




Final Status Survey Final Report Phase IV


**Appendix A4
Survey Unit Release Record
9106-0004, Discharge Canal**

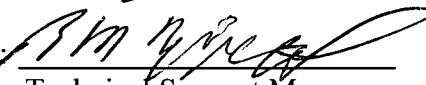
November 2006



CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
DISCHARGE CANAL
SURVEY UNIT 9106-0004

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DISCHARGE CANAL
SURVEY UNIT 9106-0004
RELEASE RECORD

TABLE OF CONTENTS

1. SURVEY UNIT DESCRIPTION	3
2. CLASSIFICATION BASIS	3
3. DATA QUALITY OBJECTIVES (DQO)	5
4. SURVEY DESIGN	8
5. SURVEY IMPLEMENTATION.....	11
6. SURVEY RESULTS.....	12
7. QUALITY CONTROL	14
8. INVESTIGATIONS AND RESULTS.....	14
9. REMEDIATION AND RESULTS.....	15
10. CHANGES FROM THE FINAL STATUS SURVEY PLAN	15
11. DATA QUALITY ASSESSMENT (DQA).....	15
12. ANOMALIES	16
13. CONCLUSION.....	16
14. ATTACHMENTS	167
14.1 Attachment 1 – Figures (6 pages including cover)	
14.2 Attachment 2 – Sample and Statistical Data (312 pages including covers)	

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

1. SURVEY UNIT DESCRIPTION

Survey Unit 9106-0004 (Discharge Canal) is designated as Final Status Survey (FSS) Class 2 and consists of approximately 9,900 m² (2.45 acres) of water covered sediment in an area located approximately 0.28 miles from the reference coordinate system benchmark used at the Haddam Neck Plant (HNP) (see Attachment 1, Figure 1). The Discharge Canal is a man-made mile long waterway that runs parallel to, and ultimately communicates with the Connecticut River. The Discharge Canal is subdivided into fifteen (15) survey units including two (2) permanent wetland areas for FSS purposes. The survey unit is bounded as follows: Discharge Canal Survey Unit 9106-0003 is to the north, (called north as orientated with the north to south flow of the Connecticut River), land surface area Survey Unit 9528-0005 is to the east, Discharge Canal Survey Unit 9106-0005 is to the south and land Surface Area 9520 is to the west. The survey unit comprises the canal sediments to the deeper of three feet or the original construction depth. It extends up the canal banks to the mean high water level.

The reference coordinates associated with this survey unit are E007 through E022 by S090 through S100 (refer to License Termination Plan Section 5.4.4). The reference coordinates provide the maximum dimensions of a rectangle containing this survey unit. Some areas contained in this rectangle may not be part of this survey unit. The boundary of the survey unit was defined using a Global Positioning System (GPS) based on the Connecticut State Plane System North American Datum (NAD) 1927.

2. CLASSIFICATION BASIS

The survey unit was classified in accordance with Procedure RPM 5.1-10, "Survey Unit Classification." The historical information, scoping analyses and characterization results provided sufficient data to designate Survey Unit 9106-0004 as Class 2 in May 2006.

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

- a) A review of the 10CFR50.75 (g) (1) database,
- b) A review of the "Initial Characterization Report" and the "Historic Site Assessment (HSA) Supplement,"
- c) Historic and current survey records review,
- d) Visual inspections and a "walkdown."
- e) Formal or informal interviews with cognizant personnel.

A review of the 10CFR50.75(g)(1) database report identified a number of events that may have impacted this survey unit. Several events indicated the potential for plant related contamination in the survey unit. These included a number of primary side system to secondary side system leakage events,

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

contamination found to be present in secondary side systems and components, and unmonitored spills that drained to the discharge canal. In 1986, samples were taken from the legacy dredge spoils removed in 1979 dredged spoils area and from recently dredged canal sediment. The sample analyses indicated that the concentrations of Cs-137, Co-60 and other radionuclides were a small fraction of the DCGLs for those nuclides that could be identified by gamma spectroscopy. (refer to NE-86-RA-1142 dated 11-13-86). None the available historical information reviewed would support a conclusion that any residual activity in this survey unit is likely to be present at concentrations greater than the respective DCGLs.

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

An initial characterization survey was implemented during April and May of 2004. Six (6) samples from three (3) coring locations were obtained by biased sampling throughout the area. The samples were analyzed off-site by gamma spectroscopy and with radiochemical analyses for Sr-90 and Tritium. Additional Hard-to-Detect (HTD) analyses were also conducted on one (1) of the six (6) samples.

For FSS, canal sediment sample collection methodology was achieved by producing one (1) thoroughly homogenized sample from each three (3) foot column of sediment obtained at each sampling location. However, the characterization sample collection process was performed in a slightly different manner that split the top six (6) inches of the column of sediment from the rest of the column of sediment and analyzed them separately. Additionally, only the top sample was analyzed for HTD nuclides. This process may have had the effect of high biasing the HTD sample results.

Based on the characterization data, the primary radionuclides of concern were determined to be Cesium-137, Cobalt-60 and Sr-90. Three (3) HTD nuclides (C-14, Ni-63 and Tc-99) were detected at slightly above the screening criteria but were deselected as radionuclides of concern because it is believed that the characterization data was high biased for HTDs and if the entire three (3) foot column of sediment was analyzed, the concentrations would have been below the screening criteria. Cobalt-60 accounted for the majority of the dose in these samples with a maximum concentration of 3.04 pCi/g.

A final Characterization was performed by Site Closure personnel in April and May of 2006 to obtain the necessary data of sufficient data quality for final status survey (FSS) planning purposes. A 3-foot core sediment sample was

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

taken from each of the six (6) locations identified. All of the samples were analyzed by gamma spectroscopy. Since five (5) of the six (6) initial characterization results tested positive for Sr-90, it was included as a nuclide of concern. No additional HTD testing was performed for characterization purposes. However, four (4) of the fifteen (15) FSS samples collected were tested for HTD nuclides. The purpose of the increased level of HTD sample analysis was to ensure that all radionuclides of concern, for this survey unit, were properly identified. The only plant-related, dose significant radionuclides identified in the samples were Cesium-137, Cobalt-60 and Sr-90 (refer to Table 1).

Table 1 – Basic Statistical Quantities for Cs-137, Co-60 and Sr-90 from the Characterization Survey			
Parameter	Cs-137 (pCi/g)	Co-60 (pCi/g)	Sr-90 (pCi/g)
Minimum Value:	-5.48E-03	-2.68E-03	1.43E-02
Maximum Value:	1.75E-01	5.59E-01	1.41E-01
Mean:	1.04E-01	2.18E-01	6.78E-02
Median:	1.20E-01	2.11E-01	6.77E-02
Standard Deviation:	6.76E-02	1.88E-01	4.25E-02
NOTE: The Operational DCGLs are 5.38 pCi/g for Cs-137, 2.59 pCi/g for Co-60 and 1.05 for Sr-90; these are used in conjunction with the unity rule to achieve 19 mrem/yr TEDE.			

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

The final designation was Class 2 based on historical information and the characterization survey data which provided sufficient data to conclude that FSS sample results will be less than the seventeen (17) mrem/yr Operational DCGL (refer to Section 3).

3. DATA QUALITY OBJECTIVES (DQO)

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

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

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

activity in the survey unit exceeded the release criteria. Rejection of the null hypothesis would satisfy the release criteria objective of the FSS.

The primary objective of the Final Status Survey Plan (FSSP) was to demonstrate that the level of residual radioactivity in Survey Unit 9106-0004 did not exceed the release criteria specified in the LTP and that the potential dose from residual radioactivity is As Low As Reasonably Achievable (ALARA).

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

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

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

Equation 1:

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

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

This survey unit is affected by existing groundwater (reference CY memo ISC 06-024). The dose contribution from existing groundwater was determined not exceed two (2) mrem/yr TEDE.

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

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

Equation 2:

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

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

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

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

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

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

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

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

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

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

Another important facet of the DQO process is to identify the radionuclides of concern and determine the concentration variability. The Radiological data that was used to support the DQO process was provided by the characterization surveys performed in 2004 and 2006, as discussed in Section 2. Cs-137, Co-60 and Sr-90 were found to be the predominate radionuclides of concern. The basic statistical quantities (i.e., mean, standard deviation, median) for Cs-137, Co-60 and Sr-90 are provided in Table 1.

As part of the DQOs applied to laboratory processes, analysis results were reported as actual calculated results. Results reported as less than Minimum

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

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*".

This survey was initially designed to 10 mrem/yr TEDE. At the time when the survey was designed, the dose contribution for existing and future groundwater had not yet been determined. Subsequently, a conservative value was chosen for the Operational DCGL. This approach is no longer required as the total dose from existing and future groundwater has been established. The dose for soil used for this survey unit to demonstrate compliance with the LTP criteria is seventeen (17) mrem/yr TEDE, as discussed in Section 2 of this Release Record.

The DQO process determined that Cs-137, Co-60 and Sr-90 were the radionuclides of concern (refer to Section 3). The sum of fractions, or unity rule, was used with the individual Operational DCGLs because multiple radionuclides (Cs-137, Co-60 and Sr-90) were considered in the survey design. A common practice is to surrogate Sr-90, a HTD nuclide, to Cs-137 or another ETD nuclide. However, Sr-90 concentrations in sediment and soil, of this survey unit, were ascertained by direct analysis.

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

The Sign Test was selected as the non-parametric statistical test to demonstrate that the null hypothesis was rejected. The use of the Sign Test did not require the selection or use of a background reference area, which simplified survey design and implementation. In addition, this approach is conservative since it includes background Cs-137 as part of the sample set.

The number of soil samples for FSS was determined in accordance with Procedure RPM 5.1-12, "*Determination of the Number of Samples for Final Status Survey*." The Lower Bound of the Gray Region (LBGR) was set in accordance with Procedure RPM 5.1-11 to 0.714 to maintain the relative shift (Δ/σ) in the range of 1 and 3. The resulting 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.

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

This indicates that the survey unit has a high probability of rejecting the null hypothesis, assuming that the characterization data are representative of the FSS results. Survey design specified fifteen (15) sediment core 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 2 area.

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

Table 3 - Sample Measurement Locations with Associated GPS Coordinates		
Designation	Northing	Easting
9106-0004-001F	235796.96	670148.53
9106-0004-002F	235796.96	670237.74
9106-0004-003F	235796.96	670326.96
9106-0004-004F	235796.96	670416.17
9106-0004-005F	235796.96	670505.39
9106-0004-006F	235796.96	670594.60
9106-0004-007F	235796.96	670683.81
9106-0004-008F	235719.70	670103.92
9106-0004-009F	235719.70	670193.14
9106-0004-010F	235719.70	670549.99
9106-0004-011F	235719.70	670639.21
9106-0004-012F	235719.70	670728.42
9106-0004-013F	235719.70	670817.63
9106-0004-014F	235642.44	670773.03
9106-0004-015F	235642.44	670862.24

Five (5) sediment samples were analyzed for the full suite of radionuclides specified in Table 1, exceeding the requirement to analyze 5% of the sample population for HTD analysis specified in procedure RPM 5.1-11.

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

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

“RAND” function. The number of quality control samples exceeded the 5% requirement.

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

Table 4 – Synopsis of the Survey Design ⁽¹⁾		
Feature	Design Criteria	Basis
Survey Unit Land Area	9,900 m ²	Based on AutoCAD-LT and Visual Sample Plan calculations
Number of Measurements	15	Type 1 and Type 2 errors were 0.05, sigma was 0.143 the LBGR was set to 0.714 to maintain Relative Shift in the range of 1 and 3, Relative Shift was 2.0
Grid Spacing	27.61 m	Based on triangular grid
Design DCGL	3.16 pCi/g Cs-137 1.52 pCi/g Co-60 0.62 pCi/g Sr-90	To achieve 10 mrem/yr TEDE
Operational DCGL	5.38 pCi/g Cs-137 2.59 pCi/g Co-60 1.05 pCi/g Sr-90	To achieve 17 mrem/yr TEDE ⁽²⁾ to demonstrate compliance with Equation 2 of this Release Record
Scan Coverage	N/A	The LTP exempts this area
Sediment Investigation Level	5.38 pCi/g Cs-137 2.59 pCi/g Co-60 1.05 pCi/g Sr-90	The Operational DCGL meets the LTP criteria for a Class 2 survey unit

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

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

5. SURVEY IMPLEMENTATION

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

Measurement locations were identified in North American Datum (NAD) 1927 coordinates that were supplied to the sampling vendor, Ocean Survey, Inc. (OSI) of Old Saybrook, Connecticut. Discharge Canal sampling was accomplished using direct push technology to collect composite samples of

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

bottom and mean high water mark sediments. Sediment cores from the Discharge Canal were obtained by OSI using a vibrating corer that is platform mounted on a sampling vessel. The core barrel was a three (3) inch diameter thin-walled aluminum tube, approximately ten (10) feet long, which also served as a core liner. A core catcher was available to prevent the sample from sliding out of the bottom of the tube. Vessel positioning and the determination of sample locations were accomplished using a GPS interfaced with a navigation and data logging system.

After extraction, water was drained by drilling holes above the sediment column which would constitute the sample. The liner was cut, capped, sealed, labeled and turned over from the Ocean Surveys, Inc. to site personnel who processed and controlled each sample with a Chain-of-Custody (COC). Rinsing of the barrel and associated equipment was performed between sampling events. New aluminum tubes were used for each sample to prevent cross-contamination of subsequent samples.

The fifteen (15) sediment samples were collected and packaged in accordance with Haddam Neck Plant (HNP) Procedure RPM 5.1-3, "*Collection of Sample Media for Final Status Survey*" and FSS design. Samples were controlled, transported, stored, and transferred to the off-site laboratory using COC protocols.

Five (5) samples (9106-0004-001F, 9106-0004-005F, 9106-0004-013F, 9106-0004-014F and 9106-0004-015F) were selected for HTD radionuclide analysis by the off-site laboratory.

The implementation of survey specific quality control measures included the collection of two (2) split samples at locations 9106-0004-004F and 9106-0004-010F for "split sample" analysis by the off-site laboratory.

6. SURVEY RESULTS

The off-site laboratory employed for the radiological analyses of samples was General Engineering Laboratories (GEL) – Charleston, South Carolina. The laboratory analyzed the fifteen (15) samples taken for non-parametric statistical testing and the associated duplicates using gamma spectroscopy. Sr-90 was analyzed by gas flow proportional counting. All analyses were performed to the required MDC.

Cesium-137 was identified in thirteen (13), Co-60 was identified in fourteen (14) and Sr-90 in two (2) of the fifteen (15) samples.

Additionally, C-14 was positively identified (i.e., a result greater than two (2) standard deviations uncertainty) in all five (5) samples analyzed for HTD radionuclides and could not be de-selected or excluded using the 5% and 10% rule described in Section 5.4.7.2 of the LTP. Several other radionuclides which

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

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

None of the samples exceeded the Operational DCGL. A summary of the sample results is provided in Table 5.

Table 5- Summary of Sediment Sample Results					
Sample Number	Cs-137 pCi/g	Co-60 pCi/g	Sr-90 pCi/g	Fraction of the Operational DCGL ⁽¹⁾	
				Nuclides of concern	Unity (Sign Test) ⁽²⁾
9106-0004-001F	4.510E-01	9.530E-01	6.330E-03	0.452	0.527
9106-0004-002F	1.710E-01	1.410E-01	-9.370E-05	0.086	0.147
9106-0004-003F	3.55E-01	9.45E-01	1.62E-02	0.431	0.507
9106-0004-004F	1.59E-01	2.63E-01	-7.59E-03	0.131	0.185
9106-0004-005F	3.99E-01	1.74E+00	5.86E-03	0.746	0.842
9106-0004-006F	1.12E-01	2.23E-01	1.01E-02	0.107	0.177
9106-0004-007F	-5.61E-03	1.16E-03	-6.09E-03	-0.001	0.055
9106-0004-008F	1.55E-01	2.56E-01	2.62E-02	0.128	0.214
9106-0004-009F	2.09E-02	0.00E+00	2.16E-02	0.004	0.085
9106-0004-010F	2.46E-03	7.39E-03	-1.75E-03	0.003	0.063
9106-0004-011F	2.12E-01	3.66E-01	9.13E-04	0.181	0.242
9106-0004-012F	1.59E-01	1.37E-01	-1.72E-03	0.082	0.142
9106-0004-013F	5.49E-01	1.81E+00	3.01E-03	0.801	0.873
9106-0004-014F	-7.91E-03	2.85E-02	8.27E-03	0.010	0.052
9106-0004-015F	3.77E-01	7.44E-01	-1.53E-03	0.357	0.396

(1) The Operational DCGLs from Table 2 are 5.38 pCi/g for Cs-137, 2.59 pCi/g for Co-60 and 1.05 for Sr-90; these are used in conjunction with the unity rule to achieve 17 mrem/yr TEDE

(2) This column is the sum of the DCGL unity fraction from identified radionuclides of concern and HTD isotope (C-14) exceeding the 5%/10% rule for one or more FSS samples. For those samples not measured for HTD isotopes, an average calculated value of 6.1% of the DCGL was added to each sample.

The off-site laboratory also processed five (5) 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. Five (5) of the HTD radionuclides met the accepted criteria for detection (i.e., a result greater than two standard deviations uncertainty) in more than one (1) sample. Each of the positive results for HTD radionuclides could be de-selected based on the 5% and 10% rules, except for C-14. These results are presented in Table 6.

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

Table 6-Hard-to-Detect Sample Results

Sample Number	C-14 pCi/g	Fraction of the Operational DCGL ⁽²⁾
9106-0004-001F	0.268	0.0696
9106-0004-005F	0.347	0.0902
9106-0004-013F	0.267	0.0694
9106-0004-014F	0.134	0.0348
9106-0004-015F	0.156	0.0405

(1) The Operational DCGL from Table 2 is 3.85 pCi/g for C-14.

A biased sample location called for in the sample plan the (sample point 9106-0004-016F was found to be located on dry land. This point was replaced with a randomly generated sample point 9106-0004-17F. For completeness this sample result is presented in the Table below.

Table 7- Additional Sample Result

Sample Number	Cs-137 pCi/g	Co-60 pCi/g	Sr-90 pCi/g	Fraction of the Operational DCGL ⁽¹⁾
9106-0004-017F	3.78E-01	2.94E-01	3.46E-02	0.184

(1) The Operational DCGLs from Table 2 are 5.38 pCi/g for Cs-137, 2.59 pCi/g for Co-60 and 1.05 pCi/g for Sr-90; these are used in conjunction with the unity rule to achieve 17 mrem/yr TEDE

7. QUALITY CONTROL

The off-site laboratory processed the split samples and performed gamma spectroscopy analysis. Two (2) 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 and as detailed in HNP Procedure RPM 5.1-24, "*Split Sample Assessment for Final Status Survey.*" For one of the split-sample comparisons, Co-60 was found to not meet the comparison criterion; however this nuclide may be present in particulate form which is not necessarily an indicator of a non-homogenous mixing of the soil matrix. K-40, a natural radioisotope, was found to be present at an acceptable level of agreement, so the comparison was deemed acceptable. There was acceptable agreement between the field split results for both of the "split sample" pairs tested.

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

8. INVESTIGATIONS AND RESULTS

Two (2) sample results were found to exceed the Design DCGL of ten (10) mrem/yr, but were below the seventeen (17) mrem/yr Operational DCGL, as specified in Table 4. Confirmatory samples were collected to determine the extent of contamination. The extent was bounded by taking four (4)

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

confirmatory samples, one in each compass direction, two (2) meters distant from the elevated sample location. The results are included in Table 8.

Table 8- Confirmatory Sample Results					
Original Sample Location	Sample Number (9106-0004)	Cs-137 $\mu\text{Ci/g}$	Co-60 $\mu\text{Ci/g}$	Sr-90 $\mu\text{Ci/g}$	Fraction of the Operational DCGL ⁽¹⁾
005F	005A	2.49E-01	6.82E-01	-2.62E-02	0.285
	005B	1.81E-01	7.10E-01	1.09E-02	0.318
	005C	1.13E-01	2.68E-01	8.20E-03	0.132
	005D	5.03E-01	1.72E+00	-3.22E-03	0.754
013F	013A	-1.13E-03	-5.69E-03	-3.31E-03	-0.006
	013B	8.31E-02	1.96E-01	2.21E-03	0.093
	013C	7.89E-02	7.40E-02	-1.57E-03	0.042
	013D	1.70E-01	5.66E-01	7.38E-03	0.257

(1) The Operational DCGLs from Table 2 are 5.38 $\mu\text{Ci/g}$ for Cs-137, 2.59 $\mu\text{Ci/g}$ for Co-60 and 1.05 $\mu\text{Ci/g}$ for Sr-90; these are used in conjunction with the unity rule to achieve seventeen (17) mrem/yr TEDE.

The confirmatory results demonstrate that no measurements exceed the 17 mrem/yr operational DCGL, indicating that no further actions are warranted.

9. REMEDIATION AND RESULTS

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

10. CHANGES FROM THE FINAL STATUS SURVEY PLAN

The survey was designed to ten (10) mrem/yr TEDE which was conservative and necessary at the time of FSS planning. It is no longer required as the total dose from existing and future groundwater has been established. The dose for soil used to demonstrate compliance with the LTP criteria is seventeen (17) mrem/yr TEDE as discussed in Section 2 of this Release Record.

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

11. DATA QUALITY ASSESSMENT (DQA)

The DQO sample design and data were reviewed in accordance with Procedure RPM 5.1-23, "*Data Quality Assessment*," 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 Sign Test shows that the survey unit passes FSS.

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

The preliminary data review consisted of calculating basic statistical quantities (e.g., mean, median, standard deviation). The sample standard deviation was slightly more than the value used for the survey design. This is represented by the shift in the retrospective power curve as shown in Attachment 2g. This would indicate a change to the original LBGR to maintain the number of samples at fifteen (15) to meet the Operational DCGL. However, the value of LBGR is less of a critical issue as the survey unit has passed the statistical test, and the mean and median values are well below the Operational DCGL when used in conjunction with the unity rule. Also, the retrospective power curve shows that a sufficient number of samples were collected to achieve the desired power. Therefore, the survey unit meets the release criteria with adequate power as required by the DQOs.

The range of the data, about 3.02 standard deviations, was not unusually large. The difference between the mean and median was 42.5% of the standard deviation which indicates some skewness in the data. The data was represented graphically through posting plots, a frequency plot, and a quantile plot. The frequency plot shows some positive skewness as confirmed by the calculated skew of 1.23.

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

12. ANOMALIES

The finding of C-14 in excess of the screening criteria was the only anomaly associated with the FSS of this survey unit. For conservatism, the C-14 results were factored into all statistical evaluations of the survey data for this survey unit accounting for any possible dose contributions. This action does not alter the conclusion that this survey unit meets the criteria for unconditional release.

13. CONCLUSION

Survey Unit 9106-0004 has met the final DQOs of the FSS. The ALARA criteria for soils as specified in Chapter 4 of the LTP were achieved. Elevated Measurement Comparison and remediation was not required.

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

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

The dose contribution from soil is 5.1 mrem/yr TEDE based on the average concentration of the samples used for non-parametric statistical sampling.

This survey unit is affected by existing groundwater (reference CY memo ISC 06-024 and the Final Status Survey Final Report Phase IV). It has been determined that the dose contribution from groundwater sources will not exceed two (2) mrem/yr TEDE.

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

The average total dose from residual radioactivity in this survey unit, including present ground water and sediment, will not exceed 7.1 mrem/yr Total Effective Dose Equivalent (TEDE).

14. ATTACHMENTS

14.1 Attachment 1 – Figures

14.2 Attachment 2 – Sample and Statistical Data

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

Attachment 1
Figures
(5 pages)

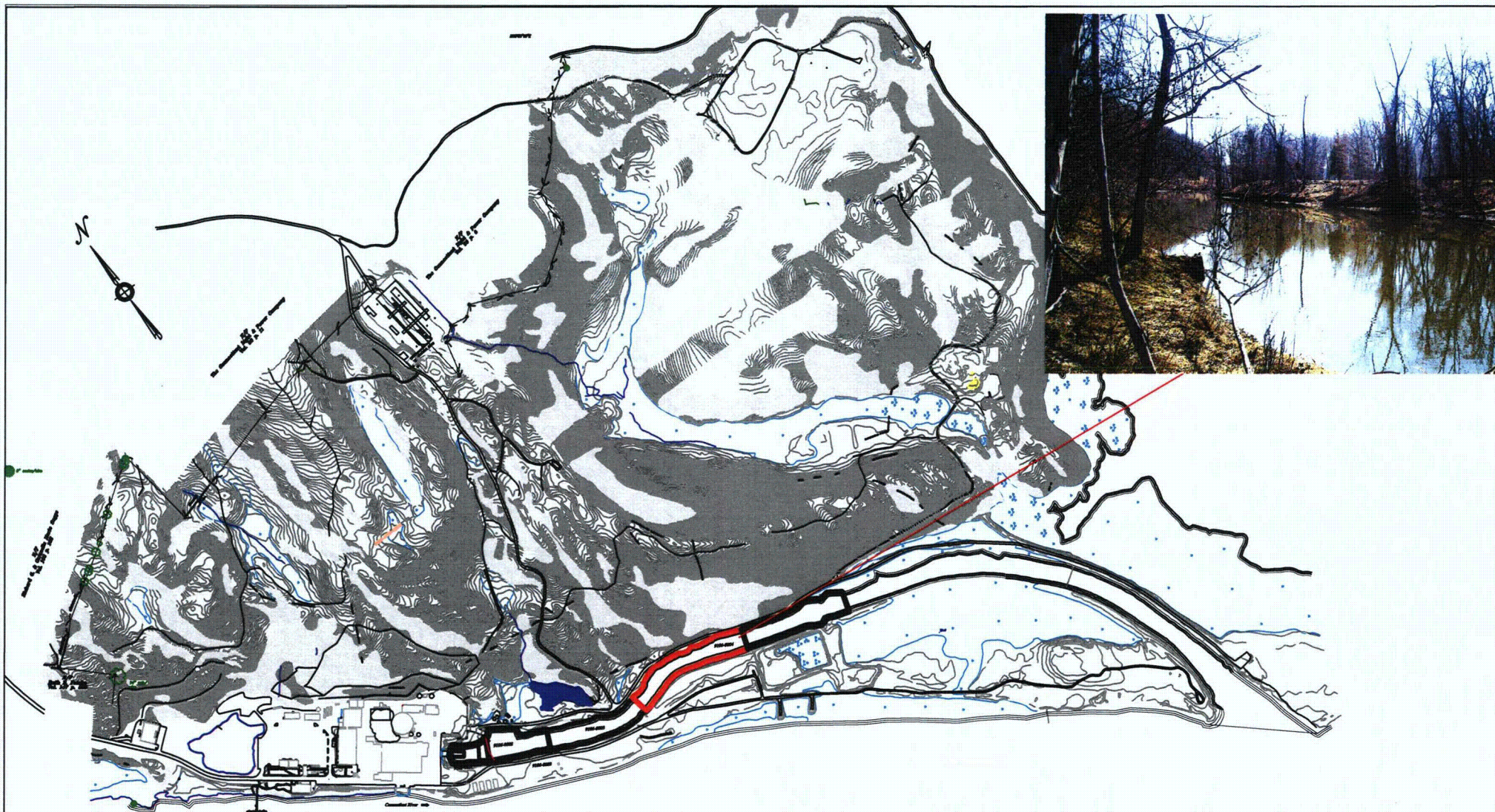


Figure 1

Connecticut Yankee Atomic Power Company
Site Map With Reference To Survey Unit 9106-0004

Date
October 2006

By
E. Sergent

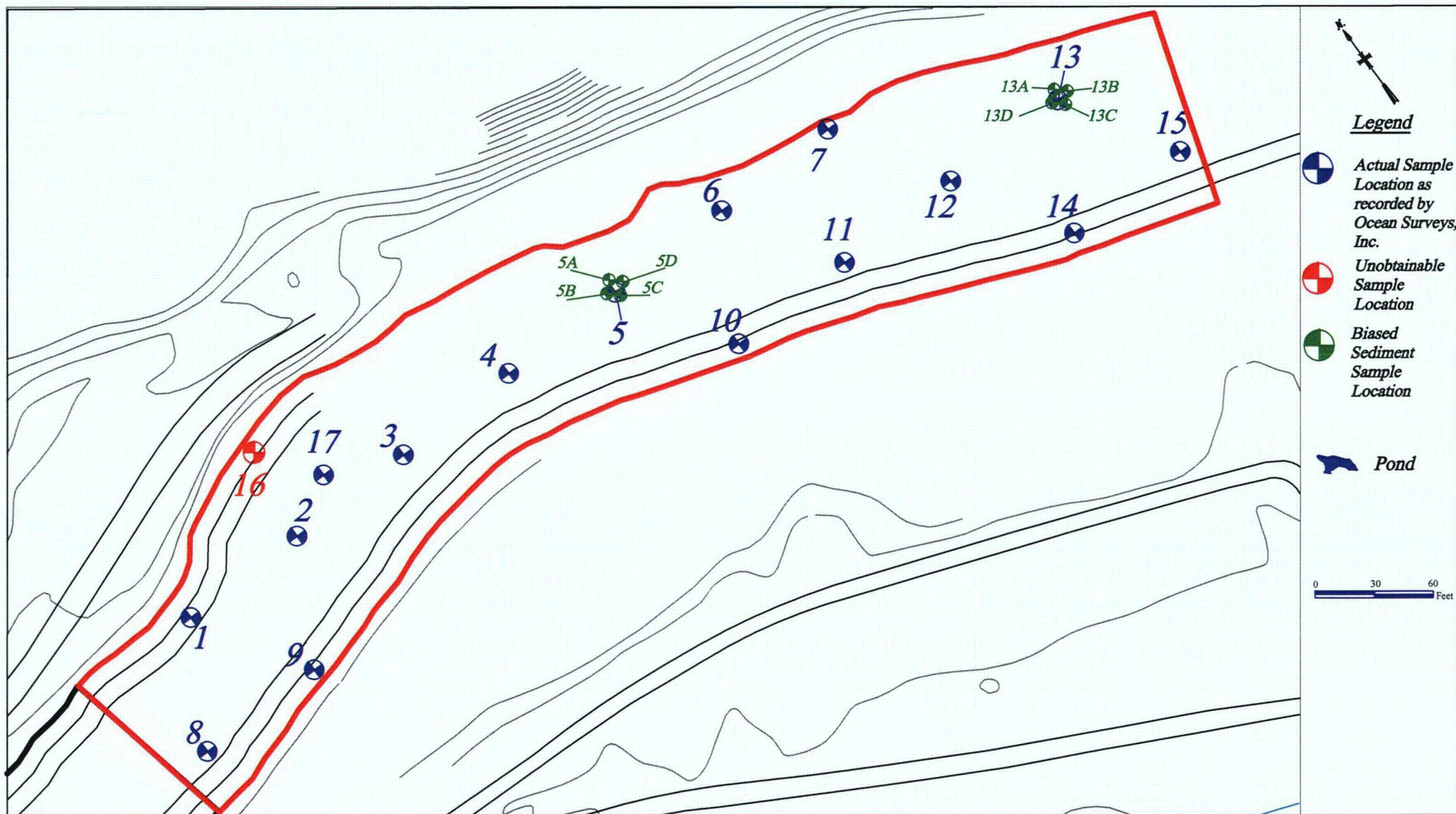


Figure 2

Connecticut Yankee Atomic Power Company
9106-0004 Final Status Survey Sample Locations

Date
October 2006

By
E. Sergeant

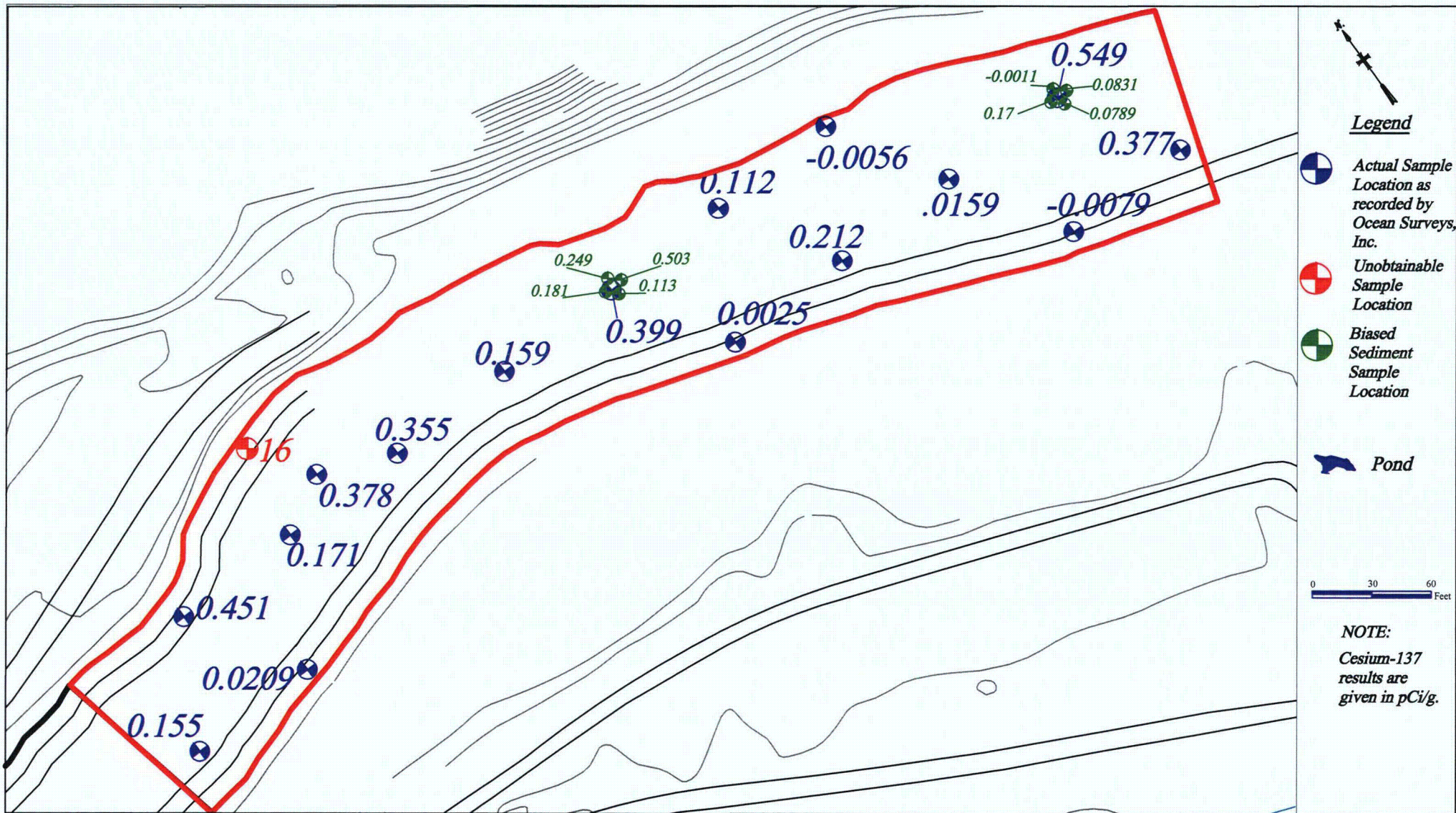


Figure 3

Connecticut Yankee Atomic Power Company
9106-0004 Final Status Survey
Cesium-137 Posting Plot

Date
October 2006

By
E. Sergent

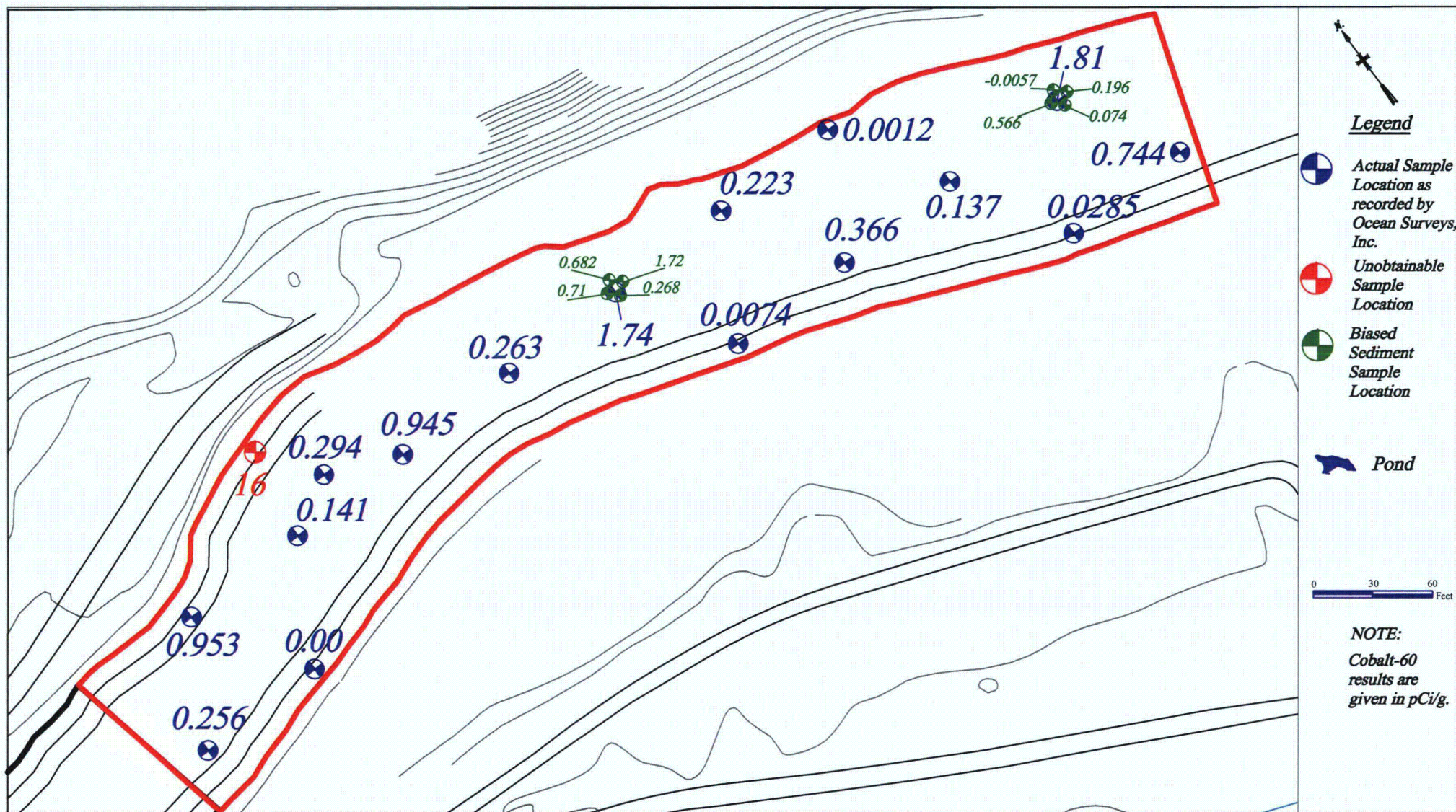


Figure 4

Connecticut Yankee Atomic Power Company
9106-0004 Final Status Survey
Cobalt-60 Posting Plot

Date
October 2006

By
E. Sargent

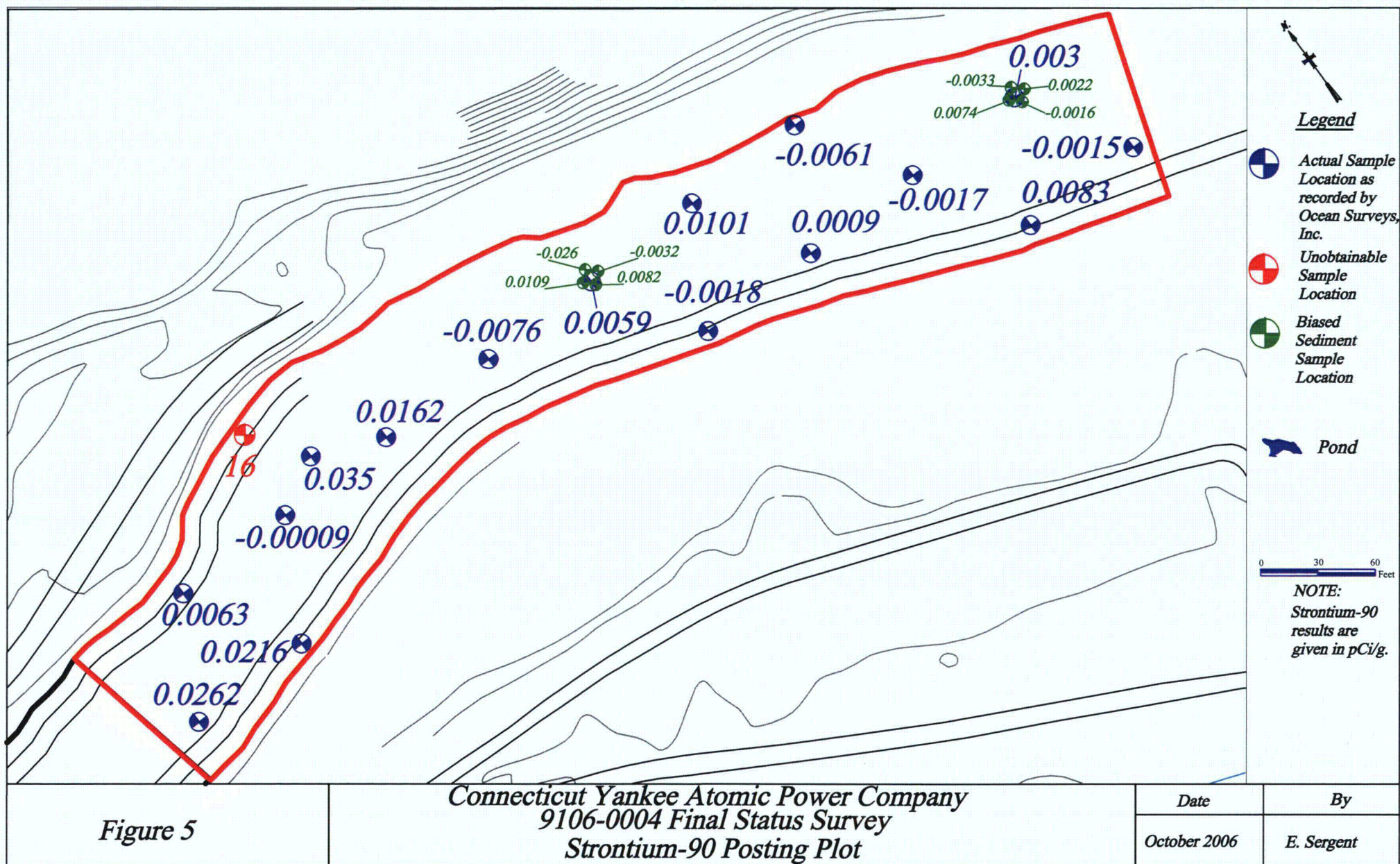


Figure 5

Connecticut Yankee Atomic Power Company
9106-0004 Final Status Survey
Strontium-90 Posting Plot

Date
October 2006

By
E. Sergent

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

Attachment 2
Sample and Statistical Data

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

Attachment 2a
Sample Data
(292 Pages)

Table of Contents

General Narrative.....	1
Chain of Custody and Supporting Documentation	4
Radiological Analysis	12
Sample Data Summary	31
Quality Control Data	71

General Narrative

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Sediment
PO# 002332
Work Order: 162832
SDG: MSR #06-0688

June 7, 2006

Laboratory Identification:
General Engineering Laboratories, LLC

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

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

Telephone Number:
(843) 556-8171

Summary:

Sample receipt

The sample(s) for this Project arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina on May 12, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures except the sample container for sample 9106-0004-014F was received leaking. A Safety Technician contained the leak and salvaged the sample successfully. No other samples were affected. Analyses were conducted as normal.

The laboratory received the following sample(s):

<u>Sample ID</u>	<u>Client Sample ID</u>
162832001	9106-0004-008F
162832002	9106-0004-009F
162832003	9106-0004-010F
162832004	9106-0004-010FS
162832005	9106-0004-011F
162832006	9106-0004-012F
162832007	9106-0004-013F
162832008	9106-0004-014F

<u>Sample ID</u>	<u>Client Sample ID</u>
162832009	9106-0004-015F
162832010	9106-0004-001F
162832011	9106-0004-002F
162832012	9106-0004-003F
162832013	9106-0004-004F
162832014	9106-0004-004FS
162832015	9106-0004-005F
162832016	9106-0004-006F
162832017	9106-0004-007F
162832018	9106-0004-017F

Items of Note:

There were no items of note.

Case Narrative:

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

Analytical Request:

Sixteen sediment samples were analyzed for FSSGAM and Sr-90.
Two sediment samples were analyzed for FSSALL.

Internal Chain of Custody:

Custody was maintained for the sample(s).

Data Package:

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

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



Cheryl Jones
Project Manager

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. 2006-00337

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size- & Type Code	Analyses Requested						Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Sr-90						Comments:	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones															
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.															
Sample Designation	Date	Time										Comment, Preservation	Lab Sample ID		
9106-0004-008F ✓	5/04/06	08:58	SE	C	BP	X		X				Transferred from COC 2006-00320			
9106-0004-009F ✓	5/04/06	08:23	SE	C	BP	X		X				Transferred from COC 2006-00320			
9106-0004-010F ✓	5/03/06	15:11	SE	C	BP	X		X				Transferred from COC 2006-00317			
9106-0004-010FS ✓	5/03/06	15:11	SE	C	BP	X		X				Transferred from COC 2006-00317			
9106-0004-011F ✓	5/03/06	13:08	SE	C	BP	X		X				Transferred from COC 2006-00317			
9106-0004-012F ✓	5/03/06	13:33	SE	C	BP	X		X				Transferred from COC 2006-00317			
9106-0004-013F ✓	5/03/06	13:54	SE	C	BP	X		X				Transferred from COC 2006-00317			
9106-0004-014F ✓	5/03/06	14:43	SE	C	BP		X	X				Transferred from COC 2006-00317			
9106-0004-015F ✓	5/03/06	14:18	SE	C	BP	X		X				Transferred from COC 2006-00317			
NOTES: PO #: 002332 MSR #: 06-0688 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA															
1) Relinquished By _____ Date/Time _____												Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp. <u>17</u> Deg. C Custody Sealed? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Custody Seal Intact? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
2) Received By <u>[Signature]</u> Date/Time <u>5/12/06 09:20</u>															
3) Relinquished By _____ Date/Time _____												Bill of Lading # _____			
4) Received By _____ Date/Time _____															

Connecticut Yankee Atomic Power Company						Chain of Custody Form						No. 2006-00336		
362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556														
Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size- & Type Code	Analyses Requested					Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Sr-90					Comments:	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones														
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.														
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID		
9106-0004-001F	05/3/06	09:37	SE	C	BP		X	X			Transferred from COC 2006-00316			
9106-0004-002F	05/3/06	09:56	SE	C	BP	X		X			Transferred from COC 2006-00316			
9106-0004-003F	05/3/06	10:28	SE	C	BP	X		X			Transferred from COC 2006-00316			
9106-0004-004F	05/3/06	10:48	SE	C	BP	X		X			Transferred from COC 2006-00316			
9106-0004-004FS	05/3/06	10:48	SE	C	BP	X		X			Transferred from COC 2006-00316			
9106-0004-005F	05/3/06	11:07	SE	C	BP	X		X			Transferred from COC 2006-00316			
9106-0004-006F	05/3/06	12:46	SE	C	BP	X		X			Transferred from COC 2006-00317			
9106-0004-007F	05/4/06	07:55	SE	C	BP	X		X			Transferred from COC 2006-00320			
9106-0004-017F	05/4/06	09:27	SE	C	BP	X		X			Transferred from COC 2006-00320			
NOTES: PO #: 002332 MSR #: 06-0688 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA														
1) Relinquished By			Date/Time		2) Received By			Date/Time		Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other			Internal Container Temp: 18 Deg. C Custody Sealed? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input checked="" type="checkbox"/>	
3) Relinquished By			Date/Time		4) Received By			Date/Time						Bill of Lading # 7919-3895-8881

Figure 1. Sample Check-in List

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

SDG#: MSR #06-0688

Work Order Number: 162832

Shipping Container ID: 7919 3895 8892 Chain of Custody # 2006-00337

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

8. Samples have:

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

9. Samples are:

_____ in good condition ☒ leaking
_____ broken _____ have air bubbles

10. Were any anomalies identified in sample receipt? Yes ☒ No ☐

11. Description of anomalies (include sample numbers): soil was busting out
of container bag

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

Telephoned to: _____ On _____ By _____



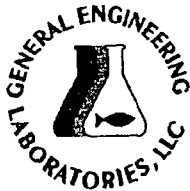
SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: <u>Yankel</u>	SDG/ARCOC/Work Order: <u>162832</u>
Date Received: <u>5/12/06</u>	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: <u>C. Derricotte</u>	<u>[Signature]</u>

Sample Receipt Criteria		Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		<input checked="" type="checkbox"/>		Circle Coolant # ice bags blue ice dry ice <u>none</u> other (describe) <u>170C</u>
3	Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			<u>COCs are wet</u>
4	Sample containers intact and sealed?			<input checked="" type="checkbox"/>	Circle Applicable: seals broken damaged container leaking container other (describe) <u>busted bag w/ RSOs</u> <u>cooler 7970 9480 6058 (C)</u>
5	Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH: <u>8.892</u>
6	VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			<input checked="" type="checkbox"/>	
8	Samples received within holding time?	<input checked="" type="checkbox"/>			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11	Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?			<input checked="" type="checkbox"/>	<u>no COCs are relinquished</u>
14	Air Bill ,Tracking #'s, & Additional Comments	<u>FedEx #'s</u> <u>see continuation sheet</u>			
Suspected Hazard Information		Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?		<input checked="" type="checkbox"/>		Maximum Counts Observed*: <u>440 @ 40 cpm</u>
B	PCB Regulated?	<input checked="" type="checkbox"/>			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	<input checked="" type="checkbox"/>			Hazard Class Shipped: UN#:
PM (or PMA) review of Hazard classification:					Initials <u>[Signature]</u> Date: <u>5/12/06</u>

9



SAMPLE RECEIPT & REVIEW FORM

PM use only

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

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		X		Circle Coolant # ice bags blue ice dry ice none other describe)
3 Chain of custody documents included with shipment?	X			
4 Sample containers intact and sealed?			X	Circle Applicable: seals broken damaged container <u>leaking container</u> other (describe) <u>SN: 9106-0004-014F*</u>
5 Samples requiring chemical preservation at proper pH?		X		Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			X	
8 Samples received within holding time?	X			Id's and tests affected:
9 Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	X			Sample ID's affected:
11 Number of containers received match number indicated on COC?	X			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?			X	<u>Coc Not Relinquished</u>
14 Air Bill ,Tracking #'s, & Additional Comments				<u>* Sample repackaged to address leakage.</u> <u>7919 3895 8892</u>

Suspected Hazard Information	Non-Regulated	Regulated	High Level	
A Radiological Classification?		X		RSO RAD Receipt # *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
B PCB Regulated?	X			Maximum Counts Observed*: <u>< Bkgd.</u>
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	X			Comments: <u>Bkgd = 40 cpm</u> Hazard Class Shipped: <u>N/A</u> UN#: <u>N/A</u>
PM (or PMA) review of Hazard classification:				Initials <u>[Signature]</u> Date: <u>5/12/06</u>

Figure 1. Sample Check-in List

Date/Time Received: 5.12.06 09:20

SDG#: MSR#06-0688

Work Order Number: 1628321

Shipping Container ID: 7919 3895 8892 Chain of Custody # 2006-00337

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☒ No ☐
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature N/A
5. Vermiculite/packing materials is: Wet ☒ Dry ☐
6. Number of samples in shipping container: 9
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: Emily Martin Date: 5.12.06 09:20

Telephoned to: _____ On _____ By _____

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 162832**

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:	533471
Prep Batch Number:	529742
Dry Soil Prep GL-RAD-A-021 Batch Number:	529741

Sample ID	Client ID
162832008	9106-0004-014F
162832010	9106-0004-001F
1201101117	Method Blank (MB)
1201101118	162485017(9106-0005-005F) Sample Duplicate (DUP)
1201101119	162485017(9106-0005-005F) Matrix Spike (MS)
1201101120	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: 162485017 (9106-0005-005F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:

NCR Documentation

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Alphaspec Pu, Solid-ALL FSS
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	533472
Prep Batch Number:	529742
Dry Soil Prep GL-RAD-A-021 Batch Number:	529741

Sample ID	Client ID
162832008	9106-0004-014F
162832010	9106-0004-001F
1201101121	Method Blank (MB)
1201101122	162485017(9106-0005-005F) Sample Duplicate (DUP)
1201101123	162485017(9106-0005-005F) Matrix Spike (MS)
1201101124	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: 162485017 (9106-0005-005F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	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:	533473
Prep Batch Number:	529742
Dry Soil Prep GL-RAD-A-021 Batch Number:	529741

Sample ID	Client ID
162832008	9106-0004-014F
162832010	9106-0004-001F
1201101125	Method Blank (MB)
1201101126	162485017(9106-0005-005F) Sample Duplicate (DUP)
1201101127	162485017(9106-0005-005F) Matrix Spike (MS)
1201101128	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: 162485017 (9106-0005-005F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

The tracer yield for sample 1201101127 (9106-0005-005F) was recounted due to poor resolution.

Miscellaneous Information:

NCR Documentation

Nonconformance reports are generated to document any procedural anomalies that may deviate from

referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Gamma,Solid-FSS GAM & ALL FSS
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	529778
Prep Batch Number:	529741

Sample ID	Client ID
162832001	9106-0004-008F
162832002	9106-0004-009F
162832003	9106-0004-010F
162832004	9106-0004-010FS
162832005	9106-0004-011F
162832006	9106-0004-012F
162832007	9106-0004-013F
162832008	9106-0004-014F
162832009	9106-0004-015F
162832010	9106-0004-001F
162832011	9106-0004-002F
162832012	9106-0004-003F
162832013	9106-0004-004F
162832014	9106-0004-004FS
162832015	9106-0004-005F
162832016	9106-0004-006F
162832017	9106-0004-007F
162832018	9106-0004-017F
1201092338	Method Blank (MB)
1201092339	162832001(9106-0004-008F) Sample Duplicate (DUP)
1201092340	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 11.

Calibration Information:**Calibration Information**

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:**Blank Information**

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

Designated QC

The following sample was used for QC: 162832001 (9106-0004-008F).

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

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high Full-Width Half-Maximum.	Cobalt-60	162832002
		Manganese-54	162832017
UI	Data rejected due to high counting uncertainty.	Americium-241	162832010
		Lead-212	1201092338
UI	Data rejected due to interference.	Manganese-54	162832001
UI	Data rejected due to low abundance.	Cesium-134	162832002
			162832003
			162832004
			162832006
			162832007
			162832012
			162832013
			162832015
			162832016
			162832017
			162832018
			1201092339

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:	534448
Prep Batch Number:	529742
Dry Soil Prep GL-RAD-A-021 Batch Number:	529741

Sample ID	Client ID
162832001	9106-0004-008F
162832002	9106-0004-009F
162832003	9106-0004-010F
162832004	9106-0004-010FS
162832005	9106-0004-011F
162832006	9106-0004-012F
162832007	9106-0004-013F
162832008	9106-0004-014F
162832009	9106-0004-015F
162832010	9106-0004-001F
162832011	9106-0004-002F
162832012	9106-0004-003F
162832013	9106-0004-004F
162832014	9106-0004-004FS
162832015	9106-0004-005F
162832016	9106-0004-006F
162832017	9106-0004-007F
162832018	9106-0004-017F
1201103434	Method Blank (MB)
1201103435	162832001(9106-0004-008F) Sample Duplicate (DUP)
1201103436	162832001(9106-0004-008F) Matrix Spike (MS)
1201103437	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: 162832001 (9106-0004-008F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

Sample 162832008 (9106-0004-014F) was recounted due to high MDA.

Chemical Recoveries

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

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: Liquid Scint Tc99, Solid-ALL FSS
Analytical Method: DOE EML HASL-300, Tc-02-RC Modified
Analytical Batch Number: 531704

Sample ID	Client ID
162832008	9106-0004-014F
162832010	9106-0004-001F
1201096867	Method Blank (MB)
1201096868	162583001(NOL-02-02-005-F-S) Sample Duplicate (DUP)
1201096869	162583001(NOL-02-02-005-F-S) Matrix Spike (MS)
1201096870	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: 162583001 (NOL-02-02-005-F-S).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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:	531618
Prep Batch Number:	529742
Dry Soil Prep GL-RAD-A-021 Batch Number:	529741

Sample ID	Client ID
162832008	9106-0004-014F
162832010	9106-0004-001F
1201096631	Method Blank (MB)
1201096632	163173001(9304-0000-063RACR) Sample Duplicate (DUP)
1201096633	163173001(9304-0000-063RACR) Matrix Spike (MS)
1201096634	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: 163173001 (9304-0000-063RACR).

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:	531622
Prep Batch Number:	529742
Dry Soil Prep GL-RAD-A-021 Batch Number:	529741

Sample ID	Client ID
162832008	9106-0004-014F
162832010	9106-0004-001F
1201096644	Method Blank (MB)
1201096645	163173001(9304-0000-063RACR) Sample Duplicate (DUP)
1201096646	163173001(9304-0000-063RACR) Matrix Spike (MS)
1201096647	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: 163173001 (9304-0000-063RACR).

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 - 1 to 2 pCi/g
Analytical Method: EPA 906.0 Modified
Analytical Batch Number: 531705

Sample ID	Client ID
162832008	9106-0004-014F
162832010	9106-0004-001F
1201096877	Method Blank (MB)
1201096878	162583001(NOL-02-02-005-F-S) Sample Duplicate (DUP)
1201096879	162583001(NOL-02-02-005-F-S) Matrix Spike (MS)
1201096880	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# 11.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 162583001 (NOL-02-02-005-F-S).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

Samples 1201096877 (MB) and 162832008 (9106-0004-014F) were recounted due to high MDAs.

Miscellaneous Information:

NCR Documentation

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: Liquid Scint C14, Solid All,FSS
Analytical Method: EPA EERF C-01 Modified
Analytical Batch Number: 534984

Sample ID	Client ID
162832008	9106-0004-014F
162832010	9106-0004-001F
1201104745	Method Blank (MB)
1201104746	163173001(9304-0000-063RACR) Sample Duplicate (DUP)
1201104747	163173001(9304-0000-063RACR) Matrix Spike (MS)
1201104748	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: 163173001 (9304-0000-063RACR).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

Samples were reprepared due to low/high recovery.

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Certification Statement

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

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date: _____

Kathleen Bell 6/19/06

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#06-0688 GEL Work Order: 162832

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- ND The analyte concentration is not detected above the reporting limit.

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

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

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



Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-008F
Sample ID: 162832001
Matrix: SE
Collect Date: 04-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 19.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		0.655	+/-0.137	0.0451	+/-0.137	0.0962	pCi/g		MJH1	06/06/06	1727	529778	1
Americium-241	U	0.0325	+/-0.0823	0.0746	+/-0.0823	0.154	pCi/g						
Bismuth-212		0.551	+/-0.165	0.115	+/-0.165	0.241	pCi/g						
Bismuth-214		0.447	+/-0.0787	0.0262	+/-0.0787	0.0549	pCi/g						
Cesium-134	U	0.0255	+/-0.0237	0.017	+/-0.0237	0.0357	pCi/g						
Cesium-137		0.155	+/-0.0273	0.0123	+/-0.0273	0.026	pCi/g						
Cobalt-60		0.256	+/-0.046	0.0129	+/-0.046	0.028	pCi/g						
Europium-152	U	0.0135	+/-0.0376	0.0314	+/-0.0376	0.0656	pCi/g						
Europium-154	U	0.000575	+/-0.048	0.0407	+/-0.048	0.0876	pCi/g						
Europium-155	U	0.015	+/-0.0405	0.039	+/-0.0405	0.0803	pCi/g						
Lead-212		0.609	+/-0.0665	0.0195	+/-0.0665	0.0403	pCi/g						
Lead-214		0.566	+/-0.0835	0.0228	+/-0.0835	0.0476	pCi/g						
Manganese-54	UUI	0.00	+/-0.0194	0.0125	+/-0.0194	0.0266	pCi/g						
Niobium-94	U	0.00427	+/-0.0141	0.0123	+/-0.0141	0.026	pCi/g						
Potassium-40		10.8	+/-0.957	0.125	+/-0.957	0.272	pCi/g						
Radium-226		0.447	+/-0.0787	0.0262	+/-0.0787	0.0549	pCi/g						
Silver-108m	U	0.00155	+/-0.0131	0.0119	+/-0.0131	0.0249	pCi/g						
Thallium-208		0.194	+/-0.042	0.013	+/-0.042	0.0274	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0262	+/-0.0216	0.0193	+/-0.0217	0.0428	pCi/g		BXF1	06/02/06	1547	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-008F
Sample ID: 162832001

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			33		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-009F
Sample ID: 162832002
Matrix: SE
Collect Date: 04-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 10.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		1.02	+/-0.127	0.0487	+/-0.127	0.104	pCi/g		MJH1	06/06/06	1727	529778	1
Americium-241	U	-0.0652	+/-0.121	0.073	+/-0.121	0.149	pCi/g						
Bismuth-212		0.802	+/-0.219	0.116	+/-0.219	0.244	pCi/g						
Bismuth-214		0.765	+/-0.0817	0.0269	+/-0.0817	0.0565	pCi/g						
Cesium-134	UUI	0.00	+/-0.0222	0.0212	+/-0.0222	0.0443	pCi/g						
Cesium-137	U	0.0209	+/-0.0277	0.0169	+/-0.0277	0.0353	pCi/g						
Cobalt-60	UUI	0.00	+/-0.0245	0.0151	+/-0.0245	0.0326	pCi/g						
Europium-152	U	0.0221	+/-0.0473	0.0425	+/-0.0473	0.0879	pCi/g						
Europium-154	U	0.0603	+/-0.0585	0.0478	+/-0.0585	0.102	pCi/g						
Europium-155	U	0.0136	+/-0.0533	0.0506	+/-0.0533	0.104	pCi/g						
Lead-212		1.00	+/-0.0543	0.0256	+/-0.0543	0.0527	pCi/g						
Lead-214		0.967	+/-0.0836	0.0302	+/-0.0836	0.0626	pCi/g						
Manganese-54	U	0.0255	+/-0.0272	0.0152	+/-0.0272	0.0321	pCi/g						
Niobium-94	U	0.00406	+/-0.0156	0.014	+/-0.0156	0.0293	pCi/g						
Potassium-40		8.59	+/-0.636	0.105	+/-0.636	0.234	pCi/g						
Radium-226		0.765	+/-0.0817	0.0269	+/-0.0817	0.0565	pCi/g						
Silver-108m	U-0.000766		+/-0.0155	0.0134	+/-0.0155	0.0279	pCi/g						
Thallium-208		0.355	+/-0.043	0.0138	+/-0.043	0.029	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0216	+/-0.0169	0.0151	+/-0.0169	0.0333	pCi/g		BXF1	06/02/06	1547	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-009F
Sample ID: 162832002

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			42		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-010F
Sample ID: 162832003
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 12.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		0.983	+/-0.148	0.0597	+/-0.148	0.127	pCi/g		MJH1	06/06/06	1727	529778	1
Americium-241	U	-0.00252	+/-0.0227	0.020	+/-0.0227	0.0411	pCi/g						
Bismuth-212		0.538	+/-0.237	0.122	+/-0.237	0.259	pCi/g						
Bismuth-214		0.627	+/-0.0778	0.0322	+/-0.0778	0.0675	pCi/g						
Cesium-134	UI	0.0529	+/-0.0292	0.0232	+/-0.0292	0.0486	pCi/g						
Cesium-137	U	0.00246	+/-0.0235	0.0177	+/-0.0235	0.0373	pCi/g						
Cobalt-60	U	0.00739	+/-0.0239	0.0204	+/-0.0239	0.0439	pCi/g						
Europium-152	U	-0.0137	+/-0.044	0.0365	+/-0.044	0.0765	pCi/g						
Europium-154	U	-0.0489	+/-0.062	0.0476	+/-0.062	0.104	pCi/g						
Europium-155	U	0.0513	+/-0.0527	0.032	+/-0.0527	0.066	pCi/g						
Lead-212		0.904	+/-0.0535	0.0216	+/-0.0535	0.0447	pCi/g						
Lead-214		0.679	+/-0.0766	0.0285	+/-0.0766	0.0596	pCi/g						
Manganese-54	U	0.00548	+/-0.0205	0.0173	+/-0.0205	0.0368	pCi/g						
Niobium-94	U	0.00502	+/-0.0179	0.0154	+/-0.0179	0.0325	pCi/g						
Potassium-40		12.0	+/-0.847	0.127	+/-0.847	0.285	pCi/g						
Radium-226		0.627	+/-0.0778	0.0322	+/-0.0778	0.0675	pCi/g						
Silver-108m	U	0.00214	+/-0.0148	0.0132	+/-0.0148	0.0278	pCi/g						
Thallium-208		0.307	+/-0.0471	0.0146	+/-0.0471	0.031	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00175	+/-0.0161	0.0179	+/-0.0161	0.0394	pCi/g		BXF1	06/02/06	1548	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-010F
Sample ID: 162832003

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			37		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-010FS
Sample ID: 162832004
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 15.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		1.05	+/-0.214	0.0808	+/-0.214	0.172	pCi/g		MJH1	06/06/06	1728	529778	1
Americium-241	U	0.0328	+/-0.0355	0.0285	+/-0.0355	0.0585	pCi/g						
Bismuth-212		0.664	+/-0.345	0.171	+/-0.345	0.363	pCi/g						
Bismuth-214		0.695	+/-0.115	0.0398	+/-0.115	0.0839	pCi/g						
Cesium-134	UUI	0.00	+/-0.0385	0.0279	+/-0.0385	0.0589	pCi/g						
Cesium-137	U	0.0326	+/-0.0317	0.0224	+/-0.0317	0.0474	pCi/g						
Cobalt-60	U	0.0254	+/-0.0295	0.0269	+/-0.0295	0.0578	pCi/g						
Europium-152	U	-0.0335	+/-0.0559	0.0482	+/-0.0559	0.101	pCi/g						
Europium-154	U	-0.0475	+/-0.0946	0.0643	+/-0.0946	0.140	pCi/g						
Europium-155	U	0.044	+/-0.0779	0.0477	+/-0.0779	0.0983	pCi/g						
Lead-212		1.08	+/-0.0716	0.0256	+/-0.0716	0.0533	pCi/g						
Lead-214		0.807	+/-0.104	0.0381	+/-0.104	0.0794	pCi/g						
Manganese-54	U	0.0132	+/-0.0275	0.0237	+/-0.0275	0.0504	pCi/g						
Niobium-94	U	0.0108	+/-0.0238	0.0207	+/-0.0238	0.0436	pCi/g						
Potassium-40		13.2	+/-1.02	0.198	+/-1.02	0.438	pCi/g						
Radium-226		0.695	+/-0.115	0.0398	+/-0.115	0.0839	pCi/g						
Silver-108m	U	-0.00335	+/-0.0237	0.018	+/-0.0237	0.0379	pCi/g						
Thallium-208		0.318	+/-0.0568	0.0211	+/-0.0568	0.0446	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00925	+/-0.0179	0.0209	+/-0.0179	0.0452	pCi/g		BXF1	06/02/06	1548	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-010FS
Sample ID: 162832004

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			39		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-011F
Sample ID: 162832005
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 20.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		1.09	+/-0.233	0.088	+/-0.233	0.190	pCi/g		MJH1	06/06/06	2000	529778	1
Americium-241	U	-0.0786	+/-0.118	0.0915	+/-0.118	0.189	pCi/g						
Bismuth-212		0.602	+/-0.421	0.195	+/-0.421	0.416	pCi/g						
Bismuth-214		0.890	+/-0.132	0.0453	+/-0.132	0.0961	pCi/g						
Cesium-134	U	0.0536	+/-0.0558	0.0342	+/-0.0558	0.0723	pCi/g						
Cesium-137		0.212	+/-0.0512	0.0247	+/-0.0512	0.0527	pCi/g						
Cobalt-60		0.366	+/-0.0849	0.0262	+/-0.0849	0.0576	pCi/g						
Europium-152	U	-0.0415	+/-0.0736	0.0582	+/-0.0736	0.122	pCi/g						
Europium-154	U	0.0615	+/-0.0839	0.0772	+/-0.0839	0.169	pCi/g						
Europium-155	U	0.0805	+/-0.0913	0.062	+/-0.0913	0.129	pCi/g						
Lead-212		1.13	+/-0.0826	0.0317	+/-0.0826	0.0663	pCi/g						
Lead-214		0.910	+/-0.0991	0.0423	+/-0.0991	0.089	pCi/g						
Manganese-54	U	0.0269	+/-0.029	0.0262	+/-0.029	0.056	pCi/g						
Niobium-94	U	0.00641	+/-0.0253	0.0217	+/-0.0253	0.0464	pCi/g						
Potassium-40		15.0	+/-1.15	0.167	+/-1.15	0.388	pCi/g						
Radium-226		0.890	+/-0.132	0.0453	+/-0.132	0.0961	pCi/g						
Silver-108m	U	-0.0111	+/-0.0222	0.0187	+/-0.0222	0.0397	pCi/g						
Thallium-208		0.353	+/-0.0647	0.0236	+/-0.0647	0.0503	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.000913	+/-0.0156	0.0173	+/-0.0156	0.0384	pCi/g		BXF1	06/02/06	1548	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-011F
Sample ID: 162832005

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			51		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-012F
Sample ID: 162832006
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 16.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		0.922	+/-0.170	0.0627	+/-0.170	0.136	pCi/g		MJH1	06/06/06	2000	529778	1
Americium-241	U	-0.0134	+/-0.120	0.0779	+/-0.120	0.161	pCi/g						
Bismuth-212		0.782	+/-0.399	0.137	+/-0.399	0.293	pCi/g						
Bismuth-214		0.677	+/-0.0964	0.035	+/-0.0964	0.0742	pCi/g						
Cesium-134	UUI	0.00	+/-0.0376	0.0264	+/-0.0376	0.0558	pCi/g						
Cesium-137		0.159	+/-0.0393	0.0175	+/-0.0393	0.0374	pCi/g						
Cobalt-60		0.137	+/-0.0477	0.0185	+/-0.0477	0.0409	pCi/g						
Europium-152	U	0.0336	+/-0.0517	0.0475	+/-0.0517	0.0998	pCi/g						
Europium-154	U	-0.0258	+/-0.0601	0.0475	+/-0.0601	0.106	pCi/g						
Europium-155	U	0.106	+/-0.0614	0.0583	+/-0.0614	0.120	pCi/g						
Lead-212		0.872	+/-0.0676	0.0262	+/-0.0676	0.0547	pCi/g						
Lead-214		0.815	+/-0.108	0.0311	+/-0.108	0.0655	pCi/g						
Manganese-54	U	-0.0175	+/-0.0212	0.0172	+/-0.0212	0.0371	pCi/g						
Niobium-94	U	0.0182	+/-0.0225	0.0199	+/-0.0225	0.042	pCi/g						
Potassium-40		10.6	+/-0.823	0.163	+/-0.823	0.364	pCi/g						
Radium-226		0.677	+/-0.0964	0.035	+/-0.0964	0.0742	pCi/g						
Silver-108m	U	0.00549	+/-0.0191	0.0169	+/-0.0191	0.0357	pCi/g						
Thallium-208		0.308	+/-0.0518	0.0159	+/-0.0518	0.0341	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00172	+/-0.0113	0.0116	+/-0.0113	0.0249	pCi/g		BXF1	06/02/06	1548	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-012F
Sample ID: 162832006

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			40		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-013F
Sample ID: 162832007
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 24.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		1.22	+/-0.297	0.146	+/-0.297	0.305	pCi/g		MJH1	06/06/06	2001	529778	1
Americium-241	U	0.0867	+/-0.102	0.064	+/-0.102	0.130	pCi/g						
Bismuth-212		0.964	+/-0.391	0.277	+/-0.391	0.581	pCi/g						
Bismuth-214		0.878	+/-0.134	0.0653	+/-0.134	0.136	pCi/g						
Cesium-134	UUI	0.00	+/-0.106	0.0448	+/-0.106	0.0936	pCi/g						
Cesium-137		0.549	+/-0.100	0.0382	+/-0.100	0.0798	pCi/g						
Cobalt-60		1.81	+/-0.147	0.0323	+/-0.147	0.0698	pCi/g						
Europium-152	U	-0.0133	+/-0.101	0.0856	+/-0.101	0.178	pCi/g						
Europium-154	U	0.0295	+/-0.141	0.105	+/-0.141	0.225	pCi/g						
Europium-155	U	0.0615	+/-0.0867	0.0765	+/-0.0867	0.157	pCi/g						
Lead-212		1.20	+/-0.0985	0.0483	+/-0.0985	0.0996	pCi/g						
Lead-214		0.931	+/-0.148	0.0581	+/-0.148	0.121	pCi/g						
Manganese-54	U	-0.00585	+/-0.0483	0.0404	+/-0.0483	0.0846	pCi/g						
Niobium-94	U	0.00999	+/-0.0382	0.0331	+/-0.0382	0.0693	pCi/g						
Potassium-40		13.0	+/-1.30	0.241	+/-1.30	0.534	pCi/g						
Radium-226		0.878	+/-0.134	0.0653	+/-0.134	0.136	pCi/g						
Silver-108m	U	-0.00427	+/-0.0382	0.032	+/-0.0382	0.0665	pCi/g						
Thallium-208		0.432	+/-0.0807	0.0333	+/-0.0807	0.0698	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00301	+/-0.0174	0.0188	+/-0.0174	0.0427	pCi/g		BOXF1	06/02/06	1548	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-013F
Sample ID: 162832007

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits					
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			38		(25%-125%)					

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-014F
Sample ID: 162832008
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 21%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.00364	+/-0.0405	0.0368	+/-0.0405	0.161	pCi/g		LCW1	05/30/06	1156	533471	1
Curium-242	U	0.0363	+/-0.0711	0.00	+/-0.0712	0.0983	pCi/g						
Curium-243/244	U	0.0323	+/-0.0634	0.00	+/-0.0635	0.0876	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.0124	+/-0.0534	0.0415	+/-0.0534	0.153	pCi/g		LCW1	05/30/06	2129	533472	2
Plutonium-239/240	U	0.0515	+/-0.0714	0.00	+/-0.0716	0.0698	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	-2.38	+/-9.97	8.47	+/-9.98	17.7	pCi/g		LCW1	06/03/06	0613	533473	3
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.23	+/-0.279	0.0824	+/-0.279	0.178	pCi/g		MJH1	06/06/06	2029	529778	4
Americium-241	U	-0.0143	+/-0.0378	0.0331	+/-0.0378	0.0681	pCi/g						
Bismuth-212		0.868	+/-0.463	0.199	+/-0.463	0.425	pCi/g						
Bismuth-214		0.813	+/-0.153	0.0472	+/-0.153	0.0999	pCi/g						
Cesium-134	U	0.0502	+/-0.0448	0.0345	+/-0.0448	0.0729	pCi/g						
Cesium-137	U	-0.00791	+/-0.032	0.026	+/-0.032	0.0553	pCi/g						
Cobalt-60	U	0.0285	+/-0.034	0.0307	+/-0.034	0.0667	pCi/g						
Europium-152	U	0.0441	+/-0.0707	0.0634	+/-0.0707	0.133	pCi/g						
Europium-154	U	-0.0149	+/-0.103	0.0724	+/-0.103	0.159	pCi/g						
Europium-155	U	0.0689	+/-0.0893	0.0541	+/-0.0893	0.112	pCi/g						
Lead-212		1.26	+/-0.165	0.0338	+/-0.165	0.0702	pCi/g						
Lead-214		0.876	+/-0.143	0.0419	+/-0.143	0.0881	pCi/g						
Manganese-54	U	0.0203	+/-0.033	0.0297	+/-0.033	0.063	pCi/g						
Niobium-94	U	0.00366	+/-0.0282	0.0235	+/-0.0282	0.050	pCi/g						
Potassium-40		19.0	+/-1.68	0.220	+/-1.68	0.493	pCi/g						
Radium-226		0.813	+/-0.153	0.0472	+/-0.153	0.0999	pCi/g						
Silver-108m	U	-0.0251	+/-0.025	0.0199	+/-0.025	0.0421	pCi/g						
Thallium-208		0.382	+/-0.0739	0.0249	+/-0.0739	0.0529	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid - 0.025 pCi/g</i>													
Strontium-90	U	0.00827	+/-0.011	0.0105	+/-0.011	0.0226	pCi/g		BXF1	06/08/06	1805	534448	5
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid - 1 to 2 pCi/g</i>													
Tritium	U	-0.0191	+/-0.527	0.443	+/-0.527	0.905	pCi/g		NXP1	06/03/06	0030	531705	6

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-014F
Sample ID: 162832008

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
<i>Liquid Scint C14, Solid All, FSS</i>													
Carbon-14	U	0.134	+/-0.103	0.0826	+/-0.103	0.171	pCi/g		ATH2	06/03/06	2137	534984	7
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	2.49	+/-21.0	15.6	+/-21.0	32.9	pCi/g		SLN1	05/29/06	1542	531618	9
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	-2.34	+/-3.32	2.83	+/-3.32	5.77	pCi/g		SLN1	05/27/06	0019	531622	10
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	-0.0698	+/-0.246	0.209	+/-0.246	0.431	pCi/g		SXE1	05/30/06	2232	531704	11

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	93	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	85	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	72	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid - 0.025 pCi/g	46	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	79	(15%-125%)

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-014F
Sample ID: 162832008

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-ALL FS			77		(25%-125%)						
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-ALL FS			75		(15%-125%)						

Notes:

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

The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-015F
Sample ID: 162832009
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 34%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		0.832	+/-0.213	0.0785	+/-0.213	0.168	pCi/g		MJH1	06/06/06	2138	529778	1
Americium-241	U	0.0511	+/-0.106	0.088	+/-0.106	0.182	pCi/g						
Bismuth-212		0.623	+/-0.270	0.160	+/-0.270	0.342	pCi/g						
Bismuth-214		0.533	+/-0.0981	0.044	+/-0.0981	0.0927	pCi/g						
Cesium-134	U	0.0265	+/-0.0323	0.0253	+/-0.0323	0.0538	pCi/g						
Cesium-137		0.377	+/-0.0611	0.0221	+/-0.0611	0.047	pCi/g						
Cobalt-60		0.744	+/-0.0759	0.0218	+/-0.0759	0.0481	pCi/g						
Europium-152	U	-0.0395	+/-0.072	0.0526	+/-0.072	0.111	pCi/g						
Europium-154	U	0.0498	+/-0.071	0.0658	+/-0.071	0.144	pCi/g						
Europium-155	U	0.0747	+/-0.0598	0.0586	+/-0.0598	0.121	pCi/g						
Lead-212		0.833	+/-0.0733	0.033	+/-0.0733	0.0685	pCi/g						
Lead-214		0.755	+/-0.0997	0.038	+/-0.0997	0.0799	pCi/g						
Manganese-54	U	0.0147	+/-0.0271	0.0241	+/-0.0271	0.0513	pCi/g						
Niobium-94	U	-0.00934	+/-0.0224	0.0188	+/-0.0224	0.0401	pCi/g						
Potassium-40		12.3	+/-1.05	0.178	+/-1.05	0.400	pCi/g						
Radium-226		0.533	+/-0.0981	0.044	+/-0.0981	0.0927	pCi/g						
Silver-108m	U	-0.0066	+/-0.023	0.019	+/-0.023	0.040	pCi/g						
Thallium-208		0.276	+/-0.0562	0.0201	+/-0.0562	0.0427	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00153	+/-0.0159	0.0181	+/-0.0159	0.0408	pCi/g		BXF1	06/02/06	1548	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-015F
Sample ID: 162832009

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			45		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-001F
Sample ID: 162832010
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 26.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.0499	+/-0.0855	0.0458	+/-0.0857	0.169	pCi/g		LCW1	05/30/06	1156	533471	1
Curium-242	U	0.032	+/-0.0627	0.00	+/-0.0628	0.0866	pCi/g						
Curium-243/244	U	-0.0205	+/-0.0605	0.0563	+/-0.0605	0.190	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.00	+/-0.0693	0.00	+/-0.0693	0.0959	pCi/g		LCW1	05/30/06	2129	533472	2
Plutonium-239/240	U	-0.00849	+/-0.0713	0.0403	+/-0.0713	0.176	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	-1.69	+/-9.07	7.68	+/-9.07	16.0	pCi/g		LCW1	06/03/06	0629	533473	3
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		1.17	+/-0.302	0.110	+/-0.302	0.237	pCi/g		MJH1	06/06/06	2138	529778	4
Americium-241	UUI	0.00	+/-0.0601	0.0312	+/-0.0601	0.0648	pCi/g						
Bismuth-212		0.859	+/-0.528	0.246	+/-0.528	0.525	pCi/g						
Bismuth-214		0.776	+/-0.161	0.0517	+/-0.161	0.110	pCi/g						
Cesium-134	U	0.00517	+/-0.0697	0.039	+/-0.0697	0.0828	pCi/g						
Cesium-137		0.451	+/-0.0758	0.0333	+/-0.0758	0.0707	pCi/g						
Cobalt-60		0.953	+/-0.129	0.0344	+/-0.129	0.0754	pCi/g						
Europium-152	U	-0.0409	+/-0.0773	0.0623	+/-0.0773	0.132	pCi/g						
Europium-154	U	-0.0482	+/-0.102	0.0792	+/-0.102	0.176	pCi/g						
Europium-155	U	0.00698	+/-0.0644	0.0542	+/-0.0644	0.113	pCi/g						
Lead-212		1.10	+/-0.0859	0.0341	+/-0.0859	0.0716	pCi/g						
Lead-214		0.953	+/-0.133	0.0476	+/-0.133	0.101	pCi/g						
Manganese-54	U	-0.0119	+/-0.0371	0.0296	+/-0.0371	0.0638	pCi/g						
Niobium-94	U	0.0288	+/-0.0302	0.0274	+/-0.0302	0.0585	pCi/g						
Potassium-40		15.9	+/-1.42	0.237	+/-1.42	0.539	pCi/g						
Radium-226		0.776	+/-0.161	0.0517	+/-0.161	0.110	pCi/g						
Silver-108m	U	0.00789	+/-0.0259	0.0233	+/-0.0259	0.0495	pCi/g						
Thallium-208		0.420	+/-0.0627	0.029	+/-0.0627	0.0617	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00633	+/-0.017	0.0179	+/-0.017	0.0398	pCi/g		BXF1	06/02/06	1548	534448	5
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2, ALL FSS</i>													
Tritium	U	6.98	+/-7.01	5.61	+/-7.01	11.7	pCi/g		NXP1	05/28/06	0601	531705	6
<i>Liquid Scint C14, Solid All, FSS</i>													

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-001F
Sample ID: 162832010

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		0.268	+/-0.101	0.0769	+/-0.101	0.159	pCi/g		ATH2	06/03/06	2339	534984	7
Liquid Scint Fe55, Solid-ALL FSS Iron-55	U	9.95	+/-15.5	11.3	+/-15.5	23.7	pCi/g		SLN1	05/29/06	1559	531618	9
Liquid Scint Ni63, Solid-ALL FSS Nickel-63	U	-4.23	+/-3.97	3.41	+/-3.97	6.95	pCi/g		SLN1	05/27/06	0120	531622	10
Liquid Scint Tc99, Solid-ALL FSS Technetium-99	U	0.174	+/-0.269	0.220	+/-0.269	0.454	pCi/g		SXE1	05/30/06	2248	531704	11

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	92	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	65	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	84	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	46	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	74	(15%-125%)

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-001F
Sample ID: 162832010

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-ALL FS			69		(25%-125%)						
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-ALL FS			71		(15%-125%)						

Notes:

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

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-002F
Sample ID: 162832011
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 16.8%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		0.590	+/-0.227	0.0948	+/-0.227	0.207	pCi/g		MJH1	06/06/06	2138	529778	1
Americium-241	U	0.000531	+/-0.0361	0.0352	+/-0.0361	0.073	pCi/g						
Bismuth-212	U	0.439	+/-0.392	0.213	+/-0.392	0.460	pCi/g						
Bismuth-214		0.436	+/-0.115	0.0442	+/-0.115	0.0955	pCi/g						
Cesium-134	U	0.00781	+/-0.0309	0.0271	+/-0.0309	0.0592	pCi/g						
Cesium-137		0.171	+/-0.0522	0.0221	+/-0.0522	0.0483	pCi/g						
Cobalt-60		0.141	+/-0.0653	0.0252	+/-0.0653	0.0568	pCi/g						
Europium-152	U	-0.0415	+/-0.0655	0.0577	+/-0.0655	0.123	pCi/g						
Europium-154	U	-0.0303	+/-0.078	0.0627	+/-0.078	0.143	pCi/g						
Europium-155	U	0.0113	+/-0.057	0.0542	+/-0.057	0.113	pCi/g						
Lead-212		0.628	+/-0.067	0.0313	+/-0.067	0.0659	pCi/g						
Lead-214		0.506	+/-0.110	0.0414	+/-0.110	0.0881	pCi/g						
Manganese-54	U	0.00764	+/-0.0308	0.0269	+/-0.0308	0.0584	pCi/g						
Niobium-94	U	-0.0101	+/-0.0309	0.0222	+/-0.0309	0.0481	pCi/g						
Potassium-40		9.74	+/-1.02	0.171	+/-1.02	0.407	pCi/g						
Radium-226		0.436	+/-0.115	0.0442	+/-0.115	0.0955	pCi/g						
Silver-108m	U	0.0121	+/-0.0208	0.0197	+/-0.0208	0.0424	pCi/g						
Thallium-208		0.197	+/-0.0581	0.0243	+/-0.0581	0.0524	pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Sr90, solid-ALL FSS

Strontium-90	U	-9.370E-05	+/-0.0166	0.0187	+/-0.0166	0.0417	pCi/g		BXF1	06/02/06	1548	534448	2
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

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Certificate of Analysis

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Address : 362 Injun Hollow Rd

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-002F
Sample ID: 162832011

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			48		(25%-125%)						

Notes:

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-003F
Sample ID: 162832012
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 20.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		0.837	+/-0.133	0.0558	+/-0.133	0.117	pCi/g		MJH1	06/06/06	2139	529778	1
Americium-241	U	-0.00219	+/-0.109	0.090	+/-0.109	0.186	pCi/g						
Bismuth-212		0.534	+/-0.216	0.119	+/-0.216	0.249	pCi/g						
Bismuth-214		0.591	+/-0.0832	0.0288	+/-0.0832	0.0602	pCi/g						
Cesium-134	UU1	0.00	+/-0.0279	0.0197	+/-0.0279	0.041	pCi/g						
Cesium-137		0.355	+/-0.0442	0.0145	+/-0.0442	0.0306	pCi/g						
Cobalt-60		0.945	+/-0.0626	0.0137	+/-0.0626	0.0296	pCi/g						
Europium-152	U	0.00575	+/-0.0435	0.0402	+/-0.0435	0.0836	pCi/g						
Europium-154	U	0.0387	+/-0.0557	0.0492	+/-0.0557	0.104	pCi/g						
Europium-155	U	0.0875	+/-0.0767	0.0496	+/-0.0767	0.102	pCi/g						
Lead-212		0.819	+/-0.0541	0.0239	+/-0.0541	0.0494	pCi/g						
Lead-214		0.690	+/-0.0799	0.0284	+/-0.0799	0.0592	pCi/g						
Manganese-54	U	0.0147	+/-0.0191	0.0176	+/-0.0191	0.0367	pCi/g						
Niobium-94	U	0.0131	+/-0.0167	0.0149	+/-0.0167	0.0311	pCi/g						
Potassium-40		12.6	+/-0.691	0.116	+/-0.691	0.253	pCi/g						
Radium-226		0.591	+/-0.0832	0.0288	+/-0.0832	0.0602	pCi/g						
Silver-108m	U	-0.0129	+/-0.0149	0.0128	+/-0.0149	0.0268	pCi/g						
Thallium-208		0.258	+/-0.0394	0.0134	+/-0.0394	0.0282	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0162	+/-0.0189	0.018	+/-0.0189	0.0402	pCi/g		BXF1	06/02/06	1549	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-003F
Sample ID: 162832012

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%	Acceptable Limits						
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS				45	(25%-125%)						

Notes:

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

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-004F
Sample ID: 162832013
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 17.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		0.686	+/-0.125	0.0426	+/-0.125	0.0906	pCi/g		MJH1	06/06/06	2350	529778	1
Americium-241	U	-0.00826	+/-0.0518	0.0509	+/-0.0518	0.105	pCi/g						
Bismuth-212		0.505	+/-0.187	0.0963	+/-0.187	0.203	pCi/g						
Bismuth-214		0.495	+/-0.060	0.0217	+/-0.060	0.0457	pCi/g						
Cesium-134	UU1	0.00	+/-0.0279	0.0165	+/-0.0279	0.0345	pCi/g						
Cesium-137		0.159	+/-0.0305	0.0126	+/-0.0305	0.0265	pCi/g						
Cobalt-60		0.263	+/-0.0399	0.0109	+/-0.0399	0.0239	pCi/g						
Europium-152	U	-0.0352	+/-0.0353	0.0291	+/-0.0353	0.0606	pCi/g						
Europium-154	U	0.0517	+/-0.0426	0.0409	+/-0.0426	0.0874	pCi/g						
Europium-155	U	0.0077	+/-0.0363	0.0348	+/-0.0363	0.0714	pCi/g						
Lead-212		0.731	+/-0.042	0.0183	+/-0.042	0.0378	pCi/g						
Lead-214		0.570	+/-0.0626	0.0228	+/-0.0626	0.0473	pCi/g						
Manganese-54	U	0.0131	+/-0.0163	0.0133	+/-0.0163	0.028	pCi/g						
Niobium-94	U	0.0134	+/-0.0199	0.0113	+/-0.0199	0.0239	pCi/g						
Potassium-40		10.6	+/-0.623	0.0881	+/-0.623	0.197	pCi/g						
Radium-226		0.495	+/-0.060	0.0217	+/-0.060	0.0457	pCi/g						
Silver-108m	U	-0.00381	+/-0.0117	0.0106	+/-0.0117	0.0221	pCi/g						
Thallium-208		0.215	+/-0.0302	0.0124	+/-0.0302	0.0259	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00759	+/-0.0173	0.020	+/-0.0173	0.0435	pCi/g		BXF1	06/02/06	1833	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-004F
Sample ID: 162832013

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			37		(25%-125%)						

Notes:

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-004FS
Sample ID: 162832014
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 20.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		0.947	+/-0.184	0.0494	+/-0.184	0.105	pCi/g		MJH1	06/06/06	2350	529778	1
Americium-241	U	0.0029	+/-0.0207	0.0199	+/-0.0207	0.0407	pCi/g						
Bismuth-212		0.561	+/-0.213	0.120	+/-0.213	0.251	pCi/g						
Bismuth-214		0.525	+/-0.0921	0.0275	+/-0.0921	0.0574	pCi/g						
Cesium-134	U	0.0375	+/-0.0368	0.0188	+/-0.0368	0.0392	pCi/g						
Cesium-137		0.216	+/-0.042	0.0157	+/-0.042	0.0329	pCi/g						
Cobalt-60		0.300	+/-0.0499	0.0141	+/-0.0499	0.0305	pCi/g						
Europium-152	U	-0.00258	+/-0.0394	0.0357	+/-0.0394	0.0741	pCi/g						
Europium-154	U	0.0578	+/-0.0507	0.0468	+/-0.0507	0.0997	pCi/g						
Europium-155	U	0.0516	+/-0.0462	0.0341	+/-0.0462	0.0699	pCi/g						
Lead-212		0.775	+/-0.0975	0.0201	+/-0.0975	0.0415	pCi/g						
Lead-214		0.573	+/-0.081	0.0257	+/-0.081	0.0533	pCi/g						
Manganese-54	U	-0.00468	+/-0.0177	0.0154	+/-0.0177	0.0324	pCi/g						
Niobium-94	U	0.0038	+/-0.0149	0.0129	+/-0.0149	0.027	pCi/g						
Potassium-40		11.6	+/-0.941	0.124	+/-0.941	0.271	pCi/g						
Radium-226		0.525	+/-0.0921	0.0275	+/-0.0921	0.0574	pCi/g						
Silver-108m	U	-0.000154	+/-0.0141	0.0125	+/-0.0141	0.0261	pCi/g						
Thallium-208		0.265	+/-0.044	0.014	+/-0.044	0.0293	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00386	+/-0.0163	0.0175	+/-0.0163	0.0394	pCi/g		BXF1	06/02/06	1549	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-004FS
Sample ID: 162832014

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			44		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-005F
Sample ID: 162832015
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 13.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		1.04	+/-0.213	0.0758	+/-0.213	0.158	pCi/g		MJH1	06/06/06	2350	529778	1
Americium-241	U	0.081	+/-0.0844	0.0717	+/-0.0844	0.147	pCi/g						
Bismuth-212		0.744	+/-0.264	0.147	+/-0.264	0.306	pCi/g						
Bismuth-214		0.666	+/-0.0896	0.0323	+/-0.0896	0.0672	pCi/g						
Cesium-134	UUI	0.00	+/-0.0355	0.0245	+/-0.0355	0.0509	pCi/g						
Cesium-137		0.399	+/-0.0533	0.0189	+/-0.0533	0.0393	pCi/g						
Cobalt-60		1.74	+/-0.0845	0.0184	+/-0.0845	0.0393	pCi/g						
Europium-152	U	0.016	+/-0.052	0.0457	+/-0.052	0.0944	pCi/g						
Europium-154	U	0.0483	+/-0.0602	0.0551	+/-0.0602	0.117	pCi/g						
Europium-155	U	0.028	+/-0.0485	0.0467	+/-0.0485	0.0956	pCi/g						
Lead-212		0.976	+/-0.0593	0.0274	+/-0.0593	0.0562	pCi/g						
Lead-214		0.756	+/-0.0846	0.033	+/-0.0846	0.0682	pCi/g						
Manganese-54	U	-0.00383	+/-0.0252	0.0214	+/-0.0252	0.0445	pCi/g						
Niobium-94	U	0.0245	+/-0.0192	0.0178	+/-0.0192	0.0369	pCi/g						
Potassium-40		10.5	+/-0.695	0.136	+/-0.695	0.297	pCi/g						
Radium-226		0.666	+/-0.0896	0.0323	+/-0.0896	0.0672	pCi/g						
Silver-108m	U	0.00682	+/-0.0196	0.0169	+/-0.0196	0.035	pCi/g						
Thallium-208		0.335	+/-0.0501	0.0169	+/-0.0501	0.0353	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00586	+/-0.0183	0.0193	+/-0.0183	0.0432	pCi/g		BXF1	06/02/06	1549	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-005F
Sample ID: 162832015

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			45		(25%-125%)						

Notes:

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-006F
Sample ID: 162832016
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 15.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		0.984	+/-0.130	0.046	+/-0.130	0.0966	pCi/g		MJH1	06/06/06	2351	529778	1
Americium-241	U	-0.0148	+/-0.087	0.0606	+/-0.087	0.124	pCi/g						
Bismuth-212		0.638	+/-0.246	0.101	+/-0.246	0.211	pCi/g						
Bismuth-214		0.774	+/-0.0668	0.0237	+/-0.0668	0.0493	pCi/g						
Cesium-134	UUI	0.00	+/-0.0296	0.017	+/-0.0296	0.0354	pCi/g						
Cesium-137		0.112	+/-0.0208	0.0134	+/-0.0208	0.028	pCi/g						
Cobalt-60		0.223	+/-0.0348	0.0129	+/-0.0348	0.0277	pCi/g						
Europium-152	U	-0.0103	+/-0.035	0.0319	+/-0.035	0.066	pCi/g						
Europium-154	U	-0.0358	+/-0.0508	0.0343	+/-0.0508	0.0734	pCi/g						
Europium-155	U	0.0827	+/-0.0422	0.0419	+/-0.0422	0.0855	pCi/g						
Lead-212		0.983	+/-0.0474	0.0203	+/-0.0474	0.0416	pCi/g						
Lead-214		0.823	+/-0.0628	0.024	+/-0.0628	0.0496	pCi/g						
Manganese-54	U	0.0093	+/-0.0151	0.0139	+/-0.0151	0.0291	pCi/g						
Niobium-94	U	0.0043	+/-0.0138	0.0121	+/-0.0138	0.0252	pCi/g						
Potassium-40		9.75	+/-0.555	0.105	+/-0.555	0.229	pCi/g						
Radium-226		0.774	+/-0.0668	0.0237	+/-0.0668	0.0493	pCi/g						
Silver-108m	U	-0.00725	+/-0.0123	0.0108	+/-0.0123	0.0224	pCi/g						
Thallium-208		0.351	+/-0.0337	0.0127	+/-0.0337	0.0264	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0101	+/-0.0157	0.0155	+/-0.0157	0.0342	pCi/g		BXF1	06/02/06	1833	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-006F
Sample ID: 162832016

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			42		(25%-125%)						

Notes:

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

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Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-007F
Sample ID: 162832017
Matrix: SE
Collect Date: 04-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 19.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		1.74	+/-0.191	0.0672	+/-0.191	0.141	pCi/g		MJH1	06/06/06	2351	529778	1
Americium-241	U	-0.0148	+/-0.0357	0.0336	+/-0.0357	0.0683	pCi/g						
Bismuth-212		1.11	+/-0.288	0.163	+/-0.288	0.337	pCi/g						
Bismuth-214		1.27	+/-0.0993	0.0373	+/-0.0993	0.0773	pCi/g						
Cesium-134	UUI	0.00	+/-0.0481	0.0291	+/-0.0481	0.0601	pCi/g						
Cesium-137	U	-0.00561	+/-0.0253	0.0222	+/-0.0253	0.0459	pCi/g						
Cobalt-60	U	0.00116	+/-0.0253	0.0217	+/-0.0253	0.0458	pCi/g						
Europium-152	U	-0.0221	+/-0.0593	0.0522	+/-0.0593	0.107	pCi/g						
Europium-154	U	-0.0434	+/-0.0719	0.0597	+/-0.0719	0.126	pCi/g						
Europium-155	U	0.0586	+/-0.0584	0.0546	+/-0.0584	0.111	pCi/g						
Lead-212		1.67	+/-0.0714	0.0298	+/-0.0714	0.061	pCi/g						
Lead-214		1.32	+/-0.0886	0.0358	+/-0.0886	0.0737	pCi/g						
Manganese-54	UUI	0.00	+/-0.0532	0.019	+/-0.0532	0.0398	pCi/g						
Niobium-94	U	0.0256	+/-0.0217	0.020	+/-0.0217	0.0414	pCi/g						
Potassium-40		11.4	+/-0.713	0.167	+/-0.713	0.357	pCi/g						
Radium-226		1.27	+/-0.0993	0.0373	+/-0.0993	0.0773	pCi/g						
Silver-108m	U	-0.0132	+/-0.0203	0.0172	+/-0.0203	0.0355	pCi/g						
Thallium-208		0.539	+/-0.0503	0.0204	+/-0.0503	0.0422	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00609	+/-0.0118	0.0147	+/-0.0118	0.0333	pCi/g		BXF1	06/02/06	1549	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-007F
Sample ID: 162832017

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			52		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-017F
Sample ID: 162832018
Matrix: SE
Collect Date: 04-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 21%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS</i>													
Actinium-228		0.779	+/-0.129	0.0463	+/-0.129	0.0977	pCi/g		MJH1	06/06/06	2351	529778	1
Americium-241	U-0.000356		+/-0.0171	0.0159	+/-0.0171	0.0326	pCi/g						
Bismuth-212		0.610	+/-0.204	0.0972	+/-0.204	0.204	pCi/g						
Bismuth-214		0.505	+/-0.0714	0.0229	+/-0.0714	0.0479	pCi/g						
Cesium-134	UU1	0.00	+/-0.0239	0.017	+/-0.0239	0.0355	pCi/g						
Cesium-137		0.378	+/-0.0359	0.0129	+/-0.0359	0.0271	pCi/g						
Cobalt-60		0.294	+/-0.0383	0.0124	+/-0.0383	0.0268	pCi/g						
Europium-152	U	0.0128	+/-0.0344	0.0305	+/-0.0344	0.0633	pCi/g						
Europium-154	U	-0.0423	+/-0.0448	0.0346	+/-0.0448	0.0746	pCi/g						
Europium-155	U	0.027	+/-0.0385	0.0238	+/-0.0385	0.0489	pCi/g						
Lead-212		0.741	+/-0.0393	0.017	+/-0.0393	0.0351	pCi/g						
Lead-214		0.614	+/-0.0628	0.0222	+/-0.0628	0.0461	pCi/g						
Manganese-54	U	0.0061	+/-0.0159	0.0137	+/-0.0159	0.0289	pCi/g						
Niobium-94	U	0.000512	+/-0.0139	0.012	+/-0.0139	0.0252	pCi/g						
Potassium-40		11.0	+/-0.600	0.0952	+/-0.600	0.210	pCi/g						
Radium-226		0.505	+/-0.0714	0.0229	+/-0.0714	0.0479	pCi/g						
Silver-108m	U	-0.00685	+/-0.0111	0.00983	+/-0.0111	0.0206	pCi/g						
Thallium-208		0.281	+/-0.0349	0.0126	+/-0.0349	0.0264	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0346	+/-0.0241	0.0215	+/-0.0242	0.0474	pCi/g		BXF1	06/02/06	1549	534448	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Ash Soil Prep	Ash Soil Prep, GL-RAD-A-021B	MXP2	05/15/06	0846	529742
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	05/14/06	1230	529741

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: June 9, 2006

Client Sample ID: 9106-0004-017F
Sample ID: 162832018

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			46		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

QUALITY CONTROL DATA

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

QC Summary

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

Report Date: June 9, 2006
Page 1 of 9

Contact: East Hampton, Connecticut
Mr. Jack McCarthy

Workorder: 162832

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	533471										
QC1201101118	162485017	DUP									
Americium-241	U	-0.0415	U	-0.00249	pCi/g	177		(0% - 100%)	LCW1	05/30/06	11:55
	Uncert:	+/-0.0591		+/-0.0219							
	TPU:	+/-0.0591		+/-0.0219							
Curium-242	U	-0.00755	U	0.0283	pCi/g	346		(0% - 100%)			
	Uncert:	+/-0.0634		+/-0.0555							
	TPU:	+/-0.0634		+/-0.0556							
Curium-243/244	U	0.00112	U	0.0131	pCi/g	168		(0% - 100%)			
	Uncert:	+/-0.0607		+/-0.0521							
	TPU:	+/-0.0607		+/-0.0521							
QC1201101120	LCS										
Americium-241	12.2			10.8	pCi/g		89	(75%-125%)		05/30/06	11:55
	Uncert:			+/-0.975							
	TPU:			+/-1.73							
Curium-242			U	-0.0056	pCi/g						
	Uncert:			+/-0.047							
	TPU:			+/-0.0471							
Curium-243/244	14.9			12.4	pCi/g		83	(75%-125%)			
	Uncert:			+/-1.04							
	TPU:			+/-1.95							
QC1201101117	MB										
Americium-241			U	-0.00902	pCi/g					05/30/06	11:55
	Uncert:			+/-0.019							
	TPU:			+/-0.019							
Curium-242			U	0.0399	pCi/g						
	Uncert:			+/-0.0638							
	TPU:			+/-0.064							
Curium-243/244			U	0.0392	pCi/g						
	Uncert:			+/-0.0626							
	TPU:			+/-0.0628							
QC1201101119	162485017	MS									
Americium-241	12.7 U	-0.0415		12.5	pCi/g		98	(75%-125%)		05/30/06	11:55
	Uncert:	+/-0.0591		+/-1.06							
	TPU:	+/-0.0591		+/-1.96							
Curium-242	U	-0.00755	U	0.00	pCi/g						
	Uncert:	+/-0.0634		+/-0.0517							
	TPU:	+/-0.0634		+/-0.0517							
Curium-243/244	15.5 U	0.00112			pCi/g		81	(75%-125%)			
	Uncert:	+/-0.0607		+/-1.06							
	TPU:	+/-0.0607		+/-1.98							
Batch	533472										
QC1201101122	162485017	DUP									
Plutonium-238	U	0.0261	U	0.00	pCi/g			(0% - 100%)	LCW1	05/30/06	21:29

GENERAL ENGINEERING LABORATORIES, LLC

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

QC Summary

Workorder: 162832

Page 2 of 9

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	533472										
Plutonium-239/240		Uncert:	+/-0.0511	+/-0.0498							
		TPU:	+/-0.0512	+/-0.0498							
		U	0.0459	-0.00609	pCi/g	261		(0% - 100%)			
		Uncert:	+/-0.0733	+/-0.0511							
		TPU:	+/-0.0734	+/-0.0512							
QC1201101124 LCS											
Plutonium-238				0.216	pCi/g			(75%-125%)		05/30/06	21:29
		Uncert:		+/-0.181							
		TPU:		+/-0.182							
Plutonium-239/240	11.3			10.3	pCi/g		91	(75%-125%)			
		Uncert:		+/-1.21							
		TPU:		+/-1.76							
QC1201101121 MB											
Plutonium-238			U	-0.00623	pCi/g					05/31/06	07:44
		Uncert:		+/-0.0692							
		TPU:		+/-0.0693							
Plutonium-239/240			U	-0.0274	pCi/g						
		Uncert:		+/-0.100							
		TPU:		+/-0.100							
QC1201101123 162485017 MS											
Plutonium-238		U	0.0261	0.0634	pCi/g			(75%-125%)		05/30/06	21:29
		Uncert:	+/-0.0511	+/-0.0787							
		TPU:	+/-0.0512	+/-0.079							
Plutonium-239/240	11.7	U	0.0459	10.7	pCi/g		92	(75%-125%)			
		Uncert:	+/-0.0733	+/-0.971							
		TPU:	+/-0.0734	+/-1.52							
Batch	533473										
QC1201101126 162485017 DUP											
Plutonium-241		U	-8.66	-6.36	pCi/g	0		(0% - 100%)	LCW1	06/03/06	07:35
		Uncert:	+/-8.72	+/-6.79							
		TPU:	+/-8.77	+/-6.82							
QC1201101128 LCS											
Plutonium-241		131		106	pCi/g		81	(75%-125%)		06/03/06	08:07
		Uncert:		+/-12.3							
		TPU:		+/-16.4							
QC1201101125 MB											
Plutonium-241			U	-1.18	pCi/g					06/03/06	07:18
		Uncert:		+/-9.02							
		TPU:		+/-9.02							
QC1201101127 162485017 MS											
Plutonium-241		135	U	-8.66	146	pCi/g	108	(75%-125%)		06/03/06	07:51
		Uncert:	+/-8.72	+/-14.7							
		TPU:	+/-8.77	+/-20.1							
Rad Gamma Spec											
Batch	529778										
QC1201092339 162832001 DUP											
Actinium-228			0.655	0.804	pCi/g	20		(0% - 100%)	MJH1	06/06/06	23:52
		Uncert:	+/-0.137	+/-0.0979							
				+/-0.0979							

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

QC Summary

Workorder: 162832

Page 3 of 9

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 529778											
Americium-241	U	TPU:	+/-0.137								
			0.0325	U	0.0192	pCi/g	52	(0% - 100%)			
		Uncert:	+/-0.0823		+/-0.0754						
Bismuth-212		TPU:	+/-0.0823		+/-0.0754						
			0.551		0.361	pCi/g	42	(0% - 100%)			
		Uncert:	+/-0.165		+/-0.163						
Bismuth-214		TPU:	+/-0.165		+/-0.163						
			0.447		0.498	pCi/g	11	(0% - 100%)			
		Uncert:	+/-0.0787		+/-0.0532						
Cesium-134	U	TPU:	+/-0.0787		+/-0.0532						
			0.0255	UUI	0.00	pCi/g	53	(0% - 100%)			
		Uncert:	+/-0.0237		+/-0.0216						
Cesium-137		TPU:	+/-0.0237		+/-0.0216						
			0.155		0.252	pCi/g	48	(0% - 100%)			
		Uncert:	+/-0.0273		+/-0.0264						
Cobalt-60		TPU:	+/-0.0273		+/-0.0264						
			0.256		0.361	pCi/g	34	(0% - 100%)			
		Uncert:	+/-0.046		+/-0.0362						
Europium-152	U	TPU:	+/-0.046		+/-0.0362						
			0.0135	U	-0.03	pCi/g	528	(0% - 100%)			
		Uncert:	+/-0.0376		+/-0.0305						
Europium-154	U	TPU:	+/-0.0376		+/-0.0305						
			0.000575	U	0.00301	pCi/g	136	(0% - 100%)			
		Uncert:	+/-0.048		+/-0.0385						
Europium-155	U	TPU:	+/-0.048		+/-0.0385						
			0.015	U	0.0377	pCi/g	86	(0% - 100%)			
		Uncert:	+/-0.0405		+/-0.0364						
Lead-212		TPU:	+/-0.0405		+/-0.0364						
			0.609		0.785	pCi/g	25	(0% - 20%)			
		Uncert:	+/-0.0665		+/-0.0398						
Lead-214		TPU:	+/-0.0665		+/-0.0398						
			0.566		0.640	pCi/g	12	(0% - 20%)			
		Uncert:	+/-0.0835		+/-0.053						
Manganese-54	UUI	TPU:	+/-0.0835		+/-0.053						
			0.00	U	-0.00338	pCi/g	239	(0% - 100%)			
		Uncert:	+/-0.0194		+/-0.014						
Niobium-94	U	TPU:	+/-0.0194		+/-0.014						
			0.00427	U	0.00622	pCi/g	37	(0% - 100%)			
		Uncert:	+/-0.0141		+/-0.0108						
Potassium-40		TPU:	+/-0.0141		+/-0.0108						
			10.8		12.9	pCi/g	18	(0% - 20%)			
		Uncert:	+/-0.957		+/-0.513						
Radium-226		TPU:	+/-0.957		+/-0.513						
			0.447		0.498	pCi/g	11	(0% - 100%)			
		Uncert:	+/-0.0787		+/-0.0532						
Silver-108m	U	TPU:	+/-0.0787		+/-0.0532						
			0.00155	U	0.000741	pCi/g	71	(0% - 100%)			
		Uncert:	+/-0.0131		+/-0.0105						

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

QC Summary

Workorder: 162832

Page 4 of 9

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 529778											
Thallium-208	TPU:	+/-0.0131		+/-0.0105							
		0.194		0.230	pCi/g	17		(0% - 100%)			
	Uncert:	+/-0.042		+/-0.0259							
QC1201092340 Actinium-228	TPU:	+/-0.042		+/-0.0259							
			U	0.589	pCi/g					06/06/06	20:05
	Uncert:			+/-0.539							
Americium-241	TPU:			+/-0.539							
	23.4			21.4	pCi/g		91	(75%-125%)			
	Uncert:			+/-3.52							
Bismuth-212	TPU:			+/-3.52							
			U	-0.211	pCi/g						
	Uncert:			+/-1.02							
Bismuth-214	TPU:			+/-1.02							
			U	-0.102	pCi/g						
	Uncert:			+/-0.244							
Cesium-134	TPU:			+/-0.244							
			U	-0.0153	pCi/g						
	Uncert:			+/-0.147							
Cesium-137	TPU:			+/-0.147							
	9.64			10.1	pCi/g		105	(75%-125%)			
	Uncert:			+/-0.792							
Cobalt-60	TPU:			+/-0.792							
	15.1			15.3	pCi/g		102	(75%-125%)			
	Uncert:			+/-1.14							
Europium-152	TPU:			+/-1.14							
			U	-0.0723	pCi/g						
	Uncert:			+/-0.330							
Europium-154	TPU:			+/-0.330							
			U	-0.186	pCi/g						
	Uncert:			+/-0.319							
Europium-155	TPU:			+/-0.319							
			U	-0.00538	pCi/g						
	Uncert:			+/-0.364							
Lead-212	TPU:			+/-0.364							
			U	0.193	pCi/g						
	Uncert:			+/-0.187							
Lead-214	TPU:			+/-0.187							
			U	-0.117	pCi/g						
	Uncert:			+/-0.232							
Manganese-54	TPU:			+/-0.232							
			U	0.0588	pCi/g						
	Uncert:			+/-0.137							
Niobium-94	TPU:			+/-0.137							
			U	0.00234	pCi/g						
	Uncert:			+/-0.126							
Potassium-40	TPU:			+/-0.126							
			U	-0.473	pCi/g						

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

QC Summary

Workorder: 162832

Page 5 of 9

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	529778									
			Uncert:							
			TPU:							
Radium-226		U	-0.102	pCi/g			(75%-125%)			
			Uncert:							
			TPU:							
Silver-108m		U	-0.00368	pCi/g						
			Uncert:							
			TPU:							
Thallium-208		U	-0.0624	pCi/g						
			Uncert:							
			TPU:							
QC1201092338	MB									
Actinium-228		U	0.0718	pCi/g					06/06/06	23:51
			Uncert:							
			TPU:							
Americium-241		U	0.00824	pCi/g						
			Uncert:							
			TPU:							
Bismuth-212		U	0.026	pCi/g						
			Uncert:							
			TPU:							
Bismuth-214		U	0.00907	pCi/g						
			Uncert:							
			TPU:							
Cesium-134		U	0.00557	pCi/g						
			Uncert:							
			TPU:							
Cesium-137		U	-0.0114	pCi/g						
			Uncert:							
			TPU:							
Cobalt-60		U	0.000917	pCi/g						
			Uncert:							
			TPU:							
Europium-152		U	0.0155	pCi/g						
			Uncert:							
			TPU:							
Europium-154		U	0.00784	pCi/g						
			Uncert:							
			TPU:							
Europium-155		U	0.016	pCi/g						
			Uncert:							
			TPU:							
Lead-212		UUI	0.00	pCi/g						
			Uncert:							
			TPU:							
Lead-214		U	0.0403	pCi/g						
			Uncert:							
			TPU:							

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

QC Summary

Workorder: 162832

Page 6 of 9

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	529778										
Manganese-54			U	0.00515	pCi/g						
		Uncert:		+/-0.0114							
		TPU:		+/-0.0114							
Niobium-94			U	0.00872	pCi/g						
		Uncert:		+/-0.0117							
		TPU:		+/-0.0117							
Potassium-40			U	0.0972	pCi/g						
		Uncert:		+/-0.106							
		TPU:		+/-0.106							
Radium-226			U	0.00907	pCi/g						
		Uncert:		+/-0.0339							
		TPU:		+/-0.0339							
Silver-108m			U	0.0115	pCi/g						
		Uncert:		+/-0.00907							
		TPU:		+/-0.00907							
Thallium-208			U	0.00346	pCi/g						
		Uncert:		+/-0.0168							
		TPU:		+/-0.0168							
Rad Gas Flow											
Batch	534448										
QC1201103435	162832001	DUP									
Strontium-90		U	0.0262	U	0.00157	pCi/g	0	(0% - 100%)	BXF1	06/02/06	15:47
		Uncert:	+/-0.0216		+/-0.0157						
		TPU:	+/-0.0217		+/-0.0157						
QC1201103437	LCS										
Strontium-90		1.41			1.16	pCi/g		82 (75%-125%)		06/02/06	15:47
		Uncert:			+/-0.0871						
		TPU:			+/-0.0923						
QC1201103434	MB										
Strontium-90				U	-0.000243	pCi/g				06/02/06	15:47
		Uncert:			+/-0.0111						
		TPU:			+/-0.0111						
QC1201103436	162832001	MS									
Strontium-90		1.51	U	0.0262		1.16	pCi/g		77 (75%-125%)	06/02/06	15:47
		Uncert:		+/-0.0216		+/-0.0901					
		TPU:		+/-0.0217		+/-0.0968					
Rad Liquid Scintillation											
Batch	531618										
QC1201096632	163173001	DUP									
Iron-55		U	10.3	U	5.38	pCi/g	0	(0% - 100%)	SLN1	05/31/06	12:49
		Uncert:	+/-20.1		+/-18.0						
		TPU:	+/-20.1		+/-18.1						
QC1201096634	LCS										
Iron-55		437			428	pCi/g		98 (75%-125%)		05/31/06	13:22
		Uncert:			+/-40.6						
		TPU:			+/-62.3						
QC1201096631	MB										
Iron-55				U	3.58	pCi/g				05/31/06	12:32

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

QC Summary

Workorder: 162832

Page 7 of 9

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	531618										
				Uncert:							
				TPU:							
QC1201096633	163173001	MS									
Iron-55		569	U	10.3	544	pCi/g	96	(75%-125%)		05/31/06	13:05
		Uncert:		+/-20.1	+/-39.3						
		TPU:		+/-20.1	+/-69.3						
Batch	531622										
QC1201096645	163173001	DUP									
Nickel-63			U	-6.64	-5.49	pCi/g	0	(0% - 100%)	SLN1	05/28/06	01:38
		Uncert:		+/-7.30	+/-4.33						
		TPU:		+/-7.31	+/-4.33						
QC1201096647	LCS										
Nickel-63		362			301	pCi/g	83	(75%-125%)		05/28/06	03:40
		Uncert:			+/-7.49						
		TPU:			+/-11.1						
QC1201096644	MB										
Nickel-63			U	-1.66		pCi/g				05/28/06	00:37
		Uncert:		+/-3.41							
		TPU:		+/-3.41							
QC1201096646	163173001	MS									
Nickel-63		460	U	-6.64	395	pCi/g	86	(75%-125%)		05/28/06	02:39
		Uncert:		+/-7.30	+/-9.22						
		TPU:		+/-7.31	+/-14.9						
Batch	531704										
QC1201096868	162583001	DUP									
Technetium-99			U	0.161	0.239	pCi/g	0	(0% - 100%)	SXE1	05/31/06	00:27
		Uncert:		+/-0.254	+/-0.273						
		TPU:		+/-0.255	+/-0.273						
QC1201096870	LCS										
Technetium-99		12.5			11.1	pCi/g	89	(75%-125%)		05/31/06	01:00
		Uncert:			+/-0.474						
		TPU:			+/-0.545						
QC1201096867	MB										
Technetium-99			U	0.163		pCi/g				05/31/06	00:11
		Uncert:		+/-0.214							
		TPU:		+/-0.214							
QC1201096869	162583001	MS									
Technetium-99		13.1	U	0.161	11.6	pCi/g	89	(75%-125%)		05/31/06	00:44
		Uncert:		+/-0.254	+/-0.583						
		TPU:		+/-0.255	+/-0.649						
Batch	531705										
QC1201096878	162583001	DUP									
Tritium			U	1.17	6.01	pCi/g	0	(0% - 100%)	NXP1	05/28/06	09:10
		Uncert:		+/-4.09	+/-4.70						
		TPU:		+/-4.09	+/-4.70						
QC1201096880	LCS										
Tritium		41.4			44.8	pCi/g	108	(75%-125%)		05/28/06	10:14
		Uncert:			+/-5.68						
		TPU:			+/-5.73						

GENERAL ENGINEERING LABORATORIES, LLC

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

QC Summary

Workorder: 162832

Page 8 of 9

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	531705										
QC1201096877	MB										
Tritium			U	0.0641	pCi/g					06/03/06	05:11
		Uncert:		+/-0.533							
		TPU:		+/-0.533							
QC1201096879	162583001	MS									
Tritium	45.7	U	1.17	52.3	pCi/g		114	(75%-125%)		05/28/06	09:42
	Uncert:		+/-4.09	+/-6.44							
	TPU:		+/-4.09	+/-6.50							
Batch	534984										
QC1201104746	163173001	DUP									
Carbon-14		U	0.00714	U	0.00246	pCi/g	0	(0% - 100%)	ATH2	06/05/06	03:00
	Uncert:		+/-0.0996	+/-0.103							
	TPU:		+/-0.0996	+/-0.103							
QC1201104748	LCS										
Carbon-14	12.1			11.3	pCi/g		94	(75%-125%)		06/05/06	05:20
	Uncert:			+/-0.855							
	TPU:			+/-0.873							
QC1201104745	MB										
Carbon-14			U	-0.0368	pCi/g					06/05/06	00:57
	Uncert:			+/-0.101							
	TPU:			+/-0.101							
QC1201104747	163173001	MS									
Carbon-14	12.9	U	0.00714	12.1	pCi/g		94	(75%-125%)		06/05/06	05:02
	Uncert:		+/-0.0996	+/-0.917							
	TPU:		+/-0.0996	+/-0.936							

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
- 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
- Preparation or preservation holding time was exceeded

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QC Summary

Workorder: 162832

Page 9 of 9

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

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

** Indicates analyte is a surrogate compound.

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

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

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

Table of Contents

General Narrative.....	1
Chain of Custody And Supporting Dpcumentation	5
Radiological Analysis	12
Sample Data Summary	18
Quality Control Data	60

General Narrative

**CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Soil
PO# 002332
Work Order: 170256
SDG: MSR #06-1160**

September 6, 2006

Laboratory Identification:

General Engineering Laboratories, LLC

Mailing Address:

P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:

2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:

(843) 556-8171

Summary:

Sample receipt

The sample(s) for this Project arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina on August 25, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures.

The laboratory received the following sample(s):

<u>Sample ID</u>	<u>Client Sample ID</u>
170256001	9106-0006-005A
170256002	9106-0006-005B
170256003	9106-0006-005C
170256004	9106-0006-005D
170256005	9106-0005-010A
170256006	9106-0005-010B
170256007	9106-0005-010C
170256008	9106-0005-010D
170256009	9106-0014-033A

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Phone (843) 556-8171 • Fax (843) 766-1178 • www.gel.com

170256010	9106-0014-033B
170256011	9106-0014-033C
170256012	9106-0014-033D
170256013	9106-0004-013A
170256014	9106-0004-013B
170256015	9106-0004-013C
170256016	9106-0004-013D
170256017	9106-0004-005A
170256018	9106-0004-005B
170256019	9106-0004-005C
170256020	9106-0004-005D

Items of Note:

There are no items of note.

Case Narrative:

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

Analytical Request:

Twenty soil samples were analyzed for FSSGAM and Sr-90.

Internal Chain of Custody:

Custody was maintained for the sample(s).

Data Package:

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

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



Cheryl Jones
Project Manager

GENERAL ENGINEERING LABORATORIES, LLC

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List of current GEL Certifications as of 06 September 2006

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

Chain of Custody And Supporting Documentation

Chain of Custody Form

No. 2006-00511

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

[illegible]

Connecticut Yankee Atomic Power Company 362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556						Chain of Custody Form				No. 2006-00512				
Project Name: Haddam Neck Decommissioning						Analyses Requested				Lab Use Only				
Contact Name & Phone: Jack McCarthy 860-267-3924						FSSGAM	FSSALL	Sr-90				Comments: 		
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones														
Priority: <input type="checkbox"/> 30 D. <input checked="" type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.														
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size & Type Code						Comment, Preservation	Lab Sample ID		
9106-0005-010A	8/9/06	09:03	SE	C	BP	X		X			Transferred from COC # 2006-00489			
9106-0005-010B	8/9/06	09:33	SE	C	BP	X		X			Transferred from COC # 2006-00489			
9106-0005-010C	8/9/06	10:04	SE	C	BP	X		X			Transferred from COC # 2006-00489			
9106-0005-010D	8/9/06	10:56	SE	C	BP	X		X			Transferred from COC # 2006-00489			
NOTES: PO #: 002332 MSR #: 06-1160 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA											Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: ____ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By <i>JAME RACARTE</i>			Date/Time 8-24-06 / 1340			2) Received By <i>Marian Galt</i>			Date/Time 8/25/06 0900			Bill of Lading # 7900 4639 6427		
3) Relinquished By			Date/Time			4) Received By			Date/Time					

Connecticut Yankee Atomic Power Company 362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556						Chain of Custody Form				No. 2006-00513			
Project Name: Haddam Neck Decommissioning						Analyses Requested				Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-3924						FSSGAM	FSSALL	Sr-90				Comments:	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones													
Priority: <input type="checkbox"/> 30 D. <input checked="" type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.													
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- & Type Code						Comment, Preservation	Lab Sample ID	
9106-0014-033A	8/11/06	07:58	SE	C	BP	X		X			Transferred from COC # 2006-00493		
9106-0014-033B	8/11/06	08:24	SE	C	BP	X		X			Transferred from COC # 2006-00493		
9106-0014-033C	8/11/06	08:45	SE	C	BP	X		X			Transferred from COC # 2006-00493		
9106-0014-033D	8/11/06	09:16	SE	C	BP	X		X			Transferred from COC # 2006-00493		
NOTES: PO #: 002332 MSR #: 06-1160 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA										Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: ____ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By JAMIE RICARTE			Date/Time 8-24-06/1340		2) Received By Maria S. [Signature]			Date/Time 8/25/06 0900			Bill of Lading # 7900 4639 6449		
3) Relinquished By			Date/Time		4) Received By			Date/Time					

Connecticut Yankee Atomic Power Company 362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556						Chain of Custody Form					No. 2006-00520			
Project Name: Haddam Neck Decommissioning						Analyses Requested					Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-3924						FSSGAM	FSSALL	Sr-90					Comments: 	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones														
Priority: <input type="checkbox"/> 30 D. <input checked="" type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.														
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size & Type Code						Comment, Preservation	Lab Sample ID		
9106-0004-013A	8/9/06	12:53	SE	C	BP	X		X			Transferred from COC 2006-00490			
9106-0004-013B	8/9/06	13:27	SE	C	BP	X		X			Transferred from COC 2006-00490			
9106-0004-013C	8/9/06	13:57	SE	C	BP	X		X			Transferred from COC 2006-00490			
9106-0004-013D	8/9/06	14:28	SE	C	BP	X		X			Transferred from COC 2006-00490			
9106-0004-005A	8/9/06	14:58	SE	C	BP	X		X			Transferred from COC 2006-00490			
9106-0004-005B	8/10/06	07:41	SE	C	BP	X		X			Transferred from COC 2006-00491			
9106-0004-005C	8/10/06	08:09	SE	C	BP	X		X			Transferred from COC 2006-00491			
9106-0004-005D	8/10/06	08:49	SE	C	BP	X		X			Transferred from COC 2006-00491			
NOTES: PO #: 002332 MSR #: 06-1160 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA											Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: ____ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By <i>Jaime Ricarte</i>			Date/Time 8-24-06 / 1340		2) Received By <i>Maria Gutierrez</i>			Date/Time 8/25/06 0900			Bill of Lading # 7900 4639 6449			
3) Relinquished By			Date/Time		4) Received By			Date/Time						

Figure 1. Sample Check-in List

Date/Time Received: 8/25/06

SDG#: MSR#06-1160

Work Order Number: 170256

Shipping Container ID: 7900 4639 6499 Chain of Custody #: 2006 00513, 00520

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☒ No ☐
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature 92°
5. Vermiculite/packing materials is: Wet ☒ Dry ☐
6. Number of samples in shipping container: 12
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: Marion L. Evans Date: 8/25/06 0900

Telephoned to: _____ On _____ By _____

Figure 1. Sample Check-in List

Date/Time Received: 8/25/06

SDG#: USR# 06-1160

Work Order Number: 170256

Shipping Container ID: 790046396449 Chain of Custody # 2006-00511
2006-00512

1. Custody Seals on shipping container intact? Yes ☒ No ☐

2. Custody Seals dated and signed? Yes ☒ No ☐

3. Chain-of-Custody record present? Yes ☒ No ☐

4. Cooler temperature 22°C

5. Vermiculite/packing materials is: Wet ☒ Dry ☐

6. Number of samples in shipping container: 8

7. Sample holding times exceeded? Yes ☒ No ☐

8. Samples have:

☒ tape

☐ hazard labels

☒ custody seals

☐ appropriate sample labels

9. Samples are:

☐ in good condition

☒ leaking

☒ broken

☐ have air bubbles

10. Were any anomalies identified in sample receipt? Yes ☒ No ☐

11. Description of anomalies (include sample numbers): ID# 9106-0005 -10D was leaking
and had a hole in the bag

Sample Custodian/Laboratory: Man and Lath Date: 8/25/06 0900

Telephoned to: _____ On _____ By _____

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 170256**

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: 563436
Prep Batch Number: 562444

Sample ID	Client ID
170256001	9106-0006-005A
170256002	9106-0006-005B
170256003	9106-0006-005C
170256004	9106-0006-005D
170256005	9106-0005-010A
170256006	9106-0005-010B
170256007	9106-0005-010C
170256008	9106-0005-010D
170256009	9106-0014-033A
170256010	9106-0014-033B
170256011	9106-0014-033C
170256012	9106-0014-033D
170256013	9106-0004-013A
170256014	9106-0004-013B
170256015	9106-0004-013C
170256016	9106-0004-013D
170256017	9106-0004-005A
170256018	9106-0004-005B
170256019	9106-0004-005C
170256020	9106-0004-005D
1201171525	Method Blank (MB)
1201171526	170256001(9106-0006-005A) Sample Duplicate (DUP)
1201171527	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: 170256001 (9106-0006-005A).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

Samples 170256007 (9106-0005-010C), 170256016 (9106-0004-013D) and 170256019 (9106-0004-005C) were recounted due to high MDAs.

Miscellaneous Information:

NCR Documentation

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high counting uncertainty	Bismuth-212	170256009
UI	Data rejected due to interference.	Europium-155	170256003
			170256009
			170256019
			170256020
UI	Data rejected due to low abundance.	Bismuth-214	170256008
		Cesium-134	170256005
			170256007
			170256008
			170256012
			170256013
			170256019
			1201171526
		Europium-155	170256018

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:	562563
Prep Batch Number:	562478
Dry Soil Prep GL-RAD-A-021 Batch Number:	562444

Sample ID	Client ID
170256001	9106-0006-005A
170256002	9106-0006-005B
170256003	9106-0006-005C
170256004	9106-0006-005D
170256005	9106-0005-010A
170256006	9106-0005-010B
170256007	9106-0005-010C
170256008	9106-0005-010D
170256009	9106-0014-033A
170256010	9106-0014-033B
170256011	9106-0014-033C
170256012	9106-0014-033D
170256013	9106-0004-013A
170256014	9106-0004-013B
170256015	9106-0004-013C
170256016	9106-0004-013D
170256017	9106-0004-005A
170256018	9106-0004-005B
170256019	9106-0004-005C
170256020	9106-0004-005D
1201169421	Method Blank (MB)
1201169422	170256002(9106-0006-005B) Sample Duplicate (DUP)
1201169423	170256002(9106-0006-005B) Matrix Spike (MS)
1201169424	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: 170256002 (9106-0006-005B).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

Samples were recounted due to low/high recovery.

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.

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: _____

 9/8/06

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#06-1160 GEL Work Order: 170256

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: September 8, 2006

Client Sample ID: 9106-0006-005A
Sample ID: 170256001
Matrix: SE
Collect Date: 08-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 15.8%

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

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

Rad Gamma Spec Analysis

*Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth
Waived*

Actinium-228		0.966	+/-0.192	0.0743	+/-0.192	0.149	pCi/g		MJH1	09/01/06	1057	563436	1
Americium-241	U	0.0375	+/-0.0387	0.0329	+/-0.0387	0.0658	pCi/g						
Bismuth-212		0.366	+/-0.306	0.175	+/-0.306	0.350	pCi/g						
Bismuth-214		0.650	+/-0.135	0.042	+/-0.135	0.0839	pCi/g						
Cesium-134	U	0.0366	+/-0.0355	0.0288	+/-0.0355	0.0576	pCi/g						
Cesium-137		0.0666	+/-0.0355	0.0236	+/-0.0355	0.0472	pCi/g						
Cobalt-60		0.104	+/-0.0726	0.0286	+/-0.0726	0.0573	pCi/g						
Europium-152	U	0.00636	+/-0.0728	0.0538	+/-0.0728	0.108	pCi/g						
Europium-154	U	-0.0788	+/-0.0938	0.0718	+/-0.0938	0.143	pCi/g						
Europium-155	U	0.0672	+/-0.0554	0.0518	+/-0.0554	0.104	pCi/g						
Lead-212		0.871	+/-0.0971	0.0305	+/-0.0971	0.061	pCi/g						
Lead-214		0.727	+/-0.105	0.0379	+/-0.105	0.0757	pCi/g						
Manganese-54	U	-0.00916	+/-0.0319	0.0232	+/-0.0319	0.0465	pCi/g						
Niobium-94	U	0.0101	+/-0.0244	0.0223	+/-0.0244	0.0445	pCi/g						
Potassium-40		11.3	+/-0.986	0.201	+/-0.986	0.403	pCi/g						
Radium-226		0.650	+/-0.135	0.042	+/-0.135	0.0839	pCi/g						
Silver-108m	U	-0.0067	+/-0.0208	0.018	+/-0.0208	0.036	pCi/g						
Thallium-208		0.283	+/-0.0618	0.0212	+/-0.0618	0.0423	pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Sr90, solid-ALL FSS

Strontium-90	U	0.0254	+/-0.0193	0.0126	+/-0.0193	0.0298	pCi/g		KSD1	09/07/06	1742	562563	2
--------------	---	--------	-----------	--------	-----------	--------	-------	--	------	----------	------	--------	---

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0006-005A
Sample ID: 170256001

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			96		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0006-005B
Sample ID: 170256002
Matrix: SE
Collect Date: 08-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 14.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.606	+/-0.152	0.0599	+/-0.152	0.131	pCi/g		MJH1	09/01/06	1220	563436	1
Americium-241	U	0.101	+/-0.114	0.0861	+/-0.114	0.179	pCi/g						
Bismuth-212		0.685	+/-0.232	0.134	+/-0.232	0.290	pCi/g						
Bismuth-214		0.435	+/-0.0852	0.0332	+/-0.0852	0.0708	pCi/g						
Cesium-134	U	0.0313	+/-0.0286	0.0238	+/-0.0286	0.0507	pCi/g						
Cesium-137		0.114	+/-0.0348	0.0206	+/-0.0348	0.0438	pCi/g						
Cobalt-60		0.436	+/-0.0586	0.0151	+/-0.0586	0.0345	pCi/g						
Europium-152	U	-0.0448	+/-0.0525	0.0416	+/-0.0525	0.0882	pCi/g						
Europium-154	U	-0.0186	+/-0.0685	0.0562	+/-0.0685	0.124	pCi/g						
Europium-155	U	0.0423	+/-0.0579	0.0552	+/-0.0579	0.114	pCi/g						
Lead-212		0.643	+/-0.0623	0.0268	+/-0.0623	0.056	pCi/g						
Lead-214		0.462	+/-0.0885	0.033	+/-0.0885	0.0696	pCi/g						
Manganese-54	U	-0.0167	+/-0.0261	0.0174	+/-0.0261	0.0377	pCi/g						
Niobium-94	U	0.00909	+/-0.0195	0.0173	+/-0.0195	0.0369	pCi/g						
Potassium-40		11.1	+/-0.983	0.179	+/-0.983	0.399	pCi/g						
Radium-226		0.435	+/-0.0852	0.0332	+/-0.0852	0.0708	pCi/g						
Silver-108m	U	-0.00194	+/-0.0168	0.0149	+/-0.0168	0.0317	pCi/g						
Thallium-208		0.243	+/-0.0457	0.0176	+/-0.0457	0.0377	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00501	+/-0.0149	0.0117	+/-0.0149	0.0278	pCi/g		KSD1	09/07/06	1742	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0006-005B
Sample ID: 170256002

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			101		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0006-005C
Sample ID: 170256003
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 31.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.07	+/-0.284	0.101	+/-0.284	0.215	pCi/g		MJH1	09/01/06	1221	563436	1
Americium-241	U	0.0251	+/-0.0367	0.0332	+/-0.0367	0.0683	pCi/g						
Bismuth-212		0.684	+/-0.424	0.178	+/-0.424	0.383	pCi/g						
Bismuth-214		0.673	+/-0.121	0.0445	+/-0.121	0.0947	pCi/g						
Cesium-134	U	0.0516	+/-0.0548	0.0344	+/-0.0548	0.0729	pCi/g						
Cesium-137		0.317	+/-0.0544	0.0247	+/-0.0544	0.0528	pCi/g						
Cobalt-60		0.821	+/-0.0911	0.0294	+/-0.0911	0.064	pCi/g						
Europium-152	U	-0.049	+/-0.0652	0.0539	+/-0.0652	0.114	pCi/g						
Europium-154	U	0.0883	+/-0.0913	0.0839	+/-0.0913	0.182	pCi/g						
Europium-155	UI	0.00	+/-0.0926	0.0506	+/-0.0926	0.105	pCi/g						
Lead-212		1.01	+/-0.0819	0.0329	+/-0.0819	0.0685	pCi/g						
Lead-214		0.828	+/-0.117	0.0423	+/-0.117	0.089	pCi/g						
Manganese-54	U	-0.0228	+/-0.0296	0.0238	+/-0.0296	0.0513	pCi/g						
Niobium-94	U	-0.0353	+/-0.0279	0.0205	+/-0.0279	0.044	pCi/g						
Potassium-40		12.4	+/-1.15	0.189	+/-1.15	0.431	pCi/g						
Radium-226		0.673	+/-0.121	0.0445	+/-0.121	0.0947	pCi/g						
Silver-108m	U	0.00475	+/-0.0263	0.0227	+/-0.0263	0.0477	pCi/g						
Thallium-208		0.382	+/-0.0567	0.0242	+/-0.0567	0.0515	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00738	+/-0.0142	0.0107	+/-0.0142	0.0255	pCi/g		KSD1	09/07/06	1745	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0006-005C
Sample ID: 170256003

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits					
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			104		(25%-125%)					

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0006-005D
Sample ID: 170256004
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 28.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.01	+/-0.197	0.0659	+/-0.197	0.143	pCi/g						
Americium-241	U	0.0605	+/-0.132	0.088	+/-0.132	0.182	pCi/g		MJH1	09/01/06	1221	563436	1.
Bismuth-212		0.534	+/-0.328	0.168	+/-0.328	0.358	pCi/g						
Bismuth-214		0.594	+/-0.105	0.0384	+/-0.105	0.0813	pCi/g						
Cesium-134	U	0.0478	+/-0.046	0.0253	+/-0.046	0.0537	pCi/g						
Cesium-137		0.103	+/-0.0401	0.0181	+/-0.0401	0.0389	pCi/g						
Cobalt-60		0.148	+/-0.0644	0.0204	+/-0.0644	0.045	pCi/g						
Europium-152	U	0.00143	+/-0.0589	0.0517	+/-0.0589	0.109	pCi/g						
Europium-154	U	0.0154	+/-0.0766	0.0653	+/-0.0766	0.142	pCi/g						
Europium-155	U	0.0625	+/-0.0643	0.0586	+/-0.0643	0.121	pCi/g						
Lead-212		0.900	+/-0.0831	0.0345	+/-0.0831	0.0714	pCi/g						
Lead-214		0.854	+/-0.106	0.0372	+/-0.106	0.078	pCi/g						
Manganese-54	U	-0.013	+/-0.0244	0.0203	+/-0.0244	0.0434	pCi/g						
Niobium-94	U	0.0144	+/-0.022	0.0192	+/-0.022	0.0408	pCi/g						
Potassium-40		11.6	+/-0.886	0.177	+/-0.886	0.396	pCi/g						
Radium-226		0.594	+/-0.105	0.0384	+/-0.105	0.0813	pCi/g						
Silver-108m	U	0.0118	+/-0.0187	0.0169	+/-0.0187	0.0357	pCi/g						
Thallium-208		0.310	+/-0.0591	0.0199	+/-0.0591	0.0422	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.000446	+/-0.0198	0.0166	+/-0.0198	0.0376	pCi/g		KSD1	09/07/06	1740	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0006-005D
Sample ID: 170256004

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			50		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0005-010A
Sample ID: 170256005
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 60.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.22	+/-0.394	0.120	+/-0.394	0.255	pCi/g		MJH1	09/01/06	1221	563436	1
Americium-241	U	0.0503	+/-0.0522	0.0424	+/-0.0522	0.0872	pCi/g						
Bismuth-212		0.628	+/-0.547	0.277	+/-0.547	0.584	pCi/g						
Bismuth-214		0.834	+/-0.160	0.0633	+/-0.160	0.133	pCi/g						
Cesium-134	UI	0.00	+/-0.0832	0.0429	+/-0.0832	0.0903	pCi/g						
Cesium-137	U	0.0463	+/-0.0542	0.0333	+/-0.0542	0.0703	pCi/g						
Cobalt-60	U	0.077	+/-0.0516	0.0472	+/-0.0516	0.100	pCi/g						
Europium-152	U	0.00822	+/-0.0958	0.0766	+/-0.0958	0.160	pCi/g						
Europium-154	U	0.000512	+/-0.129	0.0917	+/-0.129	0.199	pCi/g						
Europium-155	U	0.0659	+/-0.115	0.0674	+/-0.115	0.139	pCi/g						
Lead-212		0.933	+/-0.111	0.0593	+/-0.111	0.122	pCi/g						
Lead-214		0.787	+/-0.146	0.0602	+/-0.146	0.125	pCi/g						
Manganese-54	U	-0.0199	+/-0.0442	0.0342	+/-0.0442	0.0725	pCi/g						
Niobium-94	U	-0.0359	+/-0.0364	0.0275	+/-0.0364	0.0583	pCi/g						
Potassium-40		20.0	+/-1.50	0.288	+/-1.50	0.634	pCi/g						
Radium-226		0.834	+/-0.160	0.0633	+/-0.160	0.133	pCi/g						
Silver-108m	U	-0.00415	+/-0.0338	0.0282	+/-0.0338	0.0591	pCi/g						
Thallium-208		0.347	+/-0.0918	0.0332	+/-0.0918	0.0698	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00442	+/-0.0146	0.0116	+/-0.0146	0.0274	pCi/g		KSD1	09/07/06	1745	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0005-010A
Sample ID: 170256005

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			103		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0005-010B
Sample ID: 170256006
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 61.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.10	+/-0.245	0.0778	+/-0.245	0.168	pCi/g						
Americium-241	U	-0.00576	+/-0.0366	0.0263	+/-0.0366	0.0543	pCi/g		MJH1	09/01/06	1221	563436	1
Bismuth-212		0.760	+/-0.351	0.189	+/-0.351	0.402	pCi/g						
Bismuth-214		0.576	+/-0.139	0.0442	+/-0.139	0.0936	pCi/g						
Cesium-134	U	0.0332	+/-0.0438	0.0314	+/-0.0438	0.0665	pCi/g						
Cesium-137		0.0908	+/-0.0468	0.0231	+/-0.0468	0.0493	pCi/g						
Cobalt-60		0.115	+/-0.0522	0.0225	+/-0.0522	0.0499	pCi/g						
Europium-152	U	0.00833	+/-0.068	0.0546	+/-0.068	0.115	pCi/g						
Europium-154	U	-0.0828	+/-0.106	0.0808	+/-0.106	0.175	pCi/g						
Europium-155	U	0.0871	+/-0.0591	0.0504	+/-0.0591	0.104	pCi/g						
Lead-212		1.08	+/-0.0778	0.0306	+/-0.0778	0.0636	pCi/g						
Lead-214		0.812	+/-0.0928	0.0385	+/-0.0928	0.081	pCi/g						
Manganese-54	U	0.0145	+/-0.0313	0.0262	+/-0.0313	0.0557	pCi/g						
Niobium-94	U	0.00876	+/-0.0271	0.0226	+/-0.0271	0.0479	pCi/g						
Potassium-40		19.3	+/-1.35	0.236	+/-1.35	0.521	pCi/g						
Radium-226		0.576	+/-0.139	0.0442	+/-0.139	0.0936	pCi/g						
Silver-108m	U	-0.00887	+/-0.0232	0.0191	+/-0.0232	0.0403	pCi/g						
Thallium-208		0.282	+/-0.0641	0.0224	+/-0.0641	0.0475	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00561	+/-0.0185	0.0162	+/-0.0185	0.0368	pCi/g		KSD1	09/07/06	1746	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0005-010B
Sample ID: 170256006

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			89		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0005-010C
Sample ID: 170256007
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 49.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.05	+/-0.196	0.0698	+/-0.196	0.148	pCi/g						
Americium-241	U	0.00111	+/-0.108	0.0862	+/-0.108	0.177	pCi/g		MJH1	09/05/06	2124	563436	1
Bismuth-212		0.539	+/-0.392	0.142	+/-0.392	0.300	pCi/g						
Bismuth-214		0.626	+/-0.101	0.0371	+/-0.101	0.0775	pCi/g						
Cesium-134	UI	0.00	+/-0.0318	0.025	+/-0.0318	0.0524	pCi/g						
Cesium-137		0.192	+/-0.0408	0.0197	+/-0.0408	0.0414	pCi/g						
Cobalt-60		0.522	+/-0.0639	0.0211	+/-0.0639	0.0453	pCi/g						
Europium-152	U	-0.0379	+/-0.0596	0.0464	+/-0.0596	0.0966	pCi/g						
Europium-154	U	-0.0318	+/-0.0732	0.0585	+/-0.0732	0.126	pCi/g						
Europium-155	U	0.0641	+/-0.0925	0.0488	+/-0.0925	0.100	pCi/g						
Lead-212		1.14	+/-0.0696	0.0264	+/-0.0696	0.0544	pCi/g						
Lead-214		0.753	+/-0.0911	0.0337	+/-0.0911	0.070	pCi/g						
Manganese-54	U	0.0134	+/-0.0217	0.0193	+/-0.0217	0.0408	pCi/g						
Niobium-94	U	0.0073	+/-0.0216	0.0181	+/-0.0216	0.038	pCi/g						
Potassium-40		17.9	+/-1.02	0.190	+/-1.02	0.412	pCi/g						
Radium-226		0.626	+/-0.101	0.0371	+/-0.101	0.0775	pCi/g						
Silver-108m	U	0.00496	+/-0.0191	0.0165	+/-0.0191	0.0344	pCi/g						
Thallium-208		0.354	+/-0.0504	0.0183	+/-0.0504	0.0384	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00471	+/-0.0144	0.0114	+/-0.0145	0.027	pCi/g		KSD1	09/07/06	1758	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0005-010C
Sample ID: 170256007

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			101		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0005-010D
Sample ID: 170256008
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 58.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.920	+/-0.431	0.163	+/-0.431	0.345	pCi/g		MJH1	09/01/06	1222	563436	1
Americium-241	U	0.159	+/-0.0868	0.0423	+/-0.0868	0.0871	pCi/g						
Bismuth-212		0.975	+/-0.615	0.310	+/-0.615	0.654	pCi/g						
Bismuth-214	UI	0.00	+/-0.170	0.126	+/-0.170	0.259	pCi/g						
Cesium-134	UI	0.00	+/-0.0619	0.0563	+/-0.0619	0.118	pCi/g						
Cesium-137		0.630	+/-0.105	0.037	+/-0.105	0.0784	pCi/g						
Cobalt-60		2.24	+/-0.161	0.0361	+/-0.161	0.0793	pCi/g						
Europium-152	U	0.0801	+/-0.100	0.0874	+/-0.100	0.182	pCi/g						
Europium-154	U	0.159	+/-0.180	0.124	+/-0.180	0.267	pCi/g						
Europium-155	U	0.0923	+/-0.117	0.0649	+/-0.117	0.134	pCi/g						
Lead-212		1.10	+/-0.108	0.0414	+/-0.108	0.086	pCi/g						
Lead-214		0.707	+/-0.194	0.0578	+/-0.194	0.121	pCi/g						
Manganese-54	U	0.0291	+/-0.050	0.0419	+/-0.050	0.0886	pCi/g						
Niobium-94	U	0.0114	+/-0.0446	0.0367	+/-0.0446	0.0774	pCi/g						
Potassium-40		16.4	+/-1.57	0.341	+/-1.57	0.753	pCi/g						
Radium-226		0.761	+/-0.170	0.0744	+/-0.170	0.156	pCi/g						
Silver-108m	U	0.00643	+/-0.0377	0.0316	+/-0.0377	0.0662	pCi/g						
Thallium-208		0.396	+/-0.103	0.0362	+/-0.103	0.0763	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0219	+/-0.0196	0.0135	+/-0.0196	0.0315	pCi/g		KSD1	09/07/06	1805	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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East Hampton, Connecticut 06424
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: September 8, 2006

Client Sample ID: 9106-0005-010D
Sample ID: 170256008

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			97		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0014-033A
Sample ID: 170256009
Matrix: SE
Collect Date: 11-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 26.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.28	+/-0.272	0.0796	+/-0.272	0.171	pCi/g		MJH1	09/01/06	1223	563436	1
Americium-241	U	0.0199	+/-0.0632	0.0541	+/-0.0632	0.112	pCi/g						
Bismuth-212	UI	0.00	+/-0.484	0.171	+/-0.484	0.363	pCi/g						
Bismuth-214		0.920	+/-0.139	0.0421	+/-0.139	0.089	pCi/g						
Cesium-134	U	0.0188	+/-0.0338	0.0298	+/-0.0338	0.0628	pCi/g						
Cesium-137		0.709	+/-0.0983	0.0246	+/-0.0983	0.0519	pCi/g						
Cobalt-60		0.697	+/-0.0935	0.0267	+/-0.0935	0.0577	pCi/g						
Europium-152	U	-0.0119	+/-0.0643	0.0538	+/-0.0643	0.113	pCi/g						
Europium-154	U	0.0763	+/-0.0741	0.0675	+/-0.0741	0.147	pCi/g						
Europium-155	UI	0.00	+/-0.0951	0.052	+/-0.0951	0.108	pCi/g						
Lead-212		1.13	+/-0.134	0.0457	+/-0.134	0.0938	pCi/g						
Lead-214		1.04	+/-0.151	0.0416	+/-0.151	0.0871	pCi/g						
Manganese-54	U	-0.0049	+/-0.0275	0.023	+/-0.0275	0.049	pCi/g						
Niobium-94	U	0.014	+/-0.0236	0.0211	+/-0.0236	0.0446	pCi/g						
Potassium-40		14.3	+/-1.30	0.185	+/-1.30	0.412	pCi/g						
Radium-226		0.920	+/-0.139	0.0421	+/-0.139	0.089	pCi/g						
Silver-108m	U3.080E-05		+/-0.0263	0.0202	+/-0.0263	0.0424	pCi/g						
Thallium-208		0.405	+/-0.066	0.0235	+/-0.066	0.0495	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90		0.0366	+/-0.0205	0.0124	+/-0.0205	0.0291	pCi/g		KSD1	09/07/06	1807	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0014-033A
Sample ID: 170256009

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			99		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0014-033B
Sample ID: 170256010
Matrix: SE
Collect Date: 11-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 16.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.03	+/-0.272	0.113	+/-0.272	0.225	pCi/g		MJH1	09/01/06	1559	563436	1
Americium-241	U	0.037	+/-0.0519	0.0353	+/-0.0519	0.0705	pCi/g						
Bismuth-212		0.897	+/-0.563	0.237	+/-0.563	0.473	pCi/g						
Bismuth-214		0.681	+/-0.143	0.057	+/-0.143	0.114	pCi/g						
Cesium-134	U	0.062	+/-0.0748	0.0371	+/-0.0748	0.0742	pCi/g						
Cesium-137		0.862	+/-0.117	0.0301	+/-0.117	0.0601	pCi/g						
Cobalt-60		0.944	+/-0.113	0.0281	+/-0.113	0.0562	pCi/g						
Europium-152	U	0.00733	+/-0.118	0.0695	+/-0.118	0.139	pCi/g						
Europium-154	U	0.00812	+/-0.115	0.0959	+/-0.115	0.192	pCi/g						
Europium-155	U	0.0592	+/-0.0677	0.0595	+/-0.0677	0.119	pCi/g						
Lead-212		0.896	+/-0.109	0.0377	+/-0.109	0.0754	pCi/g						
Lead-214		0.773	+/-0.141	0.0491	+/-0.141	0.0981	pCi/g						
Manganese-54	U	-0.0465	+/-0.0487	0.032	+/-0.0487	0.0639	pCi/g						
Niobium-94	U	0.00334	+/-0.0333	0.029	+/-0.0333	0.0579	pCi/g						
Potassium-40		11.6	+/-1.25	0.247	+/-1.25	0.494	pCi/g						
Radium-226		0.681	+/-0.143	0.057	+/-0.143	0.114	pCi/g						
Silver-108m	U	-0.00313	+/-0.0324	0.0274	+/-0.0324	0.0548	pCi/g						
Thallium-208		0.278	+/-0.0682	0.0296	+/-0.0682	0.0592	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00794	+/-0.015	0.0113	+/-0.015	0.0268	pCi/g		KSD1	09/07/06	1807	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0014-033B
Sample ID: 170256010

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			103		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0014-033C
Sample ID: 170256011
Matrix: SE
Collect Date: 11-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 14.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
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Rad Gamma Spec Analysis

*Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth
Waived*

Actinium-228		0.841	+/-0.277	0.100	+/-0.277	0.212	pCi/g						
Americium-241	U	0.028	+/-0.048	0.0331	+/-0.048	0.068	pCi/g						
Bismuth-212		0.476	+/-0.345	0.223	+/-0.345	0.468	pCi/g						
Bismuth-214		0.628	+/-0.128	0.0439	+/-0.128	0.0928	pCi/g						
Cesium-134	U	0.0398	+/-0.0385	0.0344	+/-0.0385	0.0721	pCi/g						
Cesium-137		0.609	+/-0.0698	0.0277	+/-0.0698	0.0581	pCi/g						
Cobalt-60		0.916	+/-0.0989	0.0255	+/-0.0989	0.0552	pCi/g						
Europium-152	U	-0.0803	+/-0.0732	0.0581	+/-0.0732	0.121	pCi/g						
Europium-154	U	-0.0175	+/-0.0895	0.0738	+/-0.0895	0.159	pCi/g						
Europium-155	U	0.0335	+/-0.0642	0.0553	+/-0.0642	0.114	pCi/g						
Lead-212		0.710	+/-0.0819	0.0392	+/-0.0819	0.0808	pCi/g						
Lead-214		0.810	+/-0.110	0.0428	+/-0.110	0.0895	pCi/g						
Manganese-54	U	-0.0149	+/-0.0338	0.0272	+/-0.0338	0.0575	pCi/g						
Niobium-94	U	-0.00772	+/-0.0304	0.0254	+/-0.0304	0.0533	pCi/g						
Potassium-40		11.0	+/-1.00	0.220	+/-1.00	0.484	pCi/g						
Radium-226		0.628	+/-0.128	0.0439	+/-0.128	0.0928	pCi/g						
Silver-108m	U	0.0295	+/-0.0254	0.0239	+/-0.0254	0.0499	pCi/g						
Thallium-208		0.237	+/-0.0761	0.0244	+/-0.0761	0.0513	pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Sr90, solid-ALL FSS

Strontium-90	U	-0.0326	+/-0.013	0.0158	+/-0.013	0.0359	pCi/g						
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The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0014-033C
Sample ID: 170256011

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test	Recovery%		Acceptable Limits									
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	90		(25%-125%)									

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0014-033D
Sample ID: 170256012
Matrix: SE
Collect Date: 11-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 11.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.800	+/-0.169	0.0584	+/-0.169	0.125	pCi/g		MJH1	09/05/06	0531	563436	1
Americium-241	U	-0.00757	+/-0.0849	0.0733	+/-0.0849	0.151	pCi/g						
Bismuth-212		0.514	+/-0.239	0.125	+/-0.239	0.265	pCi/g						
Bismuth-214		0.496	+/-0.079	0.0289	+/-0.079	0.0614	pCi/g						
Cesium-134	UI	0.00	+/-0.0333	0.0215	+/-0.0333	0.0454	pCi/g						
Cesium-137		0.240	+/-0.0466	0.0172	+/-0.0466	0.0365	pCi/g						
Cobalt-60		0.329	+/-0.0616	0.0159	+/-0.0616	0.0349	pCi/g						
Europium-152	U	-0.0221	+/-0.047	0.0418	+/-0.047	0.0875	pCi/g						
Europium-154	U	-0.0277	+/-0.0651	0.0444	+/-0.0651	0.0974	pCi/g						
Europium-155	U	0.0409	+/-0.050	0.0464	+/-0.050	0.0959	pCi/g						
Lead-212		0.618	+/-0.0549	0.0246	+/-0.0549	0.0511	pCi/g						
Lead-214		0.582	+/-0.0773	0.0304	+/-0.0773	0.0635	pCi/g						
Manganese-54	U	0.0209	+/-0.0191	0.0165	+/-0.0191	0.0352	pCi/g						
Niobium-94	U	0.0124	+/-0.0174	0.0157	+/-0.0174	0.0331	pCi/g						
Potassium-40		10.8	+/-0.796	0.144	+/-0.796	0.320	pCi/g						
Radium-226		0.496	+/-0.079	0.0289	+/-0.079	0.0614	pCi/g						
Silver-108m	U	-0.00363	+/-0.0168	0.0148	+/-0.0168	0.0312	pCi/g						
Thallium-208		0.222	+/-0.040	0.0156	+/-0.040	0.033	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.020	+/-0.0174	0.0117	+/-0.0174	0.0276	pCi/g		KSD1	09/07/06	1842	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

Report Date: September 8, 2006

Client Sample ID: 9106-0014-033D
Sample ID: 170256012

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			103		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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Address : 362 Injun Hollow Rd

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-013A
Sample ID: 170256013
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 17.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.15	+/-0.162	0.0511	+/-0.162	0.109	pCi/g						
Americium-241	U	0.0596	+/-0.0865	0.0665	+/-0.0865	0.136	pCi/g		MJH1	09/01/06	1830	563436	1
Bismuth-212		0.731	+/-0.295	0.115	+/-0.295	0.242	pCi/g						
Bismuth-214		0.959	+/-0.0845	0.0284	+/-0.0845	0.0597	pCi/g						
Cesium-134	UI	0.00	+/-0.0287	0.0195	+/-0.0287	0.041	pCi/g						
Cesium-137	U	-0.00113	+/-0.0196	0.0162	+/-0.0196	0.034	pCi/g						
Cobalt-60	U	-0.00569	+/-0.0174	0.0139	+/-0.0174	0.0301	pCi/g						
Europium-152	U	-0.0275	+/-0.0539	0.0402	+/-0.0539	0.0837	pCi/g						
Europium-154	U	-0.0292	+/-0.0495	0.0385	+/-0.0495	0.0835	pCi/g						
Europium-155	U	0.0375	+/-0.0594	0.0534	+/-0.0594	0.110	pCi/g						
Lead-212		1.19	+/-0.0671	0.0261	+/-0.0671	0.0537	pCi/g						
Lead-214		1.08	+/-0.090	0.0305	+/-0.090	0.0634	pCi/g						
Manganese-54	U	0.0199	+/-0.0202	0.0165	+/-0.0202	0.0347	pCi/g						
Niobium-94	U	-6.020E-05	+/-0.0164	0.0143	+/-0.0164	0.030	pCi/g						
Potassium-40		14.3	+/-0.771	0.130	+/-0.771	0.283	pCi/g						
Radium-226		0.959	+/-0.0845	0.0284	+/-0.0845	0.0597	pCi/g						
Silver-108m	U	-0.00566	+/-0.0152	0.0128	+/-0.0152	0.0268	pCi/g						
Thallium-208		0.423	+/-0.0539	0.0142	+/-0.0539	0.030	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00331	+/-0.0151	0.0131	+/-0.0151	0.0304	pCi/g		KSD1	09/07/06	1842	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-013A
Sample ID: 170256013

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			101		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-013B
Sample ID: 170256014
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 19.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.23	+/-0.302	0.0948	+/-0.302	0.190	pCi/g						
Americium-241	U	0.0581	+/-0.0456	0.0383	+/-0.0456	0.0765	pCi/g		MJH1	09/01/06	2110	563436	1
Bismuth-212		0.606	+/-0.361	0.199	+/-0.361	0.399	pCi/g						
Bismuth-214		0.990	+/-0.154	0.046	+/-0.154	0.0919	pCi/g						
Cesium-134	U	0.0447	+/-0.0383	0.033	+/-0.0383	0.066	pCi/g						
Cesium-137		0.0831	+/-0.037	0.0286	+/-0.037	0.0571	pCi/g						
Cobalt-60		0.196	+/-0.0645	0.0258	+/-0.0645	0.0515	pCi/g						
Europium-152	U	0.0248	+/-0.116	0.061	+/-0.116	0.122	pCi/g						
Europium-154	U	0.0401	+/-0.106	0.0809	+/-0.106	0.162	pCi/g						
Europium-155	U	0.067	+/-0.0826	0.0584	+/-0.0826	0.117	pCi/g						
Lead-212		1.32	+/-0.136	0.0337	+/-0.136	0.0674	pCi/g						
Lead-214		0.989	+/-0.153	0.0431	+/-0.153	0.0862	pCi/g						
Manganese-54	U	-0.00696	+/-0.0306	0.0262	+/-0.0306	0.0523	pCi/g						
Niobium-94	U	0.00306	+/-0.0256	0.0228	+/-0.0256	0.0455	pCi/g						
Potassium-40		9.89	+/-0.996	0.207	+/-0.996	0.414	pCi/g						
Radium-226		0.990	+/-0.154	0.046	+/-0.154	0.0919	pCi/g						
Silver-108m	U	-0.017	+/-0.0253	0.0211	+/-0.0253	0.0422	pCi/g						
Thallium-208		0.456	+/-0.084	0.0253	+/-0.084	0.0505	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00221	+/-0.0172	0.0143	+/-0.0172	0.0316	pCi/g		KSD1	09/07/06	1843	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-013B
Sample ID: 170256014

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			103		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-013C
Sample ID: 170256015
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 17.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.07	+/-0.236	0.0703	+/-0.236	0.154	pCi/g		MJH1	09/01/06	2118	563436	1
Americium-241	U	-0.00337	+/-0.0367	0.034	+/-0.0367	0.0701	pCi/g						
Bismuth-212		0.808	+/-0.311	0.157	+/-0.311	0.341	pCi/g						
Bismuth-214		0.614	+/-0.118	0.0422	+/-0.118	0.0899	pCi/g						
Cesium-134	U	0.0481	+/-0.0502	0.033	+/-0.0502	0.0699	pCi/g						
Cesium-137		0.0789	+/-0.0569	0.0226	+/-0.0569	0.0484	pCi/g						
Cobalt-60		0.074	+/-0.0564	0.0239	+/-0.0564	0.0531	pCi/g						
Europium-152	U	-0.0203	+/-0.0622	0.0547	+/-0.0622	0.115	pCi/g						
Europium-154	U	-0.0129	+/-0.0828	0.0688	+/-0.0828	0.152	pCi/g						
Europium-155	U	0.0479	+/-0.0527	0.0529	+/-0.0527	0.109	pCi/g						
Lead-212		0.903	+/-0.0714	0.0332	+/-0.0714	0.069	pCi/g						
Lead-214		0.651	+/-0.103	0.0431	+/-0.103	0.0904	pCi/g						
Manganese-54	U	-0.0163	+/-0.0298	0.0235	+/-0.0298	0.0506	pCi/g						
Niobium-94	U	-0.022	+/-0.0284	0.0226	+/-0.0284	0.0481	pCi/g						
Potassium-40		12.9	+/-1.11	0.250	+/-1.11	0.553	pCi/g						
Radium-226		0.614	+/-0.118	0.0422	+/-0.118	0.0899	pCi/g						
Silver-108m	U	0.00256	+/-0.0199	0.0177	+/-0.0199	0.0378	pCi/g						
Thallium-208		0.248	+/-0.0569	0.0239	+/-0.0569	0.0508	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00157	+/-0.0143	0.0123	+/-0.0143	0.0289	pCi/g		KSD1	09/07/06	1845	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-013C
Sample ID: 170256015

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			98		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

- * A quality control analyte recovery is outside of specified acceptance criteria
 - < Result is less than value reported
 - > Result is greater than value reported
 - A The TIC is a suspected aldol-condensation product
 - B Target analyte was detected in the associated blank
 - BD Results are either below the MDC or tracer recovery is low
 - C Analyte has been confirmed by GC/MS analysis
 - D Results are reported from a diluted aliquot of the sample
 - H Analytical holding time was exceeded
 - J Value is estimated
 - N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
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 - 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: September 8, 2006

Client Sample ID: 9106-0004-013D
Sample ID: 170256016
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 25.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.03	+/-0.160	0.0664	+/-0.160	0.142	pCi/g		MJH1	09/05/06	0521	563436	1
Americium-241	U	0.0216	+/-0.0981	0.0845	+/-0.0981	0.174	pCi/g						
Bismuth-212		0.420	+/-0.350	0.142	+/-0.350	0.301	pCi/g						
Bismuth-214		0.689	+/-0.0898	0.0339	+/-0.0898	0.0715	pCi/g						
Cesium-134	U	0.0488	+/-0.0307	0.0247	+/-0.0307	0.0519	pCi/g						
Cesium-137		0.170	+/-0.0491	0.019	+/-0.0491	0.0402	pCi/g						
Cobalt-60		0.566	+/-0.0694	0.0198	+/-0.0694	0.0431	pCi/g						
Europium-152	U	0.0265	+/-0.0524	0.0453	+/-0.0524	0.0946	pCi/g						
Europium-154	U	0.0628	+/-0.0639	0.0591	+/-0.0639	0.127	pCi/g						
Europium-155	U	0.0541	+/-0.0561	0.0528	+/-0.0561	0.109	pCi/g						
Lead-212		0.958	+/-0.0653	0.0265	+/-0.0653	0.055	pCi/g						
Lead-214		0.784	+/-0.0896	0.0297	+/-0.0896	0.0623	pCi/g						
Manganese-54	U	0.00917	+/-0.0221	0.019	+/-0.0221	0.0403	pCi/g						
Niobium-94	U	0.0056	+/-0.019	0.0164	+/-0.019	0.0347	pCi/g						
Potassium-40		12.6	+/-0.931	0.166	+/-0.931	0.367	pCi/g						
Radium-226		0.689	+/-0.0898	0.0339	+/-0.0898	0.0715	pCi/g						
Silver-108m	U	-0.00656	+/-0.0175	0.0151	+/-0.0175	0.0318	pCi/g						
Thallium-208		0.314	+/-0.0426	0.0189	+/-0.0426	0.0398	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00738	+/-0.0147	0.0112	+/-0.0147	0.0265	pCi/g		KSD1	09/07/06	1846	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-013D
Sample ID: 170256016

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			106		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-005A
Sample ID: 170256017
Matrix: SE
Collect Date: 09-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 17.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.975	+/-0.164	0.0814	+/-0.164	0.174	pCi/g		MJH1	09/01/06	2119	563436	1
Americium-241	U	0.0504	+/-0.0306	0.030	+/-0.0306	0.0616	pCi/g						
Bismuth-212		0.804	+/-0.393	0.165	+/-0.393	0.351	pCi/g						
Bismuth-214		0.647	+/-0.112	0.0371	+/-0.112	0.0787	pCi/g						
Cesium-134	U	0.0288	+/-0.0288	0.0271	+/-0.0288	0.0574	pCi/g						
Cesium-137		0.249	+/-0.0491	0.0255	+/-0.0491	0.0537	pCi/g						
Cobalt-60		0.682	+/-0.0884	0.0206	+/-0.0884	0.0453	pCi/g						
Europium-152	U	0.0893	+/-0.0683	0.0526	+/-0.0683	0.110	pCi/g						
Europium-154	U	0.0167	+/-0.0707	0.0611	+/-0.0707	0.134	pCi/g						
Europium-155	U	0.00619	+/-0.0524	0.0476	+/-0.0524	0.0982	pCi/g						
Lead-212		0.912	+/-0.0658	0.0281	+/-0.0658	0.0584	pCi/g						
Lead-214		0.747	+/-0.0939	0.036	+/-0.0939	0.0755	pCi/g						
Manganese-54	U	0.0235	+/-0.0494	0.0228	+/-0.0494	0.0486	pCi/g						
Niobium-94	U	-0.00608	+/-0.0244	0.0201	+/-0.0244	0.0426	pCi/g						
Potassium-40		10.5	+/-0.910	0.155	+/-0.910	0.351	pCi/g						
Radium-226		0.647	+/-0.112	0.0371	+/-0.112	0.0787	pCi/g						
Silver-108m	U	0.00189	+/-0.0202	0.0178	+/-0.0202	0.0376	pCi/g						
Thallium-208		0.322	+/-0.0462	0.0209	+/-0.0462	0.0442	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00262	+/-0.0137	0.012	+/-0.0137	0.0286	pCi/g		KSD1	09/07/06	1857	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-005A
Sample ID: 170256017

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			92		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-005B
Sample ID: 170256018
Matrix: SE
Collect Date: 10-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 14%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.787	+/-0.187	0.0725	+/-0.187	0.153	pCi/g						
Americium-241	U	0.0759	+/-0.0649	0.0382	+/-0.0649	0.0789	pCi/g		MJH1	09/02/06	1713	563436	1
Bismuth-212		0.403	+/-0.233	0.139	+/-0.233	0.294	pCi/g						
Bismuth-214		0.636	+/-0.108	0.0306	+/-0.108	0.0647	pCi/g						
Cesium-134	U	0.0378	+/-0.0274	0.0229	+/-0.0274	0.0482	pCi/g						
Cesium-137		0.181	+/-0.0421	0.019	+/-0.0421	0.040	pCi/g						
Cobalt-60		0.710	+/-0.0716	0.0155	+/-0.0716	0.034	pCi/g						
Europium-152	U	0.0183	+/-0.0466	0.0421	+/-0.0466	0.0881	pCi/g						
Europium-154	U	0.0204	+/-0.0516	0.0449	+/-0.0516	0.0982	pCi/g						
Europium-155	UI	0.00	+/-0.0804	0.0458	+/-0.0804	0.0944	pCi/g						
Lead-212		0.722	+/-0.086	0.0317	+/-0.086	0.0651	pCi/g						
Lead-214		0.832	+/-0.115	0.0288	+/-0.115	0.0605	pCi/g						
Manganese-54	U	0.0204	+/-0.0232	0.0192	+/-0.0232	0.0406	pCi/g						
Niobium-94	U	0.0129	+/-0.0173	0.0161	+/-0.0173	0.0339	pCi/g						
Potassium-40		9.30	+/-0.895	0.130	+/-0.895	0.291	pCi/g						
Radium-226		0.636	+/-0.108	0.0306	+/-0.108	0.0647	pCi/g						
Silver-108m	U	0.0081	+/-0.0194	0.0154	+/-0.0194	0.0324	pCi/g						
Thallium-208		0.299	+/-0.0505	0.0157	+/-0.0505	0.0332	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0109	+/-0.0167	0.0123	+/-0.0167	0.0293	pCi/g		KSD1	09/07/06	1857	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-005B
Sample ID: 170256018

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			95		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-005C
Sample ID: 170256019
Matrix: SE
Collect Date: 10-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 24.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.810	+/-0.116	0.0431	+/-0.116	0.090	pCi/g						
Americium-241	U	0.0147	+/-0.0176	0.0169	+/-0.0176	0.0345	pCi/g		MJH1	09/05/06	2143	563436	1
Bismuth-212		0.365	+/-0.171	0.099	+/-0.171	0.206	pCi/g						
Bismuth-214		0.623	+/-0.0633	0.0212	+/-0.0633	0.044	pCi/g						
Cesium-134	UI	0.00	+/-0.0297	0.0166	+/-0.0297	0.0343	pCi/g						
Cesium-137		0.113	+/-0.0242	0.0124	+/-0.0242	0.0257	pCi/g						
Cobalt-60		0.268	+/-0.0379	0.012	+/-0.0379	0.0254	pCi/g						
Europium-152	U	-0.00617	+/-0.0317	0.0284	+/-0.0317	0.0585	pCi/g						
Europium-154	U	-0.0248	+/-0.0417	0.0337	+/-0.0417	0.0714	pCi/g						
Europium-155	UI	0.00	+/-0.0407	0.0265	+/-0.0407	0.054	pCi/g						
Lead-212		0.840	+/-0.0404	0.0162	+/-0.0404	0.0332	pCi/g						
Lead-214		0.686	+/-0.0505	0.0197	+/-0.0505	0.0406	pCi/g						
Manganese-54	U	0.00306	+/-0.0143	0.0127	+/-0.0143	0.0265	pCi/g						
Niobium-94	U	0.0053	+/-0.013	0.0112	+/-0.013	0.0232	pCi/g						
Potassium-40		10.2	+/-0.535	0.0857	+/-0.535	0.186	pCi/g						
Radium-226		0.623	+/-0.0633	0.0212	+/-0.0633	0.044	pCi/g						
Silver-108m	U	-0.0071	+/-0.0113	0.00971	+/-0.0113	0.0201	pCi/g						
Thallium-208		0.288	+/-0.031	0.0115	+/-0.031	0.0239	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0082	+/-0.0158	0.012	+/-0.0158	0.0284	pCi/g		KSD1	09/07/06	1857	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-005C
Sample ID: 170256019

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test				Recovery%		Acceptable Limits						
Carrier/Tracer Recovery		GFPC, Sr90, solid-ALL FSS			96		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-005D
Sample ID: 170256020
Matrix: SE
Collect Date: 10-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 19.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.995	+/-0.411	0.146	+/-0.411	0.291	pCi/g		MJH1	09/02/06	1725	563436	1
Americium-241	U	0.0557	+/-0.0479	0.0365	+/-0.0479	0.0729	pCi/g						
Bismuth-212		0.635	+/-0.589	0.261	+/-0.589	0.521	pCi/g						
Bismuth-214		0.760	+/-0.165	0.0601	+/-0.165	0.120	pCi/g						
Cesium-134	U	0.0627	+/-0.0504	0.0463	+/-0.0504	0.0926	pCi/g						
Cesium-137		0.503	+/-0.0894	0.0338	+/-0.0894	0.0676	pCi/g						
Cobalt-60		1.72	+/-0.132	0.0307	+/-0.132	0.0614	pCi/g						
Europium-152	U	0.00265	+/-0.0988	0.0745	+/-0.0988	0.149	pCi/g						
Europium-154	U	0.0538	+/-0.114	0.0996	+/-0.114	0.199	pCi/g						
Europium-155	UI	0.00	+/-0.119	0.0591	+/-0.119	0.118	pCi/g						
Lead-212		1.09	+/-0.126	0.0386	+/-0.126	0.0772	pCi/g						
Lead-214		0.802	+/-0.135	0.0517	+/-0.135	0.103	pCi/g						
Manganese-54	U	0.0185	+/-0.0434	0.0383	+/-0.0434	0.0766	pCi/g						
Niobium-94	U	-0.0168	+/-0.0366	0.0309	+/-0.0366	0.0618	pCi/g						
Potassium-40		10.7	+/-1.11	0.276	+/-1.11	0.551	pCi/g						
Radium-226		0.760	+/-0.165	0.0601	+/-0.165	0.120	pCi/g						
Silver-108m	U	-0.021	+/-0.0301	0.0247	+/-0.0301	0.0494	pCi/g						
Thallium-208		0.343	+/-0.0887	0.0298	+/-0.0887	0.0595	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00322	+/-0.0146	0.0127	+/-0.0146	0.0299	pCi/g		KSD1	09/07/06	1857	562563	2

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	08/27/06	1545	562444

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
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Certificate of Analysis

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

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

Report Date: September 8, 2006

Client Sample ID: 9106-0004-005D
Sample ID: 170256020

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Surrogate/Tracer recovery	Test	Recovery%		Acceptable Limits									
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	99		(25%-125%)									

Notes:

The Qualifiers in this report are defined as follows :

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

QUALITY CONTROL DATA

GENERAL ENGINEERING LABORATORIES, LLC
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QC Summary

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

Report Date: September 8, 2006
Page 1 of 5

Contact: East Hampton, Connecticut
Mr. Jack McCarthy

Workorder: 170256

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 563436											
QC1201171526 170256001 DUP											
Actinium-228		0.966		1.01	pCi/g	4		(0% - 100%)	MJH1	09/02/06	17:26
		Uncert: +/-0.192		+/-0.200							
		TPU: +/-0.192		+/-0.200							
Americium-241	U	0.0375	U	0.0258	pCi/g	37		(0% - 100%)			
		Uncert: +/-0.0387		+/-0.075							
		TPU: +/-0.0387		+/-0.075							
Bismuth-212		0.366		0.592	pCi/g	47		(0% - 100%)			
		Uncert: +/-0.306		+/-0.276							
		TPU: +/-0.306		+/-0.276							
Bismuth-214		0.650		0.690	pCi/g	6		(0% - 100%)			
		Uncert: +/-0.135		+/-0.0955							
		TPU: +/-0.135		+/-0.0955							
Cesium-134	U	0.0366	UI	0.00	pCi/g	56		(0% - 100%)			
		Uncert: +/-0.0355		+/-0.035							
		TPU: +/-0.0355		+/-0.035							
Cesium-137		0.0666		0.0611	pCi/g	9		(0% - 100%)			
		Uncert: +/-0.0355		+/-0.0415							
		TPU: +/-0.0355		+/-0.0415							
Cobalt-60		0.104		0.159	pCi/g	41		(0% - 100%)			
		Uncert: +/-0.0726		+/-0.0325							
		TPU: +/-0.0726		+/-0.0325							
Europium-152	U	0.00636	U	-0.00858	pCi/g	1350		(0% - 100%)			
		Uncert: +/-0.0728		+/-0.0624							
		TPU: +/-0.0728		+/-0.0624							
Europium-154	U	-0.0788	U	0.00919	pCi/g	253		(0% - 100%)			
		Uncert: +/-0.0938		+/-0.0602							
		TPU: +/-0.0938		+/-0.0602							
Europium-155	U	0.0672	U	0.0817	pCi/g	20		(0% - 100%)			
		Uncert: +/-0.0554		+/-0.0557							
		TPU: +/-0.0554		+/-0.0557							
Lead-212		0.871		0.847	pCi/g	3		(0% - 20%)			
		Uncert: +/-0.0971		+/-0.0867							
		TPU: +/-0.0971		+/-0.0867							
Lead-214		0.727		0.699	pCi/g	4		(0% - 20%)			
		Uncert: +/-0.105		+/-0.102							
		TPU: +/-0.105		+/-0.102							
Manganese-54	U	-0.00916	U	-0.00665	pCi/g	32		(0% - 100%)			
		Uncert: +/-0.0319		+/-0.0225							
		TPU: +/-0.0319		+/-0.0225							
Niobium-94	U	0.0101	U	-0.00339	pCi/g	402		(0% - 100%)			
		Uncert: +/-0.0244		+/-0.0176							
		TPU: +/-0.0244		+/-0.0176							

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QC Summary

Workorder: 170256

Page 2 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	563436										
Potassium-40		11.3		11.7	pCi/g	3		(0% - 20%)			
	Uncert:	+/-0.986		+/-1.03							
	TPU:	+/-0.986		+/-1.03							
Radium-226		0.650		0.690	pCi/g	6		(0% - 100%)			
	Uncert:	+/-0.135		+/-0.0955							
	TPU:	+/-0.135		+/-0.0955							
Silver-108m	U	-0.0067	U	0.000104	pCi/g	206		(0% - 100%)			
	Uncert:	+/-0.0208		+/-0.018							
	TPU:	+/-0.0208		+/-0.018							
Thallium-208		0.283		0.283	pCi/g	0		(0% - 100%)			
	Uncert:	+/-0.0618		+/-0.048							
	TPU:	+/-0.0618		+/-0.048							
QC1201171527	LCS										
Actinium-228			U	0.254	pCi/g					09/03/06	22:31
	Uncert:			+/-0.565							
	TPU:			+/-0.565							
Americium-241	23.4			24.1	pCi/g		103	(75%-125%)			
	Uncert:			+/-1.28							
	TPU:			+/-1.28							
Bismuth-212			U	0.575	pCi/g						
	Uncert:			+/-0.944							
	TPU:			+/-0.944							
Bismuth-214			U	0.0248	pCi/g						
	Uncert:			+/-0.213							
	TPU:			+/-0.213							
Cesium-134			U	0.00032	pCi/g						
	Uncert:			+/-0.147							
	TPU:			+/-0.147							
Cesium-137	9.58			9.84	pCi/g		103	(75%-125%)			
	Uncert:			+/-0.487							
	TPU:			+/-0.487							
Cobalt-60	14.5			14.7	pCi/g		101	(75%-125%)			
	Uncert:			+/-0.660							
	TPU:			+/-0.660							
Europium-152			U	0.125	pCi/g						
	Uncert:			+/-0.292							
	TPU:			+/-0.292							
Europium-154			U	0.0779	pCi/g						
	Uncert:			+/-0.277							
	TPU:			+/-0.277							
Europium-155			U	-0.0876	pCi/g						
	Uncert:			+/-0.277							
	TPU:			+/-0.277							
Lead-212			U	0.0524	pCi/g						
	Uncert:			+/-0.155							
	TPU:			+/-0.155							
Lead-214			U	-0.103	pCi/g						
	Uncert:			+/-0.212							

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QC Summary

Workorder: 170256

Page 3 of 5

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	563436									
Manganese-54	TPU:		+/-0.212							
		U	0.0306	pCi/g						
	Uncert:		+/-0.135							
Niobium-94	TPU:		+/-0.135							
		U	-0.0513	pCi/g						
	Uncert:		+/-0.115							
Potassium-40	TPU:		+/-0.115							
		U	0.769	pCi/g						
	Uncert:		+/-1.10							
Radium-226	TPU:		+/-1.10							
		U	0.0248	pCi/g			(75%-125%)			
	Uncert:		+/-0.213							
Silver-108m	TPU:		+/-0.213							
		U	0.0782	pCi/g						
	Uncert:		+/-0.105							
Thallium-208	TPU:		+/-0.105							
		U	0.180	pCi/g						
	Uncert:		+/-0.177							
	TPU:		+/-0.177							
QC1201171525 MB										
Actinium-228		U	0.0216	pCi/g					09/02/06	17:16
	Uncert:		+/-0.0479							
	TPU:		+/-0.0479							
Americium-241		U	-0.0654	pCi/g						
	Uncert:		+/-0.0396							
	TPU:		+/-0.0396							
Bismuth-212		U	0.110	pCi/g						
	Uncert:		+/-0.0705							
	TPU:		+/-0.0705							
Bismuth-214		U	0.00843	pCi/g						
	Uncert:		+/-0.0317							
	TPU:		+/-0.0317							
Cesium-134		U	-0.00203	pCi/g						
	Uncert:		+/-0.012							
	TPU:		+/-0.012							
Cesium-137		U	-0.00757	pCi/g						
	Uncert:		+/-0.0117							
	TPU:		+/-0.0117							
Cobalt-60		U	-0.00589	pCi/g						
	Uncert:		+/-0.0128							
	TPU:		+/-0.0128							
Europium-152		U	-0.0169	pCi/g						
	Uncert:		+/-0.0308							
	TPU:		+/-0.0308							
Europium-154		U	0.00802	pCi/g						
	Uncert:		+/-0.0305							
	TPU:		+/-0.0305							
Europium-155		U	-0.00342	pCi/g						

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QC Summary

Workorder: 170256

Page 4 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	563436										
Lead-212	Uncert:			+/-0.0294							
	TPU:			+/-0.0294							
		U		0.0151	pCi/g						
Lead-214	Uncert:			+/-0.028							
	TPU:			+/-0.028							
		U		0.00738	pCi/g						
Manganese-54	Uncert:			+/-0.0252							
	TPU:			+/-0.0252							
		U		0.0127	pCi/g						
Niobium-94	Uncert:			+/-0.0111							
	TPU:			+/-0.0111							
		U		-0.00293	pCi/g						
Potassium-40	Uncert:			+/-0.012							
	TPU:			+/-0.012							
		U		0.112	pCi/g						
Radium-226	Uncert:			+/-0.173							
	TPU:			+/-0.173							
		U		0.00843	pCi/g						
Silver-108m	Uncert:			+/-0.0317							
	TPU:			+/-0.0317							
		U		0.00354	pCi/g						
Thallium-208	Uncert:			+/-0.0115							
	TPU:			+/-0.0115							
		U		-0.011	pCi/g						
	Uncert:			+/-0.0157							
	TPU:			+/-0.0157							
Rad Gas Flow											
Batch	562563										
QC1201169422	170256002	DUP									
Strontium-90		U	0.00501	U	0.00534	pCi/g	0	(0% - 100%) KSD1		09/07/06	18:59
		Uncert:	+/-0.0149		+/-0.0155						
		TPU:	+/-0.0149		+/-0.0155						
QC1201169424	LCS										
Strontium-90		1.74			1.57	pCi/g	90	(75%-125%)		09/07/06	19:16
		Uncert:			+/-0.140						
		TPU:			+/-0.147						
QC1201169421	MB										
Strontium-90				U	0.0172	pCi/g				09/07/06	18:59
		Uncert:			+/-0.0185						
		TPU:			+/-0.0185						
QC1201169423	170256002	MS									
Strontium-90		1.74	U	0.00501	1.32	pCi/g	76	(75%-125%)		09/07/06	19:16
		Uncert:	+/-0.0149		+/-0.124						
		TPU:	+/-0.0149		+/-0.130						

Notes:

The Qualifiers in this report are defined as follows:

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QC Summary

Workorder: 170256

Page 5 of 5

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

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

** Indicates analyte is a surrogate compound.

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

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

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

General Narrative

**CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Soil
PO# 002332**

Work Order: 168404

SDG: MSR #06-0652, 06-0675, 06-0687, 06-0688, 06-0707, 06-0743, 06-0755

August 15, 2006

Laboratory Identification:

General Engineering Laboratories, LLC

Mailing Address:

P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:

2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:

(843) 556-8171

Summary:

Sample receipt

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

The laboratory received the following sample(s):

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

GENERAL ENGINEERING LABORATORIES, LLC

a Member of THE GEL GROUP, INC.

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Phone (843) 556-8171 • Fax (843) 766-1178 • www.gel.com

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

Items of Note:

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

Case Narrative:

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

Analytical Request:

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

Internal Chain of Custody:

Custody was maintained for the sample(s).

Data Package:

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

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



Cheryl Jones
Project Manager

1684041

Subject: Additional HTD analyses

From: "Dale Randall" <randall@cyapco.com>

Date: Thu, 20 Jul 2006 11:04:54 -0400

To: "Cheryl Jones" <cj@gel.com>

CC: "Clyde Newson" <Newson@CYAPCO.com>, "John McCarthy" <McCarthy@CYAPCO.com>

Cheryl:

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

Thank You,

Dale

(860) 267-3133

GEL FSSALL analyses request.xls

Content-Description: GEL FSSALL analyses request.xls

Content-Type: application/vnd.ms-excel

Content-Encoding: base64

Page 5 of 10

		Done			To be done								
Previous													
GEL ID	CY sample location IDs	FSS Gam	Sr-90	Ni-63	Am	Pu	Sr90	Pu241	Fe55	Ni63	Tc99	H3	C14
164220008	9106-0002-007F	x	x		x	x		x	x	x	x	x	x
164220012	9106-0002-011F	x	x		x	x		x	x	x	x	x	x
162335004	9106-0003-004F	x			x	x	x	x	x	x	x	x	x
162335014	9106-0003-015F	x			x	x	x	x	x	x	x	x	x
162832015	9106-0004-005F	x	x		x	x		x	x	x	x	x	x
162832009	9106-0004-015F	x	x		x	x		x	x	x	x	x	x
162485008	9106-0005-010F	x	x		x	x		x	x	x	x	x	x
162485011	9106-0005-014F	x	x		x	x		x	x	x	x	x	x
162850014	9106-0006-005F	x	x		x	x		x	x	x	x	x	x
163741005	9106-0008-006F	x	x	x	x	x		x	x		x	x	x
163741009	9106-0008-008F	x	x	x	x	x		x	x		x	x	x
164542008	9106-0009-002F	x		x	x	x	x	x	x		x	x	x
164542003	9106-0009-017F	x		x	x	x	x	x	x		x	x	x
163105009	9106-0010-001F	x		x	x	x	x	x	x		x	x	x
163105016	9106-0010-012F	x		x	x	x	x	x	x		x	x	x

Chain of Custody and Supporting Documentation

Relog 168404

Health Physics Procedure

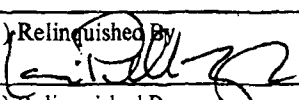
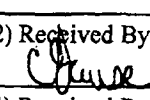
GPP-GGGR-R5104-003-Attachment B-CY-001 Major

Page 7 of 105

Connecticut Yankee Atomic Power Company 362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556						Chain of Custody Form					No. 2006-00371			
Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size- & Type Code	Analyses Requested					Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Sr-90					Comments: <div style="text-align: right; font-size: 1.2em;">164220%</div>	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones														
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.														
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID		
9106-0002-001F	5/17/06	10:42	SE	C	BP	X		X			Transferred from COC 2006-00357			
9106-0002-002F	5/18/06	09:43	SE	C	BP		X				Transferred from COC 2006-00361			
9106-0002-003F	5/18/06	10:14	SE	C	BP	X		X			Transferred from COC 2006-00361			
9106-0002-004F	5/18/06	10:39	SE	C	BP	X		X			Transferred from COC 2006-00361			
9106-0002-005F	5/18/06	12:49	SE	C	BP	X		X			Transferred from COC 2006-00364			
9106-0002-006F	5/18/06	13:14	SE	C	BP	X		X			Transferred from COC 2006-00364			
9106-0002-006FS	5/18/06	13:14	SE	C	BP	X		X			Transferred from COC 2006-00364			
9106-0002-007F	5/18/06	13:37	SE	C	BP	X		X			Transferred from COC 2006-00364			
9106-0002-008F	5/18/06	14:04	SE	C	BP	X		X			Transferred from COC 2006-00364			
NOTES: PO #: 002332 MSR #: 06- SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA 0755										Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: _____ Deg. C Custody Sealed? Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>		
1) Relinquished By			Date/Time		2) Received By			Date/Time		Bill of Lading # 7909 4145 5710				
3) Relinquished By			Date/Time		4) Received By			Date/Time						
5) Relinquished By			Date/Time		6) Received By			Date/Time						

Connecticut Yankee Atomic Power Company362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556**Chain of Custody Form**

No. 2006-00372

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size- & Type Code	Analyses Requested						Lab Use Only		
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Sr-90					Comments:	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones														
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.														
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID		
9106-0002-009F	5/18/06	14:28	SE	C	BP		X				Transferred from COC 2006-00364			
9106-0002-010F	5/18/06	14:50	SE	C	BP	X		X			Transferred from COC 2006-00364			
9106-0002-011F	5/19/06	08:10	SE	C	BP	X		X			Transferred from COC 2006-00365			
9106-0002-012F	5/19/06	08:31	SE	C	BP	X		X			Transferred from COC 2006-00365			
9106-0002-013F	5/19/06	09:00	SE	C	BP	X		X			Transferred from COC 2006-00365			
9106-0002-014F	5/19/06	09:58	SE	C	BP	X		X			Transferred from COC 2006-00365			
9106-0002-014FS	5/19/06	09:58	SE	C	BP	X		X			Transferred from COC 2006-00365			
9106-0002-015F	5/19/06	10:29	SE	C	BP	X		X			Transferred from COC 2006-00365			
9106-0002-016F	5/19/06	13:19	SE	C	BP	X		X			Transferred from COC 2006-00365			
NOTES: PO #: 002332 MSR #: 06- SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA 0755											Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: _____ Deg. C Custody Sealed? Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By 			Date/Time		2) Received By 			Date/Time			Bill of Lading # 7909 4145 5709			
3) Relinquished By			Date/Time		4) Received By			Date/Time						
5) Relinquished By			Date/Time		6) Received By			Date/Time						

Chem

Figure 1. Sample Check-in List

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

SDG#: MSR# 06-0755

Work Order Number: 1642201

Shipping Container ID: 7909 41455710 Chain of Custody #: 2006-00371

1. Custody Seals on shipping container intact? Yes ☒ No ☐

2. Custody Seals dated and signed? Yes ☒ No ☐

3. Chain-of-Custody record present? Yes ☒ No ☐

4. Cooler temperature 23°

5. Vermiculite/packing materials is: Wet ☐ Dry ☒ no packing Bot wet

6. Number of samples in shipping container: 9

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: Chase Date: 6-2-06

Telephoned to: _____ On _____ By _____

Cheryl

Figure 1. Sample Check-in List

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

SDG#: MSR#06-0755

Work Order Number: 1642201

Shipping Container ID: 1909 4145 5109 Chain of Custody #: 2006-00392

1. Custody Seals on shipping container intact? Yes ☒ No ☐

2. Custody Seals dated and signed? Yes ☒ No ☐

3. Chain-of-Custody record present? Yes ☒ No ☐

4. Cooler temperature 23°

5. Vermiculite/packing materials is: Wet ☐ Dry ☒ no packing

6. Number of samples in shipping container: 9

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: Cathy Nuss Date: 6-2-06

Telephoned to: _____ On _____ By _____



SAMPLE RECEIPT & REVIEW FORM

PM use only

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

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Coolant # ice bags blue ice dry ice none other (describe)
3 Chain of custody documents included with shipment?				
4 Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				
8 Samples received within holding time?				ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?				Sample ID's affected:
11 Number of containers received match number indicated on COC?				Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?				<u>COC # 2006-00371</u>
14 Air Bill, Tracking #'s, & Additional Comments				

Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt #
A Radiological Classification?				*If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
B PCB Regulated?	✓			Maximum Counts Observed*: <u>20 CPM</u>
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Comments:
				Hazard Class Shipped:
				UN#:
PM (or PMA) review of Hazard classification:				Initials <u>[Signature]</u> Date: <u>6/2/06</u>



SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: <u>Connecticut Yankee</u>	SDG/ARCOC/Work Order: <u>164220</u>
Date Received: <u>6-2-06</u>	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: <u>CG</u>	<u>Chy</u>

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Coolant # ice bags blue ice dry ice none other (describe)
3 Chain of custody documents included with shipment?				
4 Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				
8 Samples received within holding time?				ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?				Sample ID's affected:
11 Number of containers received match number indicated on COC?				Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?				COC # <u>2006-00371</u> <u>00372</u> <u>adj 6/2/06</u>
14 Air Bill ,Tracking #'s, & Additional Comments				

Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt #
A Radiological Classification?				*If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
B PCB Regulated?				Maximum Counts Observed*: <u>200 CPM</u>
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.				Comments:
				Hazard Class Shipped:
				UN#:
PM (or PMA) review of Hazard classification:				Initials <u>CG</u> Date: <u>6/2/06</u>

Connecticut Yankee Atomic Power Company362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556**Chain of Custody Form**

No. 2006-00312

1623347 1623351 CD 5/8/06

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size- & Type Code	Analyses Requested				Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Sr-90					Comments:
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC, 29407 843 556 8171. Attn. Cheryl Jones													
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.													
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID	
9106-0003-001F	4/24/06	14:13	SE	C	BP	X					Transferred from COC2006-00221		
9106-0003-002F	4/24/06	14:39	SE	C	BP	X					Transferred from COC2006-00221		
9106-0003-003F	4/24/06	15:01	SE	C	BP	X					Transferred from COC2006-00221		
9106-0003-004F	4/25/06	08:41	SE	C	BP	X					Transferred from COC2006-00223		
9106-0003-004FS	4/25/06	08:41	SE	C	BP	X					Transferred from COC2006-00223		
9106-0003-005F	4/25/06	09:21	SE	C	BP	X					Transferred from COC2006-00223		
9106-0003-006F	4/25/06	09:46	SE	C	BP	X					Transferred from COC2006-00223		
9106-0003-007F	4/25/06	10:28	SE	C	BP	X					Transferred from COC2006-00223		
9106-0003-008F	4/25/06	11:15	SE	C	BP		X				Transferred from COC2006-00223		
NOTES: PO #: 002332 MSR #: 06-0652 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA Combined samples 9106-0003-003F taken on 4/25/06 @08:19 and 9106-0003-003FB taken on 4/25/06 @ 08:19 in order to have sufficient sample for counting.										Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: _____ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By JAIME RICARTE			Date/Time 5-4-06/13:30			2) Received By C. Demicatto			Date/Time 5/5/06/1015			Bill of Lading # 7920-8920-0240	
3) Relinquished By			Date/Time			4) Received By			Date/Time				
5) Relinquished By			Date/Time			6) Received By			Date/Time				

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00313

~~162334~~ 162335

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:

Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)

General Engineering Laboratories
2040 Savage Road. Charleston SC. 29407
843 556 8171. Attn. Cheryl JonesPriority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Analyses Requested

Lab Use Only

Comments:

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

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

Samples Shipped Via:

☒ Fed Ex
☐ UPS
☐ Hand☐ Other

Bill of Lading #

7920-8920-0261

Internal Container
Temp. _____ Deg CCustody Sealed?
Y ☐ N ☐
Custody Seal Intact?
Y ☐ N ☐

1) Relinquished By

JAMES RICHIE

Date/Time

5-1-06 / 1330

2) Received By

C. Derricott

Date/Time

5/5/06 / 1015

3) Relinquished By

Date/Time

4) Received By

Date/Time

Cheryl

162335

Connecticut Yankee
Statement of Work for Analytical Lab Services

CY-ISC-SOW-001

Figure 1. Sample Check-in List

Date/Time Received: 5/5/06 1015

SDG#: MSR#06-0652

Work Order Number: 162335

Shipping Container ID: 7970 8920 0261 Chain of Custody #: 2006-00312
" " 0240 2006-00313

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

8. Samples have:

- | | |
|---|--|
| <input checked="" type="checkbox"/> tape | <input type="checkbox"/> hazard labels |
| <input checked="" type="checkbox"/> custody seals | <input type="checkbox"/> appropriate sample labels |

9. Samples are:

- | | |
|---|---|
| <input checked="" type="checkbox"/> in good condition | <input checked="" type="checkbox"/> leaking |
| <input type="checkbox"/> broken | <input type="checkbox"/> have air bubbles |

10. Were any anomalies identified in sample receipt? Yes ☐ No ☒

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

Sample Custodian/Laboratory: C. Derricotte Date: 5/5/06

Telephoned to: _____ On _____ By _____



SAMPLE RECEIPT & REVIEW FORM

PM use only 162335

Client: <u>Yanker</u>	SDG/ARCO/Work Order:
Date Received: <u>04/5/5/06</u>	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: <u>C. Derricotte</u>	<u>Clyde</u>

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		✓		Circle Coolant # ice bags blue ice dry ice none <u>other describe</u> <u>1900</u> <u>Peanutts</u>
3 Chain of custody documents included with shipment?	✓			
4 Sample containers intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?		✓		Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?		✓		Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			✓	
8 Samples received within holding time?	✓			Id's and tests affected:
9 Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	✓			Sample ID's affected:
11 Number of containers received match number indicated on COC?	✓			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?	✓			
14 Air Bill ,Tracking #'s, & Additional Comments				<u>FedEx #</u> <u>7920 8920 0261</u> <u>" " " 0240</u>

Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A Radiological Classification?		✓		Maximum Counts Observed*: <u>30 CPM</u>
B PCB Regulated?	✓			Comments:
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Hazard Class Shipped: UN#:
PM (or PMA) review of Hazard classification:				Initials <u>CAF</u> Date: <u>5/5/06</u>

Page 17

Chain of Custody Form

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

No. 2006-00336

Project Name: Haddam Neck Decommissioning						Analyses Requested					Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Sr-90					Comments	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones														
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.														
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- & Type Code									
9106-0004-001F	05/3/06	09:37	SE	C	BP			X	X			Transferred from COC 2006-00316		
9106-0004-002F	05/3/06	09:56	SE	C	BP	X			X			Transferred from COC 2006-00316		
9106-0004-003F	05/3/06	10:28	SE	C	BP	X			X			Transferred from COC 2006-00316		
9106-0004-004F	05/3/06	10:48	SE	C	BP	X			X			Transferred from COC 2006-00316		
9106-0004-004FS	05/3/06	10:48	SE	C	BP	X			X			Transferred from COC 2006-00316		
9106-0004-005F	05/3/06	11:07	SE	C	BP	X			X			Transferred from COC 2006-00316		
9106-0004-006F	05/3/06	12:46	SE	C	BP	X			X			Transferred from COC 2006-00317		
9106-0004-007F	05/4/06	07:55	SE	C	BP	X			X			Transferred from COC 2006-00320		
9106-0004-017F	05/4/06	09:27	SE	C	BP	X			X			Transferred from COC 2006-00320		
NOTES: PO #: 002332 MSR #: 06-0688 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA												Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other	Internal Container Temp: 72 Deg. C Custody Sealed? YES Custody Seal Intact? YES	
1) Relinquished By			Date/Time		2) Received By			Date/Time		Bill of Lading # 7919-3895-8881				
3) Relinquished By			Date/Time		4) Received By			Date/Time						

Chain of Custody Form

No. 2006-00337

Connecticut Yankee Atomic Power Company

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

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:

Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)

General Engineering Laboratories

2040 Savage Road, Charleston SC. 29407

843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Analyses Requested

Lab Use Only

Comments:

Sample Designation

Date

Time

Media
CodeSample
Type
CodeContainer
Size-
& Type
Code

FSSGAM

FSSALL

Sr-90

Comment, Preservation

Lab Sample ID

9106-0004-008F ✓

5/04/06

08:58

SE

C

BP

X

X

Transferred from COC 2006-00320

9106-0004-009F ✓

5/04/06

08:23

SE

C

BP

X

X

Transferred from COC 2006-00320

9106-0004-010F ✓

5/03/06

15:11

SE

C

BP

X

X

Transferred from COC 2006-00317

9106-0004-010FS ✓

5/03/06

15:11

SE

C

BP

X

X

Transferred from COC 2006-00317

9106-0004-011F ✓

5/03/06

13:08

SE

C

BP

X

X

Transferred from COC 2006-00317

9106-0004-012F ✓

5/03/06

13:33

SE

C

BP

X

X

Transferred from COC 2006-00317

9106-0004-013F ✓

5/03/06

13:54

SE

C

BP

X

X

Transferred from COC 2006-00317

9106-0004-014F ✓

5/03/06

14:43

SE

C

BP

X

X

Transferred from COC 2006-00317

9106-0004-015F ✓

5/03/06

14:18

SE

C

BP

X

X

Transferred from COC 2006-00317

NOTES: PO #: 002332 MSR #: 06-0699 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

Samples Shipped Via:

☒ Fed Ex☐ UPS☐ Hand☐ OtherInternal Container
Temp: 72 Deg. C

Custody Sealed?

Custody Seal Intact?

Y/N

1) Relinquished By

Date/Time

2) Received By

Date/Time

3) Relinquished By

Date/Time

4) Received By

Date/Time

Bill of Lading #

7919 3875 8872

Figure 1. Sample Check-in List

Date/Time Received: 5.12.06 09:20

SDG#: MSR#06-0688

Work Order Number: 1628321

Shipping Container ID: 7919 3895 8892 Chain of Custody # 2006-00337

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☒ No ☐
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature N/A
5. Vermiculite/packing materials is: Wet ☒ Dry ☐
6. Number of samples in shipping container: 9
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: Emily Martin Date: 5.12.06 09:20

Telephoned to: _____ On _____ By _____

Figure 1. Sample Check-in List

Date/Time Received: 5/12/06 @ 0920
SDG#: MSR #06-0688
Work Order Number: 1628321
Shipping Container ID: 7919 3895 8892
7920 Chain of Custody # 8006-00337

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

8. Samples have:

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

9. Samples are:

☐ in good condition ☒ leaking
☐ broken ☐ have air bubbles

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

Sample Custodian/Laboratory: C. Demicco Date: 5/12/06
Telephoned to: _____ On _____ By _____

Page 21 of 105



SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: <u>CT Yankee</u>	SDG/ARCO/Work Order: <u>162832</u>
Date Received: <u>5.12.06</u>	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: <u>E. Martin</u>	<u>[Signature]</u>

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		X		Circle Coolant # ice bags blue ice dry ice none other (describe)
3 Chain of custody documents included with shipment?	X			
4 Sample containers intact and sealed?			X	Circle Applicable: seals broken damaged container <u>leaking container</u> other (describe) <u>SN: 9106-0004-014F</u>
5 Samples requiring chemical preservation at proper pH?		X		Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			X	
8 Samples received within holding time?	X			Id's and tests affected:
9 Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	X			Sample ID's affected:
11 Number of containers received match number indicated on COC?	X			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?			X	<u>Coc Not Relinquished</u>
14 Air Bill ,Tracking #'s, & Additional Comments	<u>7919 3895 8892</u>			

Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt #
A Radiological Classification?		X		*If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
B PCB Regulated?	X			Maximum Counts Observed*: <u>< Bkgd.</u>
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	X			Comments: <u>Bkgd = 40 cpm</u> Hazard Class Shipped: <u>N/A</u> UN#: <u>N/A</u>
PM (or PMA) review of Hazard classification:				Initials <u>[Signature]</u> Date: <u>5/12/06</u>



SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: <u>Yankel</u>	SDG/ARCOC/Work Order: <u>162832</u>
Date Received: <u>5/12/06</u>	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: <u>C. Derricotte</u>	<u>C. Derricotte</u>

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		<input checked="" type="checkbox"/>		Circle Coolant # ice bags blue ice dry ice <u>none</u> other (describe) <u>17°C</u>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			<u>COCs are wet</u>
4 Sample containers intact and sealed?			<input checked="" type="checkbox"/>	Circle Applicable: seals broken damaged container leaking container other (describe) <u>busted bag w/ RSOs</u> <u>cooler 7970 9480 6038 (C)</u>
5 Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH: <u>8.892</u>
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			<input checked="" type="checkbox"/>	
8 Samples received within holding time?	<input checked="" type="checkbox"/>			Id's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?			<input checked="" type="checkbox"/>	<u>no COCs are relinquished</u>
14 Air Bill, Tracking #'s, & Additional Comments	<u>FedEx #'s</u> <u>see continuation sheet</u>			

Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A Radiological Classification?		<input checked="" type="checkbox"/>		Maximum Counts Observed*: <u>100 (C) 40 cpm</u>
B PCB Regulated?	<input checked="" type="checkbox"/>			Comments:
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	<input checked="" type="checkbox"/>			Hazard Class Shipped: UN#:
PM (or PMA) review of Hazard classification: _____				Initials: <u>C. Derricotte</u> Date: <u>5/12/06</u>

Connecticut Yankee Atomic Power Company362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556**Chain of Custody Form**

No. 2006-00319

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size & Type Code	Analyses Requested					Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Sr-90					Comments	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones														
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.														
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID		
9106-0005-010F	5/02/06	13:16	SE	C	BP	X		X			Transferred from COC 2006-00314			
9106-0005-011F	5/02/06	13:39	SE	C	BP	X		X			Transferred from COC 2006-00314			
9106-0005-013F	5/02/06	14:35	SE	C	BP	X		X			Transferred from COC 2006-00314			
9106-0005-014F	5/02/06	15:04	SE	C	BP	X		X			Transferred from COC 2006-00314			
9106-0005-016F	5/02/06	13:59	SE	C	BP	X		X			Transferred from COC 2006-00314			
9106-0005-015F	5/03/06	08:03	SE	C	BP	X		X			Transferred from COC 2006-00316			
9106-0005-017F	5/03/06	08:13	SE	C	BP	X		X			Transferred from COC 2006-00316			
9106-0005-018F	5/03/06	09:09	SE	C	BP	X		X			Transferred from COC 2006-00316			
9106-0005-018FS	5/03/06	09:09	SE	C	BP	X		X			Transferred from COC 2006-00316			
NOTES: PO #: 002332 MSR #: 06-0675 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA														
Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other														
1) Relinquished By <i>[Signature]</i> Date/Time 5-8-06 1440			2) Received By <i>[Signature]</i> Date/Time 5/9/06 0930			Internal Container Temp. _____ Deg. C			Custody Sealed? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N			Custody Seal Intact? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		
3) Relinquished By _____ Date/Time _____			4) Received By _____ Date/Time _____			Bill of Lading # 7920 9195 4352								

Figure 1. Sample Check-in List

Date/Time Received: 5/9/06 0930

SDG#: MSR# 06-0675

Work Order Number: 1624851

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

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☒ No ☐
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature 18°C, 19°C
5. Vermiculite/packing materials is: Wet ☒ Dry ☐
6. Number of samples in shipping container: 18
7. Sample holding times exceeded? Yes ☐ No ☒

8. Samples have:

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

9. Samples are:

☐ in good condition ☒ leaking (some bags)
☐ broken ☐ have air bubbles

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

Sample Custodian/Laboratory: Perle Date: 5/9/06 0930

Telephoned to: _____ On _____ By _____



SAMPLE RECEIPT & REVIEW FORM

PM use only

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

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Coolant # ice bags blue ice dry ice none other (describe)
3 Chain of custody documents included with shipment?				
4 Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				<u>BHC 5/9/06</u>
8 Samples received within holding time?				ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?				Sample ID's affected:
11 Number of containers received match number indicated on COC?				Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?				
14 Air Bill ,Tracking #'s, & Additional Comments				<u>Fed 7920 9195 4352 → 19°C</u> <u>Ex 4363 → 18°C</u>

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

PM (or PMA) review of Hazard classification:

Initials

Date:

Page 27

Chain of Custody Form

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

No. 2006-00332

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size & Type Code	Analyses Requested					Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Sr-90					Comments	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones														
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.														
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID		
9106-0006-004F	4/28/06	12:46	SE	C	BP	X		X			Transferred from COC 2006-00317			
9106-0006-005F	4/28/06	13:03	SE	C	BP	X		X			Transferred from COC 2006-00317			
9106-0006-006F	4/28/06	13:22	SE	C	BP	X		X			Transferred from COC 2006-00317			
9106-0006-007F	4/28/06	13:41	SE	C	BP	X		X			Transferred from COC 2006-00317			
9106-0006-007FS	4/28/06	13:41	SE	C	BP	X		X			Transferred from COC 2006-00317			
9106-0006-012F	5/01/06	13:40	SE	C	BP	X		X			Transferred from COC 2006-00317			
9106-0006-017F	5/01/06	14:03	SE	C	BP	X		X			Transferred from COC 2006-00317			

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

1) Relinquished By	Date/Time	2) Received By	Date/Time
		<i>C. DeWitt</i>	5/12/06 0920
3) Relinquished By	Date/Time	4) Received By	Date/Time

Samples Shipped Via:

☒ Fed Ex

☐ UPS

☐ Hand

☐ Other

Bill of Lading #

7 920-9480-6688

Internal Container Temp: 120 Deg. C

Custody Sealed? *YES*

Custody Seal Intact? *YES*

Figure 1. Sample Check-in List

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

SDG#: MSR#06-0687

Work Order Number: 1628501

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

1. Custody Seals on shipping container intact? Yes [] No ☒
2. Custody Seals dated and signed? Yes [] No ☒
3. Chain-of-Custody record present? Yes ☒ No []
4. Cooler temperature 1700
5. Vermiculite/packing materials is: Wet ☒ Dry []
6. Number of samples in shipping container: See cont sheet
7. Sample holding times exceeded? Yes [] No ☒

8. Samples have:

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

9. Samples are:

☒ in good condition ☐ leaking
☐ broken ☐ have air bubbles

10. Were any anomalies identified in sample receipt? Yes [] No ☒

11. Description of anomalies (include sample numbers): N/A

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

Telephoned to: _____ On _____ By _____



SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: <u>Yankel</u>	SDG/ARCOC/Work Order: <u>162832, 162850</u>
Date Received: <u>5/12/06</u>	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: <u>C. Derricotte</u>	<u>C. Derricotte</u>

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		<input checked="" type="checkbox"/>		Circle Coolant # ice bags blue ice dry ice <u>none</u> other (describe) <u>170C</u>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			<u>COGs are wet</u>
4 Sample containers intact and sealed?			<input checked="" type="checkbox"/>	Circle Applicable: seals broken damaged container leaking container other (describe) <u>busted bag w/ RSOs cooler 7920 9480 6038 (C)</u>
5 Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH: <u>8.92</u>
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			<input checked="" type="checkbox"/>	
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?			<input checked="" type="checkbox"/>	<u>no COGs are relinquished</u>

14 Air Bill ,Tracking #'s, & Additional Comments	<u>FedEx #'s</u> <u>see continuation sheet</u>
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Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A Radiological Classification?		<input checked="" type="checkbox"/>		Maximum Counts Observed*: <u>140 @ 40 cpm</u>
B PCB Regulated?	<input checked="" type="checkbox"/>			Comments:
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	<input checked="" type="checkbox"/>			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification:	Initials <u>CD</u>	Date: <u>5/12/06</u>
--	--------------------	----------------------

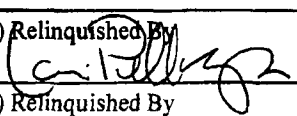
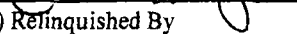
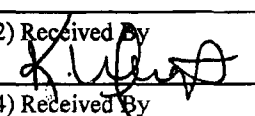
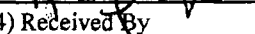


<u>Fed Ex Tok #</u>	<u>COG #</u>	<u># of containers</u>
7920 9480 6688	2006-00332	(7) Seven
- - 6611	2006-00331	(6) Six
- - 6655	2006-00330	(6) Six
7919 3895 8881	2006-00336	(9) nine
- - 8892	2006-00337	(9) nine
(this cooler had a busted sample cooler & COG is w/ RSO Emily Martin)		

Connecticut Yankee Atomic Power Company362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556**Chain of Custody Form**

No. 2006-00367

163741%

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size & Type Code	Analyses Requested						Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Sr-90	Ni-63	Comments:					
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones															
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.															
Sample Designation	Date	Time										Comment, Preservation	Lab Sample ID		
9106-0008-001F	5/05/06	11:13	SE	C	BP	X		X	X			Transferred from COC # 2006-00324			
9106-0008-003F	5/5/06	13:35	SE	C	BP	X		X	X			Transferred from COC # 2006-00325			
9106-0008-004F	5/5/06	13:51	SE	C	BP	X		X	X			Transferred from COC # 2006-00325			
9106-0008-005F	5/5/06	14:17	SE	C	BP	X		X	X			Transferred from COC # 2006-00325			
9106-0008-006F	5/5/06	14:36	SE	C	BP	X		X	X			Transferred from COC # 2006-00325			
9106-0008-006FS	5/5/06	14:36	SE	C	BP	X		X	X			Transferred from COC # 2006-00325			
9106-0008-007F	5/5/06	15:03	SE	C	BP		X					Transferred from COC # 2006-00325			
9106-0008-002F	5/5/06	13:10	SE	C	BP	X		X	X			Transferred from COC # 2006-00325			
NOTES: PO #: 002332 MSR #: 06-0743 SSWP#NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA															
1) Relinquished By  Date/Time 5/25/06 09:50												Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: ____ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
3) Relinquished By  Date/Time												2) Received By  Date/Time 5/26/06 09:30		Bill of Lading # R275154 1162	
4) Received By  Date/Time															

Connecticut Yankee Atomic Power Company362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556**Chain of Custody Form**

No. 2006-00366

163741%

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested					Lab Use Only		
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Sr-90	Ni-63			Comments:	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones													
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.													
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID	
9106-0008-008F	5/08/06	08:01	SE	C	BP	X		X	X		Transferred from COC # 2006-00327		
9106-0008-009F	5/08/06	08:32	SE	C	BP	X		X	X		Transferred from COC # 2006-00327		
9106-0008-010F	5/08/06	09:09	SE	C	BP	X		X	X		Transferred from COC # 2006-00327		
9106-0008-010FS	5/08/06	09:09	SE	C	BP	X		X	X		Transferred from COC # 2006-00327		
9106-0008-011F	5/08/06	09:30	SE	C	BP	X		X	X		Transferred from COC # 2006-00327		
9106-0008-012F	5/08/06	09:53	SE	C	BP		X				Transferred from COC # 2006-00327		
9106-0008-013F	5/08/06	10:16	SE	C	BP	X		X	X		Transferred from COC # 2006-00327		
9106-0008-014F	5/08/06	10:47	SE	C	BP	X		X	X		Transferred from COC # 2006-00327		
NOTES: PO #: 002332 MSR #: 06-0743 SSWP#NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA											Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: <u>21</u> Deg. C Custody Sealed? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>
1) Relinquished By _____ Date/Time _____			2) Received By <u>C. DeWitt</u> Date/Time <u>5/26/06 0930</u>										
3) Relinquished By _____ Date/Time _____			4) Received By _____ Date/Time _____									Bill of Lading # _____	

Figure 1. Sample Check-in List

Date/Time Received: 5/24/06 0930

SDG#: _____

Work Order Number: _____

Shipping Container ID: 7927554 1162 Chain of Custody # 2006-00367

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☐ No ☒
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature 19°C
5. Vermiculite/packing materials is: Wet ☐ Dry ☐ NA
6. Number of samples in shipping container: 8
7. Sample holding times exceeded? Yes ☐ No ☒

8. Samples have:

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

9. Samples are:

☒ in good condition ☐ leaking
☐ broken ☐ have air bubbles

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

Sample Custodian/Laboratory: K. L. [Signature] Date: 5/24/06 [Signature]

Telephoned to: _____ On _____ By _____



SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: <u>Conn. Yankee</u>		SDG/ARCOC/Work Order: <u>1637417</u>	
Date Received: <u>5/26/06</u>		PM(A) Review (ensure non-conforming items are resolved prior to signing): <u>[Signature]</u>	
Received By: <u>[Signature]</u>			

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	/			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		/		Circle Coolant # ice bags blue ice dry ice <u>none</u> other describe <u>19°C</u>
3 Chain of custody documents included with shipment?	/			
4 Sample containers intact and sealed?	/			Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?		/		Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?		/		Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			/	
8 Samples received within holding time?	/			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	/			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	/			Sample ID's affected:
11 Number of containers received match number indicated on COC?	/			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?	/			
14 Air Bill ,Tracking #'s, & Additional Comments	<u>7927 SF54 1162</u>			

Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt #
A Radiological Classification? <u>unregulated</u>	X	/		*If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
B PCB Regulated?	/			Maximum Counts Observed*: <u>cpm 20</u> <u>Per R50</u>
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	/			Comments: Hazard Class Shipped: UN#:

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



SAMPLE RECEIPT & REVIEW FORM

PM use only

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

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		<input checked="" type="checkbox"/>		Circle Coolant # ice bags blue ice dry ice <u>none</u> other (describe) <u>21°C</u>
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			<input checked="" type="checkbox"/>	
8 Samples received within holding time?	<input checked="" type="checkbox"/>			Id's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<u>not relinquished</u>
14 Air Bill ,Tracking #'s, & Additional Comments	<u>7927 5154 1173</u> <u>COC # 2604-00364</u>			

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

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

1637417

Connecticut Yankee
Statement of Work for Analytical Lab Services

CY-ISC-SOW-001

Figure 1. Sample Check-in List

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

SDG#: _____

Work Order Number: _____

Shipping Container ID: 79215K41173 Chain of Custody #: 2006-083666

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☒ No ☐
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature 21°
5. Vermiculite/packing materials is: Wet ☒ Dry ☐
6. Number of samples in shipping container: (8) eight
7. Sample holding times exceeded? Yes ☐ No ☒

8. Samples have:

<input checked="" type="checkbox"/> tape	_____ hazard labels
<input checked="" type="checkbox"/> custody seals	_____ appropriate sample labels

9. Samples are:

<input checked="" type="checkbox"/> in good condition	_____ leaking
_____ broken	_____ have air bubbles

10. Were any anomalies identified in sample receipt? Yes ☐ No ☒
11. Description of anomalies (include sample numbers): ~ / ~

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

Telephoned to: _____ On _____ By _____

164542-1

Page 37 of 105

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00380

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size & Type Code	Analyses Requested					Lab Use Only		
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Ni-63				Comments:	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones													
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.													
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID	
9106-0009-016F	5/15/06	13:28	SE	C	BP	X		X			Transferred from COC 2006-00352		
9106-0009-016FS	5/15/06	13:28	SE	C	BP	X		X			Transferred from COC 2006-00352		
9106-0009-017F	5/15/06	14:03	SE	C	BP	X		X			Transferred from COC 2006-00352		
9106-0009-011F	5/15/06	08:05	SE	C	BP		X				Transferred from COC 2006-00351		
9106-0009-013F	5/15/06	08:35	SE	C	BP	X		X			Transferred from COC 2006-00351		
9106-0009-013FS	5/15/06	08:35	SE	C	BP	X		X			Transferred from COC 2006-00351		
9106-0009-014F	5/15/06	08:59	SE	C	BP		X				Transferred from COC 2006-00351		
9106-0009-015F	5/15/06	09:36	SE	C	BP	X		X			Transferred from COC 2006-00351		
NOTES: PO #: 002332 MSR #: 06-0818 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA													
1) Relinquished By <u>Jane Riccio</u> Date/Time <u>6-7-06/11:00</u>												Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other	Internal Container Temp.: ____ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>
3) Relinquished By _____ Date/Time _____													
2) Received By <u>[Signature]</u> Date/Time <u>6-8-06 9:00</u>													
4) Received By _____ Date/Time _____												Bill of Lading # <u>7921-1915 2869</u>	

164542-1.

Page 38 of 105

Connecticut Yankee Atomic Power Company362 Injun Hollow Road, East Hampton, CT 06424
860-267-2556**Chain of Custody Form**

No. 2006-00381

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size & Type Code	Analyses Requested					Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	Ni-63					Comments:	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones														
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.														
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID		
9106-0009-001F	5/11/06	13:22	SE	C	BP	X		X			Transferred from COC 2006-00347			
9106-0009-002F	5/11/06	13:46	SE	C	BP	X		X			Transferred from COC 2006-00347			
9106-0009-003F	5/11/06	14:06	SE	C	BP	X		X			Transferred from COC 2006-00347			
9106-0009-004F	5/11/06	14:30	SE	C	BP	X		X			Transferred from COC 2006-00347			
9106-0009-005F	5/11/06	14:55	SE	C	BP	X		X			Transferred from COC 2006-00347			
9106-0009-007F	5/12/06	07:44	SE	C	BP	X		X			Transferred from COC 2006-00348			
9106-0009-008F	5/12/06	08:16	SE	C	BP	X		X			Transferred from COC 2006-00348			
9106-0009-009F	5/12/06	08:35	SE	C	BP	X		X			Transferred from COC 2006-00348			
9106-0009-010F	5/12/06	09:07	SE	C	BP	X		X			Transferred from COC 2006-00348			
NOTES: PO #: 002332 MSR #: 06- SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA												Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other	Internal Container Temp.: ____ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By JAMIE RICARTE			Date/Time 6-7-06/11:00			2) Received By A. Maly			Date/Time 6/8/06 900			Bill of Lading # 7921 1915 2858		
3) Relinquished By			Date/Time			4) Received By			Date/Time					

Cheryl 147421
164551%

CPM 40

Connecticut Yankee
Statement of Work for Analytical Lab Services

CY-ISC-SOW-001

Figure 1. Sample Check-in List

Date/Time Received: 6-8-06 900

SDG#: MSR# 06-0819, 0818

Work Order Number: 7921-1915-2868

Shipping Container ID: 11-11-8156 Chain of Custody #: 2006-00382
2006-00380
2006-00381

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

8. Samples have:	
<input checked="" type="checkbox"/> tape	<input type="checkbox"/> hazard labels
<input checked="" type="checkbox"/> custody seals	<input type="checkbox"/> appropriate sample labels
9. Samples are:	
<input checked="" type="checkbox"/> in good condition	<input type="checkbox"/> leaking
<input type="checkbox"/> broken	<input type="checkbox"/> have air bubbles

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

Sample Custodian/Laboratory: A. Maly Date: 6-8-06 900
Telephoned to: _____ On _____ By _____

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00349

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:

Jack McCarthy 860-267-2556 Ext. 3024

Analytical Lab (Name, City, State)

General Engineering Laboratories
2040 Savage Road, Charleston SC. 29407
843 556 8171. Attn. Cheryl Jones

Priority: ☒ 30 D. ☐ 14 D. ☐ 7 D.

Analyses Requested

Lab Use Only

Comments:

163105%

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

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

Samples Shipped Via:

☒ Fed Ex
☐ UPS
☐ Hand

☐ Other

Internal Container Temp.: 17 Deg. C

Custody Sealed?
Y ☒ N ☐

Custody Seal Intact?

Y ☒ N ☐

Bill of Lading #

7904-3113-8541

1) Relinquished By

Date/Time

JAMES RUARTE 5-16-06 / 1150

2) Received By

Date/Time

AMMOLIN 5/17/06 945

3) Relinquished By

Date/Time

4) Received By

Date/Time

Page 40 of 105

010
011
012
013
014
015
016
018

Figure 1. Sample Check-in List

Date/Time Received: 945 5/17/06

SDG#: MARK 06-0707

Work Order Number: 1631051

Shipping Container ID: 2904 3113 8541 Chain of Custody #: 2006-60349

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☒ No ☐
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature 17°C
5. Vermiculite/packing materials is: Wet ☒ Dry ☐
6. Number of samples in shipping container: 9
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: AMaly Date: 5-17-06

Telephoned to: _____ On _____ By _____



SAMPLE RECEIPT & REVIEW FORM

CHERYL

PM use only

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

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		<input checked="" type="checkbox"/>		Circle Coolant # ice bags blue ice dry ice <u>none</u> other (describe)
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			
4 Sample containers intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
5 Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			<input checked="" type="checkbox"/>	
8 Samples received within holding time?	<input checked="" type="checkbox"/>			ID's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?	<input checked="" type="checkbox"/>			
14 Air Bill ,Tracking #'s, & Additional Comments	<u>7904 3113 8541</u>			

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

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

List of current GEL Certifications as of 15 August 2006

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

RADIOLOGICAL ANALYSIS

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

Method/Analysis Information

Product:	Alphaspec Am241, Cm, Solid ALL FSS
Analytical Method:	DOE EML HASL-300, Am-05-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	555696
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 14.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 168340011 (9304-01-005C).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:

NCR Documentation

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Alphaspec Am241, Cm, Solid ALL FSS
Analytical Method:	DOE EML HASL-300, Am-05-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	557837
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 14.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 168404009 (9106-0006-005F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:

NCR Documentation

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Alphaspec Pu, Solid-ALL FSS
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	555697
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 14.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 168340011 (9304-01-005C).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint Pu241, Solid-ALL FSS
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	555698
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-035 REV# 8.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 168340011 (9304-01-005C).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	GFPC, Sr90, solid-ALL FSS
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	556350
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 10.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 168404003 (9106-0003-004F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Chemical Recoveries

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

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint Tc99, Solid-ALL FSS
Analytical Method:	DOE EML HASL-300, Tc-02-RC Modified
Analytical Batch Number:	554580

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-005 REV# 13.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 168340012 (9304-02-003C).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint Fe55, Solid-ALL FSS
Analytical Method:	DOE RESL Fe-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	555722
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-040 REV# 3.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 168340012 (9304-02-003C).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint Ni63, Solid-ALL FSS
Analytical Method:	DOE RESL Ni-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	555723
Prep Batch Number:	554650
Dry Soil Prep GL-RAD-A-021 Batch Number:	554649

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-022 REV# 8.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 168340012 (9304-02-003C).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: LSC, Tritium Dist, Solid-HTD2,ALL FSS

Analytical Method: EPA 906.0 Modified

Analytical Batch Number: 554582

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 12.

Calibration Information:**Calibration Information**

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:**Blank Information**

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

Designated QC

The following sample was used for QC: 168340011 (9304-01-005C).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: Liquid Scint C14, Solid All,FSS
Analytical Method: EPA EERF C-01 Modified
Analytical Batch Number: 554583

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

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-003 REV# 8.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:**Blank Information**

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

Designated QC

The following sample was used for QC: 168404003 (9106-0003-004F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Certification Statement

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

Review Validation:

GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.

The following data validator verified the information presented in this case narrative:

Reviewer/Date:

Kath Bellatt 8/22/66

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis Report for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: 168404 GEL Work Order: 168404

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
- ND The analyte concentration is not detected above the detection limit.

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

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

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



Reviewed by

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0002-007F
Sample ID: 168404001
Matrix: SE
Collect Date: 18-MAY-06
Receive Date: 02-JUN-06
Collector: Client
Moisture: 20.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.0762	+/-0.102	0.00	+/-0.102	0.0956	pCi/g	BXL1	08/11/06	1336	555696	1	
Curium-242	U	0.00	+/-0.0995	0.00	+/-0.0995	0.138	pCi/g						
Curium-243/244	U	-0.00853	+/-0.0717	0.0405	+/-0.0717	0.177	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.199	+/-0.228	0.181	+/-0.229	0.444	pCi/g	BXL1	08/11/06	1633	555697	2	
Plutonium-239/240	U	0.0341	+/-0.129	0.120	+/-0.129	0.323	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	10.0	+/-6.64	5.08	+/-6.72	10.7	pCi/g	BXL1	08/16/06	1220	555698	3	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	4.17	+/-6.67	5.28	+/-6.67	11.4	pCi/g	DFA1	08/09/06	1128	554582	4	
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14	U	0.0813	+/-0.0797	0.0634	+/-0.0797	0.132	pCi/g	ATH2	08/09/06	0324	554583	5	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	9.90	+/-48.1	32.0	+/-48.1	65.9	pCi/g	MXP1	08/12/06	1633	555722	6	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	7.02	+/-6.39	5.18	+/-6.40	10.6	pCi/g	MXP1	08/11/06	0738	555723	7	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.139	+/-0.213	0.173	+/-0.213	0.360	pCi/g	EGD1	08/11/06	2027	554580	8	

The following Prep Methods were performed

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

The following Analytical Methods were performed

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0002-007F
Sample ID: 168404001

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0002-011F
Sample ID: 168404002
Matrix: SE
Collect Date: 19-MAY-06
Receive Date: 02-JUN-06
Collector: Client
Moisture: 17.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.120	+/-0.154	0.0683	+/-0.155	0.251	pCi/g	BXL1	08/11/06	1336	555696	1	
Curium-242	U	-0.0146	+/-0.122	0.0692	+/-0.123	0.303	pCi/g						
Curium-243/244	U	-0.0103	+/-0.0861	0.0487	+/-0.0862	0.213	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.0121	+/-0.125	0.127	+/-0.125	0.344	pCi/g	BXL1	08/11/06	1633	555697	2	
Plutonium-239/240	U	0.0254	+/-0.0675	0.0381	+/-0.0675	0.167	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	6.72	+/-7.02	5.56	+/-7.05	11.7	pCi/g	BXL1	08/16/06	1237	555698	3	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	-0.521	+/-7.03	5.94	+/-7.03	12.8	pCi/g	DFA1	08/09/06	1143	554582	4	
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14	U	0.023	+/-0.0828	0.0685	+/-0.0828	0.143	pCi/g	ATH2	08/09/06	0426	554583	5	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	3.93	+/-47.7	31.9	+/-47.7	65.7	pCi/g	MXP1	08/12/06	1649	555722	6	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	7.52	+/-5.81	4.68	+/-5.81	9.60	pCi/g	MXP1	08/11/06	0825	555723	7	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.173	+/-0.203	0.164	+/-0.203	0.341	pCi/g	EGD1	08/11/06	2043	554580	8	

The following Prep Methods were performed

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

The following Analytical Methods were performed

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0002-011F
Sample ID: 168404002

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0003-004F
Sample ID: 168404003
Matrix: SE
Collect Date: 25-APR-06
Receive Date: 05-MAY-06
Collector: Client
Moisture: 23.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	-0.027	+/-0.117	0.153	+/-0.117	0.488	pCi/g	BXL1	08/13/06	0819	555696	1	
Curium-242	U	0.112	+/-0.315	0.245	+/-0.315	0.781	pCi/g						
Curium-243/244	U	0.0217	+/-0.206	0.205	+/-0.206	0.594	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.061	+/-0.189	0.176	+/-0.189	0.449	pCi/g	BXL1	08/11/06	1633	555697	2	
Plutonium-239/240	U	0.0551	+/-0.103	0.0584	+/-0.103	0.215	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	8.31	+/-5.73	4.40	+/-5.78	9.25	pCi/g	BXL1	08/16/06	1253	555698	3	
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00343	+/-0.0203	0.0172	+/-0.0203	0.036	pCi/g	BXF1	08/14/06	0834	556350	4	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2, ALL FSS</i>													
Tritium	U	0.603	+/-8.25	6.87	+/-8.25	14.8	pCi/g	DFA1	08/09/06	1159	554582	5	
<i>Liquid Scint C14, Solid All, FSS</i>													
Carbon-14	U	0.0937	+/-0.0813	0.0642	+/-0.0813	0.134	pCi/g	ATH2	08/09/06	0529	554583	6	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	7.68	+/-51.2	34.2	+/-51.2	70.4	pCi/g	MXP1	08/12/06	1706	555722	7	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	5.74	+/-7.12	6.58	+/-7.13	13.6	pCi/g	MXP1	08/11/06	0912	555723	8	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	-0.0643	+/-0.198	0.169	+/-0.198	0.351	pCi/g	EGD1	08/11/06	2059	554580	9	

The following Prep Methods were performed

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

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified

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Certificate of Analysis

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

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

Report Date: August 21, 2006

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

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

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

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
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The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0003-015F
Sample ID: 168404004
Matrix: SE
Collect Date: 25-APR-06
Receive Date: 05-MAY-06
Collector: Client
Moisture: 22.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.0456	+/-0.155	0.139	+/-0.155	0.387	pCi/g	BXL1	08/11/06	1434	555696	1	
Curium-242	U	0.113	+/-0.181	0.0733	+/-0.182	0.321	pCi/g						
Curium-243/244	U	0.180	+/-0.239	0.181	+/-0.240	0.472	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.0196	+/-0.121	0.118	+/-0.121	0.324	pCi/g	BXL1	08/11/06	1633	555697	2	
Plutonium-239/240	U	0.0326	+/-0.0639	0.00	+/-0.064	0.0884	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	6.63	+/-6.19	4.86	+/-6.22	10.2	pCi/g	BXL1	08/16/06	1309	555698	3	
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00477	+/-0.0216	0.0179	+/-0.0216	0.0375	pCi/g	BXF1	08/14/06	0834	556350	4	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	1.03	+/-7.06	5.85	+/-7.06	12.6	pCi/g	DFA1	08/09/06	1215	554582	5	
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14		0.156	+/-0.0912	0.0699	+/-0.0913	0.146	pCi/g	ATH2	08/09/06	0632	554583	6	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	-9.99	+/-42.7	28.7	+/-42.7	59.2	pCi/g	MXP1	08/12/06	1722	555722	7	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	0.939	+/-10.1	10.3	+/-10.1	21.6	pCi/g	MXP1	08/11/06	1001	555723	8	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.237	+/-0.213	0.170	+/-0.213	0.353	pCi/g	EGD1	08/11/06	2115	554580	9	

The following Prep Methods were performed

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

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified

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Certificate of Analysis

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

Report Date: August 21, 2006

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

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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- < 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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

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

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
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The above sample is reported on a dry weight basis.

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0004-005F
Sample ID: 168404005
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 15.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	-0.036	+/-0.123	0.157	+/-0.123	0.437	pCi/g	BXL1	08/11/06	1434	555696	1	
Curium-242	U	-0.0169	+/-0.033	0.080	+/-0.0331	0.350	pCi/g						
Curium-243/244	U	-0.0129	+/-0.227	0.247	+/-0.227	0.619	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.0217	+/-0.163	0.181	+/-0.163	0.444	pCi/g	BXL1	08/11/06	1633	555697	2	
Plutonium-239/240	U	-0.0708	+/-0.0791	0.128	+/-0.0795	0.337	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	9.52	+/-6.00	4.57	+/-6.07	9.61	pCi/g	BXL1	08/16/06	1326	555698	3	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	0.854	+/-5.88	4.87	+/-5.88	10.5	pCi/g	DFA1	08/09/06	1231	554582	4	
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14		0.347	+/-0.097	0.0674	+/-0.0972	0.141	pCi/g	ATH2	08/09/06	0734	554583	5	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	-1.57	+/-46.0	30.7	+/-46.0	63.2	pCi/g	MXP1	08/12/06	1738	555722	6	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	6.39	+/-7.62	7.40	+/-7.62	15.5	pCi/g	MXP1	08/11/06	1017	555723	7	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.0198	+/-0.187	0.156	+/-0.187	0.324	pCi/g	EGD1	08/11/06	2131	554580	8	

The following Prep Methods were performed

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

The following Analytical Methods were performed

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0004-005F
Sample ID: 168404005

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0004-015F
Sample ID: 168404006
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 26.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.0823	+/-0.203	0.178	+/-0.203	0.469	pCi/g		BXL1	08/11/06	1434	555696	1
Curium-242	U	-0.0154	+/-0.0301	0.0729	+/-0.0302	0.319	pCi/g						
Curium-243/244	U	-0.0994	+/-0.251	0.300	+/-0.251	0.713	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.0466	+/-0.213	0.210	+/-0.213	0.521	pCi/g		BXL1	08/11/06	1633	555697	2
Plutonium-239/240	U	-0.142	+/-0.108	0.191	+/-0.109	0.483	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	6.64	+/-6.53	5.16	+/-6.57	10.8	pCi/g		BXL1	08/16/06	1342	555698	3
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2, ALL FSS</i>													
Tritium	U	-2.9	+/-7.59	6.60	+/-7.59	14.2	pCi/g		DFA1	08/09/06	1247	554582	4
<i>Liquid Scint C14, Solid All, FSS</i>													
Carbon-14	U	0.0352	+/-0.0868	0.0713	+/-0.0868	0.149	pCi/g		ATH2	08/09/06	0837	554583	5
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	1.88	+/-46.8	31.3	+/-46.8	64.4	pCi/g		MXP1	08/12/06	1754	555722	6
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	3.88	+/-7.46	7.40	+/-7.46	15.5	pCi/g		MXP1	08/11/06	1033	555723	7
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.0894	+/-0.198	0.163	+/-0.198	0.338	pCi/g		EGD1	08/11/06	2147	554580	8

The following Prep Methods were performed

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

The following Analytical Methods were performed

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0004-015F
Sample ID: 168404006

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0005-010F
Sample ID: 168404007
Matrix: SE
Collect Date: 02-MAY-06
Receive Date: 09-MAY-06
Collector: Client
Moisture: 56.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	-0.128	+/-0.0939	0.142	+/-0.0942	0.385	pCi/g	BXL1	08/11/06	1434	555696	1	
Curium-242	U	-0.0115	+/-0.128	0.147	+/-0.128	0.450	pCi/g						
Curium-243/244	U	-0.0333	+/-0.122	0.149	+/-0.122	0.401	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.0548	+/-0.169	0.158	+/-0.170	0.403	pCi/g	BXL1	08/11/06	1633	555697	2	
Plutonium-239/240	U	0.0195	+/-0.121	0.117	+/-0.121	0.322	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	10.4	+/-6.89	5.27	+/-6.97	11.1	pCi/g	BXL1	08/16/06	1358	555698	3	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	0.00	+/-6.86	5.76	+/-6.86	12.4	pCi/g	DFA1	08/09/06	1303	554582	4	
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14	U	0.0636	+/-0.0801	0.0644	+/-0.0801	0.135	pCi/g	ATH2	08/09/06	1017	554583	5	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	36.1	+/-44.1	28.7	+/-44.1	59.0	pCi/g	MXP1	08/12/06	1811	555722	6	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	7.26	+/-10.2	10.0	+/-10.2	20.9	pCi/g	MXP1	08/11/06	1049	555723	7	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	-0.05	+/-0.199	0.169	+/-0.199	0.351	pCi/g	EGD1	08/11/06	2203	554580	8	

The following Prep Methods were performed

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

The following Analytical Methods were performed

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0005-010F
Sample ID: 168404007

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0005-014F
Sample ID: 168404008
Matrix: SE
Collect Date: 02-MAY-06
Receive Date: 09-MAY-06
Collector: Client
Moisture: 32.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.00591	+/-0.219	0.231	+/-0.219	0.608	pCi/g	BXL1	08/11/06	1434	555696	1	
Curium-242	U	-0.04	+/-0.0554	0.134	+/-0.0557	0.494	pCi/g						
Curium-243/244	U	0.0634	+/-0.261	0.249	+/-0.261	0.646	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.0694	+/-0.106	0.160	+/-0.106	0.434	pCi/g	BXL1	08/11/06	1633	555697	2	
Plutonium-239/240	U	-0.0287	+/-0.098	0.127	+/-0.0981	0.369	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	4.68	+/-8.01	6.48	+/-8.02	13.6	pCi/g	BXL1	08/16/06	1415	555698	3	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	6.02	+/-6.38	4.90	+/-6.38	10.6	pCi/g	DFA1	08/09/06	1319	554582	4	
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14	U	0.0892	+/-0.0827	0.0655	+/-0.0827	0.137	pCi/g	ATH2	08/09/06	1424	554583	5	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	19.8	+/-46.3	30.6	+/-46.3	62.9	pCi/g	MXP1	08/12/06	1827	555722	6	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	5.41	+/-7.91	7.77	+/-7.91	16.2	pCi/g	MXP1	08/11/06	1106	555723	7	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	-0.134	+/-0.192	0.167	+/-0.192	0.346	pCi/g	EGD1	08/11/06	2218	554580	8	

The following Prep Methods were performed

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

The following Analytical Methods were performed

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

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

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

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

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

Notes:

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0006-005F
Sample ID: 168404009
Matrix: SE
Collect Date: 28-APR-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 16.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	-0.0851	+/-0.136	0.106	+/-0.136	0.390	pCi/g		BXL1	08/16/06	0949	557837	1
Curium-242	U	-0.0253	+/-0.0495	0.120	+/-0.0496	0.525	pCi/g						
Curium-243/244	U	-0.0479	+/-0.0542	0.131	+/-0.0545	0.443	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.0183	+/-0.113	0.110	+/-0.113	0.303	pCi/g		BXL1	08/11/06	1633	555697	3
Plutonium-239/240	U	0.00122	+/-0.0662	0.0694	+/-0.0662	0.221	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	4.43	+/-5.83	4.67	+/-5.85	9.82	pCi/g		BXL1	08/16/06	1431	555698	4
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	-2.02	+/-6.67	5.76	+/-6.67	12.4	pCi/g		DFA1	08/09/06	1335	554582	5
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14		0.142	+/-0.0798	0.061	+/-0.0799	0.127	pCi/g		ATH2	08/09/06	1719	554583	6
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	12.6	+/-47.6	31.7	+/-47.6	65.3	pCi/g		MXPI	08/12/06	1843	555722	7
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	7.70	+/-9.56	9.31	+/-9.56	19.5	pCi/g		MXPI	08/11/06	1122	555723	8
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	-0.00659	+/-0.185	0.156	+/-0.185	0.323	pCi/g		EGD1	08/11/06	2234	554580	9

The following Prep Methods were performed

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

The following Analytical Methods were performed

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

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

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

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

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

Notes:

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0008-006F
Sample ID: 168404010
Matrix: SE
Collect Date: 05-MAY-06
Receive Date: 26-MAY-06
Collector: Client
Moisture: 34.8%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.129	+/-0.195	0.0758	+/-0.196	0.332	pCi/g	BXL1	08/16/06	0949	557837	1	
Curium-242	U	0.103	+/-0.202	0.00	+/-0.203	0.280	pCi/g						
Curium-243/244	U	-0.0161	+/-0.0316	0.0766	+/-0.0317	0.335	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.0276	+/-0.0711	0.0967	+/-0.0712	0.275	pCi/g	BXL1	08/11/06	1633	555697	3	
Plutonium-239/240	U	0.00359	+/-0.113	0.118	+/-0.113	0.317	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241		14.9	+/-6.37	4.64	+/-6.51	9.75	pCi/g	BXL1	08/16/06	1447	555698	4	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	0.00	+/-6.06	5.09	+/-6.06	10.7	pCi/g	DFA1	08/10/06	2150	554582	5	
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14	U	0.107	+/-0.0846	0.0664	+/-0.0846	0.139	pCi/g	ATH2	08/09/06	1822	554583	6	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	15.1	+/-41.4	27.5	+/-41.4	56.6	pCi/g	MXP1	08/12/06	1900	555722	7	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.258	+/-0.225	0.179	+/-0.225	0.373	pCi/g	EGD1	08/11/06	2251	554580	8	

The following Prep Methods were performed

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

The following Analytical Methods were performed

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

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

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
8		DOE EML HASL-300, Tc-02-RC Modified											
Surrogate/Tracer recovery	Test	Recovery%		Acceptable Limits									
Americium-243	Alphaspec Am241, Cm, Solid ALL	77		(15%-125%)									
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	94		(15%-125%)									
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	103		(25%-125%)									
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	72		(15%-125%)									
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	71		(15%-125%)									

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0008-008F
Sample ID: 168404011
Matrix: SE
Collect Date: 08-MAY-06
Receive Date: 26-MAY-06
Collector: Client
Moisture: 35.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.0969	+/-0.192	0.152	+/-0.193	0.426	pCi/g	BXL1	08/11/06	1434	555696	1	
Curium-242	U	-0.0482	+/-0.142	0.132	+/-0.142	0.446	pCi/g						
Curium-243/244	U	-0.0576	+/-0.202	0.240	+/-0.203	0.603	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.0397	+/-0.096	0.125	+/-0.096	0.328	pCi/g	BXL1	08/11/06	1633	555697	2	
Plutonium-239/240	U	-0.0315	+/-0.114	0.137	+/-0.114	0.353	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241		11.5	+/-6.72	5.08	+/-6.80	10.7	pCi/g	BXL1	08/16/06	1504	555698	3	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	0.00	+/-5.92	4.97	+/-5.92	10.7	pCi/g	DFA1	08/09/06	1407	554582	4	
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14	U	-0.0238	+/-0.0745	0.0636	+/-0.0745	0.133	pCi/g	ATH2	08/09/06	1924	554583	5	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	-10.7	+/-40.9	27.5	+/-40.9	56.8	pCi/g	MXP1	08/12/06	1916	555722	6	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.0956	+/-0.211	0.174	+/-0.211	0.361	pCi/g	EGD1	08/11/06	2307	554580	7	

The following Prep Methods were performed

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

The following Analytical Methods were performed

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

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

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
7		DOE EML HASL-300, Tc-02-RC Modified											
Surrogate/Tracer recovery	Test		Recovery%		Acceptable Limits								
Americium-243	Alphaspec Am241, Cm, Solid ALL		65		(15%-125%)								
Plutonium-242	Alphaspec Pu, Solid-ALL FSS		98		(15%-125%)								
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS		96		(25%-125%)								
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS		76		(15%-125%)								
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS		74		(15%-125%)								

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0009-002F
Sample ID: 168404012
Matrix: SE
Collect Date: 11-MAY-06
Receive Date: 08-JUN-06
Collector: Client
Moisture: 33%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	-0.00144	+/-0.155	0.166	+/-0.155	0.458	pCi/g	BXL1	08/11/06	1434	555696	1	
Curium-242	U	0.0192	+/-0.145	0.135	+/-0.145	0.455	pCi/g						
Curium-243/244	U	0.013	+/-0.268	0.281	+/-0.268	0.687	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.00587	+/-0.0493	0.0279	+/-0.0494	0.122	pCi/g	BXL1	08/11/06	1632	555697	2	
Plutonium-239/240	U	0.0186	+/-0.0492	0.0278	+/-0.0493	0.122	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241		13.6	+/-6.90	5.13	+/-7.01	10.8	pCi/g	BXL1	08/16/06	1520	555698	3	
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0151	+/-0.0146	0.0114	+/-0.0146	0.0242	pCi/g	BXF1	08/14/06	0834	556350	4	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	4.12	+/-8.36	6.70	+/-8.36	14.5	pCi/g	DFA1	08/09/06	1422	554582	5	
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14	U	0.046	+/-0.0755	0.0613	+/-0.0755	0.128	pCi/g	ATH2	08/09/06	2027	554583	6	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	12.9	+/-40.6	26.8	+/-40.6	55.2	pCi/g	MXPI	08/12/06	1932	555722	7	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.078	+/-0.203	0.168	+/-0.203	0.348	pCi/g	EGD1	08/11/06	2323	554580	8	

The following Prep Methods were performed

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

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EPA 905.0 Modified

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0009-002F
Sample ID: 168404012

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0009-017F
Sample ID: 168404013
Matrix: SE
Collect Date: 15-MAY-06
Receive Date: 08-JUN-06
Collector: Client
Moisture: 28.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.0755	+/-0.242	0.230	+/-0.243	0.574	pCi/g		BXL1	08/11/06	1434	555696	1
Curium-242	U	0.0957	+/-0.220	0.171	+/-0.220	0.509	pCi/g						
Curium-243/244	U	-0.073	+/-0.214	0.256	+/-0.214	0.627	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.00629	+/-0.0529	0.0299	+/-0.0529	0.131	pCi/g		BXL1	08/11/06	1632	555697	2
Plutonium-239/240	U	0.0262	+/-0.0513	0.00	+/-0.0514	0.0709	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241		13.3	+/-6.66	4.95	+/-6.77	10.4	pCi/g		BXL1	08/16/06	1536	555698	3
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0205	+/-0.0151	0.0116	+/-0.0151	0.0246	pCi/g		BXF1	08/14/06	0833	556350	4
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	0.583	+/-7.98	6.65	+/-7.98	14.4	pCi/g		DFA1	08/09/06	1438	554582	5
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14	U	0.0271	+/-0.0759	0.0625	+/-0.0759	0.131	pCi/g		ATH2	08/09/06	2129	554583	6
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	-61.9	+/-150	102	+/-150	210	pCi/g		MXP1	08/12/06	1949	555722	7
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.0628	+/-0.200	0.165	+/-0.200	0.343	pCi/g		EGD1	08/11/06	2338	554580	8

The following Prep Methods were performed

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

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EPA 905.0 Modified

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Certificate of Analysis

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

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

Report Date: August 21, 2006

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

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0010-001F
Sample ID: 168404014
Matrix: SE
Collect Date: 04-MAY-06
Receive Date: 17-MAY-06
Collector: Client
Moisture: 27.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.00677	+/-0.227	0.238	+/-0.227	0.628	pCi/g		BXL1	08/11/06	1434	555696	1
Curium-242	U	0.0854	+/-0.167	0.00	+/-0.168	0.231	pCi/g						
Curium-243/244	U	0.0361	+/-0.242	0.241	+/-0.242	0.634	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.173	+/-0.181	0.143	+/-0.182	0.331	pCi/g		BXL1	08/11/06	2250	555697	2
Plutonium-239/240	U	-0.0342	+/-0.0865	0.0951	+/-0.0866	0.235	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241		13.0	+/-6.44	4.78	+/-6.54	10.0	pCi/g		BXL1	08/16/06	1553	555698	3
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.0128	+/-0.0141	0.0125	+/-0.0141	0.0262	pCi/g		BXF1	08/14/06	0833	556350	4
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2, ALL FSS</i>													
Tritium	U	0.548	+/-7.50	6.25	+/-7.50	13.5	pCi/g		DFA1	08/09/06	1454	554582	5
<i>Liquid Scint C14, Solid All, FSS</i>													
Carbon-14	U	0.0555	+/-0.0809	0.0655	+/-0.0809	0.137	pCi/g		ATH2	08/09/06	2232	554583	6
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	-18.1	+/-47.6	32.3	+/-47.6	66.6	pCi/g		MXP1	08/12/06	2005	555722	7
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.134	+/-0.205	0.167	+/-0.205	0.347	pCi/g		EGD1	08/11/06	2354	554580	8

The following Prep Methods were performed

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

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EPA 905.0 Modified

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0010-001F
Sample ID: 168404014

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0010-012F
Sample ID: 168404015
Matrix: SE
Collect Date: 04-MAY-06
Receive Date: 17-MAY-06
Collector: Client
Moisture: 28.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.110	+/-0.184	0.140	+/-0.184	0.386	pCi/g		BXL1	08/11/06	1434	555696	1
Curium-242	U	-0.0547	+/-0.141	0.192	+/-0.141	0.544	pCi/g						
Curium-243/244	U	-0.126	+/-0.184	0.245	+/-0.185	0.597	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.00157	+/-0.126	0.122	+/-0.126	0.291	pCi/g		BXL1	08/11/06	2250	555697	2
Plutonium-239/240	U	0.0867	+/-0.0869	0.0406	+/-0.0872	0.128	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	8.31	+/-6.16	4.77	+/-6.21	10.0	pCi/g		BXL1	08/16/06	1609	555698	3
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.00771	+/-0.0144	0.0124	+/-0.0144	0.0263	pCi/g		BXF1	08/14/06	0833	556350	4
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2, ALL FSS</i>													
Tritium	U	0.896	+/-6.17	5.11	+/-6.17	11.0	pCi/g		DFA1	08/09/06	1510	554582	5
<i>Liquid Scint C14, Solid All, FSS</i>													
Carbon-14	U	0.0162	+/-0.0763	0.0633	+/-0.0763	0.132	pCi/g		ATH2	08/09/06	2334	554583	6
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	23.3	+/-49.3	32.5	+/-49.3	67.0	pCi/g		MXPI	08/12/06	2021	555722	7
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.0577	+/-0.206	0.171	+/-0.206	0.354	pCi/g		EGD1	08/12/06	0010	554580	8

The following Prep Methods were performed

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

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified
2	DOE EML HASL-300, Pu-11-RC Modified
3	DOE EML HASL-300, Pu-11-RC Modified
4	EPA 905.0 Modified

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0010-012F
Sample ID: 168404015

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

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

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

Notes:

The Qualifiers in this report are defined as follows :

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

QUALITY CONTROL DATA

GENERAL ENGINEERING LABORATORIES, LLC

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QC Summary

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

Report Date: August 21, 2006

Page 1 of 6

Contact: East Hampton, Connecticut
Mr. Jack McCarthy

Workorder: 168404

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

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QC Summary

Workorder: 168404

Page 2 of 6

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

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QC Summary

Workorder: 168404

Page 3 of 6

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

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QC Summary

Workorder: 168404

Page 4 of 6

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gas Flow											
Batch	556350										
QC120115466	168404003	MS									
Strontium-90	1.58	U	-0.00343	1.29	pCi/g		82	(75%-125%)			
	Uncert:		+/-0.0203	+/-0.0535							
	TPU:		+/-0.0203	+/-0.0813							
Rad Liquid Scintillation											
Batch	554580										
QC1201150562	168340012	DUP									
Technetium-99		U	0.0338	U	0.266	pCi/g	0	(0% - 100%)	EGD1	08/12/06	00:42
	Uncert:		+/-0.192		+/-0.226						
	TPU:		+/-0.192		+/-0.226						
QC1201150564	LCS										
Technetium-99	13.1			13.6	pCi/g		103	(75%-125%)		08/12/06	01:14
	Uncert:			+/-0.496							
	TPU:			+/-0.599							
QC1201150561	MB										
Technetium-99				U	0.0311	pCi/g				08/12/06	00:26
	Uncert:				+/-0.177						
	TPU:				+/-0.177						
QC1201150563	168340012	MS									
Technetium-99	13.0	U	0.0338	12.0	pCi/g		92	(75%-125%)		08/12/06	00:58
	Uncert:		+/-0.192	+/-0.523							
	TPU:		+/-0.192	+/-0.602							
Batch	554582										
QC1201150570	168340011	DUP									
Tritium		U	1.77	U	1.62	pCi/g	0	(0% - 100%)	DFA1	08/09/06	15:42
	Uncert:		+/-8.20		+/-7.47						
	TPU:		+/-8.20		+/-7.47						
QC1201150572	LCS										
Tritium	68.3			76.2	pCi/g		111	(75%-125%)		08/09/06	16:14
	Uncert:			+/-14.0							
	TPU:			+/-14.1							
QC1201150569	MB										
Tritium				U	0.586	pCi/g				08/09/06	15:26
	Uncert:				+/-8.01						
	TPU:				+/-8.01						
QC1201150571	168340011	MS									
Tritium	61.3	U	1.77	61.8	pCi/g		101	(75%-125%)		08/09/06	15:58
	Uncert:		+/-8.20	+/-12.2							
	TPU:		+/-8.20	+/-12.3							
Batch	554583										
QC1201150574	168404003	DUP									
Carbon-14		U	0.0937	U	0.0422	pCi/g	0	(0% - 100%)	ATH2	08/10/06	01:39
	Uncert:		+/-0.0813		+/-0.075						
	TPU:		+/-0.0813		+/-0.0751						
QC1201150576	LCS										
Carbon-14	7.27			7.14	pCi/g		98	(75%-125%)		08/10/06	03:00
	Uncert:			+/-0.508							
	TPU:			+/-0.520							
QC1201150573	MB										

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QC Summary

Workorder: 168404

Page 5 of 6

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

Notes:

The Qualifiers in this report are defined as follows:

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

GENERAL ENGINEERING LABORATORIES, LLC

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QC Summary

Workorder: 168404

Page 6 of 6

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
>										
A										
B										
BD										
C										
D										
H										
J										
N/A										
R										
U										
UI										
X										
Y										
^										
h										

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

** Indicates analyte is a surrogate compound.

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

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

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

Table of Contents

General Narrative.....	1
Chain of Custody And Supporting Documentation	5
Radiological Analysis	14
Sample Data Summary	28
Quality Control Data	32

General Narrative

**CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Soil
PO# 002332
Work Order: 172071
SDG: MSR #06-0688**

September 27, 2006

Laboratory Identification:

General Engineering Laboratories, LLC

Mailing Address:

P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:

2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:

(843) 556-8171

Summary:

Sample receipt

The sample(s) for this Project arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina on May 12, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures. Sample 9106-0004-013F was relogged for additional analyses at the request of Dale Randall via email on September 19, 2006.

The laboratory received the following sample(s):

<u>Sample ID</u>	<u>Client Sample ID</u>
172071001	9106-0004-013F

Items of Note:

There are no items of note.

Case Narrative:

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

Analytical Request:

One soil sample was analyzed for Carbon-14, Tritium, Americium, Plutonium, Plutonium-241, Iron 55, Nickel-63, and Tc-99.

Internal Chain of Custody:

Custody was maintained for the sample(s).

Data Package:

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

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



Cheryl Jones
Project Manager

List of current GEL Certifications as of 27 September 2006

State	Certification
Alaska	UST-062
Arizona	AZ0668
Arkansas	88-0651
CLIA	42E0904046
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	SCI2
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	CI641

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. 2006-00337

Project Name: Haddam Neck Decommissioning			Media Code			Sample Type Code			Container Size & Type Code			Analyses Requested				Lab Use Only		
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024												FSSGAM FSSALL Sr-90				Comments: Relog sample 9106-0004-013F per the request of Dale Randall on 9/19/06. See attached email. 162832-1		
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones																		
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.																		
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size & Type Code	FSSGAM	FSSALL	Sr-90						Comment, Preservation	Lab Sample ID			
9106-0004-008F ✓	5/04/06	08:58	SE	C	BP	X		X						Transferred from COC 2006-00320				
9106-0004-009F ✓	5/04/06	08:23	SE	C	BP	X		X						Transferred from COC 2006-00320				
9106-0004-010F ✓	5/03/06	15:11	SE	C	BP	X		X						Transferred from COC 2006-00317				
9106-0004-010FS ✓	5/03/06	15:11	SE	C	BP	X		X						Transferred from COC 2006-00317				
9106-0004-011F ✓	5/03/06	13:08	SE	C	BP	X		X						Transferred from COC 2006-00317				
9106-0004-012F ✓	5/03/06	13:33	SE	C	BP	X		X						Transferred from COC 2006-00317				
9106-0004-013F ✓	5/03/06	13:54	SE	C	BP	X		X						Transferred from COC 2006-00317				
9106-0004-014F ✓	5/03/06	14:43	SE	C	BP		X	X						Transferred from COC 2006-00317				
9106-0004-015F ✓	5/03/06	14:18	SE	C	BP	X		X						Transferred from COC 2006-00317				
NOTES: PO #: 002332 MSR #: 06-0688 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA															Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp. <u>17</u> Deg. C Custody Sealed? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Custody Seal Intact? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N	
1) Relinquished By			Date/Time			2) Received By			Date/Time			Bill of Lading # 7919 3875 8892						
3) Relinquished By			Date/Time			4) Received By			Date/Time									

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00336

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size & Type Code	Analyses Requested					Lab Use Only	
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3024						FSSGAM	FSSALL	St-90				Comments
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC, 29407 843 556 8171. Attn. Cheryl Jones												
Priority: <input checked="" type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D.												
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID
9106-0004-001F	05/3/06	09:37	SE	C	BP		X	X			Transferred from COC 2006-00316	
9106-0004-002F	05/3/06	09:56	SE	C	BP	X		X			Transferred from COC 2006-00316	
9106-0004-003F	05/3/06	10:28	SE	C	BP	X		X			Transferred from COC 2006-00316	
9106-0004-004F	05/3/06	10:48	SE	C	BP	X		X			Transferred from COC 2006-00316	
9106-0004-004FS	05/3/06	10:48	SE	C	BP	X		X			Transferred from COC 2006-00316	
9106-0004-005F	05/3/06	11:07	SE	C	BP	X		X			Transferred from COC 2006-00316	
9106-0004-006F	05/3/06	12:46	SE	C	BP	X		X			Transferred from COC 2006-00317	
9106-0004-007F	05/4/06	07:55	SE	C	BP	X		X			Transferred from COC 2006-00320	
9106-0004-017F	05/4/06	09:27	SE	C	BP	X		X			Transferred from COC 2006-00320	
NOTES: PO #: 002332 MSR #: 06-0688 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA												
1) Relinquished By			Date/Time		2) Received By			Date/Time		Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		
3) Relinquished By			Date/Time		4) Received By			Date/Time		Internal Container Temp: 18 Deg. C Custody Sealed? Y <input type="checkbox"/> N <input checked="" type="checkbox"/> Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Bill of Lading # 7914-3895-8881		

Connecticut Yankee
Statement of Work for Analytical Lab Services

CY-ISC-SOW-001

Figure 1. Sample Check-in List

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

SDG#: NSR #06-0688

Work Order Number: 1628321

Shipping Container ID: 7919 3895 8892 Chain of Custody # 2006-00337

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

8. Samples have:	
<input checked="" type="checkbox"/> tape	<input type="checkbox"/> hazard labels
<input checked="" type="checkbox"/> custody seals	<input type="checkbox"/> appropriate sample labels
9. Samples are:	
<input type="checkbox"/> in good condition	<input checked="" type="checkbox"/> leaking
<input type="checkbox"/> broken	<input type="checkbox"/> have air bubbles

10. Were any anomalies identified in sample receipt? Yes ☒ No ☐
11. Description of anomalies (include sample numbers): Soil was busting out of container bag

Sample Custodian/Laboratory: C. Demichis Date: 5/12/06
Telephoned to: _____ On _____ By _____



SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: <u>Yankel</u>	SDG/ARCOC/Work Order: <u>162832</u>
Date Received: <u>5/12/06</u>	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: <u>C. Derrick</u>	<u>C. Derrick</u>

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	<input checked="" type="checkbox"/>			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		<input checked="" type="checkbox"/>		Circle Coolant # ice bags blue ice dry ice <u>none</u> other (describe)
3 Chain of custody documents included with shipment?	<input checked="" type="checkbox"/>			<u>170C</u> COCs are wet
4 Sample containers intact and sealed?			<input checked="" type="checkbox"/>	Circle Applicable: seals broken damaged container leaking container other (describe) <u>busted bag w/ RSOs cooler 7920 9480 6058 (C)</u>
5 Samples requiring chemical preservation at proper pH?		<input checked="" type="checkbox"/>		Sample ID's, containers affected and observed pH: <u>8.892</u>
6 VOA vials free of headspace (defined as < 6mm bubble)?		<input checked="" type="checkbox"/>		Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			<input checked="" type="checkbox"/>	
8 Samples received within holding time?	<input checked="" type="checkbox"/>			Id's and tests affected:
9 Sample ID's on COC match ID's on bottles?	<input checked="" type="checkbox"/>			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	<input checked="" type="checkbox"/>			Sample ID's affected:
11 Number of containers received match number indicated on COC?	<input checked="" type="checkbox"/>			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?			<input checked="" type="checkbox"/>	<u>no COCs are relinquished</u>
14 Air Bill ,Tracking #'s, & Additional Comments	<u>FedEx #'s</u> <u>see continuation sheet</u>			
Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A Radiological Classification?		<input checked="" type="checkbox"/>		Maximum Counts Observed*: <u>140 (C) 40 CPM</u>
B PCB Regulated?	<input checked="" type="checkbox"/>			Comments:
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	<input checked="" type="checkbox"/>			Hazard Class Shipped: UN#:
PM (or PMA) review of Hazard classification: _____ Initials <u>ay</u> Date: <u>5/12/06</u>				



10



SAMPLE RECEIPT & REVIEW FORM

PM use only

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

Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1 Shipping containers received intact and sealed?	X			Circle Applicable: seals broken damaged container leaking container other (describe)
2 Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		X		Circle Coolant # ice bags blue ice dry ice none other describe)
3 Chain of custody documents included with shipment?	X			
4 Sample containers intact and sealed?			X	Circle Applicable: seals broken damaged container <u>leaking container</u> other (describe) <u>SN: 9106-0004-014F*</u>
5 Samples requiring chemical preservation at proper pH?		X		Sample ID's, containers affected and observed pH:
6 VOA vials free of headspace (defined as < 6mm bubble)?		X		Sample ID's and containers affected:
7 Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			X	
8 Samples received within holding time?	X			Id's and tests affected:
9 Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:
10 Date & time on COC match date & time on bottles?	X			Sample ID's affected:
11 Number of containers received match number indicated on COC?	X			Sample ID's affected:
12 COC form is properly signed in relinquished/received sections?			X	<u>Coc Not Relinquished</u>
14 Air Bill ,Tracking #'s, & Additional Comments				<u>* Sample repackaged to address leakage.</u> <u>7919 3895 8892</u>
Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A Radiological Classification?		X		Maximum Counts Observed*: <u>< Bkgd.</u>
B PCB Regulated?	X			Comments: <u>Bkgd = 40 cpm</u>
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	X			Hazard Class Shipped: UN#: <u>N/A</u>
PM (or PMA) review of Hazard classification: Initials <u>[Signature]</u> Date: <u>5/12/06</u>				

Figure 1. Sample Check-in List

Date/Time Received: 5.12.06 09:20

SDG#: MSR#06-0688

Work Order Number: 1628321

Shipping Container ID: 7919 3895 8892 Chain of Custody # 2006-00337

1. Custody Seals on shipping container intact? Yes ☒ No ☐
2. Custody Seals dated and signed? Yes ☒ No ☐
3. Chain-of-Custody record present? Yes ☒ No ☐
4. Cooler temperature N/A
5. Vermiculite/packing materials is: Wet ☒ Dry ☐
6. Number of samples in shipping container: 9
7. Sample holding times exceeded? Yes ☐ No ☒

8. Samples have:	
<input checked="" type="checkbox"/> tape	<input type="checkbox"/> hazard labels
<input checked="" type="checkbox"/> custody seals	<input type="checkbox"/> appropriate sample labels
9. Samples are:	
<input type="checkbox"/> in good condition	<input checked="" type="checkbox"/> leaking
<input type="checkbox"/> broken	<input type="checkbox"/> have air bubbles

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

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

Telephoned to: _____ On _____ By _____

One additional Sample that needs to be measured to FSSALL

Subject: One additional Sample that needs to be measured to FSSALL

From: "Dale Randall" <randall@cyapco.com>

Date: Tue, 19 Sep 2006 09:14:28 -0400

To: "Cheryl Jones" <cj@gel.com>

CC: "Clyde Newson" <Newson@CYAPCO.com>, "John McCarthy" <McCarthy@CYAPCO.com>

Cheryl:

We need to add sample 9106-0004-013F to our list of samples at GEL requiring further analyses to the FSSALL protocol. It has already been measured for FSSGAM and Sr-90. Once you have had an opportunity to verify that you have enough sample aliquot and can estimate the turn around time (TAT) please call or e-mail me at your earliest convenience.

Thank You,

Dale

(860) 267-3133

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 172071**

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: 570544
Prep Batch Number: 570368
Dry Soil Prep GL-RAD-A-021 Batch Number: 570366

Sample ID	Client ID
172071001	9106-0004-013F
1201187914	Method Blank (MB)
1201187915	172071001(9106-0004-013F) Sample Duplicate (DUP)
1201187916	172071001(9106-0004-013F) Matrix Spike (MS)
1201187917	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 volumes in this batch.

Designated QC

The following sample was used for QC: 172071001 (9106-0004-013F).

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

Batch was recounted due to a high Matrix Spike recovery.

Miscellaneous Information:

NCR Documentation

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

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: 570545
Prep Batch Number: 570368
Dry Soil Prep GL-RAD-A-021 Batch Number: 570366

Sample ID	Client ID
172071001	9106-0004-013F
1201187918	Method Blank (MB)
1201187919	172071001(9106-0004-013F) Sample Duplicate (DUP)
1201187920	172071001(9106-0004-013F) Matrix Spike (MS)
1201187921	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: 172071001 (9106-0004-013F).

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.

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:	570546
Prep Batch Number:	570368
Dry Soil Prep GL-RAD-A-021 Batch Number:	570366

Sample ID	Client ID
172071001	9106-0004-013F
1201187922	Method Blank (MB)
1201187923	172071001(9106-0004-013F) Sample Duplicate (DUP)
1201187924	172071001(9106-0004-013F) Matrix Spike (MS)
1201187925	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: 172071001 (9106-0004-013F).

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.

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 Tc99, Solid-ALL FSS
Analytical Method: DOE EML HASL-300, Tc-02-RC Modified
Analytical Batch Number: 570909

Sample ID	Client ID
172071001	9106-0004-013F
1201188720	Method Blank (MB)
1201188721	172071001(9106-0004-013F) Sample Duplicate (DUP)
1201188722	172071001(9106-0004-013F) Matrix Spike (MS)
1201188723	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: 172071001 (9106-0004-013F).

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:	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:	573887
Prep Batch Number:	570368
Dry Soil Prep GL-RAD-A-021 Batch Number:	570366

Sample ID	Client ID
172071001	9106-0004-013F
1201195366	Method Blank (MB)
1201195367	172071001(9106-0004-013F) Sample Duplicate (DUP)
1201195368	172071001(9106-0004-013F) Matrix Spike (MS)
1201195369	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: 172071001 (9106-0004-013F).

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

Sample 172071001 (9106-0004-013F) was recounted due to the quench number being outside the calibration range. Samples were reprepared due to low/high recovery.

Miscellaneous Information:

NCR Documentation

Nonconformance reports are generated to document any procedural anomalies that may deviate from

referenced SOP or contractual documents. A nonconformance report (NCR) was not generated for this SDG.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

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:	570908
Prep Batch Number:	570368
Dry Soil Prep GL-RAD-A-021 Batch Number:	570366

Sample ID	Client ID
172071001	9106-0004-013F
1201188716	Method Blank (MB)
1201188717	172071001(9106-0004-013F) Sample Duplicate (DUP)
1201188718	172071001(9106-0004-013F) Matrix Spike (MS)
1201188719	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: 172071001 (9106-0004-013F).

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:	570910

Sample ID	Client ID
172071001	9106-0004-013F
1201188728	Method Blank (MB)
1201188729	172071001(9106-0004-013F) Sample Duplicate (DUP)
1201188730	172071001(9106-0004-013F) Matrix Spike (MS)
1201188731	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: 172071001 (9106-0004-013F).

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: Liquid Scint C14, Solid All,FSS

Analytical Method: EPA EERF C-01 Modified

Analytical Batch Number: 570914

Sample ID	Client ID
172071001	9106-0004-013F
1201188734	Method Blank (MB)
1201188735	172071001(9106-0004-013F) Sample Duplicate (DUP)
1201188736	172071001(9106-0004-013F) Matrix Spike (MS)
1201188737	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: 172071001 (9106-0004-013F).

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.

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: At return G AUC 11 10/2/06

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#06-0688 GEL Work Order: 172071

The Qualifiers in this report are defined as follows:

- * A quality control analyte recovery is outside of specified acceptance criteria
- ** Analyte is a surrogate compound
- U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.

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

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

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

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

A/earl S. C. 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

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

Report Date: October 2, 2006

Client Sample ID: 9106-0004-013F
Sample ID: 172071001
Matrix: SE
Collect Date: 03-MAY-06
Receive Date: 12-MAY-06
Collector: Client
Moisture: 25.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mt
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	U	0.0475	+/-0.105	0.064	+/-0.106	0.207	pCi/g	TC1	09/30/06	0836	570544	1	
Curium-242	U	0.0419	+/-0.111	0.0495	+/-0.111	0.248	pCi/g						
Curium-243/244	U	-0.104	+/-0.106	0.127	+/-0.106	0.334	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.114	+/-0.111	0.0319	+/-0.112	0.132	pCi/g	TC1	09/28/06	0937	570545	3	
Plutonium-239/240	U	0.0883	+/-0.0997	0.0318	+/-0.100	0.132	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	-4.69	+/-9.90	8.51	+/-9.90	17.8	pCi/g	TC1	09/29/06	1603	570546	4	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2, ALL FSS</i>													
Tritium	U	-1.6	+/-6.64	5.69	+/-6.64	12.3	pCi/g	DFA1	09/23/06	0750	570910	5	
<i>Liquid Scint C14, Solid All, FSS</i>													
Carbon-14		0.265	+/-0.0958	0.0684	+/-0.0959	0.144	pCi/g	AXD2	09/23/06	1841	570914	6	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	16.4	+/-40.0	27.9	+/-40.0	58.3	pCi/g	MXP1	10/02/06	1453	573887	7	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	0.712	+/-10.1	8.44	+/-10.1	17.3	pCi/g	MXP1	09/26/06	1504	570908	10	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.147	+/-0.259	0.213	+/-0.260	0.441	pCi/g	KXR1	09/27/06	1734	570909	11	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	09/21/06	1329	570366

The following Analytical Methods were performed

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

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 2, 2006

Client Sample ID: 9106-0004-013F
Sample ID: 172071001

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

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

Surrogate/Tracer recovery	Test	Recovery %	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	94	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	90	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	89	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	65	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	64	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	77	(15%-125%)

Notes:

The Qualifiers in this report are defined as follows :

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

QUALITY CONTROL DATA

GENERAL ENGINEERING LABORATORIES, LLC

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

QC Summary

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

Report Date: October 2, 2006

Page 1 of 5

Contact: East Hampton, Connecticut
Mr. Jack McCarthy

Workorder: 172071

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch 570544											
QC1201187915 172071001 DUP											
Americium-241		U	0.0475	U	0.0677	pCi/g	35	(0% - 100%)	TC1	09/30/06	08:36
	Uncert:		+/-0.105		+/-0.129						
	TPU:		+/-0.106		+/-0.129						
Curium-242		U	0.0419	U	0.0444	pCi/g	6	(0% - 100%)			
	Uncert:		+/-0.111		+/-0.118						
	TPU:		+/-0.111		+/-0.118						
Curium-243/244		U	-0.104	U	0.104	pCi/g	0	(0% - 100%)			
	Uncert:		+/-0.106		+/-0.142						
	TPU:		+/-0.106		+/-0.143						
QC1201187917 LCS											
Americium-241	11.0				11.5	pCi/g	105	(75%-125%)			
	Uncert:				+/-1.13						
	TPU:				+/-1.80						
Curium-242				U	-0.0143	pCi/g					
	Uncert:				+/-0.0198						
	TPU:				+/-0.0198						
Curium-243/244	13.2				13.8	pCi/g	105	(75%-125%)			
	Uncert:				+/-1.24						
	TPU:				+/-2.09						
QC1201187914 MB											
Americium-241				U	-0.0325	pCi/g					
	Uncert:				+/-0.0788						
	TPU:				+/-0.0789						
Curium-242				U	0.0258	pCi/g					
	Uncert:				+/-0.0727						
	TPU:				+/-0.0728						
Curium-243/244				U	0.0173	pCi/g					
	Uncert:				+/-0.127						
	TPU:				+/-0.127						
QC1201187916 172071001 MS											
Americium-241	11.0	U	0.0475		12.4	pCi/g	113	(75%-125%)			
	Uncert:		+/-0.105		+/-1.26						
	TPU:		+/-0.106		+/-2.02						
Curium-242		U	0.0419	U	0.0176	pCi/g					
	Uncert:		+/-0.111		+/-0.133						
	TPU:		+/-0.111		+/-0.133						
Curium-243/244	13.4	U	-0.104		13.1	pCi/g	98	(75%-125%)			
	Uncert:		+/-0.106		+/-1.31						
	TPU:		+/-0.106		+/-2.13						
Batch 570545											
QC1201187919 172071001 DUP											
Plutonium-238		U	0.114	U	0.0215	pCi/g	137	(0% - 100%)	TC1	09/28/06	09:37

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QC Summary

Workorder: 172071

Page 2 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	570545										
Plutonium-239/240	U	Uncert:	+/-0.111	+/-0.0796	pCi/g	104	(0% - 100%)				
		TPU:	+/-0.112	+/-0.0796							
		0.0883	U	0.0278							
		Uncert:	+/-0.0997	+/-0.0783							
QC1201187921 LCS											
Plutonium-238				U	0.0774	pCi/g	(75%-125%)			09/28/06	09:37
Plutonium-239/240	10.1	Uncert:		+/-0.0812	pCi/g	93	(75%-125%)				
		TPU:		+/-0.0817							
		9.41		9.41							
		Uncert:		+/-0.863							
QC1201187918 MB											
Plutonium-238				U	-0.0052	pCi/g				09/28/06	09:37
Plutonium-239/240	U	Uncert:		+/-0.0436	pCi/g						
		TPU:		+/-0.0437							
		0.0338		0.0338							
		Uncert:		+/-0.0776							
QC1201187920 172071001 MS											
Plutonium-238		U	0.114	U	0.0355	pCi/g	(75%-125%)			09/28/06	09:37
Plutonium-239/240	10.1	Uncert:	+/-0.111	+/-0.0666	pCi/g	107	(75%-125%)				
		TPU:	+/-0.112	+/-0.0667							
		0.0883	U	10.8							
		Uncert:	+/-0.0997	+/-0.981							
Batch 570546											
QC1201187923 172071001 DUP											
Plutonium-241		U	-4.69	U	-0.734	pCi/g	0	(0% - 100%)	TC1	09/29/06	16:35
Plutonium-241	134	Uncert:	+/-9.90	+/-9.49	pCi/g	89	(75%-125%)				
		TPU:	+/-9.90	+/-9.49							
		119		119							
		Uncert:		+/-16.4							
QC1201187922 MB											
Plutonium-241				U	-1.36	pCi/g				09/29/06	16:19
Plutonium-241	136	Uncert:		+/-8.76	pCi/g	89	(75%-125%)				
		TPU:		+/-8.76							
		-4.69		121							
		Uncert:	+/-9.90	+/-16.3							
QC1201187924 172071001 MS											
Plutonium-241		U	-4.69		121	pCi/g				09/29/06	16:51
Plutonium-241	136	Uncert:	+/-9.90	+/-16.3	pCi/g	89	(75%-125%)				
		TPU:	+/-9.90	+/-21.2							
		-4.69		121							
		Uncert:	+/-9.90	+/-16.3							
Rad Liquid Scintillation											
Batch	570908										
QC1201188717 172071001 DUP											
Nickel-63		U	0.712	U	-3.16	pCi/g	0	(0% - 100%)	MXPI	09/26/06	16:08
Nickel-63	U	Uncert:	+/-10.1	+/-8.35	pCi/g	0	(0% - 100%)				
				+/-8.35							

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QC Summary

Workorder: 172071

Page 3 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD %	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	570908										
QC1201188719	LCS	TPU:	+/-10.1								
Nickel-63		530		487	pCi/g		92	(75%-125%)		09/26/06	17:11
		Uncert:		+/-17.1							
		TPU:		+/-23.3							
QC1201188716	MB										
Nickel-63			U	-4.05	pCi/g					09/26/06	15:36
		Uncert:		+/-9.33							
		TPU:		+/-9.33							
QC1201188718	172071001	MS									
Nickel-63		572	U	0.712	pCi/g		92	(75%-125%)		09/26/06	16:39
		Uncert:		+/-10.1							
		TPU:		+/-10.1							
Batch	570909										
QC1201188721	172071001	DUP									
Technetium-99			U	0.147	U	0.117	pCi/g	0	(0% - 100%) KXR1	09/27/06	18:06
		Uncert:		+/-0.259		+/-0.269					
		TPU:		+/-0.260		+/-0.269					
QC1201188723	LCS										
Technetium-99		13.1				13.4	pCi/g		103	(75%-125%)	09/27/06 18:38
		Uncert:				+/-0.550					
		TPU:				+/-0.629					
QC1201188720	MB										
Technetium-99			U			0.163	pCi/g			09/27/06	17:50
		Uncert:				+/-0.244					
		TPU:				+/-0.244					
QC1201188722	172071001	MS									
Technetium-99		13.1	U	0.147		13.5	pCi/g		103	(75%-125%)	09/27/06 18:22
		Uncert:		+/-0.259		+/-0.606					
		TPU:		+/-0.260		+/-0.680					
Batch	570910										
QC1201188729	172071001	DUP									
Tritium			U	-1.6	U	2.28	pCi/g	0	(0% - 100%) DFA1	09/23/06	08:22
		Uncert:		+/-6.64		+/-6.40					
		TPU:		+/-6.64		+/-6.40					
QC1201188731	LCS										
Tritium		51.0				42.0	pCi/g		82	(75%-125%)	09/23/06 08:55
		Uncert:				+/-8.08					
		TPU:				+/-8.11					
QC1201188728	MB										
Tritium			U			0.215	pCi/g			09/23/06	08:06
		Uncert:				+/-5.20					
		TPU:				+/-5.20					
QC1201188730	172071001	MS									
Tritium		52.1	U	-1.6		48.1	pCi/g		92	(75%-125%)	09/23/06 08:39
		Uncert:		+/-6.64		+/-8.61					
		TPU:		+/-6.64		+/-8.65					
Batch	570914										
QC1201188735	172071001	DUP									

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QC Summary

Workorder: 172071

Page 4 of 5

Parmname	NOM	Sample Qual	QC	Units	RPD %	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation										
Batch	570914									
Carbon-14		0.265	0.260	pCi/g	2		(0% - 100%) AXD2		09/23/06	20:16
		Uncert: +/-0.0958	+/-0.0933							
		TPU: +/-0.0959	+/-0.0933							
QC1201188737 LCS										
Carbon-14	6.77		6.46	pCi/g		95	(75%-125%)		09/23/06	21:21
		Uncert: +/-0.443								
		TPU: +/-0.454								
QC1201188734 MB										
Carbon-14		U	-0.0248	pCi/g					09/23/06	19:28
		Uncert: +/-0.0842								
		TPU: +/-0.0842								
QC1201188736 172071001 MS										
Carbon-14	7.13	0.265	6.69	pCi/g		90	(75%-125%)		09/23/06	21:03
		Uncert: +/-0.0958	+/-0.466							
		TPU: +/-0.0959	+/-0.478							
Batch	573887									
QC1201195367 172071001 DUP										
Iron-55		16.4 U	11.8	pCi/g	0		(0% - 100%) MXPI		10/02/06	09:34
		Uncert: +/-40.0	+/-41.4							
		TPU: +/-40.0	+/-41.4							
QC1201195369 LCS										
Iron-55	637		601	pCi/g		94	(75%-125%)		10/02/06	10:07
		Uncert: +/-52.5								
		TPU: +/-66.2								
QC1201195366 MB										
Iron-55		U	-19.2	pCi/g					10/02/06	09:17
		Uncert: +/-32.4								
		TPU: +/-32.4								
QC1201195368 172071001 MS										
Iron-55	734	16.4	769	pCi/g		105	(75%-125%)		10/02/06	09:50
		Uncert: +/-40.0	+/-64.2							
		TPU: +/-40.0	+/-83.8							

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
- Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more

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

QC Summary

Workorder: 172071

Page 5 of 5

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
N/A										
R										
U										
UI										
X										
Y										
^										
h										

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

** Indicates analyte is a surrogate compound.

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

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


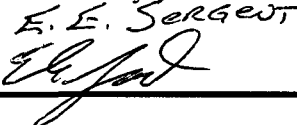
Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

Attachment 2b
Split Sample Assessment Forms
(2 Pages)


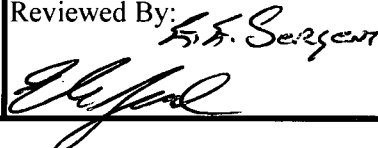
Split Sample Assessment Form

Survey Area #: 9106	Survey Unit #: 0004	Survey Unit Name: Discharge Canal						
Sample Plan or WPIR#: 2006-021		SML #: 9106-0004-004FS						
Sample Description: Comparison of split samples collected from sample measurement location #04 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was <u>9106-0004-004F</u> the comparison sample was <u>9106-0004-004FS</u> .								
STANDARD					COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
Cs-137	1.59E-01	1.53E-02	10	0.6 1.66	2.16E-01	2.10E-02	1.36	Y
Co-60	2.63E-01	2.00E-02	13	0.6 1.66	3.00E-01	2.50E-02	1.14	Y
Sr-90	-7.59E-03	8.65E-03	-1	NONE	3.86E-03	8.15E-03	-0.51	N/A
Comments/Corrective Actions: In consideration of Sr-90 results, guidance for agreement ranges, obtained from USNRC Inspection Procedure 84750, does not address resolution ratios less than 4, therefore, a determination of acceptability for such ratios cannot be made. Since other radionuclides of concern were found to be present at an acceptable level of agreement, therefore, no further action is warranted.					Table is provided to show acceptance criteria used to assess split samples.			
					Resolution		Agreement Range	
					4	7	0.50	2.00
					8	15	0.60	1.66
					16	50	0.75	1.33
					51	200	0.80	1.25
					> 200		0.85	1.18
Performed By:			Date:		Reviewed By:		Date:	
			10-25-06				10/25/06	

WPIR – Work Plan and Inspection Record

SML – Sample Measurement Location designation

Split Sample Assessment Form

Survey Area#:	9106	Survey Unit #:	0004	Survey Unit Name:	Discharge Canal							
Sample Plan or WPIR#:					2006-0021							
					SML #: 9106-0004-010FS							
<p>Sample Description: Comparison of split samples collected from sample measurement location #10 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was <u>9106-0003-010E</u>, the comparison sample was <u>9106-0003-010FS</u>.</p>												
STANDARD					COMPARISON							
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)				
Cs-137	2.46E-03	1.18E-02	0	NONE	3.26E-02	1.59E-02	13.25	N/A				
Co-60	7.39E-03	1.20E-02	1	NONE	2.54E-02	1.48E-02	3.44	N/A				
Sr-90	-1.75E-03	8.05E-03	0	NONE	-9.25E-03	8.95E-03	5.29	N/A				
K-40	1.20E+01	4.24E-01	28	0.75 1.33	1.32E+01	5.10E-01	1.10	Y				
<p>Comments/Corrective Actions: In consideration of Cs-137, Co-60 & Sr-90 results, guidance for agreement ranges, obtained from USNRC Inspection Procedure 84750, does not address resolution ratios less than 4, therefore, a determination of acceptability for such ratios cannot be made. Since none of the radionuclides of concern were in a comparable range, K-40 was used to make the comparison and was found to be present at an acceptable level of agreement, therefore, no further action is warranted.</p>					<p>Table is provided to show acceptance criteria used to assess split samples.</p>							
					Resolution		Agreement Range					
					4	7	0.50	2.00				
					8	15	0.60	1.66				
16	50	0.75	1.33									
51	200	0.80	1.25									
> 200		0.85	1.18									
Performed By:					Date:		Reviewed By:					
					10-25-06							
							Date:					
							10/25/06					

WPIR – Work Plan and Inspection Record

SML – Sample Measurement Location designation

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

Attachment 2c
Preliminary Data Forms
(1 Page)

Preliminary Data Review Form - Samples for the Sign Test

Survey Unit: 9106- 0004
 Survey Unit Name: Discharge Canal

Classification: 2
 Survey Media: Sediment
 Type of Survey: Final Status Survey
 Type of Measurement: Radionuclide Specific
 Number of Measurements: 15
 Operational DCGL: 1

BASIC STATISTICAL QUANTITIES

	Cs-137	Co-60	Sr-90
Minimum Value:	-7.91E-03	0.00E+00	-7.59E-03
Maximum Value:	5.49E-01	1.81E+00	2.62E-02
Mean:	2.07E-01	5.08E-01	5.31E-03
Median:	1.59E-01	2.56E-01	3.01E-03
Standard Deviation:	1.79E-01	6.07E-01	9.82E-03

RADIONUCLIDE CONCENTRATION (pCi/g)

NUMBER	Cs-137	Co-60	Sr-90		Identified?	
9106-0004-001F	4.51E-01	9.53E-01	6.33E-03	Y	Y	N
9106-0004-002F	1.71E-01	1.41E-01	-9.37E-05	Y	Y	N
9106-0004-003F	3.55E-01	9.45E-01	1.62E-02	Y	Y	N
9106-0004-004F	1.59E-01	2.63E-01	-7.59E-03	Y	Y	N
9106-0004-005F	3.99E-01	1.74E+00	5.86E-03	Y	Y	N
9106-0004-006F	1.12E-01	2.23E-01	1.01E-02	Y	Y	N
9106-0004-007F	-5.61E-03	1.16E-03	-6.09E-03	N	N	N
9106-0004-008F	1.55E-01	2.56E-01	2.62E-02	Y	Y	Y
9106-0004-009F	2.09E-02	0.00E+00	2.16E-02	N	N	Y
9106-0004-010F	2.46E-03	7.39E-03	-1.75E-03	N	N	N
9106-0004-011F	2.12E-01	3.66E-01	9.13E-04	Y	Y	N
9106-0004-012F	1.59E-01	1.37E-01	-1.72E-03	Y	Y	N
9106-0004-013F	5.49E-01	1.81E+00	3.01E-03	Y	Y	N
9106-0004-014F	-7.91E-03	2.85E-02	8.27E-03	N	N	N
9106-0004-015F	3.77E-01	7.44E-01	-1.53E-03	Y	Y	N

Performed By: Dale Randall

Date: 10-25-06

Independent Review: [Signature]

Date: 10/25/06

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

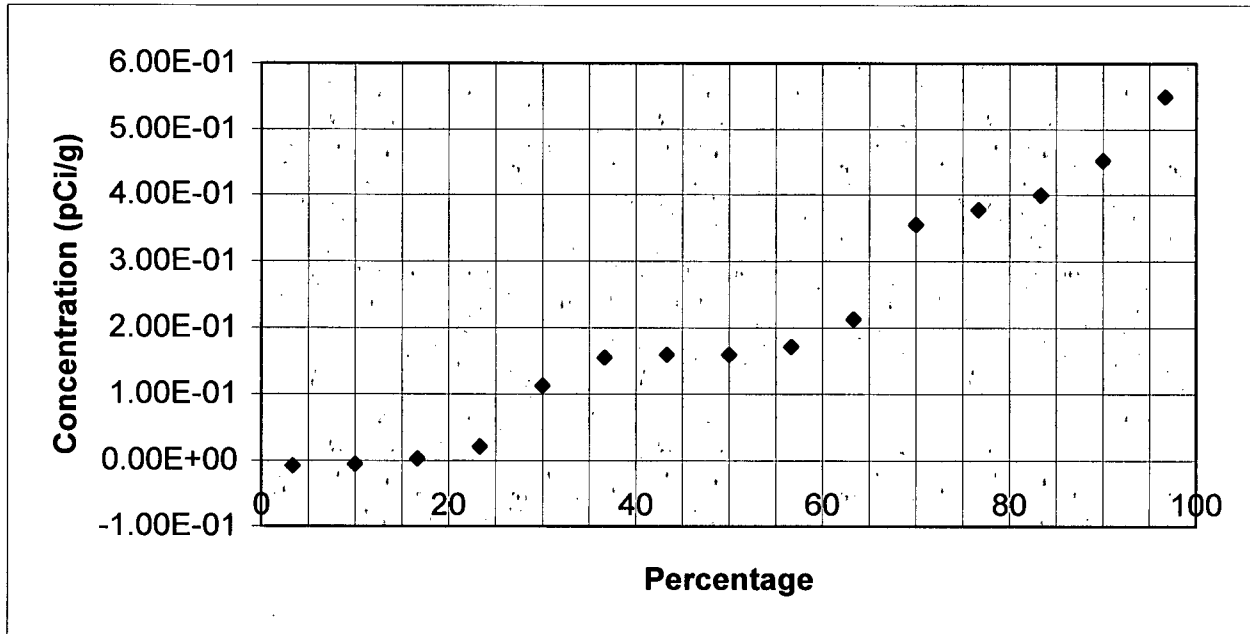
Attachment 2d
Graphical Representation of Data
(6 Pages)

Quantile Plot For Cesium - 137

Survey Unit: 9106-0004

Survey Unit Name: Discharge Canal

Mean: 2.07E-01 pCi/g

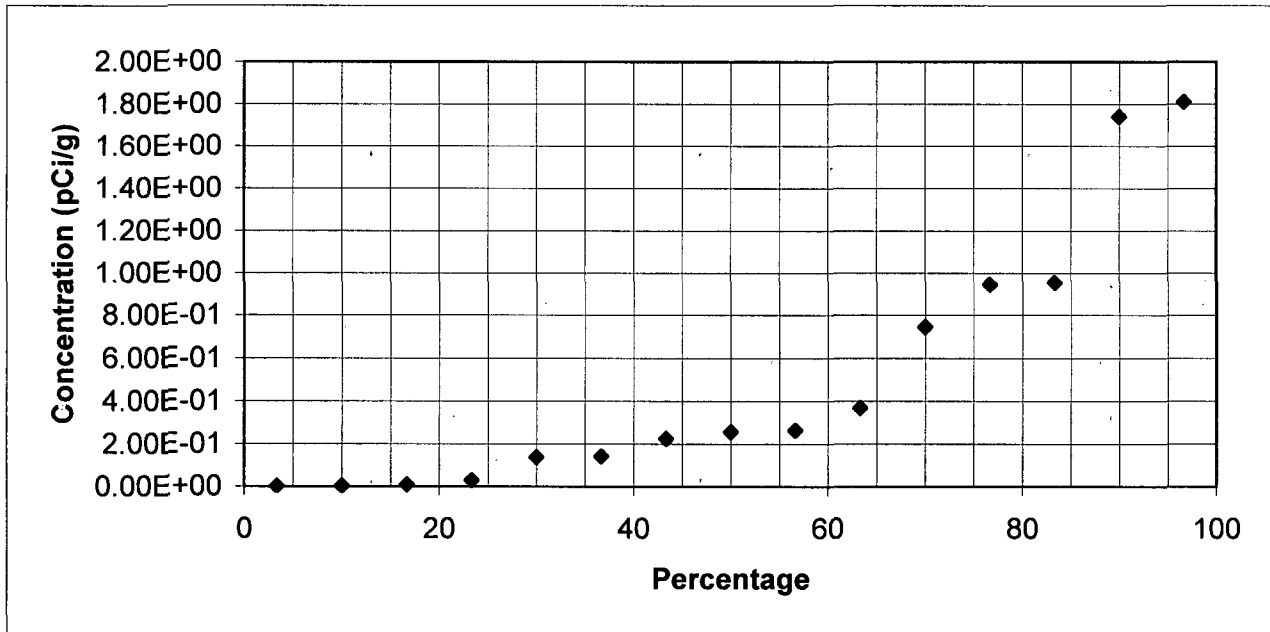


Cs-137	Rank	Percentage
-7.91E-03	1	3 %
-5.61E-03	2	10 %
2.46E-03	3	17 %
2.09E-02	4	23 %
1.12E-01	5	30 %
1.55E-01	6	37 %
1.59E-01	7	43 %
1.59E-01	8	50 %
1.71E-01	9	57 %
2.12E-01	10	63 %
3.55E-01	11	70 %
3.77E-01	12	77 %
3.99E-01	13	83 %
4.51E-01	14	90 %
5.49E-01	15	97 %

Prepared By: Oral KendallDate: 10-25-06Reviewed By: EE SargentDate: 10/25/06

Quantile Plot For Cobalt - 60

Survey Unit: 9106-0004
Survey Unit Name: Discharge Canal
Mean: 5.08E-01 pCi/g



Co-60	Rank	Percentage
0.00E+00	1	3 %
1.16E-03	2	10 %
7.39E-03	3	17 %
2.85E-02	4	23 %
1.37E-01	5	30 %
1.41E-01	6	37 %
2.23E-01	7	43 %
2.56E-01	8	50 %
2.63E-01	9	57 %
3.66E-01	10	63 %
7.44E-01	11	70 %
9.45E-01	12	77 %
9.53E-01	13	83 %
1.74E+00	14	90 %
1.81E+00	15	97 %

Prepared By: Oil Randall

Date: 10-25-06

Reviewed By: E.E. Sargent

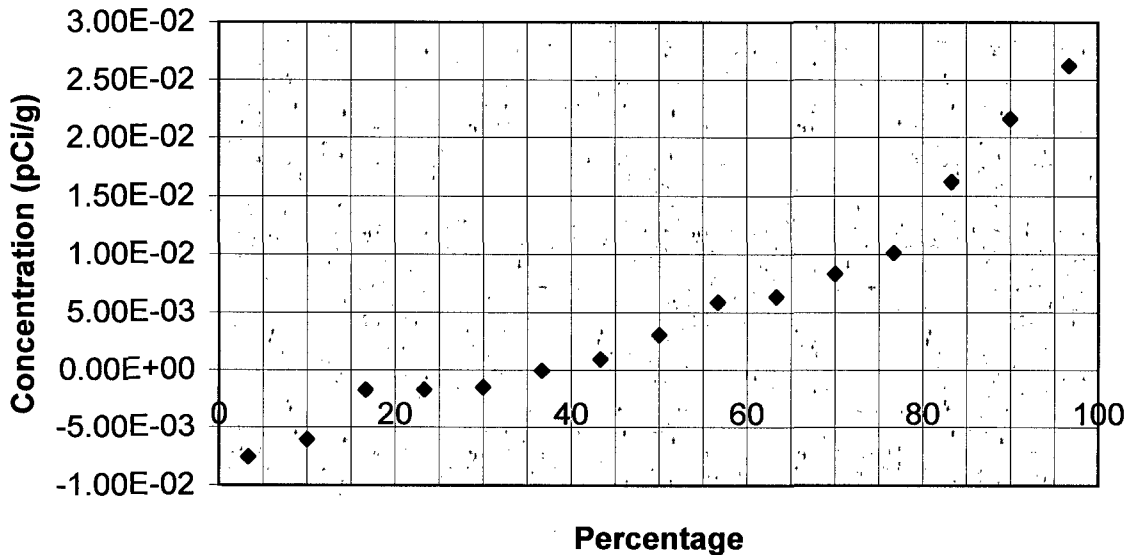
Date: 10/25/06

Quantile Plot For Strontium-90

Survey Unit: 9106-0004

Survey Unit Name: Discharge Canal

Mean: 5.31E-03 pCi/g



0	Rank	Percentage
-7.59E-03	1	3 %
-6.09E-03	2	10 %
-1.75E-03	3	17 %
-1.72E-03	4	23 %
-1.53E-03	5	30 %
-9.37E-05	6	37 %
9.13E-04	7	43 %
3.01E-03	8	50 %
5.86E-03	9	57 %
6.33E-03	10	63 %
8.27E-03	11	70 %
1.01E-02	12	77 %
1.62E-02	13	83 %
2.16E-02	14	90 %
2.62E-02	15	97 %

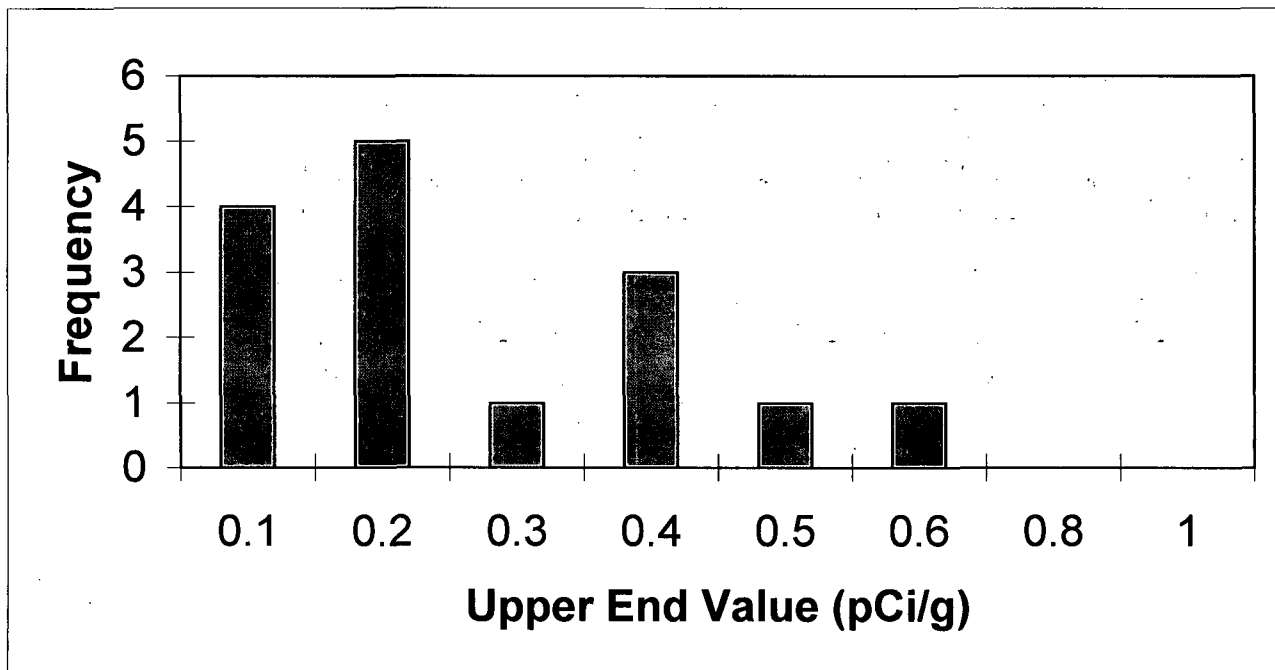
Prepared By: Paul GrunhullDate: 10-25-06Reviewed By: Clifford E. SargentDate: 10/25/06

Frequency Plot For Cesium - 137

Survey Unit: 9106-0004

Survey Unit Name: Discharge Canal

Mean: 0.207 pCi/g



Upper End Value	Observation Frequency	Observation Frequency
0.1	4	27%
0.2	5	33%
0.3	1	7%
0.4	3	20%
0.5	1	7%
0.6	1	7%
0.8	0	0%
1	0	0%
Total	15	100%

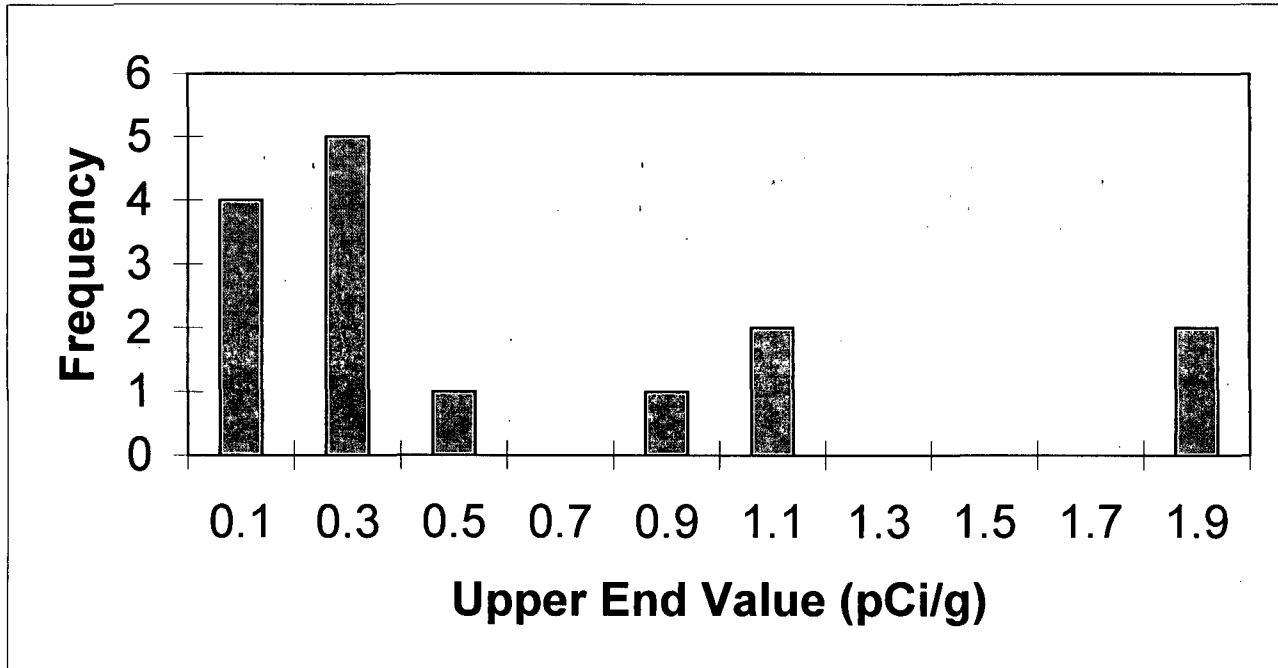
Prepared By: Del KumbullDate: 10-25-06Reviewed By: Chad E. SargentDate: 10/25/06

Frequency Plot For Cobalt - 60

Survey Unit: 9106-0004

Survey Unit Name:

Mean: 0.508 pCi/g



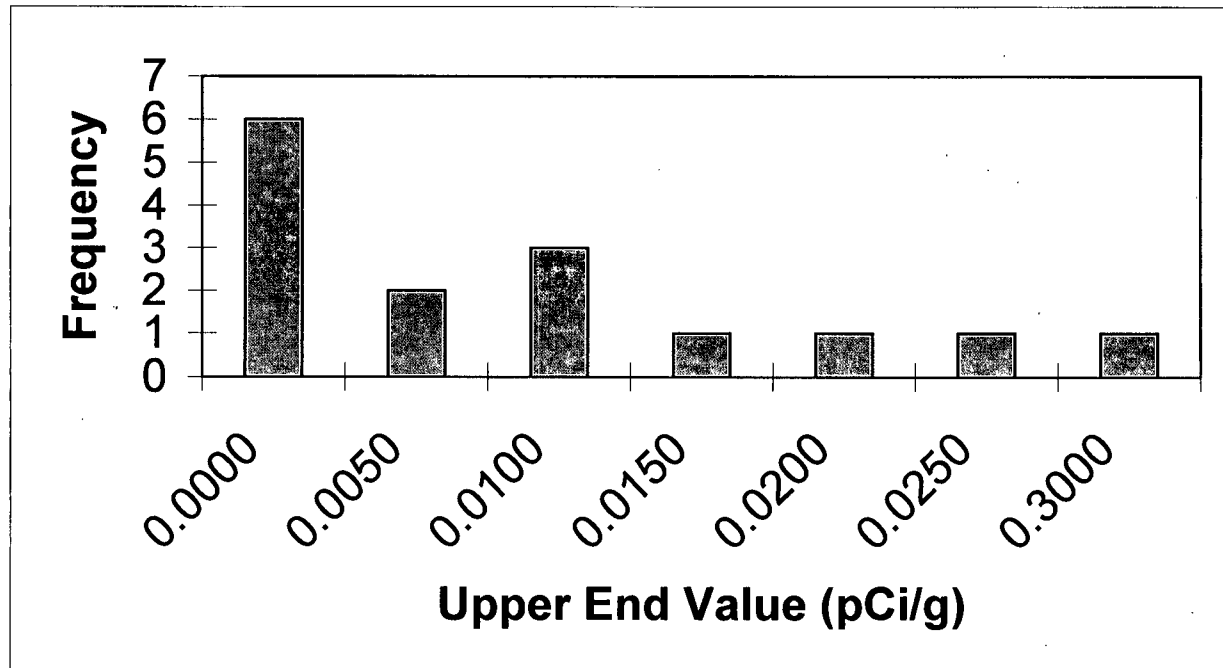
Upper End Value	Observation Frequency	Observation Frequency
0.1	4	27%
0.3	5	33%
0.5	1	7%
0.7	0	0%
0.9	1	7%
1.1	2	13%
1.3	0	0%
1.5	0	0%
1.7	0	0%
1.9	2	13%
Total	15	100%

Prepared By: Paul RumballDate: 10-25-06Reviewed By: E. E. SERGENTDate: 10/25/06

Frequency Plot For Strontium - 90

Survey Unit: 9106-0004
Survey Unit Name: Discharge Canal

Mean: 0.207 pCi/g



Upper End Value	Observation n	Observation n
	Frequency	Frequency
0	6	40%
0.005	2	13%
0.01	3	20%
0.015	1	7%
0.02	1	7%
0.025	1	7%
0.3	1	7%
Total	15	100%

Prepared By: Dal Vandell

Date: 10-25-06

Reviewed By: E.E. Sergeant

Date: 10/25/06

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

Attachment 2e
Sign Test Calculation
(1 Page)

Sign Test Calculation Sheet For Multiple Radionuclides

Survey Unit Number: 0004

Survey Unit Name: Discharge Canal

WP&IR#: 2006-021

Classification : 2

TYPE I (α error): 0.05TYPE I (β error): 0.05

Radionuclides:		Cs-137	Co-60	Sr-90	
Survey Design DCGL (pCi/g):		5.38	2.59	1.05	
Results Cs-137	Results Co-60	Results Sr-90	Weighted Sum (W _s) (includes C-14 component)	DCGL-Result	Sign
4.51E-01	9.53E-01	6.33E-03	5.27E-01	4.73E-01	1
1.71E-01	1.41E-01	-9.37E-05	1.47E-01	8.53E-01	1
3.55E-01	9.45E-01	1.62E-02	5.07E-01	4.93E-01	1
1.59E-01	2.63E-01	-7.59E-03	1.85E-01	8.15E-01	1
3.99E-01	1.74E+00	5.86E-03	8.42E-01	1.58E-01	1
1.12E-01	2.23E-01	1.01E-02	1.77E-01	8.23E-01	1
-5.61E-03	1.16E-03	-6.09E-03	5.45E-02	9.45E-01	1
1.55E-01	2.56E-01	2.62E-02	2.14E-01	7.86E-01	1
2.09E-02	0.00E+00	2.16E-02	8.54E-02	9.15E-01	1
2.46E-03	7.39E-03	-1.75E-03	6.25E-02	9.37E-01	1
2.12E-01	3.66E-01	9.13E-04	2.42E-01	7.58E-01	1
1.59E-01	1.37E-01	-1.72E-03	1.42E-01	8.58E-01	1
5.49E-01	1.81E+00	3.01E-03	8.73E-01	1.27E-01	1
-7.91E-03	2.85E-02	8.27E-03	5.22E-02	9.48E-01	1
3.77E-01	7.44E-01	-1.53E-03	3.96E-01	6.04E-01	1

Number of Positive Differences (S+): 15

Critical Value: 11

Survey Unit: Meets Acceptance Criterion

Performed By: Dal R. BellDate: 10-25-06Independent Review: E. E. SengerDate: 10/25/06

DISCHARGE CANAL
SURVEY UNIT 9106-0004

RELEASE RECORD

Attachment 2f
COMPASS DQA Surface Soil Report with
Retrospective Power Curve
(4 Pages)



DQA Surface Soil Report

Assessment Summary

Site:	9106-0004 w/C-14		
Planner(s):	Dale Randall		
Survey Unit Name:	9106-0004		
Report Number:	2		
Survey Unit Samples:	15		
Reference Area Samples:	0		
Test Performed:	Sign	Test Result:	Not Performed
Judgmental Samples:	0	EMC Result:	Not Performed
Assessment Conclusion:	<i>Reject Null Hypothesis (Survey Unit PASSES)</i>		

Retrospective Power Curve

