontium-90		U	-0.0161	U	0.0115	pCi/g	0*	(0% - 100%)	KSD1	12/11/06	21:38
		Uncert:	+/-0.00948		+/-0.00819						
		TPU:	+/-0.00948		+/-0.0082						
QC1201241542 LCS											
Strontium-90	1.15			1.26	pCi/g		110	(75%-125%)		12/12/06	13:39

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	593617										
				Uncert:							
				TPU:							
QC1201241539	MB										
Strontium-90			U	-0.00958	pCi/g					12/11/06	21:38
				Uncert:							
				TPU:							
QC1201241541	177164035	MS									
Strontium-90			5.17 U	-0.0161	6.34	pCi/g		123 (75%-125%)		12/12/06	13:39
				Uncert:							
				TPU:							
Rad Liquid Scintillation											
Batch	593639										
QC1201241575	177164035	DUP									
Technetium-99			U	0.0783	U	0.277	pCi/g	0	(0% - 100%) KXR1	12/11/06	14:14
				Uncert:							
				TPU:							
QC1201241577	LCS										
Technetium-99			12.7		11.0	pCi/g		86 (75%-125%)		12/11/06	14:47
				Uncert:							
				TPU:							
QC1201241574	MB										
Technetium-99			U	0.272	pCi/g					12/11/06	13:58
				Uncert:							
				TPU:							
QC1201241576	177164035	MS									
Technetium-99			12.7 U	0.0783	11.3	pCi/g		89 (75%-125%)		12/11/06	13:42
				Uncert:							
				TPU:							
Batch	593704										
QC1201241680	177164035	DUP									
Tritium			U	0.449	U	-1.06	pCi/g	0	(0% - 100%) DFA1	12/07/06	20:05
				Uncert:							
				TPU:							
QC1201241682	LCS										
Tritium			10.5		11.3	pCi/g		108 (75%-125%)		12/07/06	20:37
				Uncert:							
				TPU:							
QC1201241679	MB										
Tritium			U	-0.117	pCi/g					12/07/06	19:48
				Uncert:							
				TPU:							
QC1201241681	177164035	MS									
Tritium			11.1 U	0.449	9.67	pCi/g		87 (75%-125%)		12/07/06	20:21
				Uncert:							
				TPU:							
Batch	593705										
QC1201241684	177164035	DUP									
Carbon-14			U	0.0582	U	-0.0146	pCi/g	0	(0% - 100%) AXD2	12/08/06	02:33

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	593705										
		Uncert:	+/-0.0966	+/-0.095							
		TPU:	+/-0.0966	+/-0.095							
QC1201241686	LCS										
Carbon-14		7.25		7.46	pCi/g		103	(75%-125%)		12/08/06	04:38
		Uncert:		+/-0.215							
		TPU:		+/-0.244							
QC1201241683	MB										
Carbon-14			U	0.0697	pCi/g					12/08/06	01:31
		Uncert:		+/-0.097							
		TPU:		+/-0.097							
QC1201241685	177164035	MS									
Carbon-14		7.25	U	0.0582	pCi/g		103	(75%-125%)		12/08/06	03:36
		Uncert:		+/-0.0966							
		TPU:		+/-0.0966							
Batch	593707										
QC1201241692	177164035	DUP									
Nickel-63			U	9.17	U	3.54	pCi/g	0	(0% - 100%)	MXP1	12/09/06 02:49
		Uncert:		+/-10.2		+/-9.37					
		TPU:		+/-10.2		+/-9.37					
QC1201241694	LCS										
Nickel-63		545		539	pCi/g		99	(75%-125%)		12/09/06	03:22
		Uncert:		+/-28.1							
		TPU:		+/-34.0							
QC1201241691	MB										
Nickel-63			U	7.73	pCi/g					12/09/06	02:33
		Uncert:		+/-9.41							
		TPU:		+/-9.41							
QC1201241693	177164035	MS									
Nickel-63		545	U	9.17	pCi/g		94	(75%-125%)		12/09/06	03:05
		Uncert:		+/-10.2		+/-24.4					
		TPU:		+/-10.2		+/-30.4					
Batch	593708										
QC1201241696	177164035	DUP									
Iron-55			U	9.81	U	21.3	pCi/g	0	(0% - 100%)	MXP1	12/09/06 06:19
		Uncert:		+/-29.6		+/-32.1					
		TPU:		+/-29.6		+/-32.2					
QC1201241698	LCS										
Iron-55		614		532	pCi/g		87	(75%-125%)		12/09/06	06:51
		Uncert:		+/-46.8							
		TPU:		+/-80.1							
QC1201241695	MB										
Iron-55			U	-21.9	pCi/g					12/09/06	06:02
		Uncert:		+/-39.4							
		TPU:		+/-39.4							
QC1201241697	177164035	MS									
Iron-55		622	U	9.81	pCi/g		81	(75%-125%)		12/09/06	06:35
		Uncert:		+/-29.6		+/-45.5					
		TPU:		+/-29.6		+/-74.3					

GENERAL ENGINEERING LABORATORIES, LLC

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QC Summary

Workorder: 177164

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

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.

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

RELEASE RECORD

ATTACHMENT 4 (DQA RESULTS)

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

RELEASE RECORD

ATTACHMENT 4A (PRELIMINARY DATA REVIEW)

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

PRELIMINARY DATA ASSESSMENT

RELEASE RECORD
Attachment 4

Survey Unit: 9522-0007
Area Description Southeast Grounds (non-protected)
Classification 1
Survey Media Surface Soils
Type of Survey Final Status Survey
Number of Measurements 17 Static, 18 Investigation

**STATISTICS on TOTAL
POPULATION**

	Cs-137	Co-60
DCGL_{op} (pCi/g):	4.75E+00	2.29E+00
Minimum Value:	4.05E-03	-1.85E-02
Maximum Value:	1.20E+00	9.27E-02
Mean:	2.23E-01	1.57E-02
Median:	1.21E-01	8.28E-03
Standard Deviation:	2.50E-01	2.42E-02

**STATISTICS on NON-
PARAMETRIC POPULATION**

	Cs-137	Co-60
DCGL_{op} (pCi/g):	4.75E+00	2.29E+00
Minimum Value:	3.57E-02	-1.85E-02
Maximum Value:	5.82E-01	9.27E-02
Mean:	2.14E-01	1.69E-02
Median:	1.22E-01	1.04E-02
Standard Deviation:	1.70E-01	2.86E-02

Sample ID	GPS Coordinates		Cs-137				Co-60				Fraction of DCGL
			Result	2σ	MDA	Identified	Result	2σ	MDA	Identified	
	North	East	(pCi/g)		(pCi/g)		(pCi/g)		(pCi/g)		
9522-0007-001F	236604.06	669074.28	4.52E-01	0.057	4.72E-02	+	3.65E-02	0.043	4.96E-02		0.10
9522-0007-002F	236571.19	669055.30	4.20E-01	0.056	4.03E-02	+	0.00E+00	0.052	4.19E-02		0.09
9522-0007-003F	236571.19	669093.26	5.82E-01	0.054	3.75E-02	+	9.27E-02	0.031	3.43E-02	+	0.16

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

PRELIMINARY DATA ASSESSMENT

RELEASE RECORD
Attachment 4

Sample ID	GPS Coordinates		Cs-137				Co-60				Fraction of DCGL
			Result (pCi/g)	2σ	MDA (pCi/g)	Identified	Result (pCi/g)	2σ	MDA (pCi/g)	Identified	
9522-0007-004F	236538.31	669036.33	4.94E-01	0.063	4.20E-02	+	7.20E-02	0.029	3.83E-02	+	0.14
9522-0007-005F	236538.31	669074.28	2.37E-01	0.044	4.13E-02	+	1.78E-02	0.023	4.62E-02		0.05
9522-0007-006F	236538.31	669112.24	1.03E-01	0.041	4.19E-02	+	6.80E-03	0.020	3.78E-02		0.02
9522-0007-007F	236505.44	669017.35	2.21E-01	0.054	4.43E-02	+	-1.93E-03	0.028	5.06E-02		0.05
9522-0007-008F	236505.44	669055.30	1.21E-01	0.031	3.20E-02	+	-2.61E-03	0.018	3.23E-02		0.03
9522-0007-009F	236505.44	669093.26	5.76E-02	0.045	4.48E-02	+	3.03E-02	0.037	4.86E-02		0.01
9522-0007-0010F	236505.44	669131.22	1.19E-01	0.050	6.54E-02	+	-1.85E-02	0.035	6.17E-02		0.03
9522-0007-0011F	236472.57	669036.33	2.16E-01	0.021	1.92E-02	+	2.36E-02	0.017	2.41E-02	+	0.06
9522-0007-0012F	236472.57	669074.28	1.15E-01	0.025	2.23E-02	+	1.04E-02	0.018	2.90E-02		0.02
9522-0007-0013F	236472.57	669112.24	1.22E-01	0.028	2.42E-02	+	1.97E-02	0.015	2.82E-02	+	0.03
9522-0007-0014F	236472.57	669150.20	2.18E-01	0.032	2.17E-02	+	1.04E-02	0.017	2.36E-02		0.05
9522-0007-0015F	236439.69	669093.26	6.12E-02	0.013	1.88E-02	+	-3.69E-03	0.012	2.07E-02		0.01
9522-0007-0016F	236439.69	669131.22	6.30E-02	0.025	2.44E-02	+	0.00E+00	0.016	2.52E-02		0.01
9522-0007-0017F	236406.82	669112.24	3.57E-02	0.016	2.04E-02	+	-5.36E-03	0.013	2.26E-02		0.01
9522-0007-0018I	236423.71	669150.96	1.20E+00	0.056	3.29E-02	+	1.19E-02	0.035	3.05E-02		0.25
9522-0007-0019I	236430.67	669130.47	7.38E-02	0.024	2.09E-02	+	5.95E-03	0.015	2.52E-02		0.02
9522-0007-0020I	236420.30	669102.01	4.05E-03	0.014	1.80E-02		-8.34E-03	0.013	1.86E-02		
9522-0007-0021I	236423.11	669099.19	2.60E-02	0.017	2.26E-02	+	5.40E-03	0.015	2.51E-02		0.01
9522-0007-0022I	236443.95	669101.85	8.55E-02	0.037	4.62E-02	+	5.98E-02	0.089	6.08E-02		0.02
9522-0007-0023I	236435.32	669092.43	5.25E-02	0.028	4.82E-02	+	2.08E-02	0.029	5.54E-02		0.01

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

PRELIMINARY DATA ASSESSMENT

RELEASE RECORD
Attachment 4

Sample ID	GPS Coordinates		Cs-137				Co-60				Fraction of DCGL
	North	East	Result (pCi/g)	2 σ	MDA (pCi/g)	Identified	Result (pCi/g)	2 σ	MDA (pCi/g)	Identified	
9522-0007-0024I	236458.86	669108.14	6.61E-02	0.034	4.52E-02	+	3.83E-03	0.024	4.48E-02		0.01
9522-0007-0025I	236448.36	669097.00	4.73E-02	0.025	3.55E-02	+	1.23E-02	0.018	3.51E-02		0.01
9522-0007-0026I	236510.21	669129.13	2.00E-01	0.058	4.35E-02	+	5.25E-02	0.034	5.60E-02	+	0.07
9522-0007-0027I	236515.09	669129.14	9.05E-02	0.040	4.68E-02	+	-1.08E-02	0.026	4.63E-02		0.02
9522-0007-0028I	236515.95	669115.69	1.35E-01	0.023	2.63E-02	+	6.24E-03	0.020	3.14E-02		0.03
9522-0007-0029I	236525.46	669113.78	1.17E-01	0.028	2.41E-02	+	8.28E-03	0.015	2.68E-02		0.02
9522-0007-0030I	236462.00	669063.24	1.58E-01	0.051	4.53E-02	+	1.82E-02	0.026	5.02E-02		0.03
9522-0007-0031I	236488.30	669006.95	5.22E-02	0.022	3.64E-02	+	3.04E-02	0.024	4.80E-02	+	0.02
9522-0007-0032I	236513.42	669024.34	4.58E-01	0.065	3.59E-02	+	0.00E+00	0.021	3.29E-02		0.10
9522-0007-0033I	236499.59	668999.44	2.23E-01	0.045	4.17E-02	+	0.00E+00	0.047	4.95E-02		0.05
9522-0007-0034I	236528.09	669029.04	8.19E-01	0.137	7.65E-02	+	0.00E+00	0.074	1.27E-01		0.17
9522-0007-0035I	236571.65	669052.60	3.43E-01	0.079	8.09E-02	+	4.37E-02	0.043	8.97E-02	+	0.09
9522-0007-004FS	236538.31	669036.33	5.00E-01	0.067	3.88E-02	+	7.48E-02	0.033	3.46E-02	+	0.14

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

RELEASE RECORD

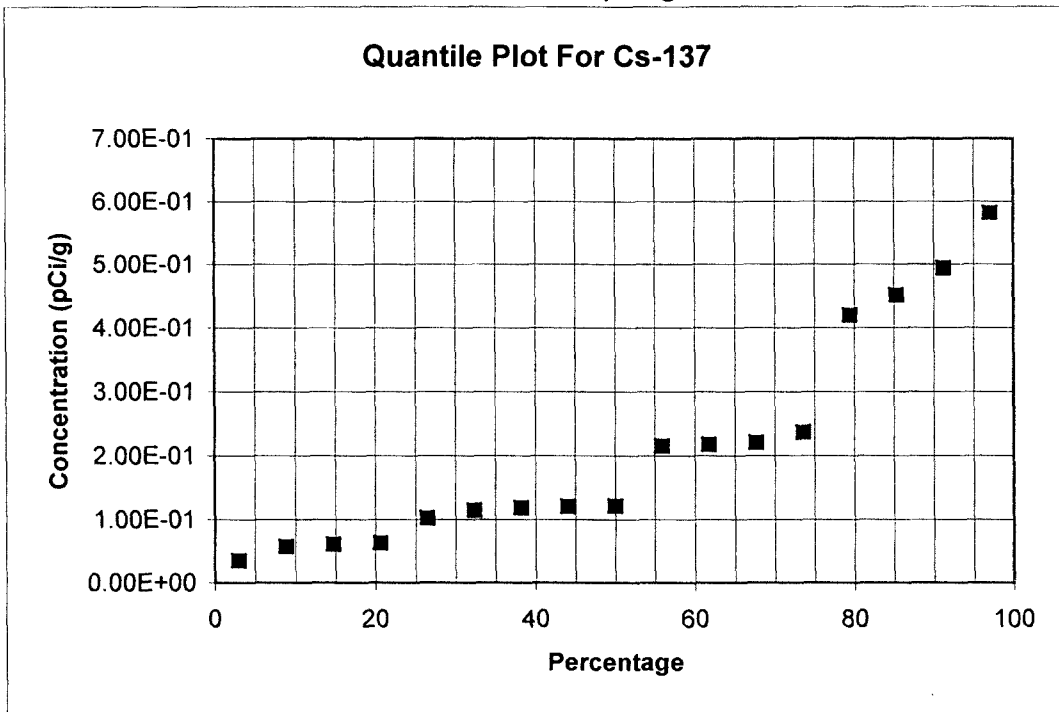
**ATTACHMENT 4B (GRAPHICAL REPRESENTATION OF
DATA)**

QUANTILE PLOT FOR CESIUM-137


Survey Unit: 9522-0007


Survey Unit Name: Southeast Site Grounds (non-protected area)

Mean: 2.14E-01 pCi/g



Cs-137	Rank	Percentage
3.57E-02	1	2.9%
5.76E-02	2	8.8%
6.12E-02	3	14.7%
6.30E-02	4	20.6%
1.03E-01	5	26.5%
1.15E-01	6	32.4%
1.19E-01	7	38.2%
1.21E-01	8	44.1%
1.22E-01	9	50.0%
2.16E-01	10	55.9%
2.18E-01	11	61.8%
2.21E-01	12	67.6%
2.37E-01	13	73.5%
4.20E-01	14	79.4%
4.52E-01	15	85.3%
4.94E-01	16	91.2%
5.82E-01	17	97.1%

 D. WATKOWIAK 12/19/06
Submitted by/Date

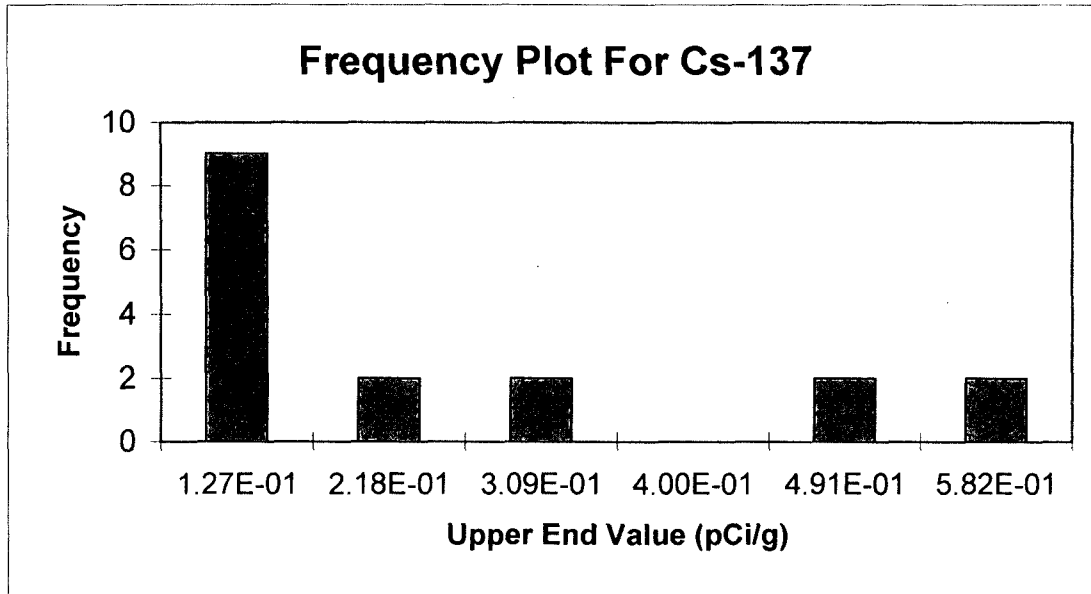
 R. MASSE 12/19/06
Reviewed by/Date

FREQUENCY PLOT FOR CESIUM-137


Survey Unit: 9522-0007

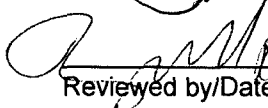
Survey Unit Name: Southeast Site Grounds (non-protected area)

Mean: 2.14E-01 pCi/g



Upper End Value	Observation Frequency	Observation Frequency
1.27E-01	9	53%
2.18E-01	2	12%
3.09E-01	2	12%
4.00E-01	0	0%
4.91E-01	2	12%
5.82E-01	2	12%
Total:	17	100%

 D. WÓJCIK 12/19/06
Submitted by/Date

 M. MASENGILL 12/19/06
Reviewed by/Date

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

RELEASE RECORD

ATTACHMENT 4C (SIGN TEST)

Sign Test Calculation Sheet for Multiple Radionuclides

Survey Area Number: 9522		Survey Unit Number: 0007		WPIR #: 2006-0047		
Survey Area Name: Southeast Site Grounds (non-protected area)		Classification: 1	TYPE I (α error): 0.05	N: 17		
Radionuclides:	1 st Radionuclide Cs-137	2 nd Radionuclide Co-60	3 rd Radionuclide	4 th Radionuclide		
DCGL:	4.75E+00	2.29E+00				
Results 1 st Radionuclide (pCi/g)	Results 2 nd Radionuclide (pCi/g)	Results 3 rd Radionuclide (pCi/g)	Results 4 th Radionuclide (pCi/g)	Weighted Sum (W _s)	1-W _s	Sign
4.52E-01	3.65E-02			0.11	0.89	+1
4.20E-01	0.00E+00			0.09	0.91	+1
5.82E-01	9.27E-02			0.16	0.84	+1
4.94E-01	7.20E-02			0.14	0.86	+1
2.37E-01	1.78E-02			0.06	0.94	+1
1.03E-01	6.80E-03			0.02	0.98	+1
2.21E-01	-1.93E-03			0.05	0.95	+1
1.21E-01	-2.61E-03			0.02	0.98	+1
5.76E-02	3.03E-02			0.03	0.97	+1
1.19E-01	-1.85E-02			0.02	0.98	+1
2.16E-01	2.36E-02			0.06	0.94	+1
1.15E-01	1.04E-02			0.03	0.97	+1
1.22E-01	1.97E-02			0.03	0.97	+1
2.18E-01	1.04E-02			0.05	0.95	+1
6.12E-02	-3.69E-03			0.01	0.99	+1
6.30E-02	0.00E+00			0.01	0.99	+1
3.57E-02	-5.36E-03			0.01	0.99	+1
Number of positive differences (S+)						17

Critical Value 12

Survey Unit Meets the Acceptance Criteria

Performed by: David Wojtkowiak

Date: 12/19/06

Independent Review by: Robert Massengill

Date: 12/19/06

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

RELEASE RECORD

ATTACHMENT 4D (QC SPLIT RESULTS)

Split Sample Assessment Form

Survey Area #: 9522	Survey Unit #: 0007	Survey Unit Name: Southeast Site Grounds (non-protected area)																		
Sample Plan or WPIR#: 2006-0047						SML#: 9522-0007-004														
Sample Description: Comparison of split samples collected from sample measurement location #8 and analyzed using gamma spectroscopy by off-site Vendor Laboratory. The standard sample was 9522-0007-004F, the comparison sample was 9522-0007-004FS.																				
STANDARD					COMPARISON															
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)												
Cs-137	4.94E-01	0.031	16	0.75 - 1.33	5.00E-01	0.034	1.01	Y												
Comments/Corrective Actions: None					Table is provided to show acceptance criteria used to assess split samples. <table border="1"> <thead> <tr> <th>Resolution</th> <th>Agreement Range</th> </tr> </thead> <tbody> <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> </tbody> </table>				Resolution	Agreement Range	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
Resolution	Agreement Range																			
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: D. Wojtkowiak		Date: 12/18/2006	Reveiwed by: Robert Massey		Date: 12/19/06															

SOUTHEAST SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9522-0007

RELEASE RECORD

ATTACHMENT 4E (COMPASS DQA WITH POWER CURVE)



DQA Surface Soil Report

Assessment Summary

Site:	Southeast Grounds (non-protected area)		
Planner(s):	Wojo		
Survey Unit Name:	9522-0007		
Report Number:	1		
Survey Unit Samples:	17		
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

