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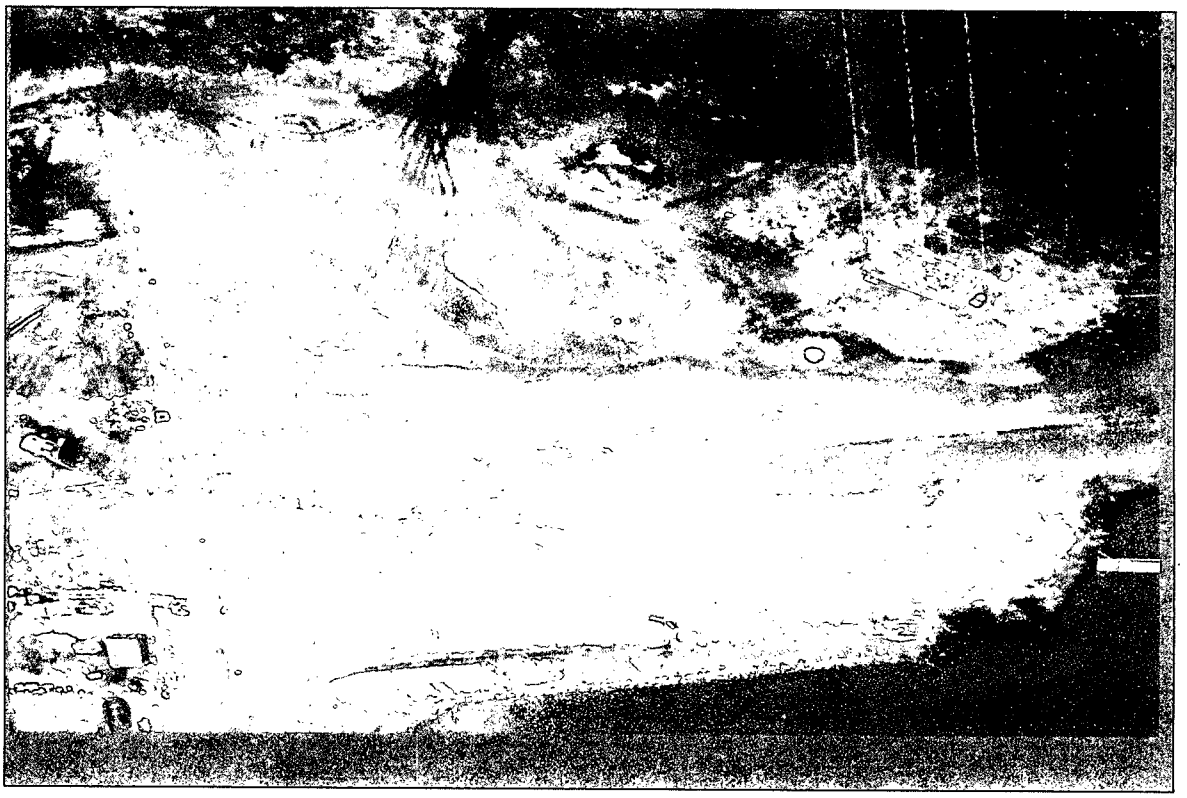

Final Status Survey
Final Report Phase VI

Appendix A17
Survey Unit Release Record 9804-0000, Subsurface Soils Associated with South East Site Grounds

February 2007

CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
SUBSURFACE AREA ASSOCIATED WITH THE SOUTHEAST GROUNDS - (NON-PROTECTED AREA)
SURVEY UNIT 9804-0000

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Revision 0

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1. SURVEY UNIT DESCRIPTION

Survey Unit 9804-0000 (Subsurface Area Associated with the Southeast Site Grounds (non-protected area) is designated as Final Status Survey (FSS) Class "A" subsurface soils area and consists of approximately eleven thousand five hundred and sixty eight (11,568 m^2) square meters of area under uninhabited land and is located approximately eight hundred and sixty four feet (864 ft) from the reference coordinate system benchmark used at Haddam Neck Plant (HNP) (see Attachment 1). Survey Unit 9804-0000 includes the subsurface soils located under open land area Survey Units 9522-0001, 9522-0002, 9522-0003 and 9522-0004. The subsurface soils under open land area Survey Units 9522-0005, 9522-0006 and 9522-0007 were formally part of subsurface soil Survey Area 9802. However during decommissioning, large excavations were necessary to facilitate the removal of commodities and contaminated soils. These excavations crossed over into the subsurface soil under open land Survey Units 9522-0003 and 9522-0004. Subsequently, the portion of Survey Area 9802 residing under open land area Survey Units 9522-0005, 9522-0006 and 9522-0007 were absorbed into subsurface Survey Area 9804. The southeast quadrant of the survey unit is comprised mostly of rock outcroppings, rock ledge, underbrush and trees. The survey unit has a moderate slope running from southeast to northwest.

The reference coordinates associated with this survey unit are E008 through E016 by S073 through S081 (refer to "*HNP License Termination Plan*" (LTP) Section 5.4.4). The reference coordinates provide the maximum dimensions of a rectangle containing this survey unit. Some areas contained in this rectangle may not be part of this survey unit. The boundary of the survey unit was defined using a Global Positioning System (GPS) based on the Connecticut State Plane System North American Datum (NAD) 1927.

2. CLASSIFICATION BASIS

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

The *"Classification Basis Summary"* conducted for Survey Unit 9804-0000 consisted of:

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

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

c) Historic and current survey records review,

A subsurface characterization study of the site was begun in 2005 to identify areas for radiological remediation based on the existing radiological conditions. Areas of interest were physically defined according to an event or physical boundary and were identified as zones. Zone 12 was associated with Survey Area 9522 (which now includes a former survey area, 9308, that was consolidated into Survey Area 9522 in 2006), Subsurface Area 9802 and Subsurface Survey Area

9804. Subsurface surveys for characterization were conducted in 2005 and 2006 under several survey and sampling plans (SSWP 05-09-001, SSWP 05-10-008, SSWP 05-11-002, SSWP 05-12-004 and SSWP 06-05-03).

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

Plant Incident Report (PIR) 80-37 reported the discovery of several discrete sources of elevated activity on the ball field in March 1980, along with other areas of the site. The investigation into the incident concluded that the elevated activity was most likely ejected from the Primary Vent Stack as a result of operational events in 1979. All elevated areas were removed upon detection according to supplemental reports.

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

In 1995, several discrete particles were found outside of the RCA, but within the Industrial Area in Survey Area 9522. These elevated areas were removed upon discovery.

The portion of Survey Area 9522 that was located inside of the Industrial Area fence, and was originally designated as Survey Area 9308, was used during decommissioning as a temporary laydown area for the Steam Generator Lower Assemblies (SGLAs) and the Pressurizer until these components where shipped off-site for disposal in 2001.

The radiological characterization of subsurface soil in this area to support decommissioning activities commenced in 2005. Sampling activities were primarily concentrated on the area designated as "Zone 12", which was an area that encompassed a majority of open land Survey Unit 9522-0006, a large portion of open land Survey Unit 9522-0007 and portions of open land Survey Units 9522-0005 and 9522-0003. Subsurface soil samples were acquired using both bore hole and test pit approaches. All soil samples were analyzed by an approved off-site laboratory for all radionuclides of concern, including "Hard-to-Detect" (HTD) radionuclides. Cs-137 was the predominant radionuclide detected in the sample population. Co-60 was detected in two samples at very low concentrations. Sr-90 and H-3 were positively identified (i.e. a result greater than two (2) standard deviations uncertainty) in six (6) different samples.

In 2006, demolition activities commenced in this area. Demolition activities consisted of building and building pad demolition in open land Survey Units 9522-0006 and 9522-0007, subsurface system removal in open land Survey Units 9522-0007, 9522-0006, 9522-0005 and 9522-0003 and above grade commodity removal in all areas with the exception of open land Survey Unit 9522-0001. The subsurface systems removed included the sewer/shower drain tank system, the Ground Water Treatment (GWT) discharge pipe, the underground utilities duct and various culverts and drains servicing various areas, including locations from within the former RCA. Thirty seven (37) soil samples were taken to support commodity removal and remediation activities, primarily in open land area Survey Unit 9522-0007 and in Excavation #7, which was a large excavation that was located in open land area Survey Units 9522-0006 and 9522-0003. Two (2) soil samples taken in support of commodity removal had results that exceeded the Operational DCGLs. Cs-137 and Co-60 were positively detected in twenty-six (26) of the thirty-seven (37) soil samples. Eu-155 was positively identified in one (1) sample but was present at a concentration less than 1% of the Operational DCGL. Two (2) samples in this group were also sent to an approved off-site laboratory for HTD analysis. No additional HTD radionuclides were identified.

Following the removal of all above grade commodities, below grade systems and soils identified by previous surveys as exceeding the screening criteria in effect for groundwater dose compliance, fifty four (54) post-remediation soil samples were taken. This sampling effort was supplemented by scanning of excavation sidewalls using an Eberline E-600 using a SPA-3 sodium iodide detector prior to backfill and grading. A summary of the sample results are provided in Table 1.

Cs-137 and Co-60 were the primary radionuclides detected in the sample population and were detected in concentrations up to 44% of the Operational DCGL incorporating the "sum of fractions". Cs-137 was the predominant radionuclide over Co-60 by a factor of 10 to 1. Two (2) samples in this group were also sent to an approved off-site laboratory for HTD analysis. No additional HTD radionuclides were positively identified.

Table 1 – Sample Analysis Results from Characterization Soil Samples Taken Post-Remediation & Prior to Backfill		
	Cs-137 (ρCi/g)	Co-60 (ρCi/g)
Minimum Value:	-1.05E-02	-3.25E-02
Maximum Value:	1.40E+00	7.35E-01
Mean:	1.90E-01	2.83E-02
Median:	8.58E-02	4.13E-04
Standard Deviation:	2.63E-01	1.08E-01

A review of the *"Initial and Supplemental Characterization Reports"* as well as the previous *"Classification Basis Summaries"* was performed. Survey Unit 9804-0000 was initially designated as Class C during the development of the LTP. The source documents, the "*Connecticut Yankee Haddam Neck Characterization Report*" and "*Initial Classification for Survey Areas at Connecticut Yankee*", were incorporated by reference in LTP revision 0. Survey Unit 9804-0000 included the subsurface soils located under open land area Survey Units 9522-0001, 9522-0002, 9522-0003 and 9522-0004. As previously explained, the subsurface soils under open land area Survey Units 9522-0005, 9522-0006 and 9522-0007 were formally part of subsurface soil Survey Area 9802. However, the physical dimensions of the excavations created during remediation crossed over into the subsurface soil under open land Survey Units 9522-0003 and 9522-0004. As a logical result, the portion of Survey Area 9802 residing under open land area Survey Units 9522-0005, 9522-0006 and 9522-0007 were absorbed into subsurface Survey Area 9804. Subsequently, as the soils incorporated from Survey Area 9802 were initially classified as subsurface Class B in accordance with LTP revision 0, subsurface Survey Area 9804 was conservatively reclassified as subsurface Class B as well. Additionally, during commodity removal, contaminated soil was identified in subsurface Survey Area 9804 that exceeded the Operational DCGL. Subsurface Class A soils are defined by LTP Section 2.3.3.1.5 as a subsurface soil area that has had known contaminating events and have a high potential to be at or exceed the DCGL. Consequently, subsurface Survey Area 9804, which contains subsurface Survey Unit 9804-0000, was again reclassified to a final classification as subsurface Class A. As discussed in LTP Section 5.7.3.2.2, the Class A classification defines the measurement or sample density. Subsequently, 31 subsurface soil sample measurement locations (approximately one per 500 m2) were established in subsurface soils Survey Unit 9804-0000. In addition, biased measurements or samples will be obtained at the locations of localized remediation efforts where operational events are suspected to may have created potential soil contamination.

3. DATA QUALITY OBJECTIVES (DQO)

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

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

The primary objective of the FSS plan was to demonstrate that the level of residual radioactivity in Survey Unit 9804-0000 did not exceed the release criteria specified in the LTP and that the potential dose from residual radioactivity is As Low As Reasonably Achievable (ALARA).

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

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

Equation 1

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

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

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

This survey unit is considered impacted by future groundwater radioactive contamination, as there are underground foundations containing residual radioactive material within the groundwater saturated zone in the area (reference CY memo ISC 06-024). The dose contribution from future groundwater, the third dose component, is bounded by two (2) mrem/yr TEDE.

Equation 2

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

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

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

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

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

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

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

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

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

Another important facet of the DQO process is to identify the radionuclides of concern and determine the concentration variability. During the characterization of the subsurface soils in this survey unit, Cs-137 and Co-60 were identified as the principle gamma emitting radionuclides which were present in sufficient concentrations that could potentially exceed the screening criteria. In addition, Sr-90 and H-3 were positively identified (i.e. a result greater than two (2) standard deviations uncertainty) in six (6) different samples. The sample population as a whole was evaluated to assess the distribution of the detected radionuclides. The radionuclide distribution percentage for each sample in the population was calculated by dividing the concentration of each detected radionuclide by the total activity concentration in the sample, expressing the abundance of the specific nuclide in the sample compared against the total activity. The mean radionuclide distribution was then calculated by taking the average of the individual sample distribution fractions. The resultant distribution fractions are presented in Table 3 below.

Table 3 – Radionuclide Distribution Fraction for Detectable Radionuclides in the Characterization Soil Sample Population

Detected Radionuclide	Distribution Fraction
Cs-137	0.791
Co-60	0.058
Sr-90	0.036
H-3	0.115

The potential presence of HTD radionuclides such as Sr-90 and H-3 was addressed during the FSS of this survey unit by using a surrogate relationship to another detectable radionuclide as recommended in NUREG-1575 (MARSSIM), in this case Cs-137. This approach directly applies as gamma spectroscopy was the primary analytical method used to assess volumetric soil samples in comparison against the Operational DCGL for soil. To demonstrate compliance with the release criteria for the survey unit, the DCGL for the surrogate radionuclide, in this case Cs-137 was scaled to account for the fact that it was being used as an indicator for additional radionuclides, in this case Sr-90 and H-3. The result is referred to as the surrogate DCGL.

The surrogate DCGL was computed based on the distribution ratio between the hard-to-detect radionuclides and the easy-to-detect radionuclides. The surrogate DCGL is computed as follows:

Equation 3

$$Surrogate_{DCGL} = \frac{1}{\left[\left(\frac{1}{DCGL_{Sur}}\right)+\left(\frac{R_2}{DCGL_2}\right)+\left(\frac{R_3}{DCGL_3}\right)+\ldots\left(\frac{R_n}{DCGL_n}\right)\right]}$$

Where: $DCGL_{Sur}$ = Surrogate radionuclide DCGL
$DCGL_{2,3\ldots n}$ = DCGL for radionuclides to be represented by the surrogate
R_n = Ratio of concentration (or nuclide mixture fraction) of radionuclide "n" to surrogate radionuclide

For soils, using the DCGLs presented in Table 2 and the soil nuclide distribution presented in Table 3, the following surrogate calculation was deduced;

Equation4

$$Surrogate_{DCGL(Cs-137)} = \frac{1}{\left[\left(\frac{1}{4.75_{(Cs-137)}}\right)+\left(\frac{.036/.791}{0.93_{(Sr-90)}}\right)+\left(\frac{.115/.791}{247.00_{(H-3)}}\right)\right]} = 3.85 \quad pCi/g$$

Subsequently, the surrogate DCGL that was used for Cs-137 in this survey unit to demonstrate compliance with the operational dose limit of fifteen (15) mrem per year is 3.85 ρCi/g.

In addition to the application of a surrogate DCGL to account for the HTD radionuclides of concern, two soil samples were selected to be analyzed by an approved off-site laboratory for all radionuclides specified in Table 1. This exceeds the LTP requirement that a minimum of 5% of the subsurface soil samples be analyzed by an approved off-site laboratory for all HTD radionuclides of concern as specified by the LTP.

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

4. SURVEY DESIGN

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

The DQO process determined that both Cs-137 and Co-60 would be the primary radionuclides of concern in Survey Unit 9804-0000. In addition, the potential

presence of two HTD radionuclides of concern, Sr-90 and H-3, would be accounted for through the use of a surrogate DCGL, in this case Cs-137 (refer to Section 3). Other radionuclides positively identified in concentrations greater than the screening criteria during the performance of this FSS would also be evaluated to ensure adequate survey design. Radionuclide screening or de-selection is a process where an individual radionuclide or aggregates may be considered insignificant and eliminated from the FSS. The criteria for de-selection are concentrations less than 5% for individual radionuclides and less than 10% for aggregates.

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

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

LTP Section 5.7.3.2.2 states that there will be a minimum of thirty one (31) measurement locations, based on a sample population of approximately one per 500 m^2 in a Class A subsurface soil area. The sample density for Survey Unit 9804-0000 with a survey population of thirty one (31) measurements over approximately eleven thousand five hundred and sixty eight square meters (11,568 m^2) was one measurement every three hundred and seventy three (373) m^2. In addition, biased measurements or samples were obtained at the locations of localized remediation efforts where there was the potential for soil contamination. LTP Section 5.7.3.2.2 states that the range of the number of measurements in Class A areas corresponds to the range of values for N (for Sign test), considering $\alpha = 0$ .05, $\beta = 0.05$, and a relative shift of < 3.0.

The grid pattern and locations of the soil samples were determined using Visual Sample Plan (VSP) in accordance with Procedure RPM 5.1-14, "*Identifying, and Marking Surface Sample Locations for Final Status Survey.*" Visual Sample Plan was created by Pacific Northwest National Laboratory (PNNL) for the United States Department of Energy. A systematic triangular grid pattern with a random starting point was selected for sample design, which is appropriate for a Class A subsurface survey 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 4.

Table 4 - Sample Measurement Locations with Associated GPS Coordinates for Non-parametric Sample Population		
Designation	**Northing**	**Easting**
9804-0000-001F	236559.81	669100.78
9804-0000-002F	236500.84	669066.74
9804-0000-003F	236500.84	669134.83
9804-0000-004F	236441.88	668964.61
9804-0000-005F	236441.88	669032.70
9804-0000-006F	236441.88	669100.78
9804-0000-007F	236382.92	668930.57
9804-0000-008F	236382.92	668998.66
9804-0000-009F	236382.92	669066.74
9804-0000-010F	236382.92	669134.83
9804-0000-011F	236382.92	669202.91
9804-0000-012F	236323.95	668896.53
9804-0000-013F	236323.95	668964.61
9804-0000-014F	236323.95	669032.70
9804-0000-015F	236323.95	669100.78
9804-0000-016F	236323.95	669168.87
9804-0000-017F	236323.95	669236.95
9804-0000-019F	236264.99	668998.66
9804-0000-020F	236264.99	669066.74
9804-0000-021F	236264.99	669134.83
9804-0000-022F	236264.99	669202.91
9804-0000-023F	236264.99	669270.99
9804-0000-025F	236206.03	669100.78
9804-0000-026F	236206.03	669236.95

Table 4 – (continued)		
Designation	**Northing**	**Easting**
9804-0000-027F	236206.03	669305.04
9804-0000-028F	236206.03	669373.12
9804-0000-029F	236147.07	669339.08
9804-0000-030F	236147.07	669407.16

During the performance of the survey, it was discovered that three (3) of the thirty-one (31) sample locations identified for non-parametric testing were deemed to be inaccessible due to the rapid change in elevation from east to west toward the canal, changes to the discharge structure, removal of the rip-rap, and area restoration to the banks of the discharge canal. The three (3) locations identified were 9804-0000-018F, 9804-0000-024F and 9804-0000-031F. Subsequently, three (3) additional sample measurement locations were designated to replace the locations that were deemed to be inaccessible. The location of the samples were determined using Visual Sample Plan (VSP) in accordance with RPM 5.1-14, *"Identifying and Marking Surface Sample Locations for FSS in Open Land Areas"* using a random selection which is appropriate for relocating a small number of sample locations in a Class A area. Sample Measurement Locations for the additional samples are listed with the GPS coordinates in Table 5.

Table 5 - Sample Measurement Locations with Associated GPS Coordinates for Replacement Sample Locations		
Designation	**Northing**	**Easting**
9804-0000-036F	236365.25	669149.47
9804-0000-037F	236400.39	668982.88
9804-0000-038F	236355.96	669069.10

In accordance with LTP Section 5.7.3.2.2, four (4) judgmental (biased) samples were collected in this survey area. One (1) judgmental location was situated at the base of the discharge canal at the location of the former barge slip, one (1) judgmental sample was situated at the north boundary of the area formally designated as Excavation #7, one (1) judgmental sample was taken in the northeast quadrant at the location where subsurface drain headers were removed and one (1) sample was taken at the former location of the sewer/shower drain tank. Sample Measurement Locations for the judgmental samples are listed with the GPS coordinates in Table 6.

Table 6 - Sample Measurement Locations with Associated GPS Coordinates for Judgmental Sample Locations		
Designation	**Northing**	**Easting**
9804-0000-032B	236206.11	669139.23
9804-0000-033B	236492.21	669023.32
9804-0000-034B	236400.60	669091.16
9804-0000-035B	236294.04	669153.04

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

The implementation of quality control measures as referenced by Procedure RPM 5.1-24, "*Split Sample Assessment for Final Status Survey*," included the collection of one (1) soil sample for "split sample" analysis by the off-site laboratory. This location was selected randomly using the Microsoft Excel "RANDBETWEEN" function.

Survey Unit 9804-0000 is a subsurface survey unit. Subsequently, no scanning was required.

For this Class A survey unit, the "Investigation Level" for soil sample measurement results are those levels specified in LTP, Table 5-8. Table 7 provides a synopsis of the survey design.

Table 7 – Synopsis of the Survey Design		
Feature	**Design Criteria**	**Basis**
Subsurface Survey Unit Land Area	11,568 m^2	Based on AutoCAD-LT
Number of Measurements	35 (31 Systematic grid) (4 Judgmental)	IAW LTP Section 5.7.3.2.2 for a Class A Subsurface Soil Survey Unit
Grid Spacing	20.74 m	Based on triangular grid

Table 7 – (continued)

Feature	Design Criteria	Basis
Operational DCGL	3.85 pCi/g Cs-137[2] 2.29 pCi/g Co-60	Administratively set to achieve 15 mrem/yr TEDE [1]
Soil Investigation Level	3.85 pCi/g Cs-137[2] 2.29 pCi/g Co-60	The Operational DCGL(s) are more conservative that the LTP criteria for a Class 1 survey unit

(1) The allowable dose for soil in this survey unit is fifteen (15) mrem/yr TEDE as the bounding dose from existing and future groundwater has been established based on field data (reference CY memo ISC 06-024).

(2) The Operational DCGL for Cs-137 has been adjusted as a surrogate to account for the potential presence of HTD radionuclides Sr-90 and H-3.

5. SURVEY IMPLEMENTATION

Final status survey field activities were conducted under Work Plan and Inspection Record (WP&IR) 2006-0043. The WP&IR package included a detailed FSS plan, job safety analysis, job planning checklist and related procedures for reference. Daily briefings were conducted to discuss the expectations for job performance and the safety aspects of the survey. The "Daily Survey Journal" was used to document field activities and other information pertaining to the FSS.

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

Thirty-five (35) subsurface soil samples were collected and packaged in accordance with Haddam Neck Plant (HNP) Procedure RPM 5.1-3, "*Collection of Sample Media for Final Status Survey*" and FSS design. Samples were collected using direct push probe technology (GeoProbe®).

All samples were obtained to a depth of three (3) meters with the exception of sample numbers 9804-0000-005F, 9804-0000-011F, 9804-0000-017F, 9804-0000-020F, 9804-0000-023F and 9804-0000-033, where refusal was encountered due to the presence of bedrock prior to reaching a three (3) meter depth. In addition, sample 9804-0000-019F was relocated approximately three feet to the west of its designed location due to the presence of a rock ledge. Large stones, wood and/or root pieces were removed and the soil matrix was homogenized from each 3 meter soil column. Samples were controlled, transported, stored, and transferred to the off-site laboratory using Chain-of-Custody (COC) protocol in accordance with Procedure RPM 5.1-5, "*Chain of Custody for Final Status Survey Samples.*"

Two (2) samples (9804-0000-027F and 9804-0000-036F) were randomly selected for HTD radionuclide analysis.

The implementation of survey specific quality control measures included the collection of two (2) samples (9804-0000-007F and 9804-0000-028F) for "split sample" analysis.

6. SURVEY RESULTS

All field survey activities were conducted between November 28, 2006 and November 30, 2006.

The off-site laboratory employed for the radiological analyses of samples was General Engineering Laboratories, LLC. The laboratory analyzed the thirty-one (31) samples collected for non-parametric statistical testing, the associated field splits and the four (4) judgmental samples using gamma spectroscopy. Gamma spectroscopy analysis was performed to the required MDCs. Gamma spectroscopy results identified some radionuclides meeting the accepted criteria for detection (i.e., a result greater than two standard deviations uncertainty). However, Cs-137 and Co-60 were the only gamma-emitting radionuclides reported in concentrations exceeding the de-selection criteria.

Cs-137 was identified in twelve (12) and Co-60 was identified in one (1) of the thirty-one (31) samples collected for non-parametric statistical testing. The mean of the gamma spectroscopic analysis results for the sample population indicated that Cs-137 was present at levels lower than the concentrations of Cs-137 found in soil at off-site locations within the vicinity of the HNP as presented in the Health Physics TSD BCY-HP-0063. A summary of the thirty-one (31) samples collected for non-parametric statistical testing results is provided in Table 8.

Table 8 - Summary of Gamma Spectroscopy Results for Surface Soil Samples Comprising the Statistical Sample Population

Sample Number	Cs-137 pCi/g	Co-60 pCi/g
9804-0000-001F	1.53E-02	6.09E-03
9804-0000-002F	3.69E-02	3.01E-03
9804-0000-003F	2.82E-02	8.66E-03
9804-0000-004F	0.00E+00	-9.72E-03
9804-0000-005F	1.41E-02	5.55E-03
9804-0000-006F	0.00E+00	5.36E-03
9804-0000-007F	-1.02E-02	-8.67E-03

Table 8 - (continued)

Sample Number	Cs-137 ρCi/g	Co-60 ρCi/g
9804-0000-008F	5.06E-03	1.01E-02
9804-0000-009F	-4.96E-04	1.41E-02
9804-0000-0010F	7.61E-03	1.18E-02
9804-0000-0011F	1.20E-02	4.00E-03
9804-0000-0012F	0.00E+00	-3.92E-03
9804-0000-0013F	3.82E-02	-1.83E-02
9804-0000-0014F	3.31E-02	-1.38E-03
9804-0000-0015F	3.24E-02	3.89E-02
9804-0000-0016F	1.71E-02	9.88E-04
9804-0000-0017F	7.43E-02	-1.48E-02
9804-0000-0019F	4.67E-02	1.70E-02
9804-0000-0020F	4.50E-02	6.85E-03
9804-0000-0021F	3.10E-02	-4.88E-03
9804-0000-0022F	5.83E-02	1.47E-02
9804-0000-0023F	1.78E-02	1.55E-02
9804-0000-0025F	2.67E-02	1.13E-02
9804-0000-0026F	2.05E-02	-2.50E-03
9804-0000-0027F	1.52E-02	3.33E-03
9804-0000-0028F	5.16E-03	-1.88E-02
9804-0000-0029F	-3.12E-03	-1.25E-02
9804-0000-0030F	-4.96E-04	1.24E-02
9804-0000-0036F	7.61E-03	9.66E-03
9804-0000-0037F	1.20E-02	7.39E-03
9804-0000-0038F	0.00E+00	2.48E-02

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

Sr-90 was positively identified (i.e., a result greater than two standard deviations uncertainty) in one of the two samples analyzed for HTD radionuclides. As previously stated in Section 4 of this report, the criteria for de-selection of a radionuclide is a concentration that is less than 5% of the Operational DCGL for individual radionuclides and less than 10% of the Operational DCGLs for aggregates. For Sr-90, the Operational DCGL is 0.93 ρCi/g to achieve a TEDE of fifteen (15) mrem/yr. The analytical result for Sr-90 identified in sample number 9804-0000-027F equated to 6% of the Operational DCGL. This concentration was within the observed range for the sample population used to determine the average nuclide distribution. However, as Sr-90 was already identified as a radionuclide of concern for this survey unit and a surrogate DCGL was applied to account for the potential presence of Sr-90 and H-3, no further action was deemed necessary. All other HTD radionuclides were not present in concentrations sufficient for detection (i.e., a result greater than two standard deviations uncertainty) in the two samples selected for HTD analysis. The singular result for Sr-90 is provided below in Table 9.

Table 9 - Summary of Sr-90 Analysis Results for Surface Soil Samples Comprising the Statistical Sample Population

Sample Number	Sr-90 ρCi/g
9804-0000-027F	5.12E-2

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

Equation 3

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

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

The results of the unity rule calculation for the radionuclides of concern in the statistical sample population for Survey Unit 9522-0003 are provided in Table 10 below.

Table 10 – Results of Unity Calculation for Subsurface Soil Samples Comprising the Statistical Sample Population [3]			
Sample Number	Fraction of the Operational DCGL[1]		Unity
	Cs-137[2]	Co-60	
9804-0000-001F	-	-	-
9804-0000-002F	0.01	-	0.01
9804-0000-003F	0.01	-	0.01
9804-0000-004F	-	-	-
9804-0000-005F	-	-	-
9804-0000-006F	-	-	-
9804-0000-007F	-	-	-
9804-0000-008F	-	-	-
9804-0000-009F	-	-	-
9804-0000-0010F	0.01	-	0.01
9804-0000-0011F	0.01	-	0.01
9804-0000-0012F	-	-	-
9804-0000-0013F	-	-	-
9804-0000-0014F	-		-
9804-0000-0015F	-	-	-
9804-0000-0016F	-	-	-
9804-0000-0017F	-	-	-
9804-0000-0019F	0.01	-	0.01
9804-0000-0020F	-	0.02	0.02
9804-0000-0021F	-	-	-
9804-0000-0022F	0.01	-	0.01
9804-0000-0023F	0.01	-	0.01
9804-0000-0025F	0.01	-	0.01
9804-0000-0026F	0.01	-	0.01
9804-0000-0027F	0.01	-	0.01
9804-0000-0028F	-	-	-

Table 10 – (continued)			
Sample Number	**Fraction of the Operational DCGL[1]**		**Unity**
	Cs-137[2]	**Co-60**	
9804-0000-0029F	0.01	-	0.01
9804-0000-0030F	0.01	-	0.01
9804-0000-0036F	-	-	-
9804-0000-0037F	-	-	-
9804-0000-0038F	-	-	-

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

(2) The Operational DCGL for Cs-137 has been adjusted to 3.85 ρCi/g as a surrogate to account for the potential presence of HTD radionuclide Sr-90 and H-3.

(3) Blank cells indicate that the radionuclide was not positively detected in the sample

Four (4) biased judgmental subsurface soil samples were collected. The judgmental soil samples were analyzed for Cs-137 and Co-60 in accordance with the DQOs used during the survey design. The samples are denoted as shown in location Table 6, with the sample results shown in Table 11 below.

Table 11 - Judgmental Sample Results [3]			
Sample Number	**Cs-137 [2] ρCi/g**	**Co-60 ρCi/g**	**Fraction of the Operational DCGL[1]**
9804-0000-032B	7.80E-03	1.24E-02	-
9804-0000-033B	1.15E-01	9.66E-03	0.03
9804-0000-034B	1.41E-02	7.39E-03	-
9804-0000-035B	5.77E-02	2.48E-02	0.01

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

(2) The Operational DCGL for Cs-137 has been adjusted to 3.85 ρCi/g as a surrogate to account for the potential presence of HTD radionuclide Sr-90 and H-3.

(3) Blank cells indicate that the radionuclide was not positively detected in the sample

7. QUALITY CONTROL

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

Cs-137 was not detected in sufficient quantities in the field split results at locations 9804-0000-007 or 9804-0000-028 to evaluate in accordance with procedure. Evaluation using the reported results for naturally occurring K-40 resulted in acceptable agreement between the field-split results at these locations.

The sample analysis vendor, GEL, maintains quality control and quality assurance plans as part of normal operation. Refer to Attachment 3 for data and data quality analysis results.

8. INVESTIGATIONS AND RESULTS

No investigations were conducted within this survey unit.

9. REMEDIATION AND RESULTS

Significant remediation activities occurred in this survey unit prior to FSS. All above grade and below grade commodities and facility systems were removed and properly dispositioned. Contaminated soils were identified, excavated and removed as part of the "Zone 12" and "Excavation 7" remediation projects which occurred in this survey area. All excavations were characterized and backfilled with "clean" fill prior to performing FSS. As a byproduct of remediation activities, the ground area is comprised of barren dirt with no vegetation, and the soils have been graded relatively flat to the corresponding elevation of the survey units to the north and west. The majority of the southeastern half of the ground in this survey unit is comprised of stone from the ledge outcroppings along the eastern ridge. Health Physics TSD BCY-HP-0078, *"ALARA Evaluation of Soil Remediation in Support of Final Status Survey,"* determined that remediation beyond that required to meet the release criteria is unnecessary and that the remaining residual radioactivity in soil was ALARA.

10. CHANGES FROM THE FINAL STATUS SURVEY PLAN

During the performance of the survey, it was discovered that three (3) of the thirty-one (31) sample locations identified for non-parametric testing were deemed to be inaccessible. The three (3) locations identified were 9804-0000-018F, 9804-0000-024F and 9804-0000-031F. Subsequently, three (3) additional sample measurement locations (9804-0000-036F, 9804-0000-037F and 9804-0000-038F) were designated to replace the locations that are deemed to be inaccessible. This was accomplished through an addendum to the FSS Plan. In

addition, sample 9804-0000-019F was relocated approximately three feet to the west of its designed location due to the presence of a rock ledge.

11. DATA QUALITY ASSESSMENT (DQA)

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

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

The preliminary data review consisted of calculating basic statistical quantities (e.g., mean, median, standard deviation). The mean and median values are well below the Operational DCGL. Also, the retrospective power curve shows that a sufficient number of samples were collected to achieve the desired power. Therefore, the survey unit meets the unrestricted release criteria with adequate power as required by the DQOs. The basic statistical quantities for the statistical sample population are provided below in Table 12.

Table 12 – Basic Statistical Quantities for Cs-137 and Co-60 from the Final Status Survey

	Cs-137 pCi/g	Co-60 pCi/g
$DCGL_{op}$:	3.85E+00	2.29E+00
Minimum Value:	-1.02E-02	-1.88E-02
Maximum Value:	7.43E-02	3.89E-02
Mean:	2.12E-02	2.64E-03
Median:	1.78E-02	3.33E-03
Standard Deviation:	1.93E-02	1.21E-02

For Cs-137, the range of the data, about four (4) standard deviations, was not a particularly large variation considering that the levels were essentially at existing environmental levels where such variation is to be expected. The difference between the mean and median was about 18% of the standard deviation which indicates some skewness in the data. The data was represented graphically through posting plots, a frequency plot, and a quantile plot. The frequency plot indicates positive skewness as confirmed by the calculated skew of 0.73.

Co-60, although included in the FSS plan for compliance purposes, was positively identified in only one (1) of the thirty-one (31) samples collected for non-parametric statistical testing. Data assessment and graphical representation of Co-60 was not considered useful given the limited number of data points to represent the distribution.

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

12. ANOMALIES

No anomalies were noted.

13. CONCLUSION

Subsurface soils Survey Unit 9804-0000 has met the final DQOs of the FSS plan. The ALARA criteria for soils as specified in Chapter 4 of the LTP were achieved. Elevated Measurement Comparison was not required.

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

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

The dose contribution from soil is 0.10 mrem/yr TEDE based on the average radionuclide concentrations in the samples used for non-parametric statistical sampling.

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

This survey unit is considered impacted by future groundwater radioactive contamination, as there are underground foundations containing residual radioactive material within the groundwater saturated zone in the area (reference CY memo ISC 06-024). The dose contribution from future groundwater, the third dose component, is bounded by two (2) mrem/yr TEDE.

The average total dose from residual radioactivity in this survey unit, including exposures from the three (3) components as described in Section 3, that is, residual radioactivity in soil, existing groundwater radioactivity, and future groundwater radioactivity from the burial of concrete foundations or footings from site buildings containing residual radioactivity, will not exceed 4.10 mrem/yr TEDE. Therefore, Survey Unit 9804-0000 is acceptable for unrestricted release.

14. ATTACHMENTS

14.1 Attachment 1 – Survey Unit Location Map

14.3 Attachment 2 – Laboratory Results

14.4 Attachment 3 – DQA Results

ATTACHMENT 1 (FIGURES)

9801

9804

9803

9802

9805

9807

0 275 550 Feet

Connecticut River

Plant North

CONNECTICUT YANKEE ATOMIC POWER COMPANY

GENERAL ARRANGEMENT DRAWING

Subsurface Survey Unit 9804-0000

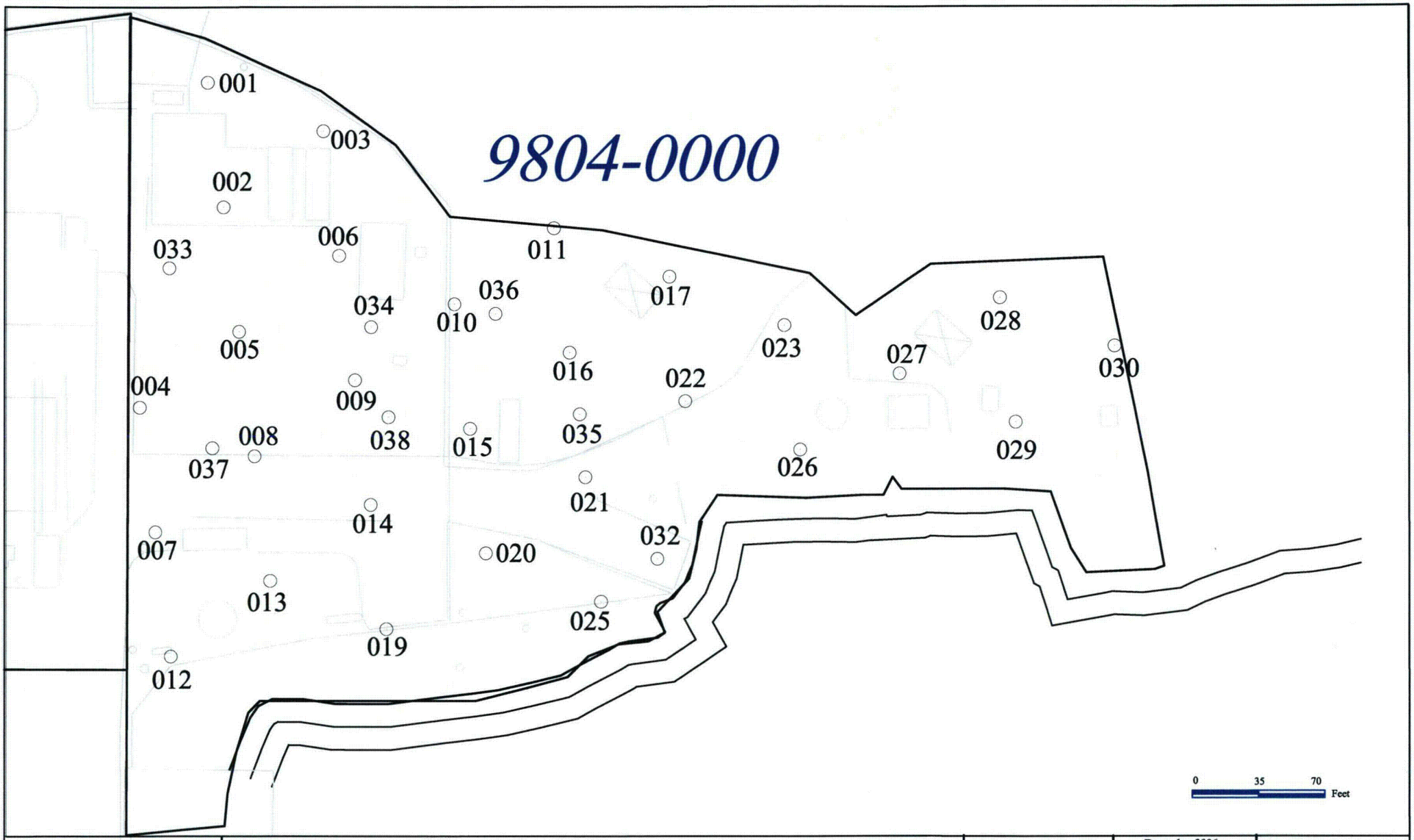
REMOVE · RESTORE · REUSE

CY DECOMMISSIONING PROJECT

Date:	December 2006
Revised By:	R Massengill
Release Record #:	9804-0000
Revision #:	0
Map #:	Figure 1

LEGEND

= Survey Unit



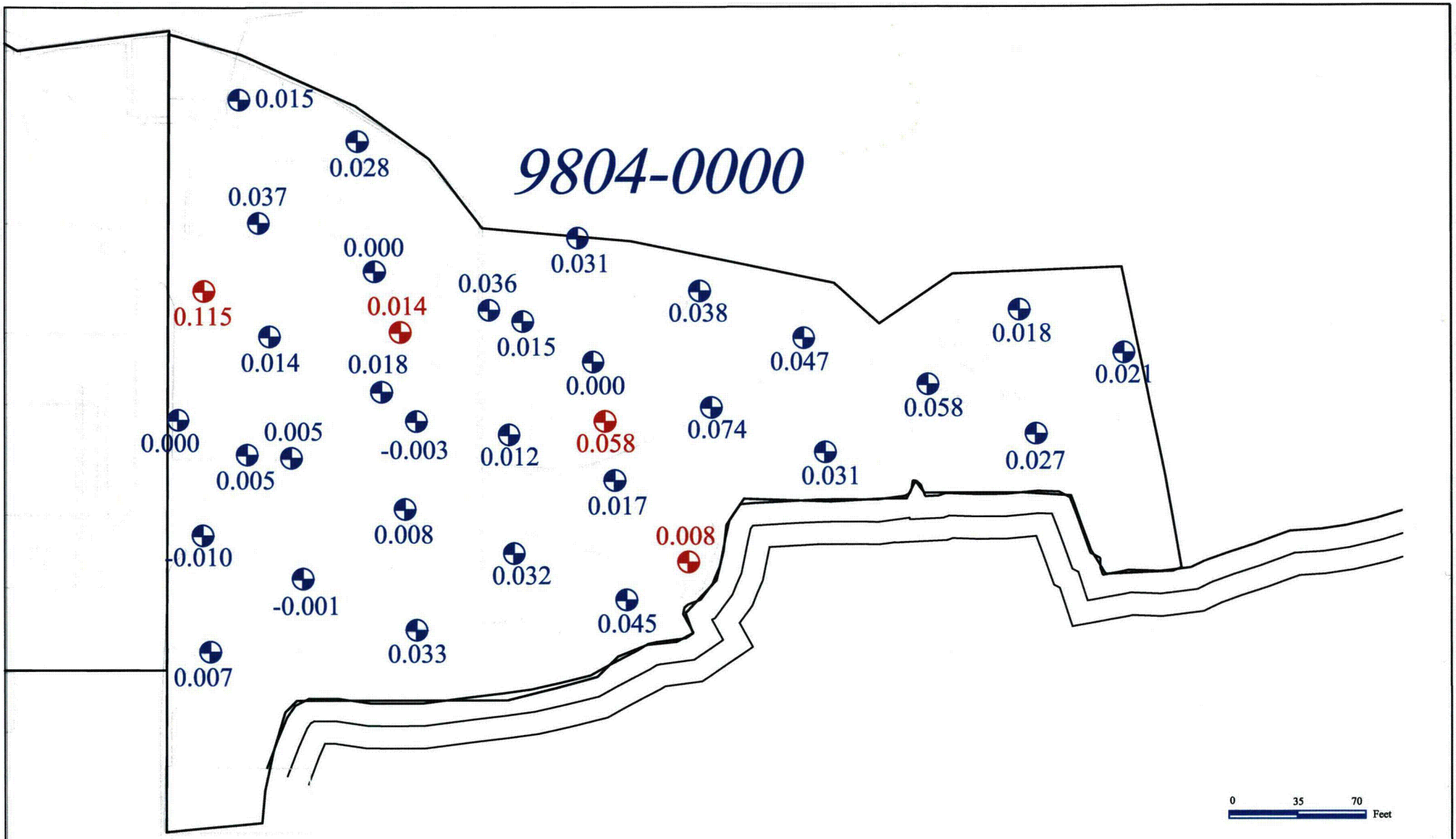
Plant North

CONNECTICUT YANKEE ATOMIC POWER COMPANY
GENERAL ARRANGEMENT DRAWING
Subsurface Sample Locations

Date:	December 2006
Revised By:	R Massengill
Release Record #:	9804-0000
Revision #:	0
Map #:	Figure 2

LEGEND

○ = Sample Location



Plant North

CONNECTICUT YANKEE ATOMIC POWER COMPANY

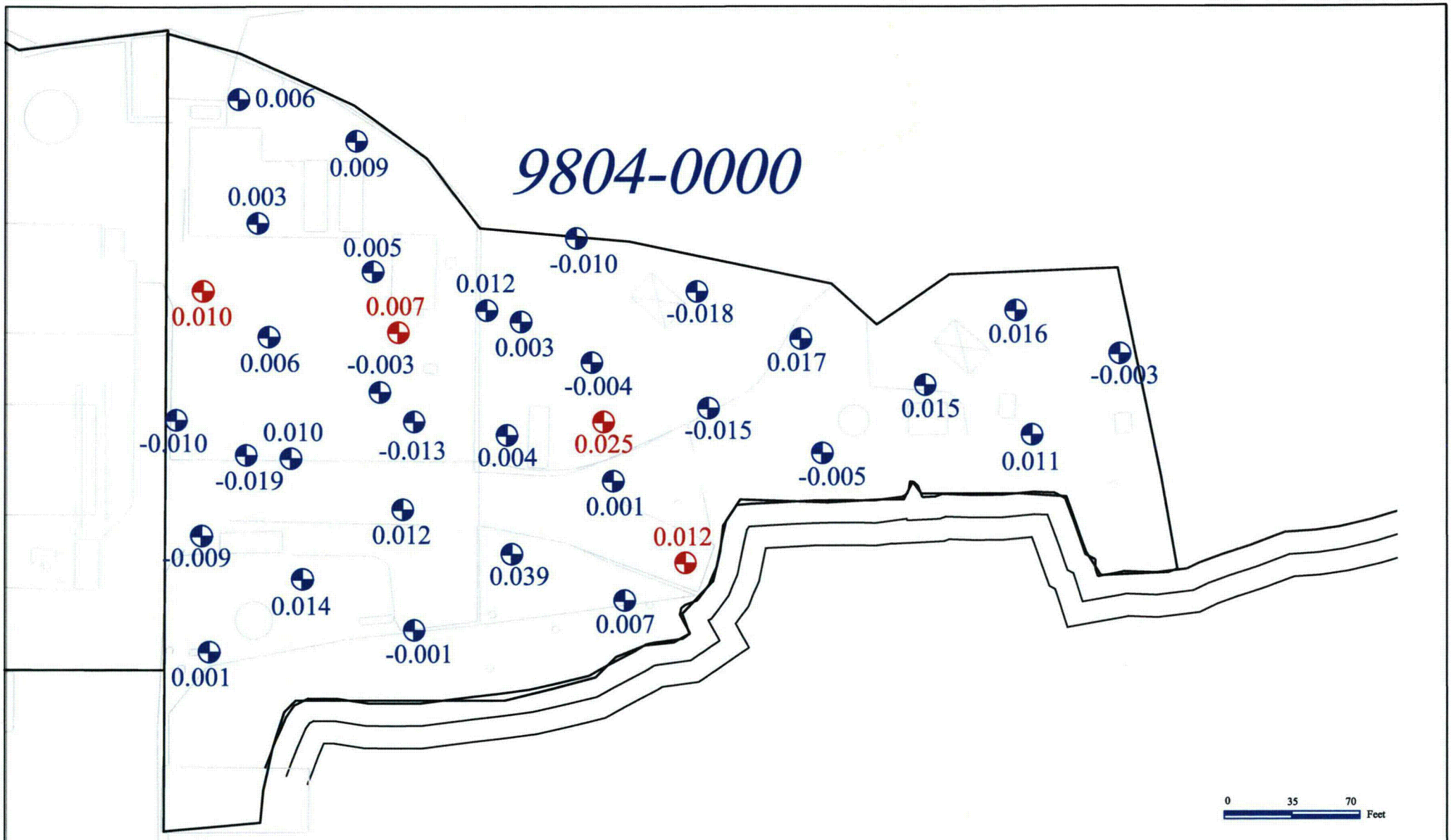
GENERAL ARRANGEMENT DRAWING

Subsurface Sample Results for Cs-137

Date:	December 2006
Revised By:	R Massengill
Release Record #:	9804-0000
Revision #:	0
Map #:	Figure 3

LEGEND

- = Non-parametric Testing Location Sample Result
- = Biased Location Sample Result



Plant North

CONNECTICUT YANKEE ATOMIC POWER COMPANY

GENERAL ARRANGEMENT DRAWING

Cobalt-60 Subsurface Soil Sample Results in ρ Ci/g

Date:	December 2006
Revised By:	R Massengill
Release Record #:	9804-0000
Revision #:	0
Map #:	Figure 4

LEGEND

- = Non-parametric Testing Location Sample Result
- = Biased Location Sample Result

ATTACHMENT 2 (LABORATORY DATA)

General Narrative

General Narrative
for
Connecticut Yankee Atomic Power Co.
Work Order: 177084
SDG: MSR#06-1517

December 08, 2006

Laboratory Identification:

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

Summary

Sample receipt

The samples arrived at General Engineering Laboratories, LLC, Charleston, South Carolina on December 05, 2006 for analysis. Shipping container temperatures were checked, documented, and within specifications. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage.

Sample Identification The laboratory received the following samples:

Laboratory Identification	Sample Description
177084001	9804-0000-013F
177084002	9804-0000-020F
177084003	9804-0000-002F
177084004	9804-0000-012F
177084005	9804-0000-003F
177084006	9804-0000-019F
177084007	9804-0000-001F
177084008	9804-0000-021F
177084009	9804-0000-026F
177084010	9804-0000-016F
177084011	9804-0000-035F
177084012	9804-0000-030F
177084013	9804-0000-029F
177084014	9804-0000-036F
177084015	9804-0000-038F
177084016	9804-0000-022F
177084017	9804-0000-010F
177084018	9804-0000-009F
177084019	9804-0000-014F
177084020	9804-0000-025F
177084021	9804-0000-032F
177084022	9804-0000-028F
177084023	9804-0000-015F
177084024	9804-0000-023F
177084025	9804-0000-017F

177084026	9804-0000-028FS
177084027	9804-0000-011F
177084028	9804-0000-027F
177084029	9804-0000-004F
177084030	9804-0000-007F
177084031	9804-0000-007FS
177084032	9804-0000-037F
177084033	9804-0000-033F
177084034	9804-0000-006F
177084035	9804-0000-034F
177084036	9804-0000-008F
177084037	9804-0000-005F

Items of Note

There are no items to note.

Case Narrative

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

Analytical Request

Thirty-five soil samples were analyzed for FSSGAM. Two soil samples were analyzed for FSSALL.

Data Package

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

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

Cheryl Jones
Project Manager

List of current GEL Certifications as of 08 December 2006

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

Chain of Custody and Supporting Documentation

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00695

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Art Hammond 860-267-2556 x 3118

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

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

Lab Use Only

Comments: 177084

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL	FSSHTD	FSSTRU	FSSOTHR	H-3, Sr-90	Comment, Preservation	Lab Sample ID
9804-0000-013F	11/28/06	1055	TS	C	BP	X							
9804-0000-020F	11/28/06	1130	TS	C	BP	X							
9804-0000-002F	11/28/06	1002	TS	C	BP	X							
9804-0000-012F	11/28/06	1041	TS	C	BP	X							
9804-0000-003F	11/28/06	1028	TS	C	BP	X							
9804-0000-019F	11/28/06	1120	TS	C	BP	X							
9804-0000-001F	11/28/06	0900	TS	C	BP	X							
9804-0000-021F	11/28/06	1313	TS	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1517 ☒ LTP QA ☐ Radwaste QA ☐ Non QA
FSSP 9804-0000
Shipping weight: 96 lbs; 93lbs; 90lbs; 68 lbs

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

Bill of Lading #

Internal Container Temp.: 12 Deg. C

Custody Sealed? Y (N)
Custody Seal Intact? Y N

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	11/30/06 @1500	K. Wright	12/5/06 1015
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. 2006-00695

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Art Hammond 860-267-2556 x 3118

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

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

Lab Use Only

Comments: 177084

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL	FSSHTD	FSSTRU	FSSOTHR	H-3, Sr-90	Comment, Preservation	Lab Sample ID
9804-0000-026F	11/28/06	1505	TS	C	BP	X							
9804-0000-016F	11/29/06	1000	TS	C	BP	X							
9804-0000-035F	11/29/06	0945	TS	C	BP	X							
9804-0000-030F	11/29/06	0805	TS	C	BP	X							
9804-0000-029F	11/29/06	0755	TS	C	BP	X							
9804-0000-036F	11/29/06	1131	TS	C	BP		X					RDL'S: Sr-90: 0.025pCi/g, H-3: 3.0pCi/g	
9804-0000-038F	11/29/06	1500	TS	C	BP	X							
9804-0000-022F	11/29/06	0829	TS	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1517 ☒ LTP QA ☐ Radwaste QA ☐ Non QA
FSSP 9804-0000
Shipping weight:

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

Bill of Lading #

Internal Container Temp.: 12 Deg. C

Custody Sealed? Y (N)
Custody Seal Intact? Y N

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	11/30/06 @1500	[signature]	12/5/06 1015
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

7

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00695

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Art Hammond 860-267-2556 x 3118

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

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

Analyses Requested

Lab Use Only

Comments:

177084

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	FSSGAM	FSSALL	FSSHTD	FSSTRU	FSSOTHR	H-3, Sr-90	Comment, Preservation	Lab Sample ID
9804-0000-010F	11/29/06	1311	TS	C	BP	X							
9804-0000-009F	11/29/06	1530	TS	C	BP	X							
9804-0000-014F	11/29/06	1320	TS	C	BP	X							
9804-0000-025F	11/29/06	1435	TS	C	BP	X							
9804-0000-032F	11/29/06	1442	TS	C	BP	X							
9804-0000-028F	11/29/06	1035	TS	C	BP	X							
9804-0000-015F	11/29/06	1015	TS	C	BP	X							
9804-0000-023F	11/29/06	1053	TS	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1517 ☒ LTP QA ☐ Radwaste QA ☐ Non QA
FSSP 9804-0000
Shipping weight:

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

Bill of Lading #

Internal Container Temp.: 12 Deg. C

Custody Sealed? Y (N)

Custody Seal Intact? Y N

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	11/30/06 @1500	K. Wright	12/5/06 1015
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

8

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00695

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Art Hammond 860-267-2556 x 3118

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

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

Analyses Requested

Lab Use Only

Comments:

177084

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	FSSGAM	FSSALL	FSSHTD	FSSTRU	FSSOTHR	H-3, Sr-90	Comment, Preservation	Lab Sample ID
9804-0000-017F	11/29/06	1105	TS	C	BP	X							
9804-0000-028FS	11/29/06	1035	TS	C	BP	X							
9804-0000-011F	11/29/06	1120	TS	C	BP	X							
9804-0000-027F	11/29/06	0817	TS	C	BP		X					RDL'S: Sr-90: 0.025pCi/g, H-3: 3.0pCi/g	
9804-0000-004F	11/30/06	0952	TS	C	BP	X							
9804-0000-007F	11/30/06	1005	TS	C	BP	X							
9804-0000-007FS	11/30/06	1005	TS	C	BP	X							
9804-0000-037F	11/30/06	0940	TS	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1517 ☒ LTP QA ☐ Radwaste QA ☐ Non QA
FSSP 9804-0000
Shipping weight:

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

Bill of Lading #

Internal Container Temp.: 12 Deg. C

Custody Sealed? Y (N)
Custody Seal Intact? Y N

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	11/30/06 @ 1500	K. Wright	12/5/06 1015
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

6

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00695

Project Name: Haddam Neck Decommissioning

Contact Name & Phone:
Art Hammond 860-267-2556 x 3118

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

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

Lab Use Only

Comments:

177084

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM	FSSALL	FSSHTD	FSSTRU	FSSOTHR	H-3, Sr-90	Comment, Preservation	Lab Sample ID
9804-0000-033F	11/30/06	0756	TS	C	BP	X							
9804-0000-006F	11/30/06	0738	TS	C	BP	X							
9804-0000-034F	11/30/06	0720	TS	C	BP	X							
9804-0000-008F	11/30/06	0825	TS	C	BP	X							
9804-0000-005F	11/30/06	0811	TS	C	BP	X							

NOTES: PO #: 002332 MSR #: 06-1517 ☒ LTP QA ☐ Radwaste QA ☐ Non QA
FSSP 9804-0000
Shipping weight:

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

Bill of Lading #

Internal Container Temp.: 13 Deg. C

Custody Sealed? Y (N)
Custody Seal Intact? Y N

1) Relinquished By	Date/Time	2) Received By	Date/Time
Mat S Kelley	11/30/06 @ 1500	K Wright	12/5/06 1015
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

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Figure 1. Sample Check-in List

Date/Time Received: 12/5/06 1015

SDG#: MSR#06-1517 , MSR#06-1519

Work Order Number: 177084 , 177087

Shipping Container ID: See Cont. Sheet Chain of Custody # See Cont. Sheet

1. Custody Seals on shipping container intact? Yes [ ] No [ ] NA
2. Custody Seals dated and signed? Yes [ ] No [ ] NA
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature See Cont Sheet.
5. Vermiculite/packing materials is: Wet [ ] Dry [ ] NA
6. Number of samples in shipping container: 55 total
7. Sample holding times exceeded? Yes [ ] No [✓]

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

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

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

Sample Custodian/Laboratory: K. Knight Date: 12/5/06

Telephoned to: ____ On ____ By ____

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Conn. Yank	**SDG/ARCOC/Work Order:** 177084, 177087
Date Received: 12/5/06	**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 ND
B	PCB Regulated?	✓			
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓			Hazard Class Shipped: UN#:
D	Regulated as a Foreign Soil?	✓			

PM (or PMA) review of Hazard classification: _____ Initials CD Date: 12/6/06

SAMPLE RECEIPT & REVIEW FORM
CONTINUATION FORM

Client: **Date Received:**

Chains:

2006-00693
2006-00694
2006-00695
~~2006-00696~~ (10)

Fed ex #5 Temp: 12

7985 5544 5873
7985 5544 5862
7901 2961 4738
7985 5544 5884
7901 2961 4716
7985 5544 5851

Data Review Qualifier Definitions

Data Review Qualifier Definitions

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

RADIOLOGICAL ANALYSIS

Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 177084

Method/Analysis Information

Product:	**Alphaspec Am241, Cm, Solid ALL FSS**
Analytical Method:	DOE EML HASL-300, Am-05-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	593610
Prep Batch Number:	593155
Dry Soil Prep GL-RAD-A-021 Batch Number:	593151

Sample ID	Client ID
177084014	9804-0000-036F
177084028	9804-0000-027F
1201241516	Method Blank (MB)
1201241517	177084014(9804-0000-036F) Sample Duplicate (DUP)
1201241518	177084014(9804-0000-036F) Matrix Spike (MS)
1201241519	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 14.

Calibration Information:

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

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

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

Quality Control (QC) Information:

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

Designated QC
The following sample was used for QC: 177084014 (9804-0000-036F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Additional Comments
The sample and the duplicate, 1201241517 (9804-0000-036F) and 177084014 (9804-0000-036F), did not meet the relative percent difference requirement for Am-241, however they do meet the relative error ratio requirement with a value of 1.47.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Pu, Solid-ALL FSS**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	593611
Prep Batch Number:	593155
Dry Soil Prep GL-RAD-A-021 Batch Number:	593151

Sample ID	Client ID
177084014	9804-0000-036F
177084028	9804-0000-027F
1201241524	Method Blank (MB)
1201241525	177084014(9804-0000-036F) Sample Duplicate (DUP)
1201241526	177084014(9804-0000-036F) Matrix Spike (MS)
1201241527	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 14.

Calibration Information:

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

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

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

Quality Control (QC) Information:

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

Designated QC
The following sample was used for QC: 177084014 (9804-0000-036F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Additional Comments
The sample and the duplicate, 1201241525 (9804-0000-036F) and 177084014 (9804-0000-036F), did not meet the relative percent difference requirement for Pu-239/240, however they do meet the relative error ratio requirement with a value of 1.61.

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Pu241, Solid-ALL FSS**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	593612
Prep Batch Number:	593155

Dry Soil Prep GL-RAD-A-021 Batch Number: 593151

Sample ID	Client ID
177084014	9804-0000-036F
177084028	9804-0000-027F
1201241528	Method Blank (MB)
1201241529	177084014(9804-0000-036F) Sample Duplicate (DUP)
1201241530	177084014(9804-0000-036F) Matrix Spike (MS)
1201241531	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-035 REV# 8.

Calibration Information:

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

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

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

Quality Control (QC) Information:

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

Designated QC
The following sample was used for QC: 177084014 (9804-0000-036F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

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:	593222
Prep Batch Number:	593151

Sample ID	Client ID
177084001	9804-0000-013F
177084002	9804-0000-020F
177084003	9804-0000-002F
177084004	9804-0000-012F
177084005	9804-0000-003F
177084006	9804-0000-019F
177084007	9804-0000-001F
177084008	9804-0000-021F
177084009	9804-0000-026F
177084010	9804-0000-016F
177084011	9804-0000-035F
177084012	9804-0000-030F
177084013	9804-0000-029F
177084014	9804-0000-036F
177084015	9804-0000-038F
177084016	9804-0000-022F
177084017	9804-0000-010F
177084018	9804-0000-009F
177084019	9804-0000-014F
177084020	9804-0000-025F
1201240646	Method Blank (MB)
1201240647	177084001(9804-0000-013F) Sample Duplicate (DUP)
1201240648	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 13.

Calibration Information:

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

Standards Information

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

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

Quality Control (QC) Information:

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

Designated QC
The following sample was used for QC: 177084001 (9804-0000-013F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high peak-width.	Cesium-137	177084010
UI	Data rejected due to low abundance.	Cesium-134	177084004
			177084005
			177084007
			177084009
			177084010
			177084012
			177084014
			177084015
			177084020
			1201240647
		Europium-152	177084004
		Lead-214	1201240646

UI	Data rejected due to no valid peak.	Americium-241	177084015

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: 593223
Prep Batch Number: 593152

Sample ID	Client ID
177084021	9804-0000-032F
177084022	9804-0000-028F
177084023	9804-0000-015F
177084024	9804-0000-023F
177084025	9804-0000-017F
177084026	9804-0000-028FS
177084027	9804-0000-011F
177084028	9804-0000-027F
177084029	9804-0000-004F
177084030	9804-0000-007F
177084031	9804-0000-007FS
177084032	9804-0000-037F
177084033	9804-0000-033F
177084034	9804-0000-006F
177084035	9804-0000-034F
177084036	9804-0000-008F
177084037	9804-0000-005F
1201240649	Method Blank (MB)
1201240650	177084037(9804-0000-005F) Sample Duplicate (DUP)
1201240651	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 13.

Calibration Information:

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

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

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

Quality Control (QC) Information:

Blank Information

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

Designated QC
The following sample was used for QC: 177084037 (9804-0000-005F).

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.

Additional Comments
The sample and the duplicate, 1201240650 (9804-0000-005F) and 177084037 (9804-0000-005F), for Tl-208 did not meet the relative percent difference requirement, however they do meet the relative error ratio requirement with value of 1.30991.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high peak-width.	Bismuth-212	177084031
		Cesium-137	177084029
			177084034
UI	Data rejected due to low abundance.	Cesium-134	177084021
			177084027
			177084029
			177084034
			177084035
			177084036

Method/Analysis Information

Product:	**GFPC, Sr90, solid - 0.025 pCi/g**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	593221

Prep Batch Number: 593155
Dry Soil Prep GL-RAD-A-021 Batch Number: 593151

Sample ID	Client ID
177084014	9804-0000-036F
177084028	9804-0000-027F
1201240642	Method Blank (MB)
1201240643	177087006(9522-0005-005F) Sample Duplicate (DUP)
1201240644	177087006(9522-0005-005F) Matrix Spike (MS)
1201240645	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: 177087006 (9522-0005-005F).

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

Technical Information:

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

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

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

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:	593284

Sample ID	Client ID
177084014	9804-0000-036F
177084028	9804-0000-027F
1201240789	Method Blank (MB)
1201240790	177084014(9804-0000-036F) Sample Duplicate (DUP)
1201240791	177084014(9804-0000-036F) Matrix Spike (MS)
1201240792	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: 177084014 (9804-0000-036F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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:	593478
Prep Batch Number:	593155
Dry Soil Prep GL-RAD-A-021 Batch Number:	593151

Sample ID	Client ID
177084014	9804-0000-036F
177084028	9804-0000-027F
1201241221	Method Blank (MB)
1201241222	177084014(9804-0000-036F) Sample Duplicate (DUP)
1201241223	177084014(9804-0000-036F) Matrix Spike (MS)
1201241224	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: 177084014 (9804-0000-036F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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:	593479
Prep Batch Number:	593155
Dry Soil Prep GL-RAD-A-021 Batch Number:	593151

Sample ID	Client ID
177084014	9804-0000-036F
177084028	9804-0000-027F
1201241225	Method Blank (MB)
1201241226	177084014(9804-0000-036F) Sample Duplicate (DUP)
1201241227	177084014(9804-0000-036F) Matrix Spike (MS)
1201241228	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: 177084014(9804-0000-036F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

Qualifier information
Manual qualifiers were not required.

Method/Analysis Information

Product: **LSC, Tritium Dist, Solid - 3 pCi/g**
Analytical Method: EPA 906.0 Modified
Analytical Batch Number: 593291

Sample ID	Client ID
177084014	9804-0000-036F
177084028	9804-0000-027F
1201240803	Method Blank (MB)
1201240804	177087014(9522-0005-013F) Sample Duplicate (DUP)

1201240805 177087014(9522-0005-013F) Matrix Spike (MS)
1201240806 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: 177087014(9522-0005-013F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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: 593288

Sample ID	Client ID
177084014	9804-0000-036F
177084028	9804-0000-027F
1201240796	Method Blank (MB)
1201240797	177084014(9804-0000-036F) Sample Duplicate (DUP)
1201240798	177084014(9804-0000-036F) Matrix Spike (MS)
1201240799	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: 177084014 (9804-0000-036F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

Qualifier information
Manual qualifiers were not required.

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

Review Validation:
GEL requires all analytical data to be verified by a qualified data validator. In addition, all data designated for CLP or CLP-like packaging will receive a third level validation upon completion of the data package.
The following data validator verified the information presented in this case narrative:

Reviewer/Date: _____ 12/12/12

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#06-1517 GEL Work Order: 177084

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
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–013F	Project:	YANK01204
Sample ID:	177084001	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	28–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	6.45%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.669	+/–0.188	0.0565	+/–0.188	0.122	pCi/g		MJH1	12/07/06	1115	593222	
Americium–241	U	–0.0958	+/–0.0731	0.0625	+/–0.0731	0.128	pCi/g						
Bismuth–212		0.547	+/–0.322	0.140	+/–0.322	0.297	pCi/g						
Bismuth–214		0.604	+/–0.103	0.0333	+/–0.103	0.0706	pCi/g						
Cesium–134	U	0.0294	+/–0.0239	0.0219	+/–0.0239	0.0465	pCi/g						
Cesium–137	U	–0.000496	+/–0.0214	0.0182	+/–0.0214	0.0387	pCi/g						
Cobalt–60	U	0.0141	+/–0.0184	0.0151	+/–0.0184	0.0338	pCi/g						
Europium–152	U	–0.0214	+/–0.053	0.0457	+/–0.053	0.0959	pCi/g						
Europium–154	U	–0.0516	+/–0.0592	0.045	+/–0.0592	0.0998	pCi/g						
Europium–155	U	0.0129	+/–0.0575	0.051	+/–0.0575	0.105	pCi/g						
Lead–212		0.680	+/–0.0829	0.0273	+/–0.0829	0.0567	pCi/g						
Lead–214		0.726	+/–0.106	0.0313	+/–0.106	0.0659	pCi/g						
Manganese–54	U	0.00152	+/–0.020	0.0169	+/–0.020	0.0361	pCi/g						
Niobium–94	U	–0.0059	+/–0.0183	0.0151	+/–0.0183	0.0323	pCi/g						
Potassium–40		10.5	+/–1.02	0.146	+/–1.02	0.328	pCi/g						
Radium–226		0.604	+/–0.103	0.0333	+/–0.103	0.0706	pCi/g						
Silver–108m	U	0.00287	+/–0.0183	0.0161	+/–0.0183	0.034	pCi/g						
Thallium–208		0.169	+/–0.0509	0.0185	+/–0.0509	0.0392	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–013F
Sample ID: 177084001

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

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–020F	Project:	YANK01204
Sample ID:	177084002	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	28–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	8.13%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.449	+/–0.175	0.0561	+/–0.175	0.112	pCi/g		MJH1	12/07/06	1208	593222	
Americium–241	U	0.0752	+/–0.0761	0.0605	+/–0.0761	0.121	pCi/g						
Bismuth–212		0.421	+/–0.333	0.140	+/–0.333	0.280	pCi/g						
Bismuth–214		0.515	+/–0.0905	0.0331	+/–0.0905	0.0661	pCi/g						
Cesium–134	U	0.0338	+/–0.0231	0.0218	+/–0.0231	0.0435	pCi/g						
Cesium–137	U	0.0324	+/–0.0338	0.0243	+/–0.0338	0.0485	pCi/g						
Cobalt–60	U	0.0389	+/–0.0232	0.0208	+/–0.0232	0.0415	pCi/g						
Europium–152	U	–0.0416	+/–0.067	0.0479	+/–0.067	0.0957	pCi/g						
Europium–154	U	0.00727	+/–0.0671	0.0567	+/–0.0671	0.113	pCi/g						
Europium–155	U	0.0619	+/–0.0575	0.0519	+/–0.0575	0.104	pCi/g						
Lead–212		0.674	+/–0.0811	0.0262	+/–0.0811	0.0523	pCi/g						
Lead–214		0.562	+/–0.0908	0.0347	+/–0.0908	0.0693	pCi/g						
Manganese–54	U	0.00829	+/–0.0201	0.0179	+/–0.0201	0.0358	pCi/g						
Niobium–94	U	0.00776	+/–0.0184	0.0165	+/–0.0184	0.033	pCi/g						
Potassium–40		10.6	+/–1.04	0.136	+/–1.04	0.272	pCi/g						
Radium–226		0.515	+/–0.0905	0.0331	+/–0.0905	0.0661	pCi/g						
Silver–108m	U	0.00563	+/–0.0181	0.0159	+/–0.0181	0.0317	pCi/g						
Thallium–208		0.196	+/–0.0506	0.0184	+/–0.0506	0.0369	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–020F Project: YANK01204
Sample ID: 177084002 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-002F	Project:	YANK01204
Sample ID:	177084003	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	28-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	13.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.914	+/-0.174	0.0422	+/-0.174	0.0844	pCi/g		MJH1	12/07/06	1209	593222	
Americium-241	U	0.113	+/-0.119	0.0975	+/-0.119	0.195	pCi/g						
Bismuth-212		0.477	+/-0.221	0.120	+/-0.221	0.240	pCi/g						
Bismuth-214		0.712	+/-0.0962	0.0271	+/-0.0962	0.0542	pCi/g						
Cesium-134	U	0.0315	+/-0.0251	0.0185	+/-0.0251	0.0369	pCi/g						
Cesium-137		0.0369	+/-0.0298	0.0156	+/-0.0298	0.0313	pCi/g						
Cobalt-60	U	0.00301	+/-0.0175	0.0148	+/-0.0175	0.0295	pCi/g						
Europium-152	U	-0.0416	+/-0.0565	0.0386	+/-0.0565	0.0771	pCi/g						
Europium-154	U	0.0108	+/-0.0523	0.0443	+/-0.0523	0.0886	pCi/g						
Europium-155	U	0.0256	+/-0.0605	0.054	+/-0.0605	0.108	pCi/g						
Lead-212		1.00	+/-0.0965	0.0227	+/-0.0965	0.0453	pCi/g						
Lead-214		0.789	+/-0.0966	0.029	+/-0.0966	0.058	pCi/g						
Manganese-54	U	-0.00487	+/-0.0164	0.014	+/-0.0164	0.0279	pCi/g						
Niobium-94	U	0.0145	+/-0.0157	0.0138	+/-0.0157	0.0275	pCi/g						
Potassium-40		11.3	+/-0.951	0.128	+/-0.951	0.255	pCi/g						
Radium-226		0.712	+/-0.0962	0.0271	+/-0.0962	0.0542	pCi/g						
Silver-108m	U	0.00692	+/-0.0153	0.0134	+/-0.0153	0.0268	pCi/g						
Thallium-208		0.284	+/-0.044	0.0132	+/-0.044	0.0263	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-002F Project: YANK01204
Sample ID: 177084003 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-012F	Project:	YANK01204
Sample ID:	177084004	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	28-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	6.88%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.644	+/-0.164	0.0584	+/-0.164	0.128	pCi/g		MJH1	12/07/06	1224	593222	
Americium-241	U	-0.0623	+/-0.0878	0.0703	+/-0.0878	0.146	pCi/g						
Bismuth-212		0.481	+/-0.240	0.132	+/-0.240	0.285	pCi/g						
Bismuth-214		0.560	+/-0.094	0.0331	+/-0.094	0.0708	pCi/g						
Cesium-134	UI	0.00	+/-0.0221	0.0224	+/-0.0221	0.048	pCi/g						
Cesium-137	U	0.00746	+/-0.0215	0.0191	+/-0.0215	0.0409	pCi/g						
Cobalt-60	U	0.000975	+/-0.0251	0.0217	+/-0.0251	0.0476	pCi/g						
Europium-152	UI	0.00	+/-0.0987	0.0472	+/-0.0987	0.0994	pCi/g						
Europium-154	U	-0.0187	+/-0.0617	0.051	+/-0.0617	0.114	pCi/g						
Europium-155	U	-0.0174	+/-0.0547	0.0488	+/-0.0547	0.101	pCi/g						
Lead-212		0.645	+/-0.0802	0.0294	+/-0.0802	0.061	pCi/g						
Lead-214		0.678	+/-0.105	0.0287	+/-0.105	0.0611	pCi/g						
Manganese-54	U	0.0136	+/-0.0208	0.0187	+/-0.0208	0.0403	pCi/g						
Niobium-94	U	0.00371	+/-0.0194	0.0169	+/-0.0194	0.0363	pCi/g						
Potassium-40		10.4	+/-1.13	0.192	+/-1.13	0.428	pCi/g						
Radium-226		0.560	+/-0.094	0.0331	+/-0.094	0.0708	pCi/g						
Silver-108m	U	0.00141	+/-0.0162	0.0145	+/-0.0162	0.031	pCi/g						
Thallium-208		0.221	+/-0.044	0.015	+/-0.044	0.0324	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–012F Project: YANK01204
Sample ID: 177084004 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-003F	Project:	YANK01204
Sample ID:	177084005	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	28-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	10.8%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.710	+/-0.173	0.0615	+/-0.173	0.123	pCi/g		MJH1	12/07/06	1216	593222	
Americium-241	U	0.0694	+/-0.104	0.0854	+/-0.104	0.171	pCi/g						
Bismuth-212		0.512	+/-0.301	0.136	+/-0.301	0.271	pCi/g						
Bismuth-214		0.567	+/-0.108	0.0363	+/-0.108	0.0726	pCi/g						
Cesium-134	UI	0.00	+/-0.0388	0.0238	+/-0.0388	0.0476	pCi/g						
Cesium-137	U	0.0282	+/-0.0267	0.0216	+/-0.0267	0.0431	pCi/g						
Cobalt-60	U	0.00866	+/-0.0237	0.0207	+/-0.0237	0.0413	pCi/g						
Europium-152	U	-0.0263	+/-0.0784	0.0513	+/-0.0784	0.103	pCi/g						
Europium-154	U	0.00685	+/-0.0767	0.056	+/-0.0767	0.112	pCi/g						
Europium-155	U	0.0625	+/-0.063	0.0586	+/-0.063	0.117	pCi/g						
Lead-212		0.768	+/-0.0855	0.0293	+/-0.0855	0.0586	pCi/g						
Lead-214		0.702	+/-0.119	0.038	+/-0.119	0.076	pCi/g						
Manganese-54	U	0.0302	+/-0.0295	0.0193	+/-0.0295	0.0386	pCi/g						
Niobium-94	U	-0.0141	+/-0.0214	0.0171	+/-0.0214	0.0343	pCi/g						
Potassium-40		11.1	+/-1.04	0.150	+/-1.04	0.300	pCi/g						
Radium-226		0.567	+/-0.108	0.0363	+/-0.108	0.0726	pCi/g						
Silver-108m	U	-0.00637	+/-0.0189	0.0162	+/-0.0189	0.0323	pCi/g						
Thallium-208		0.221	+/-0.0471	0.0184	+/-0.0471	0.0368	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-003F
Sample ID: 177084005
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-019F	Project:	YANK01204
Sample ID:	177084006	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	28-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	8.18%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.916	+/-0.176	0.057	+/-0.176	0.114	pCi/g		MJH1	12/07/06	1217	593222	
Americium-241	U	0.0575	+/-0.0899	0.0738	+/-0.0899	0.148	pCi/g						
Bismuth-212		0.452	+/-0.369	0.148	+/-0.369	0.296	pCi/g						
Bismuth-214		0.519	+/-0.0955	0.0369	+/-0.0955	0.0738	pCi/g						
Cesium-134	U	0.0447	+/-0.0323	0.0234	+/-0.0323	0.0468	pCi/g						
Cesium-137	U	0.0331	+/-0.029	0.0192	+/-0.029	0.0384	pCi/g						
Cobalt-60	U	-0.00138	+/-0.0273	0.0195	+/-0.0273	0.0391	pCi/g						
Europium-152	U	-0.0589	+/-0.088	0.0488	+/-0.088	0.0976	pCi/g						
Europium-154	U	-0.0562	+/-0.0709	0.0538	+/-0.0709	0.108	pCi/g						
Europium-155	U	0.0839	+/-0.0953	0.0533	+/-0.0953	0.107	pCi/g						
Lead-212		0.674	+/-0.0818	0.0282	+/-0.0818	0.0563	pCi/g						
Lead-214		0.586	+/-0.109	0.0337	+/-0.109	0.0674	pCi/g						
Manganese-54	U	0.019	+/-0.0235	0.0176	+/-0.0235	0.0351	pCi/g						
Niobium-94	U	0.00674	+/-0.021	0.0181	+/-0.021	0.0362	pCi/g						
Potassium-40		11.6	+/-1.09	0.121	+/-1.09	0.242	pCi/g						
Radium-226		0.519	+/-0.0955	0.0369	+/-0.0955	0.0738	pCi/g						
Silver-108m	U	-0.00355	+/-0.0191	0.0164	+/-0.0191	0.0328	pCi/g						
Thallium-208		0.189	+/-0.0538	0.0191	+/-0.0538	0.0383	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-019F Project: YANK01204
Sample ID: 177084006 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-001F	Project:	YANK01204
Sample ID:	177084007	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	28-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	13%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.911	+/-0.150	0.0502	+/-0.150	0.108	pCi/g		MJH1	12/07/06	1215	593222	
Americium-241	U	-0.0139	+/-0.117	0.0933	+/-0.117	0.192	pCi/g						
Bismuth-212		0.673	+/-0.226	0.115	+/-0.226	0.243	pCi/g						
Bismuth-214		0.681	+/-0.0735	0.0284	+/-0.0735	0.0599	pCi/g						
Cesium-134	UI	0.00	+/-0.0301	0.0199	+/-0.0301	0.042	pCi/g						
Cesium-137	U	0.0153	+/-0.0299	0.0159	+/-0.0299	0.0335	pCi/g						
Cobalt-60	U	0.00609	+/-0.018	0.0158	+/-0.018	0.0345	pCi/g						
Europium-152	U	-0.00912	+/-0.0468	0.0394	+/-0.0468	0.0822	pCi/g						
Europium-154	U	0.0542	+/-0.0553	0.0513	+/-0.0553	0.110	pCi/g						
Europium-155	U	0.0734	+/-0.0508	0.0497	+/-0.0508	0.102	pCi/g						
Lead-212		0.957	+/-0.0564	0.0236	+/-0.0564	0.0487	pCi/g						
Lead-214		0.774	+/-0.0896	0.0283	+/-0.0896	0.059	pCi/g						
Manganese-54	U	0.0159	+/-0.0199	0.0137	+/-0.0199	0.0293	pCi/g						
Niobium-94	U	-0.00781	+/-0.0168	0.0139	+/-0.0168	0.0294	pCi/g						
Potassium-40		10.9	+/-0.761	0.123	+/-0.761	0.274	pCi/g						
Radium-226		0.681	+/-0.0735	0.0284	+/-0.0735	0.0599	pCi/g						
Silver-108m	U	0.00175	+/-0.0132	0.0119	+/-0.0132	0.0252	pCi/g						
Thallium-208		0.302	+/-0.0397	0.0149	+/-0.0397	0.0313	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-001F
Sample ID: 177084007
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-021F	Project:	YANK01204
Sample ID:	177084008	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	28-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	9.82%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.642	+/-0.162	0.0691	+/-0.162	0.150	pCi/g		MJH1	12/07/06	1230	593222	
Americium-241	U	0.0298	+/-0.0331	0.0284	+/-0.0331	0.0585	pCi/g						
Bismuth-212		0.657	+/-0.361	0.145	+/-0.361	0.314	pCi/g						
Bismuth-214		0.570	+/-0.106	0.0362	+/-0.106	0.0775	pCi/g						
Cesium-134	U	0.0547	+/-0.026	0.026	+/-0.026	0.0555	pCi/g						
Cesium-137	U	0.0171	+/-0.0254	0.0227	+/-0.0254	0.0484	pCi/g						
Cobalt-60	U	0.000988	+/-0.0239	0.0204	+/-0.0239	0.0454	pCi/g						
Europium-152	U	-0.0427	+/-0.0531	0.0448	+/-0.0531	0.095	pCi/g						
Europium-154	U	-0.0409	+/-0.0771	0.0614	+/-0.0771	0.136	pCi/g						
Europium-155	U	0.0488	+/-0.0655	0.0469	+/-0.0655	0.0971	pCi/g						
Lead-212		0.722	+/-0.065	0.0262	+/-0.065	0.0548	pCi/g						
Lead-214		0.562	+/-0.101	0.0346	+/-0.101	0.0731	pCi/g						
Manganese-54	U	0.00863	+/-0.0222	0.0193	+/-0.0222	0.0417	pCi/g						
Niobium-94	U	-0.00652	+/-0.0219	0.018	+/-0.0219	0.0386	pCi/g						
Potassium-40		12.3	+/-0.981	0.164	+/-0.981	0.376	pCi/g						
Radium-226		0.570	+/-0.106	0.0362	+/-0.106	0.0775	pCi/g						
Silver-108m	U	0.000719	+/-0.0181	0.0159	+/-0.0181	0.0339	pCi/g						
Thallium-208		0.227	+/-0.0565	0.018	+/-0.0565	0.0388	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–021F Project: YANK01204
Sample ID: 177084008 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–026F	Project:	YANK01204
Sample ID:	177084009	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	28–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	13.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.667	+/–0.155	0.0551	+/–0.155	0.121	pCi/g		MJH1	12/07/06	1224	593222	
Americium–241	U	0.00145	+/–0.0931	0.0726	+/–0.0931	0.151	pCi/g						
Bismuth–212		0.692	+/–0.241	0.122	+/–0.241	0.266	pCi/g						
Bismuth–214		0.469	+/–0.0897	0.031	+/–0.0897	0.0667	pCi/g						
Cesium–134	UI	0.00	+/–0.0583	0.0238	+/–0.0583	0.0507	pCi/g						
Cesium–137	U	0.031	+/–0.0293	0.0165	+/–0.0293	0.0357	pCi/g						
Cobalt–60	U	–0.00488	+/–0.0198	0.0158	+/–0.0198	0.0357	pCi/g						
Europium–152	U	0.0198	+/–0.0476	0.0436	+/–0.0476	0.0921	pCi/g						
Europium–154	U	–0.0481	+/–0.0665	0.050	+/–0.0665	0.111	pCi/g						
Europium–155	U	0.0012	+/–0.052	0.0473	+/–0.052	0.0983	pCi/g						
Lead–212		0.473	+/–0.085	0.0317	+/–0.085	0.0657	pCi/g						
Lead–214		0.548	+/–0.0984	0.0289	+/–0.0984	0.0613	pCi/g						
Manganese–54	U	0.00856	+/–0.0209	0.0188	+/–0.0209	0.0404	pCi/g						
Niobium–94	U	0.00131	+/–0.0192	0.0162	+/–0.0192	0.0348	pCi/g						
Potassium–40		10.3	+/–1.12	0.166	+/–1.12	0.374	pCi/g						
Radium–226		0.469	+/–0.0897	0.031	+/–0.0897	0.0667	pCi/g						
Silver–108m	U	–0.00306	+/–0.0186	0.0141	+/–0.0186	0.0301	pCi/g						
Thallium–208		0.236	+/–0.042	0.0153	+/–0.042	0.0331	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:
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< Result is less than value reported

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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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–026F Project: YANK01204
Sample ID: 177084009 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–016F	Project:	YANK01204
Sample ID:	177084010	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	19.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.800	+/–0.194	0.0724	+/–0.194	0.155	pCi/g		MJH1	12/07/06	1225	593222	
Americium–241	U	–0.0547	+/–0.104	0.0822	+/–0.104	0.170	pCi/g						
Bismuth–212		0.763	+/–0.269	0.132	+/–0.269	0.284	pCi/g						
Bismuth–214		0.671	+/–0.112	0.0311	+/–0.112	0.0666	pCi/g						
Cesium–134	UI	0.00	+/–0.0368	0.0245	+/–0.0368	0.052	pCi/g						
Cesium–137	UI	0.00	+/–0.0425	0.0173	+/–0.0425	0.0371	pCi/g						
Cobalt–60	U	–0.00392	+/–0.0233	0.019	+/–0.0233	0.0421	pCi/g						
Europium–152	U	–0.0151	+/–0.0551	0.0477	+/–0.0551	0.100	pCi/g						
Europium–154	U	0.0153	+/–0.0742	0.0634	+/–0.0742	0.138	pCi/g						
Europium–155	U	0.105	+/–0.0896	0.0515	+/–0.0896	0.107	pCi/g						
Lead–212		0.817	+/–0.0903	0.0291	+/–0.0903	0.0604	pCi/g						
Lead–214		0.649	+/–0.101	0.0364	+/–0.101	0.0763	pCi/g						
Manganese–54	U	–0.0258	+/–0.0211	0.0163	+/–0.0211	0.0353	pCi/g						
Niobium–94	U	0.0041	+/–0.0206	0.0175	+/–0.0206	0.0373	pCi/g						
Potassium–40		14.1	+/–1.40	0.166	+/–1.40	0.373	pCi/g						
Radium–226		0.671	+/–0.112	0.0311	+/–0.112	0.0666	pCi/g						
Silver–108m	U	–0.00308	+/–0.0203	0.0174	+/–0.0203	0.0367	pCi/g						
Thallium–208		0.243	+/–0.050	0.020	+/–0.050	0.0423	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-016F
Sample ID: 177084010
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-035F	Project:	YANK01204
Sample ID:	177084011	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	11.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.471	+/-0.160	0.0803	+/-0.160	0.171	pCi/g		MJH1	12/07/06	1215	593222	
Americium-241	U	-0.00224	+/-0.0327	0.0292	+/-0.0327	0.0601	pCi/g						
Bismuth-212		0.483	+/-0.375	0.174	+/-0.375	0.368	pCi/g						
Bismuth-214		0.654	+/-0.115	0.0427	+/-0.115	0.0899	pCi/g						
Cesium-134	U	-0.007	+/-0.036	0.0259	+/-0.036	0.0549	pCi/g						
Cesium-137		0.0577	+/-0.0486	0.0222	+/-0.0486	0.047	pCi/g						
Cobalt-60	U	0.0248	+/-0.0258	0.0239	+/-0.0258	0.0519	pCi/g						
Europium-152	U	-0.0254	+/-0.0635	0.0529	+/-0.0635	0.111	pCi/g						
Europium-154	U	0.0257	+/-0.0823	0.0715	+/-0.0823	0.154	pCi/g						
Europium-155	U	0.0434	+/-0.079	0.0493	+/-0.079	0.102	pCi/g						
Lead-212		0.512	+/-0.0749	0.0376	+/-0.0749	0.0774	pCi/g						
Lead-214		0.587	+/-0.0984	0.0377	+/-0.0984	0.0789	pCi/g						
Manganese-54	U	0.0155	+/-0.0257	0.0226	+/-0.0257	0.048	pCi/g						
Niobium-94	U	0.0102	+/-0.0247	0.0217	+/-0.0247	0.0457	pCi/g						
Potassium-40		7.69	+/-0.765	0.215	+/-0.765	0.470	pCi/g						
Radium-226		0.654	+/-0.115	0.0427	+/-0.115	0.0899	pCi/g						
Silver-108m	U	-0.0173	+/-0.0193	0.0164	+/-0.0193	0.0347	pCi/g						
Thallium-208		0.166	+/-0.0509	0.0222	+/-0.0509	0.0467	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:
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< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-035F Project: YANK01204
Sample ID: 177084011 Client ID: YANK001
Vol. Recv.:

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

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

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Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–030F	Project:	YANK01204
Sample ID:	177084012	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	15.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.869	+/–0.172	0.0568	+/–0.172	0.124	pCi/g		MJH1	12/07/06	1210	593222	
Americium–241	U	–0.00821	+/–0.0288	0.0225	+/–0.0288	0.0466	pCi/g						
Bismuth–212	U	0.251	+/–0.324	0.149	+/–0.324	0.318	pCi/g						
Bismuth–214		0.615	+/–0.0986	0.034	+/–0.0986	0.0723	pCi/g						
Cesium–134	UI	0.00	+/–0.044	0.0245	+/–0.044	0.0521	pCi/g						
Cesium–137	U	0.0205	+/–0.0204	0.0198	+/–0.0204	0.0421	pCi/g						
Cobalt–60	U	–0.0025	+/–0.0216	0.0177	+/–0.0216	0.0395	pCi/g						
Europium–152	U	–0.0149	+/–0.0486	0.0397	+/–0.0486	0.0841	pCi/g						
Europium–154	U	–0.0089	+/–0.0662	0.0545	+/–0.0662	0.120	pCi/g						
Europium–155	U	0.0247	+/–0.041	0.0385	+/–0.041	0.0798	pCi/g						
Lead–212		0.801	+/–0.0585	0.023	+/–0.0585	0.0482	pCi/g						
Lead–214		0.745	+/–0.087	0.0314	+/–0.087	0.0662	pCi/g						
Manganese–54	U	0.0111	+/–0.0245	0.0211	+/–0.0245	0.0449	pCi/g						
Niobium–94	U	0.0212	+/–0.0323	0.0159	+/–0.0323	0.034	pCi/g						
Potassium–40		11.8	+/–0.976	0.172	+/–0.976	0.385	pCi/g						
Radium–226		0.615	+/–0.0986	0.034	+/–0.0986	0.0723	pCi/g						
Silver–108m	U	0.00717	+/–0.0172	0.0156	+/–0.0172	0.033	pCi/g						
Thallium–208		0.273	+/–0.0439	0.0174	+/–0.0439	0.0371	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:
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< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–030F Project: YANK01204
Sample ID: 177084012 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–029F	Project:	YANK01204
Sample ID:	177084013	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	17.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.400	+/–0.186	0.0821	+/–0.186	0.179	pCi/g		MJH1	12/07/06	1217	593222	
Americium–241	U	–0.0265	+/–0.0296	0.0249	+/–0.0296	0.0518	pCi/g						
Bismuth–212		0.538	+/–0.367	0.146	+/–0.367	0.319	pCi/g						
Bismuth–214		0.456	+/–0.0982	0.0402	+/–0.0982	0.0863	pCi/g						
Cesium–134	U	0.0291	+/–0.0267	0.0255	+/–0.0267	0.0552	pCi/g						
Cesium–137	U	0.0267	+/–0.0256	0.0244	+/–0.0256	0.0523	pCi/g						
Cobalt–60	U	0.0113	+/–0.0257	0.0226	+/–0.0257	0.0507	pCi/g						
Europium–152	U	–0.0363	+/–0.0511	0.0415	+/–0.0511	0.0891	pCi/g						
Europium–154	U	–0.00869	+/–0.0848	0.0688	+/–0.0848	0.153	pCi/g						
Europium–155	U	0.0423	+/–0.0734	0.0413	+/–0.0734	0.0864	pCi/g						
Lead–212		0.646	+/–0.0636	0.0265	+/–0.0636	0.0556	pCi/g						
Lead–214		0.521	+/–0.0752	0.0338	+/–0.0752	0.072	pCi/g						
Manganese–54	U	0.0101	+/–0.0306	0.0205	+/–0.0306	0.0448	pCi/g						
Niobium–94	U	0.0186	+/–0.0245	0.0226	+/–0.0245	0.0484	pCi/g						
Potassium–40		10.1	+/–1.15	0.222	+/–1.15	0.500	pCi/g						
Radium–226		0.456	+/–0.0982	0.0402	+/–0.0982	0.0863	pCi/g						
Silver–108m	U	0.00466	+/–0.0202	0.0174	+/–0.0202	0.0374	pCi/g						
Thallium–208		0.174	+/–0.048	0.0216	+/–0.048	0.0465	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:
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< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–029F Project: YANK01204
Sample ID: 177084013 Client ID: YANK001
Vol. Recv.:

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

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

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–036F	Project:	YANK01204
Sample ID:	177084014	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	14%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium–241	U	0.0351	+/–0.202	0.152	+/–0.202	0.465	pCi/g		DXH2	12/08/06	1309	593610	
Curium–242	U	0.00	+/–0.122	0.00	+/–0.122	0.168	pCi/g						
Curium–243/244	U	0.115	+/–0.309	0.221	+/–0.310	0.604	pCi/g						
Alphaspec Pu, Solid–ALL FSS													
Plutonium–238	U	–0.0285	+/–0.0645	0.0533	+/–0.0645	0.187	pCi/g		DXH2	12/08/06	1309	593611	
Plutonium–239/240	U	0.0261	+/–0.127	0.096	+/–0.127	0.273	pCi/g						
Liquid Scint Pu241, Solid–ALL FSS													
Plutonium–241	U	–4.41	+/–7.46	6.45	+/–7.46	13.5	pCi/g		DXH2	12/12/06	1112	593612	
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.667	+/–0.147	0.0525	+/–0.147	0.113	pCi/g		MJH1	12/07/06	1218	593222	
Americium–241	U	–0.0162	+/–0.0481	0.0421	+/–0.0481	0.087	pCi/g						
Bismuth–212		0.491	+/–0.225	0.138	+/–0.225	0.291	pCi/g						
Bismuth–214		0.485	+/–0.0916	0.0283	+/–0.0916	0.0601	pCi/g						
Cesium–134	UI	0.00	+/–0.0339	0.0198	+/–0.0339	0.042	pCi/g						
Cesium–137	U	0.0152	+/–0.0355	0.0144	+/–0.0355	0.0308	pCi/g						
Cobalt–60	U	0.00333	+/–0.0179	0.0151	+/–0.0179	0.0334	pCi/g						
Europium–152	U	–0.00984	+/–0.0466	0.0401	+/–0.0466	0.0842	pCi/g						
Europium–154	U	–0.0365	+/–0.0531	0.040	+/–0.0531	0.0885	pCi/g						
Europium–155	U	–0.00277	+/–0.0423	0.0402	+/–0.0423	0.0832	pCi/g						
Lead–212		0.622	+/–0.0693	0.0221	+/–0.0693	0.0461	pCi/g						
Lead–214		0.503	+/–0.081	0.0296	+/–0.081	0.0621	pCi/g						
Manganese–54	U	0.0122	+/–0.0223	0.0157	+/–0.0223	0.0336	pCi/g						
Niobium–94	U	0.00309	+/–0.0152	0.0136	+/–0.0152	0.029	pCi/g						
Potassium–40		11.8	+/–1.06	0.120	+/–1.06	0.272	pCi/g						
Radium–226		0.485	+/–0.0916	0.0283	+/–0.0916	0.0601	pCi/g						
Silver–108m	U	0.00203	+/–0.0156	0.0135	+/–0.0156	0.0284	pCi/g						
Thallium–208		0.192	+/–0.047	0.0144	+/–0.047	0.0307	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid – 0.025 pCi/g													
Strontium–90	U	–0.00714	+/–0.00892	0.00834	+/–0.00892	0.0188	pCi/g		KSD1	12/08/06	1700	593221	
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid – 3 pCi/g													
Tritium	U	0.731	+/–0.950	0.773	+/–0.950	1.60	pCi/g		DFA1	12/07/06	1451	593291	

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Certificate of Analysis

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

Report Date: December 12, 2006

Client Sample ID: 9804-0000-036F
Sample ID: 177084014

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	-0.0214	+/-0.0914	0.0771	+/-0.0914	0.157	pCi/g		AXD2	12/06/06	1701	593288	
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	-17	+/-39.0	30.8	+/-39.0	64.4	pCi/g		MXP1	12/11/06	1340	593478	
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	-4.09	+/-11.1	9.54	+/-11.1	20.0	pCi/g		MXP1	12/08/06	2221	593479	
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.132	+/-0.182	0.149	+/-0.182	0.308	pCi/g		KXR1	12/11/06	0744	593284	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	60	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	100	(15%-125%)
Plutonium-241	Liquid Scint Pu241, Solid-ALL FS	89	(25%-125%)
Strontium-90	GFPC, Sr90, solid - 0.025 pCi/g	89	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid - 0.025 pCi/g	89	(25%-125%)
Iron-55	Liquid Scint Fe55, Solid-ALL FS	82	(15%-125%)
Nickel-63	Liquid Scint Ni63, Solid-ALL FS	68	(25%-125%)

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Certificate of Analysis

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Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-036F
Sample ID: 177084014
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time Batch	N
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid-ALL FS			68		(25%-125%)				
Technetium-99		Liquid Scint Tc99, Solid-ALL FS			70		(15%-125%)				
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid-ALL FS			70		(15%-125%)				

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

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

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-038F	Project:	YANK01204
Sample ID:	177084015	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	9.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.821	+/-0.163	0.0608	+/-0.163	0.133	pCi/g		MJH1	12/07/06	1603	593222	
Americium-241	UI	0.00	+/-0.107	0.0795	+/-0.107	0.166	pCi/g						
Bismuth-212		0.677	+/-0.268	0.135	+/-0.268	0.291	pCi/g						
Bismuth-214		0.608	+/-0.0913	0.0345	+/-0.0913	0.0736	pCi/g						
Cesium-134	UI	0.00	+/-0.047	0.0256	+/-0.047	0.0544	pCi/g						
Cesium-137	U	-0.00312	+/-0.0222	0.0187	+/-0.0222	0.0402	pCi/g						
Cobalt-60	U	-0.0125	+/-0.0274	0.0181	+/-0.0274	0.0406	pCi/g						
Europium-152	U	0.0152	+/-0.0568	0.0487	+/-0.0568	0.103	pCi/g						
Europium-154	U	0.0408	+/-0.0628	0.0615	+/-0.0628	0.135	pCi/g						
Europium-155	U	0.0296	+/-0.0594	0.0556	+/-0.0594	0.115	pCi/g						
Lead-212		0.742	+/-0.0639	0.0278	+/-0.0639	0.058	pCi/g						
Lead-214		0.747	+/-0.0992	0.0328	+/-0.0992	0.0694	pCi/g						
Manganese-54	U	-0.00245	+/-0.0234	0.0193	+/-0.0234	0.0416	pCi/g						
Niobium-94	U	0.00252	+/-0.0189	0.0162	+/-0.0189	0.0349	pCi/g						
Potassium-40		11.9	+/-0.922	0.130	+/-0.922	0.304	pCi/g						
Radium-226		0.608	+/-0.0913	0.0345	+/-0.0913	0.0736	pCi/g						
Silver-108m	U	-0.015	+/-0.0174	0.0144	+/-0.0174	0.0308	pCi/g						
Thallium-208		0.249	+/-0.0391	0.0174	+/-0.0391	0.0373	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-038F
Sample ID: 177084015

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

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-022F	Project:	YANK01204
Sample ID:	177084016	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	10.6%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.587	+/-0.165	0.0754	+/-0.165	0.161	pCi/g		MJH1	12/07/06	1603	593222	
Americium-241	U	0.00872	+/-0.036	0.0301	+/-0.036	0.0619	pCi/g						
Bismuth-212	U	0.274	+/-0.289	0.176	+/-0.289	0.372	pCi/g						
Bismuth-214		0.666	+/-0.107	0.039	+/-0.107	0.0825	pCi/g						
Cesium-134	U	0.0305	+/-0.0226	0.0262	+/-0.0226	0.0555	pCi/g						
Cesium-137		0.0743	+/-0.0335	0.0218	+/-0.0335	0.0462	pCi/g						
Cobalt-60	U	-0.0148	+/-0.0296	0.0236	+/-0.0296	0.0512	pCi/g						
Europium-152	U	0.0337	+/-0.064	0.0564	+/-0.064	0.118	pCi/g						
Europium-154	U	0.0216	+/-0.0813	0.0704	+/-0.0813	0.152	pCi/g						
Europium-155	U	0.0732	+/-0.0776	0.048	+/-0.0776	0.0992	pCi/g						
Lead-212		0.575	+/-0.0708	0.0414	+/-0.0708	0.085	pCi/g						
Lead-214		0.746	+/-0.0978	0.0425	+/-0.0978	0.0885	pCi/g						
Manganese-54	U	-0.013	+/-0.0283	0.0228	+/-0.0283	0.0485	pCi/g						
Niobium-94	U	-0.00364	+/-0.0255	0.0216	+/-0.0255	0.0455	pCi/g						
Potassium-40		10.4	+/-0.952	0.208	+/-0.952	0.457	pCi/g						
Radium-226		0.666	+/-0.107	0.039	+/-0.107	0.0825	pCi/g						
Silver-108m	U	0.00485	+/-0.0213	0.0193	+/-0.0213	0.0406	pCi/g						
Thallium-208		0.230	+/-0.0502	0.0227	+/-0.0502	0.0478	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-022F
Sample ID: 177084016

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

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-010F	Project:	YANK01204
Sample ID:	177084017	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	14.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.803	+/-0.132	0.053	+/-0.132	0.112	pCi/g		MJH1	12/07/06	1603	593222	
Americium-241	U	0.028	+/-0.0654	0.055	+/-0.0654	0.113	pCi/g						
Bismuth-212		0.444	+/-0.271	0.106	+/-0.271	0.224	pCi/g						
Bismuth-214		0.517	+/-0.0674	0.0296	+/-0.0674	0.0619	pCi/g						
Cesium-134	U	0.0174	+/-0.0223	0.0178	+/-0.0223	0.0375	pCi/g						
Cesium-137		0.0355	+/-0.0257	0.0139	+/-0.0257	0.0293	pCi/g						
Cobalt-60	U	0.012	+/-0.0162	0.0148	+/-0.0162	0.0318	pCi/g						
Europium-152	U	0.0485	+/-0.0548	0.0387	+/-0.0548	0.0807	pCi/g						
Europium-154	U	0.0353	+/-0.0571	0.0451	+/-0.0571	0.0965	pCi/g						
Europium-155	U	-0.01	+/-0.0511	0.0447	+/-0.0511	0.0921	pCi/g						
Lead-212		0.697	+/-0.0516	0.0223	+/-0.0516	0.0462	pCi/g						
Lead-214		0.630	+/-0.0784	0.0252	+/-0.0784	0.0528	pCi/g						
Manganese-54	U	0.0132	+/-0.0164	0.0149	+/-0.0164	0.0314	pCi/g						
Niobium-94	U	0.000614	+/-0.0169	0.0143	+/-0.0169	0.030	pCi/g						
Potassium-40		12.5	+/-0.718	0.132	+/-0.718	0.286	pCi/g						
Radium-226		0.517	+/-0.0674	0.0296	+/-0.0674	0.0619	pCi/g						
Silver-108m	U	-0.000501	+/-0.0146	0.0129	+/-0.0146	0.027	pCi/g						
Thallium-208		0.221	+/-0.0357	0.0143	+/-0.0357	0.030	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-010F
Sample ID: 177084017

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

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-009F	Project:	YANK01204
Sample ID:	177084018	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	8.05%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.623	+/-0.130	0.0453	+/-0.130	0.0905	pCi/g		MJH1	12/07/06	1607	593222	
Americium-241	U	-0.0686	+/-0.119	0.0948	+/-0.119	0.190	pCi/g						
Bismuth-212		0.436	+/-0.226	0.109	+/-0.226	0.218	pCi/g						
Bismuth-214		0.494	+/-0.0776	0.0286	+/-0.0776	0.0571	pCi/g						
Cesium-134	U	0.0342	+/-0.0319	0.0183	+/-0.0319	0.0365	pCi/g						
Cesium-137	U	0.0179	+/-0.0307	0.0134	+/-0.0307	0.0267	pCi/g						
Cobalt-60	U	-0.0033	+/-0.0189	0.013	+/-0.0189	0.026	pCi/g						
Europium-152	U	-0.0658	+/-0.0524	0.0384	+/-0.0524	0.0768	pCi/g						
Europium-154	U	-0.0284	+/-0.0529	0.0422	+/-0.0529	0.0844	pCi/g						
Europium-155	U	0.0202	+/-0.066	0.0532	+/-0.066	0.106	pCi/g						
Lead-212		0.561	+/-0.0641	0.0251	+/-0.0641	0.0501	pCi/g						
Lead-214		0.644	+/-0.086	0.0279	+/-0.086	0.0557	pCi/g						
Manganese-54	U	-0.0162	+/-0.0181	0.014	+/-0.0181	0.0281	pCi/g						
Niobium-94	U	0.00579	+/-0.0159	0.0135	+/-0.0159	0.027	pCi/g						
Potassium-40		9.18	+/-0.856	0.126	+/-0.856	0.253	pCi/g						
Radium-226		0.494	+/-0.0776	0.0286	+/-0.0776	0.0571	pCi/g						
Silver-108m	U	0.00321	+/-0.0157	0.0133	+/-0.0157	0.0267	pCi/g						
Thallium-208		0.193	+/-0.0365	0.0144	+/-0.0365	0.0288	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

GENERAL ENGINEERING LABORATORIES, LLC
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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-009F
Sample ID: 177084018

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

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-014F	Project:	YANK01204
Sample ID:	177084019	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	5.9%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.633	+/-0.242	0.0775	+/-0.242	0.155	pCi/g		MJH1	12/07/06	1607	593222	
Americium-241	U	0.000307	+/-0.0413	0.0305	+/-0.0413	0.0609	pCi/g						
Bismuth-212		0.588	+/-0.309	0.174	+/-0.309	0.348	pCi/g						
Bismuth-214		0.481	+/-0.112	0.0381	+/-0.112	0.0761	pCi/g						
Cesium-134	U	0.0545	+/-0.0341	0.0304	+/-0.0341	0.0607	pCi/g						
Cesium-137	U	0.00761	+/-0.0291	0.026	+/-0.0291	0.0521	pCi/g						
Cobalt-60	U	0.0118	+/-0.0276	0.0245	+/-0.0276	0.0489	pCi/g						
Europium-152	U	0.0399	+/-0.0928	0.0509	+/-0.0928	0.102	pCi/g						
Europium-154	U	0.0941	+/-0.0917	0.0765	+/-0.0917	0.153	pCi/g						
Europium-155	U	0.0112	+/-0.0533	0.0474	+/-0.0533	0.0948	pCi/g						
Lead-212		0.587	+/-0.0774	0.0289	+/-0.0774	0.0579	pCi/g						
Lead-214		0.518	+/-0.101	0.0392	+/-0.101	0.0784	pCi/g						
Manganese-54	U	0.00919	+/-0.028	0.0249	+/-0.028	0.0498	pCi/g						
Niobium-94	U	0.00128	+/-0.024	0.0211	+/-0.024	0.0421	pCi/g						
Potassium-40		9.69	+/-1.03	0.180	+/-1.03	0.360	pCi/g						
Radium-226		0.481	+/-0.112	0.0381	+/-0.112	0.0761	pCi/g						
Silver-108m	U	-0.00998	+/-0.0207	0.0172	+/-0.0207	0.0344	pCi/g						
Thallium-208		0.207	+/-0.0667	0.0204	+/-0.0667	0.0408	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–014F Project: YANK01204
Sample ID: 177084019 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–025F	Project:	YANK01204
Sample ID:	177084020	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	18.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.785	+/–0.115	0.0407	+/–0.115	0.0859	pCi/g		MJH1	12/07/06	1918	593222	
Americium–241	U	–0.0432	+/–0.0677	0.0554	+/–0.0677	0.114	pCi/g						
Bismuth–212		0.429	+/–0.205	0.0893	+/–0.205	0.187	pCi/g						
Bismuth–214		0.564	+/–0.0642	0.0218	+/–0.0642	0.0454	pCi/g						
Cesium–134	UI	0.00	+/–0.0211	0.0146	+/–0.0211	0.0306	pCi/g						
Cesium–137		0.045	+/–0.0238	0.0126	+/–0.0238	0.0264	pCi/g						
Cobalt–60	U	0.00685	+/–0.0153	0.0133	+/–0.0153	0.0284	pCi/g						
Europium–152	U	–0.00174	+/–0.0376	0.0311	+/–0.0376	0.0643	pCi/g						
Europium–154	U	–0.0141	+/–0.0464	0.038	+/–0.0464	0.0809	pCi/g						
Europium–155	U	0.0466	+/–0.0594	0.0327	+/–0.0594	0.0669	pCi/g						
Lead–212		0.712	+/–0.0437	0.0172	+/–0.0437	0.0354	pCi/g						
Lead–214		0.650	+/–0.060	0.0202	+/–0.060	0.0419	pCi/g						
Manganese–54	U	0.00854	+/–0.0209	0.00962	+/–0.0209	0.0204	pCi/g						
Niobium–94	U	–0.00521	+/–0.013	0.0107	+/–0.013	0.0224	pCi/g						
Potassium–40		12.1	+/–0.635	0.106	+/–0.635	0.231	pCi/g						
Radium–226		0.564	+/–0.0642	0.0218	+/–0.0642	0.0454	pCi/g						
Silver–108m	U	–0.00918	+/–0.0118	0.00993	+/–0.0118	0.0207	pCi/g						
Thallium–208		0.231	+/–0.033	0.0107	+/–0.033	0.0225	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	TMB1	12/05/06	1233	593151

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-025F Project: YANK01204
Sample ID: 177084020 Client ID: YANK001
Vol. Recv.:

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

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

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Certificate of Analysis

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

Report Date: December 12, 2006

Client Sample ID:	9804-0000-032F	Project:	YANK01204
Sample ID:	177084021	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	5.06%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.996	+/-0.185	0.0593	+/-0.185	0.127	pCi/g		MJH1	12/08/06	0720	593223	
Americium-241	U	0.0473	+/-0.101	0.0831	+/-0.101	0.171	pCi/g						
Bismuth-212		0.778	+/-0.308	0.128	+/-0.308	0.272	pCi/g						
Bismuth-214		0.795	+/-0.0877	0.0296	+/-0.0877	0.0627	pCi/g						
Cesium-134	UI	0.00	+/-0.0382	0.0222	+/-0.0382	0.0467	pCi/g						
Cesium-137	U	0.0078	+/-0.021	0.0184	+/-0.021	0.0387	pCi/g						
Cobalt-60	U	0.0124	+/-0.0196	0.0177	+/-0.0196	0.0385	pCi/g						
Europium-152	U	-0.000668	+/-0.0513	0.0434	+/-0.0513	0.0907	pCi/g						
Europium-154	U	-0.0643	+/-0.0649	0.0497	+/-0.0649	0.108	pCi/g						
Europium-155	U	0.0891	+/-0.0894	0.0489	+/-0.0894	0.101	pCi/g						
Lead-212		1.11	+/-0.0629	0.0247	+/-0.0629	0.0512	pCi/g						
Lead-214		0.917	+/-0.0867	0.0329	+/-0.0867	0.0685	pCi/g						
Manganese-54	U	0.00631	+/-0.0194	0.0166	+/-0.0194	0.0354	pCi/g						
Niobium-94	U	0.0223	+/-0.018	0.0166	+/-0.018	0.035	pCi/g						
Potassium-40		15.3	+/-0.896	0.140	+/-0.896	0.311	pCi/g						
Radium-226		0.795	+/-0.0877	0.0296	+/-0.0877	0.0627	pCi/g						
Silver-108m	U	0.0156	+/-0.0209	0.0136	+/-0.0209	0.0287	pCi/g						
Thallium-208		0.378	+/-0.0442	0.0156	+/-0.0442	0.033	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-032F
Sample ID: 177084021

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

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–028F	Project:	YANK01204
Sample ID:	177084022	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	7.72%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.618	+/–0.174	0.0664	+/–0.174	0.133	pCi/g		MJH1	12/08/06	0725	593223	
Americium–241	U	0.106	+/–0.111	0.0975	+/–0.111	0.195	pCi/g						
Bismuth–212		0.504	+/–0.237	0.152	+/–0.237	0.303	pCi/g						
Bismuth–214		0.456	+/–0.109	0.0338	+/–0.109	0.0675	pCi/g						
Cesium–134	U	0.0249	+/–0.0189	0.0255	+/–0.0189	0.051	pCi/g						
Cesium–137	U	0.0178	+/–0.025	0.0204	+/–0.025	0.0408	pCi/g						
Cobalt–60	U	0.0155	+/–0.026	0.0212	+/–0.026	0.0424	pCi/g						
Europium–152	U	–0.0433	+/–0.100	0.0489	+/–0.100	0.0977	pCi/g						
Europium–154	U	–0.0379	+/–0.0918	0.0617	+/–0.0918	0.123	pCi/g						
Europium–155	U	0.0262	+/–0.0707	0.0672	+/–0.0707	0.134	pCi/g						
Lead–212		0.644	+/–0.0851	0.0319	+/–0.0851	0.0637	pCi/g						
Lead–214		0.584	+/–0.0936	0.0344	+/–0.0936	0.0687	pCi/g						
Manganese–54	U	–0.00598	+/–0.0408	0.0186	+/–0.0408	0.0373	pCi/g						
Niobium–94	U	0.00252	+/–0.0199	0.0173	+/–0.0199	0.0345	pCi/g						
Potassium–40		12.0	+/–1.20	0.170	+/–1.20	0.340	pCi/g						
Radium–226		0.456	+/–0.109	0.0338	+/–0.109	0.0675	pCi/g						
Silver–108m	U	–0.0102	+/–0.0211	0.0182	+/–0.0211	0.0364	pCi/g						
Thallium–208		0.178	+/–0.0476	0.0185	+/–0.0476	0.037	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–028F
Sample ID: 177084022

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

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-015F	Project:	YANK01204
Sample ID:	177084023	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	5.53%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.429	+/-0.134	0.0734	+/-0.134	0.160	pCi/g		MJH1	12/08/06	0720	593223	
Americium-241	U	0.0434	+/-0.0969	0.082	+/-0.0969	0.172	pCi/g						
Bismuth-212		0.480	+/-0.203	0.157	+/-0.203	0.340	pCi/g						
Bismuth-214		0.480	+/-0.102	0.0324	+/-0.102	0.0706	pCi/g						
Cesium-134	U	0.0315	+/-0.028	0.0237	+/-0.028	0.0513	pCi/g						
Cesium-137	U	0.012	+/-0.0227	0.0206	+/-0.0227	0.0445	pCi/g						
Cobalt-60	U	0.004	+/-0.022	0.019	+/-0.022	0.0432	pCi/g						
Europium-152	U	-0.0374	+/-0.0493	0.0425	+/-0.0493	0.0913	pCi/g						
Europium-154	U	-0.00153	+/-0.0689	0.0579	+/-0.0689	0.130	pCi/g						
Europium-155	U	0.0385	+/-0.0609	0.0593	+/-0.0609	0.124	pCi/g						
Lead-212		0.501	+/-0.0762	0.0278	+/-0.0762	0.0584	pCi/g						
Lead-214		0.569	+/-0.107	0.0361	+/-0.107	0.0767	pCi/g						
Manganese-54	U	0.00622	+/-0.0237	0.019	+/-0.0237	0.0416	pCi/g						
Niobium-94	U	0.00761	+/-0.0201	0.0178	+/-0.0201	0.0386	pCi/g						
Potassium-40		10.3	+/-1.15	0.143	+/-1.15	0.337	pCi/g						
Radium-226		0.480	+/-0.102	0.0324	+/-0.102	0.0706	pCi/g						
Silver-108m	U	0.0125	+/-0.018	0.0171	+/-0.018	0.0366	pCi/g						
Thallium-208		0.166	+/-0.0438	0.0178	+/-0.0438	0.0387	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

GENERAL ENGINEERING LABORATORIES, LLC
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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-015F
Sample ID: 177084023
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–023F	Project:	YANK01204
Sample ID:	177084024	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	6.43%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.818	+/–0.221	0.0593	+/–0.221	0.133	pCi/g		MJH1	12/08/06	0721	593223	
Americium–241	U	–0.074	+/–0.146	0.0921	+/–0.146	0.192	pCi/g						
Bismuth–212		0.413	+/–0.313	0.140	+/–0.313	0.307	pCi/g						
Bismuth–214		0.663	+/–0.109	0.0347	+/–0.109	0.0756	pCi/g						
Cesium–134	U	0.0381	+/–0.0317	0.027	+/–0.0317	0.0583	pCi/g						
Cesium–137		0.0467	+/–0.0407	0.0184	+/–0.0407	0.0403	pCi/g						
Cobalt–60	U	0.017	+/–0.0235	0.0219	+/–0.0235	0.0495	pCi/g						
Europium–152	U	0.041	+/–0.0605	0.0526	+/–0.0605	0.112	pCi/g						
Europium–154	U	0.0147	+/–0.0808	0.0695	+/–0.0808	0.154	pCi/g						
Europium–155	U	0.0299	+/–0.0693	0.0635	+/–0.0693	0.132	pCi/g						
Lead–212		0.757	+/–0.0928	0.0308	+/–0.0928	0.0648	pCi/g						
Lead–214		0.639	+/–0.130	0.0395	+/–0.130	0.084	pCi/g						
Manganese–54	U	–0.0187	+/–0.0241	0.0193	+/–0.0241	0.0424	pCi/g						
Niobium–94	U	0.0115	+/–0.0229	0.0202	+/–0.0229	0.0436	pCi/g						
Potassium–40		11.2	+/–1.30	0.150	+/–1.30	0.356	pCi/g						
Radium–226		0.663	+/–0.109	0.0347	+/–0.109	0.0756	pCi/g						
Silver–108m	U	0.0207	+/–0.0217	0.0204	+/–0.0217	0.0434	pCi/g						
Thallium–208		0.275	+/–0.0606	0.0194	+/–0.0606	0.042	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–023F
Sample ID: 177084024

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

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-017F	Project:	YANK01204
Sample ID:	177084025	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	6.36%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.831	+/-0.159	0.0676	+/-0.159	0.145	pCi/g		MJH1	12/08/06	0725	593223	
Americium-241	U	-0.179	+/-0.111	0.0845	+/-0.111	0.174	pCi/g						
Bismuth-212	U	0.283	+/-0.196	0.142	+/-0.196	0.304	pCi/g						
Bismuth-214		0.550	+/-0.0837	0.0364	+/-0.0837	0.0769	pCi/g						
Cesium-134	U	0.043	+/-0.0321	0.022	+/-0.0321	0.0468	pCi/g						
Cesium-137	U	0.0382	+/-0.0511	0.0194	+/-0.0511	0.0413	pCi/g						
Cobalt-60	U	-0.0183	+/-0.0204	0.0145	+/-0.0204	0.0328	pCi/g						
Europium-152	U	-0.0294	+/-0.0572	0.0473	+/-0.0572	0.0993	pCi/g						
Europium-154	U	0.0547	+/-0.0645	0.0588	+/-0.0645	0.128	pCi/g						
Europium-155	U	0.0531	+/-0.062	0.0579	+/-0.062	0.119	pCi/g						
Lead-212		0.795	+/-0.0607	0.0281	+/-0.0607	0.0585	pCi/g						
Lead-214		0.689	+/-0.0883	0.0329	+/-0.0883	0.0693	pCi/g						
Manganese-54	U	-0.00975	+/-0.0261	0.0185	+/-0.0261	0.0396	pCi/g						
Niobium-94	U	0.00611	+/-0.019	0.0168	+/-0.019	0.0358	pCi/g						
Potassium-40		10.5	+/-0.850	0.158	+/-0.850	0.355	pCi/g						
Radium-226		0.550	+/-0.0837	0.0364	+/-0.0837	0.0769	pCi/g						
Silver-108m	U	0.00174	+/-0.0202	0.0171	+/-0.0202	0.0361	pCi/g						
Thallium-208		0.233	+/-0.0495	0.0177	+/-0.0495	0.0377	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

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< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–017F Project: YANK01204
Sample ID: 177084025 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–028FS	Project:	YANK01204
Sample ID:	177084026	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	7.78%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.728	+/–0.242	0.115	+/–0.242	0.248	pCi/g		MJH1	12/08/06	0726	593223	
Americium–241	U	0.0152	+/–0.0462	0.0407	+/–0.0462	0.0844	pCi/g						
Bismuth–212	U	0.495	+/–0.360	0.233	+/–0.360	0.501	pCi/g						
Bismuth–214		0.806	+/–0.145	0.0502	+/–0.145	0.108	pCi/g						
Cesium–134	U	–0.00972	+/–0.0421	0.0342	+/–0.0421	0.0737	pCi/g						
Cesium–137	U	0.0535	+/–0.0376	0.0356	+/–0.0376	0.0757	pCi/g						
Cobalt–60	U	0.00821	+/–0.0352	0.0303	+/–0.0352	0.0675	pCi/g						
Europium–152	U	0.0368	+/–0.0851	0.0738	+/–0.0851	0.156	pCi/g						
Europium–154	U	0.0265	+/–0.103	0.0889	+/–0.103	0.197	pCi/g						
Europium–155	U	0.0718	+/–0.076	0.0668	+/–0.076	0.139	pCi/g						
Lead–212		0.674	+/–0.0978	0.0522	+/–0.0978	0.108	pCi/g						
Lead–214		0.620	+/–0.145	0.0536	+/–0.145	0.113	pCi/g						
Manganese–54	U	–0.0338	+/–0.0408	0.0311	+/–0.0408	0.067	pCi/g						
Niobium–94	U	0.000183	+/–0.0351	0.0296	+/–0.0351	0.0632	pCi/g						
Potassium–40		12.7	+/–1.26	0.276	+/–1.26	0.620	pCi/g						
Radium–226		0.806	+/–0.145	0.0502	+/–0.145	0.108	pCi/g						
Silver–108m	U	–0.000186	+/–0.0291	0.0257	+/–0.0291	0.0546	pCi/g						
Thallium–208		0.272	+/–0.0649	0.0289	+/–0.0649	0.0619	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:
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< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-028FS
Sample ID: 177084026

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

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–011F	Project:	YANK01204
Sample ID:	177084027	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	13.7%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.814	+/–0.129	0.0451	+/–0.129	0.0986	pCi/g		MJH1	12/08/06	0923	593223	
Americium–241	U	0.0216	+/–0.0933	0.0809	+/–0.0933	0.167	pCi/g						
Bismuth–212		0.703	+/–0.263	0.109	+/–0.263	0.234	pCi/g						
Bismuth–214		0.736	+/–0.0839	0.0295	+/–0.0839	0.0625	pCi/g						
Cesium–134	UI	0.00	+/–0.0288	0.0204	+/–0.0288	0.0431	pCi/g						
Cesium–137	U	0.0306	+/–0.0187	0.0164	+/–0.0187	0.0348	pCi/g						
Cobalt–60	U	–0.0096	+/–0.0186	0.0149	+/–0.0186	0.0329	pCi/g						
Europium–152	U	–0.0372	+/–0.0443	0.0368	+/–0.0443	0.0775	pCi/g						
Europium–154	U	0.00889	+/–0.0558	0.0489	+/–0.0558	0.107	pCi/g						
Europium–155	U	0.041	+/–0.0486	0.0492	+/–0.0486	0.102	pCi/g						
Lead–212		0.781	+/–0.0573	0.0254	+/–0.0573	0.0527	pCi/g						
Lead–214		0.921	+/–0.0817	0.0299	+/–0.0817	0.0627	pCi/g						
Manganese–54	U	0.00824	+/–0.0173	0.0155	+/–0.0173	0.0332	pCi/g						
Niobium–94	U	0.00586	+/–0.0158	0.0142	+/–0.0158	0.0303	pCi/g						
Potassium–40		10.8	+/–0.777	0.140	+/–0.777	0.313	pCi/g						
Radium–226		0.736	+/–0.0839	0.0295	+/–0.0839	0.0625	pCi/g						
Silver–108m	U	–0.00641	+/–0.0142	0.0127	+/–0.0142	0.0269	pCi/g						
Thallium–208		0.232	+/–0.0398	0.0143	+/–0.0398	0.0305	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:
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< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–011F
Sample ID: 177084027

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

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–027F	Project:	YANK01204
Sample ID:	177084028	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	7.82%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Alpha Spec Analysis													
Alphaspec Am241, Cm, Solid ALL FSS													
Americium–241	U	0.123	+/–0.214	0.125	+/–0.214	0.385	pCi/g		DXH2	12/08/06	1309	593610	
Curium–242	U	–0.0247	+/–0.0342	0.0653	+/–0.0344	0.270	pCi/g						
Curium–243/244	U	0.0791	+/–0.207	0.140	+/–0.207	0.414	pCi/g						
Alphaspec Pu, Solid–ALL FSS													
Plutonium–238	U	0.0371	+/–0.141	0.103	+/–0.141	0.296	pCi/g		DXH2	12/08/06	1309	593611	
Plutonium–239/240	U	0.0199	+/–0.123	0.0939	+/–0.123	0.278	pCi/g						
Liquid Scint Pu241, Solid–ALL FSS													
Plutonium–241	U	–4.16	+/–7.39	6.38	+/–7.39	13.4	pCi/g		DXH2	12/12/06	1056	593612	
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.820	+/–0.210	0.0764	+/–0.210	0.153	pCi/g		MJH1	12/08/06	0926	593223	
Americium–241	U	0.0414	+/–0.111	0.0919	+/–0.111	0.184	pCi/g						
Bismuth–212		0.415	+/–0.367	0.169	+/–0.367	0.338	pCi/g						
Bismuth–214		0.440	+/–0.111	0.0376	+/–0.111	0.0751	pCi/g						
Cesium–134	U	0.0304	+/–0.0463	0.0287	+/–0.0463	0.0574	pCi/g						
Cesium–137		0.0583	+/–0.0377	0.0213	+/–0.0377	0.0425	pCi/g						
Cobalt–60	U	0.0147	+/–0.0252	0.0229	+/–0.0252	0.0459	pCi/g						
Europium–152	U	0.0031	+/–0.0732	0.0571	+/–0.0732	0.114	pCi/g						
Europium–154	U	–0.0288	+/–0.0872	0.0703	+/–0.0872	0.141	pCi/g						
Europium–155	U	0.0903	+/–0.0943	0.0654	+/–0.0943	0.131	pCi/g						
Lead–212		0.715	+/–0.0939	0.0328	+/–0.0939	0.0655	pCi/g						
Lead–214		0.632	+/–0.108	0.0366	+/–0.108	0.0732	pCi/g						
Manganese–54	U	–0.00162	+/–0.0221	0.0192	+/–0.0221	0.0384	pCi/g						
Niobium–94	U	–0.00175	+/–0.0227	0.0185	+/–0.0227	0.0371	pCi/g						
Potassium–40		10.1	+/–1.21	0.200	+/–1.21	0.400	pCi/g						
Radium–226		0.440	+/–0.111	0.0376	+/–0.111	0.0751	pCi/g						
Silver–108m	U	–0.0138	+/–0.0228	0.0191	+/–0.0228	0.0381	pCi/g						
Thallium–208		0.177	+/–0.0517	0.0188	+/–0.0517	0.0376	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid – 0.025 pCi/g													
Strontium–90		0.0513	+/–0.0174	0.00757	+/–0.0174	0.0185	pCi/g		KSD1	12/08/06	1700	593221	
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid – 3 pCi/g													
Tritium	U	0.515	+/–0.892	0.732	+/–0.892	1.52	pCi/g		DFA1	12/07/06	1624	593291	

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-027F
Sample ID: 177084028
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Liquid Scintillation Analysis													
Liquid Scint C14, Solid All,FSS													
Carbon-14	U	-0.007	+/-0.0956	0.0803	+/-0.0956	0.164	pCi/g		AXD2	12/06/06	1803	593288	
Liquid Scint Fe55, Solid-ALL FSS													
Iron-55	U	-26.5	+/-28.9	23.5	+/-28.9	49.5	pCi/g		MXP1	12/11/06	1357	593478	
Liquid Scint Ni63, Solid-ALL FSS													
Nickel-63	U	1.08	+/-9.75	8.14	+/-9.75	17.1	pCi/g		MXP1	12/08/06	2238	593479	
Liquid Scint Tc99, Solid-ALL FSS													
Technetium-99	U	0.234	+/-0.179	0.144	+/-0.179	0.296	pCi/g		KXR1	12/11/06	0815	593284	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	67	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	87	(15%-125%)
Plutonium-241	Liquid Scint Pu241, Solid-ALL FS	93	(25%-125%)
Strontium-90	GFPC, Sr90, solid - 0.025 pCi/g	103	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid - 0.025 pCi/g	103	(25%-125%)
Iron-55	Liquid Scint Fe55, Solid-ALL FS	65	(15%-125%)
Nickel-63	Liquid Scint Ni63, Solid-ALL FS	73	(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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–027F Project: YANK01204
Sample ID: 177084028 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time Batch	N
Carrier/Tracer Recovery		Liquid Scint Ni63, Solid–ALL FS			73		(25%–125%)				
Technetium–99		Liquid Scint Tc99, Solid–ALL FS			73		(15%–125%)				
Carrier/Tracer Recovery		Liquid Scint Tc99, Solid–ALL FS			73		(15%–125%)				

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

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

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-004F	Project:	YANK01204
Sample ID:	177084029	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	30-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	5.2%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.747	+/-0.127	0.0362	+/-0.127	0.0723	pCi/g		MJH1	12/08/06	0732	593223	
Americium-241	U	0.0628	+/-0.0899	0.0758	+/-0.0899	0.152	pCi/g						
Bismuth-212		0.476	+/-0.191	0.0761	+/-0.191	0.152	pCi/g						
Bismuth-214		0.542	+/-0.0779	0.0207	+/-0.0779	0.0415	pCi/g						
Cesium-134	UI	0.00	+/-0.0254	0.0141	+/-0.0254	0.0282	pCi/g						
Cesium-137	UI	0.00	+/-0.0188	0.0107	+/-0.0188	0.0214	pCi/g						
Cobalt-60	U	-0.00972	+/-0.0154	0.0103	+/-0.0154	0.0205	pCi/g						
Europium-152	U	-0.0272	+/-0.045	0.0293	+/-0.045	0.0586	pCi/g						
Europium-154	U	0.010	+/-0.045	0.0331	+/-0.045	0.0662	pCi/g						
Europium-155	U	0.0149	+/-0.0505	0.0409	+/-0.0505	0.0818	pCi/g						
Lead-212		0.644	+/-0.0632	0.0194	+/-0.0632	0.0388	pCi/g						
Lead-214		0.532	+/-0.0701	0.0202	+/-0.0701	0.0405	pCi/g						
Manganese-54	U	0.0113	+/-0.0174	0.0116	+/-0.0174	0.0231	pCi/g						
Niobium-94	U	0.000372	+/-0.012	0.0102	+/-0.012	0.0203	pCi/g						
Potassium-40		10.2	+/-0.777	0.0957	+/-0.777	0.191	pCi/g						
Radium-226		0.542	+/-0.0779	0.0207	+/-0.0779	0.0415	pCi/g						
Silver-108m	U	-0.0134	+/-0.0112	0.00931	+/-0.0112	0.0186	pCi/g						
Thallium-208		0.205	+/-0.0295	0.0106	+/-0.0295	0.0211	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–004F Project: YANK01204
Sample ID: 177084029 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-007F	Project:	YANK01204
Sample ID:	177084030	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	30-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	5.11%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.498	+/-0.129	0.0503	+/-0.129	0.109	pCi/g		MJH1	12/08/06	0727	593223	
Americium-241	U	-0.00884	+/-0.070	0.0598	+/-0.070	0.124	pCi/g						
Bismuth-212		0.557	+/-0.191	0.116	+/-0.191	0.247	pCi/g						
Bismuth-214		0.540	+/-0.0752	0.0311	+/-0.0752	0.0657	pCi/g						
Cesium-134	U	0.0184	+/-0.0241	0.0175	+/-0.0241	0.0373	pCi/g						
Cesium-137	U	-0.0102	+/-0.0227	0.0161	+/-0.0227	0.0342	pCi/g						
Cobalt-60	U	-0.00867	+/-0.0194	0.016	+/-0.0194	0.0349	pCi/g						
Europium-152	U	0.0104	+/-0.0526	0.041	+/-0.0526	0.0862	pCi/g						
Europium-154	U	-0.00605	+/-0.054	0.0463	+/-0.054	0.101	pCi/g						
Europium-155	U	0.0198	+/-0.0538	0.0499	+/-0.0538	0.104	pCi/g						
Lead-212		0.560	+/-0.0514	0.0234	+/-0.0514	0.0488	pCi/g						
Lead-214		0.715	+/-0.0816	0.0288	+/-0.0816	0.0605	pCi/g						
Manganese-54	U	0.00131	+/-0.0169	0.0149	+/-0.0169	0.0319	pCi/g						
Niobium-94	U	0.00542	+/-0.0184	0.014	+/-0.0184	0.0298	pCi/g						
Potassium-40		9.17	+/-0.726	0.142	+/-0.726	0.313	pCi/g						
Radium-226		0.540	+/-0.0752	0.0311	+/-0.0752	0.0657	pCi/g						
Silver-108m	U	2.940E-05	+/-0.0158	0.0143	+/-0.0158	0.0302	pCi/g						
Thallium-208		0.181	+/-0.0383	0.0154	+/-0.0383	0.0326	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-007F Project: YANK01204
Sample ID: 177084030 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-007FS	Project:	YANK01204
Sample ID:	177084031	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	30-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	5.72%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.572	+/-0.132	0.0488	+/-0.132	0.106	pCi/g		MJH1	12/08/06	0924	593223	
Americium-241	U	-0.0672	+/-0.113	0.0904	+/-0.113	0.188	pCi/g						
Bismuth-212	UI	0.00	+/-0.216	0.114	+/-0.216	0.245	pCi/g						
Bismuth-214		0.550	+/-0.0786	0.0308	+/-0.0786	0.0653	pCi/g						
Cesium-134	U	0.0351	+/-0.026	0.0184	+/-0.026	0.0392	pCi/g						
Cesium-137	U	0.00527	+/-0.0165	0.0148	+/-0.0165	0.0318	pCi/g						
Cobalt-60	U	0.00288	+/-0.0199	0.0172	+/-0.0199	0.0379	pCi/g						
Europium-152	U	-0.00478	+/-0.0457	0.0394	+/-0.0457	0.0828	pCi/g						
Europium-154	U	-0.013	+/-0.0533	0.0442	+/-0.0533	0.0976	pCi/g						
Europium-155	U	0.0505	+/-0.0489	0.049	+/-0.0489	0.101	pCi/g						
Lead-212		0.530	+/-0.049	0.0229	+/-0.049	0.0478	pCi/g						
Lead-214		0.652	+/-0.0781	0.0298	+/-0.0781	0.0626	pCi/g						
Manganese-54	U	0.00313	+/-0.0168	0.0145	+/-0.0168	0.0313	pCi/g						
Niobium-94	U	-0.00172	+/-0.0162	0.0139	+/-0.0162	0.0297	pCi/g						
Potassium-40		8.87	+/-0.723	0.138	+/-0.723	0.309	pCi/g						
Radium-226		0.550	+/-0.0786	0.0308	+/-0.0786	0.0653	pCi/g						
Silver-108m	U	-0.000895	+/-0.0139	0.0126	+/-0.0139	0.0268	pCi/g						
Thallium-208		0.156	+/-0.0302	0.0125	+/-0.0302	0.027	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–007FS Project: YANK01204
Sample ID: 177084031 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-037F	Project:	YANK01204
Sample ID:	177084032	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	30-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	4.98%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.736	+/-0.166	0.0524	+/-0.166	0.114	pCi/g		MJH1	12/08/06	0925	593223	
Americium-241	U	-0.00582	+/-0.0876	0.0706	+/-0.0876	0.146	pCi/g						
Bismuth-212		0.527	+/-0.198	0.116	+/-0.198	0.249	pCi/g						
Bismuth-214		0.546	+/-0.106	0.0287	+/-0.106	0.0613	pCi/g						
Cesium-134	U	0.0429	+/-0.0256	0.0204	+/-0.0256	0.0434	pCi/g						
Cesium-137	U	0.00516	+/-0.0199	0.0174	+/-0.0199	0.0371	pCi/g						
Cobalt-60	U	-0.0188	+/-0.0199	0.0144	+/-0.0199	0.0323	pCi/g						
Europium-152	U	0.054	+/-0.0441	0.0407	+/-0.0441	0.0857	pCi/g						
Europium-154	U	0.0049	+/-0.0544	0.0463	+/-0.0544	0.102	pCi/g						
Europium-155	U	0.0383	+/-0.0485	0.047	+/-0.0485	0.0974	pCi/g						
Lead-212		0.643	+/-0.0716	0.0229	+/-0.0716	0.0477	pCi/g						
Lead-214		0.561	+/-0.0878	0.0268	+/-0.0878	0.0567	pCi/g						
Manganese-54	U	0.0248	+/-0.0177	0.0173	+/-0.0177	0.037	pCi/g						
Niobium-94	U	0.0136	+/-0.0171	0.0155	+/-0.0171	0.0331	pCi/g						
Potassium-40		10.1	+/-1.01	0.159	+/-1.01	0.355	pCi/g						
Radium-226		0.546	+/-0.106	0.0287	+/-0.106	0.0613	pCi/g						
Silver-108m	U	0.0114	+/-0.0146	0.0138	+/-0.0146	0.0292	pCi/g						
Thallium-208		0.190	+/-0.0404	0.0142	+/-0.0404	0.0305	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–037F
Sample ID: 177084032
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-033F	Project:	YANK01204
Sample ID:	177084033	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	30-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	6.31%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.686	+/-0.156	0.0506	+/-0.156	0.109	pCi/g		MJH1	12/08/06	0926	593223	
Americium-241	U	0.00986	+/-0.0812	0.0709	+/-0.0812	0.146	pCi/g						
Bismuth-212		0.660	+/-0.241	0.0981	+/-0.241	0.212	pCi/g						
Bismuth-214		0.593	+/-0.0984	0.028	+/-0.0984	0.0595	pCi/g						
Cesium-134	U	0.0273	+/-0.0306	0.0205	+/-0.0306	0.0434	pCi/g						
Cesium-137		0.115	+/-0.0336	0.0165	+/-0.0336	0.035	pCi/g						
Cobalt-60	U	0.00966	+/-0.017	0.0154	+/-0.017	0.0339	pCi/g						
Europium-152	U	-0.0138	+/-0.0444	0.0398	+/-0.0444	0.0836	pCi/g						
Europium-154	U	0.0136	+/-0.065	0.051	+/-0.065	0.111	pCi/g						
Europium-155	U	0.0388	+/-0.0473	0.0455	+/-0.0473	0.094	pCi/g						
Lead-212		0.682	+/-0.0725	0.0229	+/-0.0725	0.0475	pCi/g						
Lead-214		0.631	+/-0.089	0.0294	+/-0.089	0.0617	pCi/g						
Manganese-54	U	0.00943	+/-0.017	0.0157	+/-0.017	0.0336	pCi/g						
Niobium-94	U	0.00543	+/-0.0168	0.0147	+/-0.0168	0.0313	pCi/g						
Potassium-40		10.4	+/-1.01	0.154	+/-1.01	0.338	pCi/g						
Radium-226		0.593	+/-0.0984	0.028	+/-0.0984	0.0595	pCi/g						
Silver-108m	U	0.0123	+/-0.0152	0.0143	+/-0.0152	0.0301	pCi/g						
Thallium-208		0.214	+/-0.0396	0.0144	+/-0.0396	0.0308	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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

Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–033F Project: YANK01204
Sample ID: 177084033 Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-006F	Project:	YANK01204
Sample ID:	177084034	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	30-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	9.27%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		1.11	+/-0.154	0.0601	+/-0.154	0.129	pCi/g		MJH1	12/08/06	0929	593223	
Americium-241	U	-0.105	+/-0.091	0.0851	+/-0.091	0.175	pCi/g						
Bismuth-212		0.819	+/-0.288	0.130	+/-0.288	0.277	pCi/g						
Bismuth-214		0.682	+/-0.078	0.0325	+/-0.078	0.0687	pCi/g						
Cesium-134	UI	0.00	+/-0.0322	0.0222	+/-0.0322	0.0468	pCi/g						
Cesium-137	UI	0.00	+/-0.0369	0.016	+/-0.0369	0.0342	pCi/g						
Cobalt-60	U	0.00536	+/-0.0216	0.0185	+/-0.0216	0.0404	pCi/g						
Europium-152	U	-0.00175	+/-0.0546	0.0477	+/-0.0546	0.0995	pCi/g						
Europium-154	U	0.00509	+/-0.0714	0.0601	+/-0.0714	0.129	pCi/g						
Europium-155	U	0.0962	+/-0.0899	0.0593	+/-0.0899	0.122	pCi/g						
Lead-212		0.967	+/-0.0615	0.0279	+/-0.0615	0.0576	pCi/g						
Lead-214		0.711	+/-0.0783	0.0334	+/-0.0783	0.0697	pCi/g						
Manganese-54	U	-0.000118	+/-0.0197	0.0171	+/-0.0197	0.0364	pCi/g						
Niobium-94	U	0.0159	+/-0.0187	0.0173	+/-0.0187	0.0365	pCi/g						
Potassium-40		15.6	+/-0.935	0.139	+/-0.935	0.311	pCi/g						
Radium-226		0.682	+/-0.078	0.0325	+/-0.078	0.0687	pCi/g						
Silver-108m	U	-0.00505	+/-0.0182	0.0154	+/-0.0182	0.0324	pCi/g						
Thallium-208		0.312	+/-0.0409	0.016	+/-0.0409	0.0338	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

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

* A quality control analyte recovery is outside of specified acceptance criteria
< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–006F
Sample ID: 177084034
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

> 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: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804–0000–034F	Project:	YANK01204
Sample ID:	177084035	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	30–NOV–06		
Receive Date:	05–DEC–06		
Collector:	Client		
Moisture:	9.44%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.773	+/–0.176	0.0762	+/–0.176	0.162	pCi/g		MJH1	12/08/06	0930	593223	
Americium–241	U	0.0114	+/–0.0313	0.0294	+/–0.0313	0.0605	pCi/g						
Bismuth–212		0.449	+/–0.357	0.141	+/–0.357	0.299	pCi/g						
Bismuth–214		0.730	+/–0.118	0.0367	+/–0.118	0.0773	pCi/g						
Cesium–134	UI	0.00	+/–0.0505	0.0272	+/–0.0505	0.0571	pCi/g						
Cesium–137	U	0.0141	+/–0.0337	0.0203	+/–0.0337	0.0429	pCi/g						
Cobalt–60	U	0.00739	+/–0.0412	0.0225	+/–0.0412	0.0486	pCi/g						
Europium–152	U	0.0169	+/–0.0569	0.0506	+/–0.0569	0.105	pCi/g						
Europium–154	U	0.0606	+/–0.110	0.0647	+/–0.110	0.139	pCi/g						
Europium–155	U	0.0804	+/–0.0697	0.046	+/–0.0697	0.0948	pCi/g						
Lead–212		0.725	+/–0.0766	0.0419	+/–0.0766	0.0858	pCi/g						
Lead–214		0.844	+/–0.0961	0.0344	+/–0.0961	0.0719	pCi/g						
Manganese–54	U	0.0211	+/–0.0242	0.0219	+/–0.0242	0.0462	pCi/g						
Niobium–94	U	0.00842	+/–0.022	0.0196	+/–0.022	0.0412	pCi/g						
Potassium–40		11.5	+/–0.833	0.185	+/–0.833	0.405	pCi/g						
Radium–226		0.730	+/–0.118	0.0367	+/–0.118	0.0773	pCi/g						
Silver–108m	U	0.0222	+/–0.0295	0.0182	+/–0.0295	0.0381	pCi/g						
Thallium–208		0.290	+/–0.0469	0.0187	+/–0.0469	0.0395	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:
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< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804–0000–034F Project: YANK01204
Sample ID: 177084035 Client ID: YANK001
Vol. Recv.:

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

> 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
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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-008F	Project:	YANK01204
Sample ID:	177084036	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	30-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	4.04%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.743	+/-0.114	0.0384	+/-0.114	0.0814	pCi/g		MJH1	12/08/06	0930	593223	
Americium-241	U	0.0143	+/-0.0524	0.0472	+/-0.0524	0.0971	pCi/g						
Bismuth-212		0.535	+/-0.138	0.0941	+/-0.138	0.197	pCi/g						
Bismuth-214		0.471	+/-0.0536	0.0243	+/-0.0536	0.0507	pCi/g						
Cesium-134	UI	0.00	+/-0.024	0.0153	+/-0.024	0.032	pCi/g						
Cesium-137	U	0.00506	+/-0.0132	0.0118	+/-0.0132	0.0248	pCi/g						
Cobalt-60	U	0.0101	+/-0.0134	0.0124	+/-0.0134	0.0264	pCi/g						
Europium-152	U	0.00518	+/-0.0345	0.0311	+/-0.0345	0.0647	pCi/g						
Europium-154	U	-0.0133	+/-0.0379	0.0322	+/-0.0379	0.069	pCi/g						
Europium-155	U	0.00646	+/-0.0404	0.0382	+/-0.0404	0.0786	pCi/g						
Lead-212		0.667	+/-0.0406	0.0178	+/-0.0406	0.0368	pCi/g						
Lead-214		0.541	+/-0.0587	0.0217	+/-0.0587	0.0451	pCi/g						
Manganese-54	U	0.00783	+/-0.0127	0.0118	+/-0.0127	0.0247	pCi/g						
Niobium-94	U	0.00662	+/-0.0129	0.0115	+/-0.0129	0.0241	pCi/g						
Potassium-40		10.5	+/-0.585	0.114	+/-0.585	0.244	pCi/g						
Radium-226		0.471	+/-0.0536	0.0243	+/-0.0536	0.0507	pCi/g						
Silver-108m	U	0.0103	+/-0.0114	0.011	+/-0.0114	0.0229	pCi/g						
Thallium-208		0.210	+/-0.0294	0.0103	+/-0.0294	0.0217	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:
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< Result is less than value reported

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-008F Project: YANK01204
Sample ID: 177084036 Client ID: YANK001
Vol. Recv.:

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

> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
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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
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Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9804-0000-005F	Project:	YANK01204
Sample ID:	177084037	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	30-NOV-06		
Receive Date:	05-DEC-06		
Collector:	Client		
Moisture:	6.25%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.626	+/-0.135	0.0446	+/-0.135	0.0892	pCi/g		MJH1	12/08/06	0934	593223	
Americium-241	U	0.0641	+/-0.113	0.0966	+/-0.113	0.193	pCi/g						
Bismuth-212		0.377	+/-0.197	0.103	+/-0.197	0.206	pCi/g						
Bismuth-214		0.486	+/-0.0819	0.0257	+/-0.0819	0.0514	pCi/g						
Cesium-134	U	0.019	+/-0.0213	0.0162	+/-0.0213	0.0324	pCi/g						
Cesium-137	U	0.0141	+/-0.0184	0.0156	+/-0.0184	0.0312	pCi/g						
Cobalt-60	U	0.00555	+/-0.017	0.0143	+/-0.017	0.0286	pCi/g						
Europium-152	U	-0.0103	+/-0.058	0.0389	+/-0.058	0.0778	pCi/g						
Europium-154	U	0.021	+/-0.0571	0.0432	+/-0.0571	0.0863	pCi/g						
Europium-155	U	0.092	+/-0.0814	0.0527	+/-0.0814	0.105	pCi/g						
Lead-212		0.624	+/-0.0677	0.0227	+/-0.0677	0.0454	pCi/g						
Lead-214		0.619	+/-0.0804	0.0263	+/-0.0804	0.0525	pCi/g						
Manganese-54	U	0.00176	+/-0.0173	0.0146	+/-0.0173	0.0292	pCi/g						
Niobium-94	U	-0.0126	+/-0.0154	0.0122	+/-0.0154	0.0243	pCi/g						
Potassium-40		10.4	+/-0.890	0.124	+/-0.890	0.247	pCi/g						
Radium-226		0.486	+/-0.0819	0.0257	+/-0.0819	0.0514	pCi/g						
Silver-108m	U	-0.00147	+/-0.0144	0.0121	+/-0.0144	0.0241	pCi/g						
Thallium-208		0.175	+/-0.0376	0.0137	+/-0.0376	0.0274	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MXP2	12/05/06	1535	593152

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:
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< Result is less than value reported

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: December 12, 2006
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9804-0000-005F
Sample ID: 177084037
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

> 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: 177084

Report Date: December 12, 2006

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

QC Summary

Workorder: 177084

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 593611										
	Uncert:	+/-0.0645		+/-0.077						
	TPU:	+/-0.0645		+/-0.0773						
Plutonium-239/240	U	0.0261	U	-0.0986	pCi/g	344		(0% - 100%)		
	Uncert:	+/-0.127		+/-0.0831						
	TPU:	+/-0.127		+/-0.0837						
QC1201241527 LCS										
Plutonium-238			U	0.0649	pCi/g			(75%-125%)		12/08/06 13:09
	Uncert:			+/-0.112						
	TPU:			+/-0.112						
Plutonium-239/240	12.2			11.3	pCi/g		93	(75%-125%)		
	Uncert:			+/-1.18						
	TPU:			+/-1.65						
QC1201241524 MB										
Plutonium-238			U	0.00439	pCi/g					12/08/06 13:09
	Uncert:			+/-0.138						
	TPU:			+/-0.138						
Plutonium-239/240			U	-0.0161	pCi/g					
	Uncert:			+/-0.0831						
	TPU:			+/-0.0832						
QC1201241526 177084014 MS										
Plutonium-238	U	-0.0285	U	0.0821	pCi/g			(75%-125%)		12/08/06 13:09
	Uncert:	+/-0.0645		+/-0.109						
	TPU:	+/-0.0645		+/-0.109						
Plutonium-239/240	12.5 U	0.0261		12.7	pCi/g		102	(75%-125%)		
	Uncert:	+/-0.127		+/-1.15						
	TPU:	+/-0.127		+/-1.69						
Batch 593612										
QC1201241529 177084014 DUP										
Plutonium-241	U	-4.41	U	-5.33	pCi/g	0		(0% - 100%)	DXH2	12/12/06 09:18
	Uncert:	+/-7.46		+/-7.90						
	TPU:	+/-7.46		+/-7.90						
QC1201241531 LCS										
Plutonium-241	138			115	pCi/g		84	(75%-125%)		12/12/06 08:45
	Uncert:			+/-11.6						
	TPU:			+/-16.0						
QC1201241528 MB										
Plutonium-241			U	-5.28	pCi/g					12/12/06 09:34
	Uncert:			+/-6.97						
	TPU:			+/-6.97						
QC1201241530 177084014 MS										
Plutonium-241	141 U	-4.41		130	pCi/g		92	(75%-125%)		12/12/06 09:02
	Uncert:	+/-7.46		+/-12.3						
	TPU:	+/-7.46		+/-17.4						
Rad Gamma Spec										
Batch 593222										
QC1201240647 177084001 DUP										
Actinium-228		0.669		0.653	pCi/g	2		(0% - 100%)	MJH1	12/07/06 19:22
	Uncert:	+/-0.188		+/-0.104						
				+/-0.104						

QC Summary

Workorder: 177084

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 593222											
	TPU:	+/-0.188									
Americium-241	U	-0.0958	U	0.104	pCi/g	4780		(0% - 100%)			
	Uncert:	+/-0.0731		+/-0.0728							
	TPU:	+/-0.0731		+/-0.0728							
Bismuth-212		0.547		0.462	pCi/g	17		(0% - 100%)			
	Uncert:	+/-0.322		+/-0.149							
	TPU:	+/-0.322		+/-0.149							
Bismuth-214		0.604		0.501	pCi/g	19		(0% - 100%)			
	Uncert:	+/-0.103		+/-0.0665							
	TPU:	+/-0.103		+/-0.0665							
Cesium-134	U	0.0294	UI	0.00	pCi/g	18		(0% - 100%)			
	Uncert:	+/-0.0239		+/-0.0198							
	TPU:	+/-0.0239		+/-0.0198							
Cesium-137	U	-0.000496	U	-0.00765	pCi/g	176		(0% - 100%)			
	Uncert:	+/-0.0214		+/-0.0127							
	TPU:	+/-0.0214		+/-0.0127							
Cobalt-60	U	0.0141	U	-0.00142	pCi/g	245		(0% - 100%)			
	Uncert:	+/-0.0184		+/-0.0135							
	TPU:	+/-0.0184		+/-0.0135							
Europium-152	U	-0.0214	U	-0.0234	pCi/g	9		(0% - 100%)			
	Uncert:	+/-0.053		+/-0.0357							
	TPU:	+/-0.053		+/-0.0357							
Europium-154	U	-0.0516	U	0.00182	pCi/g	215		(0% - 100%)			
	Uncert:	+/-0.0592		+/-0.0353							
	TPU:	+/-0.0592		+/-0.0353							
Europium-155	U	0.0129	U	0.0506	pCi/g	119		(0% - 100%)			
	Uncert:	+/-0.0575		+/-0.0486							
	TPU:	+/-0.0575		+/-0.0486							
Lead-212		0.680		0.640	pCi/g	6		(0% - 20%)			
	Uncert:	+/-0.0829		+/-0.0586							
	TPU:	+/-0.0829		+/-0.0586							
Lead-214		0.726		0.621	pCi/g	16		(0% - 20%)			
	Uncert:	+/-0.106		+/-0.068							
	TPU:	+/-0.106		+/-0.068							
Manganese-54	U	0.00152	U	0.0104	pCi/g	149		(0% - 100%)			
	Uncert:	+/-0.020		+/-0.0152							
	TPU:	+/-0.020		+/-0.0152							
Niobium-94	U	-0.0059	U	0.00788	pCi/g	1390		(0% - 100%)			
	Uncert:	+/-0.0183		+/-0.0101							
	TPU:	+/-0.0183		+/-0.0101							
Potassium-40		10.5		11.3	pCi/g	8		(0% - 20%)			
	Uncert:	+/-1.02		+/-0.778							
	TPU:	+/-1.02		+/-0.778							
Radium-226		0.604		0.501	pCi/g	19		(0% - 100%)			
	Uncert:	+/-0.103		+/-0.0665							
	TPU:	+/-0.103		+/-0.0665							
Silver-108m	U	0.00287	U	-0.00621	pCi/g	544		(0% - 100%)			
	Uncert:	+/-0.0183		+/-0.0104							

QC Summary

Workorder: 177084

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 593222										
	TPU:	+/-0.0183		+/-0.0104						
Thallium-208		0.169		0.187	pCi/g	10		(0% - 100%)		
	Uncert:	+/-0.0509		+/-0.0264						
	TPU:	+/-0.0509		+/-0.0264						
QC1201240648 LCS										
Actinium-228			U	-0.0152	pCi/g					12/08/06 07:15
	Uncert:			+/-0.819						
	TPU:			+/-0.819						
Americium-241	23.4			25.7	pCi/g		110	(75%-125%)		
	Uncert:			+/-2.15						
	TPU:			+/-2.15						
Bismuth-212			U	0.285	pCi/g					
	Uncert:			+/-1.23						
	TPU:			+/-1.23						
Bismuth-214			U	0.232	pCi/g					
	Uncert:			+/-0.319						
	TPU:			+/-0.319						
Cesium-134			U	-0.045	pCi/g					
	Uncert:			+/-0.198						
	TPU:			+/-0.198						
Cesium-137	9.52			10.2	pCi/g		107	(75%-125%)		
	Uncert:			+/-1.10						
	TPU:			+/-1.10						
Cobalt-60	14.0			14.8	pCi/g		106	(75%-125%)		
	Uncert:			+/-0.785						
	TPU:			+/-0.785						
Europium-152			U	-0.284	pCi/g					
	Uncert:			+/-0.402						
	TPU:			+/-0.402						
Europium-154			U	-0.205	pCi/g					
	Uncert:			+/-0.346						
	TPU:			+/-0.346						
Europium-155			U	0.136	pCi/g					
	Uncert:			+/-0.290						
	TPU:			+/-0.290						
Lead-212			U	0.208	pCi/g					
	Uncert:			+/-0.176						
	TPU:			+/-0.176						
Lead-214			U	-0.173	pCi/g					
	Uncert:			+/-0.251						
	TPU:			+/-0.251						
Manganese-54			U	-0.0484	pCi/g					
	Uncert:			+/-0.172						
	TPU:			+/-0.172						
Niobium-94			U	-0.0168	pCi/g					
	Uncert:			+/-0.149						
	TPU:			+/-0.149						
Potassium-40			U	-0.351	pCi/g					

QC Summary

Workorder: 177084

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 593222											
	Uncert:			+/-1.21							
	TPU:			+/-1.21							
Radium-226			U	0.232	pCi/g			(75%-125%)			
	Uncert:			+/-0.319							
	TPU:			+/-0.319							
Silver-108m			U	-0.0931	pCi/g						
	Uncert:			+/-0.137							
	TPU:			+/-0.137							
Thallium-208			U	0.0423	pCi/g						
	Uncert:			+/-0.153							
	TPU:			+/-0.153							
QC1201240646 MB											
Actinium-228			U	0.0752	pCi/g					12/07/06	19:18
	Uncert:			+/-0.0442							
	TPU:			+/-0.0442							
Americium-241			U	0.000231	pCi/g						
	Uncert:			+/-0.0133							
	TPU:			+/-0.0133							
Bismuth-212			U	-0.0591	pCi/g						
	Uncert:			+/-0.0899							
	TPU:			+/-0.0899							
Bismuth-214			U	0.0327	pCi/g						
	Uncert:			+/-0.0245							
	TPU:			+/-0.0245							
Cesium-134			U	0.00527	pCi/g						
	Uncert:			+/-0.013							
	TPU:			+/-0.013							
Cesium-137			U	-0.00736	pCi/g						
	Uncert:			+/-0.015							
	TPU:			+/-0.015							
Cobalt-60			U	0.00958	pCi/g						
	Uncert:			+/-0.012							
	TPU:			+/-0.012							
Europium-152			U	0.00224	pCi/g						
	Uncert:			+/-0.0289							
	TPU:			+/-0.0289							
Europium-154			U	-0.0396	pCi/g						
	Uncert:			+/-0.0346							
	TPU:			+/-0.0346							
Europium-155			U	0.0291	pCi/g						
	Uncert:			+/-0.036							
	TPU:			+/-0.036							
Lead-212			U	0.00563	pCi/g						
	Uncert:			+/-0.0281							
	TPU:			+/-0.0281							
Lead-214			UI	0.00	pCi/g						
	Uncert:			+/-0.0218							
	TPU:			+/-0.0218							

QC Summary

Workorder: 177084

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 593222										
Manganese-54			U	0.0151	pCi/g					
	Uncert:			+/-0.0176						
	TPU:			+/-0.0176						
Niobium-94			U	0.000867	pCi/g					
	Uncert:			+/-0.0121						
	TPU:			+/-0.0121						
Potassium-40			U	0.111	pCi/g					
	Uncert:			+/-0.129						
	TPU:			+/-0.129						
Radium-226			U	0.0327	pCi/g					
	Uncert:			+/-0.0245						
	TPU:			+/-0.0245						
Silver-108m			U	-0.00836	pCi/g					
	Uncert:			+/-0.00976						
	TPU:			+/-0.00976						
Thallium-208			U	0.00254	pCi/g					
	Uncert:			+/-0.0239						
	TPU:			+/-0.0239						
Batch 593223										
QC1201240650 177084037 DUP										
Actinium-228		0.626		0.619	pCi/g	1		(0% - 100%)	MJH1	12/08/06 10:25
	Uncert:	+/-0.135		+/-0.187						
	TPU:	+/-0.135		+/-0.187						
Americium-241	U	0.0641	U	0.0506	pCi/g	23		(0% - 100%)		
	Uncert:	+/-0.113		+/-0.0359						
	TPU:	+/-0.113		+/-0.0359						
Bismuth-212		0.377		0.622	pCi/g	49		(0% - 100%)		
	Uncert:	+/-0.197		+/-0.319						
	TPU:	+/-0.197		+/-0.319						
Bismuth-214		0.486		0.551	pCi/g	13		(0% - 100%)		
	Uncert:	+/-0.0819		+/-0.135						
	TPU:	+/-0.0819		+/-0.135						
Cesium-134	U	0.019	U	0.0464	pCi/g	84		(0% - 100%)		
	Uncert:	+/-0.0213		+/-0.0355						
	TPU:	+/-0.0213		+/-0.0355						
Cesium-137	U	0.0141	U	0.0365	pCi/g	88		(0% - 100%)		
	Uncert:	+/-0.0184		+/-0.030						
	TPU:	+/-0.0184		+/-0.030						
Cobalt-60	U	0.00555	U	0.00175	pCi/g	104		(0% - 100%)		
	Uncert:	+/-0.017		+/-0.0291						
	TPU:	+/-0.017		+/-0.0291						
Europium-152	U	-0.0103	U	-0.00749	pCi/g	32		(0% - 100%)		
	Uncert:	+/-0.058		+/-0.0681						
	TPU:	+/-0.058		+/-0.0681						
Europium-154	U	0.021	U	0.0149	pCi/g	34		(0% - 100%)		
	Uncert:	+/-0.0571		+/-0.0848						
	TPU:	+/-0.0571		+/-0.0848						
Europium-155	U	0.092	U	0.0558	pCi/g	49		(0% - 100%)		

QC Summary

Workorder: 177084

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 593223										
	Uncert:	+/-0.0814		+/-0.0528						
	TPU:	+/-0.0814		+/-0.0528						
Lead-212		0.624		0.676	pCi/g	8		(0% - 20%)		
	Uncert:	+/-0.0677		+/-0.0839						
	TPU:	+/-0.0677		+/-0.0839						
Lead-214		0.619		0.530	pCi/g	16		(0% - 20%)		
	Uncert:	+/-0.0804		+/-0.101						
	TPU:	+/-0.0804		+/-0.101						
Manganese-54	U	0.00176	U	0.00791	pCi/g	127		(0% - 100%)		
	Uncert:	+/-0.0173		+/-0.0254						
	TPU:	+/-0.0173		+/-0.0254						
Niobium-94	U	-0.0126	U	-0.00817	pCi/g	43		(0% - 100%)		
	Uncert:	+/-0.0154		+/-0.0418						
	TPU:	+/-0.0154		+/-0.0418						
Potassium-40		10.4		9.70	pCi/g	6		(0% - 20%)		
	Uncert:	+/-0.890		+/-0.966						
	TPU:	+/-0.890		+/-0.966						
Radium-226		0.486		0.551	pCi/g	13		(0% - 100%)		
	Uncert:	+/-0.0819		+/-0.135						
	TPU:	+/-0.0819		+/-0.135						
Silver-108m	U	-0.00147	U	-0.0118	pCi/g	155		(0% - 100%)		
	Uncert:	+/-0.0144		+/-0.0215						
	TPU:	+/-0.0144		+/-0.0215						
Thallium-208		0.175		0.218	pCi/g	22		(0% - 100%)		
	Uncert:	+/-0.0376		+/-0.0526						
	TPU:	+/-0.0376		+/-0.0526						
QC1201240651 LCS										
Actinium-228			U	0.682	pCi/g					12/08/06 09:23
	Uncert:			+/-0.819						
	TPU:			+/-0.819						
Americium-241	23.4			25.6	pCi/g		110	(75%-125%)		
	Uncert:			+/-2.12						
	TPU:			+/-2.12						
Bismuth-212			U	0.900	pCi/g					
	Uncert:			+/-1.36						
	TPU:			+/-1.36						
Bismuth-214			U	0.150	pCi/g					
	Uncert:			+/-0.277						
	TPU:			+/-0.277						
Cesium-134			U	-0.00387	pCi/g					
	Uncert:			+/-0.178						
	TPU:			+/-0.178						
Cesium-137	9.52			10.4	pCi/g		109	(75%-125%)		
	Uncert:			+/-1.10						
	TPU:			+/-1.10						
Cobalt-60	14.0			14.9	pCi/g		107	(75%-125%)		
	Uncert:			+/-0.772						
	TPU:			+/-0.772						

QC Summary

Workorder: 177084

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 593223											
Europium-152			U	0.148	pCi/g						
	Uncert:			+/-0.335							
	TPU:			+/-0.335							
Europium-154			U	-0.196	pCi/g						
	Uncert:			+/-0.385							
	TPU:			+/-0.385							
Europium-155			U	0.212	pCi/g						
	Uncert:			+/-0.283							
	TPU:			+/-0.283							
Lead-212			U	0.113	pCi/g						
	Uncert:			+/-0.189							
	TPU:			+/-0.189							
Lead-214			U	0.236	pCi/g						
	Uncert:			+/-0.254							
	TPU:			+/-0.254							
Manganese-54			U	0.0987	pCi/g						
	Uncert:			+/-0.173							
	TPU:			+/-0.173							
Niobium-94			U	-0.0728	pCi/g						
	Uncert:			+/-0.151							
	TPU:			+/-0.151							
Potassium-40			U	0.360	pCi/g						
	Uncert:			+/-1.21							
	TPU:			+/-1.21							
Radium-226			U	0.150	pCi/g			(75%-125%)			
	Uncert:			+/-0.277							
	TPU:			+/-0.277							
Silver-108m			U	0.180	pCi/g						
	Uncert:			+/-0.137							
	TPU:			+/-0.137							
Thallium-208			U	0.111	pCi/g						
	Uncert:			+/-0.245							
	TPU:			+/-0.245							
QC1201240649 MB											
Actinium-228			U	0.00435	pCi/g					12/08/06	10:21
	Uncert:			+/-0.0452							
	TPU:			+/-0.0452							
Americium-241			U	0.00483	pCi/g						
	Uncert:			+/-0.0302							
	TPU:			+/-0.0302							
Bismuth-212			U	0.0347	pCi/g						
	Uncert:			+/-0.0812							
	TPU:			+/-0.0812							
Bismuth-214			U	0.0311	pCi/g						
	Uncert:			+/-0.0219							
	TPU:			+/-0.0219							
Cesium-134			U	-0.00659	pCi/g						
	Uncert:			+/-0.0101							

QC Summary

Workorder: 177084

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 593223										
	TPU:			+/-0.0101						
Cesium-137			U	-0.00142	pCi/g					
	Uncert:			+/-0.00888						
	TPU:			+/-0.00888						
Cobalt-60			U	0.00205	pCi/g					
	Uncert:			+/-0.0115						
	TPU:			+/-0.0115						
Europium-152			U	0.0132	pCi/g					
	Uncert:			+/-0.0278						
	TPU:			+/-0.0278						
Europium-154			U	5.630E-05	pCi/g					
	Uncert:			+/-0.0238						
	TPU:			+/-0.0238						
Europium-155			U	-0.0124	pCi/g					
	Uncert:			+/-0.0238						
	TPU:			+/-0.0238						
Lead-212			U	0.0246	pCi/g					
	Uncert:			+/-0.0163						
	TPU:			+/-0.0163						
Lead-214			U	0.00937	pCi/g					
	Uncert:			+/-0.0204						
	TPU:			+/-0.0204						
Manganese-54			U	-5.830E-05	pCi/g					
	Uncert:			+/-0.00905						
	TPU:			+/-0.00905						
Niobium-94			U	-0.00715	pCi/g					
	Uncert:			+/-0.00981						
	TPU:			+/-0.00981						
Potassium-40			U	0.0129	pCi/g					
	Uncert:			+/-0.200						
	TPU:			+/-0.200						
Radium-226			U	0.0311	pCi/g					
	Uncert:			+/-0.0219						
	TPU:			+/-0.0219						
Silver-108m			U	0.00263	pCi/g					
	Uncert:			+/-0.00788						
	TPU:			+/-0.00788						
Thallium-208			U	0.00657	pCi/g					
	Uncert:			+/-0.0106						
	TPU:			+/-0.0106						
Rad Gas Flow										
Batch 593221										
QC1201240643 177087006 DUP										
Strontium-90		U		U 0.00411	pCi/g	0		(0% - 100%)	KSD1	12/08/06 17:02
	Uncert:	+/-0.00993		+/-0.0104						
	TPU:	+/-0.00993		+/-0.0104						
QC1201240645 LCS										
Strontium-90	1.13			1.13	pCi/g		100	(75%-125%)		12/08/06 17:02

QC Summary

Workorder: 177084

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 593221										
	Uncert:			+/-0.105						
	TPU:			+/-0.111						
QC1201240642 MB										
Strontium-90			U	-8.670E-05	pCi/g					12/08/06 17:01
	Uncert:			+/-0.00912						
	TPU:			+/-0.00912						
QC1201240644 177087006 MS										
Strontium-90	5.07 U	-0.00152		5.23	pCi/g		103	(75%-125%)		12/08/06 17:02
	Uncert:	+/-0.00993		+/-0.499						
	TPU:	+/-0.00993		+/-0.513						
Rad Liquid Scintillation										
Batch 593284										
QC1201240790 177084014 DUP										
Technetium-99	U	0.132	U	-0.111	pCi/g	0		(0% - 100%)	KXR1	12/11/06 10:22
	Uncert:	+/-0.182		+/-0.156						
	TPU:	+/-0.182		+/-0.156						
QC1201240792 LCS										
Technetium-99	13.0			12.1	pCi/g		93	(75%-125%)		12/11/06 11:25
	Uncert:			+/-0.349						
	TPU:			+/-0.460						
QC1201240789 MB										
Technetium-99			U	0.0296	pCi/g					12/11/06 09:50
	Uncert:			+/-0.148						
	TPU:			+/-0.148						
QC1201240791 177084014 MS										
Technetium-99	13.0 U	0.132		12.1	pCi/g		93	(75%-125%)		12/11/06 10:53
	Uncert:	+/-0.182		+/-0.397						
	TPU:	+/-0.182		+/-0.498						
Batch 593288										
QC1201240797 177084014 DUP										
Carbon-14	U	-0.0214	U	0.0237	pCi/g	0		(0% - 100%)	AXD2	12/06/06 22:14
	Uncert:	+/-0.0914		+/-0.102						
	TPU:	+/-0.0914		+/-0.102						
QC1201240799 LCS										
Carbon-14	6.60			6.53	pCi/g		99	(75%-125%)		12/07/06 00:19
	Uncert:			+/-0.185						
	TPU:			+/-0.211						
QC1201240796 MB										
Carbon-14			U	-0.00806	pCi/g					12/06/06 21:11
	Uncert:			+/-0.0931						
	TPU:			+/-0.0931						
QC1201240798 177084014 MS										
Carbon-14	7.01 U	-0.0214		7.02	pCi/g		100	(75%-125%)		12/06/06 23:16
	Uncert:	+/-0.0914		+/-0.198						
	TPU:	+/-0.0914		+/-0.226						
Batch 593291										
QC1201240804 177087014 DUP										
Tritium	U	0.506	U	0.635	pCi/g	0		(0% - 100%)	DFA1	12/07/06 22:36

QC Summary

Workorder: 177084

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Liquid Scintillation										
Batch 593291										
	Uncert:	+/-0.876		+/-0.885						
	TPU:	+/-0.877		+/-0.885						
QC1201240806 LCS										
Tritium	10.7			10.1	pCi/g		95	(75%-125%)		12/08/06 01:42
	Uncert:			+/-0.698						
	TPU:			+/-0.719						
QC1201240803 MB										
Tritium			U	0.321	pCi/g					12/07/06 21:03
	Uncert:			+/-0.426						
	TPU:			+/-0.426						
QC1201240805 177087014 MS										
Tritium	11.1 U	0.506		10.1	pCi/g		91	(75%-125%)		12/08/06 00:09
	Uncert:	+/-0.876		+/-1.18						
	TPU:	+/-0.877		+/-1.19						
Batch 593478										
QC1201241222 177084014 DUP										
Iron-55	U	-17	U	-1.18	pCi/g	0		(0% - 100%)	MXP1	12/11/06 15:02
	Uncert:	+/-39.0		+/-52.7						
	TPU:	+/-39.0		+/-52.7						
QC1201241224 LCS										
Iron-55	608			635	pCi/g		104	(75%-125%)		12/11/06 15:34
	Uncert:			+/-49.4						
	TPU:			+/-94.0						
QC1201241221 MB										
Iron-55			U	-23.2	pCi/g					12/11/06 14:46
	Uncert:			+/-43.3						
	TPU:			+/-43.3						
QC1201241223 177084014 MS										
Iron-55	642 U	-17		650	pCi/g		101	(75%-125%)		12/11/06 15:18
	Uncert:	+/-39.0		+/-78.7						
	TPU:	+/-39.0		+/-130						
Batch 593479										
QC1201241226 177084014 DUP										
Nickel-63	U	-4.09	U	1.32	pCi/g	0		(0% - 100%)	MXP1	12/08/06 23:43
	Uncert:	+/-11.1		+/-9.72						
	TPU:	+/-11.1		+/-9.72						
QC1201241228 LCS										
Nickel-63	506			514	pCi/g		102	(75%-125%)		12/09/06 00:15
	Uncert:			+/-23.3						
	TPU:			+/-29.2						
QC1201241225 MB										
Nickel-63			U	-2.75	pCi/g					12/08/06 23:27
	Uncert:			+/-8.97						
	TPU:			+/-8.97						
QC1201241227 177084014 MS										
Nickel-63	545 U	-4.09		515	pCi/g		95	(75%-125%)		12/08/06 23:59
	Uncert:	+/-11.1		+/-24.1						
	TPU:	+/-11.1		+/-30.2						

QC Summary

Workorder: 177084

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 3 (DQA RESULTS)

ATTACHMENT 3A (PRELIMINARY DATA REVIEW)

Survey Unit:	9804-0000
Area Description	Southeast Grounds (non-protected)
Classification	A
Survey Media	Subsurface Soils
Type of Survey	Final Status Survey
Number of Measurements	31 Static, 4 Biased

STATISTICS on TOTAL POPULATION

	Cs-137	Co-60
$DCGL_{op}$ (pCi/g):	3.85E+00	2.29E+00
Minimum Value:	-1.02E-02	-1.88E-02
Maximum Value:	1.15E-01	3.89E-02
Mean:	2.44E-02	3.89E-03
Median:	1.78E-02	5.36E-03
Standard Deviation:	2.50E-02	1.21E-02

STATISTICS on NON-PARAMETRIC POPULATION

	Cs-137	Co-60
$DCGL_{op}$ (pCi/g):	3.85E+00	2.29E+00
Minimum Value:	-1.02E-02	-1.88E-02
Maximum Value:	7.43E-02	3.89E-02
Mean:	2.12E-02	2.64E-03
Median:	1.78E-02	3.33E-03
Standard Deviation:	1.93E-02	1.21E-02

Sample ID	GPS Coordinates		Cs-137				Co-60				Fraction of DCGL
	North	East	Result (pCi/g)	2σ	MDA (pCi/g)	Identified	Result (pCi/g)	2σ	MDA (pCi/g)	Identified	
9804-0000-001F	669100.78	236559.81	1.53E-02	0.030	3.35E-02		6.09E-03	0.018	3.45E-02		0.01
9804-0000-002F	669066.74	236500.84	3.69E-02	0.030	3.13E-02	+	3.01E-03	0.018	2.95E-02		0.01
9804-0000-003F	669134.83	236500.84	2.82E-02	0.027	4.31E-02	+	8.66E-03	0.024	4.13E-02		0.01
9804-0000-004F	668964.61	236441.88	0.00E+00	0.019	2.14E-02		-9.72E-03	0.015	2.05E-02		0.00

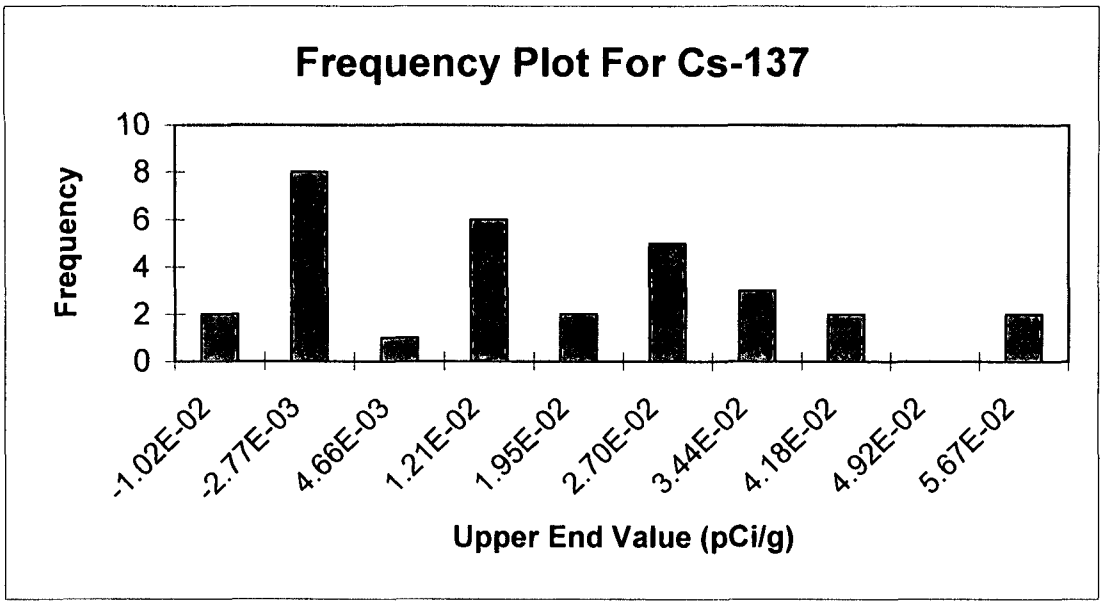
Sample ID	GPS Coordinates		Cs-137				Co-60				Fraction of DCGL
	North	East	Result (pCi/g)	2σ	MDA (pCi/g)	Identified	Result (pCi/g)	2σ	MDA (pCi/g)	Identified	
9804-0000-005F	669032.70	236441.88	1.41E-02	0.018	3.12E-02		5.55E-03	0.017	2.86E-02		0.01
9804-0000-006F	669100.78	236441.88	0.00E+00	0.037	3.42E-02		5.36E-03	0.022	4.04E-02		0.00
9804-0000-007F	668930.57	236382.92	-1.02E-02	0.023	3.42E-02		-8.67E-03	0.019	3.49E-02		0.00
9804-0000-008F	668998.66	236382.92	5.06E-03	0.013	2.48E-02		1.01E-02	0.013	2.64E-02		0.01
9804-0000-009F	669066.74	236382.92	1.79E-02	0.031	2.67E-02		-3.30E-03	0.019	2.60E-02		0.00
9804-0000-0010F	669134.83	236382.92	3.55E-02	0.026	2.93E-02	+	1.20E-02	0.016	3.18E-02		0.01
9804-0000-0011F	669202.91	236382.92	3.06E-02	0.019	3.48E-02	+	-9.60E-03	0.019	3.29E-02		0.00
9804-0000-0012F	668896.53	236323.95	7.46E-03	0.022	4.09E-02		9.75E-04	0.025	4.76E-02		0.00
9804-0000-0013F	668964.61	236323.95	-4.96E-04	0.021	3.87E-02		1.41E-02	0.018	3.38E-02		0.01
9804-0000-0014F	669032.70	236323.95	7.61E-03	0.029	5.21E-02		1.18E-02	0.028	4.89E-02		0.01
9804-0000-0015F	669100.78	236323.95	1.20E-02	0.023	4.45E-02		4.00E-03	0.022	4.32E-02		0.00
9804-0000-0016F	669168.87	236323.95	0.00E+00	0.043	3.71E-02		-3.92E-03	0.023	4.21E-02		0.00
9804-0000-0017F	669236.95	236323.95	3.82E-02	0.051	4.13E-02		-1.83E-02	0.020	3.28E-02		0.00
9804-0000-0019F	668998.66	236264.99	3.31E-02	0.029	3.84E-02	+	-1.38E-03	0.027	3.91E-02		0.01
9804-0000-0020F	669066.74	236264.99	3.24E-02	0.034	4.85E-02		3.89E-02	0.023	4.15E-02	+	0.03
9804-0000-0021F	669134.83	236264.99	1.71E-02	0.025	4.84E-02		9.88E-04	0.024	4.54E-02		0.00
9804-0000-0022F	669202.91	236264.99	7.43E-02	0.034	4.62E-02	+	-1.48E-02	0.030	5.12E-02		0.01
9804-0000-0023F	669270.99	236264.99	4.67E-02	0.041	4.03E-02	+	1.70E-02	0.024	4.95E-02		0.02
9804-0000-0025F	669100.78	236206.03	4.50E-02	0.024	2.64E-02	+	6.85E-03	0.015	2.84E-02		0.01
9804-0000-0026F	669236.95	236206.03	3.10E-02	0.029	3.57E-02	+	-4.88E-03	0.020	3.57E-02		0.01
9804-0000-0027F	669305.04	236206.03	5.83E-02	0.038	4.25E-02	+	1.47E-02	0.025	4.59E-02		0.02

Sample ID	GPS Coordinates		Cs-137				Co-60				Fraction of DCGL
	North	East	Result (pCi/g)	2σ	MDA (pCi/g)	Identified	Result (pCi/g)	2σ	MDA (pCi/g)	Identified	
9804-0000-0028F	669373.12	236206.03	1.78E-02	0.025	4.08E-02		1.55E-02	0.026	4.24E-02		0.01
9804-0000-0029F	669339.08	236147.07	2.67E-02	0.026	5.23E-02	+	1.13E-02	0.026	5.07E-02		0.01
9804-0000-0030F	669407.16	236147.07	2.05E-02	0.020	4.21E-02	+	-2.50E-03	0.022	3.95E-02		0.00
9804-0000-0036F	236365.25	669149.47	1.52E-02	0.036	3.08E-02		3.33E-03	0.018	3.34E-02		0.01
9804-0000-0037F	236400.39	668982.88	5.16E-03	0.020	3.71E-02		-1.88E-02	0.020	3.23E-02		0.00
9804-0000-0038F	236355.96	669069.10	-3.12E-03	0.022	4.02E-02		-1.25E-02	0.027	4.06E-02		0.00
9804-0000-0032B	236206.11	669139.23	7.80E-03	0.021	3.87E-02		1.24E-02	0.020	3.85E-02		0.01
9804-0000-0033B	236492.21	669023.32	1.15E-01	0.034	3.50E-02	+	9.66E-03	0.017	3.39E-02		0.03
9804-0000-0034B	236400.60	669091.16	1.41E-02	0.034	4.29E-02		7.39E-03	0.041	4.86E-02		0.01
9804-0000-0035B	236294.04	669153.04	5.77E-02	0.049	4.70E-02	+	2.48E-02	0.026	5.19E-02		0.03
9804-0000-007FS	668998.66	236382.92	5.27E-03	0.017	3.18E-02		2.88E-03	0.020	3.79E-02		0.00
9804-0000-028FS	669373.12	236206.03	5.35E-02	0.038	7.57E-02		8.21E-03	0.035	6.75E-02		0.02

ATTACHMENT 3B (GRAPHICAL REPRESENTATION OF DATA)

FREQUENCY PLOT FOR CESIUM-137

Survey Unit: 9804-0000
Survey Unit Name: Southeast Site Grounds Sub-surface Soils
Mean: 2.12E-02 pCi/g



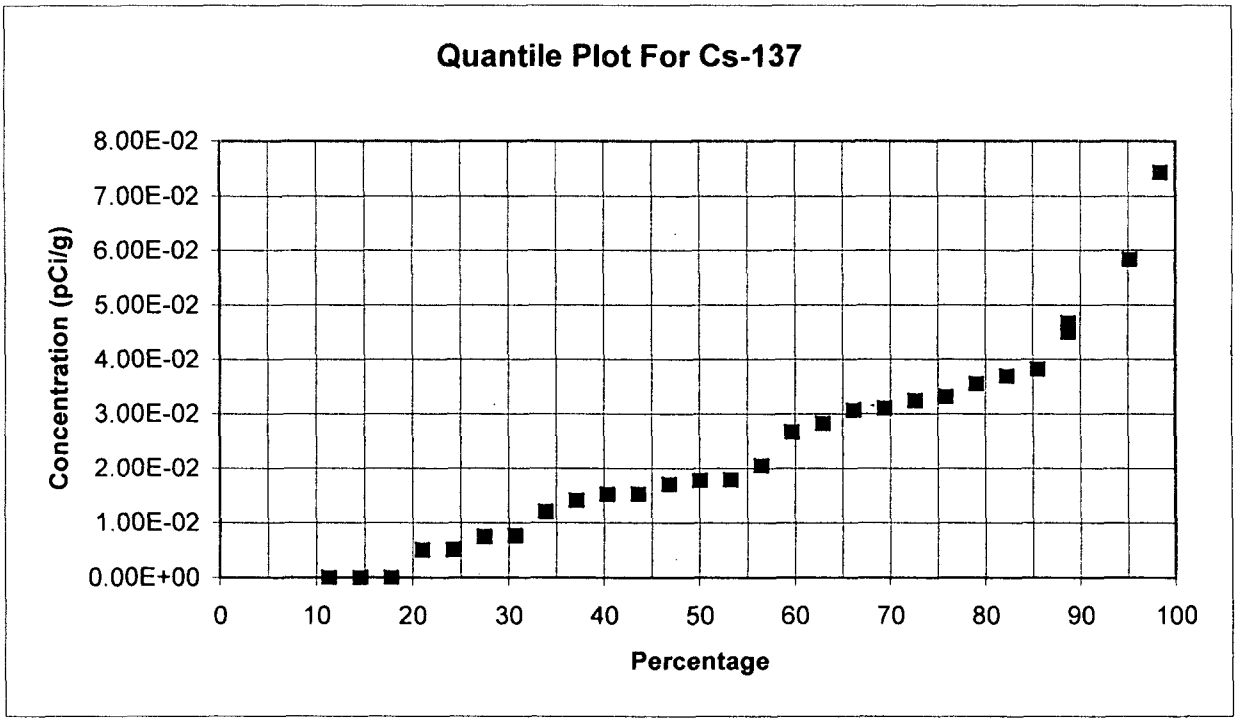
Upper End Value	Observation Frequency	Observation Frequency
-1.02E-02	2	6%
-2.77E-03	8	26%
4.66E-03	1	3%
1.21E-02	6	19%
1.95E-02	2	6%
2.70E-02	5	16%
3.44E-02	3	10%
4.18E-02	2	6%
4.92E-02	0	0%
5.67E-02	2	6%
Total:	31	100%

D WOJTKOWIAK 12/14/06
Submitted by/Date

1/2/07
Reviewed by/Date

QUANTILE PLOT FOR CESIUM-137

Survey Unit: 9804-0000
Survey Unit Name: Southeast Site Grounds Sub-surface Soils
Mean: 2.12E-02 ρCi/g



Cs-137	Rank	Percentage
-1.02E-02	1	1.6%
-3.12E-03	2	4.8%
-4.96E-04	3	8.1%
0.00E+00	4	11.3%
0.00E+00	5	14.5%
0.00E+00	6	17.7%
5.06E-03	7	21.0%
5.16E-03	8	24.2%
7.46E-03	9	27.4%
7.61E-03	10	30.6%
1.20E-02	11	33.9%
1.41E-02	12	37.1%
1.52E-02	13	40.3%
1.53E-02	14	43.5%
1.71E-02	15	46.8%

Cs-137	Rank	Percentage
1.78E-02	16	50.0%
1.79E-02	17	53.2%
2.05E-02	18	56.5%
2.67E-02	19	59.7%
2.82E-02	20	62.9%
3.06E-02	21	66.1%
3.10E-02	22	69.4%
3.24E-02	23	72.6%
3.31E-02	24	75.8%
3.55E-02	25	79.0%
3.69E-02	26	82.3%
3.82E-02	27	85.5%
4.50E-02	28	88.7%
4.67E-02	28	88.7%
5.83E-02	30	95.2%
7.43E-02	31	98.4%

D. WOJTKOWIAK 12/14/06
Submitted by/Date

S. McCURRY 1/2/07
Reviewed by/Date

ATTACHMENT 3C (SIGN TEST)

Sign Test Calculation Sheet for Multiple Radionuclides

Survey Area Number:	9804	Survey Unit Number:	0000	WPIR #:	2006-0043
Survey Area Name:	Southeast Site Grounds Subsurface Soils	Classification:	A	TYPE I (α error): 0.05	N: 32
Radionuclides:	1st Radionuclide Cs-137	2nd Radionuclide Co-60			
DCGL:	3.85E+00	2.29E+00			

Results 1st Radionuclide (pCi/g)	Results 2nd Radionuclide (pCi/g)	Results 3rd Radionuclide (pCi/g)	Results 4th Radionuclide (pCi/g)	Weighted Sum (W_s)	1-W_s	Sign
1.53E-02	6.09E-03			0.01	0.99	+1
3.69E-02	3.01E-03			0.01	0.99	+1
2.82E-02	8.66E-03			0.01	0.99	+1
0.00E+00	-9.72E-03			0.00	1.00	+1
1.41E-02	5.55E-03			0.01	0.99	+1
0.00E+00	5.36E-03			0.00	1.00	+1
-1.02E-02	-8.67E-03			-0.01	1.01	+1
5.06E-03	1.01E-02			0.01	0.99	+1
1.79E-02	-3.30E-03			0.00	1.00	+1
3.55E-02	1.20E-02			0.01	0.99	+1
3.06E-02	-9.60E-03			0.00	1.00	+1
7.46E-03	9.75E-04			0.00	1.00	+1
-4.96E-04	1.41E-02			0.01	0.99	+1
7.61E-03	1.18E-02			0.01	0.99	+1
1.20E-02	4.00E-03			0.00	1.00	+1
0.00E+00	-3.92E-03			0.00	1.00	+1
3.82E-02	-1.83E-02			0.00	1.00	+1
3.31E-02	-1.38E-03			0.01	0.99	+1
3.24E-02	3.89E-02			0.03	0.97	+1
1.71E-02	9.88E-04			0.00	1.00	+1
7.43E-02	-1.48E-02			0.01	0.99	+1
4.67E-02	1.70E-02			0.02	0.98	+1

Results 1st Radionuclide (pCi/g)	Results 2nd Radionuclide (pCi/g)	Results 3rd Radionuclide (pCi/g)	Results 4th Radionuclide (pCi/g)	Weighted Sum (W_s)	1-W_s	Sign
4.50E-02	6.85E-03			0.01	0.99	+1
3.10E-02	-4.88E-03			0.01	0.99	+1
5.83E-02	1.47E-02			0.02	0.98	+1
1.78E-02	1.55E-02			0.01	0.99	+1
2.67E-02	1.13E-02			0.01	0.99	+1
2.05E-02	-2.50E-03			0.00	1.00	+1
1.52E-02	3.33E-03			0.01	0.99	+1
5.16E-03	-1.88E-02			-0.01	1.01	+1
-3.12E-03	-1.25E-02			-0.01	1.01	+1
					Number of positive differences (S+)	31

Critical Value 20 Survey Unit Meets the Acceptance Criteria

Performed by: David Wojtkowiak Date: 12/14/2006

Independent Review by: Jack McCluskey Date: 1/2/07

ATTACHMENT 3D (QC SPLIT RESULTS)

Split Sample Assessment Form

Survey Area #: 9804	Survey Unit # 0000	Survey Unit Name: Southeast Site Grounds Sub-surface Soils (non-protected area)
Sample Plan or WPIR#: 2006-0043		SML#: 9804-0000-007

Sample Description: Comparison of split samples collected from sample measurement location #7 and analyzed using gamma spectroscopy by off-site Vendor Laboratory. The standard sample was 9804-0000-007F, the comparison sample was 9804-0000-007FS.

STANDARD					COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
K-40	9.17E+00	0.363	25	0.75 - 1.33	8.87E+00	0.36	0.97	Y

Comments/Corrective Actions: Cs-137 was not detected in sufficient quantities in the field split results at location 9804-0000-007 to evaluate in accordance with procedure. Evaluation using the reported results for K-40 resulted in acceptable agreement between the field-split results at these locations.. 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	0.5 - 2.0
8 - 15	0.6 - 1.66
16 - 50	0.75 - 1.33
51 - 200	0.80 - 1.25
>200	0.85 - 1.18

Performed by: D. Wojtkowiak	Date: 12/14/2006	Reveiwed by: Jack McCarty	Date: 1/2/07

Split Sample Assessment Form

Survey Area #: 9804	Survey Unit # 0000	Survey Unit Name:	Southeast Site Grounds Sub-surface Soils (non-protected area)
Sample Plan or WPIR#: 2006-0043		SML#:	9804-0000-028

Sample Description: Comparison of split samples collected from sample measurement location #28 and analyzed using gamma spectroscopy by off-site Vendor Laboratory. The standard sample was 9804-0000-028F, the comparison sample was 9804-0000-028FS.

STANDARD					COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
K-40	1.20E+01	0.6	20	0.75 - 1.33	1.27E+01	0.63	1.06	Y

Comments/Corrective Actions: Cs-137 was not detected in sufficient quantities in the field split results at location 9804-0000-028 to evaluate in accordance with procedure. Evaluation using the reported results for K-40 resulted in acceptable agreement between the field-split results at these locations.. 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	0.5 - 2.0
8 - 15	0.6 - 1.66
16 - 50	0.75 - 1.33
51 - 200	0.80 - 1.25
>200	0.85 - 1.18

Performed by: D. Wojtkowiak	Date: 12/14/2006	Reveiwed by: Jack McCall	Date: 1/2/07

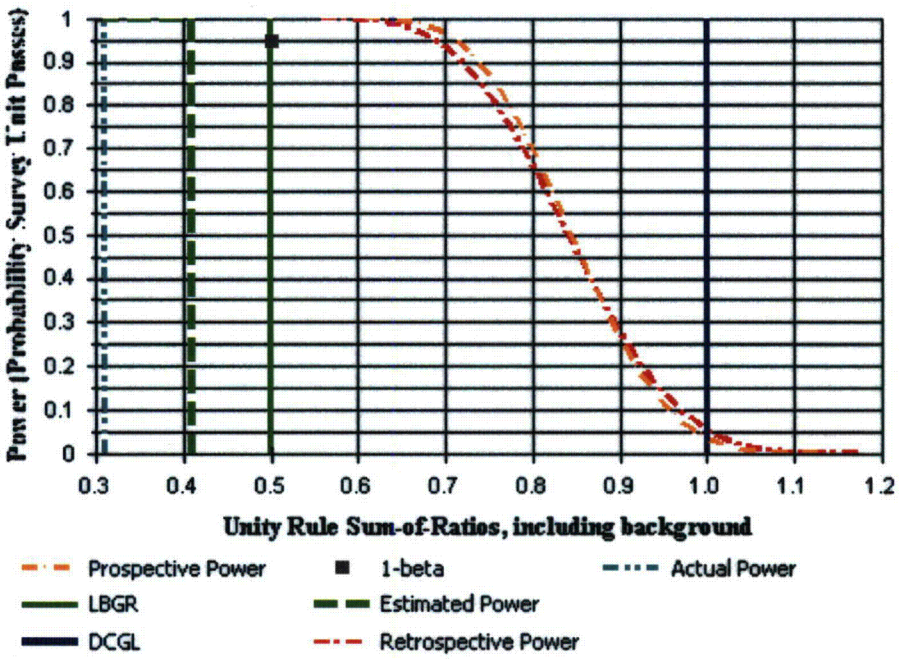
ATTACHMENT 3E (COMPASS DQA WITH POWER CURVE)

DQA Surface Soil Report

Assessment Summary

Site:	9527-0006 F		
Planner(s):	McCarthy		
Survey Unit Name:	East Mountainside Area		
Report Number:	1		
Survey Unit Samples:	14		
Reference Area Samples:	0		
Test Performed:	Sign	Test Result:	Not Performed
Judgmental Samples:	0	EMC Result:	Not Performed
Assessment Conclusion:	***Reject Null Hypothesis (Survey Unit PASSES)***		

Retrospective Power Curve



ATTACHMENT 4E (COMPASS DQA WITH POWER CURVE)