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Final Status Survey Final Report Phase IV

Appendix A11

Survey Unit Release Record 9106-0011, Discharge Canal

November 2006

CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
DISCHARGE CANAL
SURVEY UNIT 9106-0011

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1. SURVEY UNIT DESCRIPTION

Survey Unit 9106-0011 (Discharge Canal) is designated as Final Status Survey (FSS) Class 2 and consists of approximately 6,394 m^2 (1.58 acres) of water covered sediment in an area located approximately 1.58 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 9106-0010 is to the north (called north as oriented with the north to south flow of the Connecticut River), Survey Area 9521 is to the east, the Connecticut River is to the south and west, and Survey Area 9530 is also to the west. The survey unit comprises the canal sediments to the depth of three (3) feet from the top of the sediment layer or the original construction depth and it extends up the canal banks to the mean high water level.

This survey unit is bounded by reference coordinates E008 through E016 and by S157 through S173 (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 9106-0011 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 "walk-down."

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,

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 of the available historical information reviewed would support a conclusion that any residual activity in this survey unit is likely to be present at concentrations greater than the respective DCGLs.

Additional information was provided by several historical documents, including the *"Results of Scoping Survey"*, (completed 9/1/98), the *"Historical Site Assessment"*, and the HSA Supplement (dated 6-30-00).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

An initial characterization survey was implemented during April and May of 2004. Six (6) samples from three (3) locations were obtained by biased sampling throughout the area. The samples were analyzed off-site by gamma spectroscopy and with radiochemical analyses for Sr-90 and Tritium. Hard-to-Detect analyses were also conducted on two (2) of the six (6) samples. The only plant-related dosimetrically significant radionuclides identified in the samples were Cs-137, Co-60 and Ni-63. No samples indicated radioactive material in quantities above the ten (10) mrem/yr design DCGL. Cobalt-60 accounted for the majority of the dose in these samples with a maximum concentration of 1.05 pCi/g.

A final characterization was performed by Site Closure personnel in April of 2006. Six (6) sediment samples from six (6) locations were taken. All of the samples were analyzed by gamma spectroscopy. Although no additional HTD testing was performed for characterization; four (4) of the fifteen (15) samples taken to demonstrate compliance with the release criteria during FSS were tested for the full suite of HTD nuclides to provide additional assurance that all of the radionuclides of concern were appropriately addressed. As a result of characterization, the radionuclides of concern identified for FSS planning purposes were Cs-137, Co-60 and Ni-63 (refer to Table 1).

Table 1 – Basic Statistical Quantities for Cs-137, Co-60 and Ni-63 from the Characterization Survey			
Parameter	**Cs-137 (ρCi/g)**	**Co-60 (ρCi/g)**	**Ni-63 (ρCi/g)**
Minimum Value:	1.09E-02	-4.95E-03	2.42E+01
Maximum Value:	2.85E-01	3.69E-01	2.59E+01
Mean:	1.48E-01	1.26E-01	2.51E+01
Median:	1.43E-01	7.50E-02	2.51E+01
Standard Deviation:	1.25E-01	1.57E-01	1.20E+00
NOTE: The Operational DCGLs from Table 2 are 6.01 ρCi/g for Cs-137, 2.90 ρCi/g for Co-60 and 549 for Ni-63; these are used in conjunction with the unity rule to achieve nineteen (19) mrem/yr TEDE.			

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

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

3. DATA QUALITY OBJECTIVES (DQO)

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

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

The primary objective of the Final Status Survey Plan (FSSP) was to demonstrate that the level of residual radioactivity in Survey Unit 9106-0011 did not exceed the release criteria specified in the LTP and that the potential dose from residual radioactivity is As Low As Reasonably Achievable (ALARA).

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

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

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

Equation 1:

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

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

This survey unit is not affected by existing groundwater (reference CY memo ISC 06-024). Therefore, dose contribution from existing groundwater is zero (0) mrem/yr TEDE.

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

Equation 2:

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

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

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

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

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

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

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

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

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

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

Another important facet of the DQO process is to identify the radionuclides of concern and determine the concentration variability. Initial characterization was performed in April of 2004 as discussed in Section 2. Cs-137, Co-60 and Ni-63 were found to be the predominate radionuclides of concern. The basic statistical quantities (i.e., mean, standard deviation, median) for Cs-137, Co-60 and Ni-63 are provided in Table 1.

As part of the DQOs applied to laboratory processes, analysis results were reported as actual calculated results. Results reported as less than Minimum Detectable Concentration (<MDC) were not accepted for FSS. Sample report

summaries included unique sample identification, analytical method, radionuclide, result, and uncertainty to two (2) standard deviations, laboratory data qualifiers, units, and the required and observed MDC.

4. SURVEY DESIGN

The level of effort associated with planning a survey is based on the complexity of the survey and nature of the hazards. Guidance for preparing FSS plans is provided in Procedure RPM 5.1-11, *"Preparation of Final Status Survey Plans".*

This survey was initially designed to ten (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 nineteen (19) mrem/yr TEDE, as discussed in Section 2 of this Release Record.

The DQO process determined that Cs-137, Co-60 and Ni-63 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 Ni-63) were considered in the survey design.

Surrogate DCGLs were not required for this survey unit based on process knowledge from FSS of nearby adjacent areas and via screening process described in LTP Section 5.4.7.2, "Gross Activity DCGLs". Ni-63 concentrations in sediment and soil were ascertained by direct analysis.

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

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

The Sign Test was selected as the non-parametric statistical test 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 sediment samples for FSS was determined in accordance with Procedure RPM 5.1-12, *"Determination of the Number of Samples for Final Status Survey."* The Lower Bound of the Gray Region (LBGR) was set in

accordance with Procedure RPM 5.1-11 to 0.778 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 MARSSIM in support of the decommissioning license termination rule (10 CFR 20, Subpart E). The result of the COMPASS computer run showed adequate power for the survey design. This indicates that the survey unit has a high probability of rejecting the null hypothesis, assuming that the characterization data are representative of the FSS results. Survey design specified fifteen (15) sediment core samples for non-parametric statistical testing.

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

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

Table 3 -Sample Measurement Locations with Associated GPS Coordinates

Designation	Northing	Easting
9106-0011-002F	233348.73	673092.56
9106-0011-003F	233348.73	673165.28
9106-0011-004F	233285.75	673128.92
9106-0011-005F	233285.75	673201.64
9106-0011-006F	233222.77	673165.28
9106-0011-007F	233222.77	673238.00
9106-0011-008F	233222.77	673310.72
9106-0011-009F	233159.79	673274.36
9106-0011-010F	233159.79	673347.09
9106-0011-011F	233096.81	673310.72
9106-0011-012F	233096.81	673383.45
9106-0011-014F	233033.83	673419.81
9106-0011-015F	232970.85	673456.17
9106-0011-017F	235120.91	672468.82
9106-0011-018F	233321.34	673176.29

The sample location designations of Table 3 are not sequentially inclusive because of the necessity to relocate some samples due to the accessibility of the original sample locations. Sample locations 9106-0011-001F and 9106-0011-013F were found to be inaccessible. These were randomly re-located using the VSP software to two (2) new locations designated as 9106-0011-016F and 9106-0011-017F, except that location 9106-0011-016F was also found to be inaccessible. So, an additional randomly located sample, 9106-0011-018F was also generated. Since sample 9106-0011-001F was randomly selected as a Quality Control (QC) split sample, sample 9106-0011-017F was designated as the replacement QC sample.

While comparing sample design locations to the actual sample location provided by Ocean Surveys, Inc (OSI) in order to determine the maximum design to actual offset, an anomaly was found concerning sample numbering.

It was found that the sample offsets for sample numbers 9106-0000-017F and 9106-0000-018F were quite extreme. It was further noticed that the sample location provided by OSI for sample number 9106-0000-017F closely matched that of sample design location for 9106-0000-016F and that the sample location provided by OSI for sample location 9106-0000-018F closely matched the sample design location for 9106-0000-017F.

A review of the OSI Daily Sampling Logs, Sample Analysis Reports and Chain of Custody forms and interviews with the FSS Project Engineer were performed in order to resolve the anomaly. It was determined that, on 5/10/06, Sample Number 9106-0000-016 was used for a DEP sample. Sampling to replace sample design locations which were unobtainable from Sample Locations 9106-0000-001F and 9106-0000-013F did not begin until 5/17/06. The OSI crew encountered high winds, significant rainfall and strong currents during this period. Evidence supports the hypothesis that the crew became confused with regard to sample numbering at this time. Either the FSS Engineer in charge of the project did not provide corresponding sample numbers with the sample coordinates that were provided to the OSI crew or the OSI crew, knowing that Sample Number 9106-0000-016F had already been used, guided the boat captain to the first set of coordinates provided by the FSS Engineer and called this point Sample Number 9106-0000-017F. In any case, there is no documentation of a Sample Number 9106-0000-016F on Chain of Custody Forms or in the Sample Analysis packages. There is also no documentation in the OSI Daily Sampling Logs to show that Sample Number 9106-0000-016F was ever taken; however, there is documentation of a Sample Number 9106-0000-016DEP, taken in the vicinity of Sample Location 9106-0000-007F.

Therefore, the evaluation determined that the GPS coordinates for sample design location 9106-0000-016F were used and called Sample Number 9106-0000-017F and the coordinates for sample design location 9106-0000-017F

were used for Sample Number 9106-0000-018F. There is no documentation that the coordinates for sample design location 9106-0000-018F were used.

Three (3) sediment samples were analyzed for the full suite of radionuclides specified in Table 1, exceeding the requirement to analyze 5% of the sample population for HTD analysis specified in procedure RPM 5.1-11. Two (2) of the three (3) samples were randomly selected using the Microsoft Excel "RAND" function. The two (2) samples exhibiting the highest observed radionuclide concentrations by gamma analyses were also selected.

The implementation of quality control measures as referenced by Procedure RPM 5.1-24, *"Split Sample Assessment for Final Status Survey,"* required 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 "RAND" function. The number of quality control samples exceeded the 5% requirement as specified by the LTP.

Section 5.7.3.2.6 of 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	6,394 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 0.111 the LBGR was set to 0.778 to maintain Relative Shift in the range of 1 and 3, Relative Shift was 2.0
Grid Spacing	22.2 m	Based on triangular grid
Design DCGL	3.16 ρCi/g Cs-137 1.52 ρCi/g Co-60 289 ρCi/g Ni-63	To achieve ten (10) mrem/yr TEDE
Operational DCGL	6.01 ρCi/g Cs-137 2.90 ρCi/g Co-60 549 ρCi/g Ni-63	To achieve nineteen (19) mrem/yr TEDE [2] to demonstrate compliance with Equation 2 of this Release Record
Scan Coverage	N/A	The LTP exempts this area
Sediment Investigation Level	6.01 ρCi/g Cs-137 2.90 ρCi/g Co-60 549 ρCi/g Ni-63	The Operational DCGL meets the LTP criteria for a Class 2 survey unit

(1) The survey design used a much smaller value for investigation than the Operational DCGL provided by Table 2 as the total dose from existing and future groundwater had not been established at the time of planning the FSS.
(2) The allowable dose for soil in this survey unit is nineteen (19) mrem/yr TEDE as the bounding dose from existing and future groundwater has been established based on field data (reference CY memo ISC 06-024.)

5. SURVEY IMPLEMENTATION

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

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

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

The 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.

Four (4) samples (9106-0011-003F, 9106-0011-009F and 9106-0011-018F) were selected for HTD radionuclide analysis by the off-site laboratory.

The implementation of quality control measures included the collection of two (2) split samples at locations 9106-0011-012F and 9106-0011-017F for comparative 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. Ni-63 was analyzed by liquid scintillation analyses. All analyses were performed to the required MDC.

Cs-137 was positively identified above the accepted criteria for detection (i.e., a result greater than two (2) standard deviations uncertainty) in thirteen (13), Co-60 was positively identified in seven (7) and Ni-63 in three (3) of the fifteen (15) samples.

Several other radionuclides which were positively identified could be de-selected or excluded using the 5% and 10% rule described in Section 5.4.7.2 of the LTP.

The off-site laboratory also processed three (3) samples for full HTD analysis as required by the sample plan. The requested analyses included alpha spectroscopy and liquid scintillation depending upon the radionuclide and the measurement method. All analyses were performed to the required MDC. None of the HTD radionuclides met the accepted criteria for detection (i.e., a

result greater than two standard deviations uncertainty) in more than one sample; however, each of the positive results for HTD radionuclides could be de-selected based on the 5% and 10% rules.

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

Table 5- Summary of Soil Sample Results

Sample Number	Cs-137 pCi/g	Co-60 pCi/g	Ni-63 pCi/g	Fraction of the Operational DCGL (1)
9106-0011-002F	8.89E-02	2.69E-02	1.53E+00	2.69E-02
9106-0011-003F	7.37E-01	1.38E-01	-4.64E-01	1.69E-01
9106-0011-004F	1.02E-01	-1.19E-02	5.93E+00	2.37E-02
9106-0011-005F	2.13E-01	1.52E-01	5.96E+00	9.87E-02
9106-0011-006F	3.22E-01	1.99E-02	2.44E+00	6.49E-02
9106-0011-007F	1.84E-01	5.52E-02	1.40E+01	7.52E-02
9106-0011-008F	1.56E-01	1.53E-01	-5.23E-01	7.78E-02
9106-0011-009F	6.23E-02	3.42E-02	8.59E-01	2.37E-02
9106-0011-010F	3.71E-02	-1.19E-02	6.11E+00	1.32E-02
9106-0011-011F	1.57E-02	1.17E-02	9.78E-01	8.43E-03
9106-0011-012F	-3.48E-03	3.11E-02	-1.12E+00	8.11E-03
9106-0011-014F	2.49E-02	-4.54E-04	2.76E+00	9.01E-03
9106-0011-015F	1.18E-01	-4.29E-03	8.67E+00	3.39E-02
9106-0011-017F	4.06E-01	6.52E-03	1.18E+01	9.13E-02
9106-0011-018F	1.99E-01	1.81E-01	5.22E+00	1.05E-01

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

The sample location designations of Table 5 are not sequentially inclusive because of the necessity to relocate some samples due to the accessibility of the original sample locations. Sample locations 9106-0011-001F and 9106-0011-013F were found to be inaccessible. These were randomly re-located using the VSP software to two (2) new locations designated as 9106-0011-016F and 9106-0011-017F, except that location 9106-0011-016F was also found to be inaccessible. So, an additional randomly located sample, 9106-0011-018F was also generated. Biased samples were not required per the sample plan.

7. QUALITY CONTROL

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

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

8. INVESTIGATIONS AND RESULTS

None of the sample results were found to exceed the nineteen (19) mrem/yr Operational DCGL. Thus, no investigations were required.

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 and CTDEP criteria is nineteen (19) mrem/yr TEDE as discussed in Section 2 of this Release Record.

11. DATA QUALITY ASSESSMENT (DQA)

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

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

The preliminary data review consisted of calculating basic statistical quantities (e.g., mean, median, standard deviation). The standard deviation was slightly more than the value used for the survey design. This is represented by the shift in the retrospective power curve as shown in Attachment 2f. This would indicate a need to change the original LBGR in order to maintain the number of samples at fifteen (15) to meet the Operational DCGL. However, the value of LBGR is not a critical issue as the survey unit has passed the statistical test, and the mean and median values are well below the Operational DCGL when used in conjunction with the unity rule. Also, the retrospective power curve shows that a sufficient number of samples were collected to achieve the desired power. Therefore, the survey unit meets the unrestricted release criterion with adequate power as required by the DQOs.

The range of the data, about 3.41 standard deviations, was not unusually large. The difference between the mean and median was 45.8% 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 1.00.

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

12. ANOMALIES

The following anomalies were noted:

- Upon receipt at the off-site laboratory, it was discovered that the labels for two (2) of the samples (9106-0011-007F and 9106-0011-017FS) were smudged in transit, rendering them illegible. This issue and measures to prevent a recurrence are documented in Condition Report 06-0168, initiated on 6-25-06.

- Sample location 9106-0011-017 was designated as a QC split sample. Sample 9106-0011-017F (the split to illegibly labeled sample 9106-0011-017FS) had a legible label and was counted at the offsite laboratory. This result was included in sample results packages returned from the off-site laboratory (MSR#06-0877).

  To resolve this issue, three additional samples (9106-0011-007F, 9106-0011-017F and 9106-0011-017FS) were sent from excess aliquot that had been retained in appropriate packaging on-site and in compliance with chain of custody requirements. An additional issue was encountered with this:

- Sample 9106-0011-007F was erroneously sent out the second time with the sample labeled as "9106-0011-007FS", this is how the sample is now titled in the results.

  The results appearing in sample package MSR#06-960 are the results of record for the three (3) affected samples. A memo noting these discrepancies has been attached to the sample results package.

- **Sample numbering error identified during compilation of this release record, as described in Section 4 of this report.**

  Design Sample Number 9106-0000-016F was notated as a sample number which was not used.

  Design Sample Location 9106-0000-017F was shown at the coordinates originally designated for Design Sample Location 9106-0000-016F.

  Design Sample Location 9106-0000-018F was shown at the coordinates originally designated for Design Sample Location 9106-0000-017F.

13. CONCLUSION

Survey Unit 9106-0011 has demonstrated compliance with the dose based, unrestricted release criterion. The sample data passed the Sign Test and the null hypothesis was rejected. The ALARA criteria for soils as specified in Chapter 4 of the LTP were achieved. Reclassification and remediation of this survey unit was not required.

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

The dose contribution from sediment in this survey unit is 1.0 mrem/yr TEDE based on the average concentration of the samples used for non-parametric statistical sampling.

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

This survey unit is 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 exposures from the three (3) components as described in Section 3, that is, residual radioactivity in soil, existing groundwater radioactivity, and future groundwater radioactivity from the burial of concrete foundations or footings from site buildings containing residual radioactivity, will not exceed 1.0 mrem/yr Total Effective Dose Equivalent (TEDE).

14. ATTACHMENTS

14.1 Attachment 1 – Figures

14.2 Attachment 2 – Sample and Statistical Data

Attachment 1
Figures
(5 pages)

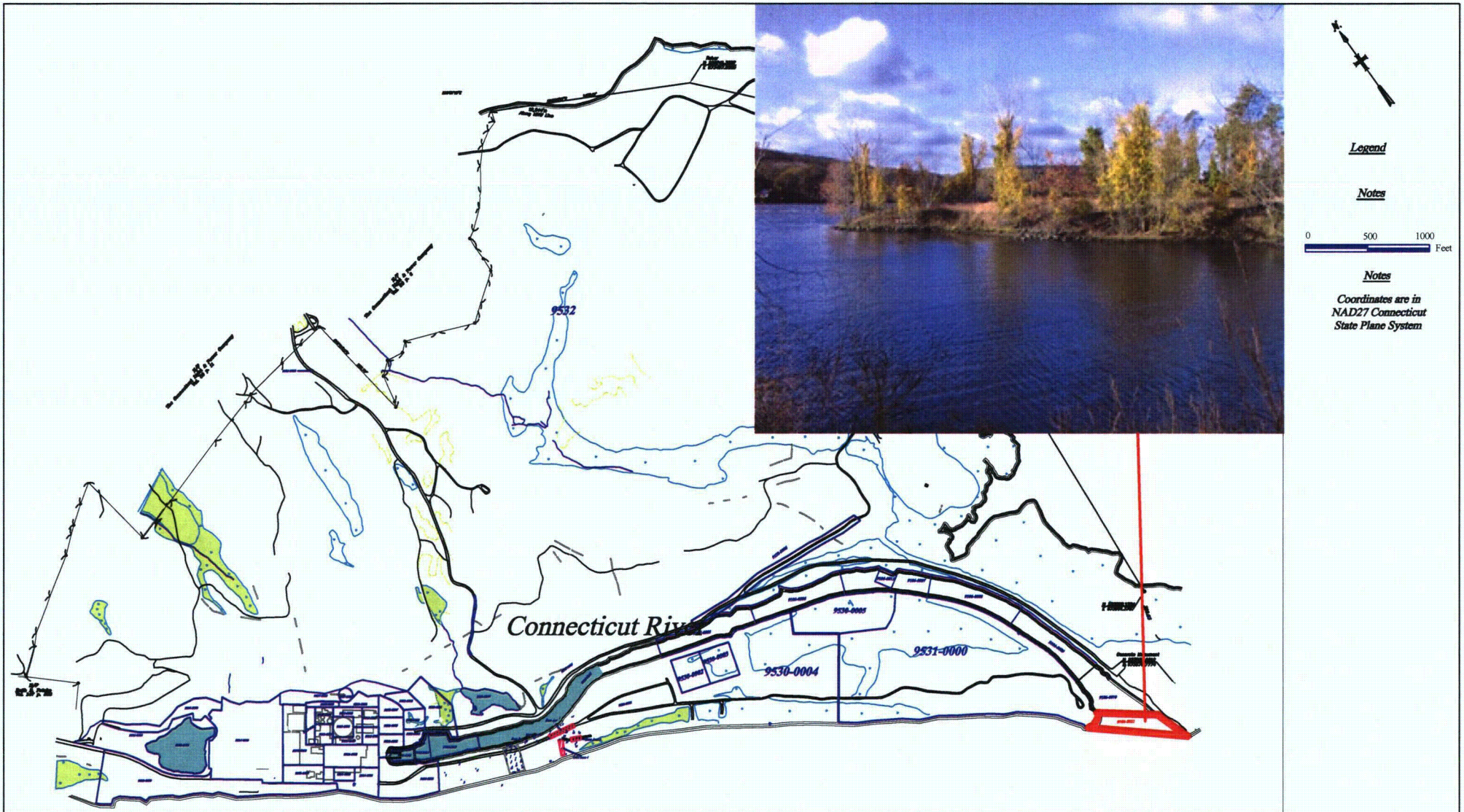


Figure 1	*Connecticut Yankee Atomic Power Company* *9106-0011 Final Status Survey Design*	*Date: November 2006* *Revision: 0*

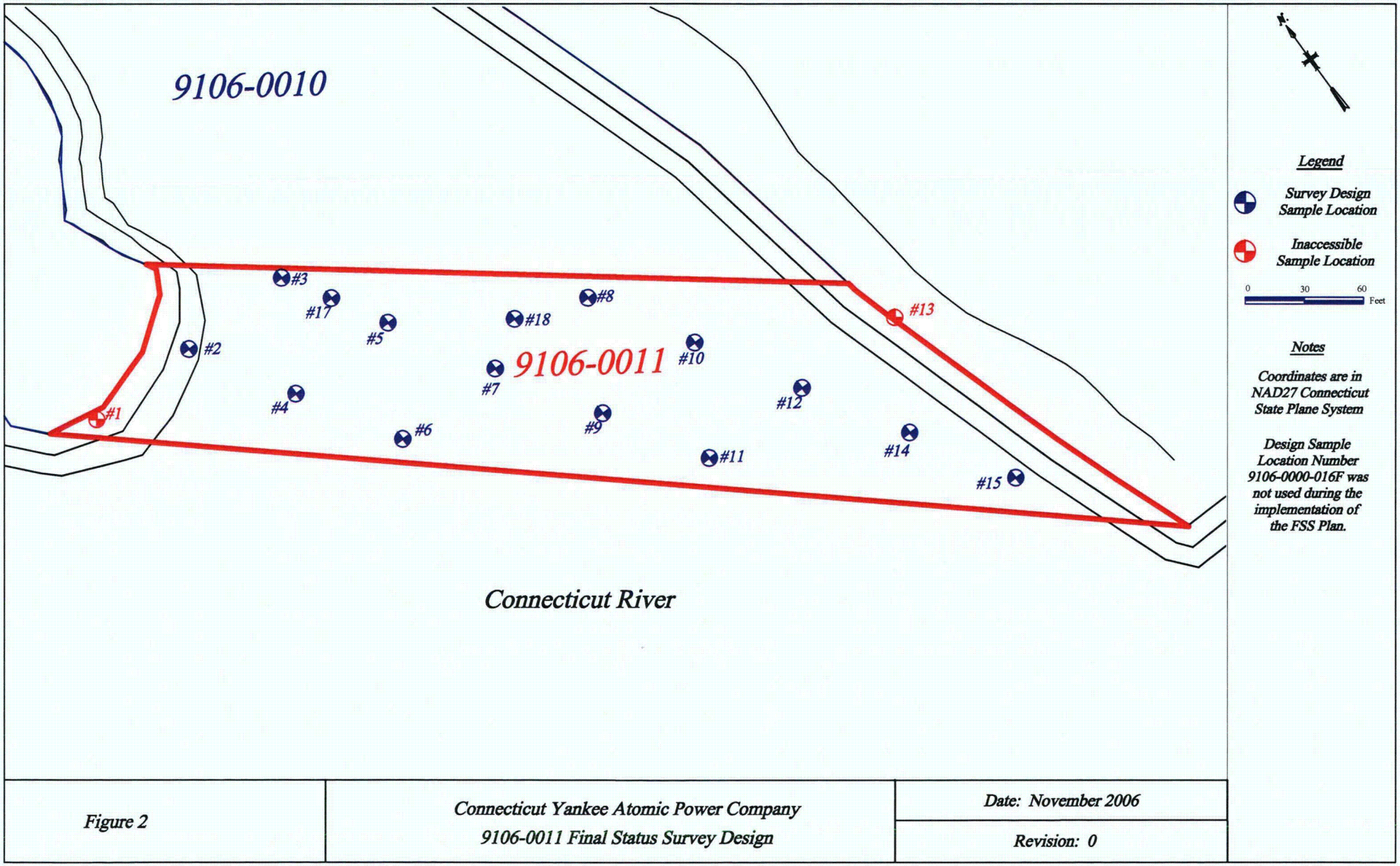


Figure 2	Connecticut Yankee Atomic Power Company 9106-0011 Final Status Survey Design	Date: November 2006 Revision: 0

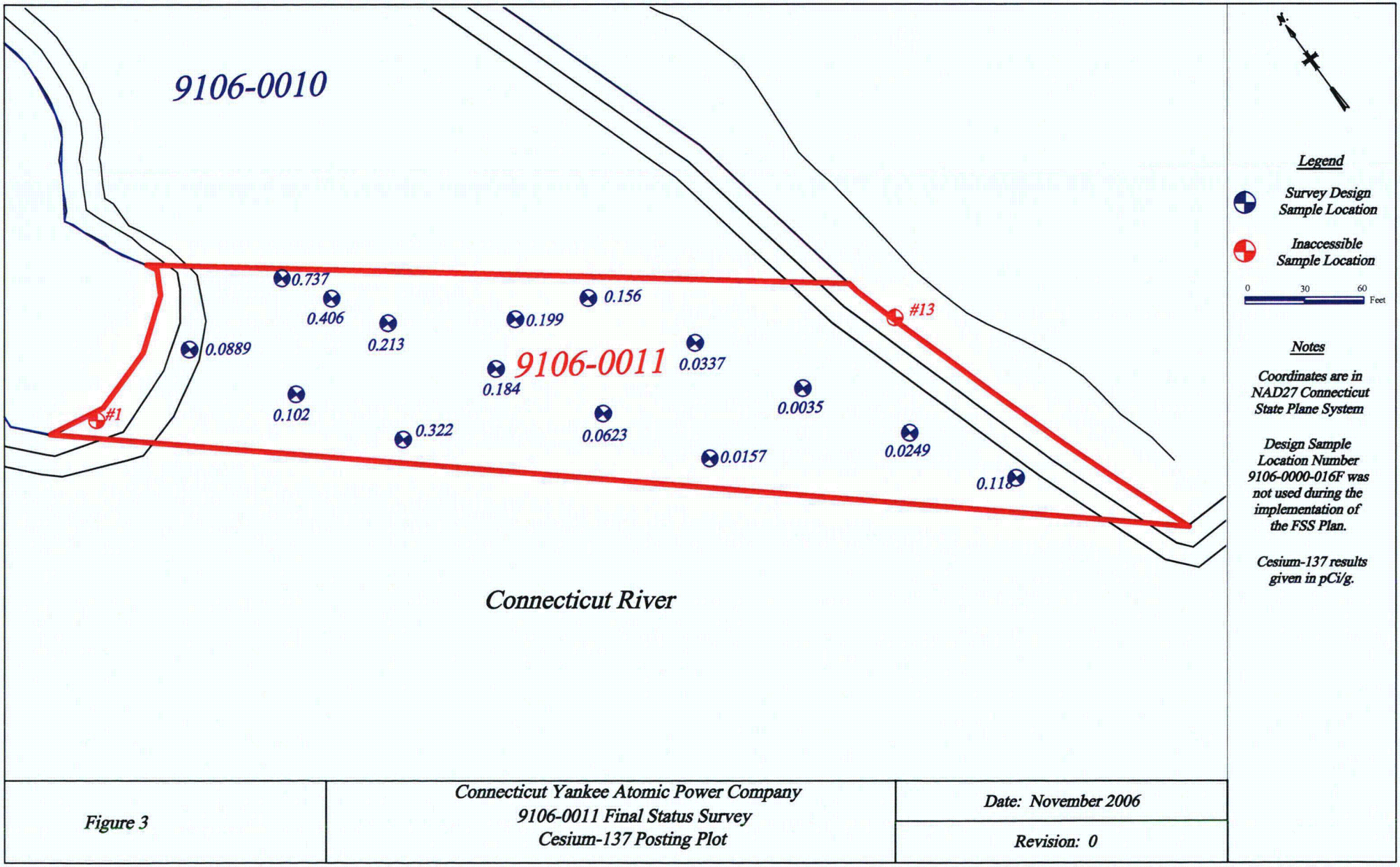
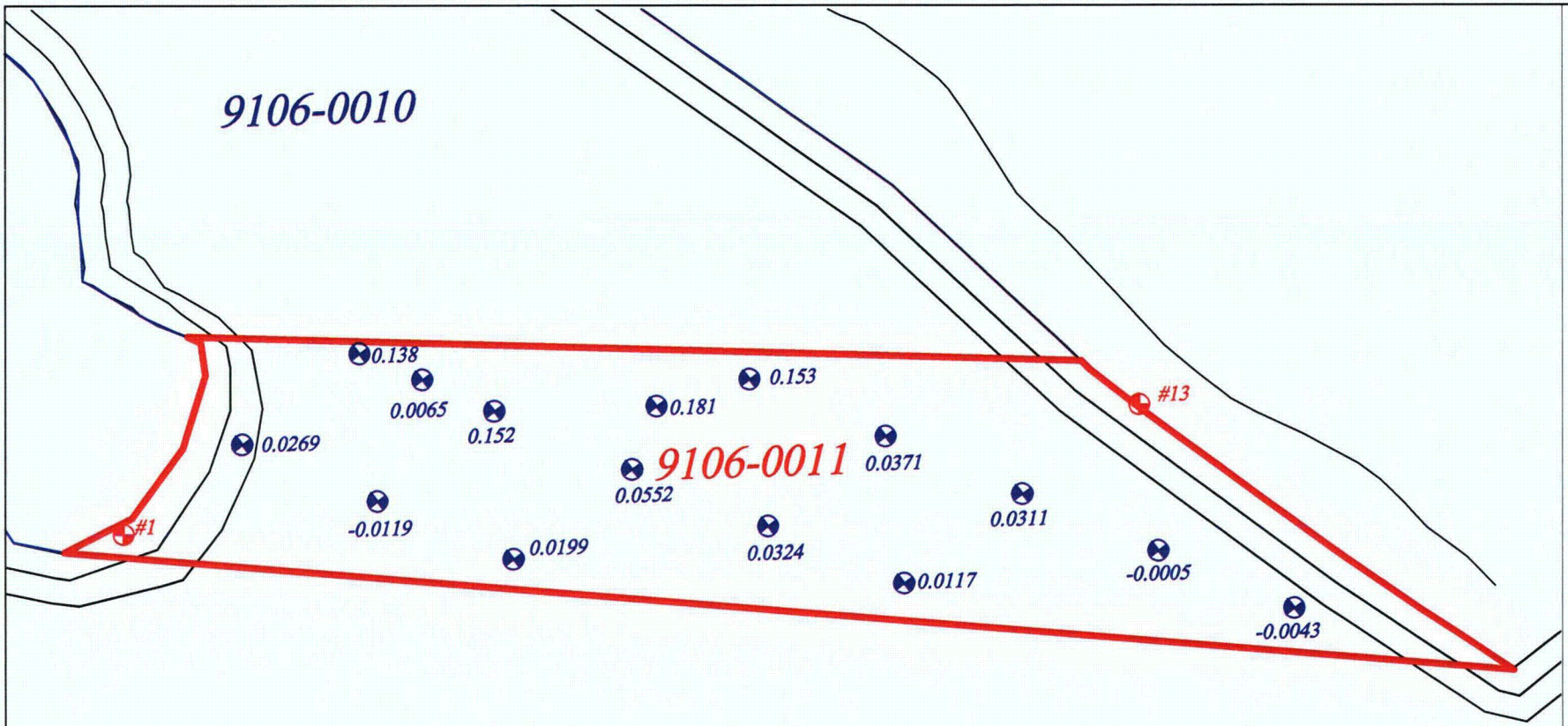


Figure 3	Connecticut Yankee Atomic Power Company 9106-0011 Final Status Survey Cesium-137 Posting Plot	Date: November 2006 Revision: 0



Legend

Survey Design Sample Location

Inaccessible Sample Location

Notes

0 30 60 Feet

Notes

Coordinates are in NAD27 Connecticut State Plane System

Design Sample Location Number 9106-0000-016F was not used during the implementation of the FSS Plan.

Cobalt-60 results are given in pCi/g.

Figure 4	Connecticut Yankee Atomic Power Company 9106-0011 Final Status Survey Cobalt-60 Posting Plot	Date: November 2006 Revision: 0

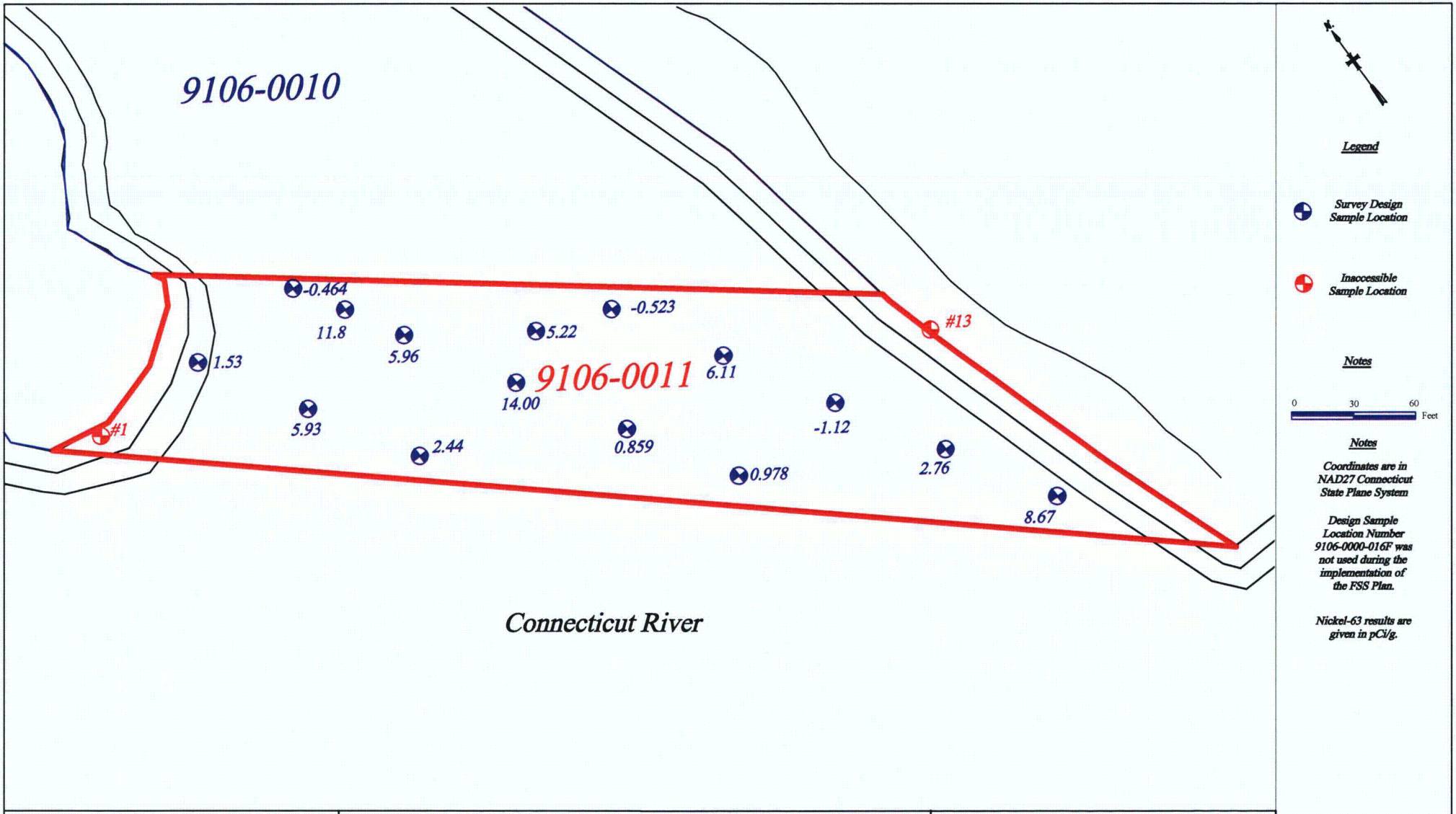


Figure 5	Connecticut Yankee Atomic Power Company 9106-0011 Final Status Survey Nickel-63 Posting Plot	Date: November 2006 Revision: 0

Attachment 2
Sample and Statistical Data

Attachment 2a
Sample Data
(188 Pages)

Table of Contents

General Narrative

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Sediment
PO# 002332
Work Order: 165614
SDG: MSR #06-0877

June 30, 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 June 21, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures.

The laboratory received the following sample(s):

Sample ID	Client Sample ID
165614001	9106-0011-011F
165614002	9106-0011-012F
165614003	9106-0011-012FS
165614004	9106-0011-014F
165614005	9106-0011-015F
165614006	9106-0011-018F
165614007	9106-0011-002F
165614008	9106-0011-003F

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:

Seven sediment samples were analyzed for FSSGAM and Ni-63.
One sediment sample was 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

Chain of Custody Form

No. 2006-00413

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

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only
Comments: 165614

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Ni-63				Comment, Preservation	Lab Sample ID
9106-0011-011F	5/17/06	08:15	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-012F	5/17/06	08:41	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-012FS	5/17/06	08:41	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-014F	5/17/06	09:34	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-015F	5/17/06	09:12	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-018F	5/17/06	10:01	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-002F	5/15/06	14:33	SE	C	BP	X		X				Transferred from COC 2006-00352	
9106-0011-003F	5/15/06	14:58	SE	C	BP		X					Transferred from COC 2006-00352	

NOTES: PO #: 002332 MSR #: 06-0877 per accompanying paperwork. CA from 4/21/06 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	6-20-06/1100	AM	6/21/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

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

Bill of Lading #
7910 2328 7540

Internal Container Temp. 24° Deg. C
Custody Sealed? Y ☒ N ☐
Custody Seal Intact? Y ☒ N ☐

SAMPLE RECEIPT & REVIEW FORM

GENERAL ENGINEERING LABORATORIES, LLC

PM use only

Client: CONN ATOMIC YANKEE	SDG/ARCOC/Work Order: 165614
Date Received: 6-21-06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: ACM	

	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) 24°C
3	Chain of custody documents included with shipment?	/			
4	Sample containers intact and sealed?	/			Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?		/		Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?		/		Sample ID's and containers affected:
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			/	
8	Samples received within holding time?	/			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	/			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?			/	Sample ID's affected: TIME & DATES WERE WIPED OFF
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	7910 2328 7540			

	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*: CAM 60
B	PCB Regulated?	X			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	X			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: _____ Initials _____ Date: 6/21/06

Figure 1. Sample Check-in List

Date/Time Received: 6-21-06 0930

SDG#: MSR# 06-0877

Work Order Number: 165614

Shipping Container ID: 7910 2328 2540 Chain of Custody # 2006-00413

1. Custody Seals on shipping container intact? Yes [X] No [ ]
2. Custody Seals dated and signed? Yes [ ] No [X]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 24°C
5. Vermiculite/packing materials is: Wet [X] Dry [ ]
6. Number of samples in shipping container: 8
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:
   - 7 tape
   - 8 hazard labels
   - 8 custody seals
   - 8 appropriate sample labels

9. Samples are:
   - 8 in good condition
   - ____ leaking
   - ____ broken
   - ____ have air bubbles

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

Sample Custodian/Laboratory: [signature] Date: 6/21/06 0930

Telephoned to: _____ On _____ By _____

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 165614

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:	542293
Prep Batch Number:	541984
Dry Soil Prep GL-RAD-A-021 Batch Number:	541800

Sample ID	Client ID
165614008	9106-0011-003F
1201121832	Method Blank (MB)
1201121833	165557001(1000-0000-119-C-1C-01) Sample Duplicate (DUP)
1201121834	165557001(1000-0000-119-C-1C-01) Matrix Spike (MS)
1201121835	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: 165557001 (1000-0000-119-C-1C-01).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Additional Comments
The Cm-233/234 blank result is greater than the MDA but less than the detection limit.

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:	542294
Prep Batch Number:	541984
Dry Soil Prep GL-RAD-A-021 Batch Number:	541800

Sample ID	Client ID
165614008	9106-0011-003F
1201121836	Method Blank (MB)
1201121837	165557001(1000-0000-119-C-1C-01) Sample Duplicate (DUP)
1201121838	165557001(1000-0000-119-C-1C-01) Matrix Spike (MS)
1201121839	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: 165557001 (1000-0000-119-C-1C-01).

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 165614008 (9106-0011-003F) was recounted due to a negative result greater than three times the error.

Miscellaneous Information:

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

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**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:	542295
Prep Batch Number:	541984
Dry Soil Prep GL-RAD-A-021 Batch Number:	541800

Sample ID	Client ID
165614008	9106-0011-003F
1201121840	Method Blank (MB)
1201121841	165557001(1000-0000-119-C-1C-01) Sample Duplicate (DUP)
1201121842	165557001(1000-0000-119-C-1C-01) Matrix Spike (MS)
1201121843	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: 165557001 (1000-0000-119-C-1C-01).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

SDG.

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	541904
Prep Batch Number:	541800

Sample ID	Client ID
165614001	9106-0011-011F
165614002	9106-0011-012F
165614003	9106-0011-012FS
165614004	9106-0011-014F
165614005	9106-0011-015F
165614006	9106-0011-018F
165614007	9106-0011-002F
165614008	9106-0011-003F
1201120872	Method Blank (MB)
1201120873	165614001(9106-0011-011F) Sample Duplicate (DUP)
1201120874	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: 165614001 (9106-0011-011F).

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 1201120872 (MB) recounted due to a suspected blank false positive. Since the reason for the recount was due to a counting irregularity specific to the detector, the rest of batch was not recounted.

Miscellaneous Information:

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

Additional Comments
The relative percent difference between samples 1201120873 (9106-0011-011F) and 165614001 (9106-0011-011F) for Ac-228 and Tl-208 did not meet the duplication criteria. However, when a relative error ratio is calculated, precision is shown at 2.06 for Ac-228 and .9919 for Tl-208.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to low abundance.	Cesium-134	165614006
			165614007
			165614008

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:	545299
Prep Batch Number:	541984
Dry Soil Prep GL-RAD-A-021 Batch Number:	541800

Sample ID	Client ID
165614008	9106-0011-003F
1201128844	Method Blank (MB)
1201128845	165011040(1000-0000-120-C-1C-03) Sample Duplicate (DUP)
1201128846	165011040(1000-0000-120-C-1C-03) Matrix Spike (MS)
1201128847	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: 165011040 (1000-0000-120-C-1C-03).

QC Information
Refer to Non-Conformance Report.

Technical Information:

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

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

Sample Re-prep/Re-analysis
The batch was reprepped due to a low matrix spike 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. The following NCR was generated for this SDG:
NCR 335049 was generated due to RDL less than MDA and Failed Recovery for MS/PS. 1. Samples 165011031, 165011033, 165011034, 165011035, 165011036, 165011037, 165011039, 165011042, 165011043, and duplicate 1201128845 did not meet the detection limit. 2. The matrix spike, 1201128846, did not meet the recovery requirement due to the matrix of the sample. 1. Client was contacted and granted relief to report results. 2. The batch was previously prepped with similar results. Client was contacted and granted relief to report results.

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Tc99, Solid-ALL FSS**
Analytical Method:	DOE EML HASL-300, Tc-02-RC Modified
Analytical Batch Number:	541378

Sample ID	Client ID
165614008	9106-0011-003F
1201119751	Method Blank (MB)
1201119752	165557011(1000-0000-121-C-1C-02) Sample Duplicate (DUP)
1201119753	165557011(1000-0000-121-C-1C-02) Matrix Spike (MS)
1201119754	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: 165557011 (1000-0000-121-C-1C-02).

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:	542567
Prep Batch Number:	541984
Dry Soil Prep GL-RAD-A-021 Batch Number:	541800

Sample ID	Client ID
165614008	9106-0011-003F
1201122392	Method Blank (MB)
1201122393	165614008(9106-0011-003F) Sample Duplicate (DUP)
1201122394	165614008(9106-0011-003F) Matrix Spike (MS)
1201122395	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: 165614008 (9106-0011-003F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Ni63, Solid-ALL FSS**
Analytical Method:	DOE RESL Ni-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	542563
Prep Batch Number:	541984
Dry Soil Prep GL-RAD-A-021 Batch Number:	541800

Sample ID	Client ID
165614001	9106-0011-011F
165614002	9106-0011-012F
165614003	9106-0011-012FS
165614004	9106-0011-014F
165614005	9106-0011-015F
165614006	9106-0011-018F
165614007	9106-0011-002F
165614008	9106-0011-003F
1201122381	Method Blank (MB)
1201122382	165614008(9106-0011-003F) Sample Duplicate (DUP)
1201122383	165614008(9106-0011-003F) Matrix Spike (MS)
1201122384	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: 165614008 (9106-0011-003F).

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

Technical Information:

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

Preparation Information

All preparation criteria have been met for these analyses.

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

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**LSC, Tritium Dist, Solid-HTD2,ALL FSS**
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	542430

Sample ID	Client ID
165614008	9106-0011-003F
1201122131	Method Blank (MB)
1201122132	165011027(1000-0000-125-C-10C-07) Sample Duplicate (DUP)
1201122133	165011027(1000-0000-125-C-10C-07) Matrix Spike (MS)
1201122134	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: 165011027 (1000-0000-125-C-10C-07).

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 165614008 (9106-0011-003F) 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:	541380

Sample ID	Client ID
165614008	9106-0011-003F
1201119755	Method Blank (MB)
1201119756	165557010(1000-0000-121-C-1C-01) Sample Duplicate (DUP)
1201119757	165557010(1000-0000-121-C-1C-01) Matrix Spike (MS)
1201119758	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: 165557010 (1000-0000-121-C-1C-01).

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: 7/14/16

NCR Report No.: 335049
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
14-JUL-06	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
GFPC	EPA 905.0 Modified	Solid	YANK
Batch ID:	**Sample Numbers:**		
545299	See Below		

Potentially affected work order(s)(SDG): 165011(MSR#06-0828),165614(MSR#06-0877),165702(MSR#06-0877)

Application Issues:

RDL less than MDA

Failed Recovery for MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Samples 165011031, 165011033, 165011034, 165011035, 165011036, 165011037, 165011039, 165011042, 165011043, and duplicate 1201128845 did not meet the detection limit. 2. The matrix spike, 1201128846, did not meet the recovery requirement due to the matrix of the sample.	1. Client was contacted and granted relief to report results. 2. The batch was previously prepped with similar results. Client was contacted and granted relief to report results.

Originator's Name:
Melanie Aycock 14-JUL-06

Data Validator/Group Leader:
Heather Anderson 14-JUL-06

Quality Review:

Director:

SAMPLE DATA SUMMARY

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

Certificate of Analysis Report
for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#06-0877 GEL Work Order: 165614

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: July 14, 2006

Client Sample ID:	9106-0011-011F	Project:	YANK01204
Sample ID:	165614001	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	17-MAY-06		
Receive Date:	21-JUN-06		
Collector:	Client		
Moisture:	22.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.669	+/-0.127	0.0474	+/-0.127	0.102	pCi/g		MJH1	06/29/06	1322	541904	1
Americium-241	U	0.0549	+/-0.0804	0.0676	+/-0.0804	0.139	pCi/g						
Bismuth-212		0.401	+/-0.220	0.110	+/-0.220	0.233	pCi/g						
Bismuth-214		0.473	+/-0.0699	0.0245	+/-0.0699	0.0518	pCi/g						
Cesium-134	U	0.0328	+/-0.020	0.0189	+/-0.020	0.0398	pCi/g						
Cesium-137	U	0.0157	+/-0.0158	0.0142	+/-0.0158	0.030	pCi/g						
Cobalt-60	U	0.0117	+/-0.017	0.0155	+/-0.017	0.0336	pCi/g						
Europium-152	U	0.0317	+/-0.0426	0.0379	+/-0.0426	0.079	pCi/g						
Europium-154	U	-0.0318	+/-0.0551	0.0442	+/-0.0551	0.0957	pCi/g						
Europium-155	U	0.0426	+/-0.0446	0.0431	+/-0.0446	0.0887	pCi/g						
Lead-212		0.609	+/-0.0496	0.0207	+/-0.0496	0.043	pCi/g						
Lead-214		0.467	+/-0.0614	0.025	+/-0.0614	0.0524	pCi/g						
Manganese-54	U	0.0136	+/-0.0175	0.0156	+/-0.0175	0.0331	pCi/g						
Niobium-94	U	0.00856	+/-0.0147	0.0131	+/-0.0147	0.0276	pCi/g						
Potassium-40		12.5	+/-0.763	0.111	+/-0.763	0.248	pCi/g						
Radium-226		0.473	+/-0.0699	0.0245	+/-0.0699	0.0518	pCi/g						
Silver-108m	U	0.00554	+/-0.0136	0.0125	+/-0.0136	0.0262	pCi/g						
Thallium-208		0.164	+/-0.0418	0.0133	+/-0.0418	0.0282	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	0.978	+/-5.34	4.45	+/-5.34	9.20	pCi/g		SLN1	07/02/06	1812	542563	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	06/22/06	1916	541800

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

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

Certificate of Analysis

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

Report Date: July 14, 2006

Client Sample ID: 9106-0011-011F
Sample ID: 165614001

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	Liquid Scint Ni63, Solid-ALL FS	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.

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-012F	Project:	YANK01204
Sample ID:	165614002	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	17-MAY-06		
Receive Date:	21-JUN-06		
Collector:	Client		
Moisture:	21.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.855	+/-0.225	0.0824	+/-0.225	0.181	pCi/g		MJH1	06/29/06	1322	541904	1
Americium-241	U	0.018	+/-0.0359	0.0342	+/-0.0359	0.0708	pCi/g						
Bismuth-212		0.702	+/-0.375	0.180	+/-0.375	0.392	pCi/g						
Bismuth-214		0.655	+/-0.141	0.0497	+/-0.141	0.106	pCi/g						
Cesium-134	U	0.0385	+/-0.0821	0.0349	+/-0.0821	0.0746	pCi/g						
Cesium-137	U	-0.00348	+/-0.0301	0.0252	+/-0.0301	0.0544	pCi/g						
Cobalt-60	U	0.0311	+/-0.0298	0.0287	+/-0.0298	0.0637	pCi/g						
Europium-152	U	-0.0521	+/-0.0672	0.0567	+/-0.0672	0.121	pCi/g						
Europium-154	U	0.0502	+/-0.0881	0.0797	+/-0.0881	0.176	pCi/g						
Europium-155	U	0.0499	+/-0.0873	0.0609	+/-0.0873	0.126	pCi/g						
Lead-212		0.912	+/-0.128	0.0339	+/-0.128	0.0711	pCi/g						
Lead-214		0.624	+/-0.117	0.0428	+/-0.117	0.0908	pCi/g						
Manganese-54	U	0.0341	+/-0.0317	0.0278	+/-0.0317	0.0602	pCi/g						
Niobium-94	U	-0.00106	+/-0.0264	0.0222	+/-0.0264	0.0479	pCi/g						
Potassium-40		13.0	+/-1.40	0.230	+/-1.40	0.523	pCi/g						
Radium-226		0.655	+/-0.141	0.0497	+/-0.141	0.106	pCi/g						
Silver-108m	U	-0.00675	+/-0.0209	0.0178	+/-0.0209	0.0384	pCi/g						
Thallium-208		0.298	+/-0.0656	0.0248	+/-0.0656	0.0533	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	-1.12	+/-6.94	5.86	+/-6.94	12.1	pCi/g		SLN1	07/02/06	1844	542563	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	06/22/06	1916	541800

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-012F
Sample ID: 165614002
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	Liquid Scint Ni63, Solid-ALL FS	78	(25%-125%)

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-012FS	Project:	YANK01204
Sample ID:	165614003	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	17-MAY-06		
Receive Date:	21-JUN-06		
Collector:	Client		
Moisture:	22%		

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		0.761	+/-0.256	0.124	+/-0.256	0.265	pCi/g		MJH1	06/29/06	1323	541904	1
Americium-241	U	-0.00524	+/-0.0553	0.0458	+/-0.0553	0.0946	pCi/g						
Bismuth-212		1.16	+/-0.593	0.255	+/-0.593	0.544	pCi/g						
Bismuth-214		0.641	+/-0.140	0.0428	+/-0.140	0.0929	pCi/g						
Cesium-134	U	0.0231	+/-0.0443	0.0397	+/-0.0443	0.0845	pCi/g						
Cesium-137	U	0.0406	+/-0.0384	0.0361	+/-0.0384	0.0764	pCi/g						
Cobalt-60	U	0.0109	+/-0.0395	0.0347	+/-0.0395	0.0759	pCi/g						
Europium-152	U	-0.0343	+/-0.0953	0.082	+/-0.0953	0.172	pCi/g						
Europium-154	U	-0.0138	+/-0.118	0.100	+/-0.118	0.218	pCi/g						
Europium-155	U	0.124	+/-0.105	0.0716	+/-0.105	0.149	pCi/g						
Lead-212		0.931	+/-0.0944	0.0449	+/-0.0944	0.0935	pCi/g						
Lead-214		0.657	+/-0.145	0.0555	+/-0.145	0.117	pCi/g						
Manganese-54	U	-0.00109	+/-0.0489	0.0361	+/-0.0489	0.0771	pCi/g						
Niobium-94	U	-0.00118	+/-0.0355	0.0309	+/-0.0355	0.0655	pCi/g						
Potassium-40		12.3	+/-1.22	0.299	+/-1.22	0.661	pCi/g						
Radium-226		0.641	+/-0.140	0.0428	+/-0.140	0.0929	pCi/g						
Silver-108m	U	-0.012	+/-0.0325	0.0273	+/-0.0325	0.0577	pCi/g						
Thallium-208		0.289	+/-0.0697	0.0319	+/-0.0697	0.0678	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	7.07	+/-7.16	5.78	+/-7.17	11.9	pCi/g		SLN1	07/02/06	1915	542563	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	06/22/06	1916	541800

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-012FS
Sample ID: 165614003
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	Liquid Scint Ni63, Solid-ALL FS	73	(25%-125%)

Notes:
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* A quality control analyte recovery is outside of specified acceptance criteria
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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: July 14, 2006

Client Sample ID:	9106-0011-014F	Project:	YANK01204
Sample ID:	165614004	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	17-MAY-06		
Receive Date:	21-JUN-06		
Collector:	Client		
Moisture:	19.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.468	+/-0.108	0.0389	+/-0.108	0.0836	pCi/g		MJH1	06/29/06	1323	541904	1
Americium-241	U	-0.0359	+/-0.0837	0.0675	+/-0.0837	0.141	pCi/g						
Bismuth-212	U	0.173	+/-0.196	0.0983	+/-0.196	0.208	pCi/g						
Bismuth-214		0.345	+/-0.0531	0.0218	+/-0.0531	0.0461	pCi/g						
Cesium-134	U	0.0236	+/-0.0258	0.0163	+/-0.0258	0.0343	pCi/g						
Cesium-137	U	0.0249	+/-0.024	0.0125	+/-0.024	0.0265	pCi/g						
Cobalt-60	U	-0.000454	+/-0.0154	0.0128	+/-0.0154	0.0278	pCi/g						
Europium-152	U	0.0126	+/-0.0352	0.033	+/-0.0352	0.0692	pCi/g						
Europium-154	U	0.00393	+/-0.0427	0.0362	+/-0.0427	0.0783	pCi/g						
Europium-155	U	0.0369	+/-0.0412	0.0408	+/-0.0412	0.0847	pCi/g						
Lead-212		0.495	+/-0.044	0.0214	+/-0.044	0.0445	pCi/g						
Lead-214		0.383	+/-0.0586	0.0221	+/-0.0586	0.0464	pCi/g						
Manganese-54	U	-0.00115	+/-0.0151	0.0132	+/-0.0151	0.0281	pCi/g						
Niobium-94	U	-0.0016	+/-0.0139	0.0117	+/-0.0139	0.0248	pCi/g						
Potassium-40		12.4	+/-0.680	0.106	+/-0.680	0.233	pCi/g						
Radium-226		0.345	+/-0.0531	0.0218	+/-0.0531	0.0461	pCi/g						
Silver-108m	U	-0.00562	+/-0.0124	0.0109	+/-0.0124	0.0229	pCi/g						
Thallium-208		0.159	+/-0.0325	0.0121	+/-0.0325	0.0256	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	2.76	+/-6.18	5.09	+/-6.18	10.5	pCi/g		SLN1	07/02/06	1947	542563	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	06/22/06	1916	541800

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, 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 Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-014F Project: YANK01204
Sample ID: 165614004 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	Liquid Scint Ni63, Solid-ALL FS	80	(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
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-015F	Project:	YANK01204
Sample ID:	165614005	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	17-MAY-06		
Receive Date:	21-JUN-06		
Collector:	Client		
Moisture:	27.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.731	+/-0.236	0.110	+/-0.236	0.221	pCi/g		MJH1	06/29/06	1331	541904	1
Americium-241	U	0.0236	+/-0.0463	0.0378	+/-0.0463	0.0756	pCi/g						
Bismuth-212		0.488	+/-0.346	0.224	+/-0.346	0.448	pCi/g						
Bismuth-214		0.460	+/-0.123	0.0534	+/-0.123	0.107	pCi/g						
Cesium-134	U	0.0693	+/-0.0413	0.0412	+/-0.0413	0.0824	pCi/g						
Cesium-137		0.118	+/-0.0591	0.0336	+/-0.0591	0.0672	pCi/g						
Cobalt-60	U	-0.00429	+/-0.0441	0.0363	+/-0.0441	0.0726	pCi/g						
Europium-152	U	0.121	+/-0.0926	0.0635	+/-0.0926	0.127	pCi/g						
Europium-154	U	-0.0186	+/-0.121	0.0834	+/-0.121	0.167	pCi/g						
Europium-155	U	-0.00174	+/-0.0695	0.0614	+/-0.0695	0.123	pCi/g						
Lead-212		0.735	+/-0.101	0.0361	+/-0.101	0.0721	pCi/g						
Lead-214		0.589	+/-0.104	0.0415	+/-0.104	0.083	pCi/g						
Manganese-54	U	-0.0054	+/-0.0366	0.0312	+/-0.0366	0.0623	pCi/g						
Niobium-94	U	-0.0281	+/-0.0326	0.0255	+/-0.0326	0.0509	pCi/g						
Potassium-40		12.2	+/-1.31	0.226	+/-1.31	0.452	pCi/g						
Radium-226		0.460	+/-0.123	0.0534	+/-0.123	0.107	pCi/g						
Silver-108m	U	0.0249	+/-0.0283	0.0262	+/-0.0283	0.0523	pCi/g						
Thallium-208		0.278	+/-0.0647	0.027	+/-0.0647	0.054	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	8.67	+/-6.20	4.93	+/-6.21	10.2	pCi/g		SLN1	07/02/06	2019	542563	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	06/22/06	1916	541800

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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

Client Sample ID: 9106-0011-015F
Sample ID: 165614005
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	Liquid Scint Ni63, Solid-ALL FS	96	(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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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: July 14, 2006

Client Sample ID:	9106-0011-018F	Project:	YANK01204
Sample ID:	165614006	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	17-MAY-06		
Receive Date:	21-JUN-06		
Collector:	Client		
Moisture:	30.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.866	+/-0.168	0.0395	+/-0.168	0.0868	pCi/g		MJH1	06/29/06	1323	541904	1
Americium-241	U	0.0632	+/-0.0711	0.0637	+/-0.0711	0.131	pCi/g						
Bismuth-212		0.798	+/-0.337	0.124	+/-0.337	0.264	pCi/g						
Bismuth-214		0.525	+/-0.0947	0.0298	+/-0.0947	0.0631	pCi/g						
Cesium-134	UI	0.00	+/-0.0367	0.021	+/-0.0367	0.0443	pCi/g						
Cesium-137		0.199	+/-0.0508	0.0182	+/-0.0508	0.0384	pCi/g						
Cobalt-60		0.181	+/-0.053	0.0156	+/-0.053	0.0341	pCi/g						
Europium-152	U	-0.0143	+/-0.0552	0.0407	+/-0.0552	0.0854	pCi/g						
Europium-154	U	0.00275	+/-0.0601	0.0495	+/-0.0601	0.107	pCi/g						
Europium-155	U	0.0102	+/-0.0594	0.0507	+/-0.0594	0.105	pCi/g						
Lead-212		0.815	+/-0.0875	0.0256	+/-0.0875	0.0532	pCi/g						
Lead-214		0.639	+/-0.105	0.0306	+/-0.105	0.064	pCi/g						
Manganese-54	U	0.0141	+/-0.0212	0.0188	+/-0.0212	0.0398	pCi/g						
Niobium-94	U	-0.00538	+/-0.0178	0.015	+/-0.0178	0.0317	pCi/g						
Potassium-40		13.4	+/-1.14	0.129	+/-1.14	0.288	pCi/g						
Radium-226		0.525	+/-0.0947	0.0298	+/-0.0947	0.0631	pCi/g						
Silver-108m	U	-0.00164	+/-0.0169	0.0142	+/-0.0169	0.0299	pCi/g						
Thallium-208		0.243	+/-0.0476	0.0171	+/-0.0476	0.036	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	5.22	+/-5.86	4.75	+/-5.86	9.81	pCi/g		SLN1	07/02/06	2050	542563	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	06/22/06	1916	541800

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, 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 Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-018F Project: YANK01204
Sample ID: 165614006 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	Liquid Scint Ni63, Solid-ALL FS	89	(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: July 14, 2006

Client Sample ID:	9106-0011-002F	Project:	YANK01204
Sample ID:	165614007	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	15-MAY-06		
Receive Date:	21-JUN-06		
Collector:	Client		
Moisture:	22.9%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.658	+/-0.138	0.0508	+/-0.138	0.109	pCi/g		MJH1	06/29/06	1855	541904	1
Americium-241	U	-0.0311	+/-0.0756	0.0669	+/-0.0756	0.138	pCi/g						
Bismuth-212		0.345	+/-0.292	0.103	+/-0.292	0.220	pCi/g						
Bismuth-214		0.499	+/-0.0747	0.0244	+/-0.0747	0.0517	pCi/g						
Cesium-134	UI	0.00	+/-0.0195	0.0182	+/-0.0195	0.0385	pCi/g						
Cesium-137		0.0889	+/-0.027	0.0145	+/-0.027	0.0306	pCi/g						
Cobalt-60		0.0269	+/-0.0233	0.00536	+/-0.0233	0.0135	pCi/g						
Europium-152	U	-0.0229	+/-0.0433	0.0363	+/-0.0433	0.0759	pCi/g						
Europium-154	U	-0.017	+/-0.048	0.0394	+/-0.048	0.0862	pCi/g						
Europium-155	U	0.0358	+/-0.0436	0.0429	+/-0.0436	0.0883	pCi/g						
Lead-212		0.579	+/-0.0538	0.0337	+/-0.0538	0.069	pCi/g						
Lead-214		0.580	+/-0.0665	0.0257	+/-0.0665	0.0537	pCi/g						
Manganese-54	U	-0.0115	+/-0.0174	0.0139	+/-0.0174	0.0297	pCi/g						
Niobium-94	U	-0.00762	+/-0.0139	0.0115	+/-0.0139	0.0245	pCi/g						
Potassium-40		9.35	+/-0.691	0.116	+/-0.691	0.259	pCi/g						
Radium-226		0.499	+/-0.0747	0.0244	+/-0.0747	0.0517	pCi/g						
Silver-108m	U	-0.00182	+/-0.0131	0.0118	+/-0.0131	0.0249	pCi/g						
Thallium-208		0.212	+/-0.0381	0.0134	+/-0.0381	0.0284	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	1.53	+/-6.28	5.22	+/-6.28	10.8	pCi/g		SLN1	07/02/06	2122	542563	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	06/22/06	1916	541800

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, 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
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-002F
Sample ID: 165614007
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	Liquid Scint Ni63, Solid-ALL FS	84	(25%-125%)

Notes:
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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
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-003F	Project:	YANK01204
Sample ID:	165614008	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	15-MAY-06		
Receive Date:	21-JUN-06		
Collector:	Client		
Moisture:	35.4%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241		0.054	+/-0.0385	0.0127	+/-0.039	0.043	pCi/g		LCW1	06/29/06	1420	542293	1
Curium-242	U	0.00784	+/-0.0154	0.00	+/-0.0154	0.0212	pCi/g						
Curium-243/244	U	0.0135	+/-0.0268	0.0209	+/-0.0269	0.0593	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	0.00557	+/-0.0109	0.00	+/-0.0109	0.0151	pCi/g		LCW1	06/29/06	0902	542294	2
Plutonium-239/240		0.0167	+/-0.0189	0.00	+/-0.019	0.0151	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	0.856	+/-1.15	1.09	+/-1.15	2.22	pCi/g		LCW1	07/03/06	1323	542295	3
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.975	+/-0.218	0.0817	+/-0.218	0.177	pCi/g		MJH1	06/29/06	1855	541904	4
Americium-241	U	0.0948	+/-0.107	0.0932	+/-0.107	0.193	pCi/g						
Bismuth-212		0.654	+/-0.378	0.191	+/-0.378	0.409	pCi/g						
Bismuth-214		0.555	+/-0.120	0.0463	+/-0.120	0.0982	pCi/g						
Cesium-134	UI	0.00	+/-0.0608	0.0334	+/-0.0608	0.0708	pCi/g						
Cesium-137		0.737	+/-0.0708	0.0249	+/-0.0708	0.053	pCi/g						
Cobalt-60		0.138	+/-0.051	0.030	+/-0.051	0.0653	pCi/g						
Europium-152	U	0.00922	+/-0.0681	0.0548	+/-0.0681	0.116	pCi/g						
Europium-154	U	0.0148	+/-0.0716	0.062	+/-0.0716	0.138	pCi/g						
Europium-155	U	0.000332	+/-0.0703	0.0586	+/-0.0703	0.121	pCi/g						
Lead-212		1.16	+/-0.0877	0.0379	+/-0.0877	0.0785	pCi/g						
Lead-214		0.730	+/-0.124	0.0406	+/-0.124	0.0856	pCi/g						
Manganese-54	U	0.0441	+/-0.0381	0.0236	+/-0.0381	0.051	pCi/g						
Niobium-94	U	-0.00358	+/-0.0263	0.0215	+/-0.0263	0.0459	pCi/g						
Potassium-40		15.7	+/-1.23	0.247	+/-1.23	0.547	pCi/g						
Radium-226		0.555	+/-0.120	0.0463	+/-0.120	0.0982	pCi/g						
Silver-108m	U	0.0181	+/-0.0259	0.0228	+/-0.0259	0.0479	pCi/g						
Thallium-208		0.331	+/-0.0695	0.0208	+/-0.0695	0.0447	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00308	+/-0.00873	0.00721	+/-0.00873	0.015	pCi/g		BXF1	07/09/06	2208	545299	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	0.0442	+/-1.51	1.27	+/-1.51	2.60	pCi/g		NXP1	07/05/06	1959	542430	7

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: July 14, 2006

Client Sample ID: 9106-0011-003F
Sample ID: 165614008

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	-0.0948	+/-0.108	0.0924	+/-0.108	0.188	pCi/g		ATH2	06/30/06	1635	541380	8
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	-11.6	+/-25.9	21.1	+/-26.0	44.2	pCi/g		SLN1	07/03/06	1833	542567	9
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	-0.464	+/-5.78	4.87	+/-5.78	10.1	pCi/g		SLN1	07/02/06	2154	542563	10
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.091	+/-0.255	0.212	+/-0.255	0.436	pCi/g		EGD1	06/30/06	0942	541378	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	06/22/06	1916	541800

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	89	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	97	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	71	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	76	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	71	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	93	(25%-125%)

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-003F
Sample ID: 165614008
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 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.

QUALITY CONTROL DATA

QC Summary

Report Date: July 14, 2006
Page 1 of 9

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

East Hampton, Connecticut
Contact: Mr. Jack McCarthy

Workorder: 165614

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 542293										
QC1201121833 165557001 DUP										
Americium-241	U	0.0069		0.0442	pCi/g	146		(0% - 100%)	LCW1	06/29/06 14:20
	Uncert:	+/-0.013		+/-0.0412						
	TPU:	+/-0.013		+/-0.0417						
Curium-242	U	0.00685	U	-0.00258	pCi/g	442		(0% - 100%)		
	Uncert:	+/-0.0134		+/-0.0217						
	TPU:	+/-0.0135		+/-0.0217						
Curium-243/244	U	0.00332	U	0.0176	pCi/g	137		(0% - 100%)		
	Uncert:	+/-0.0132		+/-0.0282						
	TPU:	+/-0.0132		+/-0.0283						
QC1201121835 LCS										
Americium-241	2.68			2.84	pCi/g		106	(75%-125%)		
	Uncert:			+/-0.266						
	TPU:			+/-0.426						
Curium-242			U	0.00	pCi/g					
	Uncert:			+/-0.0129						
	TPU:			+/-0.0129						
Curium-243/244	3.26			3.05	pCi/g		94	(75%-125%)		
	Uncert:			+/-0.276						
	TPU:			+/-0.452						
QC1201121832 MB										
Americium-241			U	0.0049	pCi/g					
	Uncert:			+/-0.0157						
	TPU:			+/-0.0157						
Curium-242			U	0.00	pCi/g					
	Uncert:			+/-0.0141						
	TPU:			+/-0.0141						
Curium-243/244				0.0424	pCi/g					
	Uncert:			+/-0.034						
	TPU:			+/-0.0343						
QC1201121834 165557001 MS										
Americium-241	2.73 U	0.0069		2.70	pCi/g		99	(75%-125%)		
	Uncert:	+/-0.013		+/-0.250						
	TPU:	+/-0.013		+/-0.398						
Curium-242	U	0.00685	U	0.00644	pCi/g					
	Uncert:	+/-0.0134		+/-0.0126						
	TPU:	+/-0.0135		+/-0.0126						
Curium-243/244	3.33 U	0.00332		3.12	pCi/g		94	(75%-125%)		
	Uncert:	+/-0.0132		+/-0.269						
	TPU:	+/-0.0132		+/-0.447						
Batch 542294										
QC1201121837 165557001 DUP										
Plutonium-238	U	0.0117	U	0.0162	pCi/g	32		(0% - 100%)	LCW1	06/28/06 23:03

QC Summary

Workorder: 165614

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 542294										
	Uncert:	+/-0.0336		+/-0.0281						
	TPU:	+/-0.0336		+/-0.0281						
Plutonium-239/240	U	0.00369	U	0.0159	pCi/g	125		(0% - 100%)		
	Uncert:	+/-0.0147		+/-0.0221						
	TPU:	+/-0.0147		+/-0.0221						
QC1201121839 LCS										
Plutonium-238			U	0.00893	pCi/g			(75%-125%)		06/28/06 23:03
	Uncert:			+/-0.0143						
	TPU:			+/-0.0143						
Plutonium-239/240	2.48			2.10	pCi/g		85	(75%-125%)		
	Uncert:			+/-0.202						
	TPU:			+/-0.302						
QC1201121836 MB										
Plutonium-238			U	-0.00137	pCi/g					06/28/06 23:03
	Uncert:			+/-0.0115						
	TPU:			+/-0.0115						
Plutonium-239/240			U	0.00435	pCi/g					
	Uncert:			+/-0.0115						
	TPU:			+/-0.0115						
QC1201121838 165557001 MS										
Plutonium-238	U	0.0117		0.0336	pCi/g			(75%-125%)		06/28/06 23:03
	Uncert:	+/-0.0336		+/-0.0295						
	TPU:	+/-0.0336		+/-0.0297						
Plutonium-239/240	2.52 U	0.00369		2.28	pCi/g		91	(75%-125%)		
	Uncert:	+/-0.0147		+/-0.242						
	TPU:	+/-0.0147		+/-0.355						
Batch 542295										
QC1201121841 165557001 DUP										
Plutonium-241	U	0.395	U	1.16	pCi/g	0		(0% - 100%)	LCW1	07/03/06 16:27
	Uncert:	+/-1.29		+/-1.89						
	TPU:	+/-1.29		+/-1.89						
QC1201121843 LCS										
Plutonium-241	35.0			27.3	pCi/g		78	(75%-125%)		07/03/06 18:31
	Uncert:			+/-1.43						
	TPU:			+/-3.02						
QC1201121840 MB										
Plutonium-241			U	0.499	pCi/g					07/03/06 15:26
	Uncert:			+/-0.891						
	TPU:			+/-0.893						
QC1201121842 165557001 MS										
Plutonium-241	35.3 U	0.395		31.7	pCi/g		90	(75%-125%)		07/03/06 17:29
	Uncert:	+/-1.29		+/-1.58						
	TPU:	+/-1.29		+/-3.43						
Rad Gamma Spec										
Batch 541904										
QC1201120873 165614001 DUP										
Actinium-228		0.669		0.385	pCi/g	54		(0% - 100%)	MJH1	06/29/06 18:58
	Uncert:	+/-0.127		+/-0.239						
				+/-0.239						

QC Summary

Workorder: 165614

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 541904										
	TPU:	+/-0.127								
Americium-241	U	0.0549	U	0.0237	pCi/g	80		(0% - 100%)		
	Uncert:	+/-0.0804		+/-0.0384						
	TPU:	+/-0.0804		+/-0.0384						
Bismuth-212		0.401	U	0.334	pCi/g	18		(0% - 100%)		
	Uncert:	+/-0.220		+/-0.239						
	TPU:	+/-0.220		+/-0.239						
Bismuth-214		0.473		0.489	pCi/g	3		(0% - 100%)		
	Uncert:	+/-0.0699		+/-0.112						
	TPU:	+/-0.0699		+/-0.112						
Cesium-134	U	0.0328	U	0.0258	pCi/g	24		(0% - 100%)		
	Uncert:	+/-0.020		+/-0.0337						
	TPU:	+/-0.020		+/-0.0337						
Cesium-137	U	0.0157	U	-0.0084	pCi/g	660		(0% - 100%)		
	Uncert:	+/-0.0158		+/-0.0301						
	TPU:	+/-0.0158		+/-0.0301						
Cobalt-60	U	0.0117	U	-0.0145	pCi/g	1840		(0% - 100%)		
	Uncert:	+/-0.017		+/-0.0289						
	TPU:	+/-0.017		+/-0.0289						
Europium-152	U	0.0317	U	-0.0192	pCi/g	813		(0% - 100%)		
	Uncert:	+/-0.0426		+/-0.0634						
	TPU:	+/-0.0426		+/-0.0634						
Europium-154	U	-0.0318	U	0.0556	pCi/g	733		(0% - 100%)		
	Uncert:	+/-0.0551		+/-0.0814						
	TPU:	+/-0.0551		+/-0.0814						
Europium-155	U	0.0426	U	0.0126	pCi/g	109		(0% - 100%)		
	Uncert:	+/-0.0446		+/-0.0591						
	TPU:	+/-0.0446		+/-0.0591						
Lead-212		0.609		0.501	pCi/g	20		(0% - 20%)		
	Uncert:	+/-0.0496		+/-0.0722						
	TPU:	+/-0.0496		+/-0.0722						
Lead-214		0.467		0.430	pCi/g	8		(0% - 100%)		
	Uncert:	+/-0.0614		+/-0.106						
	TPU:	+/-0.0614		+/-0.106						
Manganese-54	U	0.0136	U	0.0196	pCi/g	36		(0% - 100%)		
	Uncert:	+/-0.0175		+/-0.0316						
	TPU:	+/-0.0175		+/-0.0316						
Niobium-94	U	0.00856	U	-0.0061	pCi/g	1190		(0% - 100%)		
	Uncert:	+/-0.0147		+/-0.0263						
	TPU:	+/-0.0147		+/-0.0263						
Potassium-40		12.5		12.2	pCi/g	3		(0% - 20%)		
	Uncert:	+/-0.763		+/-1.23						
	TPU:	+/-0.763		+/-1.23						
Radium-226		0.473		0.489	pCi/g	3		(0% - 100%)		
	Uncert:	+/-0.0699		+/-0.112						
	TPU:	+/-0.0699		+/-0.112						
Silver-108m	U	0.00554	U	0.00226	pCi/g	84		(0% - 100%)		
	Uncert:	+/-0.0136		+/-0.0231						

QC Summary

Workorder: 165614

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 541904										
	TPU:	+/-0.0136		+/-0.0231						
Thallium-208		0.164		0.203	pCi/g	21		(0% - 100%)		
	Uncert:	+/-0.0418		+/-0.0645						
	TPU:	+/-0.0418		+/-0.0645						
QC1201120874 LCS										
Actinium-228			U	0.257	pCi/g					06/29/06 18:58
	Uncert:			+/-0.387						
	TPU:			+/-0.387						
Americium-241	23.4			24.6	pCi/g		105	(75%-125%)		
	Uncert:			+/-2.02						
	TPU:			+/-2.02						
Bismuth-212			U	-0.084	pCi/g					
	Uncert:			+/-0.708						
	TPU:			+/-0.708						
Bismuth-214			U	-0.00724	pCi/g					
	Uncert:			+/-0.183						
	TPU:			+/-0.183						
Cesium-134			U	-0.00761	pCi/g					
	Uncert:			+/-0.101						
	TPU:			+/-0.101						
Cesium-137	9.62			10.0	pCi/g		104	(75%-125%)		
	Uncert:			+/-0.921						
	TPU:			+/-0.921						
Cobalt-60	14.9			15.1	pCi/g		102	(75%-125%)		
	Uncert:			+/-0.935						
	TPU:			+/-0.935						
Europium-152			U	-0.234	pCi/g					
	Uncert:			+/-0.226						
	TPU:			+/-0.226						
Europium-154			U	-0.105	pCi/g					
	Uncert:			+/-0.229						
	TPU:			+/-0.229						
Europium-155			U	-0.0941	pCi/g					
	Uncert:			+/-0.288						
	TPU:			+/-0.288						
Lead-212			U	0.0458	pCi/g					
	Uncert:			+/-0.141						
	TPU:			+/-0.141						
Lead-214			U	-0.0295	pCi/g					
	Uncert:			+/-0.158						
	TPU:			+/-0.158						
Manganese-54			U	-0.0537	pCi/g					
	Uncert:			+/-0.0955						
	TPU:			+/-0.0955						
Niobium-94			U	0.00301	pCi/g					
	Uncert:			+/-0.0829						
	TPU:			+/-0.0829						
Potassium-40			U	0.0392	pCi/g					

QC Summary

Workorder: 165614

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 541904											
	Uncert:			+/-0.911							
	TPU:			+/-0.911							
Radium-226			U	-0.00724	pCi/g			(75%-125%)			
	Uncert:			+/-0.183							
	TPU:			+/-0.183							
Silver-108m			U	0.133	pCi/g						
	Uncert:			+/-0.0861							
	TPU:			+/-0.0861							
Thallium-208			U	-0.0458	pCi/g						
	Uncert:			+/-0.0936							
	TPU:			+/-0.0936							
QC1201120872 MB											
Actinium-228			U	0.0661	pCi/g					07/02/06	19:56
	Uncert:			+/-0.109							
	TPU:			+/-0.109							
Americium-241			U	-0.132	pCi/g						
	Uncert:			+/-0.103							
	TPU:			+/-0.103							
Bismuth-212			U	0.0987	pCi/g						
	Uncert:			+/-0.140							
	TPU:			+/-0.140							
Bismuth-214			U	0.0297	pCi/g						
	Uncert:			+/-0.0399							
	TPU:			+/-0.0399							
Cesium-134			U	0.0152	pCi/g						
	Uncert:			+/-0.0208							
	TPU:			+/-0.0208							
Cesium-137			U	0.00321	pCi/g						
	Uncert:			+/-0.014							
	TPU:			+/-0.014							
Cobalt-60			U	0.0147	pCi/g						
	Uncert:			+/-0.0117							
	TPU:			+/-0.0117							
Europium-152			U	-0.0287	pCi/g						
	Uncert:			+/-0.0501							
	TPU:			+/-0.0501							
Europium-154			U	0.0195	pCi/g						
	Uncert:			+/-0.0444							
	TPU:			+/-0.0444							
Europium-155			U	0.00022	pCi/g						
	Uncert:			+/-0.0525							
	TPU:			+/-0.0525							
Lead-212			U	0.0228	pCi/g						
	Uncert:			+/-0.038							
	TPU:			+/-0.038							
Lead-214			U	0.00181	pCi/g						
	Uncert:			+/-0.0453							
	TPU:			+/-0.0453							

QC Summary

Workorder: 165614

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 541904										
Manganese-54			U	0.00971	pCi/g					
Uncert:				+/-0.0166						
TPU:				+/-0.0166						
Niobium-94			U	0.00227	pCi/g					
Uncert:				+/-0.0157						
TPU:				+/-0.0157						
Potassium-40			U	0.346	pCi/g					
Uncert:				+/-0.237						
TPU:				+/-0.237						
Radium-226			U	0.0297	pCi/g					
Uncert:				+/-0.0399						
TPU:				+/-0.0399						
Silver-108m			U	0.00446	pCi/g					
Uncert:				+/-0.0154						
TPU:				+/-0.0154						
Thallium-208			U	0.00177	pCi/g					
Uncert:				+/-0.0188						
TPU:				+/-0.0188						
Rad Gas Flow										
Batch 545299										
QC1201128845 165011040 DUP										
Strontium-90	U	0.00424	U	-0.00211	pCi/g	0		(0% - 100%)	BXF1	07/09/06 22:06
Uncert:		+/-0.00511		+/-0.00864						
TPU:		+/-0.00511		+/-0.00864						
QC1201128847 LCS										
Strontium-90	0.874			0.718	pCi/g		82	(75%-125%)		07/09/06 13:30
Uncert:				+/-0.0548						
TPU:				+/-0.0587						
QC1201128844 MB										
Strontium-90			U	0.00281	pCi/g					07/09/06 22:06
Uncert:				+/-0.00503						
TPU:				+/-0.00503						
QC1201128846 165011040 MS										
Strontium-90	2.60 U	0.00424		1.75	pCi/g		67*	(75%-125%)		07/09/06 14:48
Uncert:		+/-0.00511		+/-0.155						
TPU:		+/-0.00511		+/-0.164						
Rad Liquid Scintillation										
Batch 541378										
QC1201119752 165557011 DUP										
Technetium-99	U	-0.0712	U	0.114	pCi/g	0		(0% - 100%)	EGD1	06/30/06 10:15
Uncert:		+/-0.415		+/-0.434						
TPU:		+/-0.415		+/-0.434						
QC1201119754 LCS										
Technetium-99	12.8			12.2	pCi/g		96	(75%-125%)		06/30/06 10:48
Uncert:				+/-0.483						
TPU:				+/-0.571						
QC1201119751 MB										
Technetium-99			U	-0.0564	pCi/g					06/30/06 09:59

QC Summary

Workorder: 165614

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 541378										
	Uncert:			+/-0.211						
	TPU:			+/-0.211						
QC1201119753 165557011 MS										
Technetium-99	23.3 U	-0.0712		22.3	pCi/g		96	(75%-125%)		06/30/06 10:31
	Uncert:	+/-0.415		+/-0.977						
	TPU:	+/-0.415		+/-1.12						
Batch 541380										
QC1201119756 165557010 DUP										
Carbon-14	U	-0.38	U	0.561	pCi/g	0*		(0% - 100%)	ATH2	06/30/06 19:00
	Uncert:	+/-0.322		+/-0.348						
	TPU:	+/-0.322		+/-0.349						
QC1201119758 LCS										
Carbon-14	7.05			6.94	pCi/g		99	(75%-125%)		06/30/06 21:26
	Uncert:			+/-0.203						
	TPU:			+/-0.230						
QC1201119755 MB										
Carbon-14			U	-0.154	pCi/g					06/30/06 17:48
	Uncert:			+/-0.106						
	TPU:			+/-0.106						
QC1201119757 165557010 MS										
Carbon-14	20.4 U	-0.38		20.4	pCi/g		100	(75%-125%)		06/30/06 20:13
	Uncert:	+/-0.322		+/-0.593						
	TPU:	+/-0.322		+/-0.674						
Batch 542430										
QC1201122132 165011027 DUP										
Tritium		105		96.6	pCi/g	9		(0% - 20%)	NXP1	07/02/06 23:47
	Uncert:	+/-7.18		+/-6.34						
	TPU:	+/-7.40		+/-6.56						
QC1201122134 LCS										
Tritium	11.4			11.4	pCi/g		100	(75%-125%)		07/03/06 00:20
	Uncert:			+/-2.12						
	TPU:			+/-2.13						
QC1201122131 MB										
Tritium			U	1.82	pCi/g					07/02/06 23:31
	Uncert:			+/-1.52						
	TPU:			+/-1.52						
QC1201122133 165011027 MS										
Tritium	10.7	105		118	pCi/g		119	(75%-125%)		07/03/06 00:03
	Uncert:	+/-7.18		+/-7.00						
	TPU:	+/-7.40		+/-7.29						
Batch 542563										
QC1201122382 165614008 DUP										
Nickel-63	U	-0.464	U	1.22	pCi/g	0		(0% - 100%)	SLN1	07/03/06 02:39
	Uncert:	+/-5.78		+/-7.42						
	TPU:	+/-5.78		+/-7.42						
QC1201122384 LCS										
Nickel-63	450			372	pCi/g		83	(75%-125%)		07/03/06 03:43
	Uncert:			+/-13.2						
	TPU:			+/-17.2						

QC Summary

Workorder: 165614

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 542563										
QC1201122381 MB										
Nickel-63			U	4.76	pCi/g					07/03/06 02:08
	Uncert:			+/-5.21						
	TPU:			+/-5.21						
QC1201122383 165614008 MS										
Nickel-63	451 U	-0.464		360	pCi/g		80	(75%-125%)		07/03/06 03:11
	Uncert:	+/-5.78		+/-13.1						
	TPU:	+/-5.78		+/-16.9						
Batch 542567										
QC1201122393 165614008 DUP										
Iron-55	U	-11.6	U	-16.3	pCi/g	0		(0% - 100%)	SLN1	07/03/06 19:22
	Uncert:	+/-25.9		+/-22.8						
	TPU:	+/-26.0		+/-22.9						
QC1201122395 LCS										
Iron-55	571			562	pCi/g		98	(75%-125%)		07/03/06 19:55
	Uncert:			+/-59.5						
	TPU:			+/-102						
QC1201122392 MB										
Iron-55			U	-12.4	pCi/g					07/03/06 19:06
	Uncert:			+/-38.9						
	TPU:			+/-39.0						
QC1201122394 165614008 MS										
Iron-55	608 U	-11.6		611	pCi/g		100	(75%-125%)		07/03/06 19:38
	Uncert:	+/-25.9		+/-46.4						
	TPU:	+/-26.0		+/-99.9						

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

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

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

QC Summary

Workorder: 165614

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

^

h Preparation or preservation holding time was exceeded

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

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

Table of Contents

General Narrative

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Sediment
PO# 002332
Work Order: 165702
SDG: MSR #06-0877

July 5, 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 June 22, 2006. Samples 9106-0011-007F and 9106-0011-017FS arrived with illegible dates, times and identifying marks. Mr. Arthur Hammond of CY was contact on this matter. The chain of custody contained the proper documentation and signatures.

The laboratory received the following sample(s):

Sample ID	Client Sample ID
165702001	9106-0011-004F
165702002	9106-0011-005F
165702003	9106-0011-006F
165702004	9106-0011-008F
165702005	9106-0011-009F
165702006	9106-0011-010F
165702007 *	9106-0011-017F
165702008 *	9106-0011-007F
165702009 *	9106-0011-017FS

* See Items of Note Section below

Items of Note:

Mr. Arthur Hammond informed GEL that samples 9106-0011-007F, 9106-1100-017FS and 9106-1100-017F would be recollected at a later date. Sample 9106-1100-017FS is a duplicate of 017F. Therefore, no data for these three samples will appear in the report.

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:

Five sediment samples were analyzed for FSSGAM and Ni-63.
One sediment sample was 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

Chain of Custody Form

No. 2006-00414

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

1657021

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Ni-63				Comment, Preservation	Lab Sample ID
9106-0011-004F	5/16/06	08:34	SE	C	BP	X		X				Transferred from COC 2006-00353	
9106-0011-005F	5/16/06	09:07	SE	C	BP	X		X				Transferred from COC 2006-00353	
9106-0011-006F	5/16/06	10:04	SE	C	BP	X		X				Transferred from COC 2006-00353	
9106-0011-007F *	5/16/06	10:28	SE	C	BP	X		X				Transferred from COC 2006-00353	
9106-0011-008F	5/16/06	10:48	SE	C	BP	X		X				Transferred from COC 2006-00353	
9106-0011-009F	5/16/06	12:59	SE	C	BP		X					Transferred from COC 2006-00354	
9106-0011-010F	5/16/06	13:44	SE	C	BP	X		X				Transferred from COC 2006-00354	
9106-0011-017F *	5/16/06	14:51	SE	C	BP	X		X				Transferred from COC 2006-00354	
9106-0011-017FS *	5/16/06	14:51	SE	C	BP	X		X				Transferred from COC 2006-00354	

Lab Use Only
Comments:

NOTES: PO #: 002332 MSR #: 06-0877 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

per paperwork
AMS 6/23/06

* See GEL SRR Form.

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

Bill of Lading #
7910 2328 7517

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

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	6-20-06/1100	[signature]	6/20/06 0835
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 6/22/06 0835

SDG#: MSR#06-0877

Work Order Number: 165702

Shipping Container ID: 7910 2490 0852 Chain of Custody # 2006-00414

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 21C
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] NA
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 [✓] (2)

11. Description of anomalies (include sample numbers):
2 Samples without identifiable labels - Sample ID date, & time. See GEL SRR for IDs and resolution.

Sample Custodian/Laboratory K. [illegible] Date: 6/22/06

Telephoned to: _____ On _____ By _____

SAMPLE RECEIPT & REVIEW FORM

PM use only 165702

Client: Conn. Yankee	SDG/ARCOC/Work Order:
Date Received: 6/22/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: KW	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	/			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		/		Circle Coolant # ice bags blue ice dry ice (none) other describe) 21°C
3	Chain of custody documents included with shipment?	/			
4	Sample containers intact and sealed?	/			Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?		/		Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?		/		Sample ID's and containers affected:
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			/	
8	Samples received within holding time?	/			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?			/	Sample ID's and containers affected: * -007F Cannot read ID's on samples for -017FS
10	Date & time on COC match date & time on bottles?			/	Sample ID's affected: -008F -017FS Cannot read date/time on -007F
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	* Per Arthur Hammond (CY), these samples plus -017F will be recollected. GEL to dispose in accordance with contract. 7910 2490 0852 6/26/06			

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

PM (or PMA) review of Hazard classification: _____ Initials _____ Date: 6/22/06

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 165702

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:	542293
Prep Batch Number:	541985
Dry Soil Prep GL-RAD-A-021 Batch Number:	541837

Sample ID	Client ID
165702005	9106-0011-009F
1201121832	Method Blank (MB)
1201121833	165557001(1000-0000-119-C-1C-01) Sample Duplicate (DUP)
1201121834	165557001(1000-0000-119-C-1C-01) Matrix Spike (MS)
1201121835	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: 165557001 (1000-0000-119-C-1C-01).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Additional Comments
The Cm-233/234 blank result is greater than the MDA but less than the detection limit.

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:	542294
Prep Batch Number:	541985
Dry Soil Prep GL-RAD-A-021 Batch Number:	541837

Sample ID	Client ID
165702005	9106-0011-009F
1201121836	Method Blank (MB)
1201121837	165557001(1000-0000-119-C-1C-01) Sample Duplicate (DUP)
1201121838	165557001(1000-0000-119-C-1C-01) Matrix Spike (MS)
1201121839	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: 165557001 (1000-0000-119-C-1C-01).

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:	542295
Prep Batch Number:	541985
Dry Soil Prep GL-RAD-A-021 Batch Number:	541837

Sample ID	Client ID
165702005	9106-0011-009F
1201121840	Method Blank (MB)
1201121841	165557001(1000-0000-119-C-1C-01) Sample Duplicate (DUP)
1201121842	165557001(1000-0000-119-C-1C-01) Matrix Spike (MS)
1201121843	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: 165557001 (1000-0000-119-C-1C-01).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

SDG.

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	541904
Prep Batch Number:	541837

Sample ID	Client ID
165702001	9106-0011-004F
165702002	9106-0011-005F
165702003	9106-0011-006F
165702004	9106-0011-008F
165702005	9106-0011-009F
165702006	9106-0011-010F
165702007	9106-0011-017F
1201120872	Method Blank (MB)
1201120873	165614001(9106-0011-011F) Sample Duplicate (DUP)
1201120874	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: 165614001 (9106-0011-011F).

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 1201120872 (MB) recounted due to a suspected blank false positive. Since the reason for the recount was due to a counting irregularity specific to the detector, the rest of batch was not recounted.

Miscellaneous Information:

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

Additional Comments
The relative percent difference for sample 1201120873 (9106-0011-011F) for Ac-228 and Tl-208 did not meet the duplication criteria. However, when a relative error ratio is calculated, precision is shown at 2.06 for Ac-228 and .9919 for Tl-208.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to low abundance.	Cesium-134	165702002
			165702004
			165702005
			165702007

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:	545299
Prep Batch Number:	541985
Dry Soil Prep GL-RAD-A-021 Batch Number:	541837

Sample ID	Client ID
165702005	9106-0011-009F
1201128844	Method Blank (MB)
1201128845	165011040(1000-0000-120-C-1C-03) Sample Duplicate (DUP)
1201128846	165011040(1000-0000-120-C-1C-03) Matrix Spike (MS)
1201128847	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: 165011040 (1000-0000-120-C-1C-03).

QC Information
Refer to Non-Conformance Report.

Technical Information:

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

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

Sample Re-prep/Re-analysis
The batch was reprepped due to a low matrix spike 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. The following NCR was generated for this SDG:
NCR 335049 was generated due to RDL less than MDA and Failed Recovery for MS/PS. 1. Samples 165011031, 165011033, 165011034, 165011035, 165011036, 165011037, 165011039, 165011042, 165011043, and duplicate 1201128845 did not meet the detection limit. 2. The matrix spike, 1201128846, did not meet the recovery requirement due to the matrix of the sample. 1. Client was contacted and granted relief to report results. 2. The batch was previously prepped with similar results. Client was contacted and granted relief to report results.

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Tc99, Solid-ALL FSS**
Analytical Method:	DOE EML HASL-300, Tc-02-RC Modified
Analytical Batch Number:	542571

Sample ID	Client ID
165702005	9106-0011-009F
1201122396	Method Blank (MB)
1201122397	165702005(9106-0011-009F) Sample Duplicate (DUP)
1201122398	165702005(9106-0011-009F) Matrix Spike (MS)
1201122399	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: 165702005 (9106-0011-009F).

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:	542567
Prep Batch Number:	541985
Dry Soil Prep GL-RAD-A-021 Batch Number:	541837

Sample ID	Client ID
165702005	9106-0011-009F
1201122392	Method Blank (MB)
1201122393	165614008(9106-0011-003F) Sample Duplicate (DUP)
1201122394	165614008(9106-0011-003F) Matrix Spike (MS)
1201122395	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: 165614008 (9106-0011-003F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Ni63, Solid-ALL FSS**
Analytical Method:	DOE RESL Ni-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	542563
Prep Batch Number:	541985
Dry Soil Prep GL-RAD-A-021 Batch Number:	541837

Sample ID	Client ID
165702001	9106-0011-004F
165702002	9106-0011-005F
165702003	9106-0011-006F
165702004	9106-0011-008F
165702005	9106-0011-009F
165702006	9106-0011-010F
165702007	9106-0011-017F
1201122381	Method Blank (MB)
1201122382	165614008(9106-0011-003F) Sample Duplicate (DUP)
1201122383	165614008(9106-0011-003F) Matrix Spike (MS)
1201122384	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: 165614008 (9106-0011-003F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**LSC, Tritium Dist, Solid-HTD2,ALL FSS**
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	542573

Sample ID	Client ID
165702005	9106-0011-009F
1201122404	Method Blank (MB)
1201122405	165702005(9106-0011-009F) Sample Duplicate (DUP)
1201122406	165702005(9106-0011-009F) Matrix Spike (MS)
1201122407	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: 165702005 (9106-0011-009F).

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:	542575

Sample ID	Client ID
165702005	9106-0011-009F
1201122408	Method Blank (MB)
1201122409	165702005(9106-0011-009F) Sample Duplicate (DUP)
1201122410	165702005(9106-0011-009F) Matrix Spike (MS)
1201122411	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: 165702005 (9106-0011-009F).

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: _____ 7/14/06

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
14-JUL-06	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
GFPC	EPA 905.0 Modified	Solid	YANK
Batch ID:	**Sample Numbers:**		
545299	See Below		

Potentially affected work order(s)(SDG): 165011(MSR#06-0828),165614(MSR#06-0877),165702(MSR#06-0877)

Application Issues:

RDL less than MDA

Failed Recovery for MS/PS

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. Samples 165011031, 165011033, 165011034, 165011035, 165011036, 165011037, 165011039, 165011042, 165011043, and duplicate 1201128845 did not meet the detection limit. 2. The matrix spike, 1201128846, did not meet the recovery requirement due to the matrix of the sample.	1. Client was contacted and granted relief to report results. 2. The batch was previously prepped with similar results. Client was contacted and granted relief to report results.

Originator's Name:
Melanie Aycock 14-JUL-06

Data Validator/Group Leader:
Heather Anderson 14-JUL-06

Quality Review:

Director:

SAMPLE DATA SUMMARY

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

Certificate of Analysis Report
for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#06-0877 GEL Work Order: 165702

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: July 14, 2006

Client Sample ID:	9106-0011-004F	Project:	YANK01204
Sample ID:	165702001	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	16-MAY-06		
Receive Date:	22-JUN-06		
Collector:	Client		
Moisture:	22%		

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		0.607	+/-0.238	0.0458	+/-0.238	0.100	pCi/g		MJH1	06/29/06	1856	541904	1
Americium-241	U	-0.02	+/-0.0786	0.0661	+/-0.0786	0.137	pCi/g						
Bismuth-212		0.623	+/-0.372	0.121	+/-0.372	0.259	pCi/g						
Bismuth-214		0.380	+/-0.0874	0.0294	+/-0.0874	0.0625	pCi/g						
Cesium-134	U	0.0263	+/-0.0259	0.0214	+/-0.0259	0.0454	pCi/g						
Cesium-137		0.102	+/-0.0485	0.0152	+/-0.0485	0.0325	pCi/g						
Cobalt-60	U	-0.0119	+/-0.0205	0.0163	+/-0.0205	0.0359	pCi/g						
Europium-152	U	-0.031	+/-0.0487	0.0417	+/-0.0487	0.0875	pCi/g						
Europium-154	U	-0.00968	+/-0.064	0.0459	+/-0.064	0.101	pCi/g						
Europium-155	U	0.0364	+/-0.0585	0.0493	+/-0.0585	0.102	pCi/g						
Lead-212		0.621	+/-0.0718	0.0243	+/-0.0718	0.0506	pCi/g						
Lead-214		0.426	+/-0.0869	0.0317	+/-0.0869	0.0664	pCi/g						
Manganese-54	U	0.0148	+/-0.0198	0.018	+/-0.0198	0.0385	pCi/g						
Niobium-94	U	0.00668	+/-0.0177	0.0159	+/-0.0177	0.0337	pCi/g						
Potassium-40		10.5	+/-0.991	0.133	+/-0.991	0.299	pCi/g						
Radium-226		0.380	+/-0.0874	0.0294	+/-0.0874	0.0625	pCi/g						
Silver-108m	U	0.00233	+/-0.0179	0.0137	+/-0.0179	0.0291	pCi/g						
Thallium-208		0.203	+/-0.0407	0.0152	+/-0.0407	0.0325	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	5.93	+/-7.27	5.91	+/-7.27	12.2	pCi/g		SLN1	07/02/06	2225	542563	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	06/22/06	1856	541837

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-004F Project: YANK01204
Sample ID: 165702001 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	Liquid Scint Ni63, Solid-ALL FS	82	(25%-125%)

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-005F	Project:	YANK01204
Sample ID:	165702002	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	16-MAY-06		
Receive Date:	22-JUN-06		
Collector:	Client		
Moisture:	34.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.883	+/-0.154	0.0538	+/-0.154	0.114	pCi/g		MJH1	06/29/06	1856	541904	1
Americium-241	U	0.0145	+/-0.126	0.0837	+/-0.126	0.172	pCi/g						
Bismuth-212		0.536	+/-0.266	0.108	+/-0.266	0.229	pCi/g						
Bismuth-214		0.575	+/-0.0758	0.0258	+/-0.0758	0.0542	pCi/g						
Cesium-134	UI	0.00	+/-0.044	0.0205	+/-0.044	0.0428	pCi/g						
Cesium-137		0.213	+/-0.0403	0.014	+/-0.0403	0.0295	pCi/g						
Cobalt-60		0.152	+/-0.0402	0.0155	+/-0.0402	0.0336	pCi/g						
Europium-152	U	-0.0488	+/-0.0452	0.0349	+/-0.0452	0.0728	pCi/g						
Europium-154	U	0.00347	+/-0.0907	0.0441	+/-0.0907	0.0949	pCi/g						
Europium-155	U	0.0433	+/-0.0626	0.0399	+/-0.0626	0.0822	pCi/g						
Lead-212		0.943	+/-0.0563	0.0219	+/-0.0563	0.0451	pCi/g						
Lead-214		0.651	+/-0.0794	0.0278	+/-0.0794	0.0577	pCi/g						
Manganese-54	U	0.00985	+/-0.0194	0.0165	+/-0.0194	0.0347	pCi/g						
Niobium-94	U	0.00161	+/-0.0158	0.0132	+/-0.0158	0.0278	pCi/g						
Potassium-40		14.1	+/-0.798	0.127	+/-0.798	0.279	pCi/g						
Radium-226		0.575	+/-0.0758	0.0258	+/-0.0758	0.0542	pCi/g						
Silver-108m	U	-0.00605	+/-0.0149	0.0127	+/-0.0149	0.0264	pCi/g						
Thallium-208		0.295	+/-0.0417	0.0154	+/-0.0417	0.0322	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	5.96	+/-6.70	5.43	+/-6.70	11.2	pCi/g		SLN1	07/02/06	2257	542563	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	06/22/06	1856	541837

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-005F Project: YANK01204
Sample ID: 165702002 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	Liquid Scint Ni63, Solid-ALL FS	78	(25%-125%)

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

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

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-006F	Project:	YANK01204
Sample ID:	165702003	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	16-MAY-06		
Receive Date:	22-JUN-06		
Collector:	Client		
Moisture:	25.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.739	+/-0.232	0.0872	+/-0.232	0.195	pCi/g		MJH1	06/29/06	1856	541904	1
Americium-241	U	0.0115	+/-0.0393	0.0354	+/-0.0393	0.0737	pCi/g						
Bismuth-212		0.727	+/-0.379	0.237	+/-0.379	0.513	pCi/g						
Bismuth-214		0.573	+/-0.140	0.0491	+/-0.140	0.107	pCi/g						
Cesium-134	U	0.0632	+/-0.0496	0.0346	+/-0.0496	0.0751	pCi/g						
Cesium-137		0.322	+/-0.084	0.0285	+/-0.084	0.0619	pCi/g						
Cobalt-60	U	0.0199	+/-0.0404	0.0358	+/-0.0404	0.0793	pCi/g						
Europium-152	U	0.0264	+/-0.0729	0.0652	+/-0.0729	0.139	pCi/g						
Europium-154	U	-0.0269	+/-0.0913	0.0721	+/-0.0913	0.165	pCi/g						
Europium-155	U	0.0195	+/-0.0671	0.0592	+/-0.0671	0.124	pCi/g						
Lead-212		0.718	+/-0.116	0.0342	+/-0.116	0.0724	pCi/g						
Lead-214		0.533	+/-0.130	0.0457	+/-0.130	0.0976	pCi/g						
Manganese-54	U	-0.021	+/-0.0402	0.0276	+/-0.0402	0.0609	pCi/g						
Niobium-94	U	0.0188	+/-0.0286	0.0254	+/-0.0286	0.0551	pCi/g						
Potassium-40		12.0	+/-1.43	0.206	+/-1.43	0.489	pCi/g						
Radium-226		0.573	+/-0.140	0.0491	+/-0.140	0.107	pCi/g						
Silver-108m	U	-0.0184	+/-0.0254	0.0203	+/-0.0254	0.044	pCi/g						
Thallium-208		0.190	+/-0.0741	0.0282	+/-0.0741	0.0609	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	2.44	+/-6.31	5.21	+/-6.31	10.8	pCi/g		SLN1	07/02/06	2329	542563	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	06/22/06	1856	541837

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-006F Project: YANK01204
Sample ID: 165702003 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	Liquid Scint Ni63, Solid-ALL FS				78	(25%-125%)						

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

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

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-008F	Project:	YANK01204
Sample ID:	165702004	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	16-MAY-06		
Receive Date:	22-JUN-06		
Collector:	Client		
Moisture:	29.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.811	+/-0.188	0.0856	+/-0.188	0.182	pCi/g		MJH1	06/29/06	1856	541904	1
Americium-241	U	0.064	+/-0.0836	0.0821	+/-0.0836	0.170	pCi/g						
Bismuth-212		0.555	+/-0.301	0.165	+/-0.301	0.351	pCi/g						
Bismuth-214		0.576	+/-0.0945	0.0381	+/-0.0945	0.0807	pCi/g						
Cesium-134	UI	0.00	+/-0.0492	0.0272	+/-0.0492	0.0576	pCi/g						
Cesium-137		0.156	+/-0.0394	0.0213	+/-0.0394	0.0452	pCi/g						
Cobalt-60		0.153	+/-0.0496	0.0241	+/-0.0496	0.0526	pCi/g						
Europium-152	U	-0.0549	+/-0.0587	0.048	+/-0.0587	0.101	pCi/g						
Europium-154	U	0.0372	+/-0.0811	0.0717	+/-0.0811	0.155	pCi/g						
Europium-155	U	0.0916	+/-0.0628	0.0588	+/-0.0628	0.121	pCi/g						
Lead-212		0.871	+/-0.068	0.0308	+/-0.068	0.064	pCi/g						
Lead-214		0.560	+/-0.083	0.0352	+/-0.083	0.074	pCi/g						
Manganese-54	U	0.0375	+/-0.029	0.0238	+/-0.029	0.0506	pCi/g						
Niobium-94	U	-0.00392	+/-0.0207	0.0175	+/-0.0207	0.0375	pCi/g						
Potassium-40		13.7	+/-1.09	0.147	+/-1.09	0.338	pCi/g						
Radium-226		0.576	+/-0.0945	0.0381	+/-0.0945	0.0807	pCi/g						
Silver-108m	U	-0.0129	+/-0.0197	0.0159	+/-0.0197	0.0338	pCi/g						
Thallium-208		0.244	+/-0.0486	0.0207	+/-0.0486	0.0438	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	-0.523	+/-6.52	5.49	+/-6.52	11.3	pCi/g		SLN1	07/03/06	0001	542563	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	06/22/06	1856	541837

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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East Hampton, Connecticut 06424 Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-008F Project: YANK01204
Sample ID: 165702004 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	Liquid Scint Ni63, Solid-ALL FS	83	(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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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-009F	Project:	YANK01204
Sample ID:	165702005	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	16-MAY-06		
Receive Date:	22-JUN-06		
Collector:	Client		
Moisture:	22.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241	U	0.00565	+/-0.0112	0.00	+/-0.0112	0.0157	pCi/g		LCW1	06/29/06	1420	542293	1
Curium-242	U	0.00	+/-0.0138	0.00	+/-0.0138	0.019	pCi/g						
Curium-243/244	U	0.00	+/-0.0114	0.00	+/-0.0114	0.0158	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	0.0056	+/-0.011	0.00	+/-0.011	0.0152	pCi/g		LCW1	06/28/06	2303	542294	2
Plutonium-239/240	U	0.00425	+/-0.0113	0.00638	+/-0.0113	0.0279	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	0.203	+/-0.846	0.814	+/-0.847	1.66	pCi/g		LCW1	07/03/06	1424	542295	3
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.793	+/-0.169	0.0643	+/-0.169	0.138	pCi/g		MJH1	06/29/06	1857	541904	4
Americium-241	U	0.0054	+/-0.104	0.070	+/-0.104	0.145	pCi/g						
Bismuth-212		0.822	+/-0.243	0.117	+/-0.243	0.252	pCi/g						
Bismuth-214		0.420	+/-0.0689	0.0285	+/-0.0689	0.0608	pCi/g						
Cesium-134	UI	0.00	+/-0.0362	0.025	+/-0.0362	0.0528	pCi/g						
Cesium-137		0.0623	+/-0.0326	0.0167	+/-0.0326	0.0357	pCi/g						
Cobalt-60	U	0.0342	+/-0.0424	0.0167	+/-0.0424	0.037	pCi/g						
Europium-152	U	0.0271	+/-0.0555	0.0455	+/-0.0555	0.0955	pCi/g						
Europium-154	U	0.0294	+/-0.0574	0.0513	+/-0.0574	0.112	pCi/g						
Europium-155	U	0.0564	+/-0.0511	0.0486	+/-0.0511	0.101	pCi/g						
Lead-212		0.692	+/-0.0563	0.0247	+/-0.0563	0.0516	pCi/g						
Lead-214		0.545	+/-0.0736	0.0286	+/-0.0736	0.0604	pCi/g						
Manganese-54	U	-0.00673	+/-0.0202	0.0172	+/-0.0202	0.0371	pCi/g						
Niobium-94	U	0.00329	+/-0.0174	0.0149	+/-0.0174	0.0319	pCi/g						
Potassium-40		12.6	+/-0.890	0.122	+/-0.890	0.279	pCi/g						
Radium-226		0.420	+/-0.0689	0.0285	+/-0.0689	0.0608	pCi/g						
Silver-108m	U	0.0108	+/-0.0152	0.0141	+/-0.0152	0.0298	pCi/g						
Thallium-208		0.228	+/-0.0432	0.0161	+/-0.0432	0.0343	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00341	+/-0.00736	0.00602	+/-0.00736	0.0126	pCi/g		BXF1	07/09/06	2207	545299	5
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	2.71	+/-6.22	5.11	+/-6.22	10.6	pCi/g		EGD1	07/04/06	2315	542573	7

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Certificate of Analysis

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

Report Date: July 14, 2006

Client Sample ID: 9106-0011-009F
Sample ID: 165702005

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	-0.067	+/-0.0804	0.0686	+/-0.0804	0.139	pCi/g		ATH2	07/01/06	1716	542575	8
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	-21.3	+/-23.6	19.8	+/-23.9	41.4	pCi/g		SLN1	07/03/06	1850	542567	9
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	0.859	+/-5.21	4.34	+/-5.21	8.97	pCi/g		SLN1	07/03/06	0033	542563	10
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.242	+/-0.197	0.160	+/-0.197	0.327	pCi/g		EGD1	07/03/06	1118	542571	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	06/22/06	1856	541837

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	95	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	86	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	93	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	72	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	68	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	88	(25%-125%)

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Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-009F
Sample ID: 165702005

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 Tc99, Solid-ALL FS			76		(15%-125%)						

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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
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East Hampton, Connecticut 06424
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-010F	Project:	YANK01204
Sample ID:	165702006	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	16-MAY-06		
Receive Date:	22-JUN-06		
Collector:	Client		
Moisture:	22.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.726	+/-0.221	0.0645	+/-0.221	0.139	pCi/g		MJH1	06/29/06	1857	541904	1
Americium-241	U	-0.145	+/-0.115	0.0857	+/-0.115	0.176	pCi/g						
Bismuth-212		0.470	+/-0.216	0.155	+/-0.216	0.331	pCi/g						
Bismuth-214		0.419	+/-0.122	0.0323	+/-0.122	0.0687	pCi/g						
Cesium-134	U	0.0337	+/-0.0389	0.0261	+/-0.0389	0.0552	pCi/g						
Cesium-137	U	0.0371	+/-0.0335	0.0215	+/-0.0335	0.0454	pCi/g						
Cobalt-60	U	-0.0119	+/-0.0241	0.0192	+/-0.0241	0.0424	pCi/g						
Europium-152	U	-0.0146	+/-0.0532	0.0464	+/-0.0532	0.0973	pCi/g						
Europium-154	U	0.0466	+/-0.0744	0.0599	+/-0.0744	0.131	pCi/g						
Europium-155	U	0.00414	+/-0.0572	0.051	+/-0.0572	0.105	pCi/g						
Lead-212		0.686	+/-0.0855	0.0278	+/-0.0855	0.0577	pCi/g						
Lead-214		0.513	+/-0.0862	0.0327	+/-0.0862	0.0687	pCi/g						
Manganese-54	U	0.0175	+/-0.018	0.0181	+/-0.018	0.0389	pCi/g						
Niobium-94	U	-0.00975	+/-0.0207	0.0169	+/-0.0207	0.036	pCi/g						
Potassium-40		12.4	+/-1.30	0.149	+/-1.30	0.339	pCi/g						
Radium-226		0.419	+/-0.122	0.0323	+/-0.122	0.0687	pCi/g						
Silver-108m	U	-0.00572	+/-0.0186	0.016	+/-0.0186	0.0337	pCi/g						
Thallium-208		0.244	+/-0.0597	0.0189	+/-0.0597	0.040	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	6.11	+/-6.69	5.41	+/-6.69	11.2	pCi/g		SLN1	07/03/06	0104	542563	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	06/22/06	1856	541837

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, 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 Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-010F Project: YANK01204
Sample ID: 165702006 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	Liquid Scint Ni63, Solid-ALL FS	87	(25%-125%)

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

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-017F	Project:	YANK01204
Sample ID:	165702007	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	16-MAY-06		
Receive Date:	22-JUN-06		
Collector:	Client		
Moisture:	34.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.919	+/-0.207	0.0716	+/-0.207	0.153	pCi/g		MJH1	06/29/06	1857	541904	1
Americium-241	U	0.0486	+/-0.111	0.0867	+/-0.111	0.178	pCi/g						
Bismuth-212		0.620	+/-0.266	0.163	+/-0.266	0.346	pCi/g						
Bismuth-214		0.748	+/-0.115	0.0364	+/-0.115	0.077	pCi/g						
Cesium-134	UI	0.00	+/-0.0398	0.028	+/-0.0398	0.059	pCi/g						
Cesium-137		0.370	+/-0.0609	0.0218	+/-0.0609	0.0461	pCi/g						
Cobalt-60		0.0722	+/-0.0326	0.0215	+/-0.0326	0.0469	pCi/g						
Europium-152	U	-0.0155	+/-0.0696	0.0567	+/-0.0696	0.118	pCi/g						
Europium-154	U	0.0654	+/-0.0809	0.0713	+/-0.0809	0.153	pCi/g						
Europium-155	U	-0.00839	+/-0.0717	0.0613	+/-0.0717	0.126	pCi/g						
Lead-212		1.02	+/-0.0741	0.0332	+/-0.0741	0.0686	pCi/g						
Lead-214		0.741	+/-0.110	0.0406	+/-0.110	0.0845	pCi/g						
Manganese-54	U	-0.00693	+/-0.0323	0.0229	+/-0.0323	0.0486	pCi/g						
Niobium-94	U	0.00746	+/-0.024	0.0181	+/-0.024	0.0384	pCi/g						
Potassium-40		14.2	+/-1.10	0.181	+/-1.10	0.401	pCi/g						
Radium-226		0.748	+/-0.115	0.0364	+/-0.115	0.077	pCi/g						
Silver-108m	U	0.0117	+/-0.0189	0.0184	+/-0.0189	0.0387	pCi/g						
Thallium-208		0.352	+/-0.056	0.0201	+/-0.056	0.0425	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	1.70	+/-6.96	5.79	+/-6.96	12.0	pCi/g		SLN1	07/03/06	0136	542563	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	06/22/06	1856	541837

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, 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 Report Date: July 14, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-017F Project: YANK01204
Sample ID: 165702007 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	Liquid Scint Ni63, Solid-ALL FS	79	(25%-125%)

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

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

QUALITY CONTROL DATA

QC Summary

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

East Hampton, Connecticut

Contact: Mr. Jack McCarthy

Workorder: 165702

Report Date: July 14, 2006

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 542293										
QC1201121833 165557001 DUP										
Americium-241	U	0.0069		0.0442	pCi/g	146		(0% - 100%)	LCW1	06/29/06 14:20
	Uncert:	+/-0.013		+/-0.0412						
	TPU:	+/-0.013		+/-0.0417						
Curium-242	U	0.00685	U	-0.00258	pCi/g	442		(0% - 100%)		
	Uncert:	+/-0.0134		+/-0.0217						
	TPU:	+/-0.0135		+/-0.0217						
Curium-243/244	U	0.00332	U	0.0176	pCi/g	137		(0% - 100%)		
	Uncert:	+/-0.0132		+/-0.0282						
	TPU:	+/-0.0132		+/-0.0283						
QC1201121835 LCS										
Americium-241	2.68			2.84	pCi/g		106	(75%-125%)		
	Uncert:			+/-0.266						
	TPU:			+/-0.426						
Curium-242			U	0.00	pCi/g					
	Uncert:			+/-0.0129						
	TPU:			+/-0.0129						
Curium-243/244	3.26			3.05	pCi/g		94	(75%-125%)		
	Uncert:			+/-0.276						
	TPU:			+/-0.452						
QC1201121832 MB										
Americium-241			U	0.0049	pCi/g					
	Uncert:			+/-0.0157						
	TPU:			+/-0.0157						
Curium-242			U	0.00	pCi/g					
	Uncert:			+/-0.0141						
	TPU:			+/-0.0141						
Curium-243/244				0.0424	pCi/g					
	Uncert:			+/-0.034						
	TPU:			+/-0.0343						
QC1201121834 165557001 MS										
Americium-241	2.73 U	0.0069		2.70	pCi/g		99	(75%-125%)		
	Uncert:	+/-0.013		+/-0.250						
	TPU:	+/-0.013		+/-0.398						
Curium-242	U	0.00685	U	0.00644	pCi/g					
	Uncert:	+/-0.0134		+/-0.0126						
	TPU:	+/-0.0135		+/-0.0126						
Curium-243/244	3.33 U	0.00332		3.12	pCi/g		94	(75%-125%)		
	Uncert:	+/-0.0132		+/-0.269						
	TPU:	+/-0.0132		+/-0.447						
Batch 542294										
QC1201121837 165557001 DUP										
Plutonium-238	U	0.0117	U	0.0162	pCi/g	32		(0% - 100%)	LCW1	06/28/06 23:03

QC Summary

Workorder: 165702

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 542294										
	Uncert:	+/-0.0336		+/-0.0281						
	TPU:	+/-0.0336		+/-0.0281						
Plutonium-239/240	U	0.00369	U	0.0159	pCi/g	125		(0% - 100%)		
	Uncert:	+/-0.0147		+/-0.0221						
	TPU:	+/-0.0147		+/-0.0221						
QC1201121839 LCS										
Plutonium-238			U	0.00893	pCi/g			(75%-125%)		06/28/06 23:03
	Uncert:			+/-0.0143						
	TPU:			+/-0.0143						
Plutonium-239/240	2.48			2.10	pCi/g		85	(75%-125%)		
	Uncert:			+/-0.202						
	TPU:			+/-0.302						
QC1201121836 MB										
Plutonium-238			U	-0.00137	pCi/g					06/28/06 23:03
	Uncert:			+/-0.0115						
	TPU:			+/-0.0115						
Plutonium-239/240			U	0.00435	pCi/g					
	Uncert:			+/-0.0115						
	TPU:			+/-0.0115						
QC1201121838 165557001 MS										
Plutonium-238	U	0.0117		0.0336	pCi/g			(75%-125%)		06/28/06 23:03
	Uncert:	+/-0.0336		+/-0.0295						
	TPU:	+/-0.0336		+/-0.0297						
Plutonium-239/240	2.52 U	0.00369		2.28	pCi/g		91	(75%-125%)		
	Uncert:	+/-0.0147		+/-0.242						
	TPU:	+/-0.0147		+/-0.355						
Batch 542295										
QC1201121841 165557001 DUP										
Plutonium-241	U	0.395	U	1.16	pCi/g	0		(0% - 100%)	LCW1	07/03/06 16:27
	Uncert:	+/-1.29		+/-1.89						
	TPU:	+/-1.29		+/-1.89						
QC1201121843 LCS										
Plutonium-241	35.0			27.3	pCi/g		78	(75%-125%)		07/03/06 18:31
	Uncert:			+/-1.43						
	TPU:			+/-3.02						
QC1201121840 MB										
Plutonium-241			U	0.499	pCi/g					07/03/06 15:26
	Uncert:			+/-0.891						
	TPU:			+/-0.893						
QC1201121842 165557001 MS										
Plutonium-241	35.3 U	0.395		31.7	pCi/g		90	(75%-125%)		07/03/06 17:29
	Uncert:	+/-1.29		+/-1.58						
	TPU:	+/-1.29		+/-3.43						
Rad Gamma Spec										
Batch 541904										
QC1201120873 165614001 DUP										
Actinium-228		0.669		0.385	pCi/g	54		(0% - 100%)	MJH1	06/29/06 18:58
	Uncert:	+/-0.127		+/-0.239						
				+/-0.239						

QC Summary

Workorder: 165702

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 541904										
	TPU:	+/-0.127								
Americium-241	U	0.0549	U	0.0237	pCi/g	80		(0% - 100%)		
	Uncert:	+/-0.0804		+/-0.0384						
	TPU:	+/-0.0804		+/-0.0384						
Bismuth-212		0.401	U	0.334	pCi/g	18		(0% - 100%)		
	Uncert:	+/-0.220		+/-0.239						
	TPU:	+/-0.220		+/-0.239						
Bismuth-214		0.473		0.489	pCi/g	3		(0% - 100%)		
	Uncert:	+/-0.0699		+/-0.112						
	TPU:	+/-0.0699		+/-0.112						
Cesium-134	U	0.0328	U	0.0258	pCi/g	24		(0% - 100%)		
	Uncert:	+/-0.020		+/-0.0337						
	TPU:	+/-0.020		+/-0.0337						
Cesium-137	U	0.0157	U	-0.0084	pCi/g	660		(0% - 100%)		
	Uncert:	+/-0.0158		+/-0.0301						
	TPU:	+/-0.0158		+/-0.0301						
Cobalt-60	U	0.0117	U	-0.0145	pCi/g	1840		(0% - 100%)		
	Uncert:	+/-0.017		+/-0.0289						
	TPU:	+/-0.017		+/-0.0289						
Europium-152	U	0.0317	U	-0.0192	pCi/g	813		(0% - 100%)		
	Uncert:	+/-0.0426		+/-0.0634						
	TPU:	+/-0.0426		+/-0.0634						
Europium-154	U	-0.0318	U	0.0556	pCi/g	733		(0% - 100%)		
	Uncert:	+/-0.0551		+/-0.0814						
	TPU:	+/-0.0551		+/-0.0814						
Europium-155	U	0.0426	U	0.0126	pCi/g	109		(0% - 100%)		
	Uncert:	+/-0.0446		+/-0.0591						
	TPU:	+/-0.0446		+/-0.0591						
Lead-212		0.609		0.501	pCi/g	20		(0% - 20%)		
	Uncert:	+/-0.0496		+/-0.0722						
	TPU:	+/-0.0496		+/-0.0722						
Lead-214		0.467		0.430	pCi/g	8		(0% - 100%)		
	Uncert:	+/-0.0614		+/-0.106						
	TPU:	+/-0.0614		+/-0.106						
Manganese-54	U	0.0136	U	0.0196	pCi/g	36		(0% - 100%)		
	Uncert:	+/-0.0175		+/-0.0316						
	TPU:	+/-0.0175		+/-0.0316						
Niobium-94	U	0.00856	U	-0.0061	pCi/g	1190		(0% - 100%)		
	Uncert:	+/-0.0147		+/-0.0263						
	TPU:	+/-0.0147		+/-0.0263						
Potassium-40		12.5		12.2	pCi/g	3		(0% - 20%)		
	Uncert:	+/-0.763		+/-1.23						
	TPU:	+/-0.763		+/-1.23						
Radium-226		0.473		0.489	pCi/g	3		(0% - 100%)		
	Uncert:	+/-0.0699		+/-0.112						
	TPU:	+/-0.0699		+/-0.112						
Silver-108m	U	0.00554	U	0.00226	pCi/g	84		(0% - 100%)		
	Uncert:	+/-0.0136		+/-0.0231						

QC Summary

Workorder: 165702

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 541904										
	TPU:	+/-0.0136		+/-0.0231						
Thallium-208		0.164		0.203	pCi/g	21		(0% - 100%)		
	Uncert:	+/-0.0418		+/-0.0645						
	TPU:	+/-0.0418		+/-0.0645						
QC1201120874 LCS										
Actinium-228			U	0.257	pCi/g					06/29/06 18:58
	Uncert:			+/-0.387						
	TPU:			+/-0.387						
Americium-241	23.4			24.6	pCi/g		105	(75%-125%)		
	Uncert:			+/-2.02						
	TPU:			+/-2.02						
Bismuth-212			U	-0.084	pCi/g					
	Uncert:			+/-0.708						
	TPU:			+/-0.708						
Bismuth-214			U	-0.00724	pCi/g					
	Uncert:			+/-0.183						
	TPU:			+/-0.183						
Cesium-134			U	-0.00761	pCi/g					
	Uncert:			+/-0.101						
	TPU:			+/-0.101						
Cesium-137	9.62			10.0	pCi/g		104	(75%-125%)		
	Uncert:			+/-0.921						
	TPU:			+/-0.921						
Cobalt-60	14.9			15.1	pCi/g		102	(75%-125%)		
	Uncert:			+/-0.935						
	TPU:			+/-0.935						
Europium-152			U	-0.234	pCi/g					
	Uncert:			+/-0.226						
	TPU:			+/-0.226						
Europium-154			U	-0.105	pCi/g					
	Uncert:			+/-0.229						
	TPU:			+/-0.229						
Europium-155			U	-0.0941	pCi/g					
	Uncert:			+/-0.288						
	TPU:			+/-0.288						
Lead-212			U	0.0458	pCi/g					
	Uncert:			+/-0.141						
	TPU:			+/-0.141						
Lead-214			U	-0.0295	pCi/g					
	Uncert:			+/-0.158						
	TPU:			+/-0.158						
Manganese-54			U	-0.0537	pCi/g					
	Uncert:			+/-0.0955						
	TPU:			+/-0.0955						
Niobium-94			U	0.00301	pCi/g					
	Uncert:			+/-0.0829						
	TPU:			+/-0.0829						
Potassium-40			U	0.0392	pCi/g					

QC Summary

Workorder: 165702

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 541904										
	Uncert:			+/-0.911						
	TPU:			+/-0.911						
Radium-226			U	-0.00724	pCi/g			(75%-125%)		
	Uncert:			+/-0.183						
	TPU:			+/-0.183						
Silver-108m			U	0.133	pCi/g					
	Uncert:			+/-0.0861						
	TPU:			+/-0.0861						
Thallium-208			U	-0.0458	pCi/g					
	Uncert:			+/-0.0936						
	TPU:			+/-0.0936						
QC1201120872 MB										
Actinium-228			U	0.0661	pCi/g					07/02/06 19:56
	Uncert:			+/-0.109						
	TPU:			+/-0.109						
Americium-241			U	-0.132	pCi/g					
	Uncert:			+/-0.103						
	TPU:			+/-0.103						
Bismuth-212			U	0.0987	pCi/g					
	Uncert:			+/-0.140						
	TPU:			+/-0.140						
Bismuth-214			U	0.0297	pCi/g					
	Uncert:			+/-0.0399						
	TPU:			+/-0.0399						
Cesium-134			U	0.0152	pCi/g					
	Uncert:			+/-0.0208						
	TPU:			+/-0.0208						
Cesium-137			U	0.00321	pCi/g					
	Uncert:			+/-0.014						
	TPU:			+/-0.014						
Cobalt-60			U	0.0147	pCi/g					
	Uncert:			+/-0.0117						
	TPU:			+/-0.0117						
Europium-152			U	-0.0287	pCi/g					
	Uncert:			+/-0.0501						
	TPU:			+/-0.0501						
Europium-154			U	0.0195	pCi/g					
	Uncert:			+/-0.0444						
	TPU:			+/-0.0444						
Europium-155			U	0.00022	pCi/g					
	Uncert:			+/-0.0525						
	TPU:			+/-0.0525						
Lead-212			U	0.0228	pCi/g					
	Uncert:			+/-0.038						
	TPU:			+/-0.038						
Lead-214			U	0.00181	pCi/g					
	Uncert:			+/-0.0453						
	TPU:			+/-0.0453						

QC Summary

Workorder: 165702

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 541904										
Manganese-54			U	0.00971	pCi/g					
Uncert:				+/-0.0166						
TPU:				+/-0.0166						
Niobium-94			U	0.00227	pCi/g					
Uncert:				+/-0.0157						
TPU:				+/-0.0157						
Potassium-40			U	0.346	pCi/g					
Uncert:				+/-0.237						
TPU:				+/-0.237						
Radium-226			U	0.0297	pCi/g					
Uncert:				+/-0.0399						
TPU:				+/-0.0399						
Silver-108m			U	0.00446	pCi/g					
Uncert:				+/-0.0154						
TPU:				+/-0.0154						
Thallium-208			U	0.00177	pCi/g					
Uncert:				+/-0.0188						
TPU:				+/-0.0188						
Rad Gas Flow										
Batch 545299										
QC1201128845 165011040 DUP										
Strontium-90	U	0.00424	U	-0.00211	pCi/g	0		(0% - 100%)	BXF1	07/09/06 22:06
Uncert:		+/-0.00511		+/-0.00864						
TPU:		+/-0.00511		+/-0.00864						
QC1201128847 LCS										
Strontium-90	0.874			0.718	pCi/g		82	(75%-125%)		07/09/06 13:30
Uncert:				+/-0.0548						
TPU:				+/-0.0587						
QC1201128844 MB										
Strontium-90			U	0.00281	pCi/g					07/09/06 22:06
Uncert:				+/-0.00503						
TPU:				+/-0.00503						
QC1201128846 165011040 MS										
Strontium-90	2.60 U	0.00424		1.75	pCi/g		67*	(75%-125%)		07/09/06 14:48
Uncert:		+/-0.00511		+/-0.155						
TPU:		+/-0.00511		+/-0.164						
Rad Liquid Scintillation										
Batch 542563										
QC1201122382 165614008 DUP										
Nickel-63	U	-0.464	U	1.22	pCi/g	0		(0% - 100%)	SLN1	07/03/06 02:39
Uncert:		+/-5.78		+/-7.42						
TPU:		+/-5.78		+/-7.42						
QC1201122384 LCS										
Nickel-63	450			372	pCi/g		83	(75%-125%)		07/03/06 03:43
Uncert:				+/-13.2						
TPU:				+/-17.2						
QC1201122381 MB										
Nickel-63			U	4.76	pCi/g					07/03/06 02:08

QC Summary

Workorder: 165702

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 542563										
	Uncert:			+/-5.21						
	TPU:			+/-5.21						
QC1201122383 165614008 MS										
Nickel-63	451 U	-0.464		360	pCi/g		80	(75%-125%)		07/03/06 03:11
	Uncert:	+/-5.78		+/-13.1						
	TPU:	+/-5.78		+/-16.9						
Batch 542567										
QC1201122393 165614008 DUP										
Iron-55	U	-11.6	U	-16.3	pCi/g	0		(0% - 100%)	SLN1	07/03/06 19:22
	Uncert:	+/-25.9		+/-22.8						
	TPU:	+/-26.0		+/-22.9						
QC1201122395 LCS										
Iron-55	571			562	pCi/g		98	(75%-125%)		07/03/06 19:55
	Uncert:			+/-59.5						
	TPU:			+/-102						
QC1201122392 MB										
Iron-55			U	-12.4	pCi/g					07/03/06 19:06
	Uncert:			+/-38.9						
	TPU:			+/-39.0						
QC1201122394 165614008 MS										
Iron-55	608 U	-11.6		611	pCi/g		100	(75%-125%)		07/03/06 19:38
	Uncert:	+/-25.9		+/-46.4						
	TPU:	+/-26.0		+/-99.9						
Batch 542571										
QC1201122397 165702005 DUP										
Technetium-99	U	0.242	U	-0.0687	pCi/g	0		(0% - 100%)	EGD1	07/03/06 12:22
	Uncert:	+/-0.197		+/-0.182						
	TPU:	+/-0.197		+/-0.182						
QC1201122399 LCS										
Technetium-99	12.8			12.2	pCi/g		96	(75%-125%)		07/03/06 13:25
	Uncert:			+/-0.344						
	TPU:			+/-0.460						
QC1201122396 MB										
Technetium-99			U	0.0899	pCi/g					07/03/06 11:50
	Uncert:			+/-0.167						
	TPU:			+/-0.167						
QC1201122398 165702005 MS										
Technetium-99	13.1 U	0.242		13.1	pCi/g		100	(75%-125%)		07/03/06 12:53
	Uncert:	+/-0.197		+/-0.403						
	TPU:	+/-0.197		+/-0.518						
Batch 542573										
QC1201122405 165702005 DUP										
Tritium	U	2.71	U	4.56	pCi/g	0		(0% - 100%)	EGD1	07/05/06 04:00
	Uncert:	+/-6.22		+/-6.50						
	TPU:	+/-6.22		+/-6.50						
QC1201122407 LCS										
Tritium	61.0			62.7	pCi/g		103	(75%-125%)		07/05/06 05:03
	Uncert:			+/-8.39						
	TPU:			+/-8.46						

QC Summary

Workorder: 165702

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 542573										
QC1201122404 MB										
Tritium			U	8.19	pCi/g					07/05/06 03:28
Uncert:				+/-6.12						
TPU:				+/-6.12						
QC1201122406 165702005 MS										
Tritium	63.4 U	2.71		71.0	pCi/g		112	(75%-125%)		07/05/06 04:32
Uncert:		+/-6.22		+/-8.48						
TPU:		+/-6.22		+/-8.57						
Batch 542575										
QC1201122409 165702005 DUP										
Carbon-14	U	-0.067	U	-0.0775	pCi/g	0		(0% - 100%)	ATH2	07/01/06 20:22
Uncert:		+/-0.0804		+/-0.0785						
TPU:		+/-0.0804		+/-0.0785						
QC1201122411 LCS										
Carbon-14	6.92			7.00	pCi/g		101	(75%-125%)		07/01/06 23:28
Uncert:				+/-0.171						
TPU:				+/-0.203						
QC1201122408 MB										
Carbon-14			U	-0.00305	pCi/g					07/01/06 18:49
Uncert:				+/-0.0817						
TPU:				+/-0.0817						
QC1201122410 165702005 MS										
Carbon-14	7.14 U	-0.067		7.14	pCi/g		100	(75%-125%)		07/01/06 21:55
Uncert:		+/-0.0804		+/-0.174						
TPU:		+/-0.0804		+/-0.207						

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

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

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

QC Summary

Workorder: 165702

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

^

h Preparation or preservation holding time was exceeded

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

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

Table of Contents

General Narrative

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Soil
PO# 002332
Work Order: 166656
SDG: MSR #06-960

July 21, 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 July 7, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures.

The laboratory received the following sample(s):

Sample ID	Client Sample ID
166656001	9106-0011-017F
166656002	9106-0011-017FS
166656003	9106-0011-007FS

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:

Three soil samples were analyzed for FSSGAM 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

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. 2006-00442

166656.1

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only

Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Sr-90	Ni-63			Comment, Preservation	Lab Sample ID
9106-0011-017F	6-27-06	1411	SE	C	BP	X			X				001
9106-0011-017FS	6-27-06	1411	SE	C	BP	X			X			Split sample obtained from 9106-0000-017F	002
9106-0011-007FS	5-16-06	1028	SE	C	BP	X			X			Transferred from Attachment A	003

NOTES: PO #: 002332 MSR #: 06-960 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA
Samples 9106-0011-017F, 017FS and 007F replace samples that were unidentifiable.

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	7-6-06 / 0900	[signature]	7/7/06 900
3) Relinquished By	Date/Time	4) Received By	Date/Time

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

Bill of Lading #
7910 4024 2937

Internal Container Temp.: ____ Deg. C

Custody Sealed?
Y ☐ N ☐

Custody Seal Intact?
Y ☐ N ☐

5

Figure 1. Sample Check-in List

Date/Time Received: 7/7/06

SDG#:

Work Order Number: 166653 / 166655 / 166656

Shipping Container ID: 7919 8876 4783 - 23°C
7910 4024 2957 - 22°C
7917 8782 3124 - 23°C

Chain of Custody # 2006-00449
2006-00448
2006-00451
2006-00452

1. Custody Seals on shipping container intact? Yes [ ] No [X]
2. Custody Seals dated and signed? Yes [X] No [ ]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 23°C - 22°C - 23°C
5. Vermiculite/packing materials is: Wet [X] Dry [ ]
6. Number of samples in shipping container: (1) 3 ; (2) 12 (3) 9
7. Sample holding times exceeded? Yes [ ] No [ ]

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

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

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

Sample Custodian/Laboratory: [signature] Date: 7/7/06 0900

Telephoned to: On By

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Connecticut Yankee	SDG/ARCOC/Work Order: 166653, 166655, 166656
Date Received: 7/7/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By:	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Coolant # ice bags blue ice dry ice none other describe)
3	Chain of custody documents included with shipment?				
4	Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				
8	Samples received within holding time?				Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?				Sample ID's affected:
11	Number of containers received match number indicated on COC?				Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?				
14	Air Bill ,Tracking #'s, & Additional Comments				

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	
A	Radiological Classification?		✓		RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
B	PCB Regulated?		✓		Maximum Counts Observed*: CPM 40
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: 7/7/06

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 166656

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:	546530
Prep Batch Number:	546300

Sample ID	Client ID
166656001	9106-0011-017F
166656002	9106-0011-017FS
166656003	9106-0011-007FS
1201131807	Method Blank (MB)
1201131808	166655001(9106-0015-017A) Sample Duplicate (DUP)
1201131809	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: 166655001 (9106-0015-017A).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

Additional Comments
The sample and the duplicate, 1201131808 (9106-0015-017A), did not meet the relative percent difference requirement for Ra-226, however they do meet the relative error ratio requirement with value of 1.94.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to interference	Europium-155	166656002

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:	547198
Prep Batch Number:	546301
Dry Soil Prep GL-RAD-A-021 Batch Number:	546300

Sample ID	Client ID
166656001	9106-0011-017F
166656002	9106-0011-017FS
166656003	9106-0011-007FS
1201133195	Method Blank (MB)
1201133196	166656001(9106-0011-017F) Sample Duplicate (DUP)
1201133197	166656001(9106-0011-017F) Matrix Spike (MS)
1201133198	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: 166656001 (9106-0011-017F).

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: 7/21/16

SAMPLE DATA SUMMARY

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

Certificate of Analysis Report
for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#06-960 GEL Work Order: 166656

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: July 20, 2006

Client Sample ID:	9106-0011-017F	Project:	YANK01204
Sample ID:	166656001	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	27-JUN-06		
Receive Date:	07-JUL-06		
Collector:	Client		
Moisture:	24.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.896	+/-0.172	0.0747	+/-0.172	0.163	pCi/g		MJH1	07/17/06	1855	546530	1
Americium-241	U	-0.00999	+/-0.115	0.088	+/-0.115	0.182	pCi/g						
Bismuth-212		0.460	+/-0.324	0.176	+/-0.324	0.379	pCi/g						
Bismuth-214		0.643	+/-0.115	0.0447	+/-0.115	0.095	pCi/g						
Cesium-134	U	0.00863	+/-0.0312	0.0266	+/-0.0312	0.0571	pCi/g						
Cesium-137		0.406	+/-0.0779	0.0233	+/-0.0779	0.0497	pCi/g						
Cobalt-60	U	0.00652	+/-0.0302	0.0259	+/-0.0302	0.0569	pCi/g						
Europium-152	U	0.0332	+/-0.0667	0.0578	+/-0.0667	0.122	pCi/g						
Europium-154	U	-0.0432	+/-0.114	0.0772	+/-0.114	0.168	pCi/g						
Europium-155	U	0.049	+/-0.0758	0.0653	+/-0.0758	0.135	pCi/g						
Lead-212		0.848	+/-0.0831	0.0341	+/-0.0831	0.071	pCi/g						
Lead-214		0.610	+/-0.114	0.0418	+/-0.114	0.088	pCi/g						
Manganese-54	U	0.014	+/-0.029	0.0251	+/-0.029	0.0537	pCi/g						
Niobium-94	U	0.0163	+/-0.0242	0.0215	+/-0.0242	0.0459	pCi/g						
Potassium-40		13.4	+/-1.12	0.182	+/-1.12	0.416	pCi/g						
Radium-226		0.643	+/-0.115	0.0447	+/-0.115	0.095	pCi/g						
Silver-108m	U	0.00536	+/-0.0243	0.0204	+/-0.0243	0.0431	pCi/g						
Thallium-208		0.284	+/-0.0528	0.0232	+/-0.0528	0.0494	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	11.8	+/-7.46	5.98	+/-7.47	12.2	pCi/g		SLN1	07/15/06	0025	547198	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	07/09/06	1715	546300

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 20, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-017F
Sample ID: 166656001
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	Liquid Scint Ni63, Solid-ALL FS	89	(25%-125%)

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

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

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 20, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0011-017FS	Project:	YANK01204
Sample ID:	166656002	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	27-JUN-06		
Receive Date:	07-JUL-06		
Collector:	Client		
Moisture:	21.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.923	+/-0.231	0.0926	+/-0.231	0.202	pCi/g		MJH1	07/17/06	1855	546530	1
Americium-241	U	0.0179	+/-0.0435	0.0339	+/-0.0435	0.0701	pCi/g						
Bismuth-212		0.759	+/-0.513	0.188	+/-0.513	0.409	pCi/g						
Bismuth-214		0.871	+/-0.165	0.0485	+/-0.165	0.104	pCi/g						
Cesium-134	U	0.0392	+/-0.0354	0.0328	+/-0.0354	0.0705	pCi/g						
Cesium-137		0.416	+/-0.0873	0.0292	+/-0.0873	0.0625	pCi/g						
Cobalt-60	U	0.0477	+/-0.0504	0.0329	+/-0.0504	0.0722	pCi/g						
Europium-152	U	-0.0181	+/-0.0872	0.064	+/-0.0872	0.135	pCi/g						
Europium-154	U	0.108	+/-0.110	0.100	+/-0.110	0.218	pCi/g						
Europium-155	UI	0.147	+/-0.0937	0.0516	+/-0.0937	0.108	pCi/g						
Lead-212		0.893	+/-0.130	0.0357	+/-0.130	0.0747	pCi/g						
Lead-214		0.659	+/-0.140	0.0476	+/-0.140	0.100	pCi/g						
Manganese-54	U	-0.0144	+/-0.0344	0.0282	+/-0.0344	0.0607	pCi/g						
Niobium-94	U	0.0184	+/-0.0311	0.0265	+/-0.0311	0.0567	pCi/g						
Potassium-40		13.9	+/-1.49	0.280	+/-1.49	0.624	pCi/g						
Radium-226		0.871	+/-0.165	0.0485	+/-0.165	0.104	pCi/g						
Silver-108m	U	-0.00687	+/-0.0274	0.0225	+/-0.0274	0.0479	pCi/g						
Thallium-208		0.285	+/-0.0773	0.0236	+/-0.0773	0.051	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	11.3	+/-9.38	7.60	+/-9.39	15.6	pCi/g		SLN1	07/15/06	0057	547198	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	07/09/06	1715	546300

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: July 20, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-017FS Project: YANK01204
Sample ID: 166656002 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	Liquid Scint Ni63, Solid-ALL FS	72	(25%-125%)

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B Target analyte was detected in the associated blank
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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.

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: July 20, 2006

Client Sample ID:	9106-0011-007FS	Project:	YANK01204
Sample ID:	166656003	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	16-MAY-06		
Receive Date:	07-JUL-06		
Collector:	Client		
Moisture:	25.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		1.05	+/-0.183	0.0673	+/-0.183	0.143	pCi/g		MJH1	07/17/06	1856	546530	1
Americium-241	U	-0.093	+/-0.0953	0.0693	+/-0.0953	0.142	pCi/g						
Bismuth-212		0.785	+/-0.356	0.137	+/-0.356	0.289	pCi/g						
Bismuth-214		0.569	+/-0.096	0.0368	+/-0.096	0.0769	pCi/g						
Cesium-134	U	0.031	+/-0.0402	0.0255	+/-0.0402	0.0533	pCi/g						
Cesium-137		0.184	+/-0.0403	0.0182	+/-0.0403	0.0382	pCi/g						
Cobalt-60		0.0552	+/-0.0375	0.0237	+/-0.0375	0.0506	pCi/g						
Europium-152	U	0.0584	+/-0.0521	0.0488	+/-0.0521	0.101	pCi/g						
Europium-154	U	-0.0506	+/-0.0776	0.061	+/-0.0776	0.131	pCi/g						
Europium-155	U	0.0688	+/-0.0572	0.0491	+/-0.0572	0.101	pCi/g						
Lead-212		1.02	+/-0.0685	0.0266	+/-0.0685	0.055	pCi/g						
Lead-214		0.745	+/-0.107	0.0314	+/-0.107	0.0654	pCi/g						
Manganese-54	U	0.00413	+/-0.0242	0.0201	+/-0.0242	0.0425	pCi/g						
Niobium-94	U	-0.00316	+/-0.0212	0.0175	+/-0.0212	0.0367	pCi/g						
Potassium-40		14.1	+/-0.893	0.161	+/-0.893	0.354	pCi/g						
Radium-226		0.569	+/-0.096	0.0368	+/-0.096	0.0769	pCi/g						
Silver-108m	U	0.00983	+/-0.0197	0.0165	+/-0.0197	0.0345	pCi/g						
Thallium-208		0.319	+/-0.0496	0.018	+/-0.0496	0.0379	pCi/g						
Rad Liquid Scintillation Analysis													
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	14.0	+/-9.64	7.76	+/-9.66	15.9	pCi/g		SLN1	07/15/06	0128	547198	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	07/09/06	1716	546300

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3
2	DOE RESL Ni-1, Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: July 20, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-007FS
Sample ID: 166656003
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	Liquid Scint Ni63, Solid-ALL FS	71	(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

QC Summary

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

East Hampton, Connecticut
Contact: Mr. Jack McCarthy

Workorder: 166656

Report Date: July 20, 2006

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 546530										
QC1201131808 166655001 DUP										
Actinium-228		0.880		0.785	pCi/g	7		(0% - 100%)	MJH1	07/17/06 19:00
	Uncert:	+/-0.190		+/-0.261						
	TPU:	+/-0.190		+/-0.261						
Americium-241	U	0.0144	U	0.0531	pCi/g	44		(0% - 100%)		
	Uncert:	+/-0.0976		+/-0.0519						
	TPU:	+/-0.0976		+/-0.0519						
Bismuth-212		0.586		1.42	pCi/g	67*		(0% - 100%)		
	Uncert:	+/-0.272		+/-0.597						
	TPU:	+/-0.272		+/-0.597						
Bismuth-214		0.599		0.695	pCi/g	32		(0% - 100%)		
	Uncert:	+/-0.0901		+/-0.165						
	TPU:	+/-0.0901		+/-0.165						
Cesium-134	U	0.0267	U	0.035	pCi/g	24		(0% - 100%)		
	Uncert:	+/-0.0293		+/-0.0628						
	TPU:	+/-0.0293		+/-0.0628						
Cesium-137		0.365		0.359	pCi/g	1		(0% - 100%)		
	Uncert:	+/-0.050		+/-0.0764						
	TPU:	+/-0.050		+/-0.0764						
Cobalt-60		1.02		0.828	pCi/g	20		(0% - 20%)		
	Uncert:	+/-0.0748		+/-0.132						
	TPU:	+/-0.0748		+/-0.132						
Europium-152	U	0.0287	U	0.0537	pCi/g	56		(0% - 100%)		
	Uncert:	+/-0.0546		+/-0.0862						
	TPU:	+/-0.0546		+/-0.0862						
Europium-154	U	0.0179	U	0.127	pCi/g	361		(0% - 100%)		
	Uncert:	+/-0.0614		+/-0.129						
	TPU:	+/-0.0614		+/-0.129						
Europium-155	U	0.0449	U	0.055	pCi/g	24		(0% - 100%)		
	Uncert:	+/-0.0829		+/-0.109						
	TPU:	+/-0.0829		+/-0.109						
Lead-212		0.818		0.756	pCi/g	6		(0% - 20%)		
	Uncert:	+/-0.0599		+/-0.0927						
	TPU:	+/-0.0599		+/-0.0927						
Lead-214		0.731		0.694	pCi/g	4		(0% - 20%)		
	Uncert:	+/-0.087		+/-0.121						
	TPU:	+/-0.087		+/-0.121						
Manganese-54	U	0.0186	U	0.0308	pCi/g	49		(0% - 100%)		
	Uncert:	+/-0.0224		+/-0.0506						
	TPU:	+/-0.0224		+/-0.0506						
Niobium-94	U	0.0138	U	0.00511	pCi/g	15		(0% - 100%)		
	Uncert:	+/-0.0188		+/-0.0378						
	TPU:	+/-0.0188		+/-0.0378						

QC Summary

Workorder: 166656

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 546530										
Potassium-40		13.7		12.6	pCi/g	5		(0% - 20%)		
	Uncert:	+/-0.845		+/-1.23						
	TPU:	+/-0.845		+/-1.23						
Radium-226		0.599		0.695	pCi/g	32		(0% - 100%)		
	Uncert:	+/-0.0901		+/-0.165						
	TPU:	+/-0.0901		+/-0.165						
Silver-108m	U	0.00949	U	0.00566	pCi/g	71		(0% - 100%)		
	Uncert:	+/-0.0173		+/-0.0494						
	TPU:	+/-0.0173		+/-0.0494						
Thallium-208		0.265		0.271	pCi/g	6		(0% - 100%)		
	Uncert:	+/-0.0477		+/-0.0726						
	TPU:	+/-0.0477		+/-0.0726						
QC1201131809 LCS										
Actinium-228			U	0.160	pCi/g					07/17/06 19:01
	Uncert:			+/-0.545						
	TPU:			+/-0.545						
Americium-241	23.4			24.4	pCi/g		104	(75%-125%)		
	Uncert:			+/-0.599						
	TPU:			+/-0.599						
Bismuth-212			U	-0.135	pCi/g					
	Uncert:			+/-1.00						
	TPU:			+/-1.00						
Bismuth-214			U	-0.106	pCi/g					
	Uncert:			+/-0.219						
	TPU:			+/-0.219						
Cesium-134			U	-0.0105	pCi/g					
	Uncert:			+/-0.149						
	TPU:			+/-0.149						
Cesium-137	9.61			10.8	pCi/g		112	(75%-125%)		
	Uncert:			+/-0.468						
	TPU:			+/-0.468						
Cobalt-60	14.8			15.5	pCi/g		105	(75%-125%)		
	Uncert:			+/-0.660						
	TPU:			+/-0.660						
Europium-152			U	0.0894	pCi/g					
	Uncert:			+/-0.281						
	TPU:			+/-0.281						
Europium-154			U	0.0901	pCi/g					
	Uncert:			+/-0.291						
	TPU:			+/-0.291						
Europium-155			U	0.0661	pCi/g					
	Uncert:			+/-0.236						
	TPU:			+/-0.236						
Lead-212			U	0.00863	pCi/g					
	Uncert:			+/-0.144						
	TPU:			+/-0.144						
Lead-214			U	-0.0928	pCi/g					
	Uncert:			+/-0.197						

QC Summary

Workorder: 166656

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 546530											
	TPU:			+/-0.197							
Manganese-54			U	-0.0301	pCi/g						
	Uncert:			+/-0.142							
	TPU:			+/-0.142							
Niobium-94			U	-0.105	pCi/g						
	Uncert:			+/-0.119							
	TPU:			+/-0.119							
Potassium-40			U	0.577	pCi/g						
	Uncert:			+/-1.17							
	TPU:			+/-1.17							
Radium-226			U	-0.106	pCi/g			(75%-125%)			
	Uncert:			+/-0.219							
	TPU:			+/-0.219							
Silver-108m			U	-0.0449	pCi/g						
	Uncert:			+/-0.101							
	TPU:			+/-0.101							
Thallium-208			U	-0.0572	pCi/g						
	Uncert:			+/-0.118							
	TPU:			+/-0.118							
QC1201131807 MB											
Actinium-228			U	0.0538	pCi/g					07/17/06	18:57
	Uncert:			+/-0.0733							
	TPU:			+/-0.0733							
Americium-241			U	0.0126	pCi/g						
	Uncert:			+/-0.0946							
	TPU:			+/-0.0946							
Bismuth-212			U	-0.0364	pCi/g						
	Uncert:			+/-0.125							
	TPU:			+/-0.125							
Bismuth-214			U	0.00552	pCi/g						
	Uncert:			+/-0.0416							
	TPU:			+/-0.0416							
Cesium-134			U	0.00875	pCi/g						
	Uncert:			+/-0.0182							
	TPU:			+/-0.0182							
Cesium-137			U	-0.000566	pCi/g						
	Uncert:			+/-0.0173							
	TPU:			+/-0.0173							
Cobalt-60			U	-0.015	pCi/g						
	Uncert:			+/-0.0194							
	TPU:			+/-0.0194							
Europium-152			U	0.0584	pCi/g						
	Uncert:			+/-0.053							
	TPU:			+/-0.053							
Europium-154			U	0.0222	pCi/g						
	Uncert:			+/-0.0583							
	TPU:			+/-0.0583							
Europium-155			U	-0.0079	pCi/g						

QC Summary

Workorder: 166656

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 546530										
	Uncert:			+/-0.0403						
	TPU:			+/-0.0403						
Lead-212			U	0.0336	pCi/g					
	Uncert:			+/-0.0283						
	TPU:			+/-0.0283						
Lead-214			U	0.0301	pCi/g					
	Uncert:			+/-0.0341						
	TPU:			+/-0.0341						
Manganese-54			U	0.0139	pCi/g					
	Uncert:			+/-0.0175						
	TPU:			+/-0.0175						
Niobium-94			U	-0.0065	pCi/g					
	Uncert:			+/-0.0171						
	TPU:			+/-0.0171						
Potassium-40			U	0.122	pCi/g					
	Uncert:			+/-0.188						
	TPU:			+/-0.188						
Radium-226			U	0.00552	pCi/g					
	Uncert:			+/-0.0416						
	TPU:			+/-0.0416						
Silver-108m			U	-0.00533	pCi/g					
	Uncert:			+/-0.0176						
	TPU:			+/-0.0176						
Thallium-208			U	0.000666	pCi/g					
	Uncert:			+/-0.0172						
	TPU:			+/-0.0172						
Rad Liquid Scintillation										
Batch 547198										
QC1201133196 166656001 DUP										
Nickel-63	U	11.8	U	12.1	pCi/g	0		(0% - 100%)	SLN1	07/15/06 02:31
	Uncert:	+/-7.46		+/-8.89						
	TPU:	+/-7.47		+/-8.90						
QC1201133198 LCS										
Nickel-63	574			517	pCi/g		90	(75%-125%)		07/15/06 03:35
	Uncert:			+/-17.8						
	TPU:			+/-24.7						
QC1201133195 MB										
Nickel-63			U	13.1	pCi/g					07/15/06 02:00
	Uncert:			+/-8.80						
	TPU:			+/-8.81						
QC1201133197 166656001 MS										
Nickel-63	587 U	11.8		529	pCi/g		90	(75%-125%)		07/15/06 03:03
	Uncert:	+/-7.46		+/-18.9						
	TPU:	+/-7.47		+/-26.0						

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

QC Summary

Workorder: 166656

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

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

General Narrative

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Soil
PO# 002332
Work Order: 170683
SDG: 170683

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 17, 2006, July 07, 2006, July 13, 2006, July 21, 2006 and June 21, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures.

The laboratory received the following sample(s):

Sample ID	Client Sample ID
170683001	9106-0011-018F
170683002	9106-0012-005F
170683003	9106-0012-014F
170683004	9106-0013-006F
170683005	9106-0013-005F
170683006	9106-0014-012F
170683007	9106-0014-033F
170683008	9106-0015-018F

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

170683009	9106-0015-002F
170683010	9106-0001-132F

Items of Note:

At the request of Dale Randall on August 31, 2006, the samples listed above were relogged for various analyses. A list of Sample ID's and requested tests follows.

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:

Ten soil samples were analyzed for various analyses included in the FSSALL suite.

Internal Chain of Custody:

Custody was maintained for the sample(s).

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

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

Cheryl Jones
Project Manager

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

Analysis request - 8/31/06 | 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
165614006	9106-0011-018F	x		x	X	X	X	X	X		X	X	X
166653003	9106-0012-005F	x			X	X	X	X	X	X	X	X	X
166653010	9106-0012-014F	x			X	X	X	X	X	X	X	X	X
167555007	9106-0013-005F	x			X	X	X	X	X	X	X	X	X
167555001	9106-0013-006F	x			X	X	X	X	X	X	X	X	X
167014026	9106-0014-012F	x			X	X	X	X	X	X	X	X	X
167014042	9106-0014-033F	x			X	X	X	X	X	X	X	X	X
167556010	9106-0015-002F	x	x		X	X		X	X	X	X	X	X
167556007	9106-0015-018F	x	x		X	X		X	X	X	X	X	X
169489001	9106-0001-132F	x			X	X	X	X	X	X	X	X	X

RELOGGED AS 170683

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

170683

Chain of Custody Form

No. 2006-00413

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

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Ni-63				Comment, Preservation	Lab Sample ID
9106-0011-011F	5/17/06	08:15	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-012F	5/17/06	08:41	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-012FS	5/17/06	08:41	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-014F	5/17/06	09:34	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-015F	5/17/06	09:12	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-018F	5/17/06	10:01	SE	C	BP	X		X				Transferred from COC 2006-00356	
9106-0011-002F	5/15/06	14:33	SE	C	BP	X		X				Transferred from COC 2006-00352	
9106-0011-003F	5/15/06	14:58	SE	C	BP		X					Transferred from COC 2006-00352	

Lab Use Only
Comments: 165614.1

NOTES: PO #: 002332 MSR #: 06-0877 per accompanying paperwork. CAfom 4/21/06 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	6-20-06/1100	AM	6/21/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

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

Bill of Lading #
7910 2328 7540

Internal Container Temp: 24° Deg. C
Custody Sealed? Y ☒ N ☐
Custody Seal Intact? Y ☒ N ☐

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: CONN ATOMIC YANKEE	SDG/ARCOC/Work Order: 165614
Date Received: 6-21-06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: ACM	

	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) 24°C
3	Chain of custody documents included with shipment?	/			
4	Sample containers intact and sealed?	/			Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?		/		Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?		/		Sample ID's and containers affected:
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)			/	
8	Samples received within holding time?	/			Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?	/			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?			/	Sample ID's affected: TIMES & DATES WERE WIPED OFF
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	7910 2328 7542			

	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*: CAM 60
B	PCB Regulated?	X			Comments:
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	X			Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: Initials _____ Date: 6/21/06

Figure 1. Sample Check-in List

Date/Time Received: 6-21-06 0930

SDG#: MSR# 06-0877

Work Order Number: 165614

Shipping Container ID: 7910 2328 2540 Chain of Custody # 2006-00413

1. Custody Seals on shipping container intact? Yes [X] No [ ]
2. Custody Seals dated and signed? Yes [ ] No [X]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 24°C
5. Vermiculite/packing materials is: Wet [X] Dry [ ]
6. Number of samples in shipping container: 8
7. Sample holding times exceeded? Yes [ ] No [X]

8. Samples have:

7 tape	7 hazard labels
7 custody seals	X appropriate sample labels

9. Samples are:

7 in good condition	____ leaking
____ broken	____ have air bubbles

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

Sample Custodian/Laboratory: A Mulry Date: 6/21/06 0930

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. 2006-00451

1616653-1.

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
9106-0012-002F	6/23/06	08:56	SE	C	BP	X						Transferred from COC 2006-00436	001
9106-0012-003F	6/23/06	08:39	SE	C	BP	X						Transferred from COC 2006-00436	002
9106-0012-004F	6/23/06	09:32	SE	C	BP		X					Transferred from COC 2006-00436	016
9106-0012-005F	6/23/06	09:56	SE	C	BP	X						Transferred from COC 2006-00436	003
9106-0012-006F	6/23/06	13:07	SE	C	BP	X						Transferred from COC 2006-00436	004
9106-0012-010F	6/23/06	11:08	SE	C	BP		X					Transferred from COC 2006-00436	017
9106-0012-013F	6/23/06	10:56	SE	C	BP	X						Transferred from COC 2006-00436	005
9106-0012-013FS	6/23/06	10:56	SE	C	BP	X						Transferred from COC 2006-00436	006

NOTES: PO#: 002332 MSR #: 06-0960 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7919 8876 4783

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

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	7-6-06 / 1400	[signature]	7/7/06 900
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. 2006-00452

1666653.

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
9106-0012-007F	6/21/06	09:32	SE	C	BP	X						Transferred from COC # 2006-00433	007
9106-0012-008F	6/21/06	09:00	SE	C	BP	X						Transferred from COC # 2006-00433	008
9106-0012-012F	6/21/06	09:19	SE	C	BP	X						Transferred from COC # 2006-00433	009
9106-0012-014F	6/21/06	10:05	SE	C	BP	X						Transferred from COC # 2006-00433	010
9106-0012-011F	6/21/06	09:51	SE	C	BP	X						Transferred from COC # 2006-00433	011
9106-0012-015F	6/21/06	14:24	SE	C	BP	X						Transferred from COC # 2006-00433	012
9106-0012-009F	6/23/06	10:33	SE	C	BP	X						Transferred from COC # 2006-00436	013
9106-0012-009FS	6/23/06	10:33	SE	C	BP	X						Transferred from COC # 2006-00436	014
9106-0012-001F	6/23/06	09:18	SE	C	BP	X						Transferred from COC # 2006-00436	015

Lab Use Only
Comments:

NOTES: PO #: 002332 MSR #: 06-0967 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	7-6-06/1400	[signature]	7/7/06 900
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

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

Bill of Lading #
7927 8782 3129

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

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Connecticut Yankee	SDG/ARCOC/Work Order: 166653, 166655, 166656
Date Received: 7/7/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By:	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Coolant # ice bags blue ice dry ice none other describe)
3	Chain of custody documents included with shipment?				
4	Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				
8	Samples received within holding time?				Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?				Sample ID's affected:
11	Number of containers received match number indicated on COC?				Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?				
14	Air Bill ,Tracking #'s, & Additional Comments				

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

PM (or PMA) review of Hazard classification: _____ Initials CAJ Date: 7/7/06

Figure 1. Sample Check-in List

Date/Time Received: 7/7/06

SDG#:

Work Order Number: 166653 / 166655 / 166656

Shipping Container ID: 7919 8876 4783 - 23°C
7910 4024 2957 - 22°C
7927 8782 3129 - 23°C

Chain of Custody # 2006-00449
2006-00448
2006-00451
2006-00452

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°C - 22°C - 23°C
5. Vermiculite/packing materials is: Wet [✓] Dry [ ]
6. Number of samples in shipping container: (1) 3 ; (2) 12 (3) 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: [signature] Date: 7/7/06 0900

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. 2006-00434

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
501	9106-0013-006F	6/21/06	10:33	SE	C	BP	X							
502	9106-0013-003F	6/21/06	10:51	SE	C	BP	X							
503	9106-0013-002F	6/21/06	10:19	SE	C	BP	X							
504	9106-0013-002FS	6/21/06	10:19	SE	C	BP	X							
505	9106-0013-010F	6/21/06	13:56	SE	C	BP	X							
506	9106-0013-010FS	6/21/06	13:56	SE	C	BP	X							
507	9106-0013-005F	6/21/06	14:40	SE	C	BP	X							
508	9106-0013-011F	6/21/06	13:35	SE	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1036 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading # 7910-5711-1264

Internal Container Temp.: 21 Deg. C

Custody Sealed? Y ☐ N ☒

Custody Seal Intact? Y ☐ N ☐

Relinquished By	Date/Time	Received By	Date/Time
1) Jaime Ricarte	7-20-06 / 1445	2) K. [signature]	7/21/06 0930
3)		4)	
5)		6)	

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00444

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only

Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
9	9106-0013-007F	6-27-06	10:58	SE	C	BP	X							
10	9106-0013-014F	6-27-06	09:22	SE	C	BP	X							
11	9106-0013-015F	6-26-06	15:06	SE	C	BP	X						Transferred from COC 2006-00438	
12	9106-0013-001F	6-23-06	13:32	SE	C	BP	X						Transferred from COC 2006-00437	
16	9106-0013-004F	6-23-06	13:51	SE	C	BP		X					Transferred from COC 2006-00437	
17	9106-0013-009F	6-23-06	14:08	SE	C	BP		X					Transferred from COC 2006-00437	
13	9106-0013-013F	6-23-06	14:38	SE	C	BP	X						Transferred from COC 2006-00437	
14	9106-0013-008F	6-26-06	11:11	SE	C	BP	X						Transferred from COC 2006-00438	
15	9106-0013-012F	6-26-06	12:35	SE	C	BP	X						Transferred from COC 2006-00438	

NOTES: PO #: 002332 MSR #: 06-5036 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7910 5711 1209

Internal Container Temp.: 21 Deg. C

Custody Sealed?
Y ☐ N ☒

Custody Seal Intact?
Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
Jaime Ricart	7-20-06 / 1945	K. Wright	7/21/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Conn. Yank.	SDG/ARCOC/Work Order: 167554, 167555, 167556
Date Received: 7/21/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By:	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	/			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.	/			Circle Coolant # ice bags blue ice dry ice (none) other describe) See Cont. Sheet.
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: See Cont. Sheet
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	See Sheet			

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

PM (or PMA) review of Hazard classification: _____ Initials _____ Date: 7/21/06

SAMPLE RECEIPT & REVIEW FORM
CONTINUATION FORM

Fed ex #'s	# of Containers	COC #
7910 5711 1209 - 21°C	9	2006-00
1301 - 22°C	8	2006-0044
1194 - 21°C	10	2006-0044
1286 - 21°C	8	2006-00431
1220 - 23°C	9	2006-0044
(1264) 1 Cooler w/out Fedex # - 21°C	8	2006-00448/00

Chain # 2006-00444:

Sample # 9106-0013-004F Actually reads 9106-0013-004FS

Figure 1. Sample Check-in List

Date/Time Received: 7/21/06 0930

SDG#: MSR#06-1035, MSR#06-1036, MSR#06-1037

Work Order Number: 167555

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 [ ] N/A
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature See Cont Sheet
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] N/A
6. Number of samples in shipping container: 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):

Sample Custodian/Laboratory: K. Lafleur Date: 7/21/06

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. 2006-00456

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
001	9106-0014-021F	6/15/06	10:50	SE	C	BP	X						Transferred from COC 2006-00407	
002	9106-0014-030F	6/15/06	11:20	SE	C	BP	X						Transferred from COC 2006-00407	
003	9106-0014-032F	6/15/06	09:31	SE	C	BP	X						Transferred from COC 2006-00407	
004	9106-0014-043F	6/16/06	08:45	SE	C	BP	X						Transferred from COC 2006-00409	
005	9106-0014-010F	6/12/06	14:23	SE	C	BP	X						Transferred from COC 2006-00391	
006	9106-0014-016F	6/12/06	14:51	SE	C	BP	X						Transferred from COC 2006-00391	
007	9106-0014-022F	6/12/06	15:12	SE	C	BP	X						Transferred from COC 2006-00391	
008	9106-0014-013F	6/13/06	15:06	SE	C	BP	X						Transferred from COC 2006-00394	
009	9106-0014-024F	6/07/06	09:58	SE	C	BP	X						Transferred from COC 2006-00385	

NOTES: PO #: 002332 MSR #: 06-0988 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7921 4950 3967

Internal Container Temp.: ___ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	7-12-06 / 1200	[signature]	7/13/06 945
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. 2006-00457

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
010	9106-0014-025F	6/7/06	10:18	SE	C	BP	X						Transferred from COC 2006-00387	
011	9106-0014-031F	6/7/06	10:44	SE	C	BP	X						Transferred from COC 2006-00387	
012	9106-0014-017F	6/9/06	07:39	SE	C	BP	X						Transferred from COC 2006-00387	
013	9106-0014-023F	6/9/06	08:23	SE	C	BP	X						Transferred from COC 2006-00387	
014	9106-0014-035F	6/9/06	09:03	SE	C	BP	X						Transferred from COC 2006-00387	
043	9106-0014-038F	6/9/06	10:59	SE	C	BP		X					Transferred from COC 2006-00387	
015	9106-0014-039F	6/9/06	09:28	SE	C	BP	X						Transferred from COC 2006-00387	
016	9106-0014-042F	6/9/06	09:53	SE	C	BP	X						Transferred from COC 2006-00387	
017	9106-0014-034F	6/9/06	10:11	SE	C	BP	X						Transferred from COC 2006-00387	

NOTES: PO #: 002332 MSR #: 06-0098 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7921 4950 3984

Internal Container Temp.: ____ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	7-12-06/1200	Marian Gatheus	7/13/06 945
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. 2006-00458

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
118	9106-0014-029F	6/09/06	08:42	SE	C	BP	X						Transferred from COC 2006-00387	
119	9106-0014-009F	6/13/06	08:44	SE	C	BP	X						Transferred from COC 2006-00392	
120	9106-0014-028F	6/13/06	08:08	SE	C	BP	X						Transferred from COC 2006-00392	
121	9106-0014-028FS	6/13/06	08:08	SE	C	BP	X						Transferred from COC 2006-00392	
122	9106-0014-036F	6/13/06	09:38	SE	C	BP	X						Transferred from COC 2006-00392	
044	9106-0014-037F	6/13/06	09:12	SE	C	BP		X					Transferred from COC 2006-00392	
123	9106-0014-040F	6/13/06	10:42	SE	C	BP	X						Transferred from COC 2006-00392	
124	9106-0014-041F	6/13/06	10:13	SE	C	BP	X						Transferred from COC 2006-00392	
125	9106-0014-041FS	6/13/06	10:13	SE	C	BP	X						Transferred from COC 2006-00392	

NOTES: PO #: 002332 MSR #: 06-0985 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7921 4950 4014

Internal Container Temp.: ____ Deg. C

Custody Sealed?
Y ☐ N ☐

Custody Seal Intact?
Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	7-12-06/1200	[signature]	7/13/06 945
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. 2006-00459

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Analyses Requested

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
026	9106-0014-012F	6/06/06	12:47	SE	C	BP	X						Transferred from COC 2006-00384	
345	9106-0014-018F	6/06/06	14:45	SE	C	BP		X					Transferred from COC 2006-00384	
027	9106-0014-019F	6/06/06	14:25	SE	C	BP	X						Transferred from COC 2006-00384	
028	9106-0014-001F	6/09/06	13:37	SE	C	BP	X						Transferred from COC 2006-00392	
029	9106-0014-002F	6/09/06	14:40	SE	C	BP	X						Transferred from COC 2006-00392	
030	9106-0014-002FS	6/09/06	14:40	SE	C	BP	X						Transferred from COC 2006-00392	
031	9106-0014-005F	6/09/06	14:12	SE	C	BP	X						Transferred from COC 2006-00392	
032	9106-0014-006F	6/09/06	13:07	SE	C	BP	X						Transferred from COC 2006-00392	
346	9106-0014-011F	6/09/06	12:44	SE	C	BP		X					Transferred from COC 2006-00392	

NOTES: PO #: 002332 MSR #: 06-0988 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading # 7921 4950 3990

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

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	7-12-06 / 1200	[signature]	7/13/06 0845
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. 2006-00460

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
047	9106-0014-003F	6/14/06	08:46	SE	C	BP		X					Transferred from COC 2006-00396	
033	9106-0014-007F	6/14/06	09:13	SE	C	BP	X						Transferred from COC 2006-00396	
034	9106-0014-008F	6/14/06	07:34	SE	C	BP	X						Transferred from COC 2006-00396	
035	9106-0014-008FS	6/14/06	07:34	SE	C	BP	X						Transferred from COC 2006-00396	
036	9106-0014-014F	6/14/06	10:23	SE	C	BP	X						Transferred from COC 2006-00396	

NOTES: PO #: 002332 MSR #: 06-0088 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7921 4950 3978

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

1) Relinquished By	Date/Time	2) Received By	Date/Time
Jaime Ricarte	7-12-06/1200	Marian Gattens	7/13/06 0845
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Chain of Custody Form

No. 2006-00461

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. 3924

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
037	9106-0014-015F	6/14/06	11:39	SE	C	BP	X						Transferred from COC 2006-00396	
038	9106-0014-020F	6/14/06	13:10	SE	C	BP	X						Transferred from COC 2006-00396	
039	9106-0014-026F	6/14/06	13:53	SE	C	BP	X						Transferred from COC 2006-00396	
040	9106-0014-027F	6/14/06	14:26	SE	C	BP	X						Transferred from COC 2006-00396	
041	9106-0014-027FS	6/14/06	14:26	SE	C	BP	X						Transferred from COC 2006-00396	
042	9106-0014-033F	6/14/06	15:04	SE	C	BP	X							

Lab Use Only
Comments:

NOTES: PO #: 002332 MSR #: 06-0988 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7921 4950 3978

Internal Container Temp. ____ Deg. C

Custody Sealed? Y☐ N☐

Custody Seal Intact? Y☐ N☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
Jaime Ricarte	7-12-06/1200	[signature]	7/13/06 0945
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: YANK	SDG/ARCOC/Work Order: 167614
Date Received: 7/13/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By:	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Coolant # ice bags blue ice dry ice none other describe)
3	Chain of custody documents included with shipment?				
4	Sample containers intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
5	Samples requiring chemical preservation at proper pH?				Sample ID's, containers affected and observed pH:
6	VOA vials free of headspace (defined as < 6mm bubble)?				Sample ID's and containers affected:
7	Are Encore containers present? (If yes, immediately deliver to VOA laboratory)				
8	Samples received within holding time?				Id's and tests affected:
9	Sample ID's on COC match ID's on bottles?				Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?				Sample ID's affected:
11	Number of containers received match number indicated on COC?				Sample ID's affected:
12	COC form is properly signed in relinquished/received sections?				
14	Air Bill, Tracking #'s, & Additional Comments				

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A	Radiological Classification?		✓		Maximum Counts Observed*: CPM 40
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 [signature] Date: 7/13/06

Figure 1. Sample Check-in List

Date/Time Received: 7/13/06 0945.

SDG#: MSR# 06-0988

Work Order Number: 167014

Shipping Container ID: 7921 4950 3589 Chain of Custody # 2006-00456

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 24°C
5. Vermiculite/packing materials is: Wet [✓] Dry [ ]
6. Number of samples in shipping container: 4
7. Sample holding times exceeded? Yes [✓] No [ ]

8. Samples have:

✓ tape	____ hazard labels
✓ custody seals	____ appropriate sample labels

9. Samples are:

✓ in good condition	____ leaking
____ broken	____ have air bubbles

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

Sample Custodian/Laboratory: [signature] Date: 7/13/06 0945

Telephoned to: _____ On _____ By _____

Figure 1. Sample Check-in List

Date/Time Received: 7/13/06 0945

SDG#: MSL#06-0988

Work Order Number: 167014

Shipping Container ID: 7921 4950 3978 2006-0045 Chain of Custody # 2006-0045

1. Custody Seals on shipping container intact? Yes [X] No [ ]
2. Custody Seals dated and signed? Yes [X] No [ ]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature 24°C
5. Vermiculite/packing materials is: Wet [X] Dry [ ]
6. Number of samples in shipping container: 9
7. Sample holding times exceeded? Yes [X] No [ ]

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

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

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

Sample Custodian/Laboratory: Marian Bottes Date: 7/13/06 0945

Telephoned to: On By

Figure 1. Sample Check-in List

Date/Time Received: 7/13/06 0945

SDG#: MSR#06-0988

Work Order Number: 167014

Shipping Container ID: 792149503967 Chain of Custody # 2006-00458

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 24°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: Marian Gallucci Date: 7/13/06 0945

Telephoned to: On By

Figure 1. Sample Check-in List

Date/Time Received: 7/13/06 0945

SDG#: MSR#06-0988

Work Order Number: 167014

Shipping Container ID: 7921 4950 3990 Chain of Custody # 2006-00459

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 _____
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): _____

Sample Custodian/Laboratory: Marian Gatheres Date: 7/13/06 0945

Telephoned to: _____ On _____ By _____

Figure 1. Sample Check-in List

Date/Time Received: 7/13/06 0945

SDG#: MSR#06-0988

Work Order Number: 167014

Shipping Container ID: 7921 4950 3978 ~~3998~~ 3978 Chain of Custody # 2006-00460 -00461

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°C
5. Vermiculite/packing materials is: Wet [✓] Dry [ ]
6. Number of samples in shipping container: 11
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: Marian Gathers Date: 7/13/06 0945

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. 2006-00443

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Sr-90	Ni-63			Comment, Preservation	Lab Sample ID
1	9106-0015-022F	6-27-06	16:24	SE	C	BP	X		X					
2	9106-0015-023F	6-27-06	16:03	SE	C	BP	X		X					
3	9106-0015-024F	6-27-06	15:42	SE	C	BP	X		X					
4	9106-0015-026F	6-27-06	14:58	SE	C	BP	X		X					
5	9106-0015-027F	6-27-06	15:17	SE	C	BP	X		X					
6	9106-0015-028F	6-27-06	14:31	SE	C	BP	X		X					
7	9106-0015-018F	6-27-06	17:18	SE	C	BP	X		X					
8	9106-0015-025F	6-27-06	16:43	SE	C	BP	X		X					
9	9106-0015-021F	6-27-06	17:01	SE	C	BP		X						

Lab Use Only

Comments:

NOTES: PO #: 002332 MSR #: 06-1037 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7910 5711 1301

Internal Container Temp.: 22 Deg. C

Custody Sealed?
Y ☐ N ☒

Custody Seal Intact?
Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
Jaime Ricatti	7-20-06 / 1445	K. Lukright	7/21/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time

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

Chain of Custody Form

No. 2006-00448

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL	Sr-90				Comment, Preservation	Lab Sample ID
18	9106-0015-011F	6-28-06	14:39	SE	C	BP	X		X					
19	9106-0015-012F	6-28-06	10:58	SE	C	BP	X		X					
20	9106-0015-013F	6-28-06	10:04	SE	C	BP	X		X					
21	9106-0015-014F	6-28-06	09:05	SE	C	BP	X		X					
31	9106-0015-015F	6-28-06	08:25	SE	C	BP		X						
22	9106-0015-016F	6-28-06	08:46	SE	C	BP	X		X					
23	9106-0015-017F	6-28-06	09:47	SE	C	BP	X		X					
24	9106-0015-019F	6-28-06	09:25	SE	C	BP	X		X					
25	9106-0015-020F	6-28-06	07:59	SE	C	BP	X		X					

NOTES: PO #: 002332 MSR #: 06-1037 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7910 5711 1286

Internal Container Temp: 21 Deg. C
21

Custody Sealed?
Y ☐ N ☐

Custody Seal Intact?
Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
Jaime Richard	7-20-06/1445	K Leight	7/21/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00447

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 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
9	9106-0015-001F	6-28-06	13:36	SE	C	BP	X		X					
10	9106-0015-002F	6-28-06	14:15	SE	C	BP	X		X					
11	9106-0015-003F	6-28-06	13:15	SE	C	BP	X		X					
12	9106-0015-004F	6-28-06	12:54	SE	C	BP		X						
13	9106-0015-005F	6-28-06	15:47	SE	C	BP	X		X					
14	9106-0015-006F	6-28-06	16:10	SE	C	BP	X		X					
15	9106-0015-007F	6-28-06	11:33	SE	C	BP	X		X					
16	9106-0015-008F	6-28-06	11:10	SE	C	BP	X		X					
17	9106-0015-009F	6-28-06	10:25	SE	C	BP	X		X					
18	9106-0015-010F	6-28-06	15:17	SE	C	BP	X		X					

NOTES: PO #: 002332 MSR #: 06-1037 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7910 5711 1220

Internal Container Temp 23 Deg. C

Custody Sealed? Y☐ N☑

Custody Seal Intact? Y☐ N☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	7-20-06 / 1415	K. Lybright	7/21/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time

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

Chain of Custody Form

No. 2006-00468

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☒ 14 D. ☐ 7 D.

Lab Use Only
Comments:

	Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	FSSGAM	FSSALL	Sr-90				Comment, Preservation	Lab Sample ID
26	9106-0015-005FS	6-28-06	15:47	SE	C	BP	X		X					
27	9106-0015-012FS	6-28-06	10:58	SE	C	BP	X		X					
28	9106-0015-018FS	6-27-06	17:18	SE	C	BP	X		X					

NOTES: PO #: 002332 MSR #: 06-1037 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7910 5711 1286

Internal Container Temp: 21 Deg. C
21
Custody Sealed? Y☐ N☐
Custody Seal Intact? Y☐ N☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	7-20-06 / 1445	K Wright	7/21/06 0930
3) Relinquished By	Date/Time	4) Received By	Date/Time

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Conn. Yank.	SDG/ARCOC/Work Order: 167554, 167555, 167556
Date Received: 7/21/06	PM(A) Review (ensure non-conforming items are resolved prior to signing):
Received By: (CW)	

	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) See Cont. Sheet.
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: See Cont. Sheet.
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	See Sheet			

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

PM (or PMA) review of Hazard classification: Initials _____ Date: 7/21/06

Figure 1. Sample Check-in List

Date/Time Received: 7/21/06 0930

SDG#: MSR#06-1035, MSR#06-1036, MSR#06-1037

Work Order Number: 167556

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 [ ] N/A
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature See Cont. Sheet
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] N/A
6. Number of samples in shipping container: 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):

Sample Custodian/Laboratory: K. Lufright Date: 7/21/06

Telephoned to: On By

SAMPLE RECEIPT & REVIEW FORM
CONTINUATION FORM

Fed ex #'s	# of containers	COC #
7910 5711 1209 - 21°C	9	2006-00444
1301 - 22°C	8	2006-00448
1194 - 21°C	10	2006-00447
1286 - 21°C	8	2006-00434
1220 - 23°C	9	2006-00443
(1264) 1 Cooler w/out Fedex # - 21°C	8	2006-00448/00441

Chain # 2006-00444:

Sample # 9106-0013-004F Actually reads 9106-0013-004FS

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

Chain of Custody Form

No. 2006-00496

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3924

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. ☒ 3 D.

Lab Use Only
Comments:
169489.1

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
9106-0001-132F			SE	C	BP	X							
9106-0001-112F			SE	C	BP	X							
9106-0001-132A			SE	C	BP	X							
9106-0001-132B			SE	C	BP	X							
9106-0001-132C			SE	C	BP	X							
9106-0001-132D			SE	C	BP	X							
9106-0001-112A			SE	C	BP	X							
9106-0001-112B			SE	C	BP	X							
9106-0001-112C			SE	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1130 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7921 8130 3482

Internal Container Temp.: ___ Deg. C

Custody Sealed? Y ☐ N ☐

Custody Seal Intact? Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	8-16-06 / 1155	C. Duncan	8/17/06 / 915A
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. 2006-00497

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Jack McCarthy 860-267-2556 Ext. 3924

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. ☒ 3 D.

Lab Use Only
Comments:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size-&Type Code	Analyses Requested: FSSGAM	FSSALL					Comment, Preservation	Lab Sample ID
9106-0001-112D			SE	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1130 SSWP# NA ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #
7921 8130 3482

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

1) Relinquished By	Date/Time	2) Received By	Date/Time
JAIME RICARTE	8-16-06 / 1155	C. Demicott	8/17/06 @ 915a
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 8/17/06 @ 915A.

SDG#: MSR#06-1130

Work Order Number: 169489 1.

Shipping Container ID: 7921 8130 3482 Chain of Custody # 2006-00496

1. Custody Seals on shipping container intact? Yes [ ] No [✓]
2. Custody Seals dated and signed? Yes [ ] No [✓]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 2.6°C
5. Vermiculite/packing materials is: Wet [✓] Dry [ ]
6. Number of samples in shipping container: 10 - samples
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): none

Sample Custodian/Laboratory: C. Smith Date: 8/17/06

Telephoned to: ____ On ____ By ____

SAMPLE RECEIPT & REVIEW FORM
CONTINUATION FORM

- Connecticut Yankee Atomic Power Company -

	[Date]	&	[Time]
9106--132F	8-7-06	&	14:09
9106--132C	8-11-06	&	12:58
9106--132B	8-11-06	&	10:56
9106--132A	8-11-06	&	10:05
9106--132D	8-11-06	&	1340
9106--112F	8-2-06	&	13:54
9106--112C	8-15-06	&	07:43
9106--112B	8-14-06	&	14:55
9106--112A	8-14-06	&	14:23
9106--112D	8-15-06	&	08:47
*COC# 2006-00498 *			
9106--001SUR	8-10-06	&	10:14
9106--002SUR	8-10-06	&	09:35
9106--003SUR	8-10-06	&	10:53
9106--004SUR	8-10-06	&	12:53
9106--005SUR	8-10-06	&	14:09
9106--006SUR	8-10-06	&	14:35

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 170683

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:	565213
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	Client ID
170683004	9106-0013-006F
170683005	9106-0013-005F
170683008	9106-0015-018F
170683009	9106-0015-002F
170683010	9106-0001-132F
1201175602	Method Blank (MB)
1201175603	170683004(9106-0013-006F) Sample Duplicate (DUP)
1201175604	170683004(9106-0013-006F) Matrix Spike (MS)
1201175605	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: 170683004 (9106-0013-006F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Additional Comments
The sample and the duplicate, 1201175603 (9106-0013-006F) and 170683004 (9106-0013-006F), did not meet the relative percent difference requirement, however they do meet the relative error ratio requirement with value of 2.11.

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:	567705
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	Client ID
170683001	9106-0011-018F
170683002	9106-0012-005F
170683003	9106-0012-014F
170683006	9106-0014-012F
170683007	9106-0014-033F
1201181287	Method Blank (MB)
1201181288	170683003(9106-0012-014F) Sample Duplicate (DUP)
1201181289	170683003(9106-0012-014F) Matrix Spike (MS)
1201181290	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: 170683003 (9106-0012-014F).

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

Technical Information:

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

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

Sample Re-prep/Re-analysis
Batch reprepped due to Thorium interference.

Miscellaneous Information:

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

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

Additional Comments
The sample and the duplicate,1201181288 (9106-0012-014F) and 170683003 (9106-0012-014F), did not meet the Am-241 relative percent difference requirement, however they do meet the relative error ratio requirement with a value of 0.512.

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:	565210
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	Client ID
170683001	9106-0011-018F
170683002	9106-0012-005F
170683003	9106-0012-014F
170683006	9106-0014-012F
170683007	9106-0014-033F
1201175591	Method Blank (MB)
1201175592	170683001(9106-0011-018F) Sample Duplicate (DUP)
1201175593	170683001(9106-0011-018F) Matrix Spike (MS)
1201175594	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: 170683001 (9106-0011-018F).

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.

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:	565214
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	Client ID
170683004	9106-0013-006F
170683005	9106-0013-005F
170683008	9106-0015-018F
170683009	9106-0015-002F
170683010	9106-0001-132F
1201175606	Method Blank (MB)
1201175607	170683004(9106-0013-006F) Sample Duplicate (DUP)
1201175608	170683004(9106-0013-006F) Matrix Spike (MS)
1201175609	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: 170683004 (9106-0013-006F).

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.

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:	565216
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	Client ID
170683004	9106-0013-006F
170683005	9106-0013-005F
170683008	9106-0015-018F
170683009	9106-0015-002F
170683010	9106-0001-132F
1201175614	Method Blank (MB)
1201175615	170683004(9106-0013-006F) Sample Duplicate (DUP)

1201175616 170683004(9106-0013-006F) Matrix Spike (MS)
1201175617 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: 170683004 (9106-0013-006F).

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 1201175614 (MB), 1201175615 (9106-0013-006F), 170683004 (9106-0013-006F), 170683005 (9106-0013-005F), 170683008 (9106-0015-018F), 170683009 (9106-0015-002F) and 170683010 (9106-0001-132F) 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.

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

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:	567883
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	Client ID
170683001	9106-0011-018F
170683002	9106-0012-005F
170683003	9106-0012-014F
170683006	9106-0014-012F
170683007	9106-0014-033F
1201181751	Method Blank (MB)
1201181752	170683001(9106-0011-018F) Sample Duplicate (DUP)
1201181753	170683001(9106-0011-018F) Matrix Spike (MS)
1201181754	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: 170683001 (9106-0011-018F).

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 batch was reprepped 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.

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

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:	565250
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	**Client ID**
170683001	9106-0011-018F
170683002	9106-0012-005F
170683003	9106-0012-014F
170683006	9106-0014-012F
170683007	9106-0014-033F
1201175679	Method Blank (MB)
1201175680	170683002(9106-0012-005F) Sample Duplicate (DUP)
1201175681	170683002(9106-0012-005F) Matrix Spike (MS)
1201175682	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: 170683002 (9106-0012-005F).

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
Samples 170683001 (9106-0011-018F) and 170683006 (9106-0014-012F) were recounted due to high MDAs.

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

Miscellaneous Information:

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

Additional Comments
Samples were dried and reweighed due to low matrix spike recovery.

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:	565253
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	**Client ID**
170683004	9106-0013-006F
170683005	9106-0013-005F
170683010	9106-0001-132F

1201175686	Method Blank (MB)
1201175687	170683005(9106-0013-005F) Sample Duplicate (DUP)
1201175688	170683005(9106-0013-005F) Matrix Spike (MS)
1201175689	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: 170683005 (9106-0013-005F).

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.

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.

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: 564445

Sample ID	Client ID
170683004	9106-0013-006F
170683005	9106-0013-005F
170683008	9106-0015-018F
170683009	9106-0015-002F
1201173840	Method Blank (MB)
1201173841	170544018(9304-0002-005F) Sample Duplicate (DUP)
1201173842	170544018(9304-0002-005F) Matrix Spike (MS)
1201173843	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: 170544018 (9304-0002-005F).

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.

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:	564623

Sample ID	Client ID
170683001	9106-0011-018F
170683002	9106-0012-005F
170683003	9106-0012-014F
170683006	9106-0014-012F
170683007	9106-0014-033F
1201174253	Method Blank (MB)
1201174254	170683001(9106-0011-018F) Sample Duplicate (DUP)
1201174255	170683001(9106-0011-018F) Matrix Spike (MS)
1201174256	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: 170683001 (9106-0011-018F).

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 1201174254 (9106-0011-018F) 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.

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:	565648

Sample ID	Client ID
170683010	9106-0001-132F
1201176786	Method Blank (MB)
1201176787	170683010(9106-0001-132F) Sample Duplicate (DUP)
1201176788	170683010(9106-0001-132F) Matrix Spike (MS)
1201176789	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: 170683010 (9106-0001-132F).

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.

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:	565287
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	Client ID
170683001	9106-0011-018F
170683002	9106-0012-005F
170683003	9106-0012-014F
170683006	9106-0014-012F
170683007	9106-0014-033F
1201175808	Method Blank (MB)
1201175809	170683006(9106-0014-012F) Sample Duplicate (DUP)
1201175810	170683006(9106-0014-012F) Matrix Spike (MS)
1201175811	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: 170683006 (9106-0014-012F).

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 1201175810 (9106-0014-012F), 170683001 (9106-0011-018F), 170683002 (9106-0012-005F) and 170683006 (9106-0014-012F) were recounted due to the quench number being outside the calibration range.

Miscellaneous Information:

NCR Documentation
Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG:
NCR 356906 was generated due to Container scanning event for custody missed. 1. The analyst did not scan the sample 170683001 into the batch prior to analysis, however the samples did remain in their custody at all times. 1. The error has been corrected and the analyst has been instructed on the proper scanning procedures. Reporting results.

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:	565291
Prep Batch Number:	564526

Dry Soil Prep GL-RAD-A-021 Batch Number: 564525

Sample ID	Client ID
170683004	9106-0013-006F
170683005	9106-0013-005F
170683008	9106-0015-018F
170683009	9106-0015-002F
170683010	9106-0001-132F
1201175818	Method Blank (MB)
1201175819	170683004(9106-0013-006F) Sample Duplicate (DUP)
1201175820	170683004(9106-0013-006F) Matrix Spike (MS)
1201175821	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: 170683004 (9106-0013-006F).

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 170683004 (9106-0013-006F) and 170683009 (9106-0015-002F) were recounted due to the quench number being outside the calibration range.

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.

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:	565289
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	Client ID
170683002	9106-0012-005F
170683003	9106-0012-014F
170683006	9106-0014-012F
170683007	9106-0014-033F
1201175814	Method Blank (MB)
1201175815	170683006(9106-0014-012F) Sample Duplicate (DUP)
1201175816	170683006(9106-0014-012F) Matrix Spike (MS)
1201175817	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: 170683006 (9106-0014-012F).

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.

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:	565293
Prep Batch Number:	564526
Dry Soil Prep GL-RAD-A-021 Batch Number:	564525

Sample ID	Client ID
170683004	9106-0013-006F
170683005	9106-0013-005F
170683008	9106-0015-018F
170683009	9106-0015-002F
170683010	9106-0001-132F
1201175822	Method Blank (MB)
1201175823	170683004(9106-0013-006F) Sample Duplicate (DUP)
1201175824	170683004(9106-0013-006F) Matrix Spike (MS)
1201175825	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: 170683004 (9106-0013-006F).

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.

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: 564447

Sample ID	Client ID
170683004	9106-0013-006F
170683005	9106-0013-005F
170683008	9106-0015-018F
170683009	9106-0015-002F
1201173844	Method Blank (MB)
1201173845	170544018(9304-0002-005F) Sample Duplicate (DUP)
1201173846	170544018(9304-0002-005F) Matrix Spike (MS)
1201173847	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: 170544018 (9304-0002-005F).

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
Samples 1201173846 (9304-0002-005F) and 1201173847 (LCS) were recounted 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. The following NCR was generated for this SDG:
NCR 356177 was generated due to Container scanning event for custody missed. 1. Container scanning event for custody missed: The analyst did not scan the samples into the batch prior to analysis, however the samples did remain in their custody at all times. 1. The error has been corrected and the analyst has been instructed on proper scanning procedures. Reporting results

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: 564514

Sample ID	Client ID
170683001	9106-0011-018F
170683002	9106-0012-005F
170683003	9106-0012-014F
170683006	9106-0014-012F
170683007	9106-0014-033F
1201174038	Method Blank (MB)
1201174039	170683006(9106-0014-012F) Sample Duplicate (DUP)
1201174040	170683006(9106-0014-012F) Matrix Spike (MS)
1201174041	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: 170683006 (9106-0014-012F).

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.

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:	565650

Sample ID	Client ID
170683010	9106-0001-132F
1201176794	Method Blank (MB)
1201176795	170683010(9106-0001-132F) Sample Duplicate (DUP)
1201176796	170683010(9106-0001-132F) Matrix Spike (MS)
1201176797	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: 170683010 (9106-0001-132F).

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.

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:	564449

Sample ID	Client ID
170683004	9106-0013-006F
170683005	9106-0013-005F
170683008	9106-0015-018F
170683009	9106-0015-002F
1201173848	Method Blank (MB)
1201173849	170544019(9304-0002-008F) Sample Duplicate (DUP)
1201173850	170544019(9304-0002-008F) Matrix Spike (MS)
1201173851	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: 170544019 (9304-0002-008F).

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

Technical Information:

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

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

Sample Re-prep/Re-analysis
Sample 1201173849 (9304-0002-008F) was recounted due to a negative result greater than three times the error. Samples 170683008 (9106-0015-018F) and 170683009 (9106-0015-002F) were recounted to verify results. Second counts being reported.

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.

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:	564520

Sample ID	Client ID
170683001	9106-0011-018F
170683002	9106-0012-005F
170683003	9106-0012-014F
170683006	9106-0014-012F
170683007	9106-0014-033F
1201174056	Method Blank (MB)
1201174057	170683007(9106-0014-033F) Sample Duplicate (DUP)
1201174058	170683007(9106-0014-033F) Matrix Spike (MS)
1201174059	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: 170683007 (9106-0014-033F).

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.

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:	565649

Sample ID	Client ID
170683010	9106-0001-132F
1201176790	Method Blank (MB)
1201176791	170683010(9106-0001-132F) Sample Duplicate (DUP)
1201176792	170683010(9106-0001-132F) Matrix Spike (MS)
1201176793	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: 170683010 (9106-0001-132F).

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.

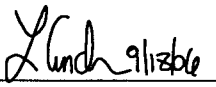
Miscellaneous Information:

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.

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:  9/13/06

NCR Report No.: 356906
Revision No.:

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
11-SEP-06	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LSC	DOE RESL Fe-1, Modified	Solid	YANK
Batch ID:	**Sample Numbers:**		
565287	See Below		

Potentially affected work order(s)(SDG): 170683

Application Issues:

Container scanning event for custody missed

Specification and Requirements Nonconformance Description:	NRG Disposition:
1. The analyst did not scan the sample 170683001 into the batch prior to analysis, however the samples did remain in their custody at all times.	1. The error has been corrected and the analyst has been instructed on the proper scanning procedures. Reporting results.

Originator's Name:
Melanie Aycock 11-SEP-06

Data Validator/Group Leader:
Heather Anderson 11-SEP-06

Quality Review:

Director:

NCR Report No.: 356177
Revision No.: 1

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr.	Division:	Quality Criteria:	Type:
08-SEP-06	Radiochemistry	Specifications	Process
Instrument Type:	**Test / Method:**	**Matrix Type:**	**Client Code:**
LSC	EPA 906.0 Modified	Solid	YANK
Batch ID:	**Sample Numbers:**		
564447	See Below		

Potentially affected work order(s)(SDG): 170543(MSR#06-1172),170544(MSR#06-1174),170683

Application Issues:

Container scanning event for custody missed

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

Originator's Name:
Kenshalla Oston 08-SEP-06

Data Validator/Group Leader:
Melanie Aycock 08-SEP-06

Quality Review:

Director:

SAMPLE DATA SUMMARY

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

Certificate of Analysis Report
for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: 170683 GEL Work Order: 170683

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

Client Sample ID:	9106-0011-018F	Project:	YANK01204
Sample ID:	170683001	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	17-MAY-06		
Receive Date:	21-JUN-06		
Collector:	Client		
Moisture:	36.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241	U	0.0277	+/-0.0418	0.0128	+/-0.042	0.0643	pCi/g		TC1	09/14/06	0931	567705	1
Curium-242	U	0.00666	+/-0.0505	0.037	+/-0.0505	0.138	pCi/g						
Curium-243/244	U	-0.0167	+/-0.0348	0.0388	+/-0.0349	0.117	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.148	+/-0.269	0.289	+/-0.270	0.795	pCi/g		MXA1	09/11/06	0919	565210	3
Plutonium-239/240	U	0.00321	+/-0.174	0.144	+/-0.174	0.505	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	9.87	+/-11.1	8.90	+/-11.1	18.6	pCi/g		TC1	09/17/06	0214	567883	4
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00422	+/-0.0151	0.0123	+/-0.0151	0.0271	pCi/g		KSD1	09/11/06	1917	565250	6
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	3.33	+/-6.35	5.16	+/-6.35	10.9	pCi/g		DFA1	09/05/06	1123	564514	7
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	0.00	+/-0.0818	0.0686	+/-0.0818	0.140	pCi/g		AXD2	09/06/06	0035	564520	8
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	0.852	+/-61.3	41.7	+/-61.3	86.4	pCi/g		MXP1	09/10/06	1419	565287	9
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.341	+/-0.291	0.235	+/-0.291	0.485	pCi/g		KXR1	09/06/06	1232	564623	10

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	AXP2	09/01/06	1328	564525

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

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-018F Project: YANK01204
Sample ID: 170683001 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	DOE EML HASL-300, Pu-11-RC Modified												
5	DOE EML HASL-300, Pu-11-RC Modified												
6	EPA 905.0 Modified												
7	EPA 906.0 Modified												
8	EPA EERF C-01 Modified												
9	DOE RESL Fe-1, Modified												
10	DOE EML HASL-300, Tc-02-RC Modified												

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	89	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	38	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	89	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	51	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	75	(15%-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

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0011-018F Project: YANK01204
Sample ID: 170683001 Client ID: YANK001
Vol. Recv.:

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

The above sample is reported on a dry weight basis.

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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 18, 2006

Client Sample ID:	9106-0012-005F	Project:	YANK01204
Sample ID:	170683002	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	23-JUN-06		
Receive Date:	07-JUL-06		
Collector:	Client		
Moisture:	23.4%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241	U	0.00725	+/-0.0262	0.0156	+/-0.0262	0.0644	pCi/g		TC1	09/14/06	0931	567705	1
Curium-242	U	0.00	+/-0.0343	0.00	+/-0.0343	0.0474	pCi/g						
Curium-243/244	U	-0.00297	+/-0.0249	0.0111	+/-0.025	0.0557	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	0.0214	+/-0.203	0.159	+/-0.203	0.498	pCi/g		MXA1	09/11/06	0919	565210	3
Plutonium-239/240	U	0.120	+/-0.237	0.134	+/-0.238	0.449	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	-10	+/-8.47	7.55	+/-8.47	15.8	pCi/g		TC1	09/17/06	0230	567883	4
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.00415	+/-0.016	0.0141	+/-0.016	0.0332	pCi/g		KSD1	09/08/06	1803	565250	6
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	4.39	+/-5.57	4.46	+/-5.57	9.42	pCi/g		DFA1	09/05/06	1155	564514	7
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	-0.0271	+/-0.0822	0.0694	+/-0.0822	0.141	pCi/g		AXD2	09/06/06	0253	564520	8
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	3.71	+/-50.4	34.5	+/-50.4	71.6	pCi/g		MXP1	09/10/06	1435	565287	9
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	5.04	+/-7.63	6.28	+/-7.63	12.9	pCi/g		MXP1	09/08/06	0035	565289	10
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.057	+/-0.270	0.225	+/-0.270	0.464	pCi/g		KXR1	09/06/06	1249	564623	11

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	AXP2	09/01/06	1328	564525

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0012-005F Project: YANK01204
Sample ID: 170683002 Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	90	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	47	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	78	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	99	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	67	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	85	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	82	(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

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0012-005F Project: YANK01204
Sample ID: 170683002 Client ID: YANK001
Vol. Recv.:

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

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

Client Sample ID:	9106-0012-014F	Project:	YANK01204
Sample ID:	170683003	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	21-JUN-06		
Receive Date:	07-JUL-06		
Collector:	Client		
Moisture:	24.1%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241	U	0.012	+/-0.0233	0.00	+/-0.0234	0.032	pCi/g		TC1	09/14/06	0931	567705	1
Curium-242	U	-0.00814	+/-0.0351	0.0215	+/-0.0351	0.089	pCi/g						
Curium-243/244	U	-0.00571	+/-0.0246	0.0151	+/-0.0246	0.0624	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.00589	+/-0.322	0.272	+/-0.322	0.744	pCi/g		MXA 1	09/11/06	0919	565210	3
Plutonium-239/240	U	0.0588	+/-0.218	0.147	+/-0.218	0.494	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	4.22	+/-11.5	9.47	+/-11.5	19.8	pCi/g		TC1	09/17/06	0246	567883	4
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0176	+/-0.0191	0.0133	+/-0.0191	0.0316	pCi/g		KSD1	09/08/06	1803	565250	6
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	1.38	+/-6.13	5.08	+/-6.13	10.7	pCi/g		DFA1	09/05/06	1226	564514	7
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	0.00209	+/-0.0745	0.0625	+/-0.0745	0.127	pCi/g		AXD2	09/06/06	0501	564520	8
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	13.9	+/-36.7	24.3	+/-36.7	50.7	pCi/g		MXP1	09/07/06	2253	565287	9
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	4.26	+/-8.20	6.78	+/-8.20	13.9	pCi/g		MXP1	09/08/06	0106	565289	10
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.269	+/-0.281	0.228	+/-0.281	0.470	pCi/g		KXR1	09/06/06	1305	564623	11

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	AXP2	09/01/06	1328	564525

The following Analytical Methods were performed

Method	Description
1	DOE EML HASL-300, Am-05-RC Modified

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0012-014F Project: YANK01204
Sample ID: 170683003 Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	95	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	44	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	84	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	100	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	70	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	79	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	81	(15%-125%)

Notes:
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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

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

Report Date: September 18, 2006

Client Sample ID: 9106-0012-014F
Sample ID: 170683003

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

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

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

Client Sample ID:	9106-0013-006F	Project:	YANK01204
Sample ID:	170683004	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	21-JUN-06		
Receive Date:	21-JUL-06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241		0.187	+/-0.170	0.0339	+/-0.172	0.170	pCi/g	1	MXA	09/12/06	0844	565213	1
Curium-242	U	-0.0387	+/-0.0438	0.0836	+/-0.0442	0.313	pCi/g						
Curium-243/244	U	-0.00608	+/-0.118	0.102	+/-0.118	0.308	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.012	+/-0.0236	0.045	+/-0.0236	0.226	pCi/g	1	MXA	09/11/06	0919	565214	2
Plutonium-239/240	U	-0.0601	+/-0.0526	0.100	+/-0.0531	0.337	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	16.2	+/-13.4	10.8	+/-13.5	22.3	pCi/g	1	MXA	09/12/06	2245	565216	3
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.000813	+/-0.0187	0.0156	+/-0.0187	0.036	pCi/g		KSD1	09/08/06	1932	565253	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	0.997	+/-4.80	3.98	+/-4.80	8.39	pCi/g		DFA1	09/05/06	1847	564447	5
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	-0.0199	+/-0.109	0.0921	+/-0.109	0.192	pCi/g		AXD2	09/06/06	0955	564449	6
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	33.7	+/-51.9	34.2	+/-52.0	71.2	pCi/g		MXP1	09/11/06	1150	565291	7
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	0.395	+/-9.40	7.88	+/-9.40	16.2	pCi/g		MXP1	09/08/06	2220	565293	8
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	-0.0409	+/-0.273	0.231	+/-0.273	0.475	pCi/g		KXR1	09/06/06	1637	564445	9

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

Client Sample ID: 9106-0013-006F Project: YANK01204
Sample ID: 170683004 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 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	86	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	60	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	72	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	100	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	70	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	43	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	79	(15%-125%)

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

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0013-005F	Project:	YANK01204
Sample ID:	170683005	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	21-JUN-06		
Receive Date:	21-JUL-06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241		0.505	+/-0.295	0.0542	+/-0.304	0.224	pCi/g	1	MXA1	09/12/06	0844	565213	1
Curium-242	U	0.00	+/-0.119	0.00	+/-0.119	0.165	pCi/g						
Curium-243/244	U	0.0327	+/-0.0868	0.0387	+/-0.0869	0.194	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.008	+/-0.0157	0.0299	+/-0.0157	0.150	pCi/g	1	MXA1	09/11/06	0919	565214	2
Plutonium-239/240	U	-0.0399	+/-0.035	0.0668	+/-0.0352	0.224	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	7.84	+/-13.5	11.1	+/-13.5	22.8	pCi/g	1	MXA1	09/12/06	2332	565216	3
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.000759	+/-0.0157	0.0133	+/-0.0157	0.0313	pCi/g		KSD1	09/08/06	1932	565253	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	-0.175	+/-4.77	4.01	+/-4.77	8.45	pCi/g		DFA1	09/05/06	1919	564447	5
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	-0.0246	+/-0.107	0.0905	+/-0.107	0.188	pCi/g		AXD2	09/06/06	1027	564449	6
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	8.33	+/-39.2	26.6	+/-39.2	55.3	pCi/g		MXP1	09/08/06	0121	565291	7
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	-1.92	+/-5.36	4.55	+/-5.36	9.32	pCi/g		MXP1	09/08/06	2323	565293	8
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.0807	+/-0.273	0.227	+/-0.273	0.468	pCi/g		KXR1	09/06/06	1654	564445	9

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: September 18, 2006

Client Sample ID: 9106-0013-005F
Sample ID: 170683005

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 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	68	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	86	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	71	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	101	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	71	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	72	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	80	(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 an "as received" 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 18, 2006

Client Sample ID:	9106-0014-012F	Project:	YANK01204
Sample ID:	170683006	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	06-JUN-06		
Receive Date:	13-JUL-06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241		0.0945	+/-0.0698	0.0158	+/-0.0709	0.0654	pCi/g		TC1	09/14/06	0931	567705	1
Curium-242	U	0.0191	+/-0.0374	0.00	+/-0.0375	0.0517	pCi/g						
Curium-243/244	U	0.0473	+/-0.0497	0.0113	+/-0.050	0.0567	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.113	+/-0.329	0.328	+/-0.330	0.930	pCi/g		MXA1	09/11/06	0919	565210	3
Plutonium-239/240	U	-0.097	+/-0.0951	0.181	+/-0.0963	0.637	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	4.84	+/-11.6	9.54	+/-11.6	20.0	pCi/g		TC1	09/17/06	0302	567883	4
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.00246	+/-0.00901	0.00776	+/-0.00901	0.0169	pCi/g		KSD1	09/11/06	1917	565250	6
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	3.44	+/-6.25	5.07	+/-6.25	10.7	pCi/g		DFA1	09/05/06	1258	564514	7
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	0.0486	+/-0.0773	0.064	+/-0.0773	0.130	pCi/g		AXD2	09/06/06	0635	564520	8
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	-12.6	+/-44.5	30.6	+/-44.5	63.6	pCi/g		MXP1	09/10/06	1451	565287	9
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	4.82	+/-7.80	6.44	+/-7.80	13.2	pCi/g		MXP1	09/08/06	0138	565289	10
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.0865	+/-0.281	0.234	+/-0.281	0.481	pCi/g		KXR1	09/06/06	1321	564623	11

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	DOE EML HASL-300, Pu-11-RC Modified
6	EPA 905.0 Modified

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0014-012F
Sample ID: 170683006
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	93	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	33	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	84	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	91	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	74	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	80	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	79	(15%-125%)

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0014-033F	Project:	YANK01204
Sample ID:	170683007	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	14-JUN-06		
Receive Date:	13-JUL-06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241		0.0906	+/-0.0692	0.0118	+/-0.0703	0.0594	pCi/g		TC1	09/14/06	0931	567705	1
Curium-242	U	0.0195	+/-0.0383	0.00	+/-0.0384	0.053	pCi/g						
Curium-243/244		0.0799	+/-0.0639	0.00	+/-0.0648	0.0361	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.0396	+/-0.254	0.229	+/-0.254	0.638	pCi/g		MXA1	09/11/06	0919	565210	3
Plutonium-239/240	U	-0.203	+/-0.182	0.244	+/-0.184	0.666	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	4.34	+/-11.1	9.14	+/-11.1	19.2	pCi/g		TC1	09/17/06	0319	567883	4
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00411	+/-0.0167	0.0133	+/-0.0167	0.0316	pCi/g		KSD1	09/08/06	1803	565250	6
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	3.13	+/-5.10	4.12	+/-5.10	8.71	pCi/g		DFA1	09/05/06	1330	564514	7
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	0.0995	+/-0.0918	0.075	+/-0.0918	0.153	pCi/g		AXD2	09/06/06	0807	564520	8
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	19.3	+/-37.9	24.9	+/-37.9	51.8	pCi/g		MXP1	09/07/06	2326	565287	9
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	4.62	+/-7.14	5.88	+/-7.14	12.1	pCi/g		MXP1	09/08/06	0209	565289	10
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.00	+/-0.282	0.236	+/-0.282	0.487	pCi/g		KXR1	09/06/06	1338	564623	11

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	DOE EML HASL-300, Pu-11-RC Modified
6	EPA 905.0 Modified

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0014-033F Project: YANK01204
Sample ID: 170683007 Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	87	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	41	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	89	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	99	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	76	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	84	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	78	(15%-125%)

Notes:
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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 an "as received" basis.

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0015-018F	Project:	YANK01204
Sample ID:	170683008	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	27-JUN-06		
Receive Date:	21-JUL-06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241		0.193	+/-0.166	0.00	+/-0.168	0.101	pCi/g		MXA1	09/12/06	0844	565213	1
Curium-242	U	0.0784	+/-0.147	0.0655	+/-0.147	0.271	pCi/g						
Curium-243/244	U	0.0942	+/-0.129	0.0474	+/-0.130	0.196	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	0.0325	+/-0.0637	0.00	+/-0.0638	0.0881	pCi/g		MXA1	09/11/06	0919	565214	2
Plutonium-239/240	U	0.0013	+/-0.0705	0.0582	+/-0.0705	0.204	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	7.19	+/-12.0	9.91	+/-12.1	20.4	pCi/g		MXA1	09/13/06	0019	565216	3
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	-0.686	+/-5.32	4.50	+/-5.32	9.48	pCi/g		DFA1	09/05/06	1950	564447	4
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	0.0572	+/-0.114	0.0942	+/-0.114	0.193	pCi/g		AXD2	09/09/06	0331	564449	5
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	7.27	+/-37.9	25.6	+/-37.9	53.2	pCi/g		MXP1	09/08/06	0137	565291	6
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	-2.39	+/-7.60	6.43	+/-7.60	13.2	pCi/g		MXP1	09/09/06	0025	565293	7
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.132	+/-0.270	0.223	+/-0.270	0.460	pCi/g		KXR1	09/06/06	1710	564445	8

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
7	DOE RESL Ni-1, Modified

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0015-018F Project: YANK01204
Sample ID: 170683008 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	78	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	86	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	79	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	79	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	47	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	82	(15%-125%)

Notes:
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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 an "as received" basis.

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0015-002F	Project:	YANK01204
Sample ID:	170683009	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	28-JUN-06		
Receive Date:	21-JUL-06		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241		0.292	+/-0.213	0.0479	+/-0.217	0.198	pCi/g		MXA1	09/12/06	0844	565213	1
Curium-242	U	0.0522	+/-0.102	0.00	+/-0.103	0.141	pCi/g						
Curium-243/244	U	0.0289	+/-0.0766	0.0341	+/-0.0767	0.171	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.0352	+/-0.0798	0.0658	+/-0.0798	0.231	pCi/g		MXA1	09/11/06	0919	565214	2
Plutonium-239/240	U	0.019	+/-0.0758	0.0465	+/-0.0758	0.192	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	24.6	+/-16.2	13.0	+/-16.5	26.7	pCi/g		MXA1	09/13/06	0106	565216	3
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	-1.6	+/-7.22	6.13	+/-7.22	12.9	pCi/g		DFA1	09/05/06	2022	564447	4
Liquid Scint C14, Solid All,FSS													
Carbon-14		0.207	+/-0.113	0.0898	+/-0.113	0.185	pCi/g		AXD2	09/09/06	0418	564449	5
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	10.8	+/-47.1	31.3	+/-47.1	65.2	pCi/g		MXP1	09/11/06	1206	565291	6
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	-3.07	+/-6.78	5.76	+/-6.78	11.8	pCi/g		MXP1	09/09/06	0127	565293	7
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.390	+/-0.283	0.227	+/-0.283	0.468	pCi/g		KXR1	09/06/06	1726	564445	8

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
7	DOE RESL Ni-1, Modified

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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: September 18, 2006

Client Sample ID: 9106-0015-002F
Sample ID: 170683009

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	78	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	79	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	75	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	74	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	55	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	80	(15%-125%)

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

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9106-0001-132F	Project:	YANK01204
Sample ID:	170683010	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	07-AUG-06		
Receive Date:	17-AUG-06		
Collector:	Client		
Moisture:	23.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium-241		0.160	+/-0.147	0.0296	+/-0.148	0.148	pCi/g		MXA1	09/12/06	0844	565213	1
Curium-242	U	0.00	+/-0.0754	0.00	+/-0.0754	0.104	pCi/g						
Curium-243/244		0.132	+/-0.130	0.00	+/-0.131	0.0896	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	-0.0279	+/-0.0954	0.0976	+/-0.0955	0.306	pCi/g		MXA1	09/11/06	0919	565214	2
Plutonium-239/240	U	-0.0591	+/-0.0934	0.0903	+/-0.0934	0.292	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	14.0	+/-14.7	12.0	+/-14.8	24.6	pCi/g		MXA1	09/13/06	0153	565216	3
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00619	+/-0.0168	0.0131	+/-0.0168	0.0311	pCi/g		KSD1	09/08/06	1932	565253	4
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid-HTD2,ALL FSS													
Tritium	U	4.94	+/-7.02	5.55	+/-7.02	12.0	pCi/g		ATH2	09/07/06	0102	565650	5
Liquid Scint C14, Solid All,FSS													
Carbon-14		0.324	+/-0.115	0.0889	+/-0.115	0.183	pCi/g		AXD2	09/08/06	0456	565649	6
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	-1.92	+/-38.0	25.9	+/-38.0	53.9	pCi/g		MXP1	09/08/06	0210	565291	7
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	0.735	+/-5.83	4.88	+/-5.83	10.0	pCi/g		MXP1	09/09/06	0229	565293	8
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.0126	+/-0.193	0.161	+/-0.193	0.330	pCi/g		KXR1	09/12/06	1349	565648	9

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	09/05/06	1736	565454

The following Analytical Methods were performed

Method	Description

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East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0001-132F Project: YANK01204
Sample ID: 170683010 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
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												
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	87	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	66	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	66	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	100	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	76	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	72	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	72	(15%-125%)

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

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

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Company : Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424 Report Date: September 18, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9106-0001-132F Project: YANK01204
Sample ID: 170683010 Client ID: YANK001
Vol. Recv.:

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

^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

QC Summary

Report Date: September 18, 2006
Page 1 of 10

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

East Hampton, Connecticut
Contact: Mr. Jack McCarthy

Workorder: 170683

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 565210										
QC1201175592 170683001 DUP										
Plutonium-238	U	-0.148	U	0.137	pCi/g	5180		(0% - 100%)	AXA1	09/11/06 09:19
	Uncert:	+/-0.269		+/-0.303						
	TPU:	+/-0.270		+/-0.304						
Plutonium-239/240	U	0.00321	U	-0.215	pCi/g	206		(0% - 100%)		
	Uncert:	+/-0.174		+/-0.181						
	TPU:	+/-0.174		+/-0.183						
QC1201175594 LCS										
Plutonium-238			U	-0.0564	pCi/g			(75%-125%)		
	Uncert:			+/-0.446						
	TPU:			+/-0.446						
Plutonium-239/240	12.3			9.42	pCi/g		77	(75%-125%)		
	Uncert:			+/-1.98						
	TPU:			+/-2.49						
QC1201175591 MB										
Plutonium-238			U	0.117	pCi/g					
	Uncert:			+/-0.220						
	TPU:			+/-0.221						
Plutonium-239/240			U	0.0802	pCi/g					
	Uncert:			+/-0.226						
	TPU:			+/-0.226						
QC1201175593 170683001 MS										
Plutonium-238	U	-0.148	U	0.110	pCi/g			(75%-125%)		
	Uncert:	+/-0.269		+/-0.175						
	TPU:	+/-0.270		+/-0.176						
Plutonium-239/240	12.5 U	0.00321		11.8	pCi/g		94	(75%-125%)		
	Uncert:	+/-0.174		+/-1.70						
	TPU:	+/-0.174		+/-2.29						
Batch 565213										
QC1201175603 170683004 DUP										
Americium-241		0.187		0.163	pCi/g	14		(0% - 100%)	AXA1	09/12/06 08:44
	Uncert:	+/-0.170		+/-0.149						
	TPU:	+/-0.172		+/-0.151						
Curium-242	U	-0.0387		0.143	pCi/g	348		(0% - 100%)		
	Uncert:	+/-0.0438		+/-0.162						
	TPU:	+/-0.0442		+/-0.163						
Curium-243/244	U	-0.00608	U	-0.0487	pCi/g	156		(0% - 100%)		
	Uncert:	+/-0.118		+/-0.0768						
	TPU:	+/-0.118		+/-0.0769						
QC1201175605 LCS										
Americium-241	13.5			12.8	pCi/g		95	(75%-125%)		
	Uncert:			+/-1.24						
	TPU:			+/-2.12						

QC Summary

Workorder: 170683

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 565213										
Curium-242			U	0.00	pCi/g					
Uncert:				+/-0.0625						
TPU:				+/-0.0625						
Curium-243/244	16.4			15.1	pCi/g		92	(75%-125%)		
Uncert:				+/-1.35						
TPU:				+/-2.44						
QC1201175602 MB										
Americium-241			U	0.0812	pCi/g					09/12/06 08:44
Uncert:				+/-0.107						
TPU:				+/-0.108						
Curium-242			U	0.0664	pCi/g					
Uncert:				+/-0.106						
TPU:				+/-0.107						
Curium-243/244			U	-0.00886	pCi/g					
Uncert:				+/-0.0744						
TPU:				+/-0.0745						
QC1201175604 170683004 MS										
Americium-241	13.7	0.187		14.1	pCi/g		102	(75%-125%)		09/12/06 08:44
Uncert:		+/-0.170		+/-1.41						
TPU:		+/-0.172		+/-2.41						
Curium-242	U	-0.0387		0.209	pCi/g					
Uncert:		+/-0.0438		+/-0.205						
TPU:		+/-0.0442		+/-0.207						
Curium-243/244	16.7 U	-0.00608		16.2	pCi/g		97	(75%-125%)		
Uncert:		+/-0.118		+/-1.52						
TPU:		+/-0.118		+/-2.71						
Batch 565214										
QC1201175607 170683004 DUP										
Plutonium-238	U	-0.012	U	-0.0415	pCi/g	110		(0% - 100%)	AXA1	09/11/06 09:19
Uncert:		+/-0.0236		+/-0.0941						
TPU:		+/-0.0236		+/-0.0941						
Plutonium-239/240	U	-0.0601	U	-0.0311	pCi/g	64		(0% - 100%)		
Uncert:		+/-0.0526		+/-0.0917						
TPU:		+/-0.0531		+/-0.0917						
QC1201175609 LCS										
Plutonium-238			U	0.00142	pCi/g			(75%-125%)		
Uncert:				+/-0.0772						
TPU:				+/-0.0772						
Plutonium-239/240	12.5			10.7	pCi/g		86	(75%-125%)		
Uncert:				+/-1.21						
TPU:				+/-1.66						
QC1201175606 MB										
Plutonium-238			U	-0.0382	pCi/g					
Uncert:				+/-0.113						
TPU:				+/-0.113						
Plutonium-239/240			U	-0.0891	pCi/g					
Uncert:				+/-0.066						
TPU:				+/-0.0669						
QC1201175608 170683004 MS										

QC Summary

Workorder: 170683

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 565214										
Plutonium-238	U	-0.012	U	0.0632	pCi/g			(75%-125%)		
	Uncert:	+/-0.0236		+/-0.143						
	TPU:	+/-0.0236		+/-0.143						
Plutonium-239/240	12.6 U	-0.0601		10.9	pCi/g		87	(75%-125%)		
	Uncert:	+/-0.0526		+/-1.20						
	TPU:	+/-0.0531		+/-1.66						
Batch 565216										
QC1201175615 170683004 DUP										
Plutonium-241	U	16.2	U	5.89	pCi/g	0		(0% - 100%)	AXA1	09/13/06 03:26
	Uncert:	+/-13.4		+/-12.7						
	TPU:	+/-13.5		+/-12.7						
QC1201175617 LCS										
Plutonium-241	341			310	pCi/g		91	(75%-125%)		09/12/06 11:26
	Uncert:			+/-32.9						
	TPU:			+/-45.2						
QC1201175614 MB										
Plutonium-241			U	5.70	pCi/g					09/13/06 02:39
	Uncert:			+/-12.7						
	TPU:			+/-12.7						
QC1201175616 170683004 MS										
Plutonium-241	344 U	16.2		341	pCi/g		99	(75%-125%)		09/12/06 11:10
	Uncert:	+/-13.4		+/-51.8						
	TPU:	+/-13.5		+/-66.7						
Batch 567705										
QC1201181288 170683003 DUP										
Americium-241	U	0.012		0.120	pCi/g	164		(0% - 100%)	TC1	09/14/06 09:31
	Uncert:	+/-0.0233		+/-0.0804						
	TPU:	+/-0.0234		+/-0.082						
Curium-242	U	-0.00814	U	0.00	pCi/g	200		(0% - 100%)		
	Uncert:	+/-0.0351		+/-0.0381						
	TPU:	+/-0.0351		+/-0.0381						
Curium-243/244	U	-0.00571	U	-0.0196	pCi/g	110		(0% - 100%)		
	Uncert:	+/-0.0246		+/-0.031						
	TPU:	+/-0.0246		+/-0.031						
QC1201181290 LCS										
Americium-241	5.23			5.41	pCi/g		103	(75%-125%)		
	Uncert:			+/-0.508						
	TPU:			+/-0.878						
Curium-242			U	0.00	pCi/g					
	Uncert:			+/-0.0244						
	TPU:			+/-0.0244						
Curium-243/244	6.31			6.40	pCi/g		101	(75%-125%)		
	Uncert:			+/-0.553						
	TPU:			+/-1.01						
QC1201181287 MB										
Americium-241			U	0.00039	pCi/g					09/14/06 09:31
	Uncert:			+/-0.00421						
	TPU:			+/-0.00421						

QC Summary

Workorder: 170683

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 567705										
Curium-242			U	0.00902	pCi/g					
Uncert:				+/-0.0239						
TPU:				+/-0.0239						
Curium-243/244			U	-0.00283	pCi/g					
Uncert:				+/-0.0238						
TPU:				+/-0.0238						
QC1201181289 170683003 MS										
Americium-241	5.27 U	0.012		5.58	pCi/g		106	(75%-125%)		09/14/06 09:31
Uncert:		+/-0.0233		+/-0.524						
TPU:		+/-0.0234		+/-0.908						
Curium-242	U	-0.00814	U	0.0183	pCi/g					
Uncert:		+/-0.0351		+/-0.0359						
TPU:		+/-0.0351		+/-0.036						
Curium-243/244	6.41 U	-0.00571		7.36	pCi/g		115	(75%-125%)		
Uncert:		+/-0.0246		+/-0.603						
TPU:		+/-0.0246		+/-1.15						
Batch 567883										
QC1201181752 170683001 DUP										
Plutonium-241	U	9.87	U	-3.06	pCi/g	0		(0% - 100%)	TC1	09/17/06 03:51
Uncert:		+/-11.1		+/-10.4						
TPU:		+/-11.1		+/-10.4						
QC1201181754 LCS										
Plutonium-241	135			120	pCi/g		89	(75%-125%)		09/17/06 04:24
Uncert:				+/-16.2						
TPU:				+/-19.8						
QC1201181751 MB										
Plutonium-241			U	1.78	pCi/g					09/17/06 03:35
Uncert:				+/-9.61						
TPU:				+/-9.61						
QC1201181753 170683001 MS										
Plutonium-241	142 U	9.87		113	pCi/g		80	(75%-125%)		09/17/06 04:08
Uncert:		+/-11.1		+/-15.8						
TPU:		+/-11.1		+/-19.1						
Rad Gas Flow										
Batch 565250										
QC1201175680 170683002 DUP										
Strontium-90	U	-0.00415	U	0.000131	pCi/g	0		(0% - 100%)	KSD1	09/08/06 18:03
Uncert:		+/-0.016		+/-0.0253						
TPU:		+/-0.016		+/-0.0253						
QC1201175682 LCS										
Strontium-90	1.56			1.63	pCi/g		105	(75%-125%)		09/08/06 18:05
Uncert:				+/-0.151						
TPU:				+/-0.155						
QC1201175679 MB										
Strontium-90			U	-0.00458	pCi/g					09/08/06 18:03
Uncert:				+/-0.018						
TPU:				+/-0.018						
QC1201175681 170683002 MS										
Strontium-90	3.13 U	-0.00415		2.38	pCi/g		76	(75%-125%)		09/08/06 18:03

QC Summary

Workorder: 170683

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 565250										
	Uncert:	+/-0.016		+/-0.249						
	TPU:	+/-0.016		+/-0.253						
Batch 565253										
QC1201175687 170683005 DUP										
Strontium-90	U	-0.000759	U	-0.000963	pCi/g	0		(0% - 100%)	KSD1	09/08/06 19:32
	Uncert:	+/-0.0157		+/-0.0166						
	TPU:	+/-0.0157		+/-0.0166						
QC1201175689 LCS										
Strontium-90	1.57			1.20	pCi/g		77	(75%-125%)		09/09/06 12:26
	Uncert:			+/-0.113						
	TPU:			+/-0.118						
QC1201175686 MB										
Strontium-90			U	-0.0216	pCi/g					09/08/06 19:32
	Uncert:			+/-0.00992						
	TPU:			+/-0.00992						
QC1201175688 170683005 MS										
Strontium-90	3.14 U	-0.000759		2.77	pCi/g		88	(75%-125%)		09/08/06 19:31
	Uncert:	+/-0.0157		+/-0.189						
	TPU:	+/-0.0157		+/-0.205						
Rad Liquid Scintillation										
Batch 564445										
QC1201173841 170544018 DUP										
Technetium-99	U	0.128	U	0.0496	pCi/g	0		(0% - 100%)	KXR1	09/06/06 17:59
	Uncert:	+/-0.272		+/-0.251						
	TPU:	+/-0.272		+/-0.251						
QC1201173843 LCS										
Technetium-99	12.7			13.0	pCi/g		103	(75%-125%)		09/06/06 18:32
	Uncert:			+/-0.501						
	TPU:			+/-0.582						
QC1201173840 MB										
Technetium-99			U	0.0991	pCi/g					09/06/06 17:43
	Uncert:			+/-0.243						
	TPU:			+/-0.243						
QC1201173842 170544018 MS										
Technetium-99	13.1 U	0.128		13.3	pCi/g		102	(75%-125%)		09/06/06 18:15
	Uncert:	+/-0.272		+/-0.540						
	TPU:	+/-0.272		+/-0.620						
Batch 564447										
QC1201173845 170544018 DUP										
Tritium	U	1.53	U	0.760	pCi/g	0		(0% - 100%)	DFA1	09/05/06 21:25
	Uncert:	+/-6.54		+/-5.24						
	TPU:	+/-6.54		+/-5.24						
QC1201173847 LCS										
Tritium	46.9			44.3	pCi/g		95	(75%-125%)		09/07/06 11:21
	Uncert:			+/-8.94						
	TPU:			+/-8.98						
QC1201173844 MB										
Tritium			U	-0.43	pCi/g					09/05/06 20:54

QC Summary

Workorder: 170683

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 564447										
	Uncert:			+/-4.67						
	TPU:			+/-4.67						
QC1201173846 170544018 MS										
Tritium	54.5 U	1.53		57.4	pCi/g		105	(75%-125%)		09/07/06 11:05
	Uncert:	+/-6.54		+/-10.7						
	TPU:	+/-6.54		+/-10.7						
Batch 564449										
QC1201173849 170544019 DUP										
Carbon-14	U	-0.0997	U	-0.0804	pCi/g	.0		(0% - 100%)	AXD2	09/09/06 05:04
	Uncert:	+/-0.0966		+/-0.108						
	TPU:	+/-0.0966		+/-0.108						
QC1201173851 LCS										
Carbon-14	6.66			6.26	pCi/g		94	(75%-125%)		09/06/06 13:38
	Uncert:			+/-0.258						
	TPU:			+/-0.276						
QC1201173848 MB										
Carbon-14			U	-0.0326	pCi/g					09/06/06 12:02
	Uncert:			+/-0.102						
	TPU:			+/-0.102						
QC1201173850 170544019 MS										
Carbon-14	6.86 U	-0.0997		6.85	pCi/g		100	(75%-125%)		09/06/06 13:07
	Uncert:	+/-0.0966		+/-0.273						
	TPU:	+/-0.0966		+/-0.293						
Batch 564514										
QC1201174039 170683006 DUP										
Tritium	U	3.44	U	1.46	pCi/g	0		(0% - 100%)	DFA1	09/05/06 14:33
	Uncert:	+/-6.25		+/-5.79						
	TPU:	+/-6.25		+/-5.79						
QC1201174041 LCS										
Tritium	48.4			53.7	pCi/g		111	(75%-125%)		09/05/06 15:36
	Uncert:			+/-7.25						
	TPU:			+/-7.31						
QC1201174038 MB										
Tritium			U	0.308	pCi/g					09/05/06 14:01
	Uncert:			+/-4.66						
	TPU:			+/-4.66						
QC1201174040 170683006 MS										
Tritium	49.1 U	3.44		61.1	pCi/g		124	(75%-125%)		09/05/06 15:05
	Uncert:	+/-6.25		+/-7.58						
	TPU:	+/-6.25		+/-7.65						
Batch 564520										
QC1201174057 170683007 DUP										
Carbon-14	U	0.0995	U	0.0741	pCi/g	0		(0% - 100%)	AXD2	09/06/06 10:24
	Uncert:	+/-0.0918		+/-0.118						
	TPU:	+/-0.0918		+/-0.118						
QC1201174059 LCS										
Carbon-14	6.58			6.51	pCi/g		99	(75%-125%)		09/06/06 11:28
	Uncert:			+/-0.263						
	TPU:			+/-0.282						

QC Summary

Workorder: 170683

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 564520										
QC1201174056 MB										
Carbon-14			U	-0.0231	pCi/g					09/06/06 09:53
	Uncert:			+/-0.105						
	TPU:			+/-0.105						
QC1201174058 170683007 MS										
Carbon-14	7.19 U	0.0995		6.42	pCi/g		89	(75%-125%)		09/06/06 10:56
	Uncert:	+/-0.0918		+/-0.276						
	TPU:	+/-0.0918		+/-0.293						
Batch 564623										
QC1201174254 170683001 DUP										
Technetium-99	U	0.341	U	0.187	pCi/g	0		(0% - 100%)	KXR1	09/08/06 19:42
	Uncert:	+/-0.291		+/-0.211						
	TPU:	+/-0.291		+/-0.211						
QC1201174256 LCS										
Technetium-99	13.0			12.2	pCi/g		94	(75%-125%)		09/06/06 14:43
	Uncert:			+/-0.490						
	TPU:			+/-0.566						
QC1201174253 MB										
Technetium-99			U	0.151	pCi/g					09/06/06 13:54
	Uncert:			+/-0.247						
	TPU:			+/-0.247						
QC1201174255 170683001 MS										
Technetium-99	13.0 U	0.341		12.9	pCi/g		99	(75%-125%)		09/06/06 14:27
	Uncert:	+/-0.291		+/-0.547						
	TPU:	+/-0.291		+/-0.623						
Batch 565287										
QC1201175809 170683006 DUP										
Iron-55	U	-12.6	U	38.3	pCi/g	0		(0% - 100%)	MXP1	09/07/06 23:59
	Uncert:	+/-44.5		+/-41.2						
	TPU:	+/-44.5		+/-41.2						
QC1201175811 LCS										
Iron-55	628			613	pCi/g		98	(75%-125%)		09/08/06 00:31
	Uncert:			+/-56.2						
	TPU:			+/-67.5						
QC1201175808 MB										
Iron-55			U	10.2	pCi/g					09/07/06 23:42
	Uncert:			+/-35.9						
	TPU:			+/-35.9						
QC1201175810 170683006 MS										
Iron-55	746 U	-12.6		675	pCi/g		91	(75%-125%)		09/10/06 15:07
	Uncert:	+/-44.5		+/-60.5						
	TPU:	+/-44.5		+/-73.4						
Batch 565289										
QC1201175815 170683006 DUP										
Nickel-63	U	4.82	U	6.11	pCi/g	0		(0% - 100%)	MXP1	09/08/06 03:13
	Uncert:	+/-7.80		+/-9.03						
	TPU:	+/-7.80		+/-9.03						
QC1201175817 LCS										
Nickel-63	512			443	pCi/g		87	(75%-125%)		09/08/06 04:16

QC Summary

Workorder: 170683

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 565289										
	Uncert:			+/-15.2						
	TPU:			+/-20.8						
QC1201175814 MB										
Nickel-63			U	5.67	pCi/g					09/08/06 02:41
	Uncert:			+/-7.44						
	TPU:			+/-7.44						
QC1201175816 170683006 MS										
Nickel-63	572 U	4.82		475	pCi/g		83	(75%-125%)		09/08/06 03:44
	Uncert:	+/-7.80		+/-15.4						
	TPU:	+/-7.80		+/-22.2						
Batch 565291										
QC1201175819 170683004 DUP										
Iron-55	U	33.7	U	-4.73	pCi/g	0		(0% - 100%)	MXP1	09/08/06 02:42
	Uncert:	+/-51.9		+/-40.3						
	TPU:	+/-52.0		+/-40.3						
QC1201175821 LCS										
Iron-55	628			652	pCi/g		104	(75%-125%)		09/08/06 03:15
	Uncert:			+/-52.2						
	TPU:			+/-64.9						
QC1201175818 MB										
Iron-55			U	-26.7	pCi/g					09/08/06 02:26
	Uncert:			+/-35.6						
	TPU:			+/-35.6						
QC1201175820 170683004 MS										
Iron-55	711 U	33.7		744	pCi/g		105	(75%-125%)		09/08/06 02:59
	Uncert:	+/-51.9		+/-60.1						
	TPU:	+/-52.0		+/-75.2						
Batch 565293										
QC1201175823 170683004 DUP										
Nickel-63	U	0.395	U	0.122	pCi/g	0		(0% - 100%)	MXP1	09/09/06 04:34
	Uncert:	+/-9.40		+/-7.25						
	TPU:	+/-9.40		+/-7.25						
QC1201175825 LCS										
Nickel-63	512			467	pCi/g		91	(75%-125%)		09/09/06 06:38
	Uncert:			+/-15.4						
	TPU:			+/-21.5						
QC1201175822 MB										
Nickel-63			U	-2.47	pCi/g					09/09/06 03:32
	Uncert:			+/-5.58						
	TPU:			+/-5.58						
QC1201175824 170683004 MS										
Nickel-63	531 U	0.395		535	pCi/g		101	(75%-125%)		09/09/06 05:36
	Uncert:	+/-9.40		+/-21.6						
	TPU:	+/-9.40		+/-27.8						
Batch 565648										
QC1201176787 170683010 DUP										
Technetium-99	U	0.0126	U	0.0841	pCi/g	0		(0% - 100%)	KXR1	09/12/06 14:53
	Uncert:	+/-0.193		+/-0.206						
	TPU:	+/-0.193		+/-0.206						

QC Summary

Workorder: 170683

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 565648										
QC1201176789 LCS										
Technetium-99	13.1			13.2	pCi/g		101	(75%-125%)		09/12/06 15:56
	Uncert:			+/-0.349						
	TPU:			+/-0.480						
QC1201176786 MB										
Technetium-99			U	0.00238	pCi/g					09/12/06 14:21
	Uncert:			+/-0.154						
	TPU:			+/-0.154						
QC1201176788 170683010 MS										
Technetium-99	13.0 U	0.0126		12.1	pCi/g		93	(75%-125%)		09/12/06 15:24
	Uncert:	+/-0.193		+/-0.383						
	TPU:	+/-0.193		+/-0.489						
Batch 565649										
QC1201176791 170683010 DUP										
Carbon-14		0.324		0.204	pCi/g	46		(0% - 100%)	AXD2	09/08/06 07:38
	Uncert:	+/-0.115		+/-0.112						
	TPU:	+/-0.115		+/-0.112						
QC1201176793 LCS										
Carbon-14	7.27			8.39	pCi/g		115	(75%-125%)		09/08/06 09:12
	Uncert:			+/-0.256						
	TPU:			+/-0.288						
QC1201176790 MB										
Carbon-14			U	0.0136	pCi/g					09/08/06 06:51
	Uncert:			+/-0.109						
	TPU:			+/-0.109						
QC1201176792 170683010 MS										
Carbon-14	7.22	0.324		7.14	pCi/g		94	(75%-125%)		09/08/06 08:25
	Uncert:	+/-0.115		+/-0.239						
	TPU:	+/-0.115		+/-0.264						
Batch 565650										
QC1201176795 170683010 DUP										
Tritium	U	4.94	U	7.42	pCi/g	0		(0% - 100%)	ATH2	09/07/06 01:36
	Uncert:	+/-7.02		+/-7.37						
	TPU:	+/-7.02		+/-7.37						
QC1201176797 LCS										
Tritium	64.5			64.9	pCi/g		101	(75%-125%)		09/07/06 02:09
	Uncert:			+/-10.8						
	TPU:			+/-10.8						
QC1201176794 MB										
Tritium			U	4.55	pCi/g					09/07/06 01:19
	Uncert:			+/-6.87						
	TPU:			+/-6.87						
QC1201176796 170683010 MS										
Tritium	64.7 U	4.94		67.5	pCi/g		104	(75%-125%)		09/07/06 01:52
	Uncert:	+/-7.02		+/-10.9						
	TPU:	+/-7.02		+/-10.9						

QC Summary

Workorder: 170683

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

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

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

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

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

Attachment 2b
Split Sample Assessment Forms
(2 Pages)

Split Sample Assessment Form

Survey Area #: 9106	Survey Unit #: 0011	Survey Unit Name: Discharge Canal
Sample Plan or WPIR#: 2006-021		SML #: 9106-0011-012FS

Sample Description: Comparison of split samples collected from sample measurement location #12 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was 9106-0011-012F the comparison sample was 9106-0011-012FS.

STANDARD					COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
Cs-137	-3.48E-03	1.51E-02	0	NONE -	4.06E-02	1.92E-02	-11.67	N/A
Co-60	3.11E-02	1.49E-02	2	NONE -	1.09E-02	1.98E-02	0.35	N/A
NI-63	-1.12E+00	3.47E+00	0	NONE -	7.07E+00	3.58E+00	-6.31	N/A
K-40	1.30E+01	7.00E-01	19	0.75 1.33	1.23E+01	6.10E-01	0.95	Y

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

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

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

Performed By:	Date:	Reviewed By:	Date:
Oal Rudall	11-8-06		11/8/06

WPIR – Work Plan and Inspection Record

SML – Sample Measurement Location designation

Split Sample Assessment Form

Survey Area#: 9106	Survey Unit #: 0011	Survey Unit Name: Discharge Canal
Sample Plan or WPIR#: 2006-0021		SML #: 9106-0011-017FS

Sample Description: Comparison of split samples collected from sample measurement location #17 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was 9106-0011-017F, the comparison sample was 9106-0011-017FS.

	STANDARD				COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
Cs-137	4.06E-01	3.90E-02	10	0.6 - 1.66	4.16E-01	4.37E-02	1.02	Y
Co-60	6.52E-03	1.51E-02	0	NONE -	4.77E-02	2.52E-02	7.32	N
Ni-63	1.18E+01	3.73E+00	3	NONE -	1.13E+01	4.69E+00	0.96	Y
K-40	1.34E+01	5.60E-01	24	0.75 1.33	1.39E+01	7.45E-01	1.04	Y

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

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

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

Performed By:	Date:	Reviewed By:	Date:
Carl Gundell	11-8-06	[signature]	11/8/06

WPIR – Work Plan and Inspection Record

SML – Sample Measurement Location designation

Attachment 2c
Preliminary Data Form
(1 Pages)

Preliminary Data Review Form - Samples for the Sign Test

Survey Unit: 9106- 0011
Survey Unit Name: Discharge Canal

Classification: 2
Survey Media: Soil
Type of Survey: Final Status Survey
Type of Measurement: Gross Measurement
Number of Measurements: 0
Operational DCGL: 1

BASIC STATISTICAL QUANTITIES

	Cs-137	Co-60	Ni-63
Minimum Value:	-3.48E-03	-1.19E-02	-1.12E+00
Maximum Value:	7.37E-01	1.81E-01	1.40E+01
Mean:	1.77E-01	5.21E-02	4.28E+00
Median:	1.18E-01	2.69E-02	2.76E+00
Standard Deviation:	1.93E-01	6.78E-02	4.56E+00

	RADIONUCLIDE CONCENTRATION (pCi/g)			IDENTIFIED		
Sample Number:	Cs-137	Co-60	Ni-63	Cs-137	Co-60	Ni-63
9106-0011-002F	8.89E-02	2.69E-02	1.53E+00	Y	Y	N
9106-0011-003F	7.37E-01	1.38E-01	-4.64E-01	Y	Y	N
9106-0011-004F	1.02E-01	-1.19E-02	5.93E+00	Y	N	N
9106-0011-005F	2.13E-01	1.52E-01	5.96E+00	Y	Y	N
9106-0011-006F	3.22E-01	1.99E-02	2.44E+00	Y	N	N
9106-0011-007F*	1.84E-01	5.52E-02	1.40E+01	Y	Y	Y
9106-0011-008F	1.56E-01	1.53E-01	-5.23E-01	Y	Y	N
9106-0011-009F	6.23E-02	3.42E-02	8.59E-01	Y	N	N
9106-0011-010F	3.71E-02	-1.19E-02	6.11E+00	Y	N	N
9106-0011-011F	1.57E-02	1.17E-02	9.78E-01	N	N	N
9106-0011-012F	-3.48E-03	3.11E-02	-1.12E+00	N	Y	N
9106-0011-014F	2.49E-02	-4.54E-04	2.76E+00	Y	N	N
9106-0011-015F	1.18E-01	-4.29E-03	8.67E+00	Y	N	Y
9106-0011-017F	4.06E-01	6.52E-03	1.18E+01	Y	N	Y
9106-0011-018F	1.99E-01	1.81E-01	5.22E+00	Y	Y	N

*Denotes sample number mislabelled in MSR #06-960 as 9106-0011-007FS

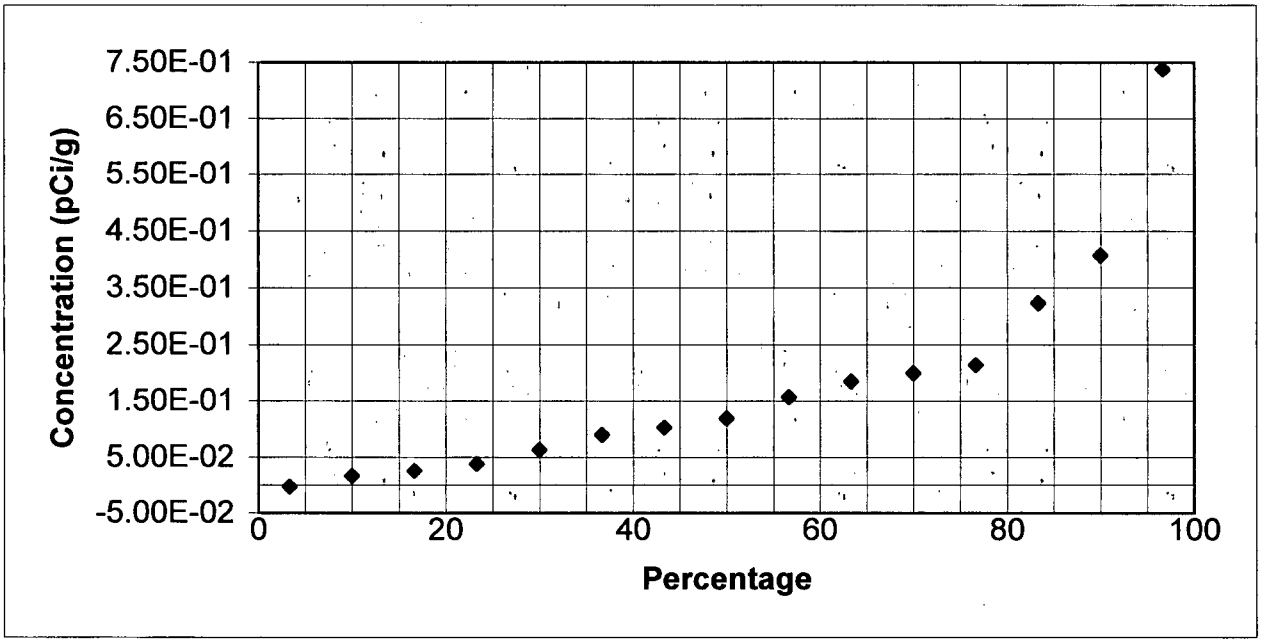
Performed By: Carl Randall Date: 11-8-06

Independent Review: Date: 11-8-06

Attachment 2d
Graphical Representation of Data
(6 Pages)

Quantile Plot For Cesium - 137

Survey Unit: 9106-0011
Survey Unit Name: Discharge Canal
Mean: 1.77E-01 pCi/g



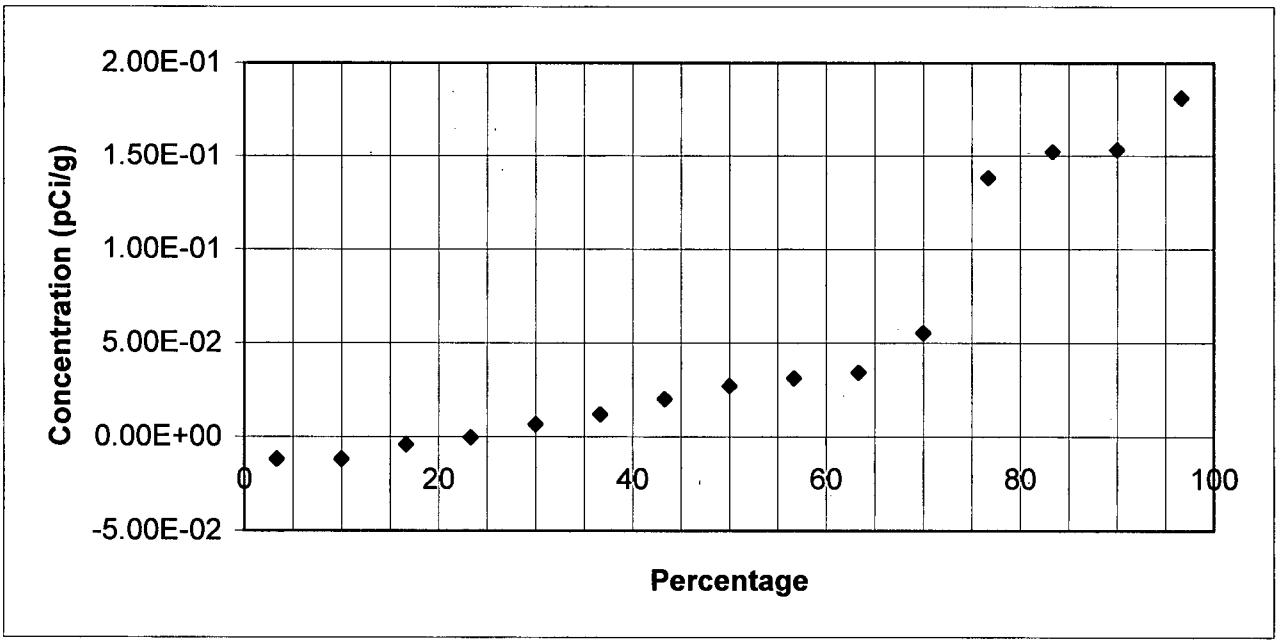
Cs-137	Rank	Percentage
-3.48E-03	1	3 %
1.57E-02	2	10 %
2.49E-02	3	17 %
3.71E-02	4	23 %
6.23E-02	5	30 %
8.89E-02	6	37 %
1.02E-01	7	43 %
1.18E-01	8	50 %
1.56E-01	9	57 %
1.84E-01	10	63 %
1.99E-01	11	70 %
2.13E-01	12	77 %
3.22E-01	13	83 %
4.06E-01	14	90 %
7.37E-01	15	97 %

Prepared By: Carl Rudolph Date: 11-3-06

Reviewed By: [signature] Date: 11/8/06

Quantile Plot For Cobalt - 60

Survey Unit: 9106-0011
Survey Unit Name: Discharge Canal
Mean: 5.21E-02 pCi/g

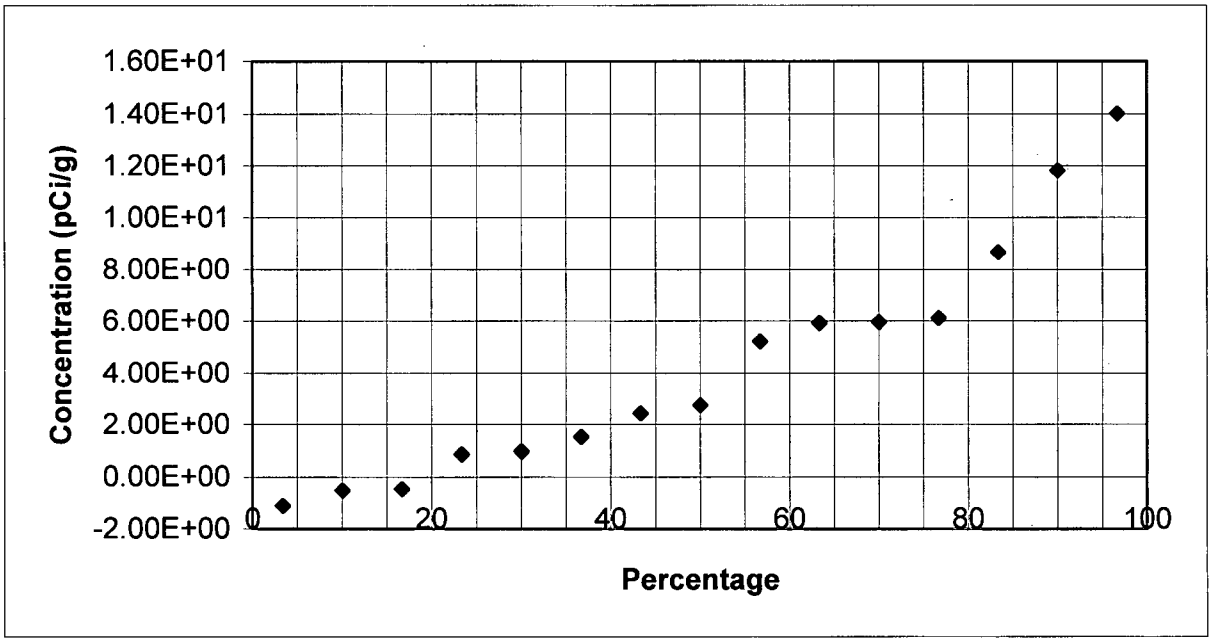


Co-60	Rank	Percentage
-1.19E-02	1	3 %
-1.19E-02	2	10 %
-4.29E-03	3	17 %
-4.54E-04	4	23 %
6.52E-03	5	30 %
1.17E-02	6	37 %
1.99E-02	7	43 %
2.69E-02	8	50 %
3.11E-02	9	57 %
3.42E-02	10	63 %
5.52E-02	11	70 %
1.38E-01	12	77 %
1.52E-01	13	83 %
1.53E-01	14	90 %
1.81E-01	15	97 %

Prepared By: Date: 11-3-06
Reviewed By: Date: 11/8/06

Quantile Plot For Nickel-63

Survey Unit: 9106-0011
Survey Unit Name: Discharge Canal
Mean: 4.40E+00 pCi/g



Ni-63	Rank	Percentage
-1.12E+00	1	3 %
-5.23E-01	2	10 %
-4.64E-01	3	17 %
8.59E-01	4	23 %
9.78E-01	5	30 %
1.53E+00	6	37 %
2.44E+00	7	43 %
2.76E+00	8	50 %
5.22E+00	9	57 %
5.93E+00	10	63 %
5.96E+00	11	70 %
6.11E+00	12	77 %
8.67E+00	13	83 %
1.18E+01	14	90 %
1.40E+01	15	97 %

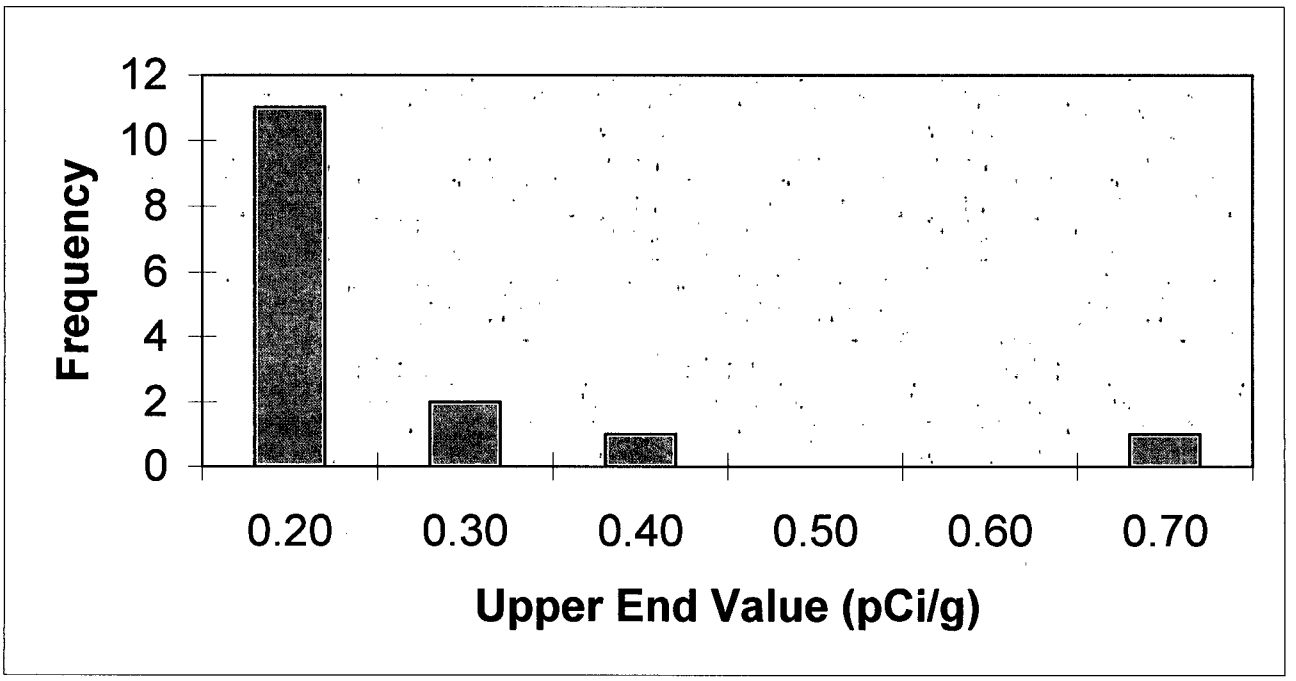
Prepared By: Jack Rockwell Date: 11-8-06

Reviewed By: [signature] Date: 11/8/06

Frequency Plot For Cesium-137

Survey Unit: 9106-0011
Survey Unit Name: Discharge Canal

Mean: 0.177 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
0.20	11	73%
0.30	2	13%
0.40	1	7%
0.50	0	0%
0.60	0	0%
0.70	1	7%
Total	15	100%

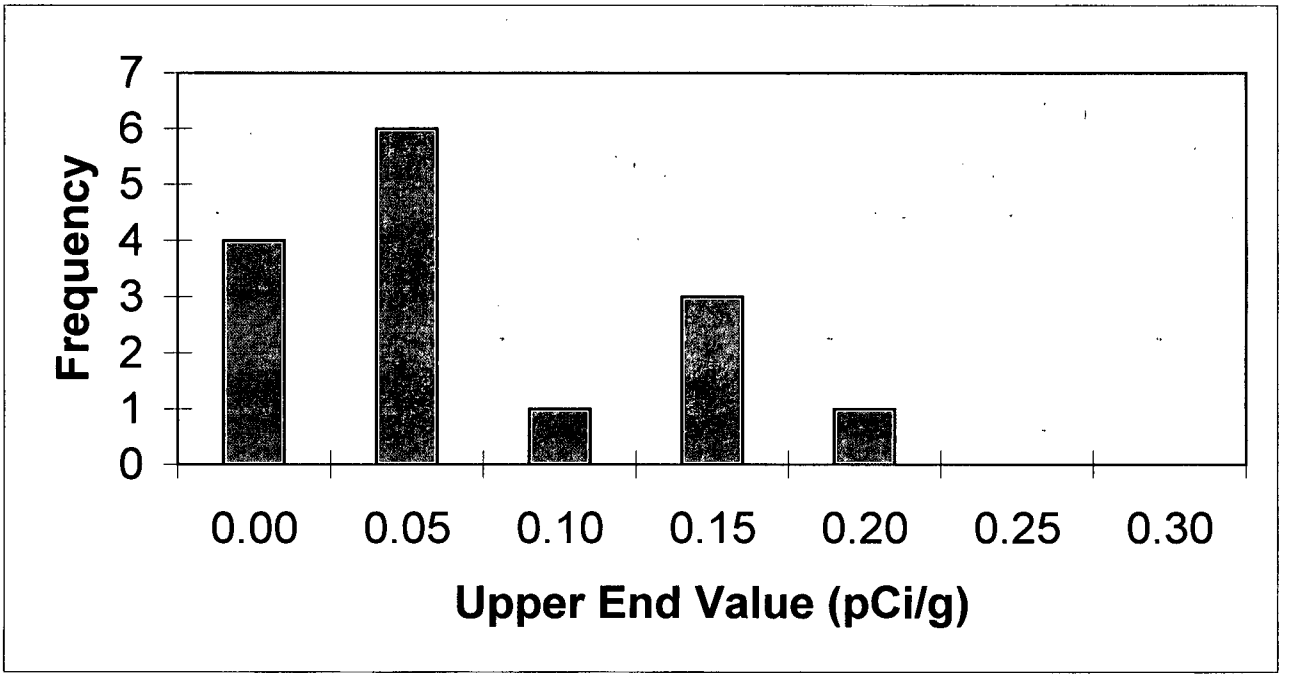
Prepared By: Carl Marshall Date: 11-3-06

Reviewed By: [signature] Date: 11/8/06

Frequency Plot For Cobalt-60

Survey Unit: 9106-0011
Survey Unit Name: Discharge Canal

Mean: 0.052 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
0.00	4	27%
0.05	6	40%
0.10	1	7%
0.15	3	20%
0.20	1	7%
0.25	0	0%
0.30	0	0%
Total	15	100%

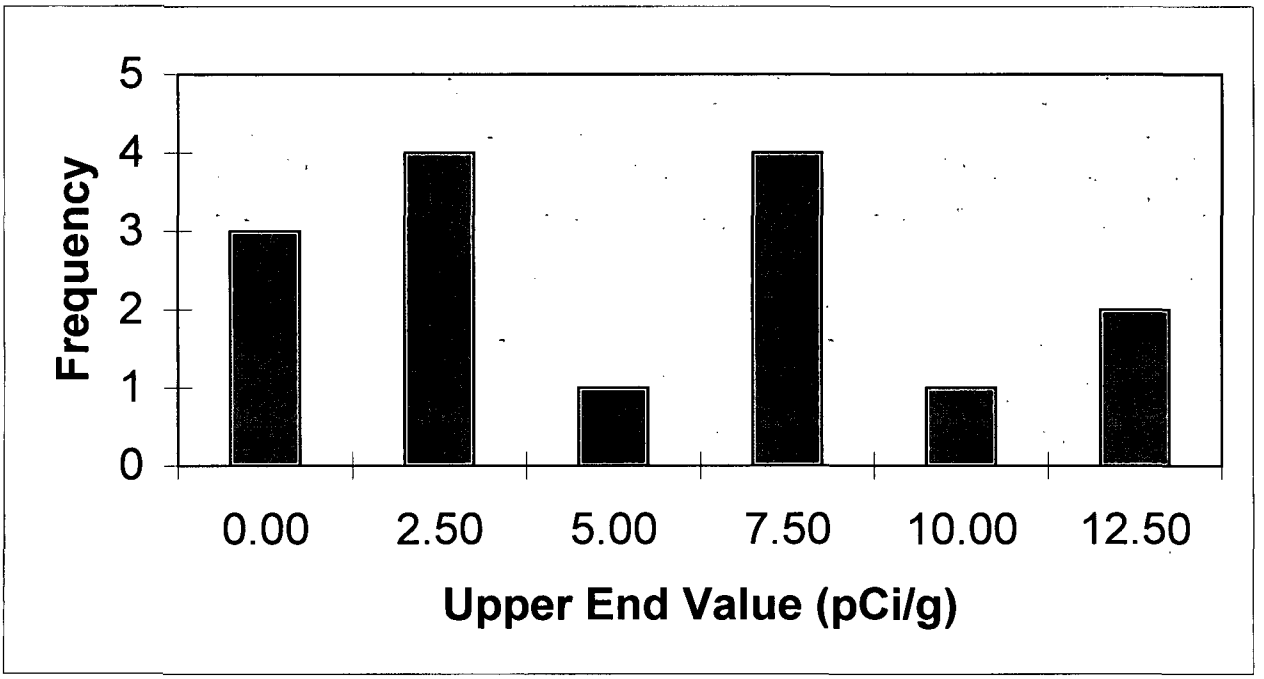
Prepared By: Oak Rudall Date: 11-3-06

Reviewed By: Date: 11/8/06

Frequency Plot For Nickel-63

Survey Unit: 9106-0011
Survey Unit Name: Discharge Canal

Mean: 4.400 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
0.00	3	20%
2.50	4	27%
5.00	1	7%
7.50	4	27%
10.00	1	7%
12.50	2	13%
Total	15	100%

Prepared By: Carl Rundell Date: 11-8-06

Reviewed By: [signature] Date: 11/8/06

Attachment 2e
Sign Test Calculation
(1 Page)

Sign Test Calculation Sheet For Multiple Radionuclisdes

Survey Unit Number: 9106-0011

Survey Unit Name: Discharge Canal

WP&IR#: 2006-021

Classification : 2	TYPE I (α error):0.05	TYPE I (β error):0.05		

Radionuclides:	Cs-137	Co-60	Ni-63
Survey Design DCGL (pCi/g):	6.01	2.9	492

Results Cs-137	Results Co-60	Results Ni-63	Weighted Sum (W_s)	DCGL-Result	Sign
8.89E-02	2.69E-02	1.53E+00	3.00E-02	9.70E-01	1
7.37E-01	1.38E-01	-4.64E-01	1.89E-01	8.11E-01	1
1.02E-01	-1.19E-02	5.93E+00	2.64E-02	9.74E-01	1
2.13E-01	1.52E-01	5.96E+00	1.10E-01	8.90E-01	1
3.22E-01	1.99E-02	2.44E+00	7.25E-02	9.28E-01	1
1.84E-01	5.52E-02	1.40E+01	8.40E-02	9.16E-01	1
1.56E-01	1.53E-01	-5.23E-01	8.70E-02	9.13E-01	1
6.23E-02	3.42E-02	8.59E-01	2.65E-02	9.73E-01	1
3.71E-02	-1.19E-02	6.11E+00	1.47E-02	9.85E-01	1
1.57E-02	1.17E-02	9.78E-01	9.42E-03	9.91E-01	1
-3.48E-03	3.11E-02	-1.12E+00	9.08E-03	9.91E-01	1
2.49E-02	-4.54E-04	2.76E+00	1.01E-02	9.90E-01	1
1.18E-01	-4.29E-03	8.67E+00	3.79E-02	9.62E-01	1
4.06E-01	6.52E-03	1.18E+01	1.02E-01	8.98E-01	1
1.99E-01	1.81E-01	5.22E+00	1.17E-01	8.83E-01	1

Number of Positive Differences (S+): 15

Critical Value: 11 Survey Unit: Meets Acceptance Criterion

Performed By: Date: 11-8-06

Independent Review: Date: 11/8/06

Attachment 2f
COMPASS DQA Surface Soil Report with Retrospective Power Curve
(3 Pages)