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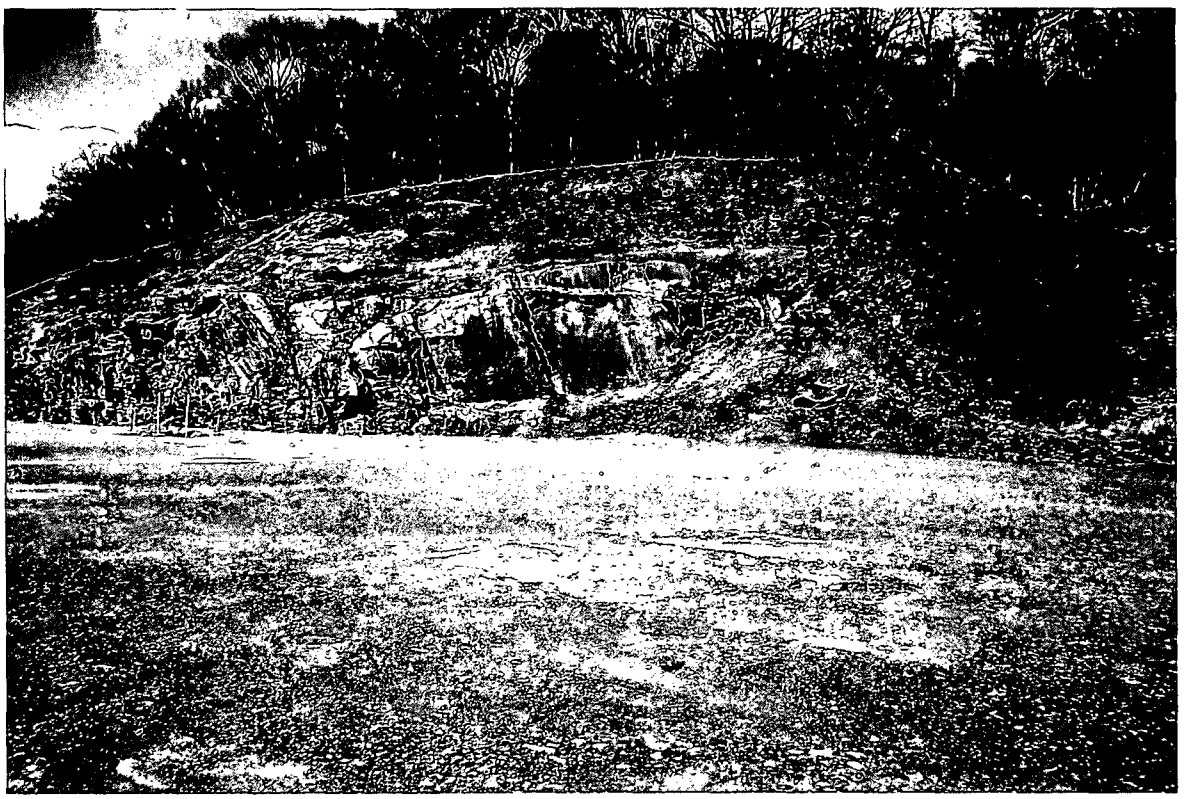

Final Status Survey Final Report Phase VII

Appendix A12
Survey Unit Release Record 9312-0010, Radiologically Controlled Area East Trench South / MWST A&B

May 2007

CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
NORTHEAST PROTECTED AREA GROUNDS
SURVEY UNIT 9312-0010

Prepared By: _____ Date: 4-24-07
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Revision 0

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1. SURVEY UNIT DESCRIPTION

Survey Unit 9312-0010 (Radiologically Controlled Area, East Trench South / MWST A&B) is designated as Final Status Survey (FSS) Class 1 and consists of approximately one thousand three hundred sixty five square meters (1,365 m^2) of uninhabited land and is located approximately fifteen hundred twenty nine feet (1,529 ft) from the reference coordinate system benchmark used at Haddam Neck Plant (HNP) (see Attachment 1). The survey unit is bounded as follows: land Survey Unit 9312-0009 to the north (called north as oriented with the north to south flow of the Connecticut River), land Survey Units 9312-0009 and 9527-0005 to the east, land Survey Units 9522-0007 to the south, and land Survey Unit 9312-0002 and 9312-0007 to the west. The survey unit is located along the east boundary of Survey Area 9312. It is comprised of flat gravel terrain. The eastern boundary is bordered by a steep rock cliff that transitions to a steep soil bank from north to south.

The reference coordinates associated with this survey unit are E013 through E014 by S067 through S071 (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 9312-0010 consisted of:

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

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

c) Historic and current survey records review,

d) Visual inspections and a "walkdown."

A review of the *"Initial and Supplemental Characterization Reports"* as well as the previous *"Classification Basis Summaries"* was performed.

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.

During plant operation, Survey Unit 9312-0010 was a part of the radiological controlled area and the location of significant, radiologically contaminated structures and systems. Structures included the yard crane, primary water

storage tank and backup primary water storage tank.

Major demolition and remediation activities began in 2002. All radioactive systems and components located inside the Containment Building, including the reactor vessel, were removed and appropriately packaged and shipped to an approved off-site disposal facility. Interior structural surfaces inside the Containment Building were decontaminated to ensure contamination levels were acceptable for controlled demolition. Interior walls and floors were then demolished and removed. The Containment liner was removed with the exception of the Incore Sump. The dose from residual radioactivity on the remaining steel and concrete in the sump was accounted for in the "Basement Fill Model". The Incore Sump was then filled with grout to the basement floor elevation. The remaining interior surfaces inside the Containment shell were decontaminated.

Following decontamination, the Containment basement was filled with clean soil to the grade of the exterior open land. The above grade portion of the Containment structure was then demolished and removed. Confirmatory radiological surveys were performed throughout the demolition process. No above grade structures currently reside within Survey Area 9312.

Outside of the containment shell, soil remediation began around the northeast, northwest and southeast quadrants of the survey unit. A large excavation was created to the north of the Containment that was designated as Excavation #1. This excavation included the area in the vicinity of the Refueling Water Storage Tank and the Primary Auxillary Building (PAB) corrider. A second large excavation, also designated as Excavation #2 was located over the Service Building footprint. A third excavation, designated as Excavation #3 was located in the area between the Containment Building and Spent Fuel Building (SFB). As adjacent structures were demolished, soil was excavated and removed. This process continued until bedrock was exposed. Subsurface structures and footings that remained following demolition and excavation include the Containment Mat, the Cable Vault wall, the Service Building east wall, a remnant of the PAB northwest wall, Waste Disposal Building footing and miscellaneous fragments of footings and slabs on the bedrock. As with the Containment basement shell, all excavations were backfilled with clean fill following the performance of a radiological assessment.

This report represents the second of two (2) attempts to FSS this survey unit. An initial FSS survey was performed starting on 01-22-07. Subsequent to the completion of this FSS Survey, but prior to the submittal of its Release Record, a remediation campaign was performed on the steep hillside in adjacent survey unit 9312-0009. The remediation efforts were followed by heavy rains that washed a portion of the hill side soils into the portion of the eastern end of this survey unit.

A surveillance of the affected area was performed on 03-15-07. Four (4) biased samples were collected at the location of the highest observed scan readings.

Two (2) of the four (4) samples had on-site sample results in excess of the DCGL, primarily due to the presence of Cs-137, which was determined to be present at concentrations up to 7 pCi/g.

A remediation was performed over the affected area, the remediation survey results indicated that the area was cleaned to levels below the DCGL.

Table 1 – Basic Statistical Quantities for Cs-137, Co-60 and Sr-90 from the Initial Final Status Survey & Surveillance Soil Sample Population

	Cs-137 (ρCi/g)	**Co-60 (ρCi/g)**	**Sr-90 (ρCi/g)**
Minimum Value :	-6.60E-03	-1.09E-02	-2.61E-03
Maximum Value :	1.85E+00	1.08E-01	1.15E+00
Mean :	4.15E-01	2.32E-02	1.09E-01
Median :	6.21E-02	1.23E-02	4.51E-02
Standard Deviation :	6.52E-01	3.43E-02	2.78E-01

A review of this sample data shows Cs-137, Co-60 and Sr-90 to be the primary radionuclides of concern, with both Cs-137 and Co-60 reported at fairly low concentrations. Sr-90 was the predominant nuclide primarily due to one scan investigation sample result from the initial FSS (sample 9312-0010-016I). 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 results are provided in Table 2.

Table 2 – Distribution Fraction for Detectable Radionuclides in Soil Sample Population	
Detected Radionuclide	**Distribution Fraction**
Cs-137	0.408
Co-60	0.047
Sr-90	0.545

No additional HTD radionuclides were positively identified in concentrations meeting the accepted criteria for detection (i.e., a result greater than two (2) standard deviations uncertainty). Radionuclide screening or de-selection is a process where an individual radionuclide or aggregates may be considered insignificant and eliminated from the FSS. The criteria for de-selection are concentrations less than 5% for individual radionuclides and less than 10% for aggregates.

The FSS Engineer performed a visual inspection and walk-down during March 2007 to assess the physical condition of the survey unit, evaluate access points, travel paths and identify potentially hazardous conditions.

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

Based upon the identification of radioactive material above the Derived Concentration Guideline Levels (DCGLs), and the need for radiological remediation, it was concluded that there was some probability for residual radioactivity in concentrations greater than the DCGLs, justifying a final survey unit classification of Class 1 (refer to Section 3).

3. DATA QUALITY OBJECTIVES (DQO)

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

The DQO process incorporated hypothesis testing and probabilistic sampling distributions to control decision errors during data analysis. Hypothesis testing is a process based on the scientific method that compares a baseline condition to an alternate condition. The baseline condition is technically known as the null hypothesis.

Hypothesis testing rests on the premise that the null hypothesis is true and that sufficient evidence must be provided for rejection. In designing the survey plan,

the underlying assumption, or null hypothesis was that residual activity in the survey unit exceeded the release criteria. Rejection of the null hypothesis would indicate that residual activity within the survey unit does not exceed the release criteria.

The primary objective of the FSS plan was to demonstrate that the level of residual radioactivity in Survey Unit 9312-0010 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

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

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 ($DCGL_{op}$), and has been established for the radionuclides of concern as provided in Table 3.

Table 3 – 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. Soil samples were collected in 2006 to establish the radiological condition of Survey Unit 9312-0010 for FSS. Cs-137, Co-60 and Sr-90 were the three (3) radionuclides reported in concentrations with the potential for exceeding the release criteria. The characterization data were used for the survey design and are provided in Table 1.

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

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

4. SURVEY DESIGN

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

The DQO process determined that Cs-137, Co-60 and Sr-90 would be the radionuclides of concern in Survey Unit 9312-0010 (refer to Section 3). The characterization surveys did not include any additional HTD radionuclides of concern for this survey unit. As Sr-90 concentrations were determined by direct analysis, surrogate DCGLs were not required as part of the survey design for this survey unit via screening under LTP Section 5.4.7.2, "*Gross Activity DCGLs*". Other radionuclides that were positively identified in concentrations greater than the screening criteria during the performance of this FSS would be evaluated to ensure adequate survey design.

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

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

The number of soil samples for FSS was determined in accordance with Procedure RPM 5.1-12, "*Determination of the Number of Surface Samples for*

Final Status Survey." The Lower Bound of the Gray Region (LBGR) was set in accordance with Procedure RPM 5.1-11 to 0.5 to achieve a relative shift (Δ/σ) in the range of 1 and 3. The resulting relative shift was 1.5. A Prospective Power Curve was generated using COMPASS, a software package developed under the sponsorship of the United States Nuclear Regulatory Commission (USNRC) for implementation of the MARSSIM in support of the decommissioning license termination rule (10CFR20, Subpart E). The result of the COMPASS computer run showed adequate power for the survey design. The survey design specified eighteen (18) surface soil samples for non-parametric statistical testing. Based upon a review of the historical information and Characterization Survey data, the acquisition of five (5) judgmental surface soil samples from two (2) areas within this survey unit was deemed appropriate. These two (2) areas included where the remediation was performed and the sample location that indicated an elevated Sr-90 concentration, based on the initial FSS sample results.

The grid pattern and locations of the soil samples were determined using Visual Sample Plan (VSP) in accordance with Procedure RPM 5.1-14, "*Identifying, and Marking Surface Sample Locations for Final Status Survey*." Visual Sample Plan was created by Pacific Northwest National Laboratory (PNNL) for the United States Department of Energy. A systematic triangular grid pattern with a random starting point was selected for sample design, which is appropriate for a Class 1 area.

Sample locations were identified using AutoCAD-LT, a commercially available plotting software package with coordinates consistent with the Connecticut State Plane System. These coordinates were integrated with a GPS to locate sample locations in the field. Sample Measurement Locations for the design are listed with the GPS coordinates in Table 4.

Table 4 - Sample Measurement Locations with Associated GPS Coordinates

Designation	Northing	Easting
9312-0010-101F	236722.97	668813.41
9312-0010-102F	236696.79	668858.76
9312-0010-103F	236670.61	668904.10
9312-0010-104F	236670.61	668934.33
9312-0010-105F	236670.61	668964.55
9312-0010-106F	236644.43	668919.21
9312-0010-107F	236644.43	668949.44
9312-0010-108F	236644.43	668979.67

Table 4 - (continued)		
Designation	**Northing**	**Easting**
9312-0010-109F	236644.43	669009.89
9312-0010-110F	236644.43	669040.12
9312-0010-111F	236618.25	668964.55
9312-0010-112F	236618.25	668994.78
9312-0010-113F	236618.25	669025.01
9312-0010-114F	236618.25	669055.24
9312-0010-115F	236592.07	668979.67
9312-0010-116F	236592.07	669009.89
9312-0010-117F	236592.07	669040.12
9312-0010-118F	236565.90	669025.01

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 "RAND" 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 3.

The LTP requires a minimum of 5% of the samples taken for non-parametric statistical testing be selected for QC evaluation. 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 "RAND" function.

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

For this Class 1 survey unit, the "Investigation Level" for area scanning and soil sample measurement results are those levels specified in LTP, Table 5-8. Table 5 provides a synopsis of the survey design.

Table 5 – Synopsis of the Survey Design		
Feature	**Design Criteria**	**Basis**
Survey Unit Land Area	1,365 m^2	Based on AutoCAD-LT
Number of Measurements	23 (18 systematic grid) (5 judgmental)	Type 1 and Type 2 errors were 0.05, sigma was 0.33 the LBGR was set at 0.5 to achieve a Relative Shift in the range of 1 and 3
Grid Spacing	9.36 m	Based on triangular grid
Operational DCGL	4.75 ρCi/g Cs-137 2.29 ρCi/g Co-60 0.93 ρCi/g Sr-90	Administratively set to achieve fifteen (15) mrem/yr TEDE (1)
Soil Investigation Level	4.75 ρCi/g Cs-137 2.29 ρCi/g Co-60 0.93 ρCi/g Sr-90	The Operational DCGL meets the LTP criteria for a Class 1 survey unit
Scan Survey Area Coverage	Approximately 100% of the area	The LTP requires 100% area coverage for Class 1 survey units
Scan Investigation Level	An instrument response greater than the 2,000 cpm plus ambient background	This is the recommended investigation level value from Technical Support Document CY-HP-0239

(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)

5. SURVEY IMPLEMENTATION

Final status survey field activities were conducted under the Final Status Survey Plan (FSSP). The FSSP contained a job safety analysis, job planning checklist and related procedures for reference. Daily briefings were conducted to discuss the expectations for job performance and the safety aspects of the survey. The "Daily Survey Journal" was used to document field activities and other information pertaining to the FSS.

A single scan area was established that constituted approximately 100% of the surface area of Survey Unit 9312-0010. Grid lines, one (1) meter wide, were painted on the ground of the scan area. A background survey was performed around the survey unit and it was determined that, using an Eberline E-600 with a SPA-3 sodium iodide detector, background ranged from 8,240 counts per minute (cpm) up to 14,000 cpm.

The scan area was established and scanned for elevated readings (see Attachment 2 for all scan results). Scanning was performed with an Eberline E-600 using a SPA-3 sodium iodide detector. The E-600 was operated in the rate-meter mode

and used with audio response. The probe was positioned as close to the ground as possible and was moved at a scan speed of about 0.5 meters per second. Approximately 100% of the survey unit was scanned.

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. At each sample location, a one (1) meter radius circle was established around the sample flag or paint mark was scanned for elevated radiation levels.

Eighteen (18) surface soil samples were collected and packaged in accordance with Haddam Neck Plant (HNP) Procedure RPM 5.1-3, "*Collection of Sample Media for Final Status Survey*" and FSS design. Samples were controlled, transported, stored, and transferred to the off-site laboratory using Chain-of-Custody (COC) protocol in accordance with Procedure RPM 5.1-5, "*Chain of Custody for Final Status Survey Samples.*"

Two (2) samples (9312-0010-102F and 9312-0010-111F) were randomly selected for HTD radionuclide analysis.

The implementation of survey specific quality control measures included the collection of one (1) sample (9312-0010-114F) for "split sample" analysis.

6. SURVEY RESULTS

All field survey activities were conducted from March 26, 2007 to March 29, 2007.

The sample locations identified in the FSS plan were scanned over approximately a one (1) meter radius for elevated radiation levels. Table 5 provides an overview of the scan results for sample measurement locations. Scan results are provided in Attachment 2.

Table 5 - Scan Results for Sample Measurement Locations

Sample Measurement Location	Highest Logged Reading (kcpm)	Action Level [1] (kcpm)	> Action Level [2]
101	14.8	15.2	NO
102	12.9	13.4	NO
103	12.9	14.3	NO
104	10.3	12.0	NO

Table 5 - (continued)

Sample Measurement Location	Highest Logged Reading (kcpm)	Action Level [1] (kcpm)	> Action Level [2]
105	9.49	11.5	NO
106	8.79	11.2	NO
107	9.53	11.2	NO
108	12.2	13.4	NO
109	13.1	13.4	NO
110	9.37	9.88	NO
111	11.0	12.1	NO
112	11.1	12.1	NO
113	10.2	11.7	NO
114	10.2	10.5	NO
115	11.6	12.4	NO
116	11.0	12.4	NO
117	11.2	12.2	NO
118	11.5	12.3	NO
119	13.1	14.0	NO
120	14.8	15.7	NO
121	13.1	12.7	YES[3]
122	10.8	12.8	NO
123	11.0	14.1	NO

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

(2) The FSS plan requires movement of the sample measurement location to the area within the 1 meter radius yielding the response above the action level.

(3) This sample location was moved to the highest observed gamma reading within the 1-m scan circle.

The scan areas, that comprised approximately 100% of the total surface area for the survey unit, were scanned for elevated radiation levels. The areas were scanned in accordance with the FSS plan on March 28, 2007.

Sixty six (66) scan strips were initially established in this survey unit. Three (3) elevated measurement locations were identified during scanning. Table 6 provides an overview of the scan area survey. Scan results are provided in Attachment 2.

Table 6 - Scan Area Results

Scan Strips	Highest Logged Reading (kcpm)	Action Level (1) (kcpm)	Elevated Reading Identification(2)	Investigation Sample
1 thru 13	14.43	12.9	9312-10-ER-00-13-1	9312-0010-124-I
14 thru 20	22.4	12.0	9312-10-ER-00-20-1	9312-0010-125-I
21 thru 49	12.38	11.9	9312-10-ER-00-49-1	9312-0010-126-I
49 thru 66	11.5	13.8	N/A	N/A

(1) The action level is based on a measurement above ambient background plus 2,000 cpm

(2) ER is an abbreviation associated with the barcodes used in the field where ER stands for Elevated Reading.

The off-site laboratory employed for the radiological analyses of samples was General Engineering Laboratories, LLC. The laboratory analyzed the eighteen (18) samples collected for non-parametric statistical testing, the associated field splits using gamma spectroscopy. Gamma spectroscopy analysis was performed to the required MDCs. Gamma spectroscopy results identified some radionuclides meeting the accepted criteria for detection (i.e., a result greater than two (2) standard deviations uncertainty). However, Cs-137 was the only gamma-emitting radionuclide reported in concentrations exceeding the de-selection criteria.

Cs-137 was identified in twelve (12), Co-60 was identified in one (1) and Sr-90 in two (2) of the eighteen (18) 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 higher than expected environmental levels for Cs-137 within the vicinity of the HNP as presented in the Health Physics TSD BCY-HP-0063. A summary of the eighteen (18) samples collected for non-parametric statistical testing results is provided in Table 7.

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

Sample Number	Cs-137 pCi/g	Co-60 pCi/g
9312-0010-101F	2.56E-01	3.48E-02
9312-0010-102F	1.60E+00	0.00E+00
9312-0010-103F	1.91E+00	0.00E+00
9312-0010-104F	1.44E-01	8.09E-03
9312-0010-105F	8.70E-02	-5.15E-03
9312-0010-106F	2.88E-02	1.74E-02
9312-0010-107F	0.00E+00	-9.39E-03
9312-0010-108F	4.18E-02	2.13E-02
9312-0010-109F	2.76E-01	2.92E-02
9312-0010-110F	4.30E-01	1.63E-02
9312-0010-111F	1.91E-02	-5.55E-03
9312-0010-112F	-2.35E-02	-2.30E-03
9312-0010-113F	6.26E-02	-1.72E-02
9312-0010-114F	4.96E-01	0.00E+00
9312-0010-115F	7.48E-03	1.65E-03
9312-0010-116F	-3.85E-03	2.50E-03
9312-0010-117F	2.91E-01	2.21E-02
9312-0010-118F	6.19E-02	-2.46E-03

In addition to Cs-137 and Co-60, Sr-90 was also identified during the DQO process as a radionuclide of concern. Subsequently, all samples were subjected to analysis by gas proportional counting for Sr-90. All analyses met the required minimum MDC.

Sr-90 was positively identified (i.e., a result greater than two (2) standard deviations uncertainty) in two (2) of the eighteen (18) samples collected for non-parametric statistical testing. The results of the Sr-90 analysis for the statistical sample population are provided below in Table 8.

Table 8 - Summary of Sr-90 Analysis Results for Surface Soil Samples Comprising the Statistical Sample Population

Sample Number	Sr-90 pCi/g
9312-0010-101F	-1.97E-02
9312-0010-102F	2.53E-02
9312-0010-103F	2.54E-02
9312-0010-104F	3.70E-02
9312-0010-105F	-1.05E-02
9312-0010-106F	-2.23E-02
9312-0010-107F	-1.55E-02
9312-0010-108F	8.14E-03
9312-0010-109F	1.91E-02
9312-0010-110F	-1.05E-02
9312-0010-111F	2.40E-03
9312-0010-112F	1.05E-02
9312-0010-113F	-1.63E-02
9312-0010-114F	2.75E-02
9312-0010-115F	-6.57E-03
9312-0010-116F	1.16E-03
9312-0010-117F	1.30E-02
9312-0010-118F	5.96E-03

In addition to Sr-90, the off-site laboratory also processed, as required by the sample plan, two (2) samples for the full suite of HTD radionuclides as specified in LTP, Table 2-12, "*Radionuclides Potentially Present at Haddam Neck Plant*" and as provided in Table 3. The requested analyses included alpha spectroscopy, gas proportional counting, and liquid scintillation depending on the radionuclide

and the measurement method. All analyses performed met the required minimum MDC. In one (1) sample, C-14 was detected at two (2) percent of the DCGL which is below the selection criteria discussed in Section 2. No additional HTD radionuclides were positively identified (i.e., a result greater than two (2) standard deviations uncertainty). 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 combination of the fractions of each detected radionuclide against their respective Operational DCGL must be less than or equal to one (1). 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 9312-0010 are provided in Table 9 below.

Table 9 – Results of Unity Calculation for Surface Soil Samples Comprising the Statistical Sample Population

Sample Number	Fraction of the Operational DCGL[(1)(2)]			Unity
	Cs-137	Co-60	Sr-90	
9312-0010-101F	2.56E-01	3.48E-02	0.00E+00	6.92E-02
9312-0010-102F	1.60E+00	0.00E+00	2.53E-02	3.64E-01
9312-0010-103F	1.91E+00	0.00E+00	2.54E-02	4.30E-01
9312-0010-104F	1.44E-01	8.09E-03	3.70E-02	7.37E-02
9312-0010-105F	8.70E-02	0.00E+00	0.00E+00	1.83E-02
9312-0010-106F	2.88E-02	1.74E-02	0.00E+00	1.37E-02
9312-0010-107F	0.00E+00	0.00E+00	0.00E+00	0.00E+00
9312-0010-108F	4.18E-02	2.13E-02	8.14E-03	2.69E-02
9312-0010-109F	2.76E-01	2.92E-02	1.91E-02	9.15E-02
9312-0010-110F	4.30E-01	1.63E-02	0.00E+00	8.64E-02

9312-0010-111F	1.91E-02	0.00E+00	2.40E-03	6.61E-03
9312-0010-112F	0.00E+00	0.00E+00	1.05E-02	1.13E-02
9312-0010-113F	6.26E-02	0.00E+00	0.00E+00	1.32E-02
9312-0010-114F	4.96E-01	0.00E+00	2.75E-02	1.34E-01
9312-0010-115F	7.48E-03	1.65E-03	0.00E+00	2.30E-03
9312-0010-116F	0.00E+00	2.50E-03	1.16E-03	1.09E-03
9312-0010-117F	2.91E-01	2.21E-02	1.30E-02	8.50E-02
9312-0010-118F	6.19E-02	0.00E+00	5.96E-03	1.84E-02

(1) The Operational DCGL from Table 2 is 4.75 ρCi/g for Cs-137, 2.29 ρCi/g for Co-60 and 0.93 ρCi/g for Sr-90 to achieve fifteen (15) mrem/yr TEDE respectively.

(2) Negative results (results whose values were less than zero) were set to zero.

7. QUALITY CONTROL

The off-site laboratory processed the split samples and performed gamma spectroscopy analysis. One sample location was selected for analysis, which exceeds the 5% minimum required by the LTP. The data were evaluated using USNRC acceptance criteria specified in Inspection Procedure 84750 as detailed in HNP Procedure RPM 5.1-24, *"Split Sample Assessment for Final Status Survey"*. There was acceptable agreement between the field split results.

The sample analysis vendor, General Engineering Laboratories, LLC, maintains quality control and quality assurance plans as part of normal operation. Refer to Attachments 3 and 4 for data and data quality analysis results

8. INVESTIGATIONS AND RESULTS

Three (3) investigative samples were collected from locations exhibiting elevated scan measurements and (5) judgmental samples were taken from the survey area. Four (4) of the judgmental samples were taken from the vicinity of the area that was subjected to remediation. The remaining judgmental sample was taken from the location where an elevated level of Sr-90 had been detected in the initial FSS. The investigation samples are denoted as shown in Table 6, with the investigative sample results, and judgmental sample results shown in Table 10 below.

Table 10 - Investigative and Biased Sample Results

Sample Number	Cs-137 ρCi/g	Co-60 ρCi/g	Sr-90 ρCi/g	Unity Fraction (1)
9312-0010-119B	2.25E+00	1.25E-01	7.53E-03	5.37E-01
9312-0010-120B	3.71E-01	1.50E-02	1.28E-04	8.49E-02
9312-0010-121B	2.34E-01	1.35E-02	1.58E-02	7.22E-02
9312-0010-122B	3.35E-02	1.02E-02	9.06E-03	2.13E-02
9312-0010-123B	3.40E-01	8.95E-03	2.29E-02	1.00E-01
9312-0010-124I	1.63E-01	1.95E-02	1.99E-02	6.43E-02
9312-0010-125I	3.54E-01	1.48E-02	6.32E-02	1.49E-01
9312-0010-126I	2.86E-02	-2.91E-02	-9.05E-03	-1.64E-02

(1) The Operational DCGL from Table 2 is 4.75 ρCi/g for Cs-137, 2.29 ρCi/g for Co-60 and 0.93 ρCi/g for Sr-90 to achieve seventeen (15) mrem/yr TEDE respectively.

9. REMEDIATION AND RESULTS

Radiological remedial action as described by MARSSIM Section 5.4 was performed in this survey unit prior to FSS. All excavations were characterized and backfilled with "clean" fill prior to performing FSS. In the area where remediation occurred, 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 adjacent survey units. The results for Cs-137 following remediation were well below the Operational DCGL provided in Table 3. Health Physics TSD BCY-HP-0078, "*ALARA Evaluation of Soil Remediation in Support of Final Status Survey,*" determined that remediation beyond that required to meet the release criteria is unnecessary and that the remaining residual radioactivity in soil was ALARA.

10. CHANGES FROM THE FINAL STATUS SURVEY PLAN

No changes were made to the Final Status Survey Plan.

11. DATA QUALITY ASSESSMENT (DQA)

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

Documentation was complete and legible. Surveys and sample collection were consistent with the DQOs and were sufficient to ensure that the survey unit was properly designated as Class 1.

The preliminary data review consisted of calculating basic statistical quantities (e.g., mean, median, standard deviation). The mean and median values are well below the Operational DCGL. Also, the retrospective power curve shows that a sufficient number of samples were collected to achieve the desired power. Therefore, the survey unit meets the unrestricted release criteria with adequate power as required by the DQOs. The basic statistical quantities for the statistical sample population are provided below in Table 11.

Table 11 – Basic Statistical Quantities for Cs-137, Co-60 and Sr-90 from the Final Status Survey

	Cs-137 ρCi/g	Co-60 ρCi/g	Sr-90 ρCi/g
$DCGL_{op}$:	4.75	2.29	0.93
Minimum Value:	-2.35E-02	-1.72E-02	-2.23E-02
Maximum Value:	1.91E+00	3.48E-02	3.70E-02
Mean:	3.16E-01	6.18E-03	3.28E-03
Median:	7.48E-02	8.25E-04	4.18E-03
Standard Deviation:	5.48E-01	1.42E-02	1.85E-02

The range of the data, about 3.0 to 3.5 standard deviations for both radionuclides, was not a particularly large variation. The difference between the mean and median was about 40% to 60% 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 a slight to diminishing skewness as confirmed by the calculated skew of 2.13, 0.58 and 0.26 for Cs-137, Co-60 and Sr-90 respectively.

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

12. ANOMALIES

No anomalies were noted in the performance of this Final Status Survey.

13. CONCLUSION

Survey Unit 9312-0010 has met the final DQOs of the FSS plan. The ALARA criteria for soils as specified in Chapter 4 of the LTP were achieved.

All identified radionuclides of concern were used for statistical testing to determine the adequacy of the survey unit for FSS.

The sample data passed the Sign Test. The null hypothesis was rejected. The Retrospective Power Curve generated using COMPASS shows adequate power was achieved. The survey unit is properly designated as Class 1.

The dose contribution from soil is 1.2 mrem/yr TEDE based on the average concentration of the samples used for non-parametric statistical sampling.

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

This survey unit is 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 5.2 mrem/yr TEDE. Therefore, Survey Unit 9312-0010 is acceptable for unrestricted release

14. ATTACHMENTS

14.1 Attachment 1 – Figures

14.2 Attachment 2 – Scan Results

14.3 Attachment 3 – Laboratory Results

14.4 Attachment 4 – DQA Results

ATTACHMENT 1 (FIGURES)

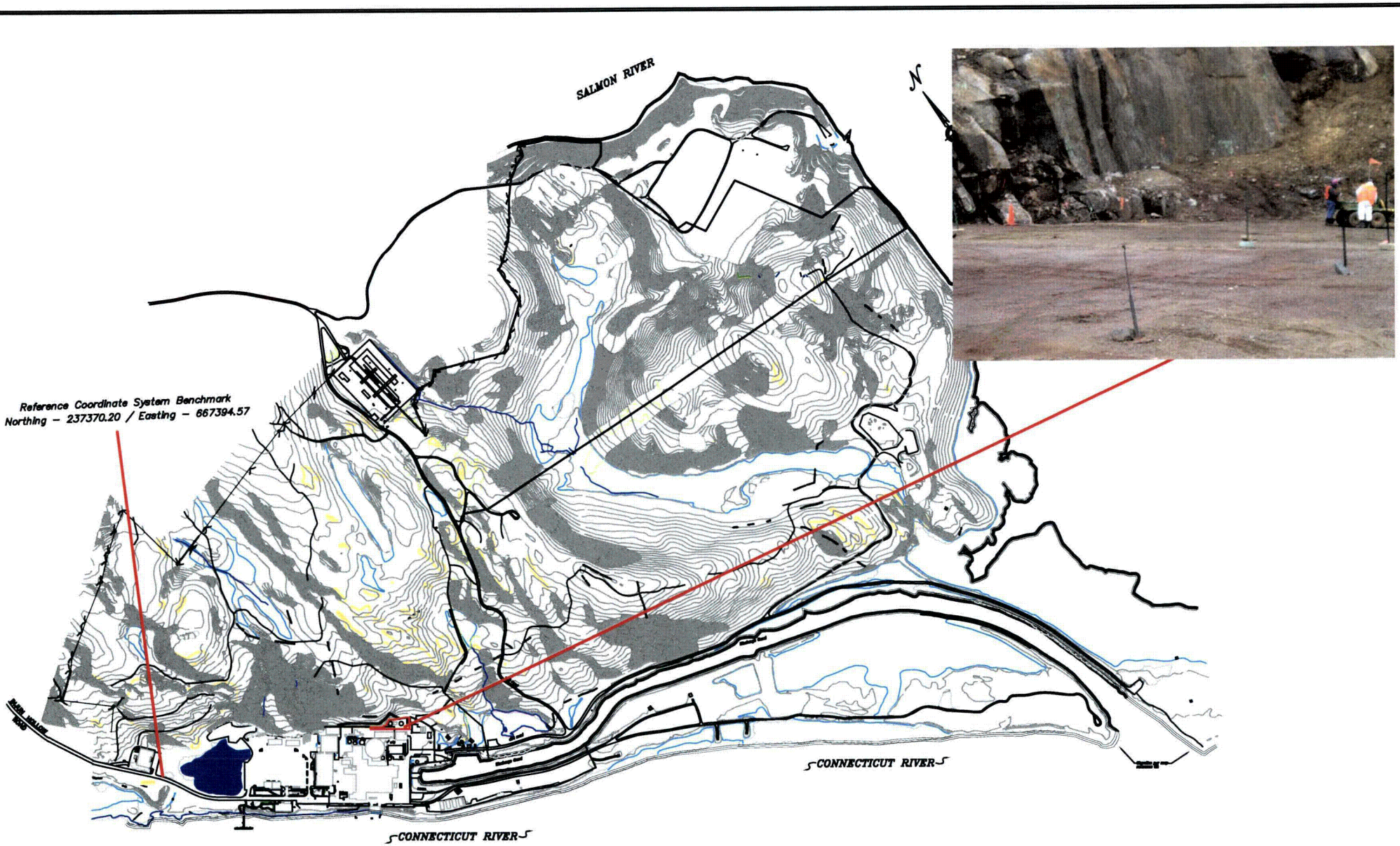

Figure 1	*Connecticut Yankee Atomic Power Company* *Site Map With Reference To Survey Unit 9312-0010*	*Date*	*By*
		April 2007	*D. Randall*

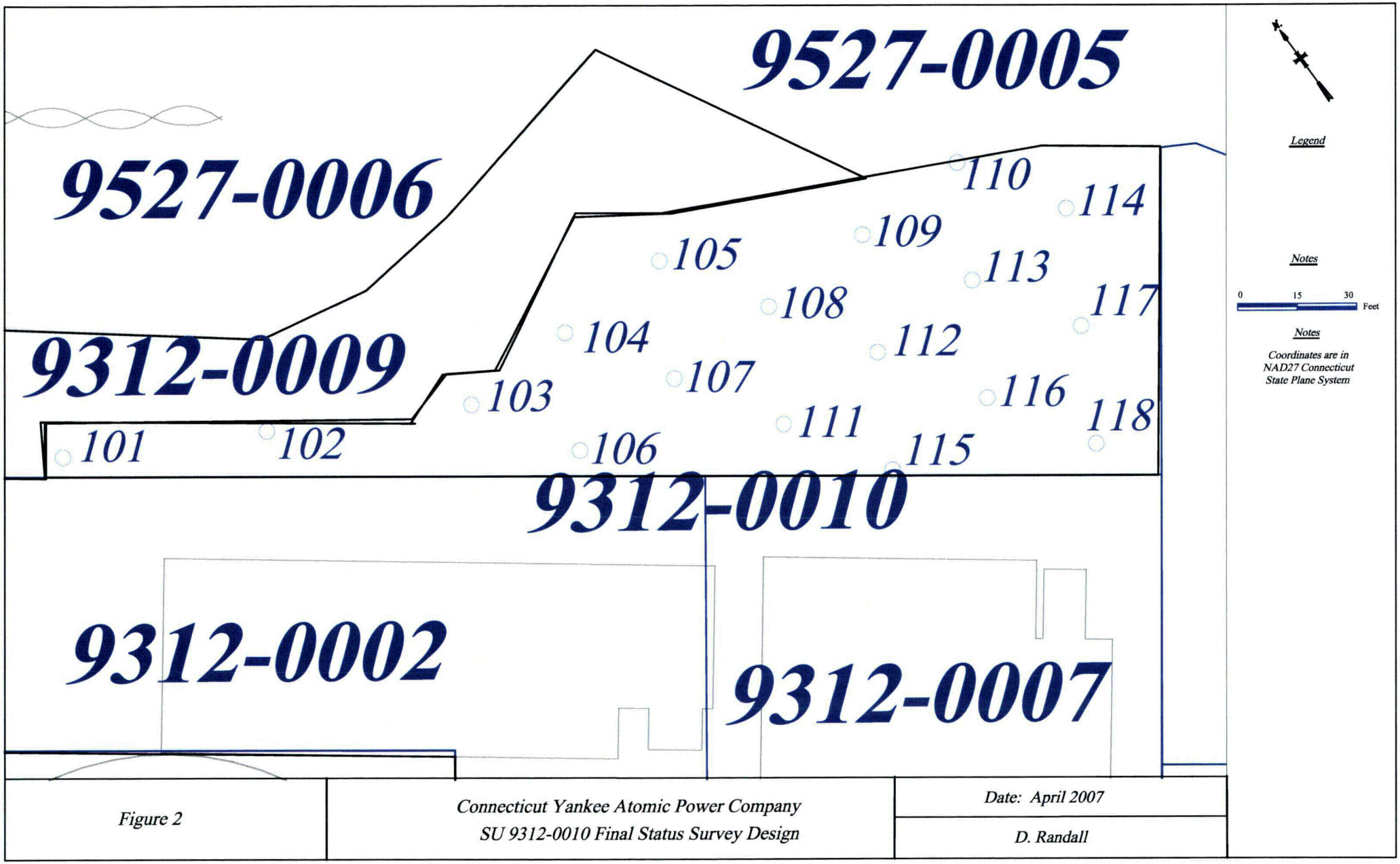

Figure 2	Connecticut Yankee Atomic Power Company SU 9312-0010 Final Status Survey Design	Date: April 2007 D. Randall

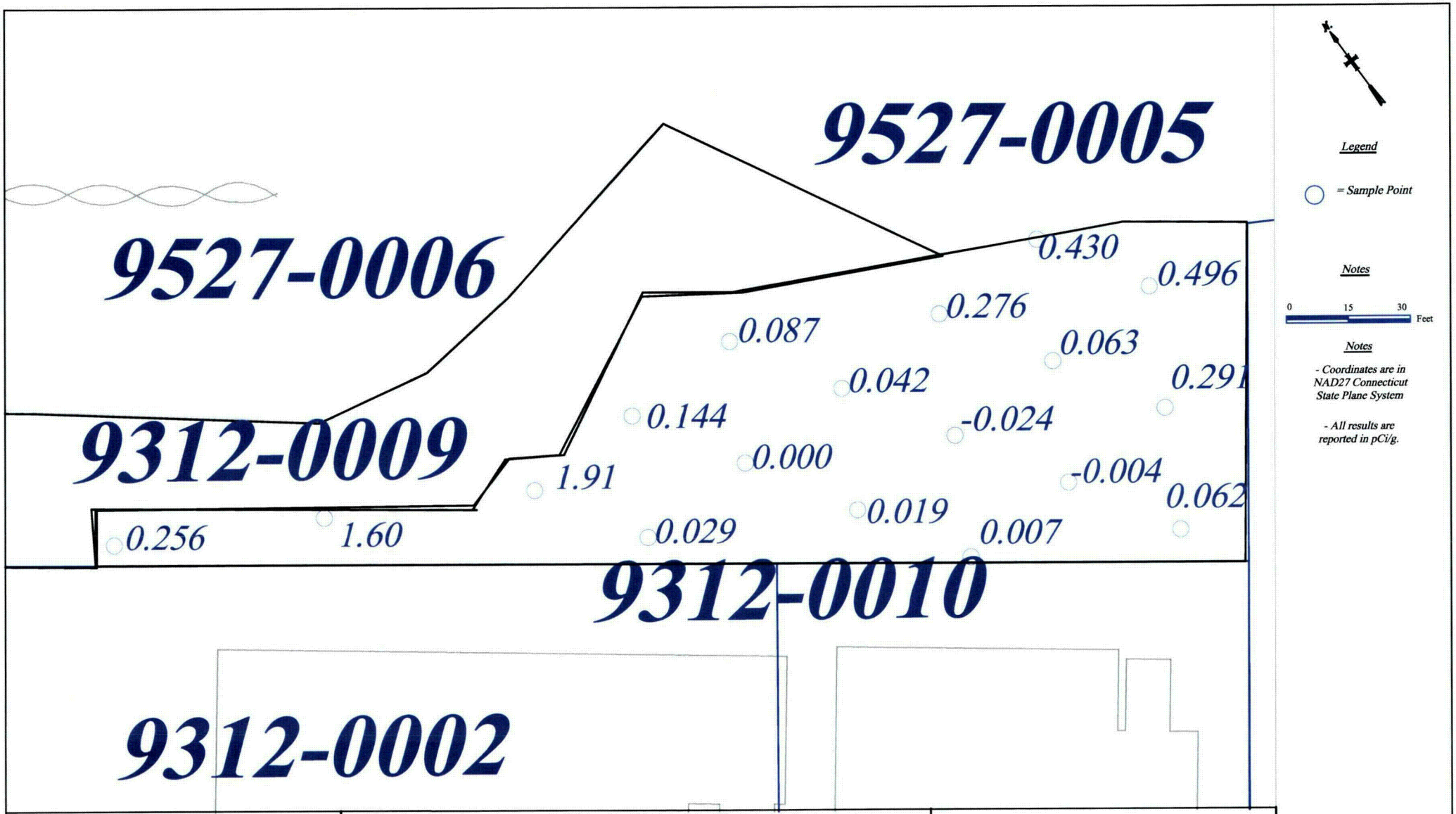

Figure 3	*Connecticut Yankee Atomic Power Company* *SU 9312-0010 Cs-137 Posting Plot*	*Date: April 2007* *D. Randall*

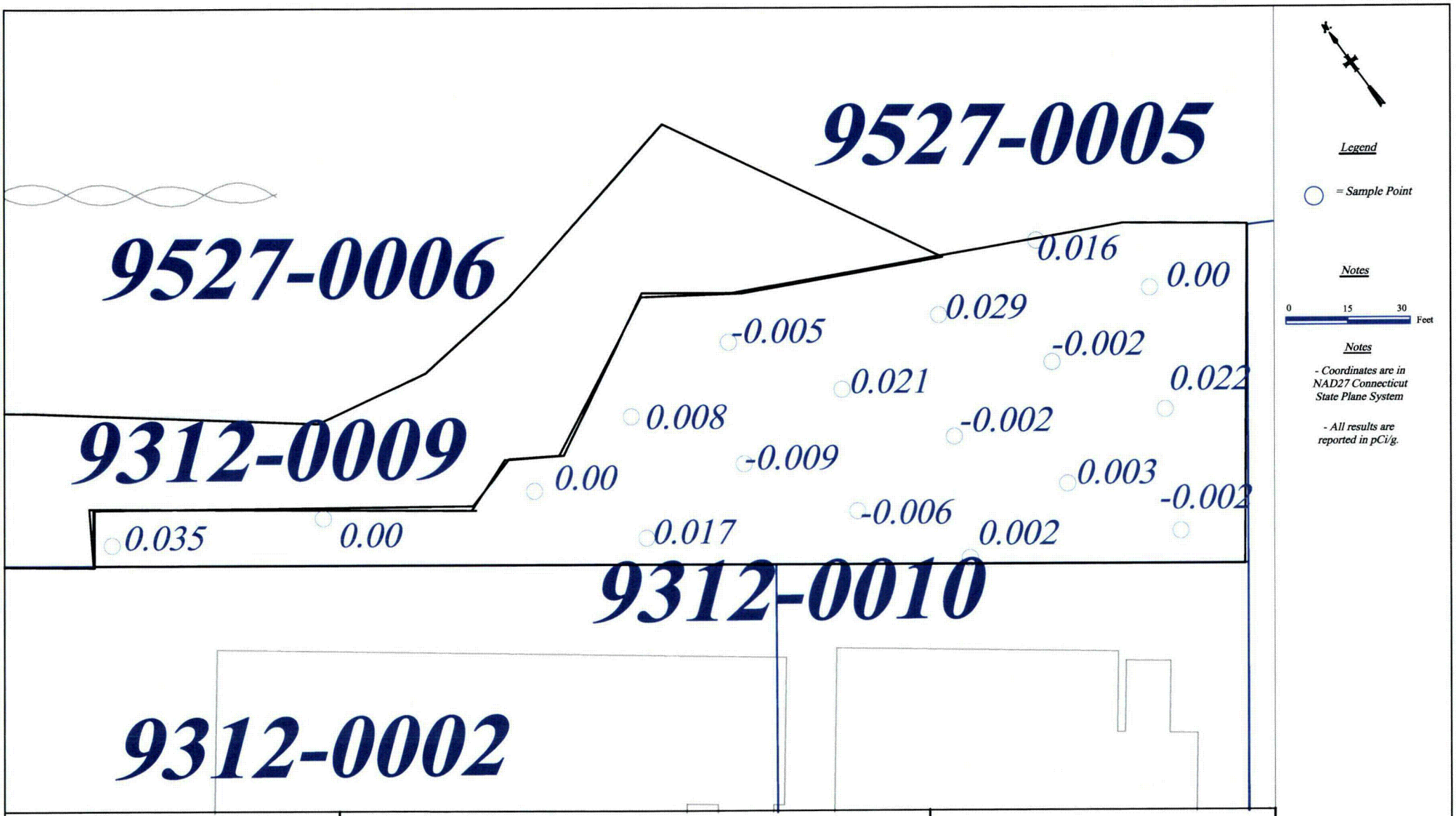

Figure 4	Connecticut Yankee Atomic Power Company SU 9312-0010 Co-60 Posting Plot	Date: April 2007 D. Randall

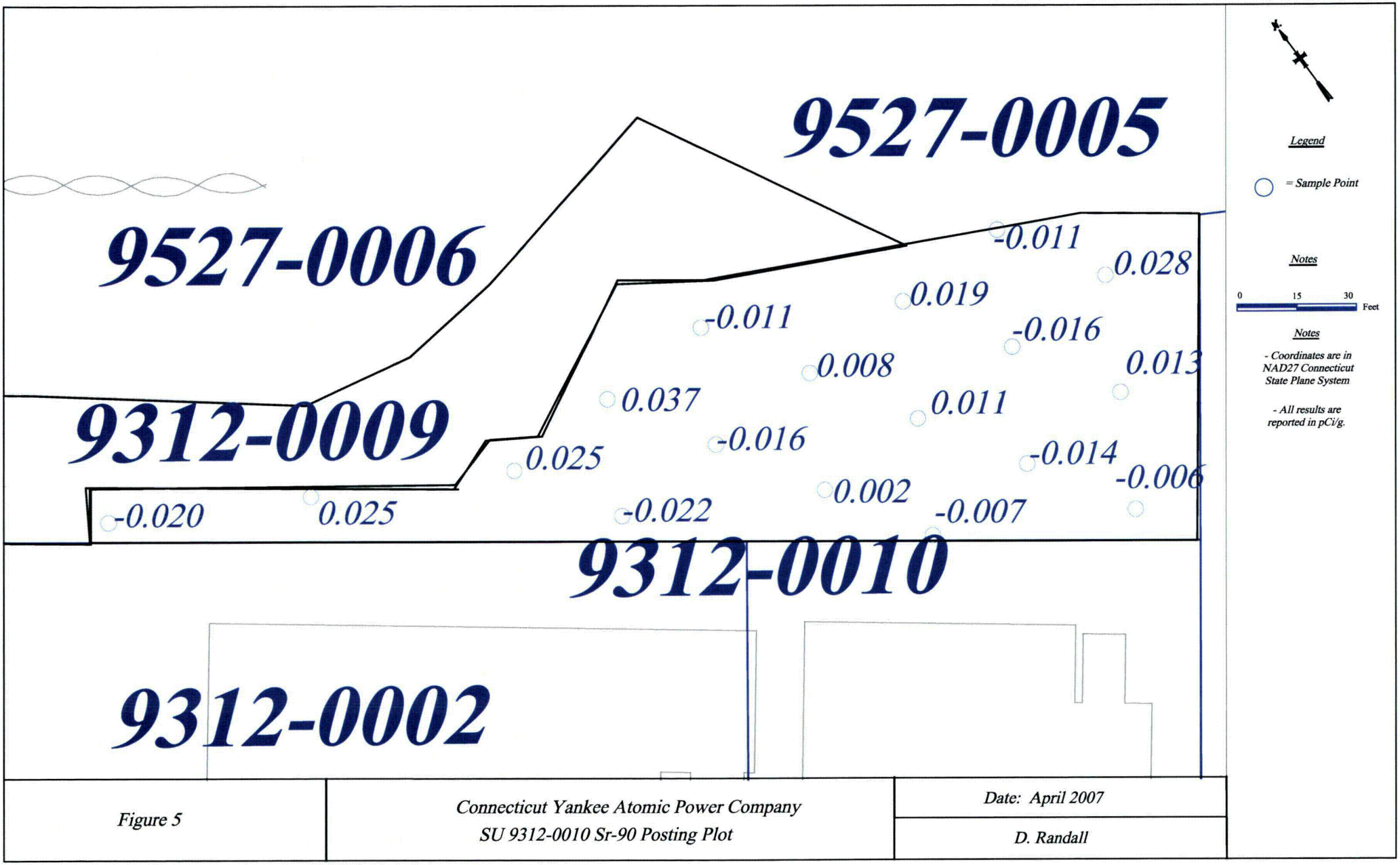

Figure 5	Connecticut Yankee Atomic Power Company SU 9312-0010 Sr-90 Posting Plot	Date: April 2007 D. Randall

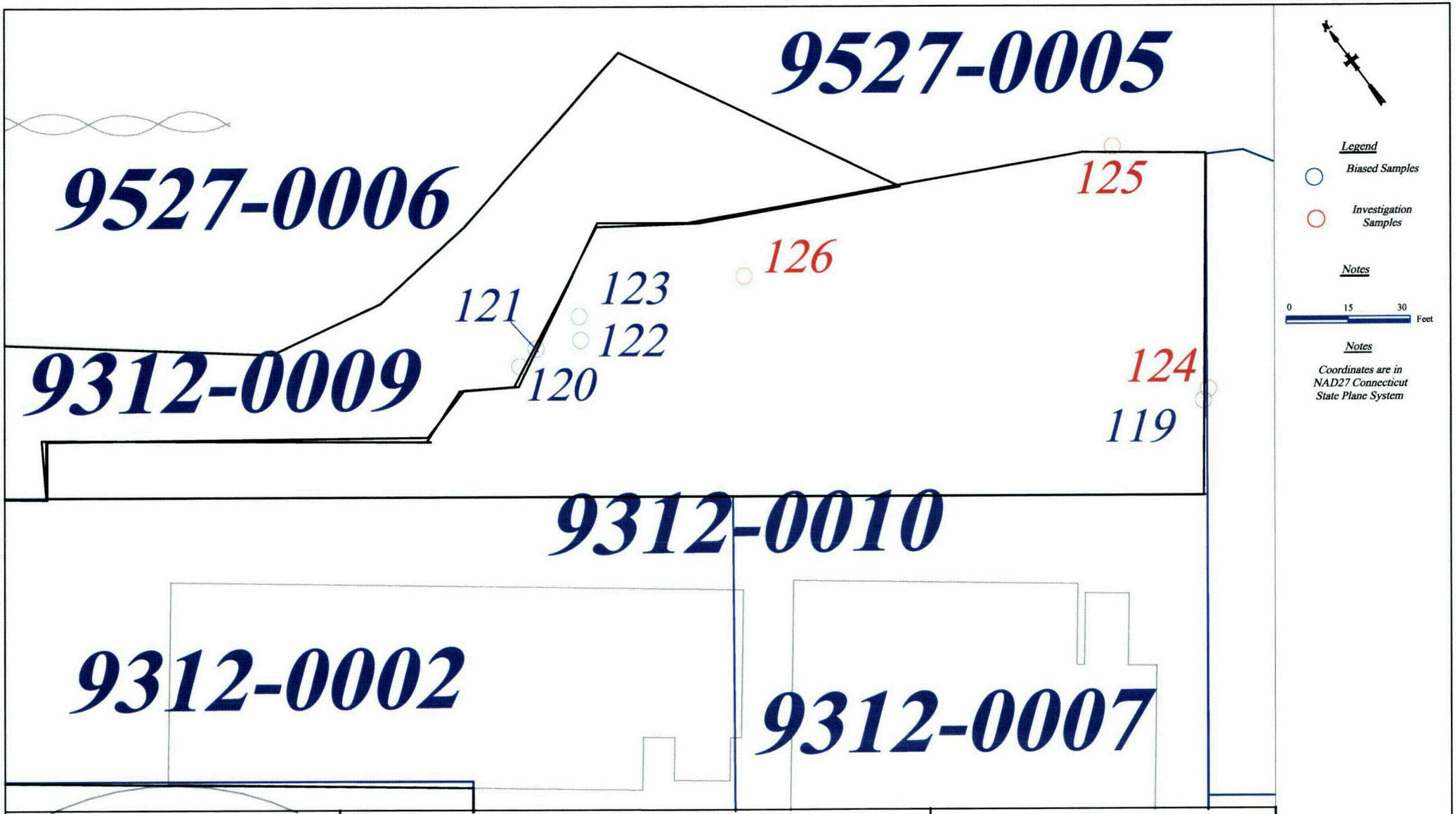

Figure 6	Connecticut Yankee Atomic Power Company SU 9312-0010 Final Status Survey Design	Date: April 2007 D. Randall

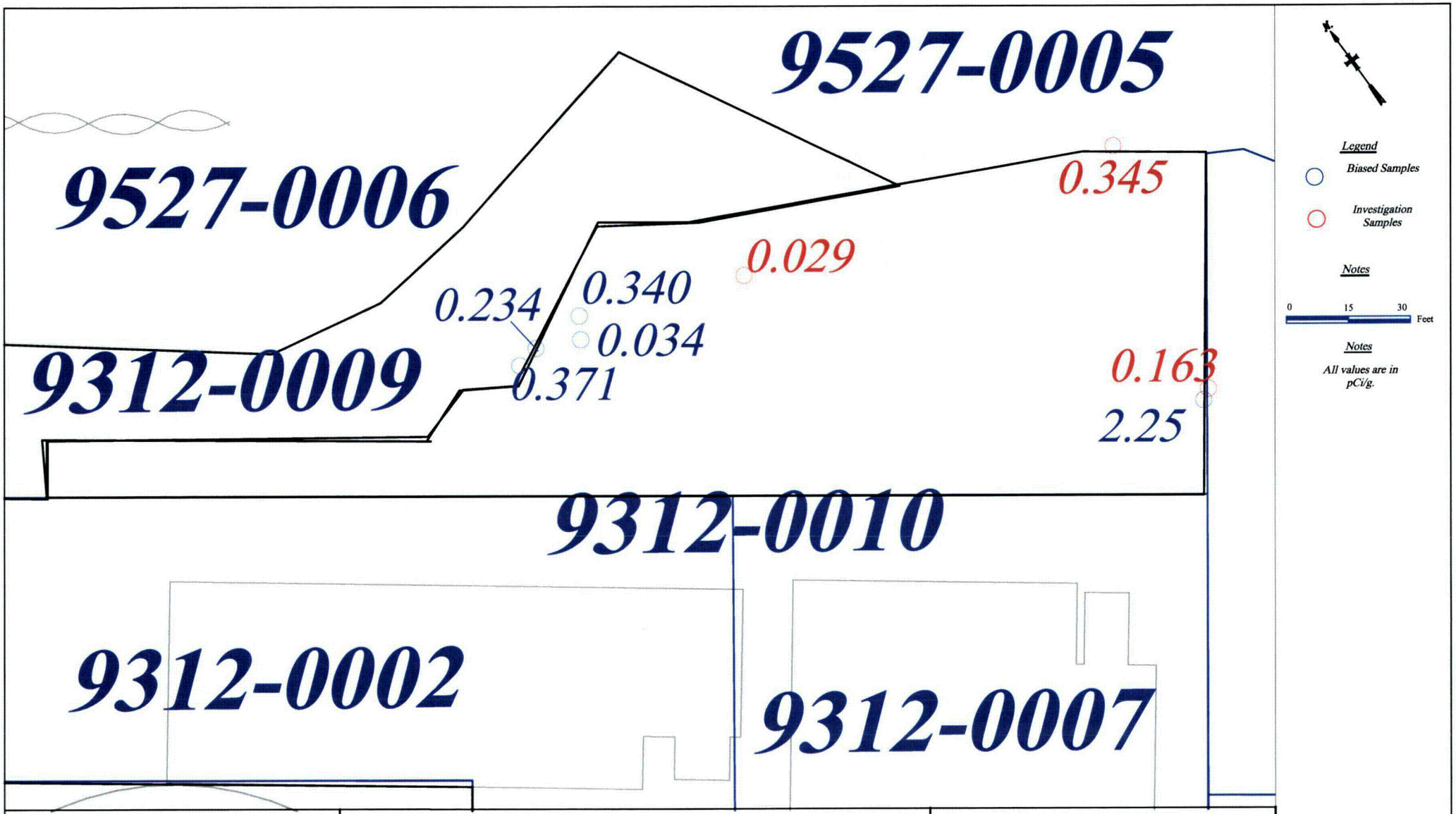

Figure 7	*Connecticut Yankee Atomic Power Company* *SU 9312-0010 Cs-137 Posting Plot*	*Date: April 2007* *D. Randall*

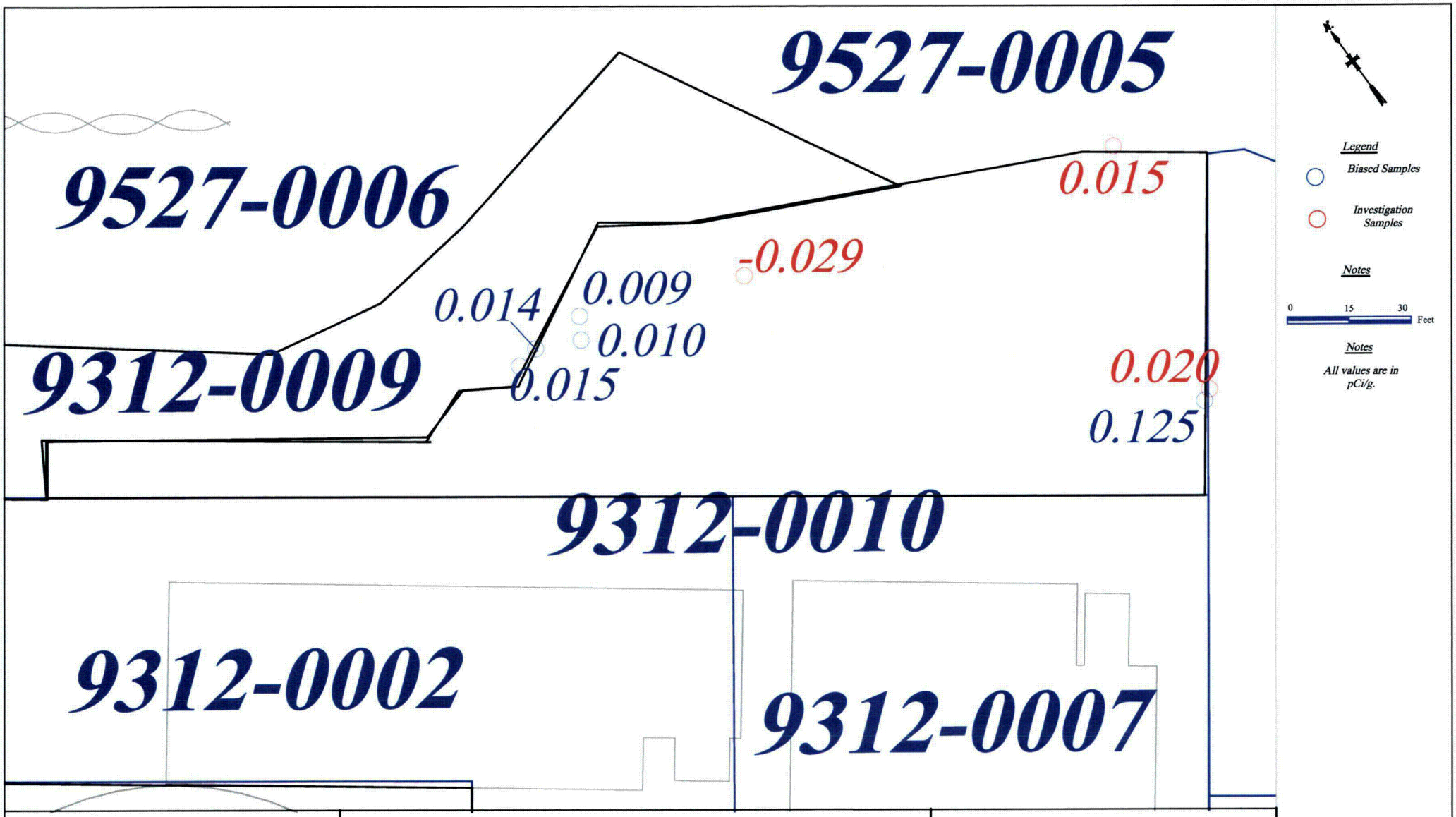

Figure 8	*Connecticut Yankee Atomic Power Company* *SU 9312-0010 Co-60 Posting Plot*	*Date: April 2007* *D. Randall*

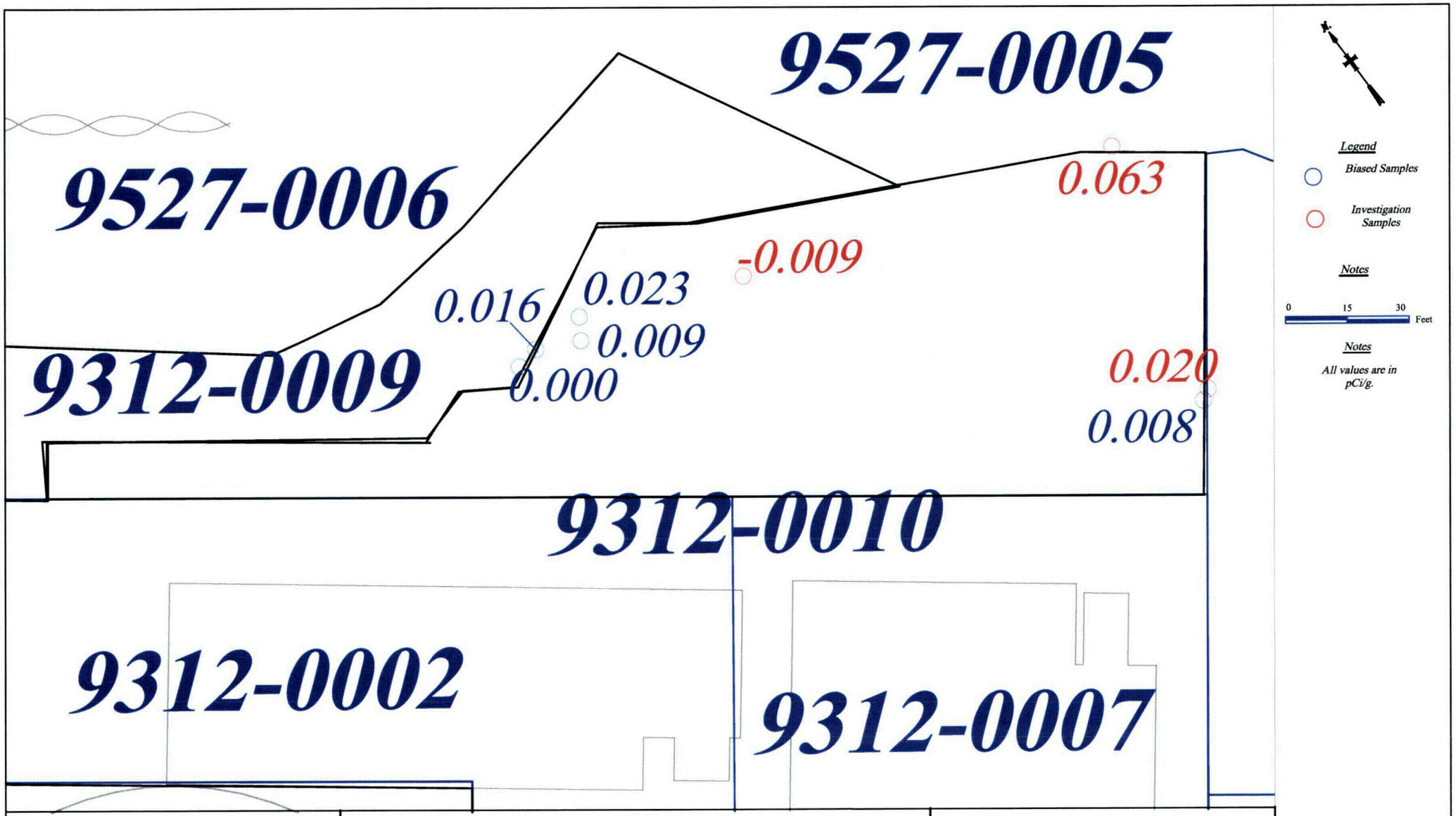

Figure 9	*Connecticut Yankee Atomic Power Company* *SU 9312-0010 Sr-90 Posting Plot*	*Date: April 2007* *D. Randall*

ATTACHMENT 2 (SCAN RESULTS)

9312-0010 Sample Location Scans

Survey Location	Log Date	Log Time	Reading	Alarm Level	>Alarm Level	E-600 S/N	Probe S/N
9312-10-BL-00-101-0	3/26/2007	10:31	1.35E+04			1117	1014
9312-10-SL-00-101-0	3/26/2007	10:32	1.48E+04	1.52E+04		1117	1014
9312-10-BL-00-102-0	3/26/2007	10:33	1.18E+04			1117	1014
9312-10-SL-00-102-0	3/26/2007	10:35	1.29E+04	1.34E+04		1117	1014
9312-10-BL-00-103-0	3/26/2007	10:35	1.27E+04			1117	1014
9312-10-SL-00-103-0	3/26/2007	10:37	1.29E+04	1.43E+04		1117	1014
9312-10-BL-00-104-0	3/26/2007	10:37	1.05E+04			1117	1014
9312-10-SL-00-104-0	3/26/2007	10:40	1.03E+04	1.20E+04		1117	1014
9312-10-BL-00-105-0	3/26/2007	10:41	1.01E+04			1117	1014
9312-10-SL-00-105-0	3/26/2007	10:43	9.49E+03	1.15E+04		1117	1014
9312-10-BL-00-106-0	3/26/2007	10:45	9.75E+03			1117	1014
9312-10-SL-00-106-0	3/26/2007	10:46	8.79E+03	1.12E+04		1117	1014
9312-10-BL-00-107-0	3/26/2007	10:48	9.83E+03			1117	1014
9312-10-SL-00-107-0	3/26/2007	10:50	9.53E+03	1.12E+04		1117	1014
9312-10-BL-00-108-0	3/26/2007	10:52	1.18E+04			1117	1014
9312-10-SL-00-108-0	3/26/2007	10:54	1.22E+04	1.34E+04		1117	1014
9312-10-BL-00-109-0	3/26/2007	10:55	1.18E+04			1117	1014
9312-10-SL-00-109-0	3/26/2007	10:57	1.31E+04	1.34E+04		1117	1014
9312-10-BL-00-110-0	3/26/2007	10:58	8.56E+03			1117	1014
9312-10-SL-00-110-0	3/26/2007	10:59	9.37E+03	9.88E+03		1117	1014
9312-10-BL-00-111-0	3/26/2007	11:01	1.06E+04			1117	1014
9312-10-SL-00-111-0	3/26/2007	11:02	1.10E+04	1.21E+04		1117	1014
9312-10-BL-00-112-0	3/26/2007	11:03	1.06E+04			1117	1014
9312-10-SL-00-112-0	3/26/2007	11:04	1.11E+04	1.21E+04		1117	1014
9312-10-BL-00-113-0	3/26/2007	11:05	1.03E+04			1117	1014
9312-10-SL-00-113-0	3/26/2007	11:06	1.02E+04	1.17E+04		1117	1014
9312-10-BL-00-114-0	3/26/2007	11:07	9.14E+03			1117	1014
9312-10-SL-00-114-0	3/26/2007	11:09	1.02E+04	1.05E+04		1117	1014

9312-10-BL-00-115-0	3/26/2007	11:10	1.09E+04		1117	1014
9312-10-SL-00-115-0	3/26/2007	11:12	1.16E+04	1.24E+04	1117	1014
9312-10-BL-00-116-0	3/26/2007	11:12	1.09E+04		1117	1014
9312-10-SL-00-116-0	3/26/2007	11:14	1.10E+04	1.24E+04	1117	1014
9312-10-BL-00-117-0	3/26/2007	11:15	1.07E+04		1117	1014
9312-10-SL-00-117-0	3/26/2007	11:17	1.12E+04	1.22E+04	1117	1014
9312-10-BL-00-118-0	3/26/2007	11:17	1.08E+04		1117	1014
9312-10-SL-00-118-0	3/26/2007	11:19	1.15E+04	1.23E+04	1117	1014
9312-10-BL-00-119-0	3/26/2007	11:20	1.24E+04		1117	1014
9312-10-SL-00-119-0	3/26/2007	11:21	1.31E+04	1.40E+04	1117	1014
9312-10-BL-00-120-0	3/26/2007	14:37	1.40E+04		1117	1014
9312-10-SL-00-120-0	3/26/2007	14:37	1.48E+04	1.57E+04	1117	1014
9312-10-BL-00-121-0	3/26/2007	14:38	1.12E+04		1117	1014
9312-10-SL-00-121-0	3/26/2007	14:39	1.31E+04	1.27E+04	1117	1014
9312-10-BL-00-122-0	3/26/2007	14:39	1.13E+04		1117	1014
9312-10-SL-00-122-0	3/26/2007	14:39	1.08E+04	1.28E+04	1117	1014
9312-10-BL-00-123-0	3/26/2007	14:40	1.25E+04		1117	1014
9312-10-SL-00-123-0	3/26/2007	14:41	1.10E+04	1.41E+04	1117	1014

9312-0010 Scan Results

Survey Location	Log Date	Log Time	Probe S/N	Reading	Action Level	Units	E-600 S/N
9312-10-BC-00-01-0	3/28/2007	8:04:00	1004	1.33E+04		cpm	1111
9312-10-SC-00-01-0	3/28/2007	8:05:00	1004	1.15E+04	1.53E+04	cpm	1111
9312-10-BC-00-02-0	3/28/2007	8:05:00	1004	1.12E+04		cpm	1111
9312-10-SC-00-02-0	3/28/2007	8:07:00	1004	1.07E+04	1.32E+04	cpm	1111
9312-10-BC-00-03-0	3/28/2007	8:07:00	1004	8.24E+03		cpm	1111
9312-10-SC-00-03-0	3/28/2007	8:11:00	1004	9.80E+03	1.02E+04	cpm	1111
9312-10-BC-00-04-0	3/28/2007	8:12:00	1004	9.74E+03		cpm	1111
9312-10-SC-00-04-0	3/28/2007	8:17:00	1004	1.16E+04	1.17E+04	cpm	1111
9312-10-BC-00-05-0	3/28/2007	8:18:00	1004	1.24E+04		cpm	1111
9312-10-SC-00-05-0	3/28/2007	8:19:00	1004	1.43E+04	1.44E+04	cpm	1111
9312-10-BC-00-06-0	3/28/2007	8:21:00	1004	1.25E+04		cpm	1111
9312-10-SC-00-06-0	3/28/2007	8:23:00	1004	1.22E+04	1.45E+04	cpm	1111
9312-10-BC-00-07-0	3/28/2007	8:24:00	1004	1.05E+04		cpm	1111
9312-10-SC-00-07-0	3/28/2007	8:27:00	1004	1.10E+04	1.25E+04	cpm	1111
9312-10-BC-00-08-0	3/28/2007	8:28:00	1004	1.03E+04		cpm	1111
9312-10-SC-00-08-0	3/28/2007	8:31:00	1004	1.15E+04	1.23E+04	cpm	1111
9312-10-BC-00-09-0	3/28/2007	8:32:00	1004	1.22E+04		cpm	1111
9312-10-SC-00-09-0	3/28/2007	8:34:00	1004	1.32E+04	1.42E+04	cpm	1111
9312-10-BC-00-10-0	3/28/2007	8:37:00	1004	1.40E+04		cpm	1111
9312-10-SC-00-10-0	3/28/2007	8:40:00	1004	1.23E+04	1.60E+04	cpm	1111
9312-10-BC-00-11-0	3/28/2007	8:41:00	1004	1.09E+04		cpm	1111
9312-10-SC-00-11-0	3/28/2007	8:42:00	1004	1.08E+04	1.29E+04	cpm	1111
9312-10-BC-00-12-0	3/28/2007	9:50:00	1004	1.23E+04		cpm	1111
9312-10-SC-00-12-0	3/28/2007	9:53:00	1004	1.22E+04	1.43E+04	cpm	1111
9312-10-BC-00-13-0	3/28/2007	10:14:00	1004	1.09E+04		cpm	1111
9312-10-SC-00-13-0	3/28/2007	10:20:00	1004	1.02E+04	1.29E+04	cpm	1111
9312-10-ER-00-13-1	3/29/2007	7:16:00	1004	1.44E+04		cpm	1111
9312-10-BC-00-14-0	3/28/2007	10:21:00	1004	1.07E+04		cpm	1111
9312-10-SC-00-14-0	3/28/2007	10:25:00	1004	1.09E+04	1.27E+04	cpm	1111
9312-10-BC-00-15-0	3/28/2007	10:26:00	1004	1.03E+04		cpm	1111
9312-10-SC-00-15-0	3/28/2007	10:29:00	1004	1.00E+04	1.23E+04	cpm	1111
9312-10-BC-00-16-0	3/28/2007	10:31:00	1004	9.27E+03		cpm	1111
9312-10-SC-00-16-0	3/28/2007	10:36:00	1004	9.33E+03	1.13E+04	cpm	1111
9312-10-BC-00-17-0	3/28/2007	10:38:00	1004	1.01E+04		cpm	1111
9312-10-SC-00-17-0	3/28/2007	10:40:00	1004	9.82E+03	1.21E+04	cpm	1111
9312-10-BC-00-18-0	3/28/2007	10:41:00	1004	1.03E+04		cpm	1111
9312-10-SC-00-18-0	3/28/2007	10:48:00	1004	9.64E+03	1.23E+04	cpm	1111
9312-10-BC-00-19-0	3/28/2007	10:49:00	1004	9.46E+03		cpm	1111
9312-10-SC-00-19-0	3/28/2007	10:54:00	1004	9.10E+03	1.15E+04	cpm	1111
9312-10-BC-00-20-0	3/28/2007	10:56:00	1004	9.98E+03		cpm	1111
9312-10-SC-00-20-0	3/28/2007	11:02:00	1004	9.63E+03	1.20E+04	cpm	1111
9312-10-ER-00-20-1	3/29/2007	7:17:00	1004	2.24E+04		cpm	1111
9312-10-BC-00-21-0	3/28/2007	11:04:00	1004	1.08E+04		cpm	1111
9312-10-SC-00-21-0	3/28/2007	11:10:00	1004	9.73E+03	1.28E+04	cpm	1111
9312-10-BC-00-22-0	3/28/2007	11:11:00	1004	9.96E+03		cpm	1111
9312-10-SC-00-22-0	3/28/2007	11:16:00	1004	9.73E+03	1.20E+04	cpm	1111
9312-10-BC-00-23-0	3/28/2007	11:18:00	1004	9.99E+03		cpm	1111
9312-10-SC-00-23-0	3/28/2007	11:21:00	1004	9.53E+03	1.20E+04	cpm	1111
9312-10-BC-00-24-0	3/28/2007	11:23:00	1004	9.69E+03		cpm	1111
9312-10-SC-00-24-0	3/28/2007	11:27:00	1004	9.55E+03	1.17E+04	cpm	1111

9312-10-BC-00-25-0	3/28/2007	11:30:00	1004	1.04E+04		cpm	1111
9312-10-SC-00-25-0	3/28/2007	11:32:00	1004	9.81E+03	1.24E+04	cpm	1111
9312-10-BC-00-26-0	3/28/2007	11:33:00	1004	9.42E+03		cpm	1111
9312-10-SC-00-26-0	3/28/2007	11:36:00	1004	9.01E+03	1.14E+04	cpm	1111
9312-10-BC-00-27-0	3/28/2007	12:55:00	1004	9.38E+03		cpm	1111
9312-10-SC-00-27-0	3/28/2007	13:01:00	1004	9.51E+03	1.14E+04	cpm	1111
9312-10-BC-00-28-0	3/28/2007	13:03:00	1004	1.02E+04		cpm	1111
9312-10-SC-00-28-0	3/28/2007	13:07:00	1004	9.91E+03	1.22E+04	cpm	1111
9312-10-BC-00-29-0	3/28/2007	13:09:00	1004	1.08E+04		cpm	1111
9312-10-SC-00-29-0	3/28/2007	13:17:00	1004	9.91E+03	1.28E+04	cpm	1111
9312-10-BC-00-30-0	3/28/2007	13:19:00	1004	1.08E+04		cpm	1111
9312-10-SC-00-30-0	3/28/2007	13:23:00	1004	1.13E+04	1.28E+04	cpm	1111
9312-10-BC-00-31-0	3/28/2007	13:24:00	1004	9.80E+03		cpm	1111
9312-10-SC-00-31-0	3/28/2007	13:28:00	1004	9.92E+03	1.18E+04	cpm	1111
9312-10-BC-00-32-0	3/28/2007	13:29:00	1004	9.87E+03		cpm	1111
9312-10-SC-00-32-0	3/28/2007	13:33:00	1004	1.03E+04	1.19E+04	cpm	1111
9312-10-BC-00-33-0	3/28/2007	13:34:00	1004	1.01E+04		cpm	1111
9312-10-SC-00-33-0	3/28/2007	13:39:00	1004	1.02E+04	1.22E+04	cpm	1111
9312-10-BC-00-34-0	3/28/2007	13:40:00	1004	9.93E+03		cpm	1111
9312-10-SC-00-34-0	3/28/2007	13:44:00	1004	1.01E+04	1.21E+04	cpm	1111
9312-10-BC-00-35-0	3/28/2007	13:46:00	1004	1.03E+04		cpm	1111
9312-10-SC-00-35-0	3/28/2007	13:50:00	1004	1.10E+04	1.23E+04	cpm	1111
9312-10-BC-00-36-0	3/28/2007	13:50:00	1004	1.03E+04		cpm	1111
9312-10-SC-00-36-0	3/28/2007	13:54:00	1004	1.06E+04	1.23E+04	cpm	1111
9312-10-BC-00-37-0	3/28/2007	13:55:00	1004	1.05E+04		cpm	1111
9312-10-SC-00-37-0	3/28/2007	13:59:00	1004	1.09E+04	1.25E+04	cpm	1111
9312-10-BC-00-38-0	3/28/2007	13:59:00	1004	1.04E+04		cpm	1111
9312-10-SC-00-38-0	3/28/2007	14:02:00	1004	1.05E+04	1.24E+04	cpm	1111
9312-10-BC-00-39-0	3/28/2007	14:04:00	1004	1.01E+04		cpm	1111
9312-10-SC-00-39-0	3/28/2007	14:05:00	1004	1.00E+04	1.21E+04	cpm	1111
9312-10-BC-00-40-0	3/28/2007	14:06:00	1004	1.01E+04		cpm	1111
9312-10-SC-00-40-0	3/28/2007	14:08:00	1004	1.03E+04	1.21E+04	cpm	1111
9312-10-BC-00-41-0	3/28/2007	14:08:00	1004	1.00E+04		cpm	1111
9312-10-SC-00-41-0	3/28/2007	14:10:00	1004	1.15E+04	1.20E+04	cpm	1111
9312-10-BC-00-42-0	3/28/2007	14:11:00	1004	1.09E+04		cpm	1111
9312-10-SC-00-42-0	3/28/2007	14:13:00	1004	1.06E+04	1.29E+04	cpm	1111
9312-10-BC-00-43-0	3/28/2007	14:13:00	1004	1.07E+04		cpm	1111
9312-10-SC-00-43-0	3/28/2007	14:16:00	1004	1.22E+04	1.27E+04	cpm	1111
9312-10-BC-00-44-0	3/28/2007	14:16:00	1004	1.14E+04		cpm	1111
9312-10-SC-00-44-0	3/28/2007	14:18:00	1004	1.08E+04	1.34E+04	cpm	1111
9312-10-BC-00-45-0	3/28/2007	14:19:00	1004	1.09E+04		cpm	1111
9312-10-SC-00-45-0	3/28/2007	14:20:00	1004	1.10E+04	1.30E+04	cpm	1111
9312-10-BC-00-46-0	3/28/2007	14:21:00	1004	1.05E+04		cpm	1111
9312-10-SC-00-46-0	3/28/2007	14:23:00	1004	1.13E+04	1.33E+04	cpm	1111
9312-10-BC-00-47-0	3/28/2007	14:23:00	1004	1.05E+04		cpm	1111
9312-10-SC-00-47-0	3/28/2007	14:25:00	1004	1.05E+04	1.25E+04	cpm	1111
9312-10-BC-00-48-0	3/28/2007	14:25:00	1004	1.07E+04		cpm	1111
9312-10-SC-00-48-0	3/28/2007	14:28:00	1004	1.08E+04	1.27E+04	cpm	1111
9312-10-BC-00-49-0	3/28/2007	14:29:00	1004	9.91E+03		cpm	1111
9312-10-SC-00-49-0	3/28/2007	14:36:00	1004	1.10E+04	1.19E+04	cpm	1111
9312-10-ER-00-49-1	3/29/2007	7:19:00	1004	1.24E+04		cpm	1111
9312-10-BC-00-50-0	3/28/2007	14:37:00	1004	1.06E+04		cpm	1111

9312-10-SC-00-50-0	3/28/2007	14:39:00	1004	1.08E+04	1.26E+04	cpm	1111
9312-10-BC-00-51-0	3/28/2007	14:40:00	1004	1.00E+04		cpm	1111
9312-10-SC-00-51-0	3/28/2007	14:43:00	1004	1.08E+04	1.20E+04	cpm	1111
9312-10-BC-00-52-0	3/28/2007	14:43:00	1004	1.18E+04		cpm	1111
9312-10-SC-00-52-0	3/28/2007	14:44:00	1004	1.15E+04	1.38E+04	cpm	1111
9312-10-BC-00-53-0	3/28/2007	14:46:00	1004	1.02E+04		cpm	1111
9312-10-SC-00-53-0	3/28/2007	14:48:00	1004	1.03E+04	1.22E+04	cpm	1111
9312-10-BC-00-54-0	3/28/2007	14:48:00	1004	1.02E+04		cpm	1111
9312-10-SC-00-54-0	3/28/2007	14:52:00	1004	1.06E+04	1.22E+04	cpm	1111
9312-10-BC-00-55-0	3/28/2007	14:53:00	1004	9.47E+03		cpm	1111
9312-10-SC-00-55-0	3/28/2007	14:54:00	1004	1.01E+04	1.15E+04	cpm	1111
9312-10-BC-00-56-0	3/28/2007	14:55:00	1004	9.68E+03		cpm	1111
9312-10-SC-00-56-0	3/28/2007	14:56:00	1004	1.02E+04	1.17E+04	cpm	1111
9312-10-BC-00-57-0	3/28/2007	14:57:00	1004	1.07E+04		cpm	1111
9312-10-SC-00-57-0	3/28/2007	14:59:00	1004	1.08E+04	1.28E+04	cpm	1111
9312-10-BC-00-58-0	3/28/2007	14:59:00	1004	9.56E+03		cpm	1111
9312-10-SC-00-58-0	3/28/2007	15:01:00	1004	9.57E+03	1.16E+04	cpm	1111
9312-10-BC-00-59-0	3/28/2007	15:01:00	1004	1.03E+04		cpm	1111
9312-10-SC-00-59-0	3/28/2007	15:03:00	1004	1.02E+04	1.23E+04	cpm	1111
9312-10-BC-00-60-0	3/28/2007	15:03:00	1004	9.96E+03		cpm	1111
9312-10-SC-00-60-0	3/28/2007	15:05:00	1004	9.60E+03	1.20E+04	cpm	1111
9312-10-BC-00-61-0	3/28/2007	15:06:00	1004	9.78E+03		cpm	1111
9312-10-SC-00-61-0	3/28/2007	15:07:00	1004	1.00E+04	1.18E+04	cpm	1111
9312-10-BC-00-62-0	3/28/2007	15:08:00	1004	1.01E+04		cpm	1111
9312-10-SC-00-62-0	3/28/2007	15:09:00	1004	1.01E+04	1.21E+04	cpm	1111
9312-10-BC-00-63-0	3/28/2007	15:10:00	1004	1.04E+04		cpm	1111
9312-10-SC-00-63-0	3/28/2007	15:12:00	1004	1.07E+04	1.24E+04	cpm	1111
9312-10-BC-00-64-0	3/28/2007	15:13:00	1004	9.39E+03		cpm	1111
9312-10-SC-00-64-0	3/28/2007	15:14:00	1004	1.01E+04	1.14E+04	cpm	1111
9312-10-BC-00-65-0	3/28/2007	15:15:00	1004	1.05E+04		cpm	1111
9312-10-SC-00-65-0	3/28/2007	15:17:00	1004	9.85E+03	1.25E+04	cpm	1111
9312-10-BC-00-66-0	3/28/2007	15:17:00	1004	9.83E+03		cpm	1111
9312-10-SC-00-66-0	3/28/2007	15:19:00	1004	1.08E+04	1.18E+04	cpm	1111

ATTACHMENT 3 (LABORATORY DATA)

General Narrative

General Narrative
for
Connecticut Yankee Atomic Power Co.
Work Order: 183243
SDG: MSR#07-0130

April 04, 2007

Laboratory Identification:

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

Summary

Sample receipt

The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on March 29, 2007 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
183243001	9312-0010-101F
183243002	9312-0010-102F
183243003	9312-0010-103F
183243004	9312-0010-104F
183243005	9312-0010-105F
183243006	9312-0010-106F
183243007	9312-0010-107F
183243008	9312-0010-108F
183243009	9312-0010-109F
183243010	9312-0010-110F
183243011	9312-0010-111F
183243012	9312-0010-112F
183243013	9312-0010-113F
183243014	9312-0010-114F
183243015	9312-0010-114FS
183243016	9312-0010-115F
183243017	9312-0010-116F
183243018	9312-0010-117F
183243019	9312-0010-118F
183243020	9312-0010-119B
183243021	9312-0010-120B
183243022	9312-0010-121B
183243023	9312-0010-122B
183243024	9312-0010-123B
183243025	9312-0010-I-017-B

183243026	9312-0010-I-018-B
183243027	9312-0010-I-019-B
183243028	9312-0010-I-020-B
183243029	9312-0010-I-021-B
183243030	9312-0010-I-022-B
183243031	9312-0010-I-023-B
183243032	9312-0010-I-024-B
183243033	9312-0010-I-025-B

Items of Note

There are no items to note.

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (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-one soil samples were analyzed for FSSGAM and Strontium-90. 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 03 April 2007

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. 2007-00100

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only
Comments:
183243

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM & Sr-90	Analyses Requested: FSSALL	Comment, Preservation	Lab Sample ID
9312-0010-101F	3/26/07	1316	TS	G	BP	X			
9312-0010-102F	3/26/07	1316	TS	G	BP		X		
9312-0010-103F	3/26/07	1317	TS	G	BP	X			
9312-0010-104F	3/26/07	1320	TS	G	BP	X			
9312-0010-105F	3/26/07	1325	TS	G	BP	X			
9312-0010-106F	3/26/07	1325	TS	G	BP	X			
9312-0010-107F	3/26/07	1330	TS	G	BP	X			
9312-0010-108F	3/26/07	1330	TS	G	BP	X			
9312-0010-109F	3/26/07	1335	TS	G	BP	X			
9312-0010-110F	3/26/07	1335	TS	G	BP	X			
9312-0010-111F	3/26/07	1340	TS	G	BP		X		

NOTES: PO #: 002332 MSR #: 07-0130 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed?
Custody Seal Intact?
Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	3/28/07 1030	[signature]	3/29/07 9:30
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. 2007-00101

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only

Comments:

183243

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM & Sr-90	FSSALL					Comment, Preservation	Lab Sample ID
9312-0010-112F	3/26/07	1340	TS	G	BP	X							
9312-0010-113F	3/26/07	1345	TS	G	BP	X							
9312-0010-114F	3/26/07	1345	TS	G	BP	X							
9312-0010-114FS	3/26/07	1345	TS	G	BP	X							
9312-0010-115F	3/26/07	1350	TS	G	BP	X							
9312-0010-116F	3/26/07	1350	TS	G	BP	X							
9312-0010-117F	3/26/07	1355	TS	G	BP	X							
9312-0010-118F	3/26/07	1355	TS	G	BP	X							
9312-0010-119B	3/26/07	1400	TS	G	BP	X							
9312-0010-120B	3/26/07	1437	TS	G	BP	X							
9312-0010-121B	3/26/07	1438	TS	G	BP	X							

NOTES: PO #: 002332 MSR #: 07-0130 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Custody Seal Intact?
Y ☐ N ☐

1) Relinquished By [signature] Date/Time 3/28/07 1040	2) Received By [signature] Date/Time 3/29/07 9:30
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. 2007-00102

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM & Sr-90	Analyses Requested: FSSALL	Analyses Requested	Analyses Requested	Analyses Requested	Analyses Requested	Lab Use Only: Comment, Preservation	Lab Use Only: Lab Sample ID
9312-0010-122B	3/26/07	1439	TS	G	BP	X							
9312-0010-123B	3/26/07	1440	TS	G	BP	X							

Lab Use Only
Comments:
183243

NOTES: PO #: 002332 MSR #: 07-130 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Custody Seal Intact?
Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	3/28/07 1040	[signature]	3/29/07 9:30
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. 2007-00103

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only

Comments:

183243

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM & Sr-90						Comment, Preservation	Lab Sample ID
9312-0010-I-017-B	3/22/07	1350	TS	G	BP	X							
9312-0010-I-018-B	3/22/07	1355	TS	G	BP	X							
9312-0010-I-019-B	3/22/07	1400	TS	G	BP	X							
9312-0010-I-020-B	3/22/07	1405	TS	G	BP	X							
9312-0010-I-021-B	3/22/07	1410	TS	G	BP	X							
9312-0010-I-022-B	3/22/07	1415	TS	G	BP	X							
9312-0010-I-023-B	3/22/07	1420	TS	G	BP	X							
9312-0010-I-024-B	3/22/07	1425	TS	G	BP	X							
9312-0010-I-025-B	3/22/07	1430	TS	G	BP	X							

NOTES: PO #: 002332 MSR #: 07-0130 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #

Internal Container Temp.: ____ Deg. C

Custody Sealed? Custody Seal Intact?
Y ☐ N ☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	3/28/07 1030	[signature]	3/29/07 9:30
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Jones

Figure 1. Sample Check-in List

Date/Time Received: 3/29/07 9:30.

SDG#: MSR#07-0129, 0130, 0131

Work Order Number: 183245, 183243, 183255

Shipping Container ID: See GEL SRR Chain of Custody # See cont. form

1. Custody Seals on shipping container intact? Yes [X] No [ ]
2. Custody Seals dated and signed? Yes [X] No [ ]
3. Chain-of-Custody record present? Yes [X] No [ ]
4. Cooler temperature See GEL SRR
5. Vermiculite/packing materials is: Wet [ ] Dry [X]
6. Number of samples in shipping container: 79
7. Sample holding times exceeded? Yes [ ] No [X]

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

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

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

Sample Custodian/Laboratory: [signature] Date: 3/29/07

Telephoned to: _____ On _____ By _____

1500

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: VANK	**SDG/ARCOC/Work Order:** 183243, 183245, 183255
Date Received: 3/29/07	**PM(A) Review (ensure non-conforming items are resolved prior to signing):**
Received By: JP	

	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	FedEx 790212159620 -23° 7916 5926 8130 -20° 7929 5789 5532 -18° 7916 5926 8140 -20° 7929 5789 5543 -19°			

	Suspected Hazard Information	Non-Regulated	Regulated	High Level	
A	Radiological Classification?	X			RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation. Maximum Counts Observed*: 20cpm
B	PCB Regulated?	X			
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	X			Hazard Class Shipped: UN#:
D	Regulated as a Foreign Soil?	X			

PM (or PMA) review of Hazard classification: ✓ Initials CAY Date: 3/29/07

SAMPLE RECEIPT & REVIEW FORM
CONTINUATION FORM

Client: YANK **Date Received:** 3/29/07 **Page** 1 **of** 1

COC #
2007-00090
2007-00089
2007-00100
2007-00103
2007-00091
2007-00092
2007-00102
2007-00101
2007-00099

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

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:	621107
Prep Batch Number:	621100
Dry Soil Prep GL-RAD-A-021 Batch Number:	621099

Sample ID	Client ID
183243002	9312-0010-102F
183243011	9312-0010-111F
1201305240	Method Blank (MB)
1201305241	183245006(9312-0001-005F) Sample Duplicate (DUP)
1201305242	183245006(9312-0001-005F) Matrix Spike (MS)
1201305243	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 15.

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: 183245006 (9312-0001-005F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Pu241, Solid-ALL FSS**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	622105
Prep Batch Number:	621100
Dry Soil Prep GL-RAD-A-021 Batch Number:	621099

Sample ID	Client ID
183243002	9312-0010-102F
183243011	9312-0010-111F
1201307488	Method Blank (MB)
1201307489	183245006(9312-0001-005F) Sample Duplicate (DUP)
1201307490	183245006(9312-0001-005F) Matrix Spike (MS)
1201307491	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-035 REV# 9.

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: 183245006 (9312-0001-005F).

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

Technical Information:

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

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

Sample Re-prep/Re-analysis
Samples 183243002 (9312-0010-102F) and 183243011 (9312-0010-111F) were reprepped due to low/high carrier/tracer yield.

Miscellaneous Information:

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

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Alphaspec Pu, Solid-ALL FSS**
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	622351
Prep Batch Number:	621100
Dry Soil Prep GL-RAD-A-021 Batch Number:	621099

Sample ID	Client ID
183243002	9312-0010-102F
183243011	9312-0010-111F
1201308034	Method Blank (MB)
1201308035	183245006(9312-0001-005F) Sample Duplicate (DUP)
1201308036	183245006(9312-0001-005F) Matrix Spike (MS)
1201308037	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-011 REV# 15.

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: 183245006 (9312-0001-005F).

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

Technical Information:

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

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

Sample Re-prep/Re-analysis
Samples were reprepped due to low/high carrier/tracer yield.

Miscellaneous Information:

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

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

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived**
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	621149
Prep Batch Number:	621101

Sample ID	Client ID
183243021	9312-0010-120B
183243022	9312-0010-121B
183243023	9312-0010-122B
183243024	9312-0010-123B
183243025	9312-0010-I-017-B
183243026	9312-0010-I-018-B
183243027	9312-0010-I-019-B
183243028	9312-0010-I-020-B
183243029	9312-0010-I-021-B
183243030	9312-0010-I-022-B
183243031	9312-0010-I-023-B
183243032	9312-0010-I-024-B
183243033	9312-0010-I-025-B
1201305347	Method Blank (MB)
1201305348	183245021(9312-0001-020-I) Sample Duplicate (DUP)
1201305349	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 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: 183245021 (9312-0001-020-I).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to low abundance.	Bismuth-214	183243022
		Cesium-134	183243021
			183243026
			183243029
			183243033
			1201305348

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:	621152
Prep Batch Number:	621099

Sample ID	Client ID
183243001	9312-0010-101F
183243002	9312-0010-102F
183243003	9312-0010-103F
183243004	9312-0010-104F
183243005	9312-0010-105F
183243006	9312-0010-106F
183243007	9312-0010-107F
183243008	9312-0010-108F
183243009	9312-0010-109F
183243010	9312-0010-110F
183243011	9312-0010-111F
183243012	9312-0010-112F
183243013	9312-0010-113F
183243014	9312-0010-114F
183243015	9312-0010-114FS
183243016	9312-0010-115F
183243017	9312-0010-116F
183243018	9312-0010-117F
183243019	9312-0010-118F
183243020	9312-0010-119B
1201305354	Method Blank (MB)
1201305355	183243001(9312-0010-101F) Sample Duplicate (DUP)
1201305356	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 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: 183243001 (9312-0010-101F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high counting uncertainty.	Cobalt-60	183243015
UI	Data rejected due to high peak width.	Bismuth-212	183243005
		Cesium-137	183243007
		Thallium-208	1201305354
UI	Data rejected due to interference.	Manganese-54	183243003
			183243007
			183243015
			183243016
UI	Data rejected due to low abundance.	Bismuth-214	183243009
		Cesium-134	183243007
			183243011
			183243013
			183243014
			183243015
			183243016
			183243017
			183243018
			183243019
			1201305355
		Cobalt-60	183243002
			183243003
		Europium-152	183243016
		Thallium-208	183243006
UI	Data rejected due to no valid peak.	Cobalt-60	183243014

Method/Analysis Information

Product:	**GFPC, Sr90, solid-ALL FSS**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	621125
Prep Batch Number:	621100
Dry Soil Prep GL-RAD-A-021 Batch Number:	621099

Sample ID	Client ID
183243001	9312-0010-101F
183243002	9312-0010-102F
183243003	9312-0010-103F
183243004	9312-0010-104F
183243005	9312-0010-105F
183243006	9312-0010-106F
183243007	9312-0010-107F
183243008	9312-0010-108F
183243009	9312-0010-109F
183243010	9312-0010-110F
183243011	9312-0010-111F
183243012	9312-0010-112F
183243013	9312-0010-113F
1201305281	Method Blank (MB)
1201305282	183245021(9312-0001-020-I) Sample Duplicate (DUP)
1201305283	183245021(9312-0001-020-I) Matrix Spike (MS)
1201305284	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 11.

Calibration Information:

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

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

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

Quality Control (QC) Information:

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

Designated QC
The following sample was used for QC: 183245021 (9312-0001-020-I).

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

Technical Information:

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

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

Sample Re-prep/Re-analysis
Samples 183243007 (9312-0010-107F) and 183243009 (9312-0010-109F) were recounted due to high MDAs.

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

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GFPC, Sr90, solid-ALL FSS**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	621126
Prep Batch Number:	621102
Dry Soil Prep GL-RAD-A-021 Batch Number:	621101

Sample ID	Client ID
183243014	9312-0010-114F
183243015	9312-0010-114FS
183243016	9312-0010-115F
183243017	9312-0010-116F
183243018	9312-0010-117F
183243019	9312-0010-118F
183243020	9312-0010-119B
183243021	9312-0010-120B
183243022	9312-0010-121B
183243023	9312-0010-122B
183243024	9312-0010-123B
183243025	9312-0010-I-017-B
183243026	9312-0010-I-018-B
183243027	9312-0010-I-019-B
183243028	9312-0010-I-020-B
183243029	9312-0010-I-021-B
183243030	9312-0010-I-022-B
183243031	9312-0010-I-023-B
183243032	9312-0010-I-024-B
183243033	9312-0010-I-025-B
1201305285	Method Blank (MB)
1201305286	183243014(9312-0010-114F) Sample Duplicate (DUP)
1201305287	183243014(9312-0010-114F) Matrix Spike (MS)
1201305288	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 11.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

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

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

Quality Control (QC) Information:

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

Designated QC
The following sample was used for QC: 183243014 (9312-0010-114F).

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

Technical Information:

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

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

Sample Re-prep/Re-analysis
Samples 183243016 (9312-0010-115F), 183243025 (9312-0010-I-017-B) and 183243029 (9312-0010-I-021-B) were recounted due to a negative result greater than three times the error.

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

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Tc99, Solid-ALL FSS**
Analytical Method:	DOE EML HASL-300, Tc-02-RC Modified
Analytical Batch Number:	621139

Sample ID	Client ID
183243002	9312-0010-102F
183243011	9312-0010-111F
1201305310	Method Blank (MB)
1201305311	183245006(9312-0001-005F) Sample Duplicate (DUP)
1201305312	183245006(9312-0001-005F) Matrix Spike (MS)
1201305313	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-005 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: 183245006 (9312-0001-005F).

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
Sample 1201305312 (9312-0001-005F) was recounted due to low/high recovery.

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Fe55, Solid-ALL FSS**
Analytical Method:	DOE RESL Fe-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	621136
Prep Batch Number:	621100
Dry Soil Prep GL-RAD-A-021 Batch Number:	621099

Sample ID	Client ID
183243002	9312-0010-102F
183243011	9312-0010-111F
1201305300	Method Blank (MB)
1201305301	183245006(9312-0001-005F) Sample Duplicate (DUP)
1201305302	183245006(9312-0001-005F) Matrix Spike (MS)
1201305303	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-040 REV# 4.

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: 183245006 (9312-0001-005F).

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
Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint Ni63, Solid-ALL FSS**
Analytical Method:	DOE RESL Ni-1, Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	621137
Prep Batch Number:	621100
Dry Soil Prep GL-RAD-A-021 Batch Number:	621099

Sample ID	Client ID
183243002	9312-0010-102F
183243011	9312-0010-111F
1201305304	Method Blank (MB)
1201305305	183245006(9312-0001-005F) Sample Duplicate (DUP)
1201305306	183245006(9312-0001-005F) Matrix Spike (MS)
1201305307	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL 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: 183245006 (9312-0001-005F).

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
Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**LSC, Tritium Dist, Solid - 3 pCi/g**
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	621141

Sample ID	Client ID
183243002	9312-0010-102F
183243011	9312-0010-111F
1201305316	Method Blank (MB)
1201305317	183255002(9312-0003-002F) Sample Duplicate (DUP)
1201305318	183255002(9312-0003-002F) Matrix Spike (MS)
1201305319	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 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: 183255002 (9312-0003-002F).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**Liquid Scint C14, Solid All,FSS**
Analytical Method:	EPA EERF C-01 Modified
Analytical Batch Number:	621144

Sample ID	Client ID
183243002	9312-0010-102F
183243011	9312-0010-111F
1201305324	Method Blank (MB)
1201305325	183245006(9312-0001-005F) Sample Duplicate (DUP)
1201305326	183245006(9312-0001-005F) Matrix Spike (MS)
1201305327	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-003 REV# 9.

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: 183245006 (9312-0001-005F).

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

Technical Information:

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

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

Sample Re-prep/Re-analysis
Samples 1201305324 (MB), 1201305325 (9312-0001-005F), 1201305326 (9312-0001-005F) and 1201305327 (LCS) were recounted due to detector error.

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Certification Statement

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

Review Validation:

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

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

Reviewer/Date: Pamela Willis 4/5/07

SAMPLE DATA SUMMARY

GEL 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#07-0130 GEL Work Order: 183243

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 GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

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

Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID:	9312-0010-101F	Project:	YANK01204
Sample ID:	183243001	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	5.52%		

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		1.13	+/-0.237	0.0753	+/-0.237	0.151	pCi/g		MJH1	04/03/07	1303	621152	
Americium-241	U	-0.0022	+/-0.0988	0.0764	+/-0.0988	0.153	pCi/g						
Bismuth-212		1.09	+/-0.345	0.134	+/-0.345	0.268	pCi/g						
Bismuth-214		1.09	+/-0.145	0.0422	+/-0.145	0.0844	pCi/g						
Cesium-134	U	0.0454	+/-0.0666	0.0262	+/-0.0666	0.0523	pCi/g						
Cesium-137		0.256	+/-0.0555	0.0227	+/-0.0555	0.0453	pCi/g						
Cobalt-60	U	0.0348	+/-0.0451	0.0202	+/-0.0451	0.0404	pCi/g						
Europium-152	U	0.0544	+/-0.103	0.056	+/-0.103	0.112	pCi/g						
Europium-154	U	0.0802	+/-0.0857	0.0774	+/-0.0857	0.155	pCi/g						
Europium-155	U	0.0543	+/-0.0742	0.0658	+/-0.0742	0.132	pCi/g						
Lead-212		1.25	+/-0.121	0.0336	+/-0.121	0.0672	pCi/g						
Lead-214		1.34	+/-0.161	0.0406	+/-0.161	0.0812	pCi/g						
Manganese-54	U	-0.0131	+/-0.0311	0.0223	+/-0.0311	0.0445	pCi/g						
Niobium-94	U	0.00411	+/-0.0281	0.0205	+/-0.0281	0.041	pCi/g						
Potassium-40		18.0	+/-1.49	0.177	+/-1.49	0.353	pCi/g						
Radium-226		1.09	+/-0.145	0.0422	+/-0.145	0.0844	pCi/g						
Silver-108m	U	-0.00485	+/-0.024	0.0204	+/-0.024	0.0409	pCi/g						
Thallium-208		0.363	+/-0.0601	0.0204	+/-0.0601	0.0408	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.0197	+/-0.0136	0.015	+/-0.0136	0.0352	pCi/g		NXL3	04/03/07	1450	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-101F
Sample ID: 183243001

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**						
Strontium Carrier	GFPC, Sr90, solid-ALL FSS				85		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the 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
ND Analyte concentration is not detected above the detection limit
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.

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

Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID:	9312-0010-102F	Project:	YANK01204
Sample ID:	183243002	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	.668%		

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	0.0564	+/-0.123	0.0791	+/-0.124	0.238	pCi/g		GXR1	04/03/07	0933	621107	
Curium-242	U	0.00852	+/-0.0646	0.0473	+/-0.0646	0.177	pCi/g						
Curium-243/244	U	-0.0411	+/-0.0723	0.0834	+/-0.0724	0.246	pCi/g						
Alphaspec Pu, Solid-ALL FSS													
Plutonium-238	U	0.036	+/-0.101	0.0621	+/-0.101	0.218	pCi/g		GXR1	04/04/07	2258	622351	
Plutonium-239/240	U	-0.0083	+/-0.0697	0.031	+/-0.0697	0.156	pCi/g						
Liquid Scint Pu241, Solid-ALL FSS													
Plutonium-241	U	-1.5	+/-7.55	6.40	+/-7.55	13.4	pCi/g		BXL1	04/05/07	1319	622105	
Rad Gamma Spec Analysis													
Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium-228		0.854	+/-0.170	0.0628	+/-0.170	0.126	pCi/g		MJH1	04/03/07	1304	621152	
Americium-241	U	0.0524	+/-0.0784	0.0675	+/-0.0784	0.135	pCi/g						
Bismuth-212		0.834	+/-0.268	0.125	+/-0.268	0.251	pCi/g						
Bismuth-214		0.818	+/-0.110	0.0357	+/-0.110	0.0713	pCi/g						
Cesium-134	U	0.0381	+/-0.0311	0.0221	+/-0.0311	0.0442	pCi/g						
Cesium-137		1.60	+/-0.153	0.0172	+/-0.153	0.0345	pCi/g						
Cobalt-60	UI	0.00	+/-0.0282	0.025	+/-0.0282	0.050	pCi/g						
Europium-152	U	-0.0137	+/-0.0654	0.0533	+/-0.0654	0.107	pCi/g						
Europium-154	U	-0.0149	+/-0.0599	0.0494	+/-0.0599	0.0988	pCi/g						
Europium-155	U	0.0282	+/-0.0606	0.0568	+/-0.0606	0.114	pCi/g						
Lead-212		0.827	+/-0.0819	0.0294	+/-0.0819	0.0588	pCi/g						
Lead-214		0.795	+/-0.107	0.0398	+/-0.107	0.0795	pCi/g						
Manganese-54	U	-0.00937	+/-0.0193	0.0164	+/-0.0193	0.0327	pCi/g						
Niobium-94	U	0.000741	+/-0.0183	0.0157	+/-0.0183	0.0314	pCi/g						
Potassium-40		14.3	+/-1.21	0.144	+/-1.21	0.288	pCi/g						
Radium-226		0.818	+/-0.110	0.0357	+/-0.110	0.0713	pCi/g						
Silver-108m	U	0.0079	+/-0.0212	0.0192	+/-0.0212	0.0383	pCi/g						
Thallium-208		0.238	+/-0.0495	0.0175	+/-0.0495	0.035	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0253	+/-0.0291	0.0202	+/-0.0291	0.0487	pCi/g		NXL3	04/03/07	1450	621125	
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid - 3 pCi/g													
Tritium	U	-0.597	+/-1.06	0.918	+/-1.06	1.93	pCi/g		AXD2	03/31/07	1045	621141	

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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: April 5, 2007

Client Sample ID: 9312–0010–102F
Sample ID: 183243002

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	0.0932	+/–0.0929	0.0759	+/–0.0929	0.156	pCi/g		AXD2	03/30/07	1642	621144	
Liquid Scint Fe55, Solid–ALL FSS													
Iron–55	U	–23	+/–35.2	25.7	+/–35.2	54.0	pCi/g		MXP1	04/02/07	2008	621136	
Liquid Scint Ni63, Solid–ALL FSS													
Nickel–63	U	–3.03	+/–10.1	8.62	+/–10.1	18.1	pCi/g		MXP1	04/02/07	1516	621137	
Liquid Scint Tc99, Solid–ALL FSS													
Technetium–99	U	–0.298	+/–0.244	0.212	+/–0.244	0.434	pCi/g		MXP1	04/03/07	1142	621139	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1120	621099

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	DOE EML HASL–300, Pu–11–RC Modified
5	DOE EML HASL–300, Pu–11–RC Modified
6	DOE EML HASL–300, Pu–11–RC Modified
7	EML HASL 300, 4.5.2.3
8	EPA 905.0 Modified
9	EPA 906.0 Modified
10	EPA EERF C–01 Modified
11	DOE RESL Fe–1, Modified
12	DOE RESL Ni–1, Modified
13	DOE EML HASL–300, Tc–02–RC Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium–243 Tracer	Alphaspec Am241, Cm, Solid ALL	92	(15%–125%)
Plutonium–242 Tracer	Alphaspec Pu, Solid–ALL FSS	80	(15%–125%)
Plutonium–242 Tracer	Liquid Scint Pu241, Solid–ALL FS	92	(25%–125%)
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	55	(25%–125%)
			(15%–125%)

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Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID: 9312–0010–102F
Sample ID: 183243002

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time Batch	M
Iron–59 Tracer		Liquid Scint Fe55, Solid–ALL FS			65						
Nickel Carrier		Liquid Scint Ni63, Solid–ALL FS			79		(25%–125%)				
Technetium–99m Tracer		Liquid Scint Tc99, Solid–ALL FS			78		(15%–125%)				

Notes:

The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol–condensation product
B For General Chemistry and Organic analysis the 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
ND Analyte concentration is not detected above the detection limit
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy––Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/–RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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

Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-103F	Project:	YANK01204
Sample ID:	183243003	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	.886%		

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		0.545	+/-0.210	0.0746	+/-0.210	0.149	pCi/g		MJH1	04/03/07	1305	621152	
Americium-241	U	0.0959	+/-0.104	0.0872	+/-0.104	0.174	pCi/g						
Bismuth-212		0.599	+/-0.264	0.131	+/-0.264	0.263	pCi/g						
Bismuth-214		0.667	+/-0.118	0.0414	+/-0.118	0.0828	pCi/g						
Cesium-134	U	0.020	+/-0.0288	0.0254	+/-0.0288	0.0508	pCi/g						
Cesium-137		1.91	+/-0.177	0.0222	+/-0.177	0.0444	pCi/g						
Cobalt-60	UI	0.00	+/-0.0317	0.0317	+/-0.0317	0.0634	pCi/g						
Europium-152	U	-0.0373	+/-0.0855	0.0607	+/-0.0855	0.121	pCi/g						
Europium-154	U	-0.0102	+/-0.0755	0.0635	+/-0.0755	0.127	pCi/g						
Europium-155	U	0.0766	+/-0.0969	0.0649	+/-0.0969	0.130	pCi/g						
Lead-212		0.924	+/-0.0981	0.0334	+/-0.0981	0.0667	pCi/g						
Lead-214		0.655	+/-0.124	0.0462	+/-0.124	0.0924	pCi/g						
Manganese-54	UI	0.00	+/-0.0285	0.0179	+/-0.0285	0.0357	pCi/g						
Niobium-94	U	0.00931	+/-0.0218	0.0191	+/-0.0218	0.0381	pCi/g						
Potassium-40		16.4	+/-1.47	0.158	+/-1.47	0.316	pCi/g						
Radium-226		0.667	+/-0.118	0.0414	+/-0.118	0.0828	pCi/g						
Silver-108m	U	0.00333	+/-0.0243	0.0215	+/-0.0243	0.0429	pCi/g						
Thallium-208		0.364	+/-0.0635	0.0205	+/-0.0635	0.041	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0254	+/-0.0292	0.0206	+/-0.0292	0.049	pCi/g		NXL3	04/03/07	1450	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID: 9312-0010-103F
Sample ID: 183243003

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	55	(25%-125%)

Notes:

The Qualifiers in this report are defined as follows :

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B For General Chemistry and Organic analysis the 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
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007

Client Sample ID:	9312-0010-104F	Project:	YANK01204
Sample ID:	183243004	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	9.14%		

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		0.440	+/-0.152	0.0514	+/-0.152	0.103	pCi/g		MJH1	04/03/07	1306	621152	
Americium-241	U	0.0491	+/-0.0632	0.0534	+/-0.0632	0.107	pCi/g						
Bismuth-212		0.340	+/-0.231	0.143	+/-0.231	0.285	pCi/g						
Bismuth-214		0.333	+/-0.0811	0.031	+/-0.0811	0.0619	pCi/g						
Cesium-134	U	0.00984	+/-0.0251	0.0211	+/-0.0251	0.0421	pCi/g						
Cesium-137		0.144	+/-0.0383	0.0195	+/-0.0383	0.039	pCi/g						
Cobalt-60	U	0.00809	+/-0.0206	0.018	+/-0.0206	0.036	pCi/g						
Europium-152	U	-0.0162	+/-0.0635	0.0482	+/-0.0635	0.0963	pCi/g						
Europium-154	U	0.0103	+/-0.0521	0.0449	+/-0.0521	0.0897	pCi/g						
Europium-155	U	-0.00511	+/-0.0593	0.0494	+/-0.0593	0.0987	pCi/g						
Lead-212		0.607	+/-0.0738	0.0281	+/-0.0738	0.0562	pCi/g						
Lead-214		0.411	+/-0.0962	0.0362	+/-0.0962	0.0723	pCi/g						
Manganese-54	U	0.00815	+/-0.0213	0.019	+/-0.0213	0.038	pCi/g						
Niobium-94	U	0.00626	+/-0.0193	0.0166	+/-0.0193	0.0333	pCi/g						
Potassium-40		10.2	+/-0.983	0.142	+/-0.983	0.285	pCi/g						
Radium-226		0.333	+/-0.0811	0.031	+/-0.0811	0.0619	pCi/g						
Silver-108m	U	-0.0186	+/-0.0216	0.0169	+/-0.0216	0.0338	pCi/g						
Thallium-208		0.207	+/-0.0483	0.0162	+/-0.0483	0.0323	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.037	+/-0.0299	0.0231	+/-0.0299	0.0491	pCi/g		NXL3	04/03/07	1450	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312–0010–104F
Sample ID: 183243004
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	69	(25%–125%)

Notes:

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D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007

Client Sample ID:	9312-0010-105F	Project:	YANK01204
Sample ID:	183243005	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	2.35%		

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		0.674	+/-0.215	0.0773	+/-0.215	0.155	pCi/g		MJH1	04/03/07	1418	621152	
Americium-241	U	-0.00664	+/-0.0423	0.0346	+/-0.0423	0.0691	pCi/g						
Bismuth-212	UI	0.00	+/-0.266	0.166	+/-0.266	0.331	pCi/g						
Bismuth-214		0.435	+/-0.119	0.0454	+/-0.119	0.0907	pCi/g						
Cesium-134	U	0.033	+/-0.0334	0.0317	+/-0.0334	0.0633	pCi/g						
Cesium-137		0.087	+/-0.0343	0.0226	+/-0.0343	0.0453	pCi/g						
Cobalt-60	U	-0.00515	+/-0.0266	0.0216	+/-0.0266	0.0431	pCi/g						
Europium-152	U	0.0985	+/-0.0821	0.0677	+/-0.0821	0.135	pCi/g						
Europium-154	U	-0.0906	+/-0.0954	0.0696	+/-0.0954	0.139	pCi/g						
Europium-155	U	-0.0211	+/-0.0656	0.0588	+/-0.0656	0.118	pCi/g						
Lead-212		0.585	+/-0.0958	0.0344	+/-0.0958	0.0687	pCi/g						
Lead-214		0.593	+/-0.118	0.0396	+/-0.118	0.0792	pCi/g						
Manganese-54	U	0.0246	+/-0.0295	0.0276	+/-0.0295	0.0552	pCi/g						
Niobium-94	U	0.0116	+/-0.028	0.0246	+/-0.028	0.0492	pCi/g						
Potassium-40		11.5	+/-1.26	0.229	+/-1.26	0.457	pCi/g						
Radium-226		0.435	+/-0.119	0.0454	+/-0.119	0.0907	pCi/g						
Silver-108m	U	-0.00602	+/-0.0233	0.0201	+/-0.0233	0.0401	pCi/g						
Thallium-208		0.222	+/-0.0567	0.0257	+/-0.0567	0.0514	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.0105	+/-0.0178	0.0168	+/-0.0178	0.0401	pCi/g		NXL3	04/03/07	1450	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID: 9312-0010-105F
Sample ID: 183243005

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	N
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**					
Strontium Carrier	GFPC, Sr90, solid-ALL FSS				79		(25%-125%)					

Notes:

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D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312–0010–106F	Project:	YANK01204
Sample ID:	183243006	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	8.58%		

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	+/–0.174	0.0561	+/–0.174	0.112	pCi/g		MJH1	04/03/07	1419	621152	
Americium–241	U	–0.054	+/–0.0925	0.0714	+/–0.0925	0.143	pCi/g						
Bismuth–212		0.416	+/–0.212	0.121	+/–0.212	0.241	pCi/g						
Bismuth–214		0.404	+/–0.0884	0.0303	+/–0.0884	0.0605	pCi/g						
Cesium–134	U	0.0383	+/–0.0373	0.0203	+/–0.0373	0.0405	pCi/g						
Cesium–137	U	0.0288	+/–0.0251	0.0178	+/–0.0251	0.0356	pCi/g						
Cobalt–60	U	0.0174	+/–0.0236	0.0164	+/–0.0236	0.0328	pCi/g						
Europium–152	U	0.0111	+/–0.0674	0.0482	+/–0.0674	0.0963	pCi/g						
Europium–154	U	0.0379	+/–0.0591	0.0542	+/–0.0591	0.108	pCi/g						
Europium–155	U	0.0229	+/–0.0547	0.0519	+/–0.0547	0.104	pCi/g						
Lead–212		0.497	+/–0.0646	0.0268	+/–0.0646	0.0536	pCi/g						
Lead–214		0.483	+/–0.104	0.0323	+/–0.104	0.0645	pCi/g						
Manganese–54	U	0.0137	+/–0.0191	0.0173	+/–0.0191	0.0346	pCi/g						
Niobium–94	U	0.00727	+/–0.017	0.0152	+/–0.017	0.0305	pCi/g						
Potassium–40		10.7	+/–1.06	0.161	+/–1.06	0.321	pCi/g						
Radium–226		0.404	+/–0.0884	0.0303	+/–0.0884	0.0605	pCi/g						
Silver–108m	U	–0.00899	+/–0.0188	0.0154	+/–0.0188	0.0308	pCi/g						
Thallium–208	UI	0.00	+/–0.0409	0.0324	+/–0.0409	0.0648	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	–0.0223	+/–0.0227	0.0214	+/–0.0227	0.0475	pCi/g		NXL3	04/03/07	1450	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

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East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-106F
Sample ID: 183243006

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	82	(25%-125%)

Notes:

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D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-107F	Project:	YANK01204
Sample ID:	183243007	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	5.37%		

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		1.14	+/-0.304	0.096	+/-0.304	0.192	pCi/g		MJH1	04/03/07	1420	621152	
Americium-241	U	0.024	+/-0.0594	0.0503	+/-0.0594	0.101	pCi/g						
Bismuth-212		0.894	+/-0.519	0.228	+/-0.519	0.455	pCi/g						
Bismuth-214		0.677	+/-0.141	0.0568	+/-0.141	0.113	pCi/g						
Cesium-134	UI	0.00	+/-0.0507	0.0409	+/-0.0507	0.0817	pCi/g						
Cesium-137	UI	0.00	+/-0.103	0.0304	+/-0.103	0.0608	pCi/g						
Cobalt-60	U	-0.00939	+/-0.0363	0.0296	+/-0.0363	0.0591	pCi/g						
Europium-152	U	-0.0441	+/-0.104	0.0741	+/-0.104	0.148	pCi/g						
Europium-154	U	0.0534	+/-0.129	0.099	+/-0.129	0.198	pCi/g						
Europium-155	U	0.0566	+/-0.107	0.0742	+/-0.107	0.148	pCi/g						
Lead-212		0.990	+/-0.123	0.044	+/-0.123	0.088	pCi/g						
Lead-214		0.706	+/-0.134	0.0552	+/-0.134	0.110	pCi/g						
Manganese-54	UI	0.00	+/-0.0443	0.0295	+/-0.0443	0.059	pCi/g						
Niobium-94	U	0.0175	+/-0.0363	0.0319	+/-0.0363	0.0637	pCi/g						
Potassium-40		15.8	+/-1.67	0.268	+/-1.67	0.535	pCi/g						
Radium-226		0.677	+/-0.141	0.0568	+/-0.141	0.113	pCi/g						
Silver-108m	U	-0.00602	+/-0.0321	0.0281	+/-0.0321	0.0561	pCi/g						
Thallium-208		0.333	+/-0.0748	0.0311	+/-0.0748	0.0623	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.0155	+/-0.016	0.0165	+/-0.016	0.0395	pCi/g		NXL3	04/04/07	1202	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312–0010–107F
Sample ID: 183243007

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	64	(25%–125%)

Notes:

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J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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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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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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-108F	Project:	YANK01204
Sample ID:	183243008	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	4.07%		

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		0.574	+/-0.180	0.0891	+/-0.180	0.178	pCi/g		MJH1	04/03/07	1421	621152	
Americium-241	U	0.0246	+/-0.0383	0.034	+/-0.0383	0.0679	pCi/g						
Bismuth-212	U	0.370	+/-0.275	0.203	+/-0.275	0.405	pCi/g						
Bismuth-214		0.441	+/-0.104	0.0377	+/-0.104	0.0754	pCi/g						
Cesium-134	U	0.0366	+/-0.0308	0.0302	+/-0.0308	0.0604	pCi/g						
Cesium-137	U	0.0418	+/-0.0429	0.0247	+/-0.0429	0.0494	pCi/g						
Cobalt-60	U	0.0213	+/-0.0279	0.0262	+/-0.0279	0.0523	pCi/g						
Europium-152	U	0.0665	+/-0.0646	0.061	+/-0.0646	0.122	pCi/g						
Europium-154	U	0.018	+/-0.0994	0.0849	+/-0.0994	0.170	pCi/g						
Europium-155	U	0.0401	+/-0.0569	0.0546	+/-0.0569	0.109	pCi/g						
Lead-212		0.553	+/-0.0805	0.0288	+/-0.0805	0.0575	pCi/g						
Lead-214		0.429	+/-0.0981	0.0356	+/-0.0981	0.0711	pCi/g						
Manganese-54	U	-0.019	+/-0.030	0.0238	+/-0.030	0.0476	pCi/g						
Niobium-94	U	0.000509	+/-0.026	0.022	+/-0.026	0.0439	pCi/g						
Potassium-40		9.10	+/-1.15	0.202	+/-1.15	0.403	pCi/g						
Radium-226		0.441	+/-0.104	0.0377	+/-0.104	0.0754	pCi/g						
Silver-108m	U	-0.00662	+/-0.023	0.0198	+/-0.023	0.0397	pCi/g						
Thallium-208		0.191	+/-0.0511	0.0215	+/-0.0511	0.043	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00814	+/-0.0206	0.0158	+/-0.0206	0.0384	pCi/g		NXL3	04/03/07	1601	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312–0010–108F
Sample ID: 183243008
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	N
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**					
Strontium Carrier	GFPC, Sr90, solid–ALL FSS				72		(25%–125%)					

Notes:

The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
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A The TIC is a suspected aldol–condensation product
B For General Chemistry and Organic analysis the 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
ND Analyte concentration is not detected above the detection limit
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy––Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/–RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

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Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312–0010–109F	Project:	YANK01204
Sample ID:	183243009	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	2.71%		

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		1.21	+/–0.278	0.110	+/–0.278	0.220	pCi/g		MJH1	04/03/07	1422	621152	
Americium–241	U	0.0266	+/–0.0564	0.0458	+/–0.0564	0.0916	pCi/g						
Bismuth–212		0.940	+/–0.498	0.261	+/–0.498	0.522	pCi/g						
Bismuth–214	UI	0.00	+/–0.202	0.144	+/–0.202	0.288	pCi/g						
Cesium–134	U	0.0604	+/–0.0458	0.044	+/–0.0458	0.0879	pCi/g						
Cesium–137		0.276	+/–0.074	0.0352	+/–0.074	0.0704	pCi/g						
Cobalt–60	U	0.0292	+/–0.0413	0.0382	+/–0.0413	0.0764	pCi/g						
Europium–152	U	–0.026	+/–0.114	0.0736	+/–0.114	0.147	pCi/g						
Europium–154	U	0.0784	+/–0.164	0.127	+/–0.164	0.254	pCi/g						
Europium–155	U	0.031	+/–0.0799	0.0718	+/–0.0799	0.144	pCi/g						
Lead–212		1.04	+/–0.129	0.0419	+/–0.129	0.0837	pCi/g						
Lead–214		1.11	+/–0.169	0.0551	+/–0.169	0.110	pCi/g						
Manganese–54	U	–0.012	+/–0.0457	0.0328	+/–0.0457	0.0656	pCi/g						
Niobium–94	U	0.0293	+/–0.0334	0.0314	+/–0.0334	0.0627	pCi/g						
Potassium–40		17.4	+/–1.61	0.266	+/–1.61	0.531	pCi/g						
Radium–226		1.05	+/–0.202	0.0552	+/–0.202	0.110	pCi/g						
Silver–108m	U	–0.0154	+/–0.0304	0.0253	+/–0.0304	0.0506	pCi/g						
Thallium–208		0.451	+/–0.0853	0.0307	+/–0.0853	0.0613	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.0191	+/–0.0259	0.0188	+/–0.0259	0.0445	pCi/g		NXL3	04/04/07	1202	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

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

Report Date: April 5, 2007

Client Sample ID: 9312-0010-109F
Sample ID: 183243009

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	57	(25%-125%)

Notes:

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C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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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East Hampton, Connecticut 06424 Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312–0010–110F	Project:	YANK01204
Sample ID:	183243010	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	10.9%		

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		0.864	+/–0.207	0.0632	+/–0.207	0.126	pCi/g		MJH1	04/03/07	1458	621152	
Americium–241	U	0.000144	+/–0.117	0.0926	+/–0.117	0.185	pCi/g						
Bismuth–212		0.695	+/–0.286	0.141	+/–0.286	0.281	pCi/g						
Bismuth–214		0.732	+/–0.122	0.0399	+/–0.122	0.0797	pCi/g						
Cesium–134	U	0.0303	+/–0.0269	0.025	+/–0.0269	0.0499	pCi/g						
Cesium–137		0.430	+/–0.0566	0.0181	+/–0.0566	0.0362	pCi/g						
Cobalt–60	U	0.0163	+/–0.0265	0.0236	+/–0.0265	0.0471	pCi/g						
Europium–152	U	0.018	+/–0.107	0.0549	+/–0.107	0.110	pCi/g						
Europium–154	U	–0.0424	+/–0.0687	0.0558	+/–0.0687	0.112	pCi/g						
Europium–155	U	0.0121	+/–0.0948	0.0615	+/–0.0948	0.123	pCi/g						
Lead–212		0.807	+/–0.0967	0.0319	+/–0.0967	0.0637	pCi/g						
Lead–214		0.841	+/–0.129	0.0372	+/–0.129	0.0744	pCi/g						
Manganese–54	U	–0.0134	+/–0.0264	0.0184	+/–0.0264	0.0368	pCi/g						
Niobium–94	U	0.0144	+/–0.0224	0.0203	+/–0.0224	0.0406	pCi/g						
Potassium–40		9.69	+/–0.999	0.152	+/–0.999	0.303	pCi/g						
Radium–226		0.732	+/–0.122	0.0399	+/–0.122	0.0797	pCi/g						
Silver–108m	U	–0.00301	+/–0.0224	0.0192	+/–0.0224	0.0385	pCi/g						
Thallium–208		0.287	+/–0.0563	0.0197	+/–0.0563	0.0393	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	–0.0105	+/–0.0185	0.0176	+/–0.0185	0.0425	pCi/g		NXL3	04/03/07	1602	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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

Report Date: April 5, 2007

Client Sample ID: 9312–0010–110F
Sample ID: 183243010

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	67	(25%–125%)

Notes:

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H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312–0010–111F	Project:	YANK01204
Sample ID:	183243011	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	4.44%		

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	0.0126	+/–0.146	0.117	+/–0.146	0.337	pCi/g		GXR1	04/03/07	0933	621107	
Curium–242	U	–0.0375	+/–0.085	0.0702	+/–0.085	0.246	pCi/g						
Curium–243/244	U	–0.0136	+/–0.144	0.127	+/–0.144	0.356	pCi/g						
Alphaspec Pu, Solid–ALL FSS													
Plutonium–238	U	0.0746	+/–0.148	0.091	+/–0.149	0.279	pCi/g		GXR1	04/04/07	2258	622351	
Plutonium–239/240	U	–0.00717	+/–0.0798	0.072	+/–0.0798	0.241	pCi/g						
Liquid Scint Pu241, Solid–ALL FSS													
Plutonium–241	U	–3.35	+/–7.83	6.73	+/–7.83	14.1	pCi/g		BXL1	04/05/07	1335	622105	
Rad Gamma Spec Analysis													
Gamma,Solid–FSS GAM & ALL FSS 226 Ingrowth Waived													
Actinium–228		0.729	+/–0.197	0.0626	+/–0.197	0.125	pCi/g		MJH1	04/03/07	1513	621152	
Americium–241	U	0.073	+/–0.109	0.0823	+/–0.109	0.165	pCi/g						
Bismuth–212		0.337	+/–0.232	0.139	+/–0.232	0.278	pCi/g						
Bismuth–214		0.488	+/–0.0902	0.0335	+/–0.0902	0.0669	pCi/g						
Cesium–134	UI	0.00	+/–0.0371	0.0237	+/–0.0371	0.0474	pCi/g						
Cesium–137	U	0.0191	+/–0.0239	0.0215	+/–0.0239	0.0429	pCi/g						
Cobalt–60	U	–0.00555	+/–0.0231	0.019	+/–0.0231	0.0381	pCi/g						
Europium–152	U	0.0446	+/–0.0894	0.0484	+/–0.0894	0.0967	pCi/g						
Europium–154	U	–0.0162	+/–0.0721	0.0601	+/–0.0721	0.120	pCi/g						
Europium–155	U	0.0198	+/–0.0598	0.0554	+/–0.0598	0.111	pCi/g						
Lead–212		0.636	+/–0.0765	0.0278	+/–0.0765	0.0556	pCi/g						
Lead–214		0.513	+/–0.099	0.0337	+/–0.099	0.0674	pCi/g						
Manganese–54	U	0.00587	+/–0.0236	0.0208	+/–0.0236	0.0416	pCi/g						
Niobium–94	U	0.00202	+/–0.0198	0.0176	+/–0.0198	0.0351	pCi/g						
Potassium–40		10.4	+/–1.18	0.173	+/–1.18	0.346	pCi/g						
Radium–226		0.488	+/–0.0902	0.0335	+/–0.0902	0.0669	pCi/g						
Silver–108m	U	–0.0155	+/–0.0179	0.0151	+/–0.0179	0.0303	pCi/g						
Thallium–208		0.221	+/–0.0446	0.0181	+/–0.0446	0.0361	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.0024	+/–0.0217	0.0178	+/–0.0217	0.0417	pCi/g		NXL3	04/03/07	1641	621125	
Rad Liquid Scintillation Analysis													
LSC, Tritium Dist, Solid – 3 pCi/g													
Tritium	U	–0.325	+/–1.07	0.916	+/–1.07	1.92	pCi/g		AXD2	03/31/07	1146	621141	

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

Report Date: April 5, 2007

Client Sample ID: 9312–0010–111F
Sample ID: 183243011

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	–0.00732	+/–0.0887	0.0746	+/–0.0887	0.153	pCi/g		AXD2	03/30/07	1744	621144	
Liquid Scint Fe55, Solid–ALL FSS													
Iron–55	U	–2.17	+/–30.8	22.0	+/–30.8	46.2	pCi/g		MXP1	04/02/07	2024	621136	
Liquid Scint Ni63, Solid–ALL FSS													
Nickel–63	U	–1.61	+/–10.0	8.49	+/–10.0	17.8	pCi/g		MXP1	04/02/07	1532	621137	
Liquid Scint Tc99, Solid–ALL FSS													
Technetium–99	U	–0.20	+/–0.237	0.203	+/–0.237	0.416	pCi/g		MXP1	04/03/07	1214	621139	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1120	621099

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	DOE EML HASL–300, Pu–11–RC Modified
5	DOE EML HASL–300, Pu–11–RC Modified
6	EML HASL 300, 4.5.2.3
7	EPA 905.0 Modified
8	EPA 906.0 Modified
9	EPA EERF C–01 Modified
10	DOE RESL Fe–1, Modified
11	DOE RESL Ni–1, Modified
12	DOE EML HASL–300, Tc–02–RC Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium–243 Tracer	Alphaspec Am241, Cm, Solid ALL	77	(15%–125%)
Plutonium–242 Tracer	Alphaspec Pu, Solid–ALL FSS	85	(15%–125%)
Plutonium–242 Tracer	Liquid Scint Pu241, Solid–ALL FS	86	(25%–125%)
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	66	(25%–125%)
Iron–59 Tracer	Liquid Scint Fe55, Solid–ALL FS	66	(15%–125%)
Nickel Carrier	Liquid Scint Ni63, Solid–ALL FS	79	(25%–125%)

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

Report Date: April 5, 2007

Client Sample ID: 9312–0010–111F
Sample ID: 183243011

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	N
Technetium–99m Tracer		Liquid Scint Tc99, Solid–ALL FS			82		(15%–125%)					

Notes:

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H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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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Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312–0010–112F	Project:	YANK01204
Sample ID:	183243012	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	8.25%		

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		1.18	+/–0.251	0.0665	+/–0.251	0.133	pCi/g		MJH1	04/03/07	1514	621152	
Americium–241	U	0.0532	+/–0.109	0.094	+/–0.109	0.188	pCi/g						
Bismuth–212		0.538	+/–0.332	0.152	+/–0.332	0.304	pCi/g						
Bismuth–214		0.620	+/–0.105	0.0362	+/–0.105	0.0723	pCi/g						
Cesium–134	U	0.0519	+/–0.0429	0.0268	+/–0.0429	0.0535	pCi/g						
Cesium–137	U	–0.0235	+/–0.0239	0.0193	+/–0.0239	0.0386	pCi/g						
Cobalt–60	U	–0.0023	+/–0.0305	0.0219	+/–0.0305	0.0438	pCi/g						
Europium–152	U	–0.0438	+/–0.0689	0.0537	+/–0.0689	0.107	pCi/g						
Europium–154	U	–0.0443	+/–0.0793	0.0637	+/–0.0793	0.127	pCi/g						
Europium–155	U	0.0459	+/–0.093	0.0632	+/–0.093	0.126	pCi/g						
Lead–212		0.921	+/–0.0971	0.0305	+/–0.0971	0.061	pCi/g						
Lead–214		0.665	+/–0.120	0.0388	+/–0.120	0.0776	pCi/g						
Manganese–54	U	0.00571	+/–0.025	0.0217	+/–0.025	0.0434	pCi/g						
Niobium–94	U	–0.00695	+/–0.0224	0.0191	+/–0.0224	0.0381	pCi/g						
Potassium–40		16.2	+/–1.53	0.163	+/–1.53	0.325	pCi/g						
Radium–226		0.620	+/–0.105	0.0362	+/–0.105	0.0723	pCi/g						
Silver–108m	U	0.00705	+/–0.0211	0.0186	+/–0.0211	0.0372	pCi/g						
Thallium–208		0.320	+/–0.0523	0.0193	+/–0.0523	0.0387	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.0105	+/–0.0257	0.0201	+/–0.0257	0.0465	pCi/g		NXL3	04/03/07	1641	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-112F
Sample ID: 183243012
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Surrogate/Tracer recovery	**Test**				**Recovery%**	**Acceptable Limits**							
Strontium Carrier	GFPC, Sr90, solid-ALL FSS				57	(25%-125%)							

Notes:

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< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
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D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-113F	Project:	YANK01204
Sample ID:	183243013	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	2.4%		

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		0.989	+/-0.213	0.0792	+/-0.213	0.158	pCi/g		MJH1	04/03/07	1529	621152	
Americium-241	U	0.0362	+/-0.0392	0.0346	+/-0.0392	0.0691	pCi/g						
Bismuth-212		0.622	+/-0.294	0.157	+/-0.294	0.314	pCi/g						
Bismuth-214		0.682	+/-0.115	0.0403	+/-0.115	0.0805	pCi/g						
Cesium-134	UI	0.00	+/-0.0504	0.0303	+/-0.0504	0.0606	pCi/g						
Cesium-137		0.0626	+/-0.0304	0.0234	+/-0.0304	0.0468	pCi/g						
Cobalt-60	U	-0.0172	+/-0.028	0.0217	+/-0.028	0.0434	pCi/g						
Europium-152	U	-0.00738	+/-0.0872	0.0538	+/-0.0872	0.108	pCi/g						
Europium-154	U	-0.0346	+/-0.0918	0.0706	+/-0.0918	0.141	pCi/g						
Europium-155	U	0.0479	+/-0.0683	0.0544	+/-0.0683	0.109	pCi/g						
Lead-212		0.845	+/-0.109	0.0317	+/-0.109	0.0633	pCi/g						
Lead-214		0.719	+/-0.118	0.0378	+/-0.118	0.0755	pCi/g						
Manganese-54	U	0.0115	+/-0.0261	0.0239	+/-0.0261	0.0477	pCi/g						
Niobium-94	U	-0.0092	+/-0.0231	0.0191	+/-0.0231	0.0382	pCi/g						
Potassium-40		17.0	+/-1.51	0.151	+/-1.51	0.302	pCi/g						
Radium-226		0.682	+/-0.115	0.0403	+/-0.115	0.0805	pCi/g						
Silver-108m	U	-0.00232	+/-0.0208	0.0185	+/-0.0208	0.037	pCi/g						
Thallium-208		0.281	+/-0.0536	0.0225	+/-0.0536	0.045	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.0163	+/-0.0207	0.019	+/-0.0207	0.0419	pCi/g		NXL3	04/03/07	1641	621125	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

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

East Hampton, Connecticut 06424 Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312–0010–113F Project: YANK01204
Sample ID: 183243013 Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	64	(25%–125%)

Notes:

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

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Certificate of Analysis

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Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-114F	Project:	YANK01204
Sample ID:	183243014	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	4.58%		

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		0.841	+/-0.151	0.0398	+/-0.151	0.0796	pCi/g		MJH1	04/03/07	1912	621152	
Americium-241	U	0.0652	+/-0.0679	0.0557	+/-0.0679	0.111	pCi/g						
Bismuth-212		0.516	+/-0.170	0.0838	+/-0.170	0.168	pCi/g						
Bismuth-214		0.769	+/-0.0931	0.0225	+/-0.0931	0.0449	pCi/g						
Cesium-134	UI	0.00	+/-0.0224	0.0149	+/-0.0224	0.0297	pCi/g						
Cesium-137		0.496	+/-0.0512	0.0115	+/-0.0512	0.0229	pCi/g						
Cobalt-60	UI	0.00	+/-0.0243	0.0126	+/-0.0243	0.0252	pCi/g						
Europium-152	U	-0.0279	+/-0.0488	0.0313	+/-0.0488	0.0626	pCi/g						
Europium-154	U	0.0176	+/-0.0478	0.0354	+/-0.0478	0.0708	pCi/g						
Europium-155	U	0.0448	+/-0.0628	0.0371	+/-0.0628	0.0742	pCi/g						
Lead-212		0.829	+/-0.0798	0.0187	+/-0.0798	0.0374	pCi/g						
Lead-214		0.788	+/-0.0897	0.0225	+/-0.0897	0.0451	pCi/g						
Manganese-54	U	0.00481	+/-0.0157	0.0119	+/-0.0157	0.0239	pCi/g						
Niobium-94	U	-0.0118	+/-0.0121	0.0101	+/-0.0121	0.0203	pCi/g						
Potassium-40		10.6	+/-0.809	0.0885	+/-0.809	0.177	pCi/g						
Radium-226		0.769	+/-0.0931	0.0225	+/-0.0931	0.0449	pCi/g						
Silver-108m	U	0.00263	+/-0.0131	0.0115	+/-0.0131	0.0229	pCi/g						
Thallium-208		0.273	+/-0.0346	0.0112	+/-0.0346	0.0224	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0275	+/-0.020	0.0133	+/-0.020	0.0308	pCi/g		NXL3	04/02/07	1905	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
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Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-114F
Sample ID: 183243014
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	M
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**					
Strontium Carrier	GFPC, Sr90, solid-ALL FSS				79		(25%-125%)					

Notes:

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H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312–0010–114FS	Project:	YANK01204
Sample ID:	183243015	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	4.83%		

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		0.872	+/–0.137	0.0364	+/–0.137	0.0728	pCi/g		MJH1	04/03/07	1914	621152	
Americium–241	U	0.0245	+/–0.0808	0.0682	+/–0.0808	0.136	pCi/g						
Bismuth–212		0.526	+/–0.155	0.0825	+/–0.155	0.165	pCi/g						
Bismuth–214		0.731	+/–0.087	0.022	+/–0.087	0.044	pCi/g						
Cesium–134	UI	0.00	+/–0.0231	0.0139	+/–0.0231	0.0278	pCi/g						
Cesium–137		0.458	+/–0.0465	0.0113	+/–0.0465	0.0225	pCi/g						
Cobalt–60	UI	0.00	+/–0.0281	0.0117	+/–0.0281	0.0233	pCi/g						
Europium–152	U	–0.0087	+/–0.0516	0.0316	+/–0.0516	0.0631	pCi/g						
Europium–154	U	0.0398	+/–0.0701	0.0372	+/–0.0701	0.0744	pCi/g						
Europium–155	U	0.0526	+/–0.0449	0.0373	+/–0.0449	0.0746	pCi/g						
Lead–212		0.783	+/–0.0719	0.0182	+/–0.0719	0.0364	pCi/g						
Lead–214		0.816	+/–0.0898	0.0213	+/–0.0898	0.0425	pCi/g						
Manganese–54	UI	0.00	+/–0.0167	0.0102	+/–0.0167	0.0204	pCi/g						
Niobium–94	U	–0.00182	+/–0.0123	0.0104	+/–0.0123	0.0208	pCi/g						
Potassium–40		10.7	+/–0.877	0.0936	+/–0.877	0.187	pCi/g						
Radium–226		0.731	+/–0.087	0.022	+/–0.087	0.044	pCi/g						
Silver–108m	U	0.00747	+/–0.0126	0.0114	+/–0.0126	0.0228	pCi/g						
Thallium–208		0.236	+/–0.0335	0.0113	+/–0.0335	0.0225	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.012	+/–0.0191	0.0145	+/–0.0191	0.0332	pCi/g		NXL3	04/02/07	1906	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312–0010–114FS
Sample ID: 183243015

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	79	(25%–125%)

Notes:

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B For General Chemistry and Organic analysis the 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
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-115F	Project:	YANK01204
Sample ID:	183243016	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	1.87%		

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		0.920	+/-0.167	0.0435	+/-0.167	0.0869	pCi/g		MJH1	04/03/07	1915	621152	
Americium-241	U	0.0344	+/-0.0601	0.0525	+/-0.0601	0.105	pCi/g						
Bismuth-212		0.385	+/-0.167	0.0913	+/-0.167	0.183	pCi/g						
Bismuth-214		0.640	+/-0.0811	0.0214	+/-0.0811	0.0427	pCi/g						
Cesium-134	UI	0.00	+/-0.0236	0.0154	+/-0.0236	0.0307	pCi/g						
Cesium-137	U	0.00748	+/-0.0147	0.0129	+/-0.0147	0.0259	pCi/g						
Cobalt-60	U	0.00165	+/-0.0148	0.0127	+/-0.0148	0.0253	pCi/g						
Europium-152	UI	0.00	+/-0.0555	0.0308	+/-0.0555	0.0616	pCi/g						
Europium-154	U	-0.00662	+/-0.0475	0.0405	+/-0.0475	0.0809	pCi/g						
Europium-155	U	0.0376	+/-0.0423	0.0351	+/-0.0423	0.0701	pCi/g						
Lead-212		0.939	+/-0.0822	0.0176	+/-0.0822	0.0352	pCi/g						
Lead-214		0.706	+/-0.0815	0.0216	+/-0.0815	0.0431	pCi/g						
Manganese-54	UI	0.00	+/-0.0161	0.011	+/-0.0161	0.0219	pCi/g						
Niobium-94	U	0.00551	+/-0.013	0.0117	+/-0.013	0.0235	pCi/g						
Potassium-40		16.4	+/-1.15	0.104	+/-1.15	0.208	pCi/g						
Radium-226		0.640	+/-0.0811	0.0214	+/-0.0811	0.0427	pCi/g						
Silver-108m	U	0.00539	+/-0.0129	0.0103	+/-0.0129	0.0206	pCi/g						
Thallium-208		0.281	+/-0.0377	0.0113	+/-0.0377	0.0226	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.00657	+/-0.0159	0.0146	+/-0.0159	0.035	pCi/g		NXL3	04/03/07	1421	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-115F
Sample ID: 183243016

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**						
Strontium Carrier	GFPC, Sr90, solid-ALL FSS				74		(25%-125%)						

Notes:

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A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the 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
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-116F	Project:	YANK01204
Sample ID:	183243017	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	4.56%		

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		1.05	+/-0.173	0.0428	+/-0.173	0.0855	pCi/g		MJH1	04/03/07	1918	621152	
Americium-241	U	0.0107	+/-0.0917	0.0745	+/-0.0917	0.149	pCi/g						
Bismuth-212		0.554	+/-0.185	0.0899	+/-0.185	0.180	pCi/g						
Bismuth-214		0.662	+/-0.0843	0.0235	+/-0.0843	0.047	pCi/g						
Cesium-134	UI	0.00	+/-0.026	0.0158	+/-0.026	0.0316	pCi/g						
Cesium-137	U	-0.00385	+/-0.0142	0.012	+/-0.0142	0.024	pCi/g						
Cobalt-60	U	0.0025	+/-0.0149	0.0126	+/-0.0149	0.0252	pCi/g						
Europium-152	U	-0.0139	+/-0.0509	0.0315	+/-0.0509	0.063	pCi/g						
Europium-154	U	-0.00395	+/-0.0516	0.0412	+/-0.0516	0.0823	pCi/g						
Europium-155	U	0.0722	+/-0.054	0.0396	+/-0.054	0.0792	pCi/g						
Lead-212		1.01	+/-0.118	0.0198	+/-0.118	0.0395	pCi/g						
Lead-214		0.821	+/-0.0995	0.0227	+/-0.0995	0.0453	pCi/g						
Manganese-54	U	0.0231	+/-0.0239	0.0119	+/-0.0239	0.0237	pCi/g						
Niobium-94	U	0.00574	+/-0.0131	0.0114	+/-0.0131	0.0228	pCi/g						
Potassium-40		16.6	+/-1.24	0.101	+/-1.24	0.203	pCi/g						
Radium-226		0.662	+/-0.0843	0.0235	+/-0.0843	0.047	pCi/g						
Silver-108m	U	0.00197	+/-0.0123	0.011	+/-0.0123	0.022	pCi/g						
Thallium-208		0.319	+/-0.0372	0.011	+/-0.0372	0.0221	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00116	+/-0.015	0.0125	+/-0.015	0.0286	pCi/g		NXL3	04/02/07	1906	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-116F
Sample ID: 183243017

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	84	(25%-125%)

Notes:

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B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
BD Results are either below the MDC or tracer recovery is low
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N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
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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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-117F	Project:	YANK01204
Sample ID:	183243018	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	3.01%		

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		1.09	+/-0.166	0.0459	+/-0.166	0.0917	pCi/g		MJH1	04/03/07	1919	621152	
Americium-241	U	0.0304	+/-0.0252	0.0211	+/-0.0252	0.0421	pCi/g						
Bismuth-212		0.700	+/-0.252	0.106	+/-0.252	0.212	pCi/g						
Bismuth-214		0.798	+/-0.112	0.0263	+/-0.112	0.0525	pCi/g						
Cesium-134	UI	0.00	+/-0.024	0.0176	+/-0.024	0.0351	pCi/g						
Cesium-137		0.291	+/-0.0424	0.0134	+/-0.0424	0.0267	pCi/g						
Cobalt-60	U	0.0221	+/-0.0179	0.0161	+/-0.0179	0.0322	pCi/g						
Europium-152	U	0.00358	+/-0.0514	0.035	+/-0.0514	0.070	pCi/g						
Europium-154	U	-0.0221	+/-0.0521	0.0427	+/-0.0521	0.0853	pCi/g						
Europium-155	U	0.0609	+/-0.0466	0.0342	+/-0.0466	0.0684	pCi/g						
Lead-212		0.982	+/-0.117	0.0193	+/-0.117	0.0385	pCi/g						
Lead-214		0.886	+/-0.106	0.0252	+/-0.106	0.0503	pCi/g						
Manganese-54	U	0.0142	+/-0.0186	0.0146	+/-0.0186	0.0292	pCi/g						
Niobium-94	U	0.00509	+/-0.016	0.0137	+/-0.016	0.0274	pCi/g						
Potassium-40		15.6	+/-1.11	0.131	+/-1.11	0.262	pCi/g						
Radium-226		0.798	+/-0.112	0.0263	+/-0.112	0.0525	pCi/g						
Silver-108m	U	0.00373	+/-0.0141	0.0125	+/-0.0141	0.0249	pCi/g						
Thallium-208		0.295	+/-0.0426	0.0139	+/-0.0426	0.0278	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.013	+/-0.0166	0.0122	+/-0.0166	0.0283	pCi/g		NXL3	04/02/07	1906	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID: 9312–0010–117F
Sample ID: 183243018

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Surrogate/Tracer recovery	**Test**					**Recovery%**	**Acceptable Limits**						
Strontium Carrier	GFPC, Sr90, solid–ALL FSS					87	(25%–125%)						

Notes:

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J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
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X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/–RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312–0010–118F	Project:	YANK01204
Sample ID:	183243019	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	3.88%		

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		0.995	+/–0.175	0.0419	+/–0.175	0.0838	pCi/g		MJH1	04/03/07	1920	621152	
Americium–241	U	0.0161	+/–0.0597	0.0559	+/–0.0597	0.112	pCi/g						
Bismuth–212		0.494	+/–0.181	0.0975	+/–0.181	0.195	pCi/g						
Bismuth–214		0.632	+/–0.0851	0.0231	+/–0.0851	0.0463	pCi/g						
Cesium–134	UI	0.00	+/–0.0225	0.0156	+/–0.0225	0.0312	pCi/g						
Cesium–137		0.0619	+/–0.0238	0.0136	+/–0.0238	0.0271	pCi/g						
Cobalt–60	U	–0.00246	+/–0.0151	0.0126	+/–0.0151	0.0253	pCi/g						
Europium–152	U	–0.0371	+/–0.0421	0.0329	+/–0.0421	0.0657	pCi/g						
Europium–154	U	–0.0107	+/–0.0475	0.0399	+/–0.0475	0.0797	pCi/g						
Europium–155	U	0.0313	+/–0.0591	0.0356	+/–0.0591	0.0712	pCi/g						
Lead–212		0.978	+/–0.0867	0.019	+/–0.0867	0.0379	pCi/g						
Lead–214		0.713	+/–0.087	0.024	+/–0.087	0.048	pCi/g						
Manganese–54	U	0.0159	+/–0.0166	0.013	+/–0.0166	0.0261	pCi/g						
Niobium–94	U	0.0126	+/–0.0132	0.0119	+/–0.0132	0.0238	pCi/g						
Potassium–40		16.0	+/–1.25	0.111	+/–1.25	0.223	pCi/g						
Radium–226		0.632	+/–0.0851	0.0231	+/–0.0851	0.0463	pCi/g						
Silver–108m	U	0.00018	+/–0.0132	0.0114	+/–0.0132	0.0227	pCi/g						
Thallium–208		0.319	+/–0.0391	0.0122	+/–0.0391	0.0244	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.00596	+/–0.020	0.0161	+/–0.020	0.0364	pCi/g		NXL3	04/02/07	1906	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-118F
Sample ID: 183243019
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**						
Strontium Carrier	GFPC, Sr90, solid-ALL FSS				80		(25%-125%)						

Notes:

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D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312–0010–119B	Project:	YANK01204
Sample ID:	183243020	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	6.09%		

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		0.594	+/–0.121	0.0367	+/–0.121	0.0734	pCi/g		MJH1	04/03/07	1921	621152	
Americium–241	U	0.043	+/–0.0726	0.0572	+/–0.0726	0.114	pCi/g						
Bismuth–212		0.394	+/–0.148	0.0825	+/–0.148	0.165	pCi/g						
Bismuth–214		0.525	+/–0.0762	0.0227	+/–0.0762	0.0454	pCi/g						
Cesium–134	U	0.0241	+/–0.022	0.0132	+/–0.022	0.0264	pCi/g						
Cesium–137		2.25	+/–0.210	0.012	+/–0.210	0.024	pCi/g						
Cobalt–60		0.125	+/–0.0239	0.0103	+/–0.0239	0.0205	pCi/g						
Europium–152	U	–0.0403	+/–0.0412	0.0338	+/–0.0412	0.0675	pCi/g						
Europium–154	U	0.000828	+/–0.0424	0.0358	+/–0.0424	0.0715	pCi/g						
Europium–155	U	0.0101	+/–0.0409	0.0376	+/–0.0409	0.0751	pCi/g						
Lead–212		0.481	+/–0.0497	0.0188	+/–0.0497	0.0376	pCi/g						
Lead–214		0.548	+/–0.0711	0.0245	+/–0.0711	0.049	pCi/g						
Manganese–54	U	0.00432	+/–0.0127	0.0113	+/–0.0127	0.0225	pCi/g						
Niobium–94	U	0.000943	+/–0.0121	0.0103	+/–0.0121	0.0206	pCi/g						
Potassium–40		10.2	+/–0.798	0.0877	+/–0.798	0.175	pCi/g						
Radium–226		0.525	+/–0.0762	0.0227	+/–0.0762	0.0454	pCi/g						
Silver–108m	U	–0.00736	+/–0.0149	0.013	+/–0.0149	0.026	pCi/g						
Thallium–208		0.156	+/–0.0324	0.0115	+/–0.0324	0.023	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.00753	+/–0.0192	0.0151	+/–0.0192	0.0349	pCi/g		NXL3	04/02/07	1906	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1120	621099

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

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Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312–0010–119B
Sample ID: 183243020
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	68	(25%–125%)

Notes:

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N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
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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: April 5, 2007

Client Sample ID:	9312-0010-120B	Project:	YANK01204
Sample ID:	183243021	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	14.8%		

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		1.39	+/-0.246	0.0674	+/-0.246	0.135	pCi/g		MJH1	04/03/07	0945	621149
Americium-241	U	0.0979	+/-0.115	0.0889	+/-0.115	0.178	pCi/g					
Bismuth-212		1.12	+/-0.377	0.146	+/-0.377	0.292	pCi/g					
Bismuth-214		1.59	+/-0.174	0.0361	+/-0.174	0.0721	pCi/g					
Cesium-134	UI	0.00	+/-0.032	0.0253	+/-0.032	0.0505	pCi/g					
Cesium-137		0.371	+/-0.053	0.0204	+/-0.053	0.0408	pCi/g					
Cobalt-60	U	0.015	+/-0.0272	0.0227	+/-0.0272	0.0454	pCi/g					
Europium-152	U	-0.056	+/-0.0832	0.0513	+/-0.0832	0.102	pCi/g					
Europium-154	U	-0.0347	+/-0.0774	0.0587	+/-0.0774	0.117	pCi/g					
Europium-155	U	0.0665	+/-0.0746	0.0563	+/-0.0746	0.113	pCi/g					
Lead-212		1.45	+/-0.139	0.0312	+/-0.139	0.0623	pCi/g					
Lead-214		1.76	+/-0.188	0.0362	+/-0.188	0.0723	pCi/g					
Manganese-54	U	0.00759	+/-0.0267	0.0199	+/-0.0267	0.0397	pCi/g					
Niobium-94	U	0.00613	+/-0.0219	0.019	+/-0.0219	0.038	pCi/g					
Potassium-40		22.5	+/-1.65	0.146	+/-1.65	0.291	pCi/g					
Radium-226		1.59	+/-0.174	0.0361	+/-0.174	0.0721	pCi/g					
Silver-108m	U	-0.0115	+/-0.0212	0.0175	+/-0.0212	0.0349	pCi/g					
Thallium-208		0.471	+/-0.0633	0.0188	+/-0.0633	0.0376	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid-ALL FSS												
Strontium-90	U	0.000128	+/-0.0193	0.0162	+/-0.0193	0.0371	pCi/g		NXL3	04/02/07	1906	621126

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

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Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID: 9312–0010–120B
Sample ID: 183243021

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	74	(25%–125%)

Notes:

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C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-121B	Project:	YANK01204
Sample ID:	183243022	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	8.55%		

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		0.470	+/-0.163	0.0659	+/-0.163	0.132	pCi/g		MJH1	04/03/07	0946	621149	
Americium-241	U	-0.0359	+/-0.0852	0.0715	+/-0.0852	0.143	pCi/g						
Bismuth-212		0.432	+/-0.272	0.134	+/-0.272	0.267	pCi/g						
Bismuth-214	UI	0.00	+/-0.102	0.070	+/-0.102	0.140	pCi/g						
Cesium-134	U	0.0183	+/-0.0287	0.0228	+/-0.0287	0.0455	pCi/g						
Cesium-137		0.234	+/-0.0446	0.0183	+/-0.0446	0.0367	pCi/g						
Cobalt-60	U	0.0135	+/-0.0189	0.0178	+/-0.0189	0.0356	pCi/g						
Europium-152	U	0.0184	+/-0.0759	0.0466	+/-0.0759	0.093	pCi/g						
Europium-154	U	0.0854	+/-0.0666	0.0631	+/-0.0666	0.126	pCi/g						
Europium-155	U	0.0542	+/-0.0658	0.0514	+/-0.0658	0.103	pCi/g						
Lead-212		0.508	+/-0.0751	0.0287	+/-0.0751	0.0573	pCi/g						
Lead-214		0.555	+/-0.101	0.0319	+/-0.101	0.0638	pCi/g						
Manganese-54	U	-0.0232	+/-0.0209	0.0166	+/-0.0209	0.0331	pCi/g						
Niobium-94	U	0.00826	+/-0.0182	0.0167	+/-0.0182	0.0333	pCi/g						
Potassium-40		11.1	+/-1.05	0.110	+/-1.05	0.220	pCi/g						
Radium-226		0.520	+/-0.102	0.0308	+/-0.102	0.0615	pCi/g						
Silver-108m	U	-0.0101	+/-0.0188	0.0164	+/-0.0188	0.0328	pCi/g						
Thallium-208		0.186	+/-0.0468	0.0163	+/-0.0468	0.0326	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0158	+/-0.021	0.0157	+/-0.021	0.0359	pCi/g		NXL3	04/02/07	1906	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
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East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-121B
Sample ID: 183243022

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	72	(25%-125%)

Notes:

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D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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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Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Report Date: April 5, 2007

Client Sample ID:	9312-0010-122B	Project:	YANK01204
Sample ID:	183243023	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	6.73%		

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		0.684	+/-0.224	0.0792	+/-0.224	0.158	pCi/g		MJH1	04/03/07	0947	621149	
Americium-241	U	0.0194	+/-0.0414	0.0353	+/-0.0414	0.0705	pCi/g						
Bismuth-212		0.447	+/-0.296	0.175	+/-0.296	0.349	pCi/g						
Bismuth-214		0.557	+/-0.125	0.0461	+/-0.125	0.0921	pCi/g						
Cesium-134	U	0.048	+/-0.0373	0.0301	+/-0.0373	0.0602	pCi/g						
Cesium-137	U	0.0335	+/-0.0533	0.0257	+/-0.0533	0.0515	pCi/g						
Cobalt-60	U	0.0102	+/-0.0374	0.0271	+/-0.0374	0.0542	pCi/g						
Europium-152	U	-0.0157	+/-0.0751	0.0575	+/-0.0751	0.115	pCi/g						
Europium-154	U	0.0132	+/-0.0845	0.0728	+/-0.0845	0.145	pCi/g						
Europium-155	U	0.0541	+/-0.0629	0.0596	+/-0.0629	0.119	pCi/g						
Lead-212		0.457	+/-0.0783	0.0337	+/-0.0783	0.0673	pCi/g						
Lead-214		0.522	+/-0.0983	0.0433	+/-0.0983	0.0865	pCi/g						
Manganese-54	U	1.900E-05	+/-0.0249	0.0218	+/-0.0249	0.0436	pCi/g						
Niobium-94	U	-0.00193	+/-0.0258	0.0217	+/-0.0258	0.0435	pCi/g						
Potassium-40		9.91	+/-1.13	0.194	+/-1.13	0.387	pCi/g						
Radium-226		0.557	+/-0.125	0.0461	+/-0.125	0.0921	pCi/g						
Silver-108m	U	-0.000262	+/-0.0225	0.0198	+/-0.0225	0.0397	pCi/g						
Thallium-208		0.189	+/-0.0633	0.0211	+/-0.0633	0.0421	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00906	+/-0.0223	0.0176	+/-0.0223	0.0403	pCi/g		NXL3	04/02/07	1906	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID: 9312–0010–122B
Sample ID: 183243023

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	59	(25%–125%)

Notes:

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

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Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID:	9312–0010–123B	Project:	YANK01204
Sample ID:	183243024	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	26–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	.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		0.593	+/–0.163	0.0561	+/–0.163	0.112	pCi/g		MJH1	04/03/07	0948	621149	
Americium–241	U	–0.00132	+/–0.0951	0.0808	+/–0.0951	0.162	pCi/g						
Bismuth–212	U	0.273	+/–0.169	0.164	+/–0.169	0.327	pCi/g						
Bismuth–214		0.400	+/–0.101	0.0326	+/–0.101	0.0653	pCi/g						
Cesium–134	U	0.015	+/–0.0236	0.0207	+/–0.0236	0.0414	pCi/g						
Cesium–137		0.340	+/–0.0526	0.0184	+/–0.0526	0.0368	pCi/g						
Cobalt–60	U	0.00895	+/–0.0243	0.0216	+/–0.0243	0.0431	pCi/g						
Europium–152	U	0.00468	+/–0.0598	0.0494	+/–0.0598	0.0987	pCi/g						
Europium–154	U	0.00596	+/–0.0743	0.0576	+/–0.0743	0.115	pCi/g						
Europium–155	U	–0.00709	+/–0.0654	0.0515	+/–0.0654	0.103	pCi/g						
Lead–212		0.616	+/–0.0732	0.0286	+/–0.0732	0.0572	pCi/g						
Lead–214		0.560	+/–0.095	0.0348	+/–0.095	0.0695	pCi/g						
Manganese–54	U	0.027	+/–0.0219	0.0206	+/–0.0219	0.0412	pCi/g						
Niobium–94	U	–0.000645	+/–0.0182	0.0158	+/–0.0182	0.0316	pCi/g						
Potassium–40		10.4	+/–1.11	0.202	+/–1.11	0.404	pCi/g						
Radium–226		0.400	+/–0.101	0.0326	+/–0.101	0.0653	pCi/g						
Silver–108m	U	–0.00929	+/–0.0199	0.0167	+/–0.0199	0.0333	pCi/g						
Thallium–208		0.215	+/–0.0421	0.0183	+/–0.0421	0.0366	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.0229	+/–0.0235	0.0171	+/–0.0235	0.0389	pCi/g		NXL3	04/02/07	1906	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

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Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-123B
Sample ID: 183243024
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**						
Strontium Carrier	GFPC, Sr90, solid-ALL FSS				75		(25%-125%)						

Notes:

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

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Certificate of Analysis

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Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-I-017-B	Project:	YANK01204
Sample ID:	183243025	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	22-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	6.86%		

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		1.01	+/-0.185	0.0499	+/-0.185	0.0998	pCi/g		MJH1	04/03/07	0949	621149	
Americium-241	U	0.0389	+/-0.0942	0.0798	+/-0.0942	0.159	pCi/g						
Bismuth-212		0.383	+/-0.256	0.124	+/-0.256	0.247	pCi/g						
Bismuth-214		0.516	+/-0.0843	0.0292	+/-0.0843	0.0584	pCi/g						
Cesium-134	U	0.0295	+/-0.0254	0.0202	+/-0.0254	0.0403	pCi/g						
Cesium-137		0.354	+/-0.0522	0.017	+/-0.0522	0.0339	pCi/g						
Cobalt-60	U	0.00544	+/-0.021	0.0181	+/-0.021	0.0362	pCi/g						
Europium-152	U	-0.0111	+/-0.0532	0.0411	+/-0.0532	0.0821	pCi/g						
Europium-154	U	-0.0381	+/-0.0639	0.0511	+/-0.0639	0.102	pCi/g						
Europium-155	U	0.0132	+/-0.0624	0.0508	+/-0.0624	0.102	pCi/g						
Lead-212		0.700	+/-0.0737	0.0266	+/-0.0737	0.0531	pCi/g						
Lead-214		0.599	+/-0.0875	0.0309	+/-0.0875	0.0618	pCi/g						
Manganese-54	U	-0.00129	+/-0.0194	0.0169	+/-0.0194	0.0338	pCi/g						
Niobium-94	U	0.000743	+/-0.0169	0.0145	+/-0.0169	0.0289	pCi/g						
Potassium-40		12.5	+/-1.12	0.149	+/-1.12	0.299	pCi/g						
Radium-226		0.516	+/-0.0843	0.0292	+/-0.0843	0.0584	pCi/g						
Silver-108m	U	-0.000208	+/-0.017	0.015	+/-0.017	0.030	pCi/g						
Thallium-208		0.196	+/-0.0415	0.0158	+/-0.0415	0.0316	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0151	+/-0.0227	0.0168	+/-0.0227	0.0397	pCi/g		NXL3	04/03/07	1421	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

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Certificate of Analysis

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Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-I-017-B
Sample ID: 183243025
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	70	(25%-125%)

Notes:

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D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy--Uncertain identification
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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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-I-018-B	Project:	YANK01204
Sample ID:	183243026	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	22-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	3.63%		

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		0.928	+/-0.203	0.0687	+/-0.203	0.137	pCi/g		MJH1	04/03/07	0950	621149	
Americium-241	U	0.0652	+/-0.0622	0.0986	+/-0.0622	0.197	pCi/g						
Bismuth-212		0.683	+/-0.260	0.161	+/-0.260	0.321	pCi/g						
Bismuth-214		0.760	+/-0.134	0.0426	+/-0.134	0.0852	pCi/g						
Cesium-134	UI	0.00	+/-0.0445	0.0266	+/-0.0445	0.0531	pCi/g						
Cesium-137		2.45	+/-0.206	0.0209	+/-0.206	0.0417	pCi/g						
Cobalt-60		0.109	+/-0.0424	0.0192	+/-0.0424	0.0383	pCi/g						
Europium-152	U	0.0857	+/-0.0846	0.0657	+/-0.0846	0.131	pCi/g						
Europium-154	U	-0.00911	+/-0.0731	0.0606	+/-0.0731	0.121	pCi/g						
Europium-155	U	-0.0132	+/-0.077	0.0691	+/-0.077	0.138	pCi/g						
Lead-212		0.957	+/-0.101	0.0366	+/-0.101	0.0732	pCi/g						
Lead-214		0.937	+/-0.133	0.0446	+/-0.133	0.0892	pCi/g						
Manganese-54	U	0.0105	+/-0.0274	0.0213	+/-0.0274	0.0427	pCi/g						
Niobium-94	U	0.032	+/-0.0263	0.0189	+/-0.0263	0.0378	pCi/g						
Potassium-40		16.0	+/-1.47	0.165	+/-1.47	0.330	pCi/g						
Radium-226		0.760	+/-0.134	0.0426	+/-0.134	0.0852	pCi/g						
Silver-108m	U	0.0105	+/-0.0269	0.0239	+/-0.0269	0.0477	pCi/g						
Thallium-208		0.281	+/-0.062	0.021	+/-0.062	0.042	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0237	+/-0.0208	0.0145	+/-0.0208	0.0334	pCi/g		NXL3	04/02/07	1907	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-I-018-B
Sample ID: 183243026
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	77	(25%-125%)

Notes:

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BD Results are either below the MDC or tracer recovery is low
C Analyte has been confirmed by GC/MS analysis
D Results are reported from a diluted aliquot of the sample
H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007

Client Sample ID:	9312–0010–I–019–B	Project:	YANK01204
Sample ID:	183243027	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	22–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	8.88%		

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		0.821	+/–0.169	0.0637	+/–0.169	0.127	pCi/g		MJH1	04/03/07	0951	621149	
Americium–241	U	0.0306	+/–0.0781	0.065	+/–0.0781	0.130	pCi/g						
Bismuth–212		0.437	+/–0.265	0.122	+/–0.265	0.243	pCi/g						
Bismuth–214		0.582	+/–0.100	0.0377	+/–0.100	0.0753	pCi/g						
Cesium–134	U	0.0427	+/–0.0276	0.0226	+/–0.0276	0.0452	pCi/g						
Cesium–137		3.84	+/–0.340	0.0189	+/–0.340	0.0378	pCi/g						
Cobalt–60		0.158	+/–0.0381	0.0169	+/–0.0381	0.0337	pCi/g						
Europium–152	U	–0.0449	+/–0.0766	0.0613	+/–0.0766	0.122	pCi/g						
Europium–154	U	0.0341	+/–0.0746	0.0579	+/–0.0746	0.116	pCi/g						
Europium–155	U	0.0192	+/–0.0611	0.0569	+/–0.0611	0.114	pCi/g						
Lead–212		0.634	+/–0.0754	0.0316	+/–0.0754	0.0631	pCi/g						
Lead–214		0.688	+/–0.103	0.0466	+/–0.103	0.0932	pCi/g						
Manganese–54	U	0.0331	+/–0.0264	0.0167	+/–0.0264	0.0335	pCi/g						
Niobium–94	U	0.016	+/–0.018	0.0163	+/–0.018	0.0326	pCi/g						
Potassium–40		13.0	+/–1.10	0.138	+/–1.10	0.275	pCi/g						
Radium–226		0.582	+/–0.100	0.0377	+/–0.100	0.0753	pCi/g						
Silver–108m	U	0.0282	+/–0.026	0.0239	+/–0.026	0.0478	pCi/g						
Thallium–208		0.196	+/–0.0521	0.0193	+/–0.0521	0.0386	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.00514	+/–0.0203	0.0164	+/–0.0203	0.0374	pCi/g		NXL3	04/02/07	1907	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

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Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-I-019-B
Sample ID: 183243027
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**						
Strontium Carrier	GFPC, Sr90, solid-ALL FSS				72		(25%-125%)						

Notes:

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C Analyte has been confirmed by GC/MS analysis
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H Analytical holding time was exceeded
J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
R Sample results are rejected
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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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Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312–0010–I–020–B	Project:	YANK01204
Sample ID:	183243028	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	22–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	6.34%		

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		0.828	+/–0.216	0.079	+/–0.216	0.158	pCi/g		MJH1	04/03/07	0952	621149	
Americium–241	U	0.0314	+/–0.119	0.0935	+/–0.119	0.187	pCi/g						
Bismuth–212		0.560	+/–0.313	0.150	+/–0.313	0.299	pCi/g						
Bismuth–214		0.609	+/–0.121	0.0421	+/–0.121	0.0842	pCi/g						
Cesium–134	U	0.0342	+/–0.0453	0.0257	+/–0.0453	0.0513	pCi/g						
Cesium–137		3.02	+/–0.288	0.0216	+/–0.288	0.0431	pCi/g						
Cobalt–60		0.136	+/–0.0524	0.0213	+/–0.0524	0.0425	pCi/g						
Europium–152	U	–0.000804	+/–0.0884	0.0613	+/–0.0884	0.123	pCi/g						
Europium–154	U	–0.000203	+/–0.083	0.0634	+/–0.083	0.127	pCi/g						
Europium–155	U	0.0529	+/–0.0743	0.0693	+/–0.0743	0.139	pCi/g						
Lead–212		0.809	+/–0.0942	0.0353	+/–0.0942	0.0706	pCi/g						
Lead–214		0.674	+/–0.122	0.0449	+/–0.122	0.0898	pCi/g						
Manganese–54	U	–0.00454	+/–0.0256	0.0182	+/–0.0256	0.0364	pCi/g						
Niobium–94	U	–0.00751	+/–0.0263	0.019	+/–0.0263	0.0379	pCi/g						
Potassium–40		14.0	+/–1.30	0.172	+/–1.30	0.343	pCi/g						
Radium–226		0.609	+/–0.121	0.0421	+/–0.121	0.0842	pCi/g						
Silver–108m	U	–0.00137	+/–0.0272	0.0227	+/–0.0272	0.0455	pCi/g						
Thallium–208		0.198	+/–0.0529	0.0214	+/–0.0529	0.0428	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.0182	+/–0.0226	0.0168	+/–0.0226	0.0383	pCi/g		NXL3	04/02/07	1907	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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

Report Date: April 5, 2007

Client Sample ID: 9312-0010-I-020-B
Sample ID: 183243028

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	75	(25%-125%)

Notes:

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

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Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID:	9312–0010–I–021–B	Project:	YANK01204
Sample ID:	183243029	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	22–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	5.65%		

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		0.853	+/–0.275	0.127	+/–0.275	0.254	pCi/g		MJH1	04/03/07	0953	621149	
Americium–241	U	0.0717	+/–0.0856	0.0535	+/–0.0856	0.107	pCi/g						
Bismuth–212		0.537	+/–0.506	0.260	+/–0.506	0.519	pCi/g						
Bismuth–214		0.755	+/–0.178	0.0694	+/–0.178	0.139	pCi/g						
Cesium–134	UI	0.00	+/–0.0701	0.0458	+/–0.0701	0.0915	pCi/g						
Cesium–137		1.46	+/–0.173	0.0346	+/–0.173	0.0692	pCi/g						
Cobalt–60		0.134	+/–0.0723	0.040	+/–0.0723	0.0799	pCi/g						
Europium–152	U	0.0181	+/–0.153	0.0936	+/–0.153	0.187	pCi/g						
Europium–154	U	0.00983	+/–0.116	0.0979	+/–0.116	0.196	pCi/g						
Europium–155	U	0.053	+/–0.102	0.088	+/–0.102	0.176	pCi/g						
Lead–212		0.877	+/–0.121	0.0487	+/–0.121	0.0974	pCi/g						
Lead–214		0.825	+/–0.161	0.0664	+/–0.161	0.133	pCi/g						
Manganese–54	U	0.0234	+/–0.0491	0.0328	+/–0.0491	0.0656	pCi/g						
Niobium–94	U	–0.0147	+/–0.0404	0.033	+/–0.0404	0.0659	pCi/g						
Potassium–40		15.0	+/–1.57	0.274	+/–1.57	0.548	pCi/g						
Radium–226		0.755	+/–0.178	0.0694	+/–0.178	0.139	pCi/g						
Silver–108m	U	0.000363	+/–0.0373	0.0325	+/–0.0373	0.0649	pCi/g						
Thallium–208		0.214	+/–0.0878	0.0348	+/–0.0878	0.0696	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid–ALL FSS													
Strontium–90	U	0.00118	+/–0.023	0.0191	+/–0.023	0.0442	pCi/g		NXL3	04/03/07	1421	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

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Certificate of Analysis

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East Hampton, Connecticut 06424 Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-I-021-B Project: YANK01204
Sample ID: 183243029 Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	72	(25%-125%)

Notes:

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

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Certificate of Analysis

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Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-I-022-B	Project:	YANK01204
Sample ID:	183243030	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	22-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	8.81%		

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		0.532	+/-0.133	0.0518	+/-0.133	0.104	pCi/g		MJH1	04/03/07	0954	621149	
Americium-241	U	0.0558	+/-0.0699	0.0584	+/-0.0699	0.117	pCi/g						
Bismuth-212		0.387	+/-0.209	0.105	+/-0.209	0.210	pCi/g						
Bismuth-214		0.423	+/-0.0796	0.0284	+/-0.0796	0.0568	pCi/g						
Cesium-134	U	0.0206	+/-0.0189	0.018	+/-0.0189	0.036	pCi/g						
Cesium-137		1.78	+/-0.156	0.0155	+/-0.156	0.031	pCi/g						
Cobalt-60		0.0753	+/-0.0397	0.015	+/-0.0397	0.030	pCi/g						
Europium-152	U	-0.00864	+/-0.0644	0.0495	+/-0.0644	0.099	pCi/g						
Europium-154	U	0.00388	+/-0.0554	0.0474	+/-0.0554	0.0948	pCi/g						
Europium-155	U	0.00277	+/-0.054	0.0489	+/-0.054	0.0977	pCi/g						
Lead-212		0.371	+/-0.0671	0.0295	+/-0.0671	0.059	pCi/g						
Lead-214		0.551	+/-0.0865	0.0348	+/-0.0865	0.0695	pCi/g						
Manganese-54	U	-0.0102	+/-0.0177	0.0148	+/-0.0177	0.0297	pCi/g						
Niobium-94	U	-0.000419	+/-0.0173	0.0127	+/-0.0173	0.0253	pCi/g						
Potassium-40		9.68	+/-0.914	0.145	+/-0.914	0.290	pCi/g						
Radium-226		0.423	+/-0.0796	0.0284	+/-0.0796	0.0568	pCi/g						
Silver-108m	U	-0.00973	+/-0.0195	0.0167	+/-0.0195	0.0335	pCi/g						
Thallium-208		0.124	+/-0.0397	0.0163	+/-0.0397	0.0325	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90		0.0319	+/-0.0202	0.0128	+/-0.0203	0.0299	pCi/g		NXL3	04/02/07	1907	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

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Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312–0010–I–022–B
Sample ID: 183243030
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**						
Strontium Carrier	GFPC, Sr90, solid–ALL FSS				78		(25%–125%)						

Notes:

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N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
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UI Gamma Spectroscopy––Uncertain identification
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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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East Hampton, Connecticut 06424 Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312–0010–I–023–B	Project:	YANK01204
Sample ID:	183243031	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	22–MAR–07		
Receive Date:	29–MAR–07		
Collector:	Client		
Moisture:	2.28%		

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		0.836	+/–0.231	0.0702	+/–0.231	0.140	pCi/g		MJH1	04/03/07 0955	621149	
Americium–241	U	–0.0172	+/–0.040	0.0319	+/–0.040	0.0638	pCi/g					
Bismuth–212	U	0.228	+/–0.336	0.176	+/–0.336	0.352	pCi/g					
Bismuth–214		0.473	+/–0.101	0.042	+/–0.101	0.0839	pCi/g					
Cesium–134	U	0.0536	+/–0.037	0.0269	+/–0.037	0.0537	pCi/g					
Cesium–137		0.397	+/–0.0664	0.024	+/–0.0664	0.048	pCi/g					
Cobalt–60	U	0.0132	+/–0.0303	0.0268	+/–0.0303	0.0536	pCi/g					
Europium–152	U	–0.0329	+/–0.0668	0.054	+/–0.0668	0.108	pCi/g					
Europium–154	U	0.0192	+/–0.0852	0.0736	+/–0.0852	0.147	pCi/g					
Europium–155	U	0.0558	+/–0.0592	0.0554	+/–0.0592	0.111	pCi/g					
Lead–212		0.640	+/–0.0907	0.0322	+/–0.0907	0.0643	pCi/g					
Lead–214		0.596	+/–0.116	0.0395	+/–0.116	0.079	pCi/g					
Manganese–54	U	0.0225	+/–0.0268	0.025	+/–0.0268	0.0501	pCi/g					
Niobium–94	U	0.000493	+/–0.0273	0.0231	+/–0.0273	0.0461	pCi/g					
Potassium–40		11.3	+/–1.35	0.221	+/–1.35	0.441	pCi/g					
Radium–226		0.473	+/–0.101	0.042	+/–0.101	0.0839	pCi/g					
Silver–108m	U	–0.0128	+/–0.0236	0.0199	+/–0.0236	0.0397	pCi/g					
Thallium–208		0.173	+/–0.0613	0.0214	+/–0.0613	0.0428	pCi/g					
Rad Gas Flow Proportional Counting												
GFPC, Sr90, solid–ALL FSS												
Strontium–90	U	0.010	+/–0.0181	0.0138	+/–0.0181	0.0321	pCi/g		NXL3	04/02/07 1907	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

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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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312-0010-I-023-B Project: YANK01204
Sample ID: 183243031 Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	75	(25%-125%)

Notes:

The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the 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
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007

Client Sample ID:	9312-0010-I-024-B	Project:	YANK01204
Sample ID:	183243032	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	22-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	8.07%		

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	+/-0.157	0.0576	+/-0.157	0.115	pCi/g		MJH1	04/03/07	0956	621149	
Americium-241	U	0.0409	+/-0.0693	0.0579	+/-0.0693	0.116	pCi/g						
Bismuth-212		0.393	+/-0.231	0.130	+/-0.231	0.260	pCi/g						
Bismuth-214		0.473	+/-0.0906	0.030	+/-0.0906	0.0599	pCi/g						
Cesium-134	U	0.0232	+/-0.0214	0.0201	+/-0.0214	0.0402	pCi/g						
Cesium-137		0.0567	+/-0.0306	0.0169	+/-0.0306	0.0337	pCi/g						
Cobalt-60	U	0.00249	+/-0.0198	0.0168	+/-0.0198	0.0336	pCi/g						
Europium-152	U	-0.0972	+/-0.0599	0.0399	+/-0.0599	0.0797	pCi/g						
Europium-154	U	-0.0145	+/-0.0721	0.0593	+/-0.0721	0.119	pCi/g						
Europium-155	U	0.0481	+/-0.0539	0.050	+/-0.0539	0.0999	pCi/g						
Lead-212		0.592	+/-0.0673	0.0257	+/-0.0673	0.0513	pCi/g						
Lead-214		0.528	+/-0.0887	0.0318	+/-0.0887	0.0635	pCi/g						
Manganese-54	U	-0.00393	+/-0.0198	0.0169	+/-0.0198	0.0339	pCi/g						
Niobium-94	U	0.00555	+/-0.0184	0.0159	+/-0.0184	0.0318	pCi/g						
Potassium-40		10.8	+/-1.03	0.126	+/-1.03	0.253	pCi/g						
Radium-226		0.473	+/-0.0906	0.030	+/-0.0906	0.0599	pCi/g						
Silver-108m	U	0.00365	+/-0.0184	0.0142	+/-0.0184	0.0284	pCi/g						
Thallium-208		0.221	+/-0.0445	0.017	+/-0.0445	0.034	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.00338	+/-0.0198	0.0161	+/-0.0198	0.0372	pCi/g		NXL3	04/02/07	1907	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312–0010–I–024–B
Sample ID: 183243032
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	64	(25%–125%)

Notes:

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J Value is estimated
N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
ND Analyte concentration is not detected above the detection limit
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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-I-025-B	Project:	YANK01204
Sample ID:	183243033	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	22-MAR-07		
Receive Date:	29-MAR-07		
Collector:	Client		
Moisture:	.528%		

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		0.746	+/-0.183	0.0879	+/-0.183	0.176	pCi/g		MJH1	04/03/07	0957	621149	
Americium-241	U	0.00275	+/-0.0438	0.0369	+/-0.0438	0.0738	pCi/g						
Bismuth-212		0.477	+/-0.331	0.201	+/-0.331	0.402	pCi/g						
Bismuth-214		0.486	+/-0.123	0.0435	+/-0.123	0.087	pCi/g						
Cesium-134	UI	0.00	+/-0.0638	0.0241	+/-0.0638	0.0481	pCi/g						
Cesium-137	U	0.041	+/-0.0463	0.0273	+/-0.0463	0.0546	pCi/g						
Cobalt-60	U	0.0225	+/-0.0349	0.0317	+/-0.0349	0.0633	pCi/g						
Europium-152	U	0.00721	+/-0.0773	0.0646	+/-0.0773	0.129	pCi/g						
Europium-154	U	0.035	+/-0.102	0.0884	+/-0.102	0.177	pCi/g						
Europium-155	U	-0.00105	+/-0.0611	0.0557	+/-0.0611	0.111	pCi/g						
Lead-212		0.525	+/-0.0815	0.0337	+/-0.0815	0.0674	pCi/g						
Lead-214		0.499	+/-0.101	0.041	+/-0.101	0.0819	pCi/g						
Manganese-54	U	-0.0133	+/-0.0314	0.0254	+/-0.0314	0.0507	pCi/g						
Niobium-94	U	0.0234	+/-0.0272	0.0256	+/-0.0272	0.0511	pCi/g						
Potassium-40		10.2	+/-1.25	0.264	+/-1.25	0.527	pCi/g						
Radium-226		0.486	+/-0.123	0.0435	+/-0.123	0.087	pCi/g						
Silver-108m	U	0.00475	+/-0.023	0.0205	+/-0.023	0.0409	pCi/g						
Thallium-208		0.182	+/-0.0617	0.0223	+/-0.0617	0.0446	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0183	+/-0.0181	0.0128	+/-0.0181	0.0296	pCi/g		NXL3	04/02/07	2051	621126	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/29/07	1125	621101

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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Certificate of Analysis

Company : Connecticut Yankee Atomic Power
Address : 362 Injun Hollow Rd
East Hampton, Connecticut 06424
Report Date: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312–0010–I–025–B
Sample ID: 183243033
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time	Batch	N
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**					
Strontium Carrier	GFPC, Sr90, solid–ALL FSS				75		(25%–125%)					

Notes:

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

QUALITY CONTROL DATA

QC Summary

Report Date: April 5, 2007
Page 1 of 13

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

East Hampton, Connecticut
Contact: Mr. Jack McCarthy

Workorder: 183243

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Alpha Spec										
Batch 621107										
QC1201305241 183245006 DUP										
Americium-241	U	-0.0394	U	-0.0452	pCi/g	14		(0% - 100%)	GXR1	04/03/07 09:33
	Uncert:	+/-0.0816		+/-0.0683						
	TPU:	+/-0.0818		+/-0.0684						
Curium-242	U	0.00	U	0.00	pCi/g	0		(0% - 100%)		
	Uncert:	+/-0.083		+/-0.0676						
	TPU:	+/-0.083		+/-0.0676						
Curium-243/244	U	0.00	U	-0.0555	pCi/g	200		(0% - 100%)		
	Uncert:	+/-0.0794		+/-0.0411						
	TPU:	+/-0.0794		+/-0.0418						
QC1201305243 LCS										
Americium-241	12.4			11.2	pCi/g		90	(75%-125%)		
	Uncert:			+/-1.06						
	TPU:			+/-1.79						
Curium-242			U	0.00	pCi/g					
	Uncert:			+/-0.0518						
	TPU:			+/-0.0518						
Curium-243/244	14.8			14.2	pCi/g		96	(75%-125%)		
	Uncert:			+/-1.19						
	TPU:			+/-2.18						
QC1201305240 MB										
Americium-241			U	-0.0487	pCi/g					
	Uncert:			+/-0.0641						
	TPU:			+/-0.0641						
Curium-242			U	0.00	pCi/g					
	Uncert:			+/-0.0603						
	TPU:			+/-0.0603						
Curium-243/244			U	0.0459	pCi/g					
	Uncert:			+/-0.0861						
	TPU:			+/-0.0863						
QC1201305242 183245006 MS										
Americium-241	13.5 U	-0.0394		12.0	pCi/g		89	(75%-125%)		
	Uncert:	+/-0.0816		+/-1.16						
	TPU:	+/-0.0818		+/-1.94						
Curium-242	U	0.00	U	0.0303	pCi/g					
	Uncert:	+/-0.083		+/-0.0594						
	TPU:	+/-0.083		+/-0.0595						
Curium-243/244	16.1 U	0.00		14.9	pCi/g		93	(75%-125%)		
	Uncert:	+/-0.0794		+/-1.29						
	TPU:	+/-0.0794		+/-2.33						
Batch 622105										
QC1201307489 183245006 DUP										
Plutonium-241	U	-3.12	U	-8.22	pCi/g	0		(0% - 100%)	BXL1	04/05/07 15:31

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
ad Alpha Spec										
atch 622105										
	Uncert:	+/-10.1		+/-9.75						
	TPU:	+/-10.1		+/-9.75						
QC1201307491 LCS										
lutonium-241	138			113	pCi/g		82	(75%-125%)		04/05/07 16:04
	Uncert:			+/-14.9						
	TPU:			+/-19.1						
QC1201307488 MB										
lutonium-241			U	-1.9	pCi/g					04/05/07 15:15
	Uncert:			+/-11.3						
	TPU:			+/-11.3						
QC1201307490 183245006 MS										
lutonium-241	140 U	-3.12		120	pCi/g		86	(75%-125%)		04/05/07 15:48
	Uncert:	+/-10.1		+/-13.1						
	TPU:	+/-10.1		+/-17.4						
atch 622351										
QC1201308035 183245006 DUP										
lutonium-238	U	0.0429	U	-0.0147	pCi/g	409		(0% - 100%)	GXR1	04/04/07 22:58
	Uncert:	+/-0.0969		+/-0.0204						
	TPU:	+/-0.0971		+/-0.0204						
lutonium-239/240	U	0.059	U	0.0306	pCi/g	63		(0% - 100%)		
	Uncert:	+/-0.0943		+/-0.060						
	TPU:	+/-0.0946		+/-0.0601						
QC1201308037 LCS										
lutonium-238			U	0.0151	pCi/g			(75%-125%)		
	Uncert:			+/-0.0602						
	TPU:			+/-0.0603						
lutonium-239/240	12.7			12.9	pCi/g		102	(75%-125%)		
	Uncert:			+/-1.20						
	TPU:			+/-1.91						
QC1201308034 MB										
lutonium-238			U	-0.00689	pCi/g					
	Uncert:			+/-0.0135						
	TPU:			+/-0.0135						
lutonium-239/240			U	-0.0138	pCi/g					
	Uncert:			+/-0.0191						
	TPU:			+/-0.0192						
QC1201308036 183245006 MS										
lutonium-238	U	0.0429	U	0.0767	pCi/g			(75%-125%)		
	Uncert:	+/-0.0969		+/-0.105						
	TPU:	+/-0.0971		+/-0.106						
lutonium-239/240	13.7 U	0.059		14.9	pCi/g		109	(75%-125%)		
	Uncert:	+/-0.0943		+/-1.32						
	TPU:	+/-0.0946		+/-2.15						
ad Gamma Spec										
atch 621149										
QC1201305348 183245021 DUP										
ctinium-228		1.53		1.59	pCi/g	4		(0% - 100%)	MJH1	04/03/07 12:58
	Uncert:	+/-0.273		+/-0.286						
				+/-0.286						

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
ad Gamma Spec											
atch 621149											
	TPU:	+/-0.273									
mericium-241	U	-0.0412	U	0.0296	pCi/g	1220		(0% - 100%)			
	Uncert:	+/-0.127		+/-0.0983							
	TPU:	+/-0.127		+/-0.0983							
ismuth-212		1.24		1.09	pCi/g	13		(0% - 100%)			
	Uncert:	+/-0.343		+/-0.394							
	TPU:	+/-0.343		+/-0.394							
ismuth-214		1.72		1.65	pCi/g	4		(0% - 20%)			
	Uncert:	+/-0.201		+/-0.195							
	TPU:	+/-0.201		+/-0.195							
esium-134	UI	0.00	UI	0.00	pCi/g	9		(0% - 100%)			
	Uncert:	+/-0.0391		+/-0.0442							
	TPU:	+/-0.0391		+/-0.0442							
esium-137	U	0.00215	U	-0.00812	pCi/g	344		(0% - 100%)			
	Uncert:	+/-0.0314		+/-0.0328							
	TPU:	+/-0.0314		+/-0.0328							
obalt-60	U	0.0276	U	0.00443	pCi/g	145		(0% - 100%)			
	Uncert:	+/-0.0282		+/-0.0349							
	TPU:	+/-0.0282		+/-0.0349							
uropium-152	U	-0.0264	U	0.0111	pCi/g	492		(0% - 100%)			
	Uncert:	+/-0.094		+/-0.0925							
	TPU:	+/-0.094		+/-0.0925							
uropium-154	U	0.0221	U	-0.0225	pCi/g	22900		(0% - 100%)			
	Uncert:	+/-0.100		+/-0.0951							
	TPU:	+/-0.100		+/-0.0951							
uropium-155	U	0.119	U	0.123	pCi/g	31		(0% - 100%)			
	Uncert:	+/-0.114		+/-0.120							
	TPU:	+/-0.114		+/-0.120							
ead-212		1.71		1.72	pCi/g	1		(0% - 20%)			
	Uncert:	+/-0.159		+/-0.155							
	TPU:	+/-0.159		+/-0.155							
ead-214		1.68		1.94	pCi/g	15		(0% - 20%)			
	Uncert:	+/-0.189		+/-0.205							
	TPU:	+/-0.189		+/-0.205							
anganese-54	U	0.0119	U	-0.00151	pCi/g	258		(0% - 100%)			
	Uncert:	+/-0.0307		+/-0.0268							
	TPU:	+/-0.0307		+/-0.0268							
iobium-94	U	0.0126	U	0.0123	pCi/g	3		(0% - 100%)			
	Uncert:	+/-0.026		+/-0.0256							
	TPU:	+/-0.026		+/-0.0256							
otassium-40		25.6		24.1	pCi/g	6		(0% - 20%)			
	Uncert:	+/-2.07		+/-1.82							
	TPU:	+/-2.07		+/-1.82							
adium-226		1.72		1.65	pCi/g	4		(0% - 100%)			
	Uncert:	+/-0.201		+/-0.195							
	TPU:	+/-0.201		+/-0.195							
ilver-108m	U	-0.00652	U	-0.0062	pCi/g	5		(0% - 100%)			
	Uncert:	+/-0.0249		+/-0.0235							

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
ad Gamma Spec											
atch 621149											
	TPU:	+/-0.0249		+/-0.0235							
hallium-208		0.564		0.506	pCi/g	11		(0% - 20%)			
	Uncert:	+/-0.0846		+/-0.0705							
	TPU:	+/-0.0846		+/-0.0705							
QC1201305349 LCS											
ctinium-228				1.50	pCi/g					04/03/07	13:00
	Uncert:			+/-0.705							
	TPU:			+/-0.705							
mericium-241	16.0			14.2	pCi/g		89	(75%-125%)			
	Uncert:			+/-1.49							
	TPU:			+/-1.49							
ismuth-212			U	0.645	pCi/g						
	Uncert:			+/-0.763							
	TPU:			+/-0.763							
ismuth-214				0.697	pCi/g						
	Uncert:			+/-0.253							
	TPU:			+/-0.253							
esium-134			U	0.0839	pCi/g						
	Uncert:			+/-0.105							
	TPU:			+/-0.105							
esium-137	6.20			5.80	pCi/g		94	(75%-125%)			
	Uncert:			+/-0.571							
	TPU:			+/-0.571							
obalt-60	9.32			9.36	pCi/g		100	(75%-125%)			
	Uncert:			+/-0.701							
	TPU:			+/-0.701							
uropium-152			U	-0.176	pCi/g						
	Uncert:			+/-0.243							
	TPU:			+/-0.243							
uropium-154			U	0.00147	pCi/g						
	Uncert:			+/-0.242							
	TPU:			+/-0.242							
uropium-155			U	0.0771	pCi/g						
	Uncert:			+/-0.250							
	TPU:			+/-0.250							
ead-212				0.907	pCi/g						
	Uncert:			+/-0.176							
	TPU:			+/-0.176							
ead-214				0.454	pCi/g						
	Uncert:			+/-0.238							
	TPU:			+/-0.238							
anganese-54			U	0.0229	pCi/g						
	Uncert:			+/-0.0932							
	TPU:			+/-0.0932							
liobium-94			U	-0.0465	pCi/g						
	Uncert:			+/-0.084							
	TPU:			+/-0.084							
otassium-40			U	0.383	pCi/g						

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
ad Gamma Spec											
atch 621149											
	Uncert:			+/-0.835							
	TPU:			+/-0.835							
.adium-226				0.697	pCi/g			(75%-125%)			
	Uncert:			+/-0.253							
	TPU:			+/-0.253							
ilver-108m			U	-0.0512	pCi/g						
	Uncert:			+/-0.0813							
	TPU:			+/-0.0813							
'hallium-208				0.328	pCi/g						
	Uncert:			+/-0.152							
	TPU:			+/-0.152							
QC1201305347 MB											
,ctinium-228			U	-0.00165	pCi/g					04/03/07	12:57
	Uncert:			+/-0.0486							
	TPU:			+/-0.0486							
,mericium-241			U	0.0179	pCi/g						
	Uncert:			+/-0.0243							
	TPU:			+/-0.0243							
;ismuth-212			U	-0.0577	pCi/g						
	Uncert:			+/-0.110							
	TPU:			+/-0.110							
;ismuth-214			U	0.0128	pCi/g						
	Uncert:			+/-0.0306							
	TPU:			+/-0.0306							
'esium-134			U	0.00507	pCi/g						
	Uncert:			+/-0.0126							
	TPU:			+/-0.0126							
'esium-137			U	0.00189	pCi/g						
	Uncert:			+/-0.012							
	TPU:			+/-0.012							
'obalt-60			U	0.00173	pCi/g						
	Uncert:			+/-0.0135							
	TPU:			+/-0.0135							
,uropium-152			U	0.00881	pCi/g						
	Uncert:			+/-0.0314							
	TPU:			+/-0.0314							
,uropium-154			U	-0.0162	pCi/g						
	Uncert:			+/-0.040							
	TPU:			+/-0.040							
,uropium-155			U	0.0195	pCi/g						
	Uncert:			+/-0.032							
	TPU:			+/-0.032							
,ead-212			U	-0.0286	pCi/g						
	Uncert:			+/-0.0274							
	TPU:			+/-0.0274							
,ead-214			U	-0.0156	pCi/g						
	Uncert:			+/-0.0217							
	TPU:			+/-0.0217							

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
ad Gamma Spec										
atch 621149										
Manganese-54			U	0.00042	pCi/g					
	Uncert:			+/-0.0108						
	TPU:			+/-0.0108						
Niobium-94			U	-0.00626	pCi/g					
	Uncert:			+/-0.012						
	TPU:			+/-0.012						
Potassium-40			U	0.200	pCi/g					
	Uncert:			+/-0.186						
	TPU:			+/-0.186						
Radium-226			U	0.0128	pCi/g					
	Uncert:			+/-0.0306						
	TPU:			+/-0.0306						
Silver-108m			U	-0.000226	pCi/g					
	Uncert:			+/-0.0111						
	TPU:			+/-0.0111						
Thallium-208			U	-0.000331	pCi/g					
	Uncert:			+/-0.0177						
	TPU:			+/-0.0177						
atch 621152										
QC1201305355 183243001 DUP										
Actinium-228		1.13		1.20	pCi/g	5		(0% - 100%)	MJH1	04/03/07 19:24
	Uncert:	+/-0.237		+/-0.196						
	TPU:	+/-0.237		+/-0.196						
Americium-241	U	-0.0022	U	0.0326	pCi/g	229		(0% - 100%)		
	Uncert:	+/-0.0988		+/-0.0574						
	TPU:	+/-0.0988		+/-0.0574						
Bismuth-212		1.09		0.920	pCi/g	17		(0% - 100%)		
	Uncert:	+/-0.345		+/-0.274						
	TPU:	+/-0.345		+/-0.274						
Bismuth-214		1.09		1.16	pCi/g	6		(0% - 20%)		
	Uncert:	+/-0.145		+/-0.129						
	TPU:	+/-0.145		+/-0.129						
Cesium-134	U	0.0454	UI	0.00	pCi/g	53		(0% - 100%)		
	Uncert:	+/-0.0666		+/-0.0215						
	TPU:	+/-0.0666		+/-0.0215						
Cesium-137		0.256		0.241	pCi/g	6		(0% - 100%)		
	Uncert:	+/-0.0555		+/-0.0301						
	TPU:	+/-0.0555		+/-0.0301						
Cobalt-60	U	0.0348	U	0.0179	pCi/g	64		(0% - 100%)		
	Uncert:	+/-0.0451		+/-0.0227						
	TPU:	+/-0.0451		+/-0.0227						
Europium-152	U	0.0544	U	0.00878	pCi/g	144		(0% - 100%)		
	Uncert:	+/-0.103		+/-0.0479						
	TPU:	+/-0.103		+/-0.0479						
Europium-154	U	0.0802	U	-0.0305	pCi/g	446		(0% - 100%)		
	Uncert:	+/-0.0857		+/-0.0507						
	TPU:	+/-0.0857		+/-0.0507						
Europium-155	U	0.0543	U	0.037	pCi/g	38		(0% - 100%)		

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
ad Gamma Spec										
atch 621152										
	Uncert:	+/-0.0742		+/-0.0415						
	TPU:	+/-0.0742		+/-0.0415						
ead-212		1.25		1.24	pCi/g	0		(0% - 20%)		
	Uncert:	+/-0.121		+/-0.106						
	TPU:	+/-0.121		+/-0.106						
ead-214		1.34		1.27	pCi/g	6		(0% - 20%)		
	Uncert:	+/-0.161		+/-0.123						
	TPU:	+/-0.161		+/-0.123						
langanese-54	U	-0.0131	U	0.000953	pCi/g	231		(0% - 100%)		
	Uncert:	+/-0.0311		+/-0.015						
	TPU:	+/-0.0311		+/-0.015						
liobium-94	U	0.00411	U	0.014	pCi/g	109		(0% - 100%)		
	Uncert:	+/-0.0281		+/-0.0145						
	TPU:	+/-0.0281		+/-0.0145						
otassium-40		18.0		18.3	pCi/g	2		(0% - 20%)		
	Uncert:	+/-1.49		+/-1.24						
	TPU:	+/-1.49		+/-1.24						
adium-226		1.09		1.16	pCi/g	6		(0% - 100%)		
	Uncert:	+/-0.145		+/-0.129						
	TPU:	+/-0.145		+/-0.129						
ilver-108m	U	-0.00485	U	-0.00602	pCi/g	22		(0% - 100%)		
	Uncert:	+/-0.024		+/-0.0132						
	TPU:	+/-0.024		+/-0.0132						
hallium-208		0.363		0.362	pCi/g	0		(0% - 100%)		
	Uncert:	+/-0.0601		+/-0.0447						
	TPU:	+/-0.0601		+/-0.0447						
QC1201305356 LCS										
ctinium-228				1.10	pCi/g					04/03/07 14:24
	Uncert:			+/-0.589						
	TPU:			+/-0.589						
mericium-241	16.0			14.5	pCi/g		91	(75%-125%)		
	Uncert:			+/-2.17						
	TPU:			+/-2.17						
ismuth-212			U	0.849	pCi/g					
	Uncert:			+/-0.831						
	TPU:			+/-0.831						
ismuth-214				0.784	pCi/g					
	Uncert:			+/-0.293						
	TPU:			+/-0.293						
esium-134			U	0.123	pCi/g					
	Uncert:			+/-0.114						
	TPU:			+/-0.114						
esium-137	6.20			5.88	pCi/g		95	(75%-125%)		
	Uncert:			+/-0.518						
	TPU:			+/-0.518						
obalt-60	9.32			9.25	pCi/g		99	(75%-125%)		
	Uncert:			+/-0.705						
	TPU:			+/-0.705						

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
ad Gamma Spec											
atch 621152											
uropium-152			U	0.128	pCi/g						
	Uncert:			+/-0.312							
	TPU:			+/-0.312							
uropium-154			U	0.206	pCi/g						
	Uncert:			+/-0.285							
	TPU:			+/-0.285							
uropium-155			U	-0.14	pCi/g						
	Uncert:			+/-0.293							
	TPU:			+/-0.293							
ead-212				0.835	pCi/g						
	Uncert:			+/-0.232							
	TPU:			+/-0.232							
ead-214				1.03	pCi/g						
	Uncert:			+/-0.352							
	TPU:			+/-0.352							
anganese-54			U	0.0289	pCi/g						
	Uncert:			+/-0.103							
	TPU:			+/-0.103							
iobium-94			U	0.022	pCi/g						
	Uncert:			+/-0.106							
	TPU:			+/-0.106							
otassium-40			U	0.272	pCi/g						
	Uncert:			+/-0.992							
	TPU:			+/-0.992							
adium-226				0.784	pCi/g			(75%-125%)			
	Uncert:			+/-0.293							
	TPU:			+/-0.293							
ilver-108m			U	-0.0421	pCi/g						
	Uncert:			+/-0.086							
	TPU:			+/-0.086							
hallium-208				0.387	pCi/g						
	Uncert:			+/-0.196							
	TPU:			+/-0.196							
QC1201305354 MB											
ctinium-228			U	0.0135	pCi/g					04/03/07	19:22
	Uncert:			+/-0.043							
	TPU:			+/-0.043							
mericium-241			U	0.0143	pCi/g						
	Uncert:			+/-0.0304							
	TPU:			+/-0.0304							
ismuth-212			U	0.0396	pCi/g						
	Uncert:			+/-0.0567							
	TPU:			+/-0.0567							
ismuth-214			U	0.0047	pCi/g						
	Uncert:			+/-0.0238							
	TPU:			+/-0.0238							
esium-134			U	0.00123	pCi/g						
	Uncert:			+/-0.00762							

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
ad Gamma Spec										
atch 621152										
	TPU:			+/-0.00762						
'esium-137			U	0.00264	pCi/g					
	Uncert:			+/-0.0074						
	TPU:			+/-0.0074						
'obalt-60			U	-0.000251	pCi/g					
	Uncert:			+/-0.00725						
	TPU:			+/-0.00725						
uropium-152			U	-0.00829	pCi/g					
	Uncert:			+/-0.0177						
	TPU:			+/-0.0177						
uropium-154			U	0.00151	pCi/g					
	Uncert:			+/-0.0211						
	TPU:			+/-0.0211						
uropium-155			U	-0.00241	pCi/g					
	Uncert:			+/-0.0178						
	TPU:			+/-0.0178						
ead-212			U	-0.0257	pCi/g					
	Uncert:			+/-0.0206						
	TPU:			+/-0.0206						
ead-214			U	0.0229	pCi/g					
	Uncert:			+/-0.0222						
	TPU:			+/-0.0222						
langanese-54			U	-0.00111	pCi/g					
	Uncert:			+/-0.00691						
	TPU:			+/-0.00691						
liobium-94			U	0.000744	pCi/g					
	Uncert:			+/-0.00807						
	TPU:			+/-0.00807						
otassium-40			U	0.00403	pCi/g					
	Uncert:			+/-0.137						
	TPU:			+/-0.137						
adium-226			U	0.0047	pCi/g					
	Uncert:			+/-0.0238						
	TPU:			+/-0.0238						
ilver-108m			U	0.000961	pCi/g					
	Uncert:			+/-0.0063						
	TPU:			+/-0.0063						
hallium-208			UI	0.00	pCi/g					
	Uncert:			+/-0.0181						
	TPU:			+/-0.0181						
ad Gas Flow										
atch 621125										
QC1201305282 183245021 DUP										
trontium-90	U	-0.0124	U	0.013	pCi/g	0		(0% - 100%)	NXL3	04/03/07 17:11
	Uncert:	+/-0.0237		+/-0.0268						
	TPU:	+/-0.0237		+/-0.0268						
QC1201305284 LCS										
trontium-90	1.40			1.38	pCi/g		99	(75%-125%)		04/03/07 17:53

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
ad Gas Flow										
atch 621125										
	Uncert:			+/-0.0937						
	TPU:			+/-0.103						
QC1201305281 MB										
trontium-90			U	-0.00552	pCi/g					04/03/07 17:11
	Uncert:			+/-0.0133						
	TPU:			+/-0.0133						
QC1201305283 183245021 MS										
trontium-90	1.41 U	-0.0124		1.17	pCi/g		83	(75%-125%)		04/03/07 17:11
	Uncert:	+/-0.0237		+/-0.127						
	TPU:	+/-0.0237		+/-0.132						
atch 621126										
QC1201305286 183243014 DUP										
trontium-90	U	0.0275	U	0.0138	pCi/g	0		(0% - 100%)	NXL3	04/02/07 20:52
	Uncert:	+/-0.020		+/-0.0222						
	TPU:	+/-0.020		+/-0.0222						
QC1201305288 LCS										
trontium-90	1.43			1.45	pCi/g		102	(75%-125%)		04/02/07 20:52
	Uncert:			+/-0.099						
	TPU:			+/-0.104						
QC1201305285 MB										
trontium-90			U	-0.00764	pCi/g					04/02/07 20:51
	Uncert:			+/-0.0133						
	TPU:			+/-0.0133						
QC1201305287 183243014 MS										
trontium-90	1.63 U	0.0275		1.62	pCi/g		99	(75%-125%)		04/02/07 20:52
	Uncert:	+/-0.020		+/-0.123						
	TPU:	+/-0.020		+/-0.129						
ad Liquid Scintillation										
atch 621136										
QC1201305301 183245006 DUP										
·on-55	U	-26.4	U	2.65	pCi/g	0		(0% - 100%)	MXP1	04/02/07 22:19
	Uncert:	+/-34.3		+/-34.0						
	TPU:	+/-34.3		+/-34.0						
QC1201305303 LCS										
·on-55	1180			1130	pCi/g		96	(75%-125%)		04/02/07 22:51
	Uncert:			+/-61.3						
	TPU:			+/-98.0						
QC1201305300 MB										
·on-55			U	-26.4	pCi/g					04/02/07 22:02
	Uncert:			+/-28.2						
	TPU:			+/-28.2						
QC1201305302 183245006 MS										
·on-55	1230 U	-26.4		1180	pCi/g		96	(75%-125%)		04/02/07 22:35
	Uncert:	+/-34.3		+/-69.4						
	TPU:	+/-34.3		+/-110						
atch 621137										
QC1201305305 183245006 DUP										
lickel-63	U	-11.2	U	-8.44	pCi/g	0		(0% - 100%)	MXP1	04/02/07 17:27

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
ad Liquid Scintillation										
atch 621137										
	Uncert:	+/-9.41		+/-10.1						
	TPU:	+/-9.41		+/-10.1						
QC1201305307 LCS										
lickel-63	556			477	pCi/g		86	(75%-125%)		04/02/07 17:59
	Uncert:			+/-25.4						
	TPU:			+/-30.6						
QC1201305304 MB										
lickel-63			U	2.75	pCi/g					04/02/07 17:10
	Uncert:			+/-11.6						
	TPU:			+/-11.6						
QC1201305306 183245006 MS										
lickel-63	591 U	-11.2		505	pCi/g		85	(75%-125%)		04/02/07 17:43
	Uncert:	+/-9.41		+/-27.3						
	TPU:	+/-9.41		+/-33.0						
atch 621139										
QC1201305311 183245006 DUP										
echnetium-99	U	-0.155	U	-0.139	pCi/g	0		(0% - 100%)	MXP1	04/03/07 15:56
	Uncert:	+/-0.229		+/-0.236						
	TPU:	+/-0.229		+/-0.236						
QC1201305313 LCS										
echnetium-99	19.6			16.4	pCi/g		84	(75%-125%)		04/03/07 17:00
	Uncert:			+/-0.466						
	TPU:			+/-0.623						
QC1201305310 MB										
echnetium-99			U	-0.281	pCi/g					04/03/07 15:25
	Uncert:			+/-0.210						
	TPU:			+/-0.210						
QC1201305312 183245006 MS										
echnetium-99	20.0 U	-0.155		15.0	pCi/g		75	(75%-125%)		04/05/07 09:59
	Uncert:	+/-0.229		+/-0.676						
	TPU:	+/-0.229		+/-0.776						
atch 621141										
QC1201305317 183255002 DUP										
ritium	U	-0.106	U	0.451	pCi/g	0		(0% - 100%)	AXD2	03/31/07 18:55
	Uncert:	+/-1.06		+/-1.03						
	TPU:	+/-1.06		+/-1.03						
QC1201305319 LCS										
ritium	11.7			12.0	pCi/g		102	(75%-125%)		03/31/07 20:57
	Uncert:			+/-1.54						
	TPU:			+/-1.55						
QC1201305316 MB										
ritium			U	-0.232	pCi/g					03/31/07 17:53
	Uncert:			+/-0.991						
	TPU:			+/-0.991						
QC1201305318 183255002 MS										
ritium	11.9 U	-0.106		13.2	pCi/g		111	(75%-125%)		03/31/07 19:56
	Uncert:	+/-1.06		+/-1.63						
	TPU:	+/-1.06		+/-1.65						
atch 621144										

QC Summary

Vorkorder: 183243

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
ad Liquid Scintillation											
atch 621144											
QC1201305325 183245006 DUP											
'arbon-14	U	0.0236	U	-0.0162	pCi/g	0		(0% - 100%)	AXD2	04/02/07	15:22
	Uncert:	+/-0.090		+/-0.0934							
	TPU:	+/-0.090		+/-0.0934							
QC1201305327 LCS											
'arbon-14	7.09			7.02	pCi/g		99	(75%-125%)		04/02/07	17:28
	Uncert:			+/-0.203							
	TPU:			+/-0.231							
QC1201305324 MB											
'arbon-14			U	-0.0233	pCi/g					04/02/07	14:19
	Uncert:			+/-0.0925							
	TPU:			+/-0.0925							
QC1201305326 183245006 MS											
'arbon-14	7.16 U	0.0236		6.92	pCi/g		97	(75%-125%)		04/02/07	16:25
	Uncert:	+/-0.090		+/-0.202							
	TPU:	+/-0.090		+/-0.229							

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

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the 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
ND	Analyte concentration is not detected above the detection limit
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI	Gamma Spectroscopy--Uncertain identification
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
h	Preparation or preservation holding time was exceeded

QC Summary

Vorkorder: 183243

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

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

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

General Narrative

General Narrative
for
Connecticut Yankee Atomic Power Co.
Work Order: 183321
SDG: MSR#07-0134

April 04, 2007

Laboratory Identification:

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

Summary

Sample receipt

The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on March 30, 2007 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
183321001	9312-0010-124-I
183321002	9312-0010-125-I
183321003	9312-0010-126-I

Items of Note

There are no items to note.

Case Narrative

Sample analyses were conducted using methodology as outlined in GEL Laboratories, LLC (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

Three soil samples were analyzed for FSSGAM and Strontium-90.

Data Package

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

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

Cheryl Jones
Project Manager

List of current GEL Certifications as of 04 April 2007

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. 2007-00104

Project Name: Haddam Neck Decommissioning

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

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

Priority: ☐ 30 D. ☐ 15 D. ☒ 7 D.
Other:

Lab Use Only

Comments:

183321 1.

Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- &Type Code	Analyses Requested: FSSGAM & Sr-90						Comment, Preservation	Lab Sample ID
9312-0010-124-I	3/29/07	0715	TS	G	BP	X							
9312-0010-125-I	3/29/07	0717	TS	G	BP	X							
9312-0010-126-I	3/29/07	0720	TS	G	BP	X							

NOTES: PO #: 002332 MSR #: 07-0134 ☒ LTP QA ☐ Radwaste QA ☐ Non QA

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

Bill of Lading #

Internal Container Temp.: 17° Deg. C

Custody Sealed? Custody Seal Intact?
Y☑ N☐

1) Relinquished By	Date/Time	2) Received By	Date/Time
[signature]	3/29/07 1430	[signature]	3-30-07 930
3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 3-30-07 930

SDG#: MSR#07-0133, 0134

Work Order Number: 183322, 183321

Shipping Container ID: 790704754446 7928 5890 9973 Chain of Custody # 2007-00096 2007-00095 2007-00

1. Custody Seals on shipping container intact? Yes [✓] No [ ]
2. Custody Seals dated and signed? Yes [✓] No [ ]
3. Chain-of-Custody record present? Yes [✓] No [ ]
4. Cooler temperature 17°, 16°
5. Vermiculite/packing materials is: Wet [ ] Dry [✓]
6. Number of samples in shipping container: 3 and 21
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: Tim Sib Date: 3-30-07 930

Telephoned to: _____ On _____ By _____

SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: Connecticut Yankee	**SDG/ARCOC/Work Order:** 183322, 183321
Date Received: 3-30-07	**PM(A) Review (ensure non-conforming items are resolved prior to signing):**
Received By: TS	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	✓			Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.		✓		Circle Coolant # ice bags blue ice dry ice none (other describe) see below packing material
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	7907 0475 4446 17° 7929 5890 9973 16°			

	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*: 80 cpm
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 CAK Date: 3/30/07

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 183321

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:	622281
Prep Batch Number:	621413

Sample ID	Client ID
183321001	9312-0010-124-I
183321002	9312-0010-125-I
183321003	9312-0010-126-I
1201307871	Method Blank (MB)
1201307872	183322021(9306-0000-019B) Sample Duplicate (DUP)
1201307873	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 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: 183322021 (9306-0000-019B).

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

Technical Information:

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

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

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

Miscellaneous Information:

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

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

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to low abundance.	Cesium-134	183321001
UI	Data rejected due to no valid peak.	Americium-241	183321001

Method/Analysis Information

Product:	**GFPC, Sr90, solid-ALL FSS**
Analytical Method:	EPA 905.0 Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	621435
Prep Batch Number:	621414
Dry Soil Prep GL-RAD-A-021 Batch Number:	621413

Sample ID	Client ID
183321001	9312-0010-124-I
183321002	9312-0010-125-I
183321003	9312-0010-126-I
1201305974	Method Blank (MB)
1201305975	183322004(9306-0000-004F) Sample Duplicate (DUP)
1201305976	183322004(9306-0000-004F) Matrix Spike (MS)
1201305977	Laboratory Control Sample (LCS)

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 11.

Calibration Information:

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

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

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

Quality Control (QC) Information:

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

Designated QC
The following sample was used for QC: 183322004 (9306-0000-004F).

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

Technical Information:

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

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

Sample Re-prep/Re-analysis
Sample 183321003 (9312-0010-126-I) was recounted due to a detector lock out condition.

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

Miscellaneous Information:

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

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

Qualifier information

Manual qualifiers were not required.

Certification Statement

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

Review Validation:

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

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

Reviewer/Date: Jamie Williams 4/5/07

SAMPLE DATA SUMMARY

GEL 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#07-0134 GEL Work Order: 183321

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 GEL Laboratories LLC standard operating procedures. Please direct any questions to your Project Manager, Cheryl Jones.

Reviewed by

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

Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID:	9312-0010-124-I	Project:	YANK01204
Sample ID:	183321001	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-MAR-07		
Receive Date:	30-MAR-07		
Collector:	Client		
Moisture:	5.01%		

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		1.55	+/-0.303	0.0947	+/-0.303	0.189	pCi/g		MJH1	04/03/07	1754	622281	
Americium-241	UI	0.00	+/-0.165	0.0952	+/-0.165	0.190	pCi/g						
Bismuth-212		0.934	+/-0.393	0.202	+/-0.393	0.404	pCi/g						
Bismuth-214		1.83	+/-0.220	0.0519	+/-0.220	0.104	pCi/g						
Cesium-134	UI	0.00	+/-0.0452	0.0331	+/-0.0452	0.0662	pCi/g						
Cesium-137		0.163	+/-0.0526	0.0261	+/-0.0526	0.0521	pCi/g						
Cobalt-60	U	0.0195	+/-0.0338	0.0292	+/-0.0338	0.0583	pCi/g						
Europium-152	U	-0.0563	+/-0.118	0.0757	+/-0.118	0.151	pCi/g						
Europium-154	U	-0.0255	+/-0.116	0.0803	+/-0.116	0.161	pCi/g						
Europium-155	U	0.0372	+/-0.105	0.092	+/-0.105	0.184	pCi/g						
Lead-212		1.53	+/-0.156	0.0466	+/-0.156	0.0931	pCi/g						
Lead-214		2.18	+/-0.244	0.0556	+/-0.244	0.111	pCi/g						
Manganese-54	U	-0.029	+/-0.0315	0.0255	+/-0.0315	0.0509	pCi/g						
Niobium-94	U	0.028	+/-0.0296	0.0257	+/-0.0296	0.0513	pCi/g						
Potassium-40		27.1	+/-2.14	0.237	+/-2.14	0.473	pCi/g						
Radium-226		1.83	+/-0.220	0.0519	+/-0.220	0.104	pCi/g						
Silver-108m	U	0.0285	+/-0.0301	0.0267	+/-0.0301	0.0534	pCi/g						
Thallium-208		0.540	+/-0.0804	0.028	+/-0.0804	0.056	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	0.0199	+/-0.0276	0.0206	+/-0.0276	0.0474	pCi/g		KSD1	04/04/07	1305	621435	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/30/07	1052	621413

The following Analytical Methods were performed

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

GEL 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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID: 9312–0010–124–I
Sample ID: 183321001
Project: YANK01204
Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst Date	Time Batch	N
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**				
Strontium Carrier	GFPC, Sr90, solid–ALL FSS				78		(25%–125%)				

Notes:

The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol–condensation product
B For General Chemistry and Organic analysis the 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
ND Analyte concentration is not detected above the detection limit
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.

GEL 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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-125-I	Project:	YANK01204
Sample ID:	183321002	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-MAR-07		
Receive Date:	30-MAR-07		
Collector:	Client		
Moisture:	7.69%		

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		0.872	+/-0.213	0.0753	+/-0.213	0.151	pCi/g		MJH1	04/03/07	2159	622281	
Americium-241	U	0.0781	+/-0.0976	0.0835	+/-0.0976	0.167	pCi/g						
Bismuth-212		0.653	+/-0.315	0.172	+/-0.315	0.343	pCi/g						
Bismuth-214		0.927	+/-0.142	0.0436	+/-0.142	0.0871	pCi/g						
Cesium-134	U	0.0388	+/-0.0451	0.0295	+/-0.0451	0.0591	pCi/g						
Cesium-137		0.354	+/-0.0678	0.0257	+/-0.0678	0.0515	pCi/g						
Cobalt-60	U	0.0148	+/-0.0261	0.0227	+/-0.0261	0.0454	pCi/g						
Europium-152	U	0.0365	+/-0.099	0.0633	+/-0.099	0.127	pCi/g						
Europium-154	U	-0.0775	+/-0.0991	0.0631	+/-0.0991	0.126	pCi/g						
Europium-155	U	0.0338	+/-0.0832	0.0769	+/-0.0832	0.154	pCi/g						
Lead-212		0.919	+/-0.109	0.0385	+/-0.109	0.077	pCi/g						
Lead-214		0.992	+/-0.147	0.0464	+/-0.147	0.0928	pCi/g						
Manganese-54	U	0.0176	+/-0.0274	0.022	+/-0.0274	0.0439	pCi/g						
Niobium-94	U	-0.00378	+/-0.0244	0.0204	+/-0.0244	0.0408	pCi/g						
Potassium-40		11.1	+/-1.11	0.190	+/-1.11	0.380	pCi/g						
Radium-226		0.927	+/-0.142	0.0436	+/-0.142	0.0871	pCi/g						
Silver-108m	U	-0.00504	+/-0.0243	0.0212	+/-0.0243	0.0423	pCi/g						
Thallium-208		0.327	+/-0.0584	0.0218	+/-0.0584	0.0436	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90		0.0632	+/-0.031	0.0176	+/-0.0311	0.0417	pCi/g		KSD1	04/04/07	1305	621435	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/30/07	1052	621413

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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

Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID: 9312-0010-125-I
Sample ID: 183321002

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Surrogate/Tracer recovery	**Test**				**Recovery%**		**Acceptable Limits**						
Strontium Carrier	GFPC, Sr90, solid-ALL FSS				80		(25%-125%)						

Notes:

The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol-condensation product
B For General Chemistry and Organic analysis the 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
ND Analyte concentration is not detected above the detection limit
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.

GEL 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: April 5, 2007
Contact: Mr. Jack McCarthy
Project: Soils PO# 002332

Client Sample ID:	9312-0010-126-I	Project:	YANK01204
Sample ID:	183321003	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	29-MAR-07		
Receive Date:	30-MAR-07		
Collector:	Client		
Moisture:	.359%		

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		0.901	+/-0.203	0.0693	+/-0.203	0.139	pCi/g		MJH1	04/04/07	0104	622281	
Americium-241	U	0.0967	+/-0.095	0.0826	+/-0.095	0.165	pCi/g						
Bismuth-212		0.716	+/-0.375	0.170	+/-0.375	0.339	pCi/g						
Bismuth-214		0.692	+/-0.116	0.0436	+/-0.116	0.0872	pCi/g						
Cesium-134	U	0.0265	+/-0.0275	0.0256	+/-0.0275	0.0511	pCi/g						
Cesium-137	U	0.0286	+/-0.0453	0.0231	+/-0.0453	0.0461	pCi/g						
Cobalt-60	U	-0.0291	+/-0.0304	0.0182	+/-0.0304	0.0364	pCi/g						
Europium-152	U	-0.0939	+/-0.108	0.0602	+/-0.108	0.120	pCi/g						
Europium-154	U	-0.00962	+/-0.0833	0.0693	+/-0.0833	0.139	pCi/g						
Europium-155	U	-0.021	+/-0.0789	0.072	+/-0.0789	0.144	pCi/g						
Lead-212		0.959	+/-0.108	0.0363	+/-0.108	0.0725	pCi/g						
Lead-214		0.644	+/-0.119	0.0447	+/-0.119	0.0893	pCi/g						
Manganese-54	U	0.0326	+/-0.0322	0.0218	+/-0.0322	0.0436	pCi/g						
Niobium-94	U	-0.00321	+/-0.0298	0.0216	+/-0.0298	0.0431	pCi/g						
Potassium-40		16.9	+/-1.49	0.205	+/-1.49	0.410	pCi/g						
Radium-226		0.692	+/-0.116	0.0436	+/-0.116	0.0872	pCi/g						
Silver-108m	U	-0.0109	+/-0.0229	0.0197	+/-0.0229	0.0394	pCi/g						
Thallium-208		0.312	+/-0.0601	0.0198	+/-0.0601	0.0395	pCi/g						
Rad Gas Flow Proportional Counting													
GFPC, Sr90, solid-ALL FSS													
Strontium-90	U	-0.00905	+/-0.0187	0.0174	+/-0.0187	0.0413	pCi/g		KSD1	04/04/07	1841	621435	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	03/30/07	1052	621413

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits

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

Certificate of Analysis

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

Report Date: April 5, 2007

Client Sample ID: 9312–0010–126–I
Sample ID: 183321003

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

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Strontium Carrier	GFPC, Sr90, solid–ALL FSS	72	(25%–125%)

Notes:

The Qualifiers in this report are defined as follows :

** Analyte is a surrogate compound
< Result is less than value reported
> Result is greater than value reported
A The TIC is a suspected aldol–condensation product
B For General Chemistry and Organic analysis the 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
ND Analyte concentration is not detected above the detection limit
R Sample results are rejected
U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
UI Gamma Spectroscopy––Uncertain identification
X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y QC Samples were not spiked with this compound
^ RPD of sample and duplicate evaluated using +/–RL. Concentrations are <5X the RL
h Preparation or preservation holding time was exceeded
The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

QC Summary

Report Date: April 5, 2007
Page 1 of 5

Client: Connecticut Yankee Atomic Power
362 Injun Hollow Rd

East Hampton, Connecticut
Contact: Mr. Jack McCarthy

Workorder: 183321

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 622281										
QC1201307872 183322021 DUP										
Actinium-228		0.750		0.746	pCi/g	1		(0% - 100%)	MJH1	04/04/07 10:30
	Uncert:	+/-0.190		+/-0.211						
	TPU:	+/-0.190		+/-0.211						
Americium-241	U	0.0469	U	0.0308	pCi/g	42		(0% - 100%)		
	Uncert:	+/-0.0916		+/-0.0391						
	TPU:	+/-0.0916		+/-0.0391						
Bismuth-212		0.738		0.679	pCi/g	8		(0% - 100%)		
	Uncert:	+/-0.351		+/-0.309						
	TPU:	+/-0.351		+/-0.309						
Bismuth-214		0.634		0.616	pCi/g	3		(0% - 100%)		
	Uncert:	+/-0.117		+/-0.119						
	TPU:	+/-0.117		+/-0.119						
Cesium-134	U	0.0503	U	0.0121	pCi/g	123		(0% - 100%)		
	Uncert:	+/-0.0327		+/-0.032						
	TPU:	+/-0.0327		+/-0.032						
Cesium-137	U	-0.033	U	0.0358	pCi/g	4980		(0% - 100%)		
	Uncert:	+/-0.0315		+/-0.0276						
	TPU:	+/-0.0315		+/-0.0276						
Cobalt-60	U	0.0197	U	-0.0106	pCi/g	665		(0% - 100%)		
	Uncert:	+/-0.0269		+/-0.0264						
	TPU:	+/-0.0269		+/-0.0264						
Europium-152	U	0.0308	U	0.00845	pCi/g	114		(0% - 100%)		
	Uncert:	+/-0.0737		+/-0.067						
	TPU:	+/-0.0737		+/-0.067						
Europium-154	U	-0.00474	U	0.0134	pCi/g	420		(0% - 100%)		
	Uncert:	+/-0.0849		+/-0.0771						
	TPU:	+/-0.0849		+/-0.0771						
Europium-155	U	0.0261	U	0.0164	pCi/g	45		(0% - 100%)		
	Uncert:	+/-0.0784		+/-0.0571						
	TPU:	+/-0.0784		+/-0.0571						
Lead-212		0.767		0.891	pCi/g	15		(0% - 20%)		
	Uncert:	+/-0.0966		+/-0.119						
	TPU:	+/-0.0966		+/-0.119						
Lead-214		0.568		0.634	pCi/g	11		(0% - 20%)		
	Uncert:	+/-0.117		+/-0.121						
	TPU:	+/-0.117		+/-0.121						
Manganese-54	U	-0.0118	U	0.0177	pCi/g	987		(0% - 100%)		
	Uncert:	+/-0.0242		+/-0.0275						
	TPU:	+/-0.0242		+/-0.0275						
Niobium-94	U	-0.00311	U	0.0103	pCi/g	374		(0% - 100%)		
	Uncert:	+/-0.0228		+/-0.0234						
	TPU:	+/-0.0228		+/-0.0234						

QC Summary

Vorkorder: 183321 **Page 2 of 5**

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
ad Gamma Spec										
atch 622281										
otassium-40		12.5		14.2	pCi/g	13		(0% - 20%)		
	Uncert:	+/-1.21		+/-1.29						
	TPU:	+/-1.21		+/-1.29						
adium-226		0.634		0.616	pCi/g	3		(0% - 100%)		
	Uncert:	+/-0.117		+/-0.119						
	TPU:	+/-0.117		+/-0.119						
ilver-108m	U	0.00407	U	-0.00551	pCi/g	1330		(0% - 100%)		
	Uncert:	+/-0.0247		+/-0.0219						
	TPU:	+/-0.0247		+/-0.0219						
hallium-208		0.266		0.269	pCi/g	1		(0% - 100%)		
	Uncert:	+/-0.0599		+/-0.0584						
	TPU:	+/-0.0599		+/-0.0584						
QC1201307873 LCS										
ctinium-228				0.795	pCi/g					04/04/07 10:19
	Uncert:			+/-0.718						
	TPU:			+/-0.718						
mericium-241	16.4			14.0	pCi/g		85	(75%-125%)		
	Uncert:			+/-1.52						
	TPU:			+/-1.52						
ismuth-212			U	1.15	pCi/g					
	Uncert:			+/-0.883						
	TPU:			+/-0.883						
ismuth-214				0.777	pCi/g					
	Uncert:			+/-0.311						
	TPU:			+/-0.311						
esium-134			U	0.092	pCi/g					
	Uncert:			+/-0.112						
	TPU:			+/-0.112						
esium-137	6.35			6.09	pCi/g		96	(75%-125%)		
	Uncert:			+/-0.577						
	TPU:			+/-0.577						
obalt-60	9.55			9.26	pCi/g		97	(75%-125%)		
	Uncert:			+/-0.685						
	TPU:			+/-0.685						
uropium-152			U	-0.0231	pCi/g					
	Uncert:			+/-0.282						
	TPU:			+/-0.282						
uropium-154			U	-0.0844	pCi/g					
	Uncert:			+/-0.238						
	TPU:			+/-0.238						
uropium-155			U	0.123	pCi/g					
	Uncert:			+/-0.319						
	TPU:			+/-0.319						
ead-212				1.30	pCi/g					
	Uncert:			+/-0.258						
	TPU:			+/-0.258						
ead-214				1.05	pCi/g					
	Uncert:			+/-0.316						

QC Summary

Vorkorder: 183321

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
ad Gamma Spec											
atch 622281											
	TPU:			+/-0.316							
langanese-54			U	0.036	pCi/g						
	Uncert:			+/-0.0981							
	TPU:			+/-0.0981							
liobium-94			U	0.0841	pCi/g						
	Uncert:			+/-0.0973							
	TPU:			+/-0.0973							
otassium-40				4.73	pCi/g						
	Uncert:			+/-3.49							
	TPU:			+/-3.49							
adium-226				0.777	pCi/g			(75%-125%)			
	Uncert:			+/-0.311							
	TPU:			+/-0.311							
ilver-108m			U	-0.0118	pCi/g						
	Uncert:			+/-0.0942							
	TPU:			+/-0.0942							
hallium-208				0.420	pCi/g						
	Uncert:			+/-0.178							
	TPU:			+/-0.178							
QC1201307871 MB											
ctinium-228			U	-0.0653	pCi/g					04/04/07	07:14
	Uncert:			+/-0.0772							
	TPU:			+/-0.0772							
mericium-241			U	0.036	pCi/g						
	Uncert:			+/-0.0585							
	TPU:			+/-0.0585							
ismuth-212			U	-0.12	pCi/g						
	Uncert:			+/-0.191							
	TPU:			+/-0.191							
ismuth-214			U	0.034	pCi/g						
	Uncert:			+/-0.0581							
	TPU:			+/-0.0581							
esium-134			U	0.00123	pCi/g						
	Uncert:			+/-0.0192							
	TPU:			+/-0.0192							
esium-137			U	0.00558	pCi/g						
	Uncert:			+/-0.0392							
	TPU:			+/-0.0392							
obalt-60			U	0.00413	pCi/g						
	Uncert:			+/-0.0209							
	TPU:			+/-0.0209							
uropium-152			U	-0.0206	pCi/g						
	Uncert:			+/-0.0539							
	TPU:			+/-0.0539							
uropium-154			U	-0.0213	pCi/g						
	Uncert:			+/-0.0507							
	TPU:			+/-0.0507							
uropium-155			U	0.0442	pCi/g						

QC Summary

Vorkorder: 183321

armname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
ad Gamma Spec										
atch 622281										
	Uncert:			+/-0.0515						
	TPU:			+/-0.0515						
ead-212			U	0.038	pCi/g					
	Uncert:			+/-0.0644						
	TPU:			+/-0.0644						
ead-214			U	0.080	pCi/g					
	Uncert:			+/-0.0602						
	TPU:			+/-0.0602						
anganese-54			U	0.0255	pCi/g					
	Uncert:			+/-0.0213						
	TPU:			+/-0.0213						
iobium-94			U	0.0222	pCi/g					
	Uncert:			+/-0.0194						
	TPU:			+/-0.0194						
otassium-40			U	0.123	pCi/g					
	Uncert:			+/-0.296						
	TPU:			+/-0.296						
adium-226			U	0.034	pCi/g					
	Uncert:			+/-0.0581						
	TPU:			+/-0.0581						
ilver-108m			U	0.00882	pCi/g					
	Uncert:			+/-0.0201						
	TPU:			+/-0.0201						
hallium-208			U	0.00326	pCi/g					
	Uncert:			+/-0.0332						
	TPU:			+/-0.0332						
ad Gas Flow										
atch 621435										
QC1201305975 183322004 DUP										
trontium-90	U	0.00529	U	0.0189	pCi/g	0		(0% - 100%)	KSD1	04/04/07 13:09
	Uncert:	+/-0.022		+/-0.0233						
	TPU:	+/-0.022		+/-0.0233						
QC1201305977 LCS										
trontium-90	1.45			1.42	pCi/g		98	(75%-125%)		04/04/07 13:10
	Uncert:			+/-0.0995						
	TPU:			+/-0.108						
QC1201305974 MB										
trontium-90			U	-0.000898	pCi/g					04/04/07 13:09
	Uncert:			+/-0.0194						
	TPU:			+/-0.0194						
QC1201305976 183322004 MS										
trontium-90	1.66 U	0.00529		1.45	pCi/g		87	(75%-125%)		04/04/07 13:09
	Uncert:	+/-0.022		+/-0.111						
	TPU:	+/-0.022		+/-0.120						

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

QC Summary

Vorkorder: 183321

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

**	Analyte is a surrogate compound
<	Result is less than value reported
>	Result is greater than value reported
A	The TIC is a suspected aldol-condensation product
B	For General Chemistry and Organic analysis the 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
ND	Analyte concentration is not detected above the detection limit
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

I/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 ample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is ess than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
'or 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 equirements of the NELAC standard unless qualified on the QC Summary.

ATTACHMENT 4 (DQA RESULTS)

ATTACHMENT 4A
(PRELIMINARY DATA REVIEW)

Preliminary Data Review Form - Samples for the Sign Test

Survey Unit: 9312- 0010
Survey Unit Name: Northeast Protected Area Grounds

Classification: 1
Survey Media: Soil
Type of Survey: Final Status Survey
Type of Measurement: Gross Measurement
Number of Measurements: 18
Operational DCGL: 1

BASIC STATISTICAL QUANTITIES

	Cs-137	Co-60	Sr-90
Minimum Value:	-2.35E-02	-1.72E-02	-2.23E-02
Maximum Value:	1.91E+00	3.48E-02	3.70E-02
Mean:	3.16E-01	6.18E-03	4.12E-03
Median:	7.48E-02	8.25E-04	4.18E-03
Standard Deviation:	5.48E-01	1.42E-02	1.80E-02

RADIONUCLIDE CONCENTRATION (pCi/g)

NUMBER	Cs-137	Co-60	Sr-90	Identified?	Identified?	Identified?
9312-0010-101F	2.56E-01	3.48E-02	-1.97E-02	Y	N	N
9312-0010-102F	1.60E+00	0.00E+00	2.53E-02	Y	N	N
9312-0010-103F	1.91E+00	0.00E+00	2.54E-02	Y	N	N
9312-0010-104F	1.44E-01	8.09E-03	3.70E-02	Y	N	Y
9312-0010-105F	8.70E-02	-5.15E-03	-1.05E-02	Y	N	N
9312-0010-106F	2.88E-02	1.74E-02	-2.23E-02	Y	N	N
9312-0010-107F	0.00E+00	-9.39E-03	-1.55E-02	N	N	N
9312-0010-108F	4.18E-02	2.13E-02	8.14E-03	N	N	N
9312-0010-109F	2.76E-01	2.92E-02	1.91E-02	Y	N	N
9312-0010-110F	4.30E-01	1.63E-02	-1.05E-02	Y	N	N
9312-0010-111F	1.91E-02	-5.55E-03	2.40E-03	N	N	N
9312-0010-112F	-2.35E-02	-2.30E-03	1.05E-02	N	N	N
9312-0010-113F	6.26E-02	-1.72E-02	-1.63E-02	Y	N	N
9312-0010-114F	4.96E-01	0.00E+00	2.75E-02	Y	N	Y
9312-0010-115F	7.48E-03	1.65E-03	-6.57E-03	N	N	N
9312-0010-116F	-3.85E-03	2.50E-03	1.16E-03	N	N	N
9312-0010-117F	2.91E-01	2.21E-02	1.30E-02	Y	Y	N
9312-0010-118F	6.19E-02	-2.46E-03	5.96E-03	Y	N	N

Performed By: [signature] Date: 4-24-07

Independent Review: [signature] WOJTKOWIAK Date: 4/24/07

Preliminary Data Review Form - Judgemental Samples

Survey Unit: 9312- 0010
Survey Unit Name: Northeast Protected Area Grounds
Classification: 1
Survey Media: Soil
Type of Survey: Final Status Survey
Type of Measurement: Gross Measurement
Number of Measurements: 8
Operational DCGL: 1

BASIC STATISTICAL QUANTITIES

	Cs-137	Co-60	Sr-90
Minimum Value:	2.86E-02	-2.91E-02	-9.05E-03
Maximum Value:	2.25E+00	1.25E-01	6.32E-02
Mean:	4.72E-01	2.22E-02	1.62E-02
Median:	2.87E-01	1.42E-02	1.24E-02
Standard Deviation:	7.31E-01	4.43E-02	2.17E-02

	RADIONUCLIDE CONCENTRATION (pCi/g)					
NUMBER	Cs-137	Co-60	Sr-90	Identified?		
9312-0010-119B	2.25E+00	1.25E-01	7.53E-03	Y	Y	N
9312-0010-120B	3.71E-01	1.50E-02	1.28E-04	Y	N	N
9312-0010-121B	2.34E-01	1.35E-02	1.58E-02	Y	N	N
9312-0010-122B	3.35E-02	1.02E-02	9.06E-03	N	N	N
9312-0010-123B	3.40E-01	8.95E-03	2.29E-02	Y	N	N
9312-0010-124I	1.63E-01	1.95E-02	1.99E-02	Y	N	N
9312-0010-125I	3.54E-01	1.48E-02	6.32E-02	Y	N	Y
9312-0010-126I	2.86E-02	-2.91E-02	-9.05E-03	N	N	N

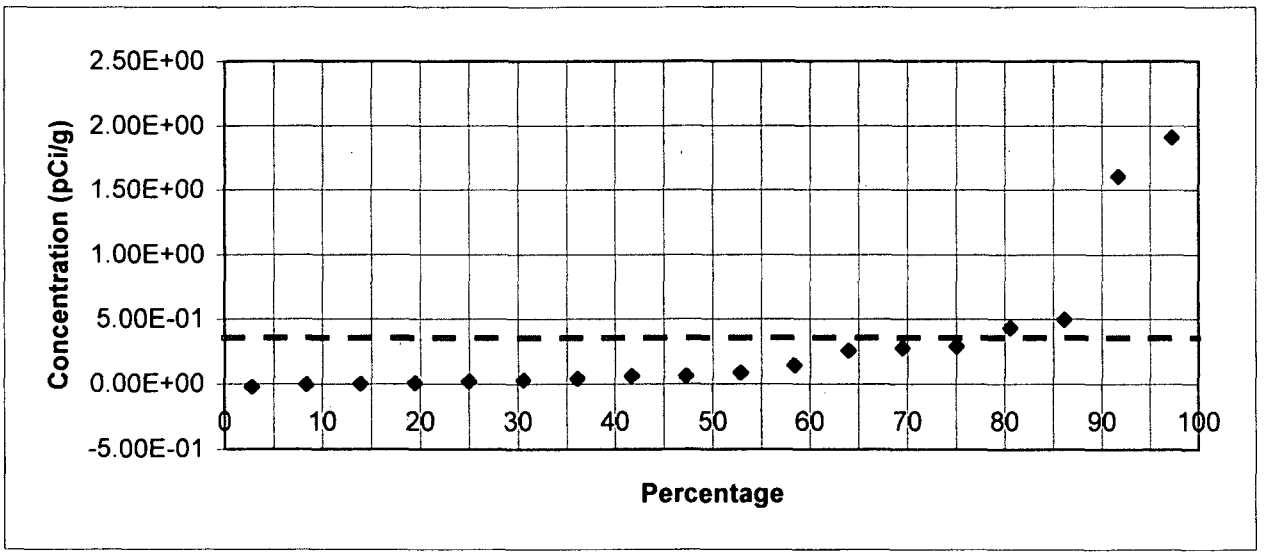
Performed By: Dal Rudall Date: 4-24-07

Independent Review: D WOJTKOWIAK Date: 4/24/07

ATTACHMENT 4B
(GRAPHICAL REPRESENTATION OF DATA)

Quantile Plot For Cesium - 137

Survey Unit: 9312-0010
Survey Unit Name: Northeast Protected Area Grounds
Mean: 3.16E-01 pCi/g



Cs-137	Rank	Percentage
-2.35E-02	1	3 %
-3.85E-03	2	8 %
0.00E+00	3	14 %
7.48E-03	4	19 %
1.91E-02	5	25 %
2.88E-02	6	31 %
4.18E-02	7	36 %
6.19E-02	8	42 %
6.26E-02	9	47 %
8.70E-02	10	53 %
1.44E-01	11	58 %
2.56E-01	12	64 %
2.76E-01	13	69 %
2.91E-01	14	75 %
4.30E-01	15	81 %
4.96E-01	16	86 %
1.60E+00	17	92 %
1.91E+00	18	97 %

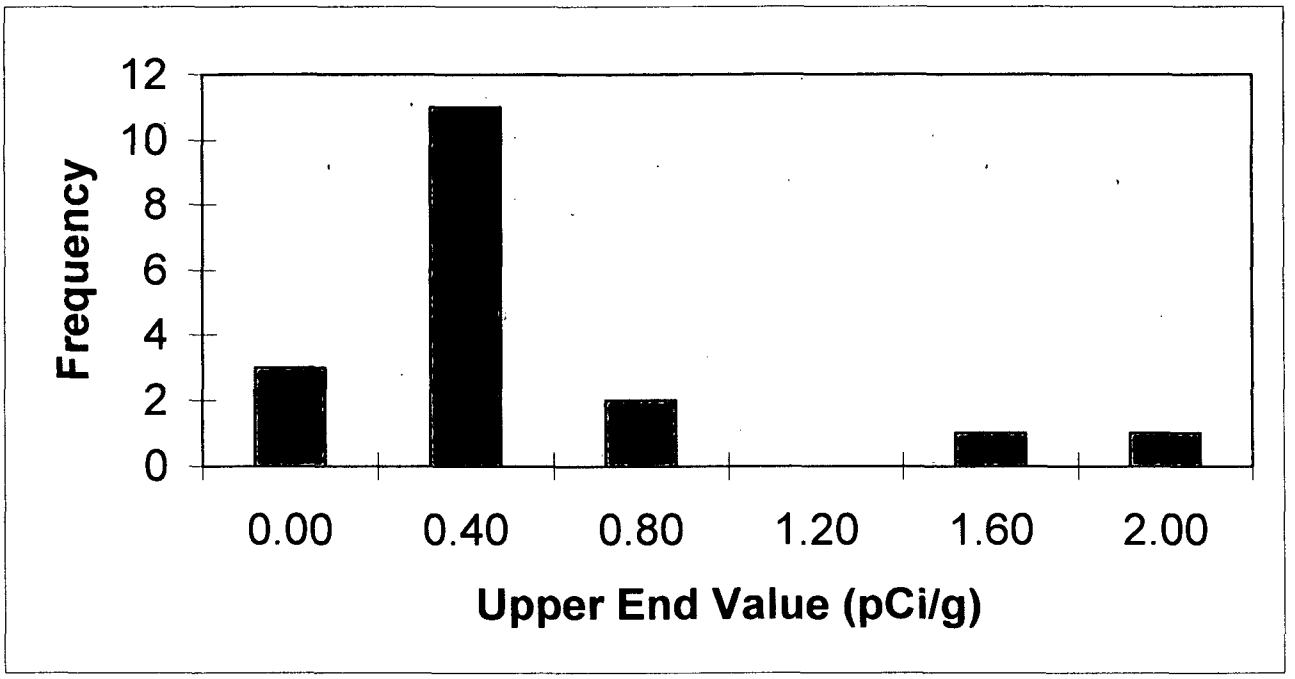
Prepared By: _____ Date: 4-24-07

Reviewed By: _____ Date: 4/24/07

Frequency Plot For Cesium-137

Survey Unit: 9312-0010
Survey Unit Name: Northeast Protected Area Grounds

Mean: 0.316 pCi/g



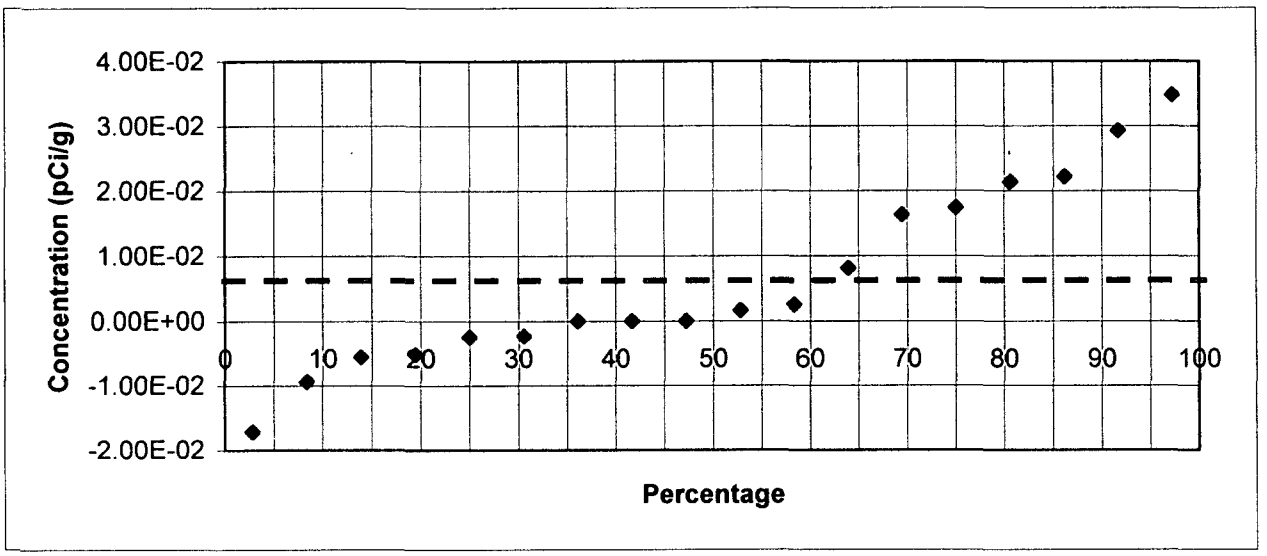
Upper End Value	Observation Frequency	Observation % Frequency
0.00	3	17%
0.40	11	61%
0.80	2	11%
1.20	0	0%
1.60	1	6%
2.00	1	6%
Total	18	100%

Prepared By: Carl Marshall Date: 4-24-07

Reviewed By: [signature] Date: 4/24/07

Quantile Plot For Cobalt - 60

Survey Unit: 9312-0010
Survey Unit Name: Northeast Protected Area Grounds
Mean: 6.18E-03 pCi/g



Co-60	Rank	Percentage
-1.72E-02	1	3 %
-9.39E-03	2	8 %
-5.55E-03	3	14 %
-5.15E-03	4	19 %
-2.46E-03	5	25 %
-2.30E-03	6	31 %
0.00E+00	7	36 %
0.00E+00	8	42 %
0.00E+00	9	47 %
1.65E-03	10	53 %
2.50E-03	11	58 %
8.09E-03	12	64 %
1.63E-02	13	69 %
1.74E-02	14	75 %
2.13E-02	15	81 %
2.21E-02	16	86 %
2.92E-02	17	92 %
3.48E-02	18	97 %

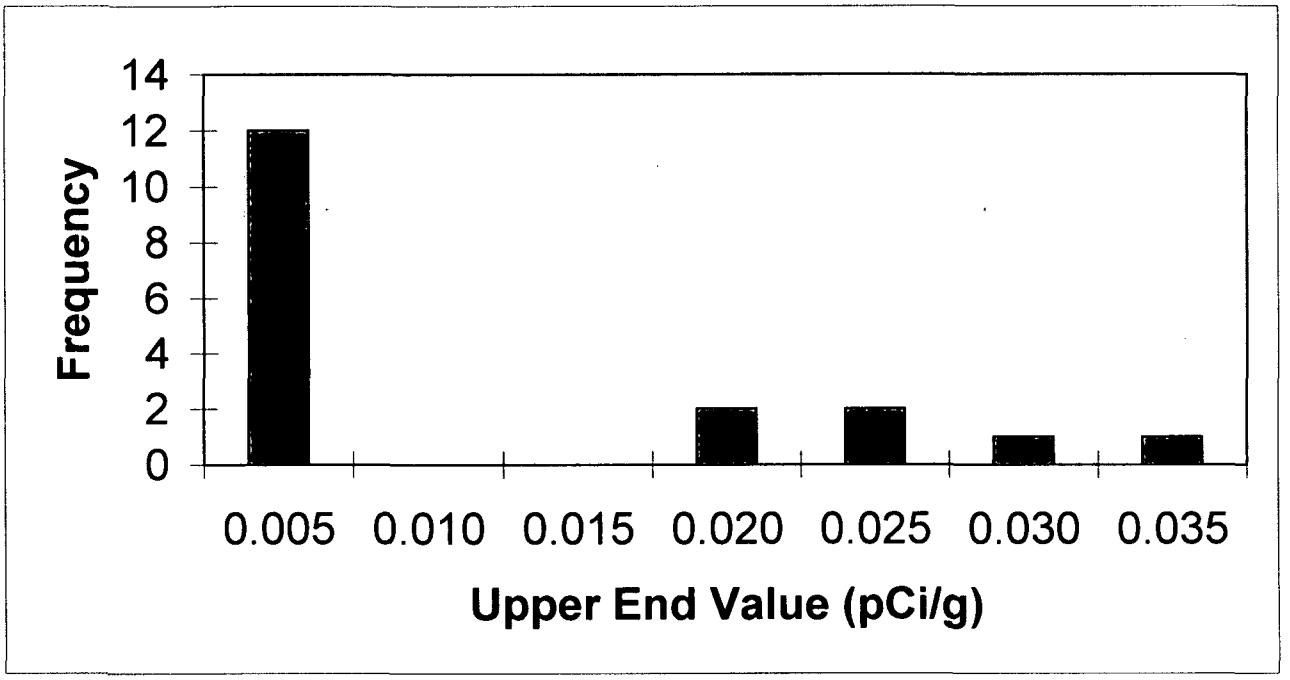
Prepared By: Carl Rundell Date: 4-24-07

Reviewed By: [signature] Date: 4/24/07

Frequency Plot For Cobalt - 60

Survey Unit: 9312-0010
Survey Unit Name: Northeast Protected Area Grounds

Mean: 0.006 pCi/g



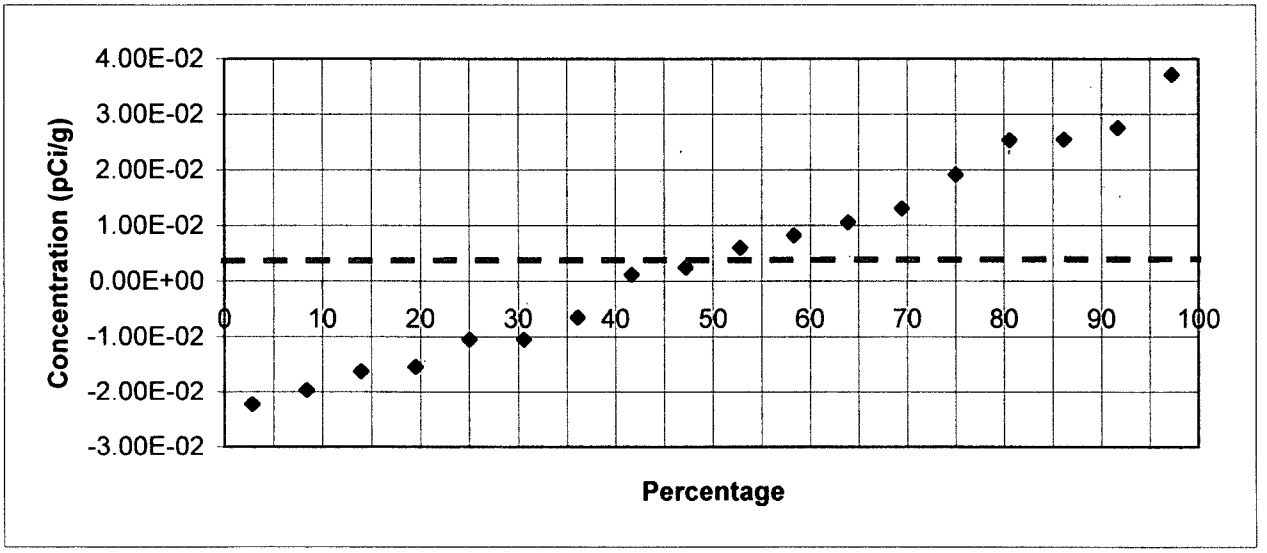
Upper End Value	Observation Frequency	Observation % Frequency
0.005	12	67%
0.010	0	0%
0.015	0	0%
0.020	2	11%
0.025	2	11%
0.030	1	6%
0.035	1	6%
Total	18	100%

Prepared By: _____ Date: 4-24-07

Reviewed By: _____ Date: 4/24/07

Quantile Plot For Strontium - 90

Survey Unit: 9312-0010
Survey Unit Name: Northeast Protected Area Grounds
Mean: 4.12E-03 pCi/g



Sr-90	Rank	Percentage
-2.23E-02	1	3 %
-1.97E-02	2	8 %
-1.63E-02	3	14 %
-1.55E-02	4	19 %
-1.05E-02	5	25 %
-1.05E-02	6	31 %
-6.57E-03	7	36 %
1.16E-03	8	42 %
2.40E-03	9	47 %
5.96E-03	10	53 %
8.14E-03	11	58 %
1.05E-02	12	64 %
1.30E-02	13	69 %
1.91E-02	14	75 %
2.53E-02	15	81 %
2.54E-02	16	86 %
2.75E-02	17	92 %
3.70E-02	18	97 %

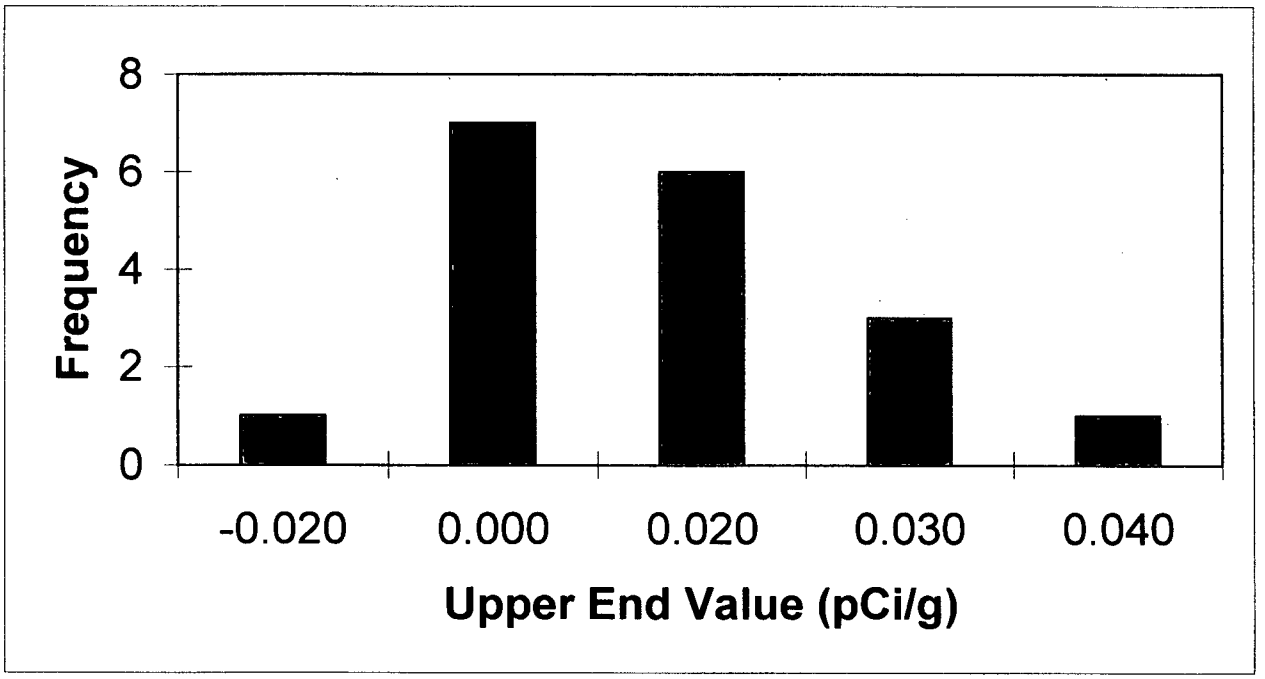
Prepared By: Date: 4-24-07

Reviewed By: Date: 4/24/07

Frequency Plot For Srontium - 90

Survey Unit: 9312-0010
Survey Unit Name: Northeast Protected Area Grounds

Mean: 0.004 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
-0.020	1	6%
0.000	7	39%
0.020	6	33%
0.030	3	17%
0.040	1	6%
Total	18	100%

Prepared By: Dale Kendall Date: 4-24-07

Reviewed By: Date: 4/24/07

ATTACHMENT 4C (SIGN TEST)

Sign Test Calculation Sheet For Multiple Radionuclisdes

Survey Unit Number: 9312-0010

Survey Unit Name: Northeast Protected Area Grounds

WP&IR#: 9312-0010

Classification : 1	TYPE I (α error):0.05	TYPE I (β error):0.05	

Radionuclides:	Cs-137	Co-60	Sr-90
Survey Design DCGL (pCi/g):	4.75	2.29	0.93

Results Cs-137	Results Co-60	Results Sr-90	Weighted Sum (W_s)	DCGL-Result	Sign
2.56E-01	3.48E-02	-1.97E-02	6.92E-02	9.31E-01	1
1.60E+00	0.00E+00	2.53E-02	3.37E-01	6.63E-01	1
1.91E+00	0.00E+00	2.54E-02	4.02E-01	5.98E-01	1
1.44E-01	8.09E-03	3.70E-02	3.39E-02	9.66E-01	1
8.70E-02	-5.15E-03	-1.05E-02	1.61E-02	9.84E-01	1
2.88E-02	1.74E-02	-2.23E-02	1.37E-02	9.86E-01	1
0.00E+00	-9.39E-03	-1.55E-02	-4.11E-03	1.00E+00	1
4.18E-02	2.13E-02	8.14E-03	1.81E-02	9.82E-01	1
2.76E-01	2.92E-02	1.91E-02	7.09E-02	9.29E-01	1
4.30E-01	1.63E-02	-1.05E-02	9.77E-02	9.02E-01	1
1.91E-02	-5.55E-03	2.40E-03	1.60E-03	9.98E-01	1
-2.35E-02	-2.30E-03	1.05E-02	-5.96E-03	1.01E+00	1
6.26E-02	-1.72E-02	-1.63E-02	5.67E-03	9.94E-01	1
4.96E-01	0.00E+00	2.75E-02	1.05E-01	8.95E-01	1
7.48E-03	1.65E-03	-6.57E-03	2.30E-03	9.98E-01	1
-3.85E-03	2.50E-03	1.16E-03	2.82E-04	1.00E+00	1
2.91E-01	2.21E-02	1.30E-02	7.10E-02	9.29E-01	1
6.19E-02	-2.46E-03	5.96E-03	1.20E-02	9.88E-01	1

Number of Positive Differences (S+): 18

Critical Value: 12 Survey Unit: Meets Acceptance Criterion

Performed By: Dal Randall Date: 4-24-07

Independent Review: D. WOJTKOWIAK Date: 4/24/07

ATTACHMENT 4D (QC SPLIT RESULTS)

Split Sample Assessment Form

Survey Area #: 9312	Survey Unit #: 0010	Survey Unit Name: Northeast Protected Area Grounds
Sample Plan or WPIR#: 9312-0010		SML #: 9312-0010-114

Sample Description: Comparison of split samples collected from sample measurement location #3 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was 9312-0010-114F the comparison sample was 9312-0010-114FS.

	STANDARD				COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
Cs-137	4.96E-01	2.56E-02	19	0.75 - 1.33	4.58E-01	2.33E-02	0.92	Y
Co-60	0.00E+00	1.22E-02	0	NONE -	0.00E+00	1.41E-02	N/A	N/A
K-40	1.06E+01	4.05E-01	26	0.75 - 1.33	1.07E+01	4.39E-01	1.01	Y

Comments/Corrective Actions: In consideration of the Co-60 results, guidance for agreement ranges, obtained from USNRC Inspection Procedure 84750, does not address resolution ratios less than 4, therefore, a determination of acceptability for such rations cannot be made. Since both Cs-137 and K-40 was found to be present at an acceptable level of agreement, no further action is warranted.

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

Resolution		Agreement Range	
4	7	0.50	2.00
8	15	0.60	1.66
16	50	0.75	1.33
51	200	0.80	1.25
> 200		0.85	1.18

Performed By:	Date:	Reviewed By:	Date:
Owl Rudall	4-19-07		4/23/07

WPIR – Work Plan and Inspection Record

SML – Sample Measurement Location designation

ATTACHMENT 4E
(COMPASS POWER CURVE)

DQA Surface Soil Report

Assessment Summary

Site:	Radiological Control Area		
Planner(s):	Dale Randall DR		
Survey Unit Name:	9312-0010		
Report Number:	1		
Survey Unit Samples:	18		
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