CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
SUBSURFACE AREA ASSOCIATED WITH THE
SOUTHWEST SITE STORAGE AREA
SURVEY UNIT 9807-0000

Prepared By: JACK McCARTY — FSS Engineer — Date: 11/21/06

Reviewed By: _____ — FSS Engineer — Date: 11/21/06

Approved By: Clyde T. Newton — Technical Support Manager — Date: 11/26/06

TABLE OF CONTENTS

1. SURVEY UNIT DESCRIPTION

Survey Unit 9807-0000 (Subsurface Area associated with the Southwest Site Storage Area) is designated as Final Status Survey (FSS) Class B and consists of 1,983 m^2 (0.5 acres) of uninhabited open land located approximately 1,860 feet from the reference coordinate system benchmark used at Haddam Neck Plant (HNP) (see Attachment 1). The surface area is bounded by Survey Unit 9520-0004. The surface land unit that resides above this subsurface survey unit is relatively level open space of the peninsula. The restoration of the peninsula for FSS has removed most of the surface interference in the survey unit.

The reference coordinates associated with this survey unit are E007 through E010 by S089 through S093 (refer to License Termination Plan (LTP) Section 5.4.4). The reference coordinates provide the maximum dimensions of a rectangle containing this survey unit. Some areas contained in this rectangle may not be part of this survey unit. The boundary of the survey unit was defined using a Global Positioning System (GPS) based on the Connecticut State Plane System North American Datum (NAD) 1927.

2. CLASSIFICATION BASIS

The survey unit was classified in accordance with Procedure RPM 5.1-10, *"Survey Unit Classification."*

The *"Classification Basis Summary"* conducted for Survey Unit 9807-0000 consisted of:

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

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

c) Historic and current survey records review,

d) Visual inspections and a "walkdown."

A review of the 10CFR50.75(g)(1) database report and historical files shows a documented history of the Southwest Site Storage Area as a radioactive materials storage area. Examples of some of the major events are provided below.

a) Plant Incident Report (PIR) 80-37 reported the discovery of three (3) discrete sources of elevated activity on the Southeast Site Storage area in March 1980, along with other areas around the site. The three (3) discrete sources were identified within adjacent Survey Units 9520-0001 and 9520-0002. The elevated areas were removed upon detection according to the report.

b) Health Physics surveys performed in 1983 and 1985 document the discovery of radioactive material (strainers, bolts, wood pallets, sections of pipe, etc.) on the peninsula. The 1985 survey documents the discovery of contaminated dirt under a pallet.

c) Condition Report (CR) 05-0314: Documents the discovery of excavation spoils, intended for backfill, above the radiological criteria for use as backfill. These spoils were likely located in Survey Units 9520-0003 and 9520-0004, based on a review of the documentation. According to the CR closure documentation, the affected spoils were removed and packaged for disposal. Follow-up survey and sampling was performed and the results were below established action levels.

A review of the *"Initial and Supplemental Characterization Reports"* as well as the previous *"Classification Basis Summaries"* was performed. Survey Unit 9807-0000 was originally part of subsurface Survey Unit 9805-0000, which was initially designated as Class C during the development of the LTP. The source documents, the "*Connecticut Yankee Haddam Neck Characterization Report*" and "*Initial Classification for Survey Areas at Connecticut Yankee*", were incorporated by reference in LTP revision 0 (references 2-2 and 2-7 respectively). The second source document justified a Class C designation for those areas for which there was historical evidence of contamination above the Derived Concentration Guideline Levels (DCGLs - refer to Section 2 for definition and description of DCGL), but for which recent surveys had shown that decontamination efforts had occurred and that the radiological conditions were expected to be below the DCGLs. Additional justification for a Class C designation based on survey and sampling data was provided as another reference to the LTP by the "*Haddam Neck Plant Historical Site Assessment Supplement*".

However, in March of 2006, Co-60 and Cs-137 were identified in subsurface soils in sufficient quantities to warrant radiological remediation. Radiological remediation was performed in July 2006. A new Class 1 survey unit, Survey Unit 9520-0004, and a new subsurface unit, Survey Unit 9807-0000, were established to bound the area of remediation.

Remedial action was performed in July 2006. Although Co-60 has been identified in the past, Cs-137 was the only radionuclide with the potential to exceed the screening criteria following the remedial action. Statistical quantities (mean, median and standard deviation) from the 2006 remedial action survey are provided in Table 1.

Table 1 – Basic Statistical Quantities for Cs-137 from the 2006 Remedial Action Survey	
Minimum Observed Concentration (pCi/g) :	-1.79E-03
Maximum Observed Concentration (pCi/g) :	2.24E-02
Mean (pCi/g):	6.84E-03
Median (pCi/g):	3.69E-03
Standard Deviation (pCi/g):	8.39E-03

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

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

Based upon the results of radiological surveys performed over six years of restoration and the 2006 remedial action survey, it was concluded that there was a probability for residual radioactivity in concentrations less than the DCGLs, justifying a final survey unit classification of Class B (refer to Section 3). Note, due to the size of the survey unit, the sample to area frequency far exceeds the frequency requirement for Class A survey units of one sample every 500 m^2 as specified by LTP Section 5.7.3.2.2.

3. DATA QUALITY OBJECTIVES (DQO)

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

The DQO process incorporated hypothesis testing and probabilistic sampling distributions to control decision errors during data analysis. Hypothesis testing is a process based on the scientific method that compares a baseline condition to an alternate condition. The baseline condition is technically known as the null hypothesis. Hypothesis testing rests on the premise that the null hypothesis is true and that sufficient evidence must be provided for rejection. In designing the survey plan, the underlying assumption, or null hypothesis was that residual activity in the survey unit exceeded the release criteria. Rejection of the null hypothesis would indicate that residual activity within the survey unit does not exceed the release criteria. Therefore, the survey unit does satisfy the primary objective of the FSS plan.

The primary objective of the FSS plan was to demonstrate that the level of residual radioactivity in Survey Unit 9807-0000 did not exceed the release

criteria specified in the LTP and that the potential dose from residual radioactivity is As Low As Reasonably Achievable (ALARA).

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

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

Equation 1

$$H_{Total} = H_{Soil} + H_{ExistingGW} + H_{FutureGW}$$

The total dose under the LTP criteria is twenty-five (25) mrem/yr TEDE from all three (3) components. The allowable total dose under the Connecticut Department of Environmental Protection (CTDEP) radiological remediation standard for CY is nineteen (19) mrem/yr TEDE. To satisfy both the LTP and CY CTDEP criteria, the dose from soil must be reduced when using the existing and future groundwater dose values discussed above.

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

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

Equation 2

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

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

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

Radionuclide [1]	Base Case Soil DCGL (ρCi/g) [2]	Operational DCGL (ρCi/g) [3]	Required MDC (ρCi/g) [4]
H-3	4.12E+02	2.80E+02	1.65E+01
C-14	5.66E+00	3.85E+00	2.26E-01
Mn-54	1.74E+01	1.18E+01	6.96E-01
Fe-55	2.74E+04	1.86E+04	1.10E+03
Co-60	3.81E+00	2.59E+00	1.52E-01
Ni-63	7.23E+02	4.92E+02	2.89E+01
Sr-90	1.55E+00	1.05E+00	6.20E-02
Nb-94	7.12E+00	4.84E+00	2.85E-01
Tc-99	1.26E+01	8.57E+00	5.04E-01
Ag-108m	7.14E+00	4.86E+00	2.86E-01
Cs-134	4.67E+00	3.18E+00	1.87E-01
Cs-137	7.91E+00	5.38E+00	3.16E-01
Eu-152	1.01E+01	6.87E+00	4.04E-01
Eu-154	9.29E+00	6.32E+00	3.72E-01
Eu-155	3.92E+02	2.67E+02	1.57E+01
Pu-238	2.96E+01	2.01E+01	1.18E+00
Pu-239/240	2.67E+01	1.82E+01	1.07E+00
Pu-241	8.70E+02	5.92E+02	3.48E+01
Am-241[5]	2.58E+01	1.75E+01	1.03E+00
Cm-243/244	2.90E+01	1.97E+01	1.16E+00

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

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

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

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

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

Another important facet of the DQO process is to identify the radionuclides of concern and determine the concentration variability. Soil samples were collected in 2006 during the remedial action survey. Cs-137 was the only gamma emitting radionuclide reported in concentrations with the potential for exceeding the screening criteria. The remedial action survey data were used for the survey design and are provided in Table 1.

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

As part of the DQOs applied to laboratory processes, analysis results were reported as actual calculated results. Results reported as less than Minimum Detectable Concentration (MDC) were not accepted for FSS. Sample report summaries included unique sample identification, analytical method, radionuclide, result, and uncertainty to two (2) standard deviations, laboratory data qualifiers, units, and the required and observed MDC.

4. SURVEY DESIGN

The level of effort associated with planning a survey is based on the complexity of the survey and nature of the hazards. Guidance for preparing FSS plans is provided in Procedure RPM 5.1-11, "*Preparation of Final Status Survey Plans*". The FSS plan uses an integrated sample design that combines scanning surveys and sampling which can be either random or biased.

The DQO process determined that Cs-137 would be the radionuclide of concern in Survey Unit 9807-0000 (refer to Section 3). Other radionuclides identified during this FSS would be evaluated to ensure adequate survey design.

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

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

The Sign Test was selected as the non-parametric statistical test. The use of the Sign Test did not require the selection or use of a background reference area, which simplified survey design and implementation. This approach was conservative since it included background Cs-137 as part of the sample set.

The number of soil samples for FSS was determined in accordance with the LTP. The Lower Bound of the Gray Region (LBGR) was set in accordance with Procedure RPM 5.1-11 to 5.36 to maintain the relative shift (Δ/σ) in the range of 1 and 3. The resulting Adjusted Relative Shift was 2.0. A Prospective Power Curve was generated using COMPASS, a software package developed under the sponsorship of the United States Nuclear Regulatory Commission (USNRC) for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR 20, Subpart E). The result of the COMPASS computer run showed adequate power for the survey design. The survey design specified twenty-five (25) core soil samples for non-parametric statistical testing.

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 B area.

Judgmental sampling was not determined to be necessary by the DQOs, based on the short distance between the area that was subjected to remedial action and FSS sample location 9807-0000-012F.

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
9807-0000-001F	235632.88	669753.10
9807-0000-002F	235632.88	669784.48
9807-0000-003F	235632.88	669815.87
9807-0000-004F	235605.70	669737.40
9807-0000-005F	235605.70	669768.79
9807-0000-006F	235605.70	669800.18
9807-0000-007F	235605.70	669831.56
9807-0000-008F	235605.70	669862.95
9807-0000-009F	235578.52	669721.71
9807-0000-010F	235578.52	669753.10
9807-0000-011F	235578.52	669784.48

Table 3 - Sample Measurement Locations with Associated GPS Coordinates

Designation	Northing	Easting
9807-0000-012F	235578.52	669815.87
9807-0000-013F	235578.52	669847.25
9807-0000-014F	235578.52	669878.64
9807-0000-015F	235551.34	669737.40
9807-0000-016F	235551.34	669768.79
9807-0000-017F	235551.34	669800.18
9807-0000-018F	235551.34	669831.56
9807-0000-019F	235551.34	669862.95
9807-0000-020F	235551.34	669894.33
9807-0000-021F	235524.15	669784.48
9807-0000-022F	235524.15	669815.87
9807-0000-023F	235524.15	669847.25
9807-0000-024F	235524.15	669878.64
9807-0000-025F	235496.97	669862.95

Procedure RPM 5.1-11 specifies that 5% of the samples are required to be selected for HTD analysis. Three (3) 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 three (3) soil samples for "split sample" analysis by the off-site laboratory. These locations were selected randomly using the Microsoft Excel "RANDBETWEEN" function. The number of quality control soil samples was about 10% of twenty-five (25) samples.

The LTP does not require scanning for elevated areas of radioactivity in subsurface survey units.

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

Table 4 – Synopsis of the Survey Design

Feature	Design Criteria	Basis
Survey Unit Land Area	1,983 m^2	Based on AutoCAD-LT
Number of Measurements	25 (25 systematic grid)	Based on LTP 5.7.3.2.2 (1)
Grid Spacing	9.6 m	Based on triangular grid
Operational DCGL	5.38 pCi/g Cs-137	Administratively set to achieve 17 mrem/yr TEDE (2)
Soil Investigation Level	5.38 pCi/g Cs-137	The Operational DCGL meets the LTP criteria for a Class B survey unit

(1) Due to the size of the survey unit, the sample to area frequency far exceeds the frequency requirement for Class A survey units of one sample every 500 m^2 as specified by LTP Section 5.7.3.2.2

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

5. SURVEY IMPLEMENTATION

FSS field activities were conducted under Work Plan and Inspection Record (WP&IR) 2006-0038. The WP&IR package included a detailed FSS plan, job safety analysis, job planning checklist and related procedures for reference. Daily briefings were conducted to discuss the expectations for job performance and the safety aspects of the survey. The "Daily Survey Journal" was used to document field activities and other information pertaining to the FSS.

Measurement locations were identified in North American Datum (NAD) 1927 coordinates using GPS coordinates; sample locations were identified and marked with a surveyor's flag or paint for identification.

Twenty-five (25) subsurface 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.*"

Three (3) samples (9807-0000-003F, 9807-0000-008F and 9807-0000-013F) were randomly selected for HTD radionuclide analysis.

The implementation of survey specific quality control measures included the collection of three (3) samples (9807-0000-012F, 9807-0000-018F and 9807-0000-024F) for "split sample" analysis.

6. SURVEY RESULTS

All field survey activities were conducted between September 13, 2006 and September 21, 2006.

The off-site laboratory employed for the radiological analyses of samples was General Engineering Laboratories, LLC. The laboratory analyzed the twenty-five (25) samples collected for non-parametric statistical testing, and the associated field splits using gamma spectroscopy. Gamma spectroscopy analysis was performed to the required MDCs. Gamma spectroscopy results identified some radionuclides meeting the accepted criteria for detection (i.e., a result greater than two standard deviations uncertainty). However, Cs-137 was the only radionuclide reported in concentrations exceeding the de-selection criteria.

Cs-137 was identified in eight (8) of the twenty-five (25) samples collected for non-parametric statistical testing. Cs-137 was the primary radionuclide confirming the DQOs. The mean of the gamma spectroscopic analysis results for the sample population indicated that Cs-137 was present at levels lower than the concentrations of Cs-137 found in soil at off-site locations within the vicinity of the HNP as presented in the Health Physics TSD BCY-HP-0063.

A summary of the twenty-five (25) samples collected for non-parametric statistical testing results is provided in Table 5.

Table 5 - Summary of Soil Sample Results for the Statistical Sample Population

Sample Number	Cs-137 (pCi/g)	Fraction of the Operational DCGL [(1)]
9805-0000-001F	-7.91E-03	0.000
9805-0000-002F	-2.76E-02	0.000
9805-0000-003F	4.02E-02	0.007
9805-0000-004F	-1.26E-03	0.000
9805-0000-005F	1.87E-02	0.003
9805-0000-006F	-8.34E-03	0.000
9805-0000-007F	-1.54E-02	0.000
9805-0000-008F	-1.36E-02	0.000
9805-0000-009F	3.30E-02	0.006
9805-0000-010F	2.86E-02	0.005
9805-0000-011F	-2.32E-02	0.000
9805-0000-012F	4.36E-02	0.008
9805-0000-013F	-2.51E-03	0.000
9805-0000-014F	8.18E-03	0.002

Table 5 - Summary of Soil Sample Results for the Statistical Sample Population		
Sample Number	Cs-137 (ρCi/g)	Fraction of the Operational DCGL (1)
9805-0000-015F	1.29E-02	0.002
9807-0000-016F	6.01E-03	0.001
9807-0000-017F	3.34E-02	0.006
9807-0000-018F	2.39E-03	0.000
9807-0000-019F	-3.24E-04	0.000
9807-0000-020F	3.53E-02	0.007
9807-0000-021F	0.00E+00	0.000
9807-0000-022F	2.88E-02	0.005
9807-0000-023F	2.56E-02	0.005
9807-0000-024F	1.18E-02	0.002
9807-0000-025F	3.50E+00	0.651

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

The off-site laboratory also processed three (3) samples for HTD analysis as required by the sample plan. The requested analyses included alpha spectroscopy, gas proportional counting, and liquid scintillation depending on the radionuclide and the measurement method. All analyses met the required MDC.

As previously stated in Section 4 of this report, the criteria for de-selection of a radionuclide is a concentration that is less than 5% of the Operational DCGL for individual radionuclides and less than 10% of the Operational DCGLs for aggregates. H-3 and Am-241 were the only HTDs identified above the accepted criteria for detection (i.e., a result greater than two standard deviations uncertainty). The off-site laboratory prepared and reanalyzed two (2) of the three (3) original samples for H-3 at HNP's request; and performed H-3 analysis on five (5) other samples bordering the two (2) sample locations. The results of all seven (7) samples were all less than the accepted criteria for detection. The highest result for Am-241 was about 4% of the Operational DCGL.

Table 8 - Hard-to-Detect Sample Results		
Sample	Am-241 (ρCi/g)	Fraction of Operational DCGL (1)
9807-0000-003F	7.13E-01	0.041
9807-0000-008F	5.32E-02	0.003
9807-0000-013F	9.35E-02	0.005

(1) The Operational DCGL from Table 2 is 17.5 ρCi/g for Am-241 to achieve 17 mrem/yr TEDE

7. QUALITY CONTROL

The off-site laboratory processed the split samples and performed gamma spectroscopy analysis. Ten percent (10%) of the samples were selected for analysis, which exceeds the 5% minimum required by the LTP. The data were evaluated using USNRC acceptance criteria specified in Inspection Procedure 84750 as detailed in HNP Procedure RPM 5.1-24, "*Split Sample Assessment for Final Status Survey*". Cs-137 was not detected in sufficient quantities in the field split results at the three (3) locations to evaluate in accordance with procedure. Evaluation using the reported results for K-40 resulted in acceptable agreement between the field split results at these locations.

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

8. INVESTIGATIONS AND RESULTS

No investigations were performed.

9. REMEDIATION AND RESULTS

Remedial action was performed in July 2006. Although Co-60 has been identified in the past, Cs-137 was the only radionuclide with the potential to exceed the screening criteria following the remedial action. Health Physics TSD BCY-HP-0078, "*ALARA Evaluation of Soil Remediation in Support of Final Status Survey,*" has determined that remediation beyond that required to meet the release criteria is unnecessary and that the remaining residual radioactivity in soil was ALARA.

10. CHANGES FROM THE FINAL STATUS SURVEY PLAN

No changes were made to the FSS plan.

11. DATA QUALITY ASSESSMENT (DQA)

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

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

The preliminary data review consisted of calculating basic statistical quantities (e.g., mean, median, standard deviation). The mean and median values are well below the Operational DCGL. Also, the retrospective power curve shows that a sufficient number of samples were collected to achieve the desired power. Therefore, the survey unit meets the unrestricted release criteria with adequate power as required by the DQOs.

For Cs-137, the range of the data, about five (5) standard deviations, indicated some variation, mainly as a result of one (1) sample that is higher in concentration than the rest of the data set. The difference between the mean and median was about 20% 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 significant positive skewness due to one (1) sample as confirmed by the calculated skew of 4.99.

All data, assessments, and graphical representations are provided in Attachment 3.

12. ANOMALIES

No anomalies were noted.

13. CONCLUSION

Survey Unit 9807-0000 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 B.

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

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

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

The average total dose from residual radioactivity in this survey unit, including exposures from the three (3) components as described in Section 3, that is, residual radioactivity in soil, existing groundwater radioactivity, and future groundwater radioactivity from the burial of concrete foundations or footings from site buildings containing residual radioactivity, will not exceed 3 mrem/yr TEDE. Therefore, Survey Unit 9807-0000 is acceptable for unrestricted release.

14. ATTACHMENTS

14.1 Attachment 1 – Survey Unit Location Map

14.2 Attachment 2 – Laboratory Results

14.4 Attachment 3 – DQA Results

ATTACHMENT 1 (FIGURES)

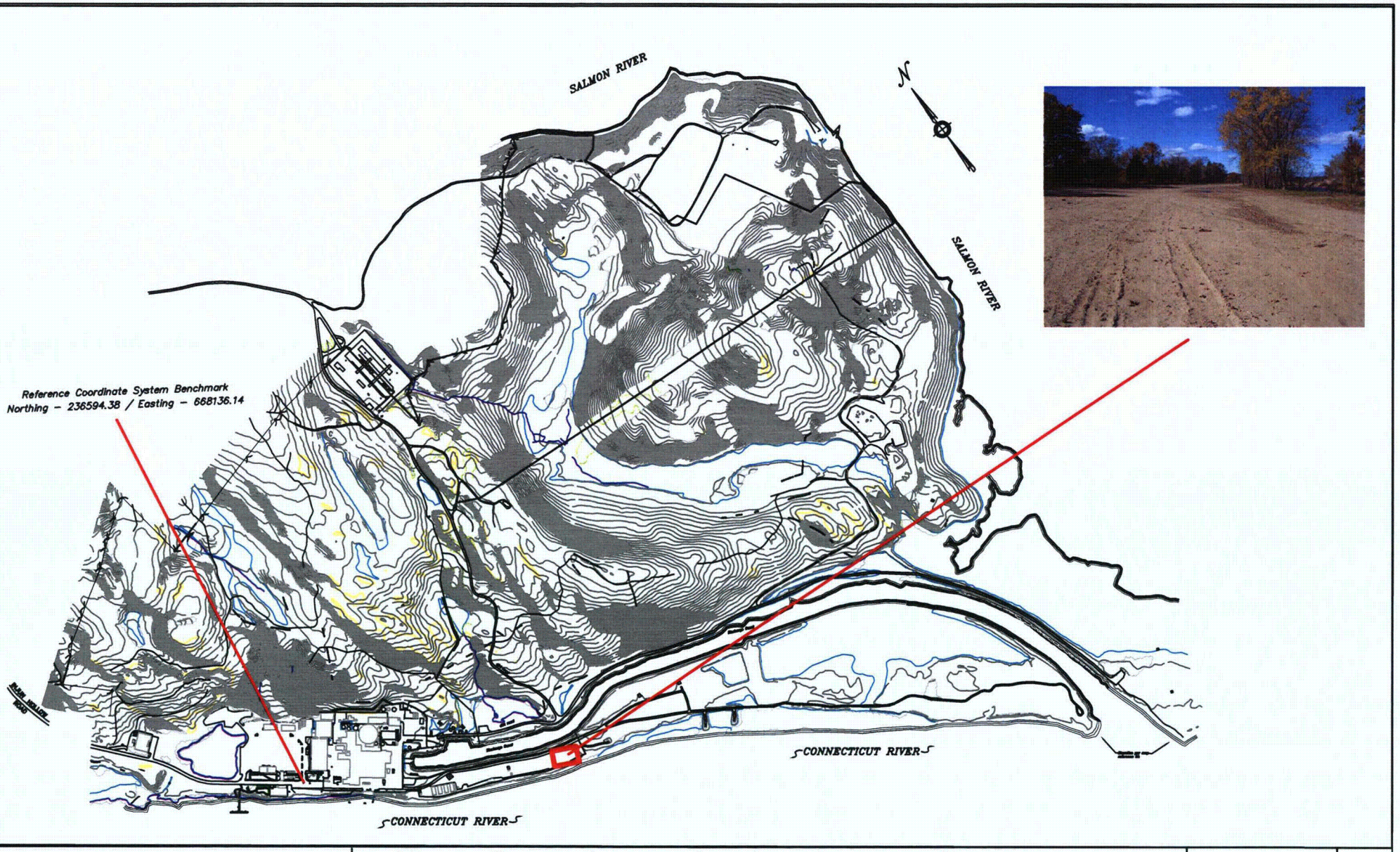


Figure 1	*Connecticut Yankee Atomic Power Company* *Site Map With Reference To Survey Unit 9807-0000*	*Date*	*By*
		November 2006	*J. McC.*

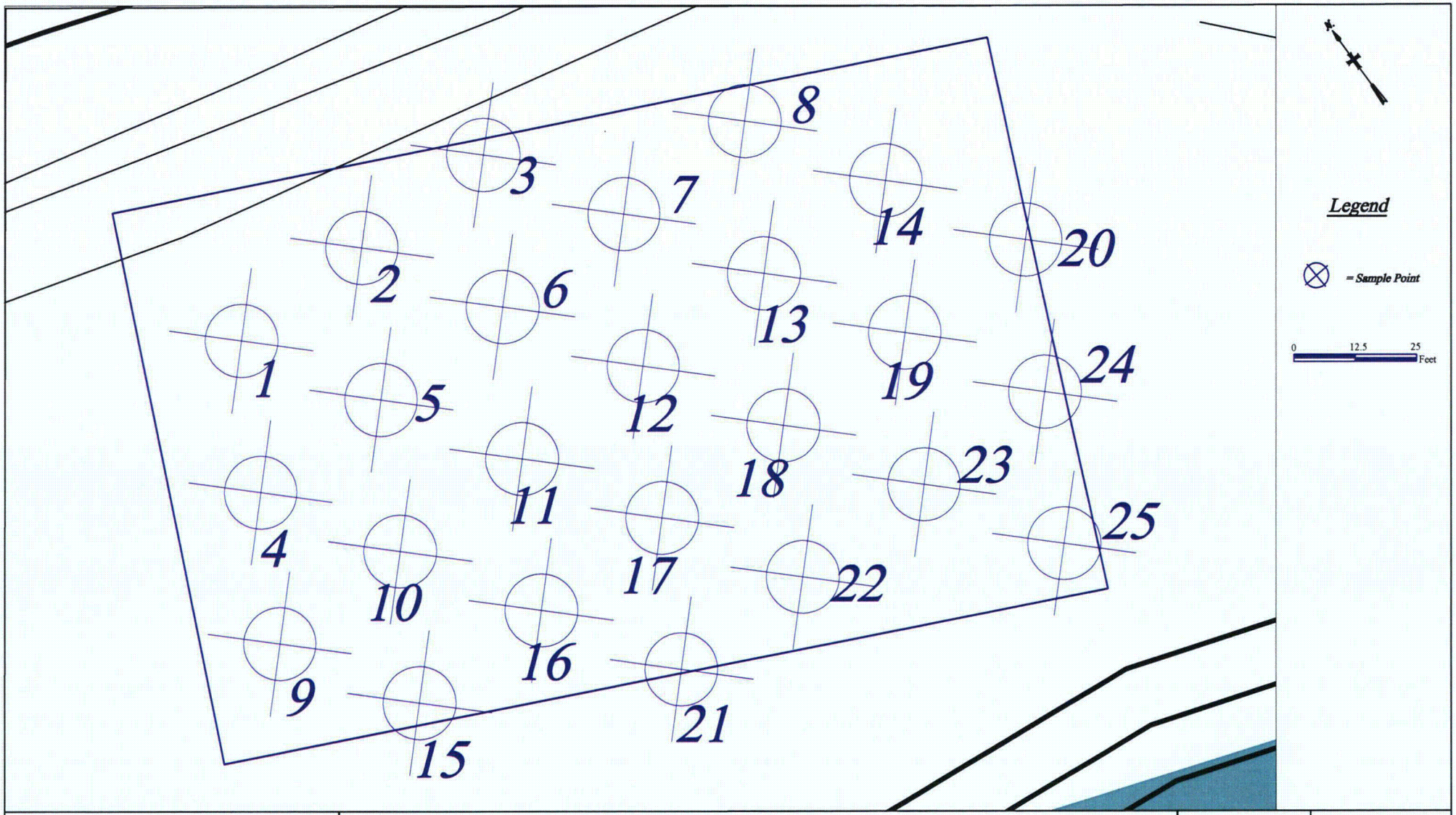


Figure 2	*Connecticut Yankee Atomic Power Company* *Survey Unit 9807-0000 Final Status Survey Design*	*Date*	*By*
		November 2006	*J. McCarthy*

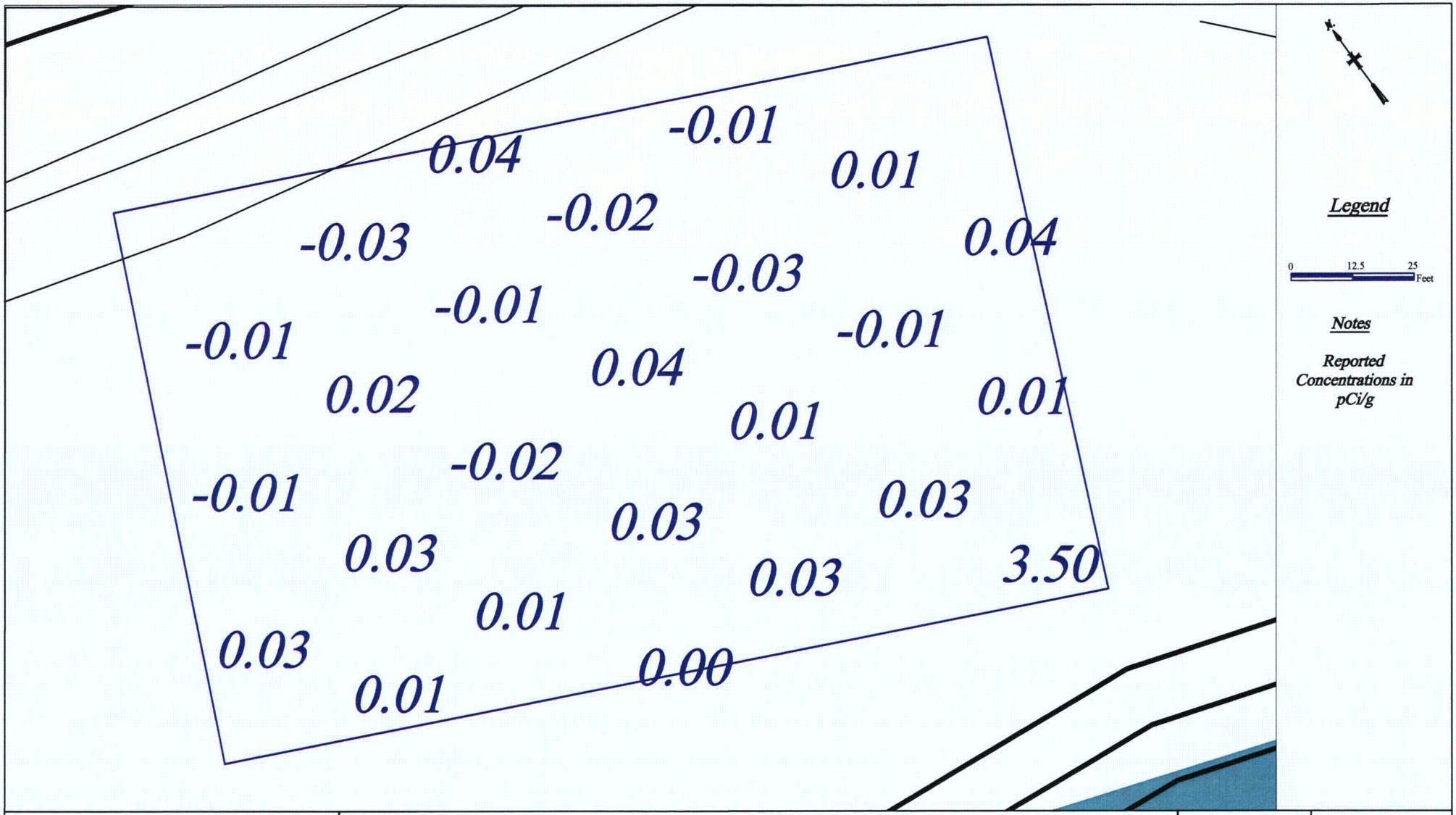


Figure 3	*Connecticut Yankee Atomic Power Company* *Survey Unit 9807-0000 Final Status Survey Cs-137 Posting Plot*	*Date*	*By*
		November 2006	*J. McCarthy*

ATTACHMENT 2 (LABORATORY DATA)

General Narrative

General Narrative
for
Connecticut Yankee Atomic Power Co.
Work Order: 172275
SDG: MSR#06-1282

October 04, 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 September 21, 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:

Laboratory Identification	Sample Description
172275001	9807-0000-001F
172275002	9807-0000-002F
172275003	9807-0000-003F
172275004	9807-0000-004F
172275005	9807-0000-005F
172275006	9807-0000-006F
172275007	9807-0000-007F
172275008	9807-0000-008F
172275009	9807-0000-009F
172275010	9807-0000-010F
172275011	9807-0000-011F

172275012	9807-0000-012F
172275013	9807-0000-012FS
172275014	9807-0000-013F
172275015	9807-0000-014F
172275016	9807-0000-015F
172275017	9807-0000-016F
172275018	9807-0000-017F
172275019	9807-0000-018F
172275020	9807-0000-018FS
172275021	9807-0000-019F
172275022	9807-0000-020F
172275023	9807-0000-021F
172275024	9807-0000-022F
172275025	9807-0000-023F
172275026	9807-0000-024F
172275027	9807-0000-024FS
172275028	9807-0000-025F

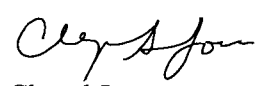
Items of Note
There are no items to note.

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

Analytical Request
Twenty-five soil samples were analyzed for FSSGAM. Three 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 04 October 2006

State	Certification
Alaska	UST-062
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California	01151CA
Colorado	GenEngLabs
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA	WG-15J
Florida/NELAP	E87156
Georgia	E87156 (FL/NELAP)
Hawaii	N/A
Idaho	N/A
Illinois	200029
Indiana	C-SC-01
Kansas	E-10332
Kentucky	90129
Louisiana	03046
Maryland	270
Massachusetts	M-SC012
Michigan	9903
Nevada	SC12
New Jersey	SC002
New Mexico	FL NELAP E87156
New York	11501
North Carolina	233
North Carolina Drinking W	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania	68-00485
South Carolina	10120001/10585001/10120002
Tennessee	02934
Texas	TX213-2006A
Texas NELAP	T104704235-06-TX
U.S. Dept. of Agriculture	S-52597
US Army Corps of Engineer	N/A
Utah	8037697376 GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Chain of Custody Form

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

No. 2006-568

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
ATT: Cheryl Jones (843-556-8171)

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.
Other:

Lab Use Only
Comments:
172275 1.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
9807-0000-001F	9/13/06	1413	TS	C	BP	X							
9807-0000-002F	9/13/06	1444	TS	C	BP	X							
9807-0000-003F	9/13/06	1507	TS	C	BP	~~X~~ 19	X						
9807-0000-004F	9/13/06	1523	TS	C	BP	X							
9807-0000-005F	9/14/06	1055	TS	C	BP	X							
9807-0000-006F	9/14/06	1105	TS	C	BP	X							
9807-0000-007F	9/14/06	1305	TS	C	BP	X							
9807-0000-008F	9/14/06	1325	TS	C	BP		X						
9807-0000-009F	9/14/06	1345	TS	C	BP	X							
9807-0000-010F	9/14/06	1405	TS	C	BP	X							
9807-0000-011F	9/14/06	1430	TS	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1282 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Internal Container Temp.: 19 Deg. C
Custody Sealed? Y ☐ N ☒
Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	9/20/06 1300	K. Lilight	9/21/06 0900
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Chain of Custody Form

No. 2006-569

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

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.
Other:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL					Lab Use Only: Comment, Preservation	Lab Sample ID
9807-0000-0 12F	9-14-06	0840	TS	C	BP	X						TIMS 0810	
9807-0000-0 12FS	9-14-06	0840	TS	C	BP	X						" 0810	
9807-0000-0 13F	9-14-06	0840	TS	C	BP		X						
9807-0000-0 14F	9-18-06	0900	TS	C	BP	X							
9807-0000-0 15F	9-18-06	0910	TS	C	BP	X							
9807-0000-0 16F	9-18-06	0925	TS	C	BP	X							
9807-0000-0 17F	9-18-06	0940	TS	C	BP	X							
9807-0000-0 18F	9-18-06	1015	TS	C	BP	X							
9807-0000-0 18FS	9-18-06	1015	TS	C	BP	X							
9807-0000-0 19F	9-18-06	1058	TS	C	BP	X							
9807-0000-0 20F	9-18-06	1300	TS	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1282 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Internal Container Temp.: ____ Deg. C

Custody Sealed?
Y ☐ N ☐
Custody Seal Intact?
Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
		K. Wright	9/21/06 0900
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Chain of Custody Form

No. 2006-570

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

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.
Other:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL					Lab Use Only: Comment, Preservation	Lab Sample ID
9807-0000-021 F	9-18-06	1325	TS	C	BP	X							
~~9807-0000-022 F~~	~~9-14-06~~	~~1625~~	~~TS~~	~~C~~	~~BP~~	~~X~~						~~Not 9/19/06~~	
9807-0000-022 F	9-14-06	1625	TS	C	BP	X							
9807-0000-023 F	9-18-06	1415	TS	C	BP	X							
9807-0000-024 F	9-18-06	1450	TS	C	BP	X							
9807-0000-024 FS	9-18-06	1450	TS	C	BP	X							
9807-0000-025 F	9-18-06	1530	TS	C	BP	X							

Comments:

NOTES: PO #: 002332 MSR #: 06-1282 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐
Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
		K. Lightner	9/21/06 0905
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 9/21/06 0900

SDG#: MSR#06-1282

Work Order Number: 172275
792208240723

Shipping Container ID: 0712 Chain of Custody # 2006-568/569/570
One Fed ex # missing from cooler

1. Custody Seals on shipping container intact? Yes [ ] No [ ] NA
2. Custody Seals dated and signed? Yes [ ] No [ ] NA
3. Chain-of-Custody record present? Yes [/] No [ ]
4. Cooler temperature 19/20/19c
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] NA
6. Number of samples in shipping container: 28 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. Leflight Date: 9/21/06

Telephoned to: _____ On _____ By _____

Data Review Qualifier Definitions

Data Review Qualifier Definitions

Qualifier	Explanation
*	A quality control analyte recovery is outside of specified acceptance criteria
**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
A	The TIC is a suspected aldol-condensation product
B	Target analyte was detected in the associated blank
B	Metals-Either presence of analyte detected in the associated blank, or MDL/IDL < sample value < PQL
BD	Results are either below the MDC or tracer recovery is low
C	Analyte has been confirmed by GC/MS analysis
D	Results are reported from a diluted aliquot of the sample
d	5-day BOD-The 2:1 depletion requirement was not met for this sample
E	Organics-Concentration of the target analyte exceeds the instrument calibration range
E	Metals-%difference of sample and SD is >10%. Sample concentration must meet flagging criteria
H	Analytical holding time was exceeded
h	Preparation or preservation holding time was exceeded
J	Value is estimated
N	Metals-The Matrix spike sample recovery is not within specified control limits
N	Organics-Presumptive evidence based on mass spectral library search to make a tentative identification of the analyte (TIC). Quantitation is based on nearest internal standard response factor
N/A	Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND	Analyte concentration is not detected above the reporting limit
UI	Gamma Spectroscopy-Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
Z	Paint Filter Test-Particulates passed through the filter, however no free liquids were observed.

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 172275

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:	572120
Prep Batch Number:	571426
Dry Soil Prep GL-RAD-A-021 Batch Number:	571421

Sample ID	Client ID
172275003	9807-0000-003F
172275008	9807-0000-008F
172275014	9807-0000-013F
1201191303	Method Blank (MB)
1201191304	172114001(9530-0001-008F) Sample Duplicate (DUP)
1201191305	172114001(9530-0001-008F) Matrix Spike (MS)
1201191306	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: 172114001 (9530-0001-008F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**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:	572121
Prep Batch Number:	571426
Dry Soil Prep GL-RAD-A-021 Batch Number:	571421

Sample ID	Client ID
172275003	9807-0000-003F
172275008	9807-0000-008F
172275014	9807-0000-013F
1201191307	Method Blank (MB)
1201191308	172114001(9530-0001-008F) Sample Duplicate (DUP)
1201191309	172114001(9530-0001-008F) Matrix Spike (MS)
1201191310	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: 172114001 (9530-0001-008F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Pu241, Solid-ALL FSS**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	572122
Prep Batch Number:	571426
Dry Soil Prep GL-RAD-A-021 Batch Number:	571421

Sample ID	Client ID
172275003	9807-0000-003F
172275008	9807-0000-008F
172275014	9807-0000-013F
1201191311	Method Blank (MB)
1201191312	172114001(9530-0001-008F) Sample Duplicate (DUP)
1201191313	172114001(9530-0001-008F) Matrix Spike (MS)
1201191314	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: 172114001 (9530-0001-008F).

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

Technical Information:

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

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

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

Miscellaneous Information:

NCR Documentation

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

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	574335
Prep Batch Number:	571421

Sample ID	Client ID
172275001	9807-0000-001F
172275002	9807-0000-002F
172275003	9807-0000-003F
172275004	9807-0000-004F
172275005	9807-0000-005F
172275006	9807-0000-006F
172275007	9807-0000-007F
172275008	9807-0000-008F
172275009	9807-0000-009F
172275010	9807-0000-010F
172275011	9807-0000-011F
172275012	9807-0000-012F
172275013	9807-0000-012FS
172275014	9807-0000-013F
172275015	9807-0000-014F
172275016	9807-0000-015F
172275017	9807-0000-016F
172275018	9807-0000-017F
172275019	9807-0000-018F
172275020	9807-0000-018FS
1201196536	Method Blank (MB)
1201196537	172275001(9807-0000-001F) Sample Duplicate (DUP)
1201196538	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# 12.

Calibration Information:

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

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

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

Quality Control (QC) Information:

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

Designated QC
The following sample was used for QC: 172275001 (9807-0000-001F).

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.	Cesium-137	172275013
UI	Data rejected due to interference.	Cesium-134	172275017
		Europium-155	172275008
			172275013
UI	Data rejected due to low abundance.	Actinium-228	172275002
		Cesium-134	172275003
			172275006
			172275007
			172275008
			172275012
			172275015
			172275018
			1201196537

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:	574336
Prep Batch Number:	571423

Sample ID	Client ID
172275021	9807-0000-019F
172275022	9807-0000-020F
172275023	9807-0000-021F
172275024	9807-0000-022F
172275025	9807-0000-023F
172275026	9807-0000-024F
172275027	9807-0000-024FS
172275028	9807-0000-025F
1201196539	Method Blank (MB)
1201196540	172275028(9807-0000-025F) Sample Duplicate (DUP)
1201196541	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# 12.

Calibration Information:

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

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

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

Quality Control (QC) Information:

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

Designated QC
The following sample was used for QC: 172275028 (9807-0000-025F).

QC Information
Refer to Non-Conformance Report.

Technical Information:

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

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

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

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 368031 was generated due to Failed RPD for DUP. 1. Failed RPD for DUP: The relative percent difference (172275028 and 120119654) for K-40 and Pb-212 did not meet the duplication criteria. 1. K-40 and Pb-212 are naturally occurring nuclides. All other nuclides meet within the duplication criteria. Reporting results.

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.	Cesium-137	172275023
UI	Data rejected due to interference.	Europium-155	172275023
UI	Data rejected due to low abundance.	Cesium-134	172275021
			172275022
			172275024
			172275025
			1201196540

Method/Analysis Information

Product:	**GFPC, Sr90, solid-ALL FSS**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	572301
Prep Batch Number:	571426
Dry Soil Prep GL-RAD-A-021 Batch Number:	571421

Sample ID	Client ID
172275003	9807-0000-003F
172275008	9807-0000-008F
172275014	9807-0000-013F
1201191723	Method Blank (MB)
1201191724	172275003(9807-0000-003F) Sample Duplicate (DUP)
1201191725	172275003(9807-0000-003F) Matrix Spike (MS)
1201191726	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: 172275003 (9807-0000-003F).

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Tc99, Solid-ALL FSS**
Analytical Method:	DOE EML HASL-300, Tc-02-RC Modified
Analytical Batch Number:	571877

Sample ID	Client ID
172275003	9807-0000-003F
172275008	9807-0000-008F
172275014	9807-0000-013F
1201190771	Method Blank (MB)
1201190772	172275003(9807-0000-003F) Sample Duplicate (DUP)
1201190773	172275003(9807-0000-003F) Matrix Spike (MS)
1201190774	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: 172275003 (9807-0000-003F).

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:	571874
Prep Batch Number:	571426
Dry Soil Prep GL-RAD-A-021 Batch Number:	571421

Sample ID	Client ID
172275003	9807-0000-003F
172275008	9807-0000-008F
172275014	9807-0000-013F
1201190757	Method Blank (MB)
1201190758	172275008(9807-0000-008F) Sample Duplicate (DUP)
1201190759	172275008(9807-0000-008F) Matrix Spike (MS)
1201190760	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: 172275008 (9807-0000-008F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Ni63, Solid-ALL FSS**
Analytical Method:	DOE RESL Ni-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	571876
Prep Batch Number:	571426
Dry Soil Prep GL-RAD-A-021 Batch Number:	571421

Sample ID	Client ID
172275003	9807-0000-003F
172275008	9807-0000-008F
172275014	9807-0000-013F
1201190767	Method Blank (MB)
1201190768	172275014(9807-0000-013F) Sample Duplicate (DUP)
1201190769	172275014(9807-0000-013F) Matrix Spike (MS)
1201190770	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: 172275014 (9807-0000-013F).

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

Technical Information:

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

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

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

Miscellaneous Information:

NCR Documentation

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**LSC, Tritium Dist, Solid-HTD2,ALL FSS**
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	571884

Sample ID	Client ID
172275003	9807-0000-003F
172275008	9807-0000-008F
172275014	9807-0000-013F
1201190793	Method Blank (MB)
1201190794	172275003(9807-0000-003F) Sample Duplicate (DUP)
1201190795	172275003(9807-0000-003F) Matrix Spike (MS)
1201190796	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: 172275003 (9807-0000-003F).

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. The following NCR was generated for this SDG:
NCR 365692 was generated due to Container scanning event for custody missed. 1. The analyst did not scan the samples 172275003, 172275008, and 172275014 into the batch prior to analysis, however the samples did remain in their custody at all times. 1. The error has been corrected and the analyst has been instructed on the proper scanning procedures. 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 C14, Solid All,FSS**
Analytical Method:	EPA EERF C-01 Modified
Analytical Batch Number:	571880

Sample ID	Client ID
172275003	9807-0000-003F
172275008	9807-0000-008F
172275014	9807-0000-013F
1201190783	Method Blank (MB)
1201190784	172275003(9807-0000-003F) Sample Duplicate (DUP)
1201190785	172275003(9807-0000-003F) Matrix Spike (MS)
1201190786	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: 172275003 (9807-0000-003F).

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: _____ 10/5/16

NCR Report No.: 365692
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
29-SEP-06	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LSC	EPA 906.0 Modified	Solid	YANK
Batch ID:	**Sample Numbers:**		
571884	See Below		

Potentially affected work order(s)(SDG): 172275(MSR#06-1282)

Application Issues:

Container scanning event for custody missed

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The analyst did not scan the samples 172275003, 172275008, and 172275014 into the batch prior to analysis, however the samples did remain in their custody at all times.	1. The error has been corrected and the analyst has been instructed on the proper scanning procedures. Reporting results.

Originator's Name:
Amy Scott 29-SEP-06

Data Validator/Group Leader:
Melanie Aycock 01-OCT-06

Quality Review:

Director:

NCR Report No.: 368031
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
05-OCT-06	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
GAMMA SPECTROMETER	EML HASL 300, 4.5.2.3	Solid	YANK
Batch ID:	**Sample Numbers:**		
574336	See Below		

Potentially affected work order(s)(SDG): 172275(MSR#06-1282),172873(MSR#06-1313),172875(MSR#06-1312),172879(MSR#06-1311)

Application Issues:

Failed RPD for DUP

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Failed RPD for DUP: The relative percent difference (172275028 and 120119654) for K-40 and Pb-212 did not meet the duplication criteria.	1. K-40 and Pb-212 are naturally occurring nuclides. All other nuclides meet within the duplication criteria. Reporting results.

Originator's Name:

Jimmy Hartley 05-OCT-06

Data Validator/Group Leader:

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#06-1282 GEL Work Order: 172275

The Qualifiers in this report are defined as follows:

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

** Analyte is a surrogate compound

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

UI Gamma Spectroscopy--Uncertain identification

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

The above sample is reported on a dry weight basis except where prohibited by the analytical procedure.

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

This data report has been prepared and reviewed in accordance with General Engineering Laboratories, LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

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

Certificate of Analysis

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

Report Date: October 5, 2006

Client Sample ID:	9807-0000-001F	Project:	YANK01204
Sample ID:	172275001	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	13-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	16.6%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.917	+/-0.197	0.0541	+/-0.197	0.119	pCi/g		MJH1	10/03/06	0635	574335	1
Americium-241	U	0.0336	+/-0.0304	0.027	+/-0.0304	0.0556	pCi/g						
Bismuth-212		0.332	+/-0.297	0.136	+/-0.297	0.293	pCi/g						
Bismuth-214		0.594	+/-0.0918	0.0352	+/-0.0918	0.075	pCi/g						
Cesium-134	U	0.0178	+/-0.0337	0.0227	+/-0.0337	0.0486	pCi/g						
Cesium-137	U	-0.00791	+/-0.0231	0.0166	+/-0.0231	0.0358	pCi/g						
Cobalt-60	U	-0.032	+/-0.0272	0.0154	+/-0.0272	0.0349	pCi/g						
Europium-152	U	0.00865	+/-0.0526	0.048	+/-0.0526	0.101	pCi/g						
Europium-154	U	-0.00226	+/-0.0668	0.0569	+/-0.0668	0.125	pCi/g						
Europium-155	U	0.0769	+/-0.0755	0.0429	+/-0.0755	0.0889	pCi/g						
Lead-212		0.826	+/-0.0631	0.0264	+/-0.0631	0.0549	pCi/g						
Lead-214		0.596	+/-0.0873	0.0338	+/-0.0873	0.0711	pCi/g						
Manganese-54	U	-0.00108	+/-0.0247	0.0207	+/-0.0247	0.0442	pCi/g						
Niobium-94	U	-0.00289	+/-0.021	0.0177	+/-0.021	0.0378	pCi/g						
Potassium-40		12.6	+/-0.924	0.140	+/-0.924	0.321	pCi/g						
Radium-226		0.594	+/-0.0918	0.0352	+/-0.0918	0.075	pCi/g						
Silver-108m	U	0.00205	+/-0.0182	0.0163	+/-0.0182	0.0344	pCi/g						
Thallium-208		0.288	+/-0.0486	0.0178	+/-0.0486	0.0381	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-001F
Sample ID: 172275001
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-002F	Project:	YANK01204
Sample ID:	172275002	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	13-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	14.9%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228	UI	0.00	+/-0.199	0.163	+/-0.199	0.325	pCi/g		MJH1	10/03/06	0650	574335	1
Americium-241	U	0.0381	+/-0.0369	0.0312	+/-0.0369	0.0624	pCi/g						
Bismuth-212		0.434	+/-0.350	0.179	+/-0.350	0.358	pCi/g						
Bismuth-214		0.556	+/-0.106	0.0356	+/-0.106	0.0711	pCi/g						
Cesium-134	U	0.035	+/-0.0431	0.0301	+/-0.0431	0.0601	pCi/g						
Cesium-137	U	-0.0276	+/-0.0307	0.0211	+/-0.0307	0.0421	pCi/g						
Cobalt-60	U	0.0211	+/-0.0298	0.0272	+/-0.0298	0.0543	pCi/g						
Europium-152	U	-0.0121	+/-0.0687	0.0491	+/-0.0687	0.0981	pCi/g						
Europium-154	U	0.0712	+/-0.0952	0.0863	+/-0.0952	0.173	pCi/g						
Europium-155	U	0.0585	+/-0.0674	0.0466	+/-0.0674	0.0931	pCi/g						
Lead-212		0.740	+/-0.0888	0.0283	+/-0.0888	0.0566	pCi/g						
Lead-214		0.618	+/-0.109	0.0383	+/-0.109	0.0766	pCi/g						
Manganese-54	U	-0.0246	+/-0.0275	0.0221	+/-0.0275	0.0441	pCi/g						
Niobium-94	U	-0.00223	+/-0.0244	0.0214	+/-0.0244	0.0428	pCi/g						
Potassium-40		12.6	+/-1.09	0.164	+/-1.09	0.327	pCi/g						
Radium-226		0.556	+/-0.106	0.0356	+/-0.106	0.0711	pCi/g						
Silver-108m	U	0.00737	+/-0.0234	0.0173	+/-0.0234	0.0345	pCi/g						
Thallium-208		0.257	+/-0.0585	0.0233	+/-0.0585	0.0465	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	09/21/06	1745	571421

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 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-002F Project: YANK01204
Sample ID: 172275002 Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-003F	Project:	YANK01204
Sample ID:	172275003	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	13-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	14%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241		0.713	+/-0.277	0.0248	+/-0.293	0.125	pCi/g		TC1	09/28/06	1156	572120	1
Curium-242	U	0.00	+/-0.0579	0.00	+/-0.0579	0.080	pCi/g						
Curium-243/244	U	0.0354	+/-0.080	0.043	+/-0.0801	0.161	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.0431	+/-0.0532	0.057	+/-0.0532	0.175	pCi/g		TC1	09/28/06	0935	572121	2
Plutonium-239/240	U	-0.00359	+/-0.0698	0.0604	+/-0.0698	0.182	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	1.79	+/-8.11	6.73	+/-8.12	14.1	pCi/g		TC1	09/29/06	2230	572122	3
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.743	+/-0.218	0.0704	+/-0.218	0.152	pCi/g		MJH1	10/03/06	0635	574335	4
Americium-241	U	0.014	+/-0.0362	0.0304	+/-0.0362	0.0626	pCi/g						
Bismuth-212		0.547	+/-0.295	0.175	+/-0.295	0.370	pCi/g						
Bismuth-214		0.558	+/-0.109	0.0428	+/-0.109	0.0901	pCi/g						
Cesium-134	UI	0.00	+/-0.0386	0.0286	+/-0.0386	0.0604	pCi/g						
Cesium-137	U	0.0402	+/-0.0327	0.0243	+/-0.0327	0.0512	pCi/g						
Cobalt-60	U	0.0104	+/-0.0285	0.0248	+/-0.0285	0.0536	pCi/g						
Europium-152	U	0.098	+/-0.0702	0.0562	+/-0.0702	0.117	pCi/g						
Europium-154	U	-0.032	+/-0.0804	0.0651	+/-0.0804	0.141	pCi/g						
Europium-155	U	-0.00541	+/-0.0571	0.0485	+/-0.0571	0.100	pCi/g						
Lead-212		0.628	+/-0.0808	0.0384	+/-0.0808	0.079	pCi/g						
Lead-214		0.585	+/-0.110	0.0369	+/-0.110	0.0775	pCi/g						
Manganese-54	U	-0.00284	+/-0.0262	0.0217	+/-0.0262	0.0462	pCi/g						
Niobium-94	U	-0.00174	+/-0.0241	0.0204	+/-0.0241	0.0432	pCi/g						
Potassium-40		13.1	+/-0.962	0.206	+/-0.962	0.453	pCi/g						
Radium-226		0.558	+/-0.109	0.0428	+/-0.109	0.0901	pCi/g						
Silver-108m	U	0.0131	+/-0.022	0.0204	+/-0.022	0.0427	pCi/g						
Thallium-208		0.247	+/-0.0581	0.0211	+/-0.0581	0.0447	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.00839	+/-0.0152	0.014	+/-0.0152	0.0324	pCi/g		KSD1	09/28/06	0957	572301	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium		32.4	+/-8.92	5.77	+/-8.93	12.3	pCi/g		DFA1	09/27/06	1825	571884	6

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-003F
Sample ID: 172275003
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	-0.0626	+/-0.105	0.0892	+/-0.105	0.181	pCi/g		AXD2	09/25/06	1910	571880	7
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	-9.41	+/-37.1	26.5	+/-37.1	55.3	pCi/g		MXP1	09/28/06	1737	571874	8
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	2.54	+/-7.06	5.86	+/-7.06	12.1	pCi/g		MXP1	09/29/06	1842	571876	9
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.165	+/-0.222	0.183	+/-0.222	0.374	pCi/g		KXR1	10/02/06	1055	571877	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	09/21/06	1745	571421

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	94	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	99	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	95	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	92	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	68	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	70	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	63	(15%-125%)

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-003F
Sample ID: 172275003
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-004F	Project:	YANK01204
Sample ID:	172275004	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	13-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	14.4%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.863	+/-0.169	0.0462	+/-0.169	0.101	pCi/g		MJH1	10/03/06	0640	574335	1
Americium-241	U	-0.00206	+/-0.058	0.048	+/-0.058	0.0992	pCi/g						
Bismuth-212		0.377	+/-0.244	0.0985	+/-0.244	0.213	pCi/g						
Bismuth-214		0.646	+/-0.0986	0.0267	+/-0.0986	0.0568	pCi/g						
Cesium-134	U	0.0312	+/-0.0276	0.018	+/-0.0276	0.0384	pCi/g						
Cesium-137	U	-0.00126	+/-0.0161	0.0141	+/-0.0161	0.0301	pCi/g						
Cobalt-60	U	0.00622	+/-0.0174	0.0157	+/-0.0174	0.0344	pCi/g						
Europium-152	U	0.0205	+/-0.0405	0.0365	+/-0.0405	0.0767	pCi/g						
Europium-154	U	-0.00568	+/-0.0572	0.0491	+/-0.0572	0.106	pCi/g						
Europium-155	U	0.0483	+/-0.0558	0.0388	+/-0.0558	0.0804	pCi/g						
Lead-212		0.775	+/-0.0787	0.0259	+/-0.0787	0.0535	pCi/g						
Lead-214		0.667	+/-0.0933	0.0269	+/-0.0933	0.0566	pCi/g						
Manganese-54	U	-0.00358	+/-0.0178	0.015	+/-0.0178	0.0321	pCi/g						
Niobium-94	U	0.00439	+/-0.0152	0.0136	+/-0.0152	0.0289	pCi/g						
Potassium-40		11.9	+/-1.04	0.141	+/-1.04	0.312	pCi/g						
Radium-226		0.646	+/-0.0986	0.0267	+/-0.0986	0.0568	pCi/g						
Silver-108m	U	0.0023	+/-0.0131	0.0113	+/-0.0131	0.0241	pCi/g						
Thallium-208		0.264	+/-0.0477	0.0123	+/-0.0477	0.0265	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-004F
Sample ID: 172275004
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-005F	Project:	YANK01204
Sample ID:	172275005	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	14.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.678	+/-0.170	0.056	+/-0.170	0.121	pCi/g		MJH1	10/03/06	1051	574335	1
Americium-241	U	-0.0294	+/-0.0785	0.0727	+/-0.0785	0.150	pCi/g						
Bismuth-212		0.485	+/-0.254	0.137	+/-0.254	0.292	pCi/g						
Bismuth-214		0.598	+/-0.0828	0.0305	+/-0.0828	0.0647	pCi/g						
Cesium-134	U	0.0242	+/-0.0336	0.0214	+/-0.0336	0.0455	pCi/g						
Cesium-137	U	0.0187	+/-0.0195	0.0174	+/-0.0195	0.0369	pCi/g						
Cobalt-60	U	0.00172	+/-0.0209	0.018	+/-0.0209	0.0395	pCi/g						
Europium-152	U	0.00129	+/-0.0502	0.0443	+/-0.0502	0.093	pCi/g						
Europium-154	U	-0.0127	+/-0.0667	0.0559	+/-0.0667	0.121	pCi/g						
Europium-155	U	0.0208	+/-0.0552	0.0506	+/-0.0552	0.105	pCi/g						
Lead-212		0.747	+/-0.0649	0.0259	+/-0.0649	0.0539	pCi/g						
Lead-214		0.625	+/-0.0802	0.0331	+/-0.0802	0.0693	pCi/g						
Manganese-54	U	0.0177	+/-0.0212	0.0193	+/-0.0212	0.0411	pCi/g						
Niobium-94	U	-0.0084	+/-0.0177	0.0148	+/-0.0177	0.0316	pCi/g						
Potassium-40		12.1	+/-0.919	0.147	+/-0.919	0.330	pCi/g						
Radium-226		0.598	+/-0.0828	0.0305	+/-0.0828	0.0647	pCi/g						
Silver-108m	U	0.00158	+/-0.0174	0.0151	+/-0.0174	0.0319	pCi/g						
Thallium-208		0.237	+/-0.0404	0.0179	+/-0.0404	0.0378	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-005F
Sample ID: 172275005

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

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

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

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807–0000–006F	Project:	YANK01204
Sample ID:	172275006	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14–SEP–06		
Receive Date:	21–SEP–06		
Collector:	Client		
Moisture:	16.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		1.07	+/–0.186	0.0767	+/–0.186	0.164	pCi/g		MJH1	10/03/06	1049	574335	1
Americium–241	U	0.00123	+/–0.0301	0.0282	+/–0.0301	0.058	pCi/g						
Bismuth–212		0.559	+/–0.281	0.145	+/–0.281	0.311	pCi/g						
Bismuth–214		0.661	+/–0.101	0.0358	+/–0.101	0.0763	pCi/g						
Cesium–134	UI	0.00	+/–0.0326	0.027	+/–0.0326	0.0572	pCi/g						
Cesium–137	U	–0.00834	+/–0.0233	0.0194	+/–0.0233	0.0414	pCi/g						
Cobalt–60	U	–0.00223	+/–0.022	0.0184	+/–0.022	0.041	pCi/g						
Europium–152	U	–0.0377	+/–0.0521	0.045	+/–0.0521	0.0949	pCi/g						
Europium–154	U	0.0272	+/–0.072	0.0639	+/–0.072	0.139	pCi/g						
Europium–155	U	0.0135	+/–0.0507	0.0466	+/–0.0507	0.0962	pCi/g						
Lead–212		0.743	+/–0.0793	0.0384	+/–0.0793	0.079	pCi/g						
Lead–214		0.653	+/–0.0828	0.0328	+/–0.0828	0.0691	pCi/g						
Manganese–54	U	0.00649	+/–0.0239	0.0205	+/–0.0239	0.044	pCi/g						
Niobium–94	U	0.0181	+/–0.0214	0.0195	+/–0.0214	0.0414	pCi/g						
Potassium–40		12.9	+/–0.976	0.203	+/–0.976	0.448	pCi/g						
Radium–226		0.661	+/–0.101	0.0358	+/–0.101	0.0763	pCi/g						
Silver–108m	U	0.000501	+/–0.0181	0.016	+/–0.0181	0.034	pCi/g						
Thallium–208		0.274	+/–0.0451	0.0198	+/–0.0451	0.042	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-006F
Sample ID: 172275006

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

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

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

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-007F	Project:	YANK01204
Sample ID:	172275007	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	16.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		1.04	+/-0.231	0.0956	+/-0.231	0.204	pCi/g		MJH1	10/03/06	0942	574335	1
Americium-241	U	0.0164	+/-0.0391	0.0342	+/-0.0391	0.0705	pCi/g						
Bismuth-212		0.619	+/-0.380	0.209	+/-0.380	0.443	pCi/g						
Bismuth-214		0.704	+/-0.150	0.0501	+/-0.150	0.105	pCi/g						
Cesium-134	UI	0.00	+/-0.0551	0.035	+/-0.0551	0.0737	pCi/g						
Cesium-137	U	-0.0154	+/-0.0318	0.0259	+/-0.0318	0.055	pCi/g						
Cobalt-60	U	0.0125	+/-0.0307	0.0267	+/-0.0307	0.0582	pCi/g						
Europium-152	U	-0.026	+/-0.0732	0.0599	+/-0.0732	0.126	pCi/g						
Europium-154	U	0.0051	+/-0.100	0.0842	+/-0.100	0.181	pCi/g						
Europium-155	U	0.0526	+/-0.0654	0.0562	+/-0.0654	0.116	pCi/g						
Lead-212		0.771	+/-0.0987	0.0509	+/-0.0987	0.104	pCi/g						
Lead-214		0.915	+/-0.122	0.0416	+/-0.122	0.0874	pCi/g						
Manganese-54	U	-0.0344	+/-0.0384	0.0248	+/-0.0384	0.0529	pCi/g						
Niobium-94	U	0.0132	+/-0.031	0.0268	+/-0.031	0.0563	pCi/g						
Potassium-40		14.7	+/-1.13	0.236	+/-1.13	0.520	pCi/g						
Radium-226		0.704	+/-0.150	0.0501	+/-0.150	0.105	pCi/g						
Silver-108m	U	-0.0191	+/-0.0299	0.0221	+/-0.0299	0.0464	pCi/g						
Thallium-208		0.300	+/-0.0768	0.0242	+/-0.0768	0.0513	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	09/21/06	1745	571421

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 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-007F Project: YANK01204
Sample ID: 172275007 Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807–0000–008F	Project:	YANK01204
Sample ID:	172275008	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14–SEP–06		
Receive Date:	21–SEP–06		
Collector:	Client		
Moisture:	19%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium–241	U	0.0532	+/–0.0818	0.0254	+/–0.082	0.127	pCi/g		TC1	09/28/06	1156	572120	1
Curium–242	U	–0.00721	+/–0.0141	0.027	+/–0.0142	0.135	pCi/g						
Curium–243/244	U	–0.00679	+/–0.0133	0.0254	+/–0.0133	0.127	pCi/g						
Alphaspec Pu, Solid–ALL FSS													
Plutonium–238	U	0.0937	+/–0.131	0.0738	+/–0.131	0.218	pCi/g		TC1	09/28/06	1156	572121	2
Plutonium–239/240	U	0.00832	+/–0.079	0.0617	+/–0.079	0.194	pCi/g						
Liquid Scint Pu241, Solid–ALL FSS													
Plutonium–241	U	4.23	+/–8.60	7.03	+/–8.61	14.8	pCi/g		TC1	09/29/06	2246	572122	3
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.976	+/–0.198	0.0581	+/–0.198	0.125	pCi/g		MJH1	10/03/06	0943	574335	4
Americium–241	U	–0.0602	+/–0.0632	0.0478	+/–0.0632	0.099	pCi/g						
Bismuth–212		0.758	+/–0.285	0.106	+/–0.285	0.229	pCi/g						
Bismuth–214		0.583	+/–0.106	0.029	+/–0.106	0.0618	pCi/g						
Cesium–134	UI	0.00	+/–0.0311	0.0234	+/–0.0311	0.0495	pCi/g						
Cesium–137	U	–0.0136	+/–0.0191	0.0156	+/–0.0191	0.0335	pCi/g						
Cobalt–60	U	0.00942	+/–0.0186	0.0169	+/–0.0186	0.0373	pCi/g						
Europium–152	U	–0.0506	+/–0.0475	0.0375	+/–0.0475	0.0793	pCi/g						
Europium–154	U	0.0206	+/–0.0594	0.0529	+/–0.0594	0.115	pCi/g						
Europium–155	UI	0.00	+/–0.0721	0.0427	+/–0.0721	0.0885	pCi/g						
Lead–212		0.855	+/–0.088	0.0236	+/–0.088	0.0492	pCi/g						
Lead–214		0.640	+/–0.0941	0.0296	+/–0.0941	0.0623	pCi/g						
Manganese–54	U	0.0129	+/–0.0261	0.0148	+/–0.0261	0.0321	pCi/g						
Niobium–94	U	0.00328	+/–0.0155	0.0136	+/–0.0155	0.0293	pCi/g						
Potassium–40		15.0	+/–1.32	0.123	+/–1.32	0.282	pCi/g						
Radium–226		0.583	+/–0.106	0.029	+/–0.106	0.0618	pCi/g						
Silver–108m	U	0.0147	+/–0.016	0.0144	+/–0.016	0.0304	pCi/g						
Thallium–208		0.284	+/–0.0503	0.0148	+/–0.0503	0.0316	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.00217	+/–0.017	0.0139	+/–0.017	0.033	pCi/g		KSD1	09/28/06	0734	572301	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid–HTD2,ALL FSS													
Tritium		182	+/–16.1	6.41	+/–16.4	13.7	pCi/g		DFA1	09/27/06	1841	571884	6

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–008F
Sample ID: 172275008
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid All,FSS													
Carbon–14	U	–0.0464	+/–0.099	0.0838	+/–0.099	0.170	pCi/g		AXD2	09/25/06	2023	571880	7
Liquid Scint Fe55, Solid–ALL FSS													
Iron–55	U	0.774	+/–38.8	27.4	+/–38.8	57.2	pCi/g		MXP1	09/28/06	1753	571874	8
Liquid Scint Ni63, Solid–ALL FSS													
Nickel–63	U	–6.65	+/–7.14	6.17	+/–7.14	12.7	pCi/g		MXP1	09/29/06	1929	571876	9
Liquid Scint Tc99, Solid–ALL FSS													
Technetium–99	U	–0.0457	+/–0.214	0.180	+/–0.214	0.368	pCi/g		KXR1	10/02/06	1127	571877	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	09/21/06	1745	571421

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	94	(15%–125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid–ALL FS	91	(25%–125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid–ALL FSS	83	(25%–125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid–ALL FS	68	(15%–125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid–ALL FS	66	(25%–125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid–ALL FS	63	(15%–125%)

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-008F
Sample ID: 172275008
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-009F	Project:	YANK01204
Sample ID:	172275009	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	14%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		1.04	+/-0.248	0.0903	+/-0.248	0.180	pCi/g		MJH1	10/03/06	0953	574335	1
Americium-241	U	0.0151	+/-0.045	0.0347	+/-0.045	0.0694	pCi/g						
Bismuth-212	U	0.460	+/-0.476	0.232	+/-0.476	0.464	pCi/g						
Bismuth-214		0.642	+/-0.127	0.0505	+/-0.127	0.101	pCi/g						
Cesium-134	U	0.0541	+/-0.0521	0.0356	+/-0.0521	0.0711	pCi/g						
Cesium-137	U	0.033	+/-0.0399	0.0297	+/-0.0399	0.0593	pCi/g						
Cobalt-60	U	0.00639	+/-0.0403	0.034	+/-0.0403	0.0679	pCi/g						
Europium-152	U	-0.119	+/-0.112	0.055	+/-0.112	0.110	pCi/g						
Europium-154	U	-0.0098	+/-0.139	0.0974	+/-0.139	0.195	pCi/g						
Europium-155	U	0.0758	+/-0.0709	0.0579	+/-0.0709	0.116	pCi/g						
Lead-212		0.719	+/-0.126	0.0395	+/-0.126	0.079	pCi/g						
Lead-214		0.805	+/-0.131	0.0432	+/-0.131	0.0863	pCi/g						
Manganese-54	U	-0.00895	+/-0.0334	0.0278	+/-0.0334	0.0555	pCi/g						
Niobium-94	U	0.0464	+/-0.0345	0.0262	+/-0.0345	0.0525	pCi/g						
Potassium-40		12.8	+/-1.33	0.260	+/-1.33	0.520	pCi/g						
Radium-226		0.642	+/-0.127	0.0505	+/-0.127	0.101	pCi/g						
Silver-108m	U	-0.0253	+/-0.027	0.0212	+/-0.027	0.0424	pCi/g						
Thallium-208		0.269	+/-0.0623	0.030	+/-0.0623	0.0599	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-009F
Sample ID: 172275009

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

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807–0000–010F	Project:	YANK01204
Sample ID:	172275010	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14–SEP–06		
Receive Date:	21–SEP–06		
Collector:	Client		
Moisture:	13.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.946	+/–0.187	0.0607	+/–0.187	0.128	pCi/g		MJH1	10/03/06	1320	574335	1
Americium–241	U	0.0349	+/–0.117	0.0919	+/–0.117	0.188	pCi/g						
Bismuth–212		0.501	+/–0.253	0.106	+/–0.253	0.225	pCi/g						
Bismuth–214		0.503	+/–0.0831	0.0286	+/–0.0831	0.060	pCi/g						
Cesium–134	U	0.0333	+/–0.0331	0.020	+/–0.0331	0.0419	pCi/g						
Cesium–137		0.0286	+/–0.0217	0.0135	+/–0.0217	0.0285	pCi/g						
Cobalt–60	U	0.0223	+/–0.0188	0.0177	+/–0.0188	0.0379	pCi/g						
Europium–152	U	–0.00927	+/–0.0519	0.0385	+/–0.0519	0.0799	pCi/g						
Europium–154	U	–0.00156	+/–0.0563	0.0482	+/–0.0563	0.103	pCi/g						
Europium–155	U	0.0644	+/–0.0532	0.047	+/–0.0532	0.0963	pCi/g						
Lead–212		0.873	+/–0.0895	0.0217	+/–0.0895	0.0448	pCi/g						
Lead–214		0.606	+/–0.0895	0.0282	+/–0.0895	0.0586	pCi/g						
Manganese–54	U	0.0031	+/–0.0171	0.0147	+/–0.0171	0.0311	pCi/g						
Niobium–94	U	–0.00738	+/–0.0168	0.014	+/–0.0168	0.0295	pCi/g						
Potassium–40		12.7	+/–1.11	0.106	+/–1.11	0.238	pCi/g						
Radium–226		0.503	+/–0.0831	0.0286	+/–0.0831	0.060	pCi/g						
Silver–108m	U	–0.0152	+/–0.0167	0.0134	+/–0.0167	0.0279	pCi/g						
Thallium–208		0.271	+/–0.0478	0.0142	+/–0.0478	0.0299	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–010F
Sample ID: 172275010

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

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-011F	Project:	YANK01204
Sample ID:	172275011	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	16.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.999	+/-0.202	0.0658	+/-0.202	0.142	pCi/g		MJH1	10/03/06	1321	574335	1
Americium-241	U	-0.11	+/-0.0806	0.0678	+/-0.0806	0.139	pCi/g						
Bismuth-212		0.572	+/-0.334	0.149	+/-0.334	0.318	pCi/g						
Bismuth-214		0.604	+/-0.101	0.035	+/-0.101	0.0743	pCi/g						
Cesium-134	U	0.0109	+/-0.0337	0.0206	+/-0.0337	0.0441	pCi/g						
Cesium-137	U	-0.0232	+/-0.0224	0.0172	+/-0.0224	0.0368	pCi/g						
Cobalt-60	U	0.0312	+/-0.0237	0.0212	+/-0.0237	0.0462	pCi/g						
Europium-152	U	-0.0113	+/-0.0579	0.0501	+/-0.0579	0.105	pCi/g						
Europium-154	U	-0.0377	+/-0.0663	0.0526	+/-0.0663	0.116	pCi/g						
Europium-155	U	0.0637	+/-0.064	0.0574	+/-0.064	0.118	pCi/g						
Lead-212		0.892	+/-0.0934	0.0297	+/-0.0934	0.0615	pCi/g						
Lead-214		0.637	+/-0.099	0.0347	+/-0.099	0.0728	pCi/g						
Manganese-54	U	0.0212	+/-0.0239	0.0213	+/-0.0239	0.0452	pCi/g						
Niobium-94	U	0.0181	+/-0.0195	0.0175	+/-0.0195	0.0373	pCi/g						
Potassium-40		13.5	+/-1.18	0.137	+/-1.18	0.313	pCi/g						
Radium-226		0.604	+/-0.101	0.035	+/-0.101	0.0743	pCi/g						
Silver-108m	U	-0.00596	+/-0.0191	0.0162	+/-0.0191	0.0342	pCi/g						
Thallium-208		0.274	+/-0.0528	0.0187	+/-0.0528	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-011F
Sample ID: 172275011

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

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

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

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-012F	Project:	YANK01204
Sample ID:	172275012	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	16.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.909	+/-0.218	0.0682	+/-0.218	0.148	pCi/g		MJH1	10/03/06	1321	574335	1
Americium-241	U	-0.0317	+/-0.155	0.0882	+/-0.155	0.182	pCi/g						
Bismuth-212		0.593	+/-0.345	0.161	+/-0.345	0.343	pCi/g						
Bismuth-214		0.657	+/-0.0919	0.0403	+/-0.0919	0.0854	pCi/g						
Cesium-134	UI	0.00	+/-0.0345	0.0287	+/-0.0345	0.0606	pCi/g						
Cesium-137	U	0.0436	+/-0.0365	0.0224	+/-0.0365	0.0476	pCi/g						
Cobalt-60	U	-0.00429	+/-0.0219	0.0174	+/-0.0219	0.0392	pCi/g						
Europium-152	U	0.0138	+/-0.066	0.0562	+/-0.066	0.118	pCi/g						
Europium-154	U	-0.0425	+/-0.0811	0.0627	+/-0.0811	0.137	pCi/g						
Europium-155	U	0.0464	+/-0.0703	0.0638	+/-0.0703	0.132	pCi/g						
Lead-212		0.893	+/-0.0692	0.0314	+/-0.0692	0.0652	pCi/g						
Lead-214		0.700	+/-0.104	0.0397	+/-0.104	0.0832	pCi/g						
Manganese-54	U	0.041	+/-0.0265	0.0215	+/-0.0265	0.046	pCi/g						
Niobium-94	U	0.0269	+/-0.021	0.0187	+/-0.021	0.0399	pCi/g						
Potassium-40		13.9	+/-1.13	0.189	+/-1.13	0.421	pCi/g						
Radium-226		0.657	+/-0.0919	0.0403	+/-0.0919	0.0854	pCi/g						
Silver-108m	U	-0.00418	+/-0.026	0.0185	+/-0.026	0.0391	pCi/g						
Thallium-208		0.228	+/-0.0521	0.0214	+/-0.0521	0.0453	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	09/21/06	1745	571421

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 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–012F Project: YANK01204
Sample ID: 172275012 Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-012FS	Project:	YANK01204
Sample ID:	172275013	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	16.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.848	+/-0.206	0.0808	+/-0.206	0.174	pCi/g		MJH1	10/03/06	1321	574335	1
Americium-241	U	-0.00901	+/-0.0398	0.0344	+/-0.0398	0.0707	pCi/g						
Bismuth-212		0.794	+/-0.464	0.183	+/-0.464	0.390	pCi/g						
Bismuth-214		0.689	+/-0.120	0.045	+/-0.120	0.0951	pCi/g						
Cesium-134	U	0.0733	+/-0.0547	0.0352	+/-0.0547	0.0739	pCi/g						
Cesium-137	UI	0.00	+/-0.0737	0.0254	+/-0.0737	0.0537	pCi/g						
Cobalt-60	U	-0.0099	+/-0.0316	0.0255	+/-0.0316	0.0555	pCi/g						
Europium-152	U	0.0273	+/-0.0711	0.0612	+/-0.0711	0.128	pCi/g						
Europium-154	U	-0.0104	+/-0.099	0.0705	+/-0.099	0.153	pCi/g						
Europium-155	UI	0.00	+/-0.0984	0.0517	+/-0.0984	0.107	pCi/g						
Lead-212		0.737	+/-0.0899	0.0456	+/-0.0899	0.0937	pCi/g						
Lead-214		0.714	+/-0.104	0.0443	+/-0.104	0.0926	pCi/g						
Manganese-54	U	0.0221	+/-0.0316	0.0276	+/-0.0316	0.0585	pCi/g						
Niobium-94	U	0.0163	+/-0.0292	0.0256	+/-0.0292	0.0538	pCi/g						
Potassium-40		13.7	+/-1.14	0.234	+/-1.14	0.513	pCi/g						
Radium-226		0.689	+/-0.120	0.045	+/-0.120	0.0951	pCi/g						
Silver-108m	U	-0.0206	+/-0.0243	0.0205	+/-0.0243	0.0431	pCi/g						
Thallium-208		0.333	+/-0.0617	0.0233	+/-0.0617	0.0493	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–012FS
Sample ID: 172275013

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

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807–0000–013F	Project:	YANK01204
Sample ID:	172275014	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14–SEP–06		
Receive Date:	21–SEP–06		
Collector:	Client		
Moisture:	14.6%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium–241	U	0.0935	+/–0.132	0.0561	+/–0.133	0.210	pCi/g		TC1	09/28/06	1156	572120	1
Curium–242	U	0.00	+/–0.0752	0.00	+/–0.0752	0.104	pCi/g						
Curium–243/244	U	–0.026	+/–0.0294	0.0561	+/–0.0296	0.210	pCi/g						
Alphaspec Pu, Solid–ALL FSS													
Plutonium–238	U	0.0164	+/–0.110	0.0863	+/–0.110	0.242	pCi/g		TC1	09/28/06	1156	572121	2
Plutonium–239/240	U	–0.0719	+/–0.0894	0.103	+/–0.0897	0.276	pCi/g						
Liquid Scint Pu241, Solid–ALL FSS													
Plutonium–241	U	4.77	+/–8.34	6.78	+/–8.35	14.2	pCi/g		TC1	09/29/06	2302	572122	3
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		1.02	+/–0.172	0.0702	+/–0.172	0.153	pCi/g		MJH1	10/03/06	1322	574335	4
Americium–241	U	–0.0146	+/–0.0306	0.0251	+/–0.0306	0.0518	pCi/g						
Bismuth–212		0.755	+/–0.351	0.153	+/–0.351	0.329	pCi/g						
Bismuth–214		0.547	+/–0.111	0.0394	+/–0.111	0.0838	pCi/g						
Cesium–134	U	0.0516	+/–0.0574	0.0281	+/–0.0574	0.0597	pCi/g						
Cesium–137	U	–0.00251	+/–0.0261	0.0217	+/–0.0261	0.0463	pCi/g						
Cobalt–60	U	0.0212	+/–0.0288	0.0259	+/–0.0288	0.0566	pCi/g						
Europium–152	U	–0.017	+/–0.0579	0.0467	+/–0.0579	0.0986	pCi/g						
Europium–154	U	–0.0293	+/–0.0998	0.0684	+/–0.0998	0.150	pCi/g						
Europium–155	U	0.0349	+/–0.0463	0.0427	+/–0.0463	0.0886	pCi/g						
Lead–212		0.791	+/–0.0798	0.0376	+/–0.0798	0.0775	pCi/g						
Lead–214		0.703	+/–0.097	0.0344	+/–0.097	0.0726	pCi/g						
Manganese–54	U	0.0418	+/–0.0282	0.021	+/–0.0282	0.0451	pCi/g						
Niobium–94	U	0.00697	+/–0.0239	0.0204	+/–0.0239	0.0433	pCi/g						
Potassium–40		15.2	+/–1.17	0.176	+/–1.17	0.400	pCi/g						
Radium–226		0.547	+/–0.111	0.0394	+/–0.111	0.0838	pCi/g						
Silver–108m	U	–0.000887	+/–0.0188	0.0163	+/–0.0188	0.0347	pCi/g						
Thallium–208		0.322	+/–0.0575	0.019	+/–0.0575	0.0406	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.0134	+/–0.0211	0.0159	+/–0.0211	0.0368	pCi/g		KSD1	09/28/06	0734	572301	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid–HTD2,ALL FSS													
Tritium	U	3.43	+/–7.85	6.38	+/–7.85	13.6	pCi/g		DFA1	09/27/06	1858	571884	6

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–013F
Sample ID: 172275014
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid All,FSS													
Carbon–14	U	–0.115	+/–0.101	0.0866	+/–0.101	0.176	pCi/g		AXD2	09/25/06	2135	571880	7
Liquid Scint Fe55, Solid–ALL FSS													
Iron–55	U	–26.8	+/–36.1	26.4	+/–36.1	55.2	pCi/g		MXP1	09/28/06	1809	571874	8
Liquid Scint Ni63, Solid–ALL FSS													
Nickel–63	U	–3.05	+/–9.26	7.85	+/–9.26	16.2	pCi/g		MXP1	09/29/06	2015	571876	9
Liquid Scint Tc99, Solid–ALL FSS													
Technetium–99	U	0.153	+/–0.193	0.159	+/–0.193	0.324	pCi/g		KXR1	10/02/06	1159	571877	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	09/21/06	1745	571421

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	63	(15%–125%)
Plutonium–242	Alphaspec Pu, Solid–ALL FSS	93	(15%–125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid–ALL FS	100	(25%–125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid–ALL FSS	89	(25%–125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid–ALL FS	66	(15%–125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid–ALL FS	53	(25%–125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid–ALL FS	72	(15%–125%)

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–013F
Sample ID: 172275014
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-014F	Project:	YANK01204
Sample ID:	172275015	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	15%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.938	+/-0.203	0.0562	+/-0.203	0.123	pCi/g		MJH1	10/03/06	1322	574335	1
Americium-241	U	-0.00605	+/-0.0653	0.0549	+/-0.0653	0.114	pCi/g						
Bismuth-212		0.845	+/-0.285	0.119	+/-0.285	0.259	pCi/g						
Bismuth-214		0.584	+/-0.124	0.0344	+/-0.124	0.0732	pCi/g						
Cesium-134	UI	0.00	+/-0.0329	0.0263	+/-0.0329	0.0557	pCi/g						
Cesium-137	U	0.00818	+/-0.0237	0.0208	+/-0.0237	0.0441	pCi/g						
Cobalt-60	U	0.011	+/-0.0186	0.0163	+/-0.0186	0.0366	pCi/g						
Europium-152	U	-0.0249	+/-0.0482	0.0388	+/-0.0482	0.0825	pCi/g						
Europium-154	U	0.0465	+/-0.0658	0.0603	+/-0.0658	0.131	pCi/g						
Europium-155	U	0.0523	+/-0.0687	0.0453	+/-0.0687	0.0942	pCi/g						
Lead-212		0.950	+/-0.0975	0.0271	+/-0.0975	0.0565	pCi/g						
Lead-214		0.708	+/-0.109	0.0295	+/-0.109	0.0626	pCi/g						
Manganese-54	U	0.00474	+/-0.0277	0.0178	+/-0.0277	0.0383	pCi/g						
Niobium-94	U	0.0238	+/-0.0237	0.0166	+/-0.0237	0.0354	pCi/g						
Potassium-40		15.8	+/-1.38	0.128	+/-1.38	0.296	pCi/g						
Radium-226		0.584	+/-0.124	0.0344	+/-0.124	0.0732	pCi/g						
Silver-108m	U	-0.00146	+/-0.0178	0.0146	+/-0.0178	0.0311	pCi/g						
Thallium-208		0.307	+/-0.0526	0.0172	+/-0.0526	0.0368	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–014F
Sample ID: 172275015

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

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

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

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-015F	Project:	YANK01204
Sample ID:	172275016	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	11.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.702	+/-0.169	0.0373	+/-0.169	0.0864	pCi/g		MJH1	10/03/06	1323	574335	1
Americium-241	U	0.0258	+/-0.0299	0.0297	+/-0.0299	0.0611	pCi/g						
Bismuth-212		0.486	+/-0.316	0.148	+/-0.316	0.318	pCi/g						
Bismuth-214		0.491	+/-0.103	0.0345	+/-0.103	0.0739	pCi/g						
Cesium-134	U	0.0563	+/-0.048	0.027	+/-0.048	0.0573	pCi/g						
Cesium-137	U	0.0129	+/-0.0242	0.0219	+/-0.0242	0.0466	pCi/g						
Cobalt-60	U	0.00658	+/-0.0246	0.0216	+/-0.0246	0.0477	pCi/g						
Europium-152	U	-0.0298	+/-0.0474	0.0416	+/-0.0474	0.0883	pCi/g						
Europium-154	U	-0.0013	+/-0.0656	0.056	+/-0.0656	0.124	pCi/g						
Europium-155	U	0.0486	+/-0.0744	0.0449	+/-0.0744	0.0929	pCi/g						
Lead-212		0.686	+/-0.0571	0.0278	+/-0.0571	0.0578	pCi/g						
Lead-214		0.552	+/-0.082	0.0324	+/-0.082	0.0684	pCi/g						
Manganese-54	U	-0.00757	+/-0.028	0.0199	+/-0.028	0.0429	pCi/g						
Niobium-94	U	-0.000502	+/-0.0218	0.0187	+/-0.0218	0.040	pCi/g						
Potassium-40		11.8	+/-1.02	0.181	+/-1.02	0.408	pCi/g						
Radium-226		0.491	+/-0.103	0.0345	+/-0.103	0.0739	pCi/g						
Silver-108m	U	-0.00694	+/-0.0193	0.0169	+/-0.0193	0.0358	pCi/g						
Thallium-208		0.215	+/-0.0455	0.0192	+/-0.0455	0.0411	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	09/21/06	1745	571421

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 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–015F Project: YANK01204
Sample ID: 172275016 Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-016F	Project:	YANK01204
Sample ID:	172275017	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	15.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.803	+/-0.139	0.0499	+/-0.139	0.106	pCi/g		MJH1	10/03/06	1323	574335	1
Americium-241	U	-0.0807	+/-0.109	0.0814	+/-0.109	0.169	pCi/g						
Bismuth-212		0.705	+/-0.192	0.099	+/-0.192	0.211	pCi/g						
Bismuth-214		0.588	+/-0.0736	0.0279	+/-0.0736	0.0585	pCi/g						
Cesium-134	UI	0.00	+/-0.0229	0.0134	+/-0.0229	0.0287	pCi/g						
Cesium-137	U	0.00601	+/-0.0211	0.0157	+/-0.0211	0.0331	pCi/g						
Cobalt-60	U	-0.00939	+/-0.0171	0.0139	+/-0.0171	0.0302	pCi/g						
Europium-152	U	-0.0448	+/-0.0436	0.0367	+/-0.0436	0.0767	pCi/g						
Europium-154	U	0.0344	+/-0.0517	0.047	+/-0.0517	0.101	pCi/g						
Europium-155	U	-0.03	+/-0.0552	0.0492	+/-0.0552	0.102	pCi/g						
Lead-212		0.776	+/-0.0539	0.0231	+/-0.0539	0.0479	pCi/g						
Lead-214		0.679	+/-0.0763	0.0287	+/-0.0763	0.0599	pCi/g						
Manganese-54		0.0304	+/-0.0219	0.0132	+/-0.0219	0.0281	pCi/g						
Niobium-94	U	0.00961	+/-0.0156	0.0142	+/-0.0156	0.0298	pCi/g						
Potassium-40		14.1	+/-0.801	0.117	+/-0.801	0.258	pCi/g						
Radium-226		0.588	+/-0.0736	0.0279	+/-0.0736	0.0585	pCi/g						
Silver-108m	U	0.00385	+/-0.0144	0.0127	+/-0.0144	0.0267	pCi/g						
Thallium-208		0.264	+/-0.0388	0.0122	+/-0.0388	0.026	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–016F
Sample ID: 172275017

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

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-017F	Project:	YANK01204
Sample ID:	172275018	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	14.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.687	+/-0.127	0.0429	+/-0.127	0.0915	pCi/g		MJH1	10/03/06	1323	574335	1
Americium-241	U	0.0675	+/-0.0841	0.0478	+/-0.0841	0.0987	pCi/g						
Bismuth-212		0.582	+/-0.214	0.0884	+/-0.214	0.188	pCi/g						
Bismuth-214		0.537	+/-0.0692	0.0241	+/-0.0692	0.0506	pCi/g						
Cesium-134	UI	0.00	+/-0.0214	0.0165	+/-0.0214	0.0347	pCi/g						
Cesium-137		0.0334	+/-0.0292	0.0119	+/-0.0292	0.0253	pCi/g						
Cobalt-60	U	0.00613	+/-0.0115	0.0126	+/-0.0115	0.0272	pCi/g						
Europium-152	U	-0.011	+/-0.0452	0.0348	+/-0.0452	0.0725	pCi/g						
Europium-154	U	0.0334	+/-0.0437	0.0391	+/-0.0437	0.0839	pCi/g						
Europium-155	U	0.0628	+/-0.0471	0.0445	+/-0.0471	0.0916	pCi/g						
Lead-212		0.727	+/-0.0505	0.0214	+/-0.0505	0.0441	pCi/g						
Lead-214		0.545	+/-0.0642	0.0253	+/-0.0642	0.0527	pCi/g						
Manganese-54	U	0.0189	+/-0.0168	0.012	+/-0.0168	0.0256	pCi/g						
Niobium-94	U	0.00811	+/-0.0127	0.0117	+/-0.0127	0.0247	pCi/g						
Potassium-40		12.8	+/-0.696	0.0872	+/-0.696	0.195	pCi/g						
Radium-226		0.537	+/-0.0692	0.0241	+/-0.0692	0.0506	pCi/g						
Silver-108m	U	-0.00478	+/-0.0128	0.0109	+/-0.0128	0.0229	pCi/g						
Thallium-208		0.244	+/-0.0341	0.0115	+/-0.0341	0.0244	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-017F
Sample ID: 172275018
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-018F	Project:	YANK01204
Sample ID:	172275019	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	14.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.923	+/-0.174	0.068	+/-0.174	0.136	pCi/g		MJH1	10/03/06	1338	574335	1
Americium-241	U	0.0219	+/-0.0658	0.0546	+/-0.0658	0.109	pCi/g						
Bismuth-212		0.440	+/-0.270	0.126	+/-0.270	0.252	pCi/g						
Bismuth-214		0.464	+/-0.0854	0.0291	+/-0.0854	0.0582	pCi/g						
Cesium-134	U	0.0248	+/-0.0274	0.0208	+/-0.0274	0.0415	pCi/g						
Cesium-137	U	0.00239	+/-0.0186	0.016	+/-0.0186	0.032	pCi/g						
Cobalt-60	U	-0.00503	+/-0.0201	0.0164	+/-0.0201	0.0329	pCi/g						
Europium-152	U	-0.0649	+/-0.0619	0.0411	+/-0.0619	0.0821	pCi/g						
Europium-154	U	0.0374	+/-0.0633	0.0564	+/-0.0633	0.113	pCi/g						
Europium-155	U	0.0114	+/-0.0528	0.0483	+/-0.0528	0.0965	pCi/g						
Lead-212		0.691	+/-0.0767	0.0251	+/-0.0767	0.0501	pCi/g						
Lead-214		0.624	+/-0.0813	0.0297	+/-0.0813	0.0594	pCi/g						
Manganese-54	U	0.0193	+/-0.0205	0.0153	+/-0.0205	0.0305	pCi/g						
Niobium-94	U	0.00598	+/-0.0168	0.0153	+/-0.0168	0.0305	pCi/g						
Potassium-40		13.2	+/-1.11	0.152	+/-1.11	0.304	pCi/g						
Radium-226		0.464	+/-0.0854	0.0291	+/-0.0854	0.0582	pCi/g						
Silver-108m	U	0.00189	+/-0.0166	0.0147	+/-0.0166	0.0294	pCi/g						
Thallium-208		0.251	+/-0.0431	0.0153	+/-0.0431	0.0305	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	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–018F
Sample ID: 172275019
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-018FS	Project:	YANK01204
Sample ID:	172275020	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	14.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.691	+/-0.160	0.0638	+/-0.160	0.127	pCi/g		MJH1	10/03/06	1338	574335	1
Americium-241	U	0.000277	+/-0.0873	0.0698	+/-0.0873	0.140	pCi/g						
Bismuth-212		0.470	+/-0.304	0.135	+/-0.304	0.271	pCi/g						
Bismuth-214		0.547	+/-0.110	0.0369	+/-0.110	0.0738	pCi/g						
Cesium-134	U	0.0256	+/-0.0423	0.0229	+/-0.0423	0.0459	pCi/g						
Cesium-137	U	0.00688	+/-0.021	0.0183	+/-0.021	0.0366	pCi/g						
Cobalt-60	U	0.0011	+/-0.0226	0.0191	+/-0.0226	0.0383	pCi/g						
Europium-152	U	0.00634	+/-0.0716	0.0485	+/-0.0716	0.097	pCi/g						
Europium-154	U	-0.0402	+/-0.0712	0.0566	+/-0.0712	0.113	pCi/g						
Europium-155	U	-0.0112	+/-0.0615	0.0533	+/-0.0615	0.107	pCi/g						
Lead-212		0.799	+/-0.0923	0.0276	+/-0.0923	0.0553	pCi/g						
Lead-214		0.544	+/-0.102	0.0333	+/-0.102	0.0666	pCi/g						
Manganese-54	U	0.0253	+/-0.024	0.0201	+/-0.024	0.0402	pCi/g						
Niobium-94	U	-0.00717	+/-0.0195	0.016	+/-0.0195	0.0319	pCi/g						
Potassium-40		13.3	+/-1.21	0.138	+/-1.21	0.275	pCi/g						
Radium-226		0.547	+/-0.110	0.0369	+/-0.110	0.0738	pCi/g						
Silver-108m	U	0.000576	+/-0.0187	0.0163	+/-0.0187	0.0326	pCi/g						
Thallium-208		0.268	+/-0.0467	0.0177	+/-0.0467	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	JMB1	09/21/06	1745	571421

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–018FS
Sample ID: 172275020

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

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

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

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

Certificate of Analysis

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

Report Date: October 5, 2006

Client Sample ID:	9807-0000-019F	Project:	YANK01204
Sample ID:	172275021	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	16.4%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.781	+/-0.176	0.0467	+/-0.176	0.0998	pCi/g		MJH1	10/02/06	1140	574336	1
Americium-241	U	-0.0732	+/-0.111	0.0891	+/-0.111	0.183	pCi/g						
Bismuth-212		0.448	+/-0.205	0.114	+/-0.205	0.240	pCi/g						
Bismuth-214		0.550	+/-0.0849	0.0243	+/-0.0849	0.0514	pCi/g						
Cesium-134	UI	0.00	+/-0.0362	0.0187	+/-0.0362	0.0393	pCi/g						
Cesium-137	U	-0.000324	+/-0.0172	0.0152	+/-0.0172	0.032	pCi/g						
Cobalt-60	U	0.0165	+/-0.0175	0.0164	+/-0.0175	0.0353	pCi/g						
Europium-152	U	-0.00565	+/-0.0423	0.0372	+/-0.0423	0.0774	pCi/g						
Europium-154	U	0.0409	+/-0.0545	0.050	+/-0.0545	0.107	pCi/g						
Europium-155	U	0.0304	+/-0.0501	0.0458	+/-0.0501	0.094	pCi/g						
Lead-212		0.736	+/-0.0767	0.0221	+/-0.0767	0.0456	pCi/g						
Lead-214		0.535	+/-0.0837	0.0272	+/-0.0837	0.0566	pCi/g						
Manganese-54	U	0.0163	+/-0.0197	0.0146	+/-0.0197	0.031	pCi/g						
Niobium-94	U	0.0159	+/-0.0221	0.0155	+/-0.0221	0.0324	pCi/g						
Potassium-40		13.2	+/-1.16	0.128	+/-1.16	0.280	pCi/g						
Radium-226		0.550	+/-0.0849	0.0243	+/-0.0849	0.0514	pCi/g						
Silver-108m	U	0.0141	+/-0.0142	0.013	+/-0.0142	0.0272	pCi/g						
Thallium-208		0.280	+/-0.0459	0.0121	+/-0.0459	0.0257	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	09/21/06	1749	571423

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-019F
Sample ID: 172275021
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-020F	Project:	YANK01204
Sample ID:	172275022	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	15.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.903	+/-0.174	0.0588	+/-0.174	0.127	pCi/g		MJH1	10/02/06	1342	574336	1
Americium-241	U	0.0644	+/-0.0757	0.071	+/-0.0757	0.145	pCi/g						
Bismuth-212		0.768	+/-0.253	0.122	+/-0.253	0.262	pCi/g						
Bismuth-214		0.500	+/-0.0932	0.0321	+/-0.0932	0.068	pCi/g						
Cesium-134	UI	0.00	+/-0.0427	0.0229	+/-0.0427	0.0484	pCi/g						
Cesium-137	U	0.0353	+/-0.0213	0.0183	+/-0.0213	0.0388	pCi/g						
Cobalt-60	U	0.00823	+/-0.0247	0.019	+/-0.0247	0.0415	pCi/g						
Europium-152	U	0.00463	+/-0.0538	0.0479	+/-0.0538	0.100	pCi/g						
Europium-154	U	0.00445	+/-0.067	0.0576	+/-0.067	0.125	pCi/g						
Europium-155	U	0.0843	+/-0.0702	0.0481	+/-0.0702	0.0992	pCi/g						
Lead-212		0.904	+/-0.0912	0.0272	+/-0.0912	0.0563	pCi/g						
Lead-214		0.599	+/-0.0939	0.0341	+/-0.0939	0.0713	pCi/g						
Manganese-54	U	0.0201	+/-0.0415	0.0181	+/-0.0415	0.0385	pCi/g						
Niobium-94	U	0.0139	+/-0.0214	0.0168	+/-0.0214	0.0355	pCi/g						
Potassium-40		14.1	+/-1.21	0.156	+/-1.21	0.347	pCi/g						
Radium-226		0.500	+/-0.0932	0.0321	+/-0.0932	0.068	pCi/g						
Silver-108m	U	-0.0173	+/-0.0177	0.0144	+/-0.0177	0.0305	pCi/g						
Thallium-208		0.283	+/-0.0422	0.016	+/-0.0422	0.0339	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	09/21/06	1749	571423

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–020F
Sample ID: 172275022

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

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

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

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-021F	Project:	YANK01204
Sample ID:	172275023	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	14.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.804	+/-0.168	0.0754	+/-0.168	0.161	pCi/g		MJH1	10/02/06	1342	574336	1
Americium-241	U	0.00322	+/-0.0321	0.0295	+/-0.0321	0.0607	pCi/g						
Bismuth-212	U	0.341	+/-0.296	0.169	+/-0.296	0.357	pCi/g						
Bismuth-214		0.573	+/-0.0993	0.0365	+/-0.0993	0.0772	pCi/g						
Cesium-134	U	0.0536	+/-0.0434	0.0277	+/-0.0434	0.0582	pCi/g						
Cesium-137	UI	0.00	+/-0.0652	0.0212	+/-0.0652	0.0448	pCi/g						
Cobalt-60	U	-0.026	+/-0.0285	0.0219	+/-0.0285	0.0474	pCi/g						
Europium-152	U	0.0168	+/-0.0573	0.0505	+/-0.0573	0.106	pCi/g						
Europium-154	U	0.0284	+/-0.0712	0.0628	+/-0.0712	0.136	pCi/g						
Europium-155	UI	0.00	+/-0.0795	0.0449	+/-0.0795	0.0928	pCi/g						
Lead-212		0.605	+/-0.0705	0.0398	+/-0.0705	0.0817	pCi/g						
Lead-214		0.597	+/-0.0881	0.0356	+/-0.0881	0.0744	pCi/g						
Manganese-54	U	0.0308	+/-0.0275	0.0227	+/-0.0275	0.048	pCi/g						
Niobium-94	U	-0.0104	+/-0.021	0.0175	+/-0.021	0.0371	pCi/g						
Potassium-40		11.8	+/-1.02	0.189	+/-1.02	0.415	pCi/g						
Radium-226		0.573	+/-0.0993	0.0365	+/-0.0993	0.0772	pCi/g						
Silver-108m	U	0.00472	+/-0.0192	0.0176	+/-0.0192	0.0371	pCi/g						
Thallium-208		0.217	+/-0.0616	0.0209	+/-0.0616	0.044	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	09/21/06	1749	571423

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 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-021F Project: YANK01204
Sample ID: 172275023 Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807–0000–022F	Project:	YANK01204
Sample ID:	172275024	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14–SEP–06		
Receive Date:	21–SEP–06		
Collector:	Client		
Moisture:	12.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.768	+/–0.137	0.0508	+/–0.137	0.108	pCi/g		MJH1	10/02/06	1343	574336	1
Americium–241	U	0.040	+/–0.104	0.0846	+/–0.104	0.175	pCi/g						
Bismuth–212		0.533	+/–0.205	0.103	+/–0.205	0.219	pCi/g						
Bismuth–214		0.569	+/–0.0753	0.0272	+/–0.0753	0.0571	pCi/g						
Cesium–134	UI	0.00	+/–0.023	0.0168	+/–0.023	0.0355	pCi/g						
Cesium–137	U	0.0288	+/–0.0254	0.0144	+/–0.0254	0.0303	pCi/g						
Cobalt–60	U	0.0109	+/–0.0158	0.0145	+/–0.0158	0.0312	pCi/g						
Europium–152	U	–0.00332	+/–0.0447	0.0351	+/–0.0447	0.0734	pCi/g						
Europium–154	U	–0.0303	+/–0.0481	0.0393	+/–0.0481	0.0849	pCi/g						
Europium–155	U	0.0221	+/–0.0517	0.0485	+/–0.0517	0.100	pCi/g						
Lead–212		0.813	+/–0.0536	0.0216	+/–0.0536	0.0449	pCi/g						
Lead–214		0.604	+/–0.0652	0.025	+/–0.0652	0.0524	pCi/g						
Manganese–54	U	–0.0119	+/–0.0153	0.0125	+/–0.0153	0.0266	pCi/g						
Niobium–94	U	0.00375	+/–0.0147	0.0132	+/–0.0147	0.0277	pCi/g						
Potassium–40		13.8	+/–0.766	0.124	+/–0.766	0.271	pCi/g						
Radium–226		0.569	+/–0.0753	0.0272	+/–0.0753	0.0571	pCi/g						
Silver–108m	U	0.0117	+/–0.0139	0.0128	+/–0.0139	0.0267	pCi/g						
Thallium–208		0.257	+/–0.0386	0.0133	+/–0.0386	0.0279	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	09/21/06	1749	571423

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–022F
Sample ID: 172275024

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

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

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

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-023F	Project:	YANK01204
Sample ID:	172275025	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	14%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.672	+/-0.128	0.0409	+/-0.128	0.0868	pCi/g		MJH1	10/02/06	1343	574336	1
Americium-241	U	-0.00365	+/-0.0563	0.0487	+/-0.0563	0.100	pCi/g						
Bismuth-212		0.548	+/-0.201	0.0816	+/-0.201	0.173	pCi/g						
Bismuth-214		0.488	+/-0.0713	0.0212	+/-0.0713	0.0446	pCi/g						
Cesium-134	UI	0.00	+/-0.0277	0.0158	+/-0.0277	0.0331	pCi/g						
Cesium-137		0.0256	+/-0.0242	0.011	+/-0.0242	0.0233	pCi/g						
Cobalt-60	U	-0.00147	+/-0.0139	0.0115	+/-0.0139	0.0249	pCi/g						
Europium-152	U	-0.0189	+/-0.0344	0.0304	+/-0.0344	0.0634	pCi/g						
Europium-154	U	-0.0143	+/-0.0401	0.0326	+/-0.0401	0.0702	pCi/g						
Europium-155	U	0.0701	+/-0.0625	0.0379	+/-0.0625	0.078	pCi/g						
Lead-212		0.699	+/-0.0454	0.0228	+/-0.0454	0.0468	pCi/g						
Lead-214		0.564	+/-0.0661	0.0215	+/-0.0661	0.0448	pCi/g						
Manganese-54	U	0.0035	+/-0.0129	0.0116	+/-0.0129	0.0245	pCi/g						
Niobium-94	U	0.008	+/-0.0121	0.0113	+/-0.0121	0.0236	pCi/g						
Potassium-40		13.1	+/-0.645	0.074	+/-0.645	0.166	pCi/g						
Radium-226		0.488	+/-0.0713	0.0212	+/-0.0713	0.0446	pCi/g						
Silver-108m	U	-0.0015	+/-0.0115	0.0102	+/-0.0115	0.0213	pCi/g						
Thallium-208		0.214	+/-0.0277	0.0111	+/-0.0277	0.0233	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	09/21/06	1749	571423

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-023F
Sample ID: 172275025
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-024F	Project:	YANK01204
Sample ID:	172275026	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	16.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.755	+/-0.141	0.0509	+/-0.141	0.108	pCi/g		MJH1	10/02/06	1502	574336	1
Americium-241	U	-0.00337	+/-0.113	0.0931	+/-0.113	0.191	pCi/g						
Bismuth-212		0.520	+/-0.195	0.118	+/-0.195	0.248	pCi/g						
Bismuth-214		0.498	+/-0.074	0.0235	+/-0.074	0.0497	pCi/g						
Cesium-134	U	0.0263	+/-0.0258	0.0187	+/-0.0258	0.0393	pCi/g						
Cesium-137	U	0.0118	+/-0.0306	0.0149	+/-0.0306	0.0314	pCi/g						
Cobalt-60	U	0.00876	+/-0.0288	0.0171	+/-0.0288	0.0368	pCi/g						
Europium-152	U	-0.0197	+/-0.0448	0.0388	+/-0.0448	0.0806	pCi/g						
Europium-154	U	-0.035	+/-0.051	0.0415	+/-0.051	0.0899	pCi/g						
Europium-155	U	0.0896	+/-0.0847	0.0448	+/-0.0847	0.092	pCi/g						
Lead-212		0.679	+/-0.0775	0.025	+/-0.0775	0.0514	pCi/g						
Lead-214		0.518	+/-0.0749	0.0278	+/-0.0749	0.0578	pCi/g						
Manganese-54	U	0.0111	+/-0.0156	0.0152	+/-0.0156	0.0321	pCi/g						
Niobium-94	U	-0.00861	+/-0.015	0.0127	+/-0.015	0.0268	pCi/g						
Potassium-40		12.1	+/-1.08	0.158	+/-1.08	0.342	pCi/g						
Radium-226		0.498	+/-0.074	0.0235	+/-0.074	0.0497	pCi/g						
Silver-108m	U	-0.013	+/-0.0145	0.0119	+/-0.0145	0.025	pCi/g						
Thallium-208		0.282	+/-0.0417	0.0155	+/-0.0417	0.0325	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	09/21/06	1749	571423

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-024F
Sample ID: 172275026
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807–0000–024FS	Project:	YANK01204
Sample ID:	172275027	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18–SEP–06		
Receive Date:	21–SEP–06		
Collector:	Client		
Moisture:	16.9%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.888	+/–0.160	0.0592	+/–0.160	0.128	pCi/g		MJH1	10/02/06	1502	574336	1
Americium–241	U	–0.00511	+/–0.0266	0.0232	+/–0.0266	0.0477	pCi/g						
Bismuth–212		0.445	+/–0.344	0.127	+/–0.344	0.274	pCi/g						
Bismuth–214		0.652	+/–0.0902	0.0265	+/–0.0902	0.057	pCi/g						
Cesium–134	U	0.0396	+/–0.0287	0.0245	+/–0.0287	0.0519	pCi/g						
Cesium–137	U	0.00396	+/–0.0217	0.0188	+/–0.0217	0.040	pCi/g						
Cobalt–60	U	0.0056	+/–0.0266	0.0228	+/–0.0266	0.0494	pCi/g						
Europium–152	U	–0.00788	+/–0.0485	0.0406	+/–0.0485	0.0855	pCi/g						
Europium–154	U	–0.0118	+/–0.0725	0.0599	+/–0.0725	0.130	pCi/g						
Europium–155	U	0.0372	+/–0.0537	0.0381	+/–0.0537	0.0788	pCi/g						
Lead–212		0.809	+/–0.0568	0.0238	+/–0.0568	0.0495	pCi/g						
Lead–214		0.636	+/–0.0814	0.0266	+/–0.0814	0.0563	pCi/g						
Manganese–54	U	0.00309	+/–0.0214	0.0181	+/–0.0214	0.0388	pCi/g						
Niobium–94	U	0.0104	+/–0.0189	0.0168	+/–0.0189	0.0357	pCi/g						
Potassium–40		13.6	+/–0.935	0.154	+/–0.935	0.347	pCi/g						
Radium–226		0.652	+/–0.0902	0.0265	+/–0.0902	0.057	pCi/g						
Silver–108m	U	–0.00209	+/–0.016	0.0142	+/–0.016	0.030	pCi/g						
Thallium–208		0.287	+/–0.048	0.0166	+/–0.048	0.0354	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	09/21/06	1749	571423

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807-0000-024FS
Sample ID: 172275027

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

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

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

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-025F	Project:	YANK01204
Sample ID:	172275028	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		
Moisture:	17%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.575	+/-0.137	0.0443	+/-0.137	0.0963	pCi/g		MJH1	10/02/06	1502	574336	1
Americium-241	U	-0.000377	+/-0.0553	0.0502	+/-0.0553	0.104	pCi/g						
Bismuth-212		0.487	+/-0.229	0.0981	+/-0.229	0.211	pCi/g						
Bismuth-214		0.606	+/-0.0922	0.0315	+/-0.0922	0.0663	pCi/g						
Cesium-134	U	0.027	+/-0.0188	0.018	+/-0.0188	0.0382	pCi/g						
Cesium-137		3.50	+/-0.317	0.0156	+/-0.317	0.0332	pCi/g						
Cobalt-60		0.089	+/-0.0294	0.0116	+/-0.0294	0.0262	pCi/g						
Europium-152	U	-0.0197	+/-0.049	0.042	+/-0.049	0.0877	pCi/g						
Europium-154	U	-0.0211	+/-0.0462	0.038	+/-0.0462	0.0839	pCi/g						
Europium-155	U	0.0382	+/-0.0686	0.0412	+/-0.0686	0.0852	pCi/g						
Lead-212		0.583	+/-0.066	0.0234	+/-0.066	0.0484	pCi/g						
Lead-214		0.695	+/-0.107	0.0316	+/-0.107	0.0658	pCi/g						
Manganese-54	U	0.0169	+/-0.0161	0.015	+/-0.0161	0.0321	pCi/g						
Niobium-94	U	-0.00138	+/-0.0123	0.0107	+/-0.0123	0.0231	pCi/g						
Potassium-40		9.02	+/-0.922	0.121	+/-0.922	0.271	pCi/g						
Radium-226		0.606	+/-0.0922	0.0315	+/-0.0922	0.0663	pCi/g						
Silver-108m	U	-0.0159	+/-0.0205	0.0168	+/-0.0205	0.035	pCi/g						
Thallium-208		0.186	+/-0.0436	0.0154	+/-0.0436	0.0325	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	09/21/06	1749	571423

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
Report Date: October 5, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9807–0000–025F
Sample ID: 172275028
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

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

QUALITY CONTROL DATA

QC Summary

Report Date: October 5, 2006

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

East Hampton, Connecticut
Contact: Mr. Jack McCarthy

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 572120										
QC1201191304 172114001 DUP										
Americium-241	U	0.0864	U	0.0286	pCi/g	101		(0% - 100%)	TC1	09/28/06 11:56
	Uncert:	+/-0.105		+/-0.0554						
	TPU:	+/-0.106		+/-0.0555						
Curium-242	U	0.00	U	-0.0072	pCi/g	200		(0% - 100%)		
	Uncert:	+/-0.0553		+/-0.0141						
	TPU:	+/-0.0553		+/-0.0141						
Curium-243/244	U	0.0664	U	-0.00672	pCi/g	245		(0% - 100%)		
	Uncert:	+/-0.0911		+/-0.0132						
	TPU:	+/-0.0915		+/-0.0132						
QC1201191306 LCS										
Americium-241	11.4			12.6	pCi/g		111	(75%-125%)		
	Uncert:			+/-1.20						
	TPU:			+/-1.96						
Curium-242			U	0.0299	pCi/g					
	Uncert:			+/-0.0586						
	TPU:			+/-0.0588						
Curium-243/244	13.7			14.4	pCi/g		105	(75%-125%)		
	Uncert:			+/-1.28						
	TPU:			+/-2.18						
QC1201191303 MB										
Americium-241			U	0.00455	pCi/g					
	Uncert:			+/-0.0226						
	TPU:			+/-0.0227						
Curium-242			U	0.00	pCi/g					
	Uncert:			+/-0.0581						
	TPU:			+/-0.0581						
Curium-243/244			U	-0.0704	pCi/g					
	Uncert:			+/-0.0436						
	TPU:			+/-0.0445						
QC1201191305 172114001 MS										
Americium-241	12.0 U	0.0864		12.9	pCi/g		108	(75%-125%)		
	Uncert:	+/-0.105		+/-1.10						
	TPU:	+/-0.106		+/-1.85						
Curium-242	U	0.00	U	-0.0126	pCi/g					
	Uncert:	+/-0.0553		+/-0.0175						
	TPU:	+/-0.0553		+/-0.0175						
Curium-243/244	14.5 U	0.0664		14.4	pCi/g		99	(75%-125%)		
	Uncert:	+/-0.0911		+/-1.16						
	TPU:	+/-0.0915		+/-2.03						
Batch 572121										
QC1201191308 172114001 DUP										
Plutonium-238	U	0.102	U	0.0358	pCi/g	96		(0% - 100%)	TC1	09/28/06 11:56

QC Summary

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 572121										
	Uncert:	+/-0.0996		+/-0.0808						
	TPU:	+/-0.100		+/-0.0809						
Plutonium-239/240	U	0.062	U	-0.0313	pCi/g	608		(0% - 100%)		
	Uncert:	+/-0.077		+/-0.0909						
	TPU:	+/-0.0773		+/-0.091						
QC1201191310 LCS										
Plutonium-238			U	0.0404	pCi/g			(75%-125%)		
	Uncert:			+/-0.0758						
	TPU:			+/-0.0759						
Plutonium-239/240	10.5			11.2	pCi/g		107	(75%-125%)		
	Uncert:			+/-1.07						
	TPU:			+/-1.73						
QC1201191307 MB										
Plutonium-238			U	0.00363	pCi/g					09/28/06 11:56
	Uncert:			+/-0.114						
	TPU:			+/-0.114						
Plutonium-239/240			U	0.0618	pCi/g					
	Uncert:			+/-0.107						
	TPU:			+/-0.107						
QC1201191309 172114001 MS										
Plutonium-238	U	0.102	U	0.0976	pCi/g			(75%-125%)		09/28/06 11:56
	Uncert:	+/-0.0996		+/-0.102						
	TPU:	+/-0.100		+/-0.103						
Plutonium-239/240	11.1 U	0.062		11.9	pCi/g		107	(75%-125%)		
	Uncert:	+/-0.077		+/-1.09						
	TPU:	+/-0.0773		+/-1.79						
Batch 572122										
QC1201191312 172114001 DUP										
Plutonium-241	U	6.10	U	4.20	pCi/g	0		(0% - 100%)	TC1	09/29/06 23:34
	Uncert:	+/-8.99		+/-8.54						
	TPU:	+/-9.01		+/-8.55						
QC1201191314 LCS										
Plutonium-241	132			112	pCi/g		85	(75%-125%)		09/30/06 00:06
	Uncert:			+/-12.9						
	TPU:			+/-17.0						
QC1201191311 MB										
Plutonium-241			U	2.21	pCi/g					09/29/06 23:18
	Uncert:			+/-8.86						
	TPU:			+/-8.86						
QC1201191313 172114001 MS										
Plutonium-241	144 U	6.10		141	pCi/g		98	(75%-125%)		09/29/06 23:50
	Uncert:	+/-8.99		+/-14.2						
	TPU:	+/-9.01		+/-19.8						
Rad Gamma Spec										
Batch 574335										
QC1201196537 172275001 DUP										
Actinium-228		0.917		0.812	pCi/g	12		(0% - 100%)	MJH1	10/03/06 15:37
	Uncert:	+/-0.197		+/-0.158						
				+/-0.158						

QC Summary

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 574335											
	TPU:	+/-0.197									
Americium-241	U	0.0336	U	-0.0128	pCi/g	445		(0% - 100%)			
	Uncert:	+/-0.0304		+/-0.111							
	TPU:	+/-0.0304		+/-0.111							
Bismuth-212		0.332		0.683	pCi/g	69		(0% - 100%)			
	Uncert:	+/-0.297		+/-0.354							
	TPU:	+/-0.297		+/-0.354							
Bismuth-214		0.594		0.535	pCi/g	10		(0% - 100%)			
	Uncert:	+/-0.0918		+/-0.115							
	TPU:	+/-0.0918		+/-0.115							
Cesium-134	U	0.0178	UI	0.00	pCi/g	121		(0% - 100%)			
	Uncert:	+/-0.0337		+/-0.0427							
	TPU:	+/-0.0337		+/-0.0427							
Cesium-137	U	-0.00791	U	0.00068	pCi/g	238		(0% - 100%)			
	Uncert:	+/-0.0231		+/-0.026							
	TPU:	+/-0.0231		+/-0.026							
Cobalt-60	U	-0.032	U	0.0131	pCi/g	478		(0% - 100%)			
	Uncert:	+/-0.0272		+/-0.0256							
	TPU:	+/-0.0272		+/-0.0256							
Europium-152	U	0.00865	U	-0.0158	pCi/g	685		(0% - 100%)			
	Uncert:	+/-0.0526		+/-0.0636							
	TPU:	+/-0.0526		+/-0.0636							
Europium-154	U	-0.00226	U	-0.00675	pCi/g	100		(0% - 100%)			
	Uncert:	+/-0.0668		+/-0.0738							
	TPU:	+/-0.0668		+/-0.0738							
Europium-155	U	0.0769	U	0.0493	pCi/g	44		(0% - 100%)			
	Uncert:	+/-0.0755		+/-0.0876							
	TPU:	+/-0.0755		+/-0.0876							
Lead-212		0.826		0.826	pCi/g	0		(0% - 20%)			
	Uncert:	+/-0.0631		+/-0.0726							
	TPU:	+/-0.0631		+/-0.0726							
Lead-214		0.596		0.633	pCi/g	6		(0% - 20%)			
	Uncert:	+/-0.0873		+/-0.106							
	TPU:	+/-0.0873		+/-0.106							
Manganese-54	U	-0.00108	U	0.00343	pCi/g	384		(0% - 100%)			
	Uncert:	+/-0.0247		+/-0.0231							
	TPU:	+/-0.0247		+/-0.0231							
Niobium-94	U	-0.00289	U	0.00591	pCi/g	584		(0% - 100%)			
	Uncert:	+/-0.021		+/-0.0228							
	TPU:	+/-0.021		+/-0.0228							
Potassium-40		12.6		14.3	pCi/g	13		(0% - 20%)			
	Uncert:	+/-0.924		+/-1.11							
	TPU:	+/-0.924		+/-1.11							
Radium-226		0.594		0.535	pCi/g	10		(0% - 100%)			
	Uncert:	+/-0.0918		+/-0.115							
	TPU:	+/-0.0918		+/-0.115							
Silver-108m	U	0.00205	U	0.0158	pCi/g	154		(0% - 100%)			
	Uncert:	+/-0.0182		+/-0.0215							

QC Summary

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 574335										
	TPU:	+/-0.0182		+/-0.0215						
Thallium-208		0.288		0.314	pCi/g	9		(0% - 100%)		
	Uncert:	+/-0.0486		+/-0.0534						
	TPU:	+/-0.0486		+/-0.0534						
QC1201196538 LCS										
Actinium-228			U	-0.336	pCi/g					10/03/06 16:53
	Uncert:			+/-0.735						
	TPU:			+/-0.735						
Americium-241	23.4			24.1	pCi/g		103	(75%-125%)		
	Uncert:			+/-0.538						
	TPU:			+/-0.538						
Bismuth-212			U	-0.539	pCi/g					
	Uncert:			+/-1.04						
	TPU:			+/-1.04						
Bismuth-214			U	0.040	pCi/g					
	Uncert:			+/-0.261						
	TPU:			+/-0.261						
Cesium-134			U	0.0448	pCi/g					
	Uncert:			+/-0.159						
	TPU:			+/-0.159						
Cesium-137	9.56			10.6	pCi/g		110	(75%-125%)		
	Uncert:			+/-0.503						
	TPU:			+/-0.503						
Cobalt-60	14.4			15.0	pCi/g		104	(75%-125%)		
	Uncert:			+/-0.670						
	TPU:			+/-0.670						
Europium-152			U	0.0391	pCi/g					
	Uncert:			+/-0.272						
	TPU:			+/-0.272						
Europium-154			U	-0.103	pCi/g					
	Uncert:			+/-0.271						
	TPU:			+/-0.271						
Europium-155			U	-0.192	pCi/g					
	Uncert:			+/-0.281						
	TPU:			+/-0.281						
Lead-212			U	0.138	pCi/g					
	Uncert:			+/-0.155						
	TPU:			+/-0.155						
Lead-214			U	-0.0121	pCi/g					
	Uncert:			+/-0.202						
	TPU:			+/-0.202						
Manganese-54			U	-0.0546	pCi/g					
	Uncert:			+/-0.141						
	TPU:			+/-0.141						
Niobium-94			U	-0.0363	pCi/g					
	Uncert:			+/-0.124						
	TPU:			+/-0.124						
Potassium-40			U	0.981	pCi/g					

QC Summary

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 574335										
	Uncert:			+/-1.13						
	TPU:			+/-1.13						
Radium-226			U	0.040	pCi/g			(75%-125%)		
	Uncert:			+/-0.261						
	TPU:			+/-0.261						
Silver-108m			U	-0.0285	pCi/g					
	Uncert:			+/-0.111						
	TPU:			+/-0.111						
Thallium-208			U	-0.016	pCi/g					
	Uncert:			+/-0.114						
	TPU:			+/-0.114						
QC1201196536 MB										
Actinium-228			U	-0.00373	pCi/g					10/03/06 13:39
	Uncert:			+/-0.0552						
	TPU:			+/-0.0552						
Americium-241			U	0.00356	pCi/g					
	Uncert:			+/-0.0133						
	TPU:			+/-0.0133						
Bismuth-212			U	0.0546	pCi/g					
	Uncert:			+/-0.117						
	TPU:			+/-0.117						
Bismuth-214			U	0.0344	pCi/g					
	Uncert:			+/-0.0333						
	TPU:			+/-0.0333						
Cesium-134			U	0.00511	pCi/g					
	Uncert:			+/-0.0185						
	TPU:			+/-0.0185						
Cesium-137			U	-0.0066	pCi/g					
	Uncert:			+/-0.0168						
	TPU:			+/-0.0168						
Cobalt-60			U	-0.000135	pCi/g					
	Uncert:			+/-0.0192						
	TPU:			+/-0.0192						
Europium-152			U	0.0299	pCi/g					
	Uncert:			+/-0.0364						
	TPU:			+/-0.0364						
Europium-154			U	-0.00197	pCi/g					
	Uncert:			+/-0.0618						
	TPU:			+/-0.0618						
Europium-155			U	-0.00897	pCi/g					
	Uncert:			+/-0.0242						
	TPU:			+/-0.0242						
Lead-212			U	0.0427	pCi/g					
	Uncert:			+/-0.0416						
	TPU:			+/-0.0416						
Lead-214			U	0.023	pCi/g					
	Uncert:			+/-0.0276						
	TPU:			+/-0.0276						

QC Summary

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 574335										
Manganese-54			U	0.00276	pCi/g					
	Uncert:			+/-0.0147						
	TPU:			+/-0.0147						
Niobium-94			U	0.0082	pCi/g					
	Uncert:			+/-0.0143						
	TPU:			+/-0.0143						
Potassium-40			U	0.223	pCi/g					
	Uncert:			+/-0.193						
	TPU:			+/-0.193						
Radium-226			U	0.0344	pCi/g					
	Uncert:			+/-0.0333						
	TPU:			+/-0.0333						
Silver-108m			U	-0.000323	pCi/g					
	Uncert:			+/-0.0132						
	TPU:			+/-0.0132						
Thallium-208			U	0.00536	pCi/g					
	Uncert:			+/-0.0248						
	TPU:			+/-0.0248						
Batch 574336										
QC1201196540 172275028 DUP										
Actinium-228		0.575		0.630	pCi/g	9		(0% - 100%)	MJH1	10/03/06 06:14
	Uncert:	+/-0.137		+/-0.144						
	TPU:	+/-0.137		+/-0.144						
Americium-241	U	-0.000377	U	-0.000296	pCi/g	24		(0% - 100%)		
	Uncert:	+/-0.0553		+/-0.0229						
	TPU:	+/-0.0553		+/-0.0229						
Bismuth-212		0.487		0.548	pCi/g	12		(0% - 100%)		
	Uncert:	+/-0.229		+/-0.181						
	TPU:	+/-0.229		+/-0.181						
Bismuth-214		0.606		0.535	pCi/g	12		(0% - 100%)		
	Uncert:	+/-0.0922		+/-0.0773						
	TPU:	+/-0.0922		+/-0.0773						
Cesium-134	U	0.027	UI	0.00	pCi/g	72		(0% - 100%)		
	Uncert:	+/-0.0188		+/-0.0445						
	TPU:	+/-0.0188		+/-0.0445						
Cesium-137		3.50	U	0.0209	pCi/g	198*		(0%-20%)		
	Uncert:	+/-0.317		+/-0.0312						
	TPU:	+/-0.317		+/-0.0312						
Cobalt-60		0.089	U	0.00347	pCi/g	185		(0% - 100%)		
	Uncert:	+/-0.0294		+/-0.0186						
	TPU:	+/-0.0294		+/-0.0186						
Europium-152	U	-0.0197	U	-0.00689	pCi/g	96		(0% - 100%)		
	Uncert:	+/-0.049		+/-0.0417						
	TPU:	+/-0.049		+/-0.0417						
Europium-154	U	-0.0211	U	0.081	pCi/g	341		(0% - 100%)		
	Uncert:	+/-0.0462		+/-0.109						
	TPU:	+/-0.0462		+/-0.109						
Europium-155	U	0.0382	U	0.0429	pCi/g	12		(0% - 100%)		

QC Summary

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 574336										
	Uncert:	+/-0.0686		+/-0.047						
	TPU:	+/-0.0686		+/-0.047						
Lead-212		0.583		0.738	pCi/g	23*		(0% - 20%)		
	Uncert:	+/-0.066		+/-0.0492						
	TPU:	+/-0.066		+/-0.0492						
Lead-214		0.695		0.589	pCi/g	17		(0% - 20%)		
	Uncert:	+/-0.107		+/-0.0747						
	TPU:	+/-0.107		+/-0.0747						
Manganese-54	U	0.0169	U	0.0287	pCi/g	52		(0% - 100%)		
	Uncert:	+/-0.0161		+/-0.0174						
	TPU:	+/-0.0161		+/-0.0174						
Niobium-94	U	-0.00138	U	0.0073	pCi/g	293		(0% - 100%)		
	Uncert:	+/-0.0123		+/-0.0179						
	TPU:	+/-0.0123		+/-0.0179						
Potassium-40		9.02		12.2	pCi/g	30*		(0% - 20%)		
	Uncert:	+/-0.922		+/-0.876						
	TPU:	+/-0.922		+/-0.876						
Radium-226		0.606		0.535	pCi/g	12		(0% - 100%)		
	Uncert:	+/-0.0922		+/-0.0773						
	TPU:	+/-0.0922		+/-0.0773						
Silver-108m	U	-0.0159	U	0.0066	pCi/g	483		(0% - 100%)		
	Uncert:	+/-0.0205		+/-0.014						
	TPU:	+/-0.0205		+/-0.014						
Thallium-208		0.186		0.254	pCi/g	31		(0% - 100%)		
	Uncert:	+/-0.0436		+/-0.0405						
	TPU:	+/-0.0436		+/-0.0405						
QC1201196541 LCS										
Actinium-228			U	-0.000391	pCi/g					10/03/06 07:26
	Uncert:			+/-0.575						
	TPU:			+/-0.575						
Americium-241	23.4			25.5	pCi/g		109	(75%-125%)		
	Uncert:			+/-2.52						
	TPU:			+/-2.52						
Bismuth-212			U	-0.528	pCi/g					
	Uncert:			+/-0.989						
	TPU:			+/-0.989						
Bismuth-214			U	0.0129	pCi/g					
	Uncert:			+/-0.236						
	TPU:			+/-0.236						
Cesium-134			U	-0.0169	pCi/g					
	Uncert:			+/-0.145						
	TPU:			+/-0.145						
Cesium-137	9.56			10.1	pCi/g		106	(75%-125%)		
	Uncert:			+/-0.768						
	TPU:			+/-0.768						
Cobalt-60	14.3			14.6	pCi/g		102	(75%-125%)		
	Uncert:			+/-1.01						
	TPU:			+/-1.01						

QC Summary

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 574336											
Europium-152			U	-0.00861	pCi/g						
	Uncert:			+/-0.305							
	TPU:			+/-0.305							
Europium-154			U	0.382	pCi/g						
	Uncert:			+/-0.275							
	TPU:			+/-0.275							
Europium-155			U	-0.0392	pCi/g						
	Uncert:			+/-0.332							
	TPU:			+/-0.332							
Lead-212			U	-0.11	pCi/g						
	Uncert:			+/-0.163							
	TPU:			+/-0.163							
Lead-214			U	0.185	pCi/g						
	Uncert:			+/-0.234							
	TPU:			+/-0.234							
Manganese-54			U	-0.00693	pCi/g						
	Uncert:			+/-0.128							
	TPU:			+/-0.128							
Niobium-94			U	-0.0972	pCi/g						
	Uncert:			+/-0.118							
	TPU:			+/-0.118							
Potassium-40			U	0.676	pCi/g						
	Uncert:			+/-1.06							
	TPU:			+/-1.06							
Radium-226			U	0.0129	pCi/g			(75%-125%)			
	Uncert:			+/-0.236							
	TPU:			+/-0.236							
Silver-108m			U	-0.0142	pCi/g						
	Uncert:			+/-0.119							
	TPU:			+/-0.119							
Thallium-208			U	0.100	pCi/g						
	Uncert:			+/-0.123							
	TPU:			+/-0.123							
QC1201196539 MB											
Actinium-228			U	0.0435	pCi/g					10/03/06	06:13
	Uncert:			+/-0.091							
	TPU:			+/-0.091							
Americium-241			U	-0.0204	pCi/g						
	Uncert:			+/-0.055							
	TPU:			+/-0.055							
Bismuth-212			U	-0.00499	pCi/g						
	Uncert:			+/-0.109							
	TPU:			+/-0.109							
Bismuth-214			U	0.0577	pCi/g						
	Uncert:			+/-0.031							
	TPU:			+/-0.031							
Cesium-134			U	0.00937	pCi/g						
	Uncert:			+/-0.0158							

QC Summary

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 574336										
	TPU:			+/-0.0158						
Cesium-137			U	-0.00291	pCi/g					
	Uncert:			+/-0.0137						
	TPU:			+/-0.0137						
Cobalt-60			U	0.000491	pCi/g					
	Uncert:			+/-0.0155						
	TPU:			+/-0.0155						
Europium-152			U	-0.00472	pCi/g					
	Uncert:			+/-0.0376						
	TPU:			+/-0.0376						
Europium-154			U	0.00671	pCi/g					
	Uncert:			+/-0.0299						
	TPU:			+/-0.0299						
Europium-155			U	0.0139	pCi/g					
	Uncert:			+/-0.0336						
	TPU:			+/-0.0336						
Lead-212			U	0.0167	pCi/g					
	Uncert:			+/-0.0287						
	TPU:			+/-0.0287						
Lead-214			U	0.0536	pCi/g					
	Uncert:			+/-0.0433						
	TPU:			+/-0.0433						
Manganese-54			U	-0.00217	pCi/g					
	Uncert:			+/-0.0116						
	TPU:			+/-0.0116						
Niobium-94			U	0.0106	pCi/g					
	Uncert:			+/-0.0136						
	TPU:			+/-0.0136						
Potassium-40			U	0.0767	pCi/g					
	Uncert:			+/-0.436						
	TPU:			+/-0.436						
Radium-226			U	0.0577	pCi/g					
	Uncert:			+/-0.031						
	TPU:			+/-0.031						
Silver-108m			U	0.0117	pCi/g					
	Uncert:			+/-0.0122						
	TPU:			+/-0.0122						
Thallium-208			U	0.0111	pCi/g					
	Uncert:			+/-0.0142						
	TPU:			+/-0.0142						
Rad Gas Flow										
Batch 572301										
QC1201191724 172275003 DUP										
Strontium-90	U	-0.00839	U	0.00318	pCi/g	0		(0% - 100%)	KSD1	09/28/06 07:35
	Uncert:	+/-0.0152		+/-0.0168						
	TPU:	+/-0.0152		+/-0.0168						
QC1201191726 LCS										
Strontium-90	1.56			1.44	pCi/g		92	(75%-125%)		09/28/06 07:35

QC Summary

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 572301										
	Uncert:			+/-0.103						
	TPU:			+/-0.113						
QC1201191723 MB										
Strontium-90			U	-0.00844	pCi/g					09/28/06 07:34
	Uncert:			+/-0.0137						
	TPU:			+/-0.0137						
QC1201191725 172275003 MS										
Strontium-90	2.99 U	-0.00839		2.97	pCi/g		99	(75%-125%)		09/28/06 07:35
	Uncert:	+/-0.0152		+/-0.209						
	TPU:	+/-0.0152		+/-0.220						
Rad Liquid Scintillation										
Batch 571874										
QC1201190758 172275008 DUP										
Iron-55	U	0.774	U	-16.1	pCi/g	0		(0% - 100%)	MXP1	09/28/06 18:42
	Uncert:	+/-38.8		+/-34.9						
	TPU:	+/-38.8		+/-34.9						
QC1201190760 LCS										
Iron-55	693			549	pCi/g		79	(75%-125%)		09/28/06 19:14
	Uncert:			+/-53.2						
	TPU:			+/-65.2						
QC1201190757 MB										
Iron-55			U	0.248	pCi/g					09/28/06 18:26
	Uncert:			+/-31.9						
	TPU:			+/-31.9						
QC1201190759 172275008 MS										
Iron-55	712 U	0.774		595	pCi/g		84	(75%-125%)		09/28/06 18:58
	Uncert:	+/-38.8		+/-55.5						
	TPU:	+/-38.8		+/-68.7						
Batch 571876										
QC1201190768 172275014 DUP										
Nickel-63	U	-3.05	U	-6.06	pCi/g	0		(0% - 100%)	MXP1	09/29/06 21:48
	Uncert:	+/-9.26		+/-6.04						
	TPU:	+/-9.26		+/-6.04						
QC1201190770 LCS										
Nickel-63	573			461	pCi/g		80	(75%-125%)		09/29/06 23:21
	Uncert:			+/-14.5						
	TPU:			+/-21.3						
QC1201190767 MB										
Nickel-63			U	-1.34	pCi/g					09/29/06 21:01
	Uncert:			+/-6.42						
	TPU:			+/-6.42						
QC1201190769 172275014 MS										
Nickel-63	575 U	-3.05		546	pCi/g		95	(75%-125%)		09/29/06 22:34
	Uncert:	+/-9.26		+/-16.4						
	TPU:	+/-9.26		+/-24.7						
Batch 571877										
QC1201190772 172275003 DUP										
Technetium-99	U	0.165	U	-0.0959	pCi/g	0		(0% - 100%)	KXR1	10/02/06 13:02

QC Summary

Workorder: 172275

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 571877										
	Uncert:	+/-0.222		+/-0.189						
	TPU:	+/-0.222		+/-0.189						
QC1201190774 LCS										
Technetium-99	13.1			12.6	pCi/g		96	(75%-125%)		10/02/06 14:05
	Uncert:			+/-0.360						
	TPU:			+/-0.480						
QC1201190771 MB										
Technetium-99			U	-0.0467	pCi/g					10/02/06 12:30
	Uncert:			+/-0.168						
	TPU:			+/-0.168						
QC1201190773 172275003 MS										
Technetium-99	12.4 U	0.165		11.6	pCi/g		94	(75%-125%)		10/02/06 13:33
	Uncert:	+/-0.222		+/-0.372						
	TPU:	+/-0.222		+/-0.474						
Batch 571880										
QC1201190784 172275003 DUP										
Carbon-14	U	-0.0626	U	-0.15	pCi/g	0		(0% - 100%)	AXD2	09/26/06 00:01
	Uncert:	+/-0.105		+/-0.103						
	TPU:	+/-0.105		+/-0.103						
QC1201190786 LCS										
Carbon-14	6.47			6.36	pCi/g		98	(75%-125%)		09/26/06 02:26
	Uncert:			+/-0.181						
	TPU:			+/-0.206						
QC1201190783 MB										
Carbon-14			U	-0.0559	pCi/g					09/25/06 22:48
	Uncert:			+/-0.0984						
	TPU:			+/-0.0984						
QC1201190785 172275003 MS										
Carbon-14	6.82 U	-0.0626		6.60	pCi/g		97	(75%-125%)		09/26/06 01:13
	Uncert:	+/-0.105		+/-0.190						
	TPU:	+/-0.105		+/-0.216						
Batch 571884										
QC1201190794 172275003 DUP										
Tritium		32.4		43.4	pCi/g	29		(0% - 100%)	DFA1	09/27/06 19:30
	Uncert:	+/-8.92		+/-9.76						
	TPU:	+/-8.93		+/-9.79						
QC1201190796 LCS										
Tritium	52.4			47.9	pCi/g		91	(75%-125%)		09/27/06 20:03
	Uncert:			+/-8.75						
	TPU:			+/-8.79						
QC1201190793 MB										
Tritium			U	-1.35	pCi/g					09/27/06 19:14
	Uncert:			+/-5.87						
	TPU:			+/-5.87						
QC1201190795 172275003 MS										
Tritium	52.5	32.4		88.6	pCi/g		107	(75%-125%)		09/27/06 19:47
	Uncert:	+/-8.92		+/-10.7						
	TPU:	+/-8.93		+/-10.8						

QC Summary

Workorder: 172275

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 acceptence criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

General Narrative

General Narrative
for
Connecticut Yankee Atomic Power Co.
Work Order: 173769
SDG: MSR#06-1282

October 16, 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 September 21, 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:

Laboratory Identification	Sample Description
173769001	9807-0000-002F
173769002	9807-0000-003F
173769003	9807-0000-006F
173769004	9807-0000-007F
173769005	9807-0000-008F
173769006	9807-0000-013F
173769007	9807-0000-014F

Items of Note
Jack McCarthy requested H3 analysis of the samples listed above via email on 10/10/06.

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

Seven soil samples were analyzed for Tritium.

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 16 October 2006

State	Certification
Alaska	UST-062
Arizona	AZ0668
Arkansas	88-0651
CLIA	42D0904046
California	01151CA
Colorado	GenEngLabs
Connecticut	PH-0169
Dept. of Navy	NFESC 413
EPA	WG-15J
Florida/NELAP	E87156
Georgia	E87156 (FL/NELAP)
Hawaii	N/A
Idaho	N/A
Illinois	200029
Indiana	C-SC-01
Kansas	E-10332
Kentucky	90129
Louisiana	03046
Maryland	270
Massachusetts	M-SC012
Michigan	9903
Nevada	SC12
New Jersey	SC002
New Mexico	FL NELAP E87156
New York	11501
North Carolina	233
North Carolina Drinking W	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania	68-00485
South Carolina	10120001/10585001/10120002
Tennessee	02934
Texas	TX213-2006A
Texas NELAP	T104704235-06-TX
U.S. Dept. of Agriculture	S-52597
US Army Corps of Engineer	N/A
Utah	8037697376 GEL
Vermont	VT87156
Virginia	00151
Washington	C1641

Chain of Custody and Supporting Documentation

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-568

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
ATT: Cheryl Jones (843-556-8171)

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.
Other:

Lab Use Only
Comments:
relog 173769
172275 1.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
9807-0000-001F	9/13/06	1417	TS	C	BP	X							
9807-0000-002F	9/13/06	1414	TS	C	BP	X							
9807-0000-003F	9/13/06	1507	TS	C	BP	X	X						
9807-0000-004F	9/13/06	1523	TS	C	BP	X							
9807-0000-005F	9/14/06	1055	TS	C	BP	X							
9807-0000-006F	9/14/06	1105	TS	C	BP	X							
9807-0000-007F	9/14/06	1305	TS	C	BP	X							
9807-0000-008F	9/14/06	1325	TS	C	BP		X						
9807-0000-009F	9/14/06	1345	TS	C	BP	X							
9807-0000-010F	9/14/06	1405	TS	C	BP	X							
9807-0000-011F	9/14/06	1430	TS	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1282 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Internal Container Temp.: 19 Deg. C
Custody Sealed? Y ☐ N ☒
Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	9/20/06 1300	K. Albright	9/21/06 0900
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

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

Chain of Custody Form

No. 2006-569

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
ATT: Cheryl Jones (843-556-8171)

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.
Other:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
9807-0000-0 12F	9-14-06	0810	TS	C	BP	X						TIME 0810	
9807-0000-0 12FS	9-14-06	0810	TS	C	BP	X						" 0810	
9807-0000-0 13F	9-14-06	[illegible]	TS	C	BP		X						
9807-0000-0 14F	9-18-06	0905	TS	C	BP	X							
9807-0000-0 15F	9-18-06	0910	TS	C	BP	X							
9807-0000-0 16F	9-18-06	0925	TS	C	BP	X							
9807-0000-0 17F	9-18-06	0940	TS	C	BP	X							
9807-0000-0 18F	9-18-06	1015	TS	C	BP	X							
9807-0000-0 18FS	9-18-06	1015	TS	C	BP	X							
9807-0000-0 19F	9-18-06	1058	TS	C	BP	X							
9807-0000-0 20F	9-18-06	1305	TS	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1282 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

1) Relinquished By	Date/Time	2) Received By	Date/Time
		K. Wright	9/21/06 0900
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

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

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

Lab Use Only
Comments:

7

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-570

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
ATT: Cheryl Jones (843-556-8171)

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.
Other:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL					Lab Use Only: Comment, Preservation	Lab Sample ID
9807-0000-021 F	9.15.06	1325	TS	C	BP	X							
~~9807-0000-0[illegible] F~~	~~9.14.06~~	~~1625~~	~~TS~~	~~C~~	~~BP~~	~~X~~		~~MM 9/19/06~~					
9807-0000-022 F [illegible]	9.14.06	1025	TS	C	BP	X							
9807-0000-023 F	9.15.06	1415	TS	C	BP	X							
9807-0000-024 F	9.15.06	1450	TS	C	BP	X							
9807-0000-024 FS	9.15.06	1450	TS	C	BP	X							
9807-0000-025 F	9.18.06	1530	TS	C	BP	X							

Comments:

NOTES: PO #: 002332 MSR #: 06-1282 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐
Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
		K. Albright	9/21/06 0905
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 9/21/06 0900

SDG#: MSR#06-1282

Work Order Number: 172275

Shipping Container ID: 792208640723 0712 Chain of Custody # 2006-568/569/570

One Fed ex # missing from cooler

1. Custody Seals on shipping container intact? Yes [ ] No [ ] NA
2. Custody Seals dated and signed? Yes [ ] No [ ] NA
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 19/20/19c
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] NA
6. Number of samples in shipping container: 28 total
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:

[X] tape	[ ] hazard labels
[X] custody seals	[X] appropriate sample labels

9. Samples are:

[X] in good condition	[ ] leaking
[ ] broken	[ ] have air bubbles

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

Sample Custodian/Laboratory: K. Leflight Date: 9/21/06

Telephoned to: On By

Subject: Prep for additional analysis (and reanalysis)
From: "John McCarthy" <McCarthy@CYAPCO.com>
Date: Tue, 10 Oct 2006 13:47:15 -0400
To: "Cheryl Jones" <cj@gel.com>
CC: "Clyde Newson" <Newson@CYAPCO.com>

Cheryl,

Would prep and analyses the following samples under MSR 0601282 for H-3:

9807-0000-002F
9807-0000-003F (REANALYSIS)
9807-0000-006F
9807-0000-007F
9807-0000-008F (REANALYSIS)
9807-0000-013F (REANALYSIS)
9807-0000-014F

TAT IS REQUESTED AT 7 DAYS. RDL IS REQUESTED AT 3 PCI/G (3.00E+00 PCI/G)

Thank you

Jack

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 173769

Method/Analysis Information

Product:	**LSC, Tritium Dist, Solid - 3 pCi/g**
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	578364

Sample ID	Client ID
173769001	9807-0000-002F
173769002	9807-0000-003F
173769003	9807-0000-006F
173769004	9807-0000-007F
173769005	9807-0000-008F
173769006	9807-0000-013F
173769007	9807-0000-014F
1201205181	Method Blank (MB)
1201205182	173770001(9106-0001-112F) Sample Duplicate (DUP)
1201205183	173770001(9106-0001-112F) Matrix Spike (MS)
1201205184	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: 173770001 (9106-0001-112F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

Additional Comments
The container ids were verified for samples 173769002 (9807-0000-003F) and 173769005 (9807-0000-008F).

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: A Fuller & C Cook 10/18/06

SAMPLE DATA SUMMARY

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

Certificate of Analysis Report
for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#06-1282 GEL Work Order: 173769

The Qualifiers in this report are defined as follows:

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

** Analyte is a surrogate compound

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

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

The above sample is reported on an "as received" basis.

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
Report Date: October 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807–0000–002F	Project:	YANK01204
Sample ID:	173769001	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	13–SEP–06		
Receive Date:	21–SEP–06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid – 3 pCi/g													
Tritium	U	0.231	+/–1.43	1.19	+/–1.43	2.55	pCi/g		DFA1	10/14/06	2310	578364	1

The following Analytical Methods were performed

Method	Description
1	EPA 906.0 Modified

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 an "as received" basis.

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-003F	Project:	YANK01204
Sample ID:	173769002	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	13-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid - 3 pCi/g													
Tritium	U	0.154	+/-1.28	1.07	+/-1.28	2.29	pCi/g		DFA1	10/14/06	2326	578364	1

The following Analytical Methods were performed

Method	Description
1	EPA 906.0 Modified

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 an "as received" basis.

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807–0000–006F	Project:	YANK01204
Sample ID:	173769003	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14–SEP–06		
Receive Date:	21–SEP–06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid – 3 pCi/g													
Tritium	U	0.0691	+/–1.64	1.37	+/–1.64	2.94	pCi/g		DFA1	10/14/06	2343	578364	1

The following Analytical Methods were performed

Method	Description
1	EPA 906.0 Modified

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 an "as received" basis.

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-007F	Project:	YANK01204
Sample ID:	173769004	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid - 3 pCi/g													
Tritium	U	0.00	+/-1.24	1.04	+/-1.24	2.23	pCi/g		DFA1	10/14/06	2359	578364	1

The following Analytical Methods were performed

Method	Description
1	EPA 906.0 Modified

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 an "as received" basis.

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-008F	Project:	YANK01204
Sample ID:	173769005	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid – 3 pCi/g													
Tritium	U	0.575	+/-1.33	1.08	+/-1.33	2.31	pCi/g		DFA1	10/15/06	0015	578364	1

The following Analytical Methods were performed

Method	Description
1	EPA 906.0 Modified

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 an "as received" basis.

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807-0000-013F	Project:	YANK01204
Sample ID:	173769006	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	14-SEP-06		
Receive Date:	21-SEP-06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid - 3 pCi/g													
Tritium	U	-0.875	+/-1.21	1.07	+/-1.21	2.30	pCi/g		DFA1	10/15/06	0032	578364	1

The following Analytical Methods were performed

Method	Description
1	EPA 906.0 Modified

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 an "as received" basis.

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: October 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9807–0000–014F	Project:	YANK01204
Sample ID:	173769007	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	18–SEP–06		
Receive Date:	21–SEP–06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid – 3 pCi/g												
Tritium	U	-1.34	+/–1.28	1.16	+/–1.28	2.49	pCi/g		DFA1	10/15/06	0048	578364 1

The following Analytical Methods were performed

Method	Description
1	EPA 906.0 Modified

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 an "as received" basis.

QUALITY CONTROL DATA

QC Summary

Report Date: October 18, 2006
Page 1 of 2

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

East Hampton, Connecticut
Contact: Mr. Jack McCarthy

Workorder: 173769

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 578364										
QC1201205182 173770001 DUP										
Tritium	U	1.60	U	-1.29	pCi/g	0		(0% - 100%)	DFA1	10/15/06 02:10
	Uncert:	+/-5.76		+/-6.37						
	TPU:	+/-5.76		+/-6.37						
QC1201205184 LCS										
Tritium	10.4			9.95	pCi/g		96	(75%-125%)		10/15/06 02:42
	Uncert:			+/-1.86						
	TPU:			+/-1.86						
QC1201205181 MB										
Tritium			U	-0.187	pCi/g					10/15/06 01:53
	Uncert:			+/-1.17						
	TPU:			+/-1.17						
QC1201205183 173770001 MS										
Tritium	57.8 U	1.60		48.5	pCi/g		84	(75%-125%)		10/15/06 02:26
	Uncert:	+/-5.76		+/-9.94						
	TPU:	+/-5.76		+/-9.97						

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

QC Summary

Workorder: 173769

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

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

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

ATTACHMENT 3 (DQA RESULTS)

ATTACHMENT 3A (PRELIMINARY DATA REVIEW)

PRELIMINARY DATA REVIEW FORM

Survey Unit : 9807-0000
Survey Unit Name : Subsurface Area Associated with the Southwest Site Storage area
Classification : B
Survey Media : Soil
Type of Survey : Final Status Survey
Type of Measurement : Radionuclide Specific
Number of Measurements : 25

BASIC STATISTICAL QUANTITIES

	Cs-137
Target Level (pCi/g) :	5.38E+00
Minimum Value :	-2.76E-02
Maximum Value :	3.50E+00
Mean :	1.49E-01
Median :	8.18E-03
Standard Deviation :	6.98E-01

Reported Results

Sample Identification	Cs-137 Concentration (pCi/g)	Detect?	Fraction of Target Level
9807-0000-001F	-7.91E-03		-0.001
9807-0000-002F	-2.76E-02		-0.005
9807-0000-003F	4.02E-02	+	0.007
9807-0000-004F	-1.26E-03		0.000
9807-0000-005F	1.87E-02		0.003
9807-0000-006F	-8.34E-03		-0.002
9807-0000-007F	-1.54E-02		-0.003
9807-0000-008F	-1.36E-02		-0.003
9807-0000-009F	3.30E-02		0.006
9807-0000-010F	2.86E-02	+	0.005
9807-0000-011F	-2.32E-02		-0.004
9807-0000-012F	4.36E-02	+	0.008
9807-0000-013F	-2.51E-03		0.000
9807-0000-014F	8.18E-03		0.002
9807-0000-015F	1.29E-02		0.002
9807-0000-016F	6.01E-03		0.001
9807-0000-017F	3.34E-02	+	0.006
9807-0000-018F	2.39E-03		0.000
9807-0000-019F	-3.24E-04		0.000
9807-0000-020F	3.53E-02	+	0.007

Jack McCarthy 11/20/06
Submitted by/Date

PRELIMINARY DATA REVIEW FORM

Sample Identification	Reported Results Cs-137 Concentration (pCi/g)	Detect?	Fraction of Target Level
9807-0000-021F	0.00E+00		0.000
9807-0000-022F	2.88E-02	+	0.005
9807-0000-023F	2.56E-02	+	0.005
9807-0000-024F	1.18E-02		0.002
9807-0000-025F	3.50E+00	+	0.651

Jack W. Cusick 11/20/06

Submitted by/Date

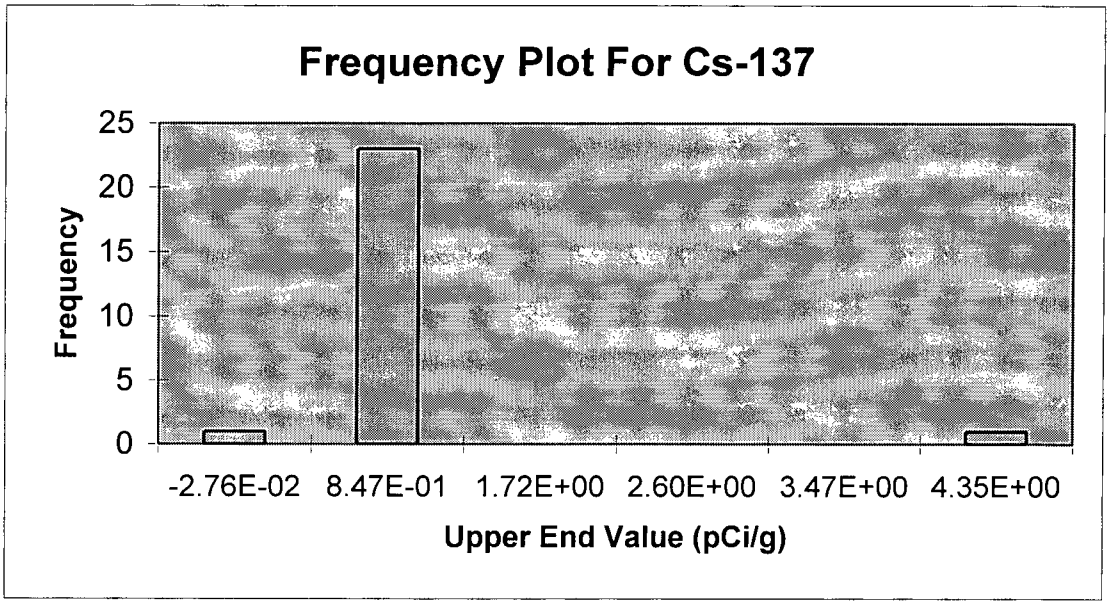
ATTACHMENT 3B (GRAPHICAL REPRESENTATION OF DATA)

FREQUENCY PLOT FOR CESIUM-137

Survey Unit: 9807-0000

Survey Unit Name: Subsurface Area Associated with the Southwest Site Storage Area

Mean: 1.49E-01 pCi/g



Upper End Value	Observation Frequency	Observation Frequency
-2.76E-02	1	4%
8.47E-01	23	92%
1.72E+00	0	0%
2.60E+00	0	0%
3.47E+00	0	0%
4.35E+00	1	4%
Total:	25	100%

Jack McCarthy 11/20/06
Submitted by/Date

11/21/06
Reviewed by/Date

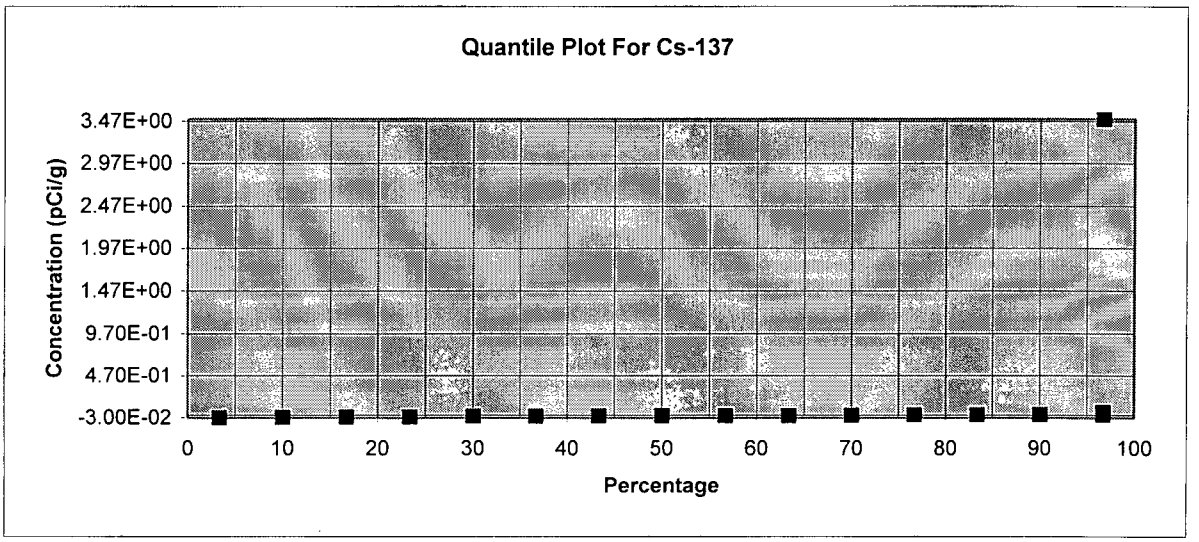
QUANTILE PLOT FOR CESIUM-137

Survey Unit: 9807-0000

Subsurface Area Associated with the

Survey Unit Name: Southwest Site Storage Area

Mean: 1.49E-01 pCi/g



Cs-137	Rank	Percentage
-2.76E-02	1	3%
-2.32E-02	2	10%
-1.54E-02	3	17%
-1.36E-02	4	23%
-8.34E-03	5	30%
-7.91E-03	6	37%
-2.51E-03	7	43%
-1.26E-03	8	50%
-3.24E-04	9	57%
0.00E+00	10	63%
2.39E-03	11	70%
6.01E-03	12	77%
8.18E-03	13	83%
1.18E-02	14	90%
1.29E-02	15	97%
1.87E-02	16	97%
2.56E-02	17	97%
2.86E-02	18	97%
2.88E-02	19	97%
3.30E-02	20	97%
3.34E-02	21	97%
3.53E-02	22	97%
4.02E-02	23	97%
4.36E-02	24	97%
3.50E+00	25	97%

Jack McCarthy 11/20/06

Submitted by/Date

11/21/06

Reviewed by/Date

ATTACHMENT 3C (SIGN TEST)

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

Survey Area Number: 9807		
Survey Unit Number: 0000		
Survey Area Name: Subsurface Area associated with the Southwest Site Storage Area		
WPIR#: 2006-0038		
Classification: B	Type I (α error): 0.05	(N): 25
Radionuclide: Cs-137	DCGL: 5.38	
Results (pCi/g)	DCGL - Results	Sign
-7.91E-03	5.39E+00	1
-2.76E-02	5.41E+00	1
4.02E-02	5.34E+00	1
-1.26E-03	5.38E+00	1
1.87E-02	5.36E+00	1
-8.34E-03	5.39E+00	1
-1.54E-02	5.40E+00	1
-1.36E-02	5.39E+00	1
3.30E-02	5.35E+00	1
2.86E-02	5.35E+00	1
-2.32E-02	5.40E+00	1
4.36E-02	5.34E+00	1
-2.51E-03	5.38E+00	1
8.18E-03	5.37E+00	1
1.29E-02	5.37E+00	1
6.01E-03	5.37E+00	1
3.34E-02	5.35E+00	1
2.39E-03	5.38E+00	1
-3.24E-04	5.38E+00	1
3.53E-02	5.34E+00	1

Survey Area Number: 9807		
Survey Unit Number: 0000		
Survey Area Name: Subsurface Area associated with the Southwest Site Storage Area		
WPIR#: 2006-0038		
Classification: B	Type I (α error): 0.05	(N): 25
Radionuclide: Cs-137	DCGL: 5.38	
Results (pCi/g)	DCGL - Results	Sign
0.00E+00	5.38E+00	1
2.88E-02	5.35E+00	1
2.56E-02	5.35E+00	1
1.18E-02	5.37E+00	1
3.50E+00	1.88E+00	1
Number of positive differences (S+): 25		

Critical Value: 17 Survey Unit Meets Acceptance Criterion

Performed by: Joe McCarthy Date: 11/20/06

Independent Review by: [signature] Date: 11/21/06

ATTACHMENT 3D (QC SPLIT RESULTS)

Split Sample Assessment Form

Survey Area#: 9807	Survey Unit #: 0000	Survey Unit name: Subsurface Area Associated with the Southwest Site Storage Area
Sample Plan or WPIR#: 2005-0038		SML#: 9807-0000-012

Sample Description: Comparison of split samples collected from sample measurement location #12 and analyzed using gamma spectroscopy by off-site Vendor Laboratory. The standard sample was 9807-0000-0012F, the comparison sample was 9807-0000-012FS.

	STANDARD				COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
K-40	13.9	5.65E-1	25	0.75 – 1.33	13.7	5.70E-1	0.99	Y

Comments/Corrective Actions: Not enough Cs-137 to yield an acceptable Resolution

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

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:	Date	Reviewed By:	Date:
Jack McCarthy	11/20/06		11/21/06

Split Sample Assessment Form

Survey Area#: 9807	Survey Unit #: 0000	Survey Unit name: Subsurface Area Associated with the Southwest Site Storage Area
Sample Plan or WPIR#: 2005-0038		SML#: 9807-0000-018

Sample Description: Comparison of split samples collected from sample measurement location #18 and analyzed using gamma spectroscopy by off-site Vendor Laboratory. The standard sample was 9807-0000-018F, the comparison sample was 9807-0000-018FS.

	STANDARD				COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
K-40	13.2	5.55E-1	24	0.75 – 1.33	13.3	6.05E-1	1.00	Y

Comments/Corrective Actions: Not enough Cs-137 to yield an acceptable Resolution

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

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:	Date	Reviewed By:	Date:
Jock McCarthy	11/20/06		11/21/06

Split Sample Assessment Form

Survey Area#: 9807	Survey Unit #: 0000	Survey Unit name: Subsurface Area Associated with the Southwest Site Storage Area
Sample Plan or WPIR#: 2005-0038		SML#: 9807-0000-024

Sample Description: Comparison of split samples collected from sample measurement location #24 and analyzed using gamma spectroscopy by off-site Vendor Laboratory. The standard sample was 9807-0000-024F, the comparison sample was 9807-0000-024FS.

	STANDARD				COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
K-40	12.1	5.40E-1	22	0.75 – 1.33	13.6	4.68E-1	1.12	Y

Comments/Corrective Actions: Not enough Cs-137 to yield an acceptable Resolution

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

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:	Date	Reviewed By:	Date:
Jack McCarthy	11/20/06		11/21/06

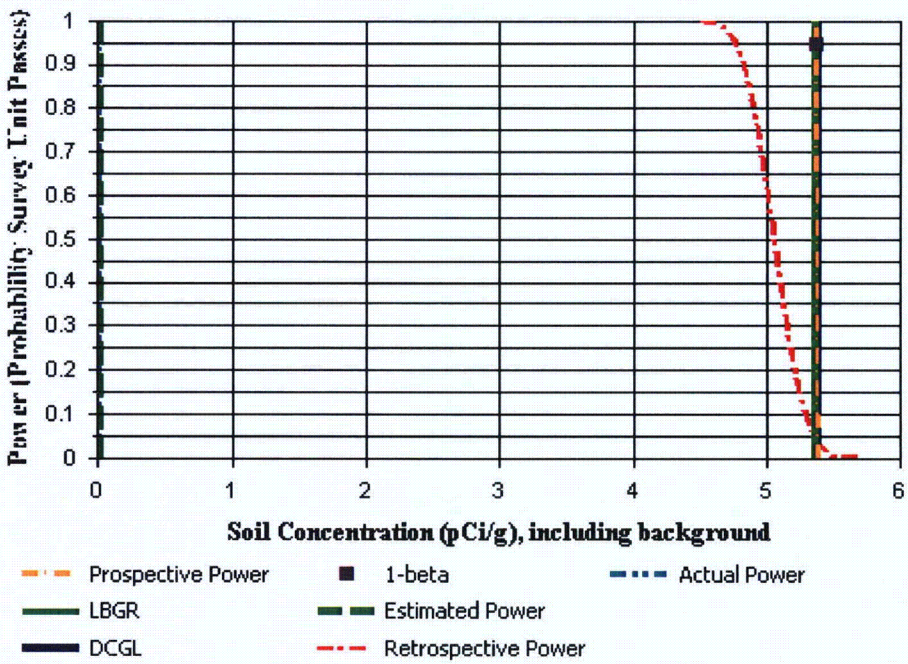
ATTACHMENT 3E (COMPASS DQA WITH POWER CURVE)

DQA Surface Soil Report

Assessment Summary

Site:	9807-0000 FSS		
Planner(s):	McCarthy 11/20/06		
Survey Unit Name:	Subsurface Area Associated with the Southwest Site		
Report Number:	1		
Survey Unit Samples:	25		
Reference Area Samples:	0		
Test Performed:	Sign	Test Result:	Not Performed
Judgmental Samples:	0	EMC Result:	Not Performed
Assessment Conclusion:	***Reject Null Hypothesis (Survey Unit PASSES)***		

Retrospective Power Curve



DQA Surface Soil Report

Survey Unit Data

NOTE: Type = "S" indicates survey unit sample.
Type = "R" indicates reference area sample.

Sample Number	Type	Cs-137 (pCi/g)
9807-0000-001F	S	-0.01
9807-0000-002F	S	-0.03
9807-0000-003F	S	0.04
9807-0000-004F	S	0
9807-0000-005F	S	0.02
9807-0000-006F	S	-0.01
9807-0000-007F	S	-0.02
9807-0000-008F	S	-0.01
9807-0000-009F	S	0.03
9807-0000-010F	S	0.03
9807-0000-011F	S	-0.02
9807-0000-012F	S	0.04
9807-0000-013F	S	0
9807-0000-014F	S	0.01
9807-0000-015F	S	0.01
9807-0000-016F	S	0.01
9807-0000-017F	S	0.03
9807-0000-018F	S	0
9807-0000-019F	S	0
9807-0000-020F	S	0.04
9807-0000-021F	S	0
9807-0000-022F	S	0.03
9807-0000-023F	S	0.03
9807-0000-024F	S	0.01
9807-0000-025F	S	3.5

Basic Statistical Quantities Summary

Statistic	Survey Unit	Background	DQO Results
Sample Number	25	N/A	N=15
Mean (pCi/g)	0.15	N/A	0.01
Median (pCi/g)	0.01	N/A	N/A
Std Dev (pCi/g)	0.70	N/A	0.00839
High Value (pCi/g)	3.50	N/A	N/A
Low Value (pCi/g)	-0.03	N/A	N/A