

Final Status Survey Final Report Phase VI

**Appendix A2
Survey Unit Release Record
9304-0002, Southwest Protected Area
Grounds**

February 2007



CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
SOUTHWEST PROTECTED AREA GROUNDS
SURVEY UNIT 9304-0002

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1. SURVEY UNIT DESCRIPTION

Survey Unit 9304-0002 (Southwest Protected Area Grounds) is designated as Final Status Survey (FSS) Class 1 and consists of 1,268 m² (0.313 acres) of uninhabited open land located approximately four hundred twenty (420) feet from the reference coordinate system benchmark used at Haddam Neck Plant (HNP) (see Attachment 1). The survey unit is bounded by Survey Unit 9306-0000, a Class 2 survey unit, on the east side and by Survey Unit 9304-0001, a Class 2 survey unit, on the three remaining sides. The survey unit is comprised of predominantly flat disturbed open land that gently slopes from east to west toward the Connecticut River.

The reference coordinates associated with this survey unit are E004 through E006 by S067 through S068. Section 5.4.4 of the License Termination Plan (LTP) identifies the requirement for a reference coordinate system for FSS. The reference coordinates provide the maximum dimensions of a rectangle containing this survey unit. Some areas contained in this rectangle may not be part of this survey unit. The boundary of the survey unit was defined using a Global Positioning System (GPS) based on the Connecticut State Plane System North American Datum (NAD) 1927.

2. CLASSIFICATION BASIS

The survey unit was classified in accordance with Procedure RPM 5.1-10, "*Survey Unit Classification*." The historical information, scoping analyses and characterization results provided sufficient data to designate Survey Unit 9304-0002 as Class 1 in August 2006.

The "*Classification Basis Summary*" conducted for Survey Unit 9304-0002 consisted of:

- a) A review of the 10CFR50.75 (g) (1) database,
- b) A review of the "*Initial Characterization Report*" and the "*Historic Site Assessment Supplement*,"
- c) Historic and current survey records review,
- d) Visual inspections and a "walkdown."

A review of the 10CFR50.75(g)(1) database report identifies twenty-four (24) documents associated with or relating to this survey area. Two (2) of the twenty-four (24) documents identified pertain to the current radiological conditions of this survey unit at the time of this report.

- a) HP 98-493: Analyses of Samples Taken east of the Intake Screen House-Bus 10 Modification. - Four (4) asphalt and seven (7) soil samples to a depth of two (2) feet were collected due East of the Screen House. The samples were analyzed on-site by gamma spectroscopy.

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The results indicate that no plant derived radionuclides were present at quantities above detection limits.

- b) HP 99-111 Analysis of Samples Taken for Proposed Trench from Screen House to Security Building (PAP). - Four (4) asphalt and ten (10) soil samples to a depth of two (2) feet were collected due East of the Screen House. The samples were analyzed on-site by gamma spectroscopy. The results indicate that no plant derived radionuclides were present at quantities above detection limits.

In May of 2006, while performing a Radiological Assessment of Survey Area 9304 during removal of Circulating Water piping system, soil was removed from the area and was staged in piles around the west-northwest edge of the excavation. Survey and sampling was being performed on the removed soil at selected, and accessible, locations along the base of the piles. Survey and sampling was conducted under SSWP 06-03-002. On May 9, 2006 an area of elevated activity was identified on a pile by direct scan measurement using an E-600 with a SPA-3 probe. The maximum response was 168,000 counts per minute (cpm) according to the survey. The locations were evaluated, and Cs-137 was confirmed to be present. A sample was collected (9304-0000-037RACR) and analyzed using gamma spectroscopy. The results indicated that the Cs-137 activity present in the sample was 897 $\mu\text{Ci/g}$ and the Cobalt-60 (Co-60) activity present in the sample was 9.51 $\mu\text{Ci/g}$. The area of the pile was remediated until no further elevated activity was identified. Subsequent sampling confirmed the remediation was successful in removing residual activity.

Based on the levels of activity and the fact that a remediation was conducted in the area, Survey Unit 9304-0002, a Class 1 Survey Unit, was established around the area of remediation to ensure that the proper level of FSS surveys and sampling were conducted in accordance with the LTP.

A review of the *"Initial and Supplemental Characterization Reports"* as well as the previous *"Classification Basis Summaries"* provided no additional information pertinent to classification.

A characterization survey plan was initiated and executed by Site Closure personnel, in August 2006, to determine existing conditions and obtain radiological data for Final Status Survey (FSS). Six (6) samples were collected within Survey Unit 9304-0002 and analyzed on-site using gamma spectroscopy.

Five (5) of the six (6) sample results were determined to be less than the established criteria for detection (i.e., a radionuclide is considered to be detected if the result is greater than two standard deviations of uncertainty). One sample, sample number 9304-02-005, was above the criteria for detection. The sample concentration was 0.056 $\mu\text{Ci/g}$ for Cs-137 and 0.036 $\mu\text{Ci/g}$ for Co-60 or 2.7% of the Operational Derived Concentration

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Guideline Level (DCGL). The Cs-137 levels were consistent with those concentrations in soil as determined from off-site locations as documented by Health Physics Technical Support Document (TSD) BCY-HP-0063, "Background Cs-137 Concentration in Soil." Characterization results showed Cs-137 and Co-60 to be the isotopes of concern for FSS planning purposes (refer to Table 1).

Table 1 – Basic Statistical Quantities for Cesium-137 and Cobalt-60 from the Characterization Survey

Parameter	Cs-137 (pCi/g)	Co-60 (pCi/g)
Minimum Value:	-1.30E-02	-1.18E-02
Maximum Value:	5.59E-02	3.56E-02
Mean:	1.31E-02	6.53E-03
Median:	1.19E-02	4.42E-03
Standard deviation:	2.60E-02	1.77E-02

Note: The Operational DCGLs are 4.75 pCi/g for Cs-137 and 2.29 pCi/g for Co-60; these are used in conjunction with the unity rule to achieve 15 mrem/yr Total Effective Dose Equivalent (TEDE)

Additionally, sample number 9304-02-003C was analyzed by the off-site laboratory for Hard-To-Detect (HTD) radionuclides. Material Service Requisition (MSR) number 06-1083 was generated to cover the analysis of the samples at the approved off-site laboratory.

The results of the HTD sample analysis indicated that there were no sample results above the established criteria for detection (i.e., a result greater than two standard deviations of uncertainty).

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

This survey area is affected by both 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 historical information and the results of radiological surveys performed during characterization, it was concluded that there was a low probability for residual radioactivity to be present in this survey unit in concentrations greater than the Operational DCGLs, justifying a final survey unit classification of Class 1 (refer to Section 3).

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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. Probabilistic sampling is a preferred method to select a sample so that each item in the population being studied has a known likelihood of being included in the sample.

The primary objective of the Final Status Survey Plan (FSSP) was to demonstrate that the level of residual radioactivity in Survey Unit 9304-0002 did not exceed the release criteria as specified in the LTP and that the potential dose from residual radioactivity is As Low As Reasonably Achievable (ALARA).

A fundamental precursor to survey design is to establish a relationship between the release criteria and some measurable quantity. This is done through the development of Derived Concentration Guideline Levels (DCGLs). The DCGLs represent 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

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

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The total dose under the LTP criteria is twenty-five (25) mrem/yr TEDE from all three components. The allowable total dose under the Connecticut Department of Environmental Protection (CTDEP) radiological remediation standard for 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 two (2) mrem/yr TEDE.

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

Equation 2

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

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

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

Radionuclide (1)	Base Case Soil DCGL ($\mu\text{Ci/g}$) ⁽²⁾	Operational DCGL ($\mu\text{Ci/g}$) ⁽³⁾	Required MDC ($\mu\text{Ci/g}$) ⁽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
Pu-241	8.70E+02	5.22E+02	3.48E+01
Am-241 ⁽⁵⁾	2.58E+01	1.55E+01	1.03E+00
Cm-243/244	2.90E+01	1.74E+01	1.16E+00

- (1) **Bold** indicates those radionuclides considered to be hard to detect
- (2) The Base Case Soil DCGLs for soil are specified by the LTP in Chapter 6 and are equivalent to 25 mrem/yr TEDE.
- (3) The Operational DCGL is equivalent to 15 mrem/yr TEDE.
- (4) The required MDC is equivalent to 1 mrem/yr TEDE.
- (5) Americium-241 can be analyzed by gamma and alpha spectroscopy and is considered to be Easy to Detect (ETD). The preferred result is the alpha spectroscopy's when both analyses are performed.

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Another important facet of the DQO process is to identify the radionuclides of concern and determine the concentration variability. Six (6) samples were collected and analyzed during characterization as discussed in Section 2. The samples were collected through systematic sampling over a simple grid design. One characterization sample was analyzed for Hard to Detect (HTD) radionuclides. Cs-137 was found to be the predominate radionuclide of concern. Co-60 was included in the survey design based on historical information. The mean and variability of Cs-137 and Co-60 in soil in this survey unit was determined during characterization 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 FSSP uses an integrated sample design that combines scanning surveys and sampling which can be either random or biased.

Characterization sampling was used to determine concentration variability. The samples were collected through systematic sampling over a simple grid design.

The DQO process determined that Cs-137 and Co-60 would be the radionuclides of concern in 9304-0002 (refer to Section 3). The sum of fractions or unity rule was used with the individual Operational DCGLs because multiple radionuclides (Cs-137 and Co-60) are considered in the survey design. Other radionuclides identified during FSS were evaluated to ensure adequate survey design.

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

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The Elevated Measurement Comparison (EMC) count rate equivalent was determined to be 3,178 cpm above background, in accordance with Procedure RPM 5.1-11.

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 4.7 to maintain the relative shift (Δ/σ) in the range of 1 and 3. The resulting Relative Shift was 2.0. A Prospective Power Curve was generated using COMPASS, a software package developed under the sponsorship of the United States Nuclear Regulatory Commission (USNRC) for implementation of the MARSSIM in support of the decommissioning license termination rule (10 CFR 20, Subpart E). The result of the COMPASS computer run showed adequate power for the survey design. Survey design specified fifteen (15) surface soil samples for non-parametric statistical testing.

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

Judgmental sampling was included as a feature of this survey design to account for any anomalies potentially identified in the field.

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

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Table 3 - Sample Measurement Locations with Associated GPS Coordinates

Designation	Northing	Easting
9304-0002-001F	236374.55	668548.03
9304-0002-001FS		
9304-0002-002F	236374.55	668515.51
9304-0002-003F	236346.39	668499.25
9304-0002-004F	236318.22	668482.98
9304-0002-004FS		
9304-0002-005F	236318.22	668515.51
9304-0002-006F	236346.39	668531.77
9304-0002-007F	236346.39	668564.29
9304-0002-008F	236318.22	668548.03
9304-0002-009F	236290.06	668531.77
9304-0002-010F	236261.89	668548.03
9304-0002-011F	236290.06	668564.29
9304-0002-012F	236318.22	668580.55
9304-0002-013F	236318.22	668613.07
9304-0002-014F	236290.06	668596.81
9304-0002-015F	236261.89	668580.55

Although Procedure RPM 5.1-11 only specified that 5% of the samples are required to be selected for HTD analysis, two (2) soil samples or 13% of the number of samples that would be used for non-parametric statistical testing were randomly selected for HTD radionuclide analysis using the Microsoft Excel "RANDBETWEEN" function. Each sample was sent off-site for a full suite analysis of the HTD radionuclides specified in the LTP, Table 2-12, "Radionuclides Potentially Present at Haddam Neck Plant" and as provided in Table 2.

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

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Based on the LTP requirements for a Class 1 land area, the total surface area to be scanned was 100% of the survey unit. A map of the scan grid is provided in Attachment 1.

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 4 provides a synopsis of the survey design.

Table 4 – Synopsis of the Survey Design

Feature	Design Criteria	Basis
Survey Unit Land Area	1,268 m ²	Based on AutoCAD-Lt and Visual Sample Plan calculations
Number of Measurements	15	Type 1 and Type 2 errors were 0.05, sigma was 0.045 pCi/g, the LBGR was adjusted to 4.66 to maintain Relative Shift in the range of 1 and 3
Grid Spacing	9.88 m	Based on triangular grid
Operational DCGL	4.75 pCi/g Cs-137 2.29 pCi/g Co-60	Administratively set to achieve 15 mrem/yr TEDE ⁽¹⁾
Soil Investigation Level	4.75 pCi/g Cs-137 2.29 pCi/g Co-60	The Operational DCGL meets the LTP criteria for a Class 1 survey unit
Scan Survey Area Coverage	100% of the area	The LTP requires 100% area coverage for Class 1 Survey Units.
Scan Investigation Level	>DCGL _{EMC} (or 3,178 cpm above background)	Administratively set to achieve 15 mrem/yr TEDE ⁽¹⁾

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

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Scan surveys were performed on 100% of the surface area of Survey Unit 9304-0002. Grid lines, one meter wide, were painted on the ground of the entire survey unit. A background survey was performed around the survey unit and it was determined that the range of background measurements, using an Eberline E-600 with a SPA-3 sodium iodide detector.

The entire survey unit was 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.

Measurement locations were identified in North American Datum (NAD) 1927 coordinates using GPS; fixed sample measurement locations were identified and marked with a surveyor's flag or paint for identification. At each fixed sample measurement location, a one (1) meter radius around the sample flag or paint mark was scanned for elevated radiation levels.

Fifteen (15) 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 (9304-0002-005F and 9304-0002-008F) were randomly selected for HTD radionuclide analysis by the off-site laboratory.

The implementation of quality control measures included the collection of two (2) samples (9304-0002-001F and 9304-0002-004F) for "split sample" analysis.

6. SURVEY RESULTS

All field survey activities were conducted between August 18 and August 22, 2006.

On August 18, 2006, the area was scanned in accordance with the Final Status Survey Plan (FSSP). Two (2) elevated measurement locations were identified during scanning. Two (2) judgmental or biased samples were collected at the elevated measurement locations. The samples collected at elevated measurement locations were 9304-0002-016F and 9304-0002-017F. A map identifying all of the sample locations is provided in Attachment 1.

The seventeen (17) fixed sample measurement 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 fixed sample measurement locations. All scan results are provided in Attachment 2.

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Table 5 - Scan Results for Sample Measurement Locations

Sample Measurement Location	Highest Logged Reading (kcpm)	Action Level ⁽¹⁾ (kcpm)	> Action Level ⁽²⁾
1	10.0	10.8	NO
2	10.2	11.5	NO
3	9.1	10.6	NO
4	8.9	10.7	NO
5	11.1	12.2	NO
6	8.4	10.6	NO
7	8.9	10.9	NO
8	10.7	11.0	NO
9	10.7	11.4	NO
10	10.1	12.2	NO
11	10.9	12.2	NO
12	11.8	12.2	NO
13	10.2	11.9	NO
14	10.6	13.2	NO
15	9.6	11.7	NO
16	62.9	17.7	YES ⁽³⁾
17	150	14.1	YES ⁽³⁾

- (1) The action level is based on a measurement above ambient background in accordance with the FSSP.
- (2) FSS sample plans require movement of the sample measurement location to the area within the 1 meter radius yielding the response above the action level.
- (3) Judgmental sample location identified during scanning as an elevated measurement location.

Table 6 provides an overview of the scan area survey. All scan results are provided in Attachment 2.

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Table 6 - Scan Area Results

Row Number	Highest Logged Reading (kcpm)	Action Level (kcpm) ⁽¹⁾	>Action Level ⁽²⁾	Elevated Reading Identification ⁽³⁾	Investigation Sample
1	10.1	10.9	NO	NA	NA
2	9.4	10.0	NO	NA	NA
3	8.5	9.7	NO	NA	NA
4	8.5	10.9	NO	NA	NA
5	8.8	10.7	NO	NA	NA
6	8.3	10.8	NO	NA	NA
7	10.1	11.6	NO	NA	NA
8	9.9	11.3	NO	NA	NA
9	9.0	12.6	NO	NA	NA
10	8.4	10.8	NO	NA	NA
11	9.2	12.1	NO	NA	NA
12	9.7	12.3	NO	NA	NA
13	10.0	12.6	NO	NA	NA
14	10.0	13.4	NO	NA	NA
15	10.4	12.3	NO	NA	NA
16	9.1	12.2	NO	NA	NA
17	10.2	12.0	NO	NA	NA
18	10.6	11.6	NO	NA	NA
19	10.1	13.0	NO	NA	NA
20	10.7	12.8	NO	NA	NA
21	9.8	12.6	NO	NA	NA
22	9.5	12.0	NO	NA	NA
23	9.4	11.7	NO	NA	NA
24	10.8	11.7	NO	NA	NA
25	11.0	13.2	NO	NA	NA
26	11.2	12.7	NO	NA	NA
27	10.8	12.5	NO	NA	NA

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Table 6 - (continued)

Row Number	Highest Logged Reading (kcpm)	Action Level (kcpm) ⁽¹⁾	>Action Level ⁽²⁾	Elevated Reading Identification ⁽³⁾	Investigation Sample
28	11.6	12.8	NO	NA	NA
29	11.7	12.7	NO	NA	NA
29	58.9	12.7	YES	9304-02-ER-01-29-1	9304-0002-016F
30	10.7	12.6	NO	NA	NA
31	12.4	13.5	NO	NA	NA
32	11.3	12.8	NO	NA	NA
33	11.5	13.9	NO	NA	NA
33	17.3	13.9	YES	9304-02-ER-01-33-1	9304-0002-017F
34	10.2	12.9	NO	NA	NA
35	11.1	12.1	NO	NA	NA
36	11.2	13.0	NO	NA	NA
37	13.2	14.2	NO	NA	NA
38	11.1	12.1	NO	NA	NA
39	11.1	13.8	NO	NA	NA
40	10.8	12.0	NO	NA	NA
41	11.6	12.2	NO	NA	NA
42	11.5	13.1	NO	NA	NA
43	11.5	14.5	NO	NA	NA
44	10.9	12.9	NO	NA	NA
45	10.3	13.5	NO	NA	NA
46	10.8	11.7	NO	NA	NA
47	10.4	11.6	NO	NA	NA

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

(2) Elevated areas were determined to be NORM, refer to Section 8.

Two (2) judgmental or biased samples were collected at elevated measurement locations identified above. The samples collected at elevated locations were 9304-0002-016F and 9304-0002-017F.

The off-site laboratory employed for the radiological analyses of samples was General Engineering Laboratories (GEL), LLC, Charleston, South Carolina. The laboratory analyzed the fifteen (15) samples collected for non-parametric

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statistical testing, the associated duplicates, and the two (2) biased samples using gamma spectroscopy. Gamma spectroscopy analysis was performed to the required MDCs. Gamma spectroscopy results identified some radionuclides meeting the established criteria for detection (i.e., a result greater than two standard deviations uncertainty).

Cs-137 was identified in two (2) of the fifteen (15) samples collected for non-parametric statistical testing. Co-60 was also identified in two (2) of the fifteen (15) samples collected for non-parametric statistical testing.

The mean of the gamma spectroscopic analysis results for the samples indicated that Cs-137 was present at levels that are similar to the concentrations of Cs-137 found in soil at off-site locations within the vicinity of the HNP as presented in the Health Physics TSD BCY-HP-0063. The mean of the gamma spectroscopic analysis results for the samples indicated that Co-60 was present at very low levels in two (2) samples and at levels below the established detection limit, of 2σ , in the remaining thirteen (13) samples collected and analyzed for non-parametric testing. A summary of the results of the fifteen (15) samples collected for non-parametric statistical testing is provided in Table 7.

Table 7 - Summary of Soil Sample Results

Sample Number	Cs-137 $\mu\text{Ci/g}$	Co-60 $\mu\text{Ci/g}$
9304-0002-001F	1.59E-02	8.81E-03
9304-0002-002F	-8.36E-03	1.30E-02
9304-0002-003F	-3.16E-03	-7.74E-05
9304-0002-004F	8.31E-03	2.53E-02
9304-0002-005F	7.01E-03	1.23E-03
9304-0002-006F	9.55E-03	5.27E-03
9304-0002-007F	1.68E-02	-6.86E-03
9304-0002-008F	1.27E-03	-1.06E-03
9304-0002-009F	-8.14E-03	-2.82E-03
9304-0002-010F	-2.18E-03	-2.71E-03
9304-0002-011F	2.79E-03	-2.76E-03
9304-0002-012F	1.07E-02	2.42E-02
9304-0002-013F	4.38E-02	2.22E-02
9304-0002-014F	2.40E-02	1.20E-02
9304-0002-015F	3.11E-02	1.57E-02

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

Equation 3

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

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 9304-0001 are provided in Table 8 below.

**Table 8 – 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	
9304-0002-001F	-	-	-
9304-0002-002F	-	-	-
9304-0002-003F	-	-	-
9304-0002-004F	-	0.011	0.011
9304-0002-005F	-	-	-
9304-0002-006F	-	-	-
9304-0002-007F	-	-	-
9304-0002-008F	-	-	-
9304-0002-009F	-	-	-
9304-0002-010F	-	-	-
9304-0002-011F	-	-	-
9304-0002-012F	-	0.011	0.011
9304-0002-013F	0.009	-	0.009

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**Table 8 – 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	
9304-0002-014F	-	-	-
9304-0002-015F	0.007	-	0.007

- (1) The Operational DCGL from Table 2 is 4.75 pCi/g for Cs-137 and 2.29 pCi/g for Co-60 to achieve fifteen (15) mrem/yr TEDE respectively.
- (2) - indicates that the radionuclide was not positively detected in the sample

The off-site laboratory also processed two (2) samples for HTD analysis as required by the sample plan. The requested analyses included alpha spectroscopy, gas proportional counting, and liquid scintillation depending on the radionuclide and the measurement method. All analyses met the required MDC. Table 8 lists the results for those HTD radionuclides meeting the accepted criteria for detection (i.e., a result greater than two standard deviations uncertainty) in one sample.

As previously stated in Section 4 of this report, the criteria for de-selection of a radionuclide is a concentration that is less than 5% of the Operational DCGL for individual radionuclides and less than 10% of the Operational DCGLs for aggregates. The HTD radionuclides identified in Table 8 meet the criteria for de-selection since their ratios are 2.2% for Cm-243/244, 2.1% for Pu-241, and 1.3% for Ni-63 with an aggregate total of 5.8%. Therefore, Cm-243/244, Pu-241, and Ni-63 will not be considered in the final dose determination for this survey unit

Table 9 - Hard-to-Detect Sample Results

Sample	Cm-243/244		Pu-241		Ni-63	
	Activity (pCi/g)	Fraction of DCGL _{op} ⁽¹⁾	Activity (pCi/g)	Fraction of DCGL _{op} ⁽¹⁾	Activity (pCi/g)	Fraction of DCGL _{op} ⁽¹⁾
9304-0002-005F	3.75E-01	2.20E-02	1.10E+01	2.10E-02	-	-
9304-0002-008F	-	-	-	-	9.11E+00	1.30E-02

- (1) The Operational DCGL from Table 2 is 17.4 pCi/g for Cm-243/244, 522 pCi/g for Pu-241, and 723 pCi/g for Ni-63.
- (2) - indicates that the radionuclide was not positively detected in the sample

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Two (2) judgmental samples were collected at locations selected by FSS Supervision based on professional judgment and observation. Gamma spectroscopy analysis was performed by the off-site laboratory to the required MDC. None of the samples exceeded 3% of the Operational DCGL. No further action or investigations were required (see Table 9).

Table 10 - Judgmental or Biased Sample Results

Sample Number	Cs-137 ($\mu\text{Ci/g}$)	Co-60 ($\mu\text{Ci/g}$)	Fraction of the Operational DCGL ⁽¹⁾
9304-0002-016F	6.31E-02	1.77E-02	0.021
9304-0002-017F	2.92E-02	-1.01E-02	0.006

(1) The Operational DCGLs from Table 2 are 4.75 $\mu\text{Ci/g}$ for Cs-137 and 2.29 $\mu\text{Ci/g}$ for Co-60 and are used in conjunction with the unity rule

7. QUALITY CONTROL

The off-site laboratory processed the split samples and performed gamma spectroscopy analysis. Two (2) samples, or 13% of the total number of samples selected for Non-Parametric analysis, were split and analyzed by an off-site laboratory. 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 unacceptable agreement between field split results for Cs-137 and Co-60 which was due to very low levels of activity reported that were generally approaching or below instrumentation detection limits. Assessment of the QC Split Samples was performed by using the reported results for NORM which resulted in acceptable agreement.

The sample analysis vendor, GEL maintains quality control and quality assurance plans as part of normal operations. Refer to Attachment 3 and Attachment 4 for data and data quality analysis results.

8. INVESTIGATIONS AND RESULTS

No investigations were conducted.

9. REMEDIATION AND RESULTS

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

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10. CHANGES FROM THE FINAL STATUS SURVEY PLAN

No changes were made to the FSS plan.

11. DATA QUALITY ASSESSMENT (DQA)

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

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

The preliminary data review consisted of calculating basic statistical quantities (e.g., mean, median, standard deviation). The standard deviation was slightly less than the value used for the survey design. This would indicate that the number of samples collected was sufficient to meet the Operational DCGL. The mean and median values are well below the Operational DCGL as applied through the use of the unity rule. Also, the retrospective power curve shows that a sufficient number of samples were collected to achieve the desired power. Therefore, the survey unit meets the unrestricted release criteria with adequate power as required by the DQOs.

For Cs-137, the range of the data, about three (3) standard deviations, was not a particularly large variation considering that the levels were essentially at existing environmental levels where such variation is to be expected. The difference between the mean and median was 17% 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 positive skewness as confirmed by the calculated skew of 0.91.

For Co-60, the range of the data, about three (3) standard deviations, was not a particularly large variation considering that the levels were at extremely low levels where such variation is to be expected. The difference between the mean and median was 29% of the standard deviation which indicates a small skewness in the data. The data was represented graphically through posting plots, a frequency plot, and a quantile plot. The frequency plot shows a positive skewness as confirmed by the calculated skew of 0.47.

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

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12. ANOMALIES

The anomalies associated with the poor agreement range between the field splits were presented in Section 7. The source of the disagreement for Cs-137 and Co-60 is likely due to the extremely low levels of activity being reported and the statistical uncertainties associated with the comparison of very small numbers.

GEL, the off-site laboratory reported one (1) Nonconformance Report (NCR) relating to the sample analysis for this survey unit. The analyst did not scan the samples into the batch prior to analysis. However, the samples did remain in their custody at all times. The error has been corrected and the analyst has been instructed on the proper procedures. This NCR did not affect the sample results for this survey unit.

No other anomalies were noted.

13. CONCLUSION

Survey Unit 9304-0002 has met the final DQOs of the FSS plan. The ALARA criteria for soils as specified in Chapter 4 of the LTP were achieved. Elevated Measurement Comparison and remediation were not required.

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 was properly designated as Class 1.

The dose contribution from soil is 0.08 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 two (2) mrem/yr TEDE.

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

The average total dose from residual radioactivity in this survey unit, including exposures from the three (3) components as described in Section 3, that is, residual radioactivity in soil, existing groundwater radioactivity, and future groundwater radioactivity from the burial of concrete foundations or footings from site buildings containing residual radioactivity, will not exceed 4.08 mrem/yr TEDE.

Therefore, Survey Unit 9304-0002 is acceptable for unrestricted release.

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SURVEY UNIT 9304-0002

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14. ATTACHMENTS

14.1 Attachment 1 – Survey Unit Location Map

14.2 Attachment 2 – Scan Results

14.3 Attachment 3 – Laboratory Results

14.4 Attachment 4 – DQA Results

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SURVEY UNIT 9304-0002

RELEASE RECORD

ATTACHMENT 1 (FIGURES)

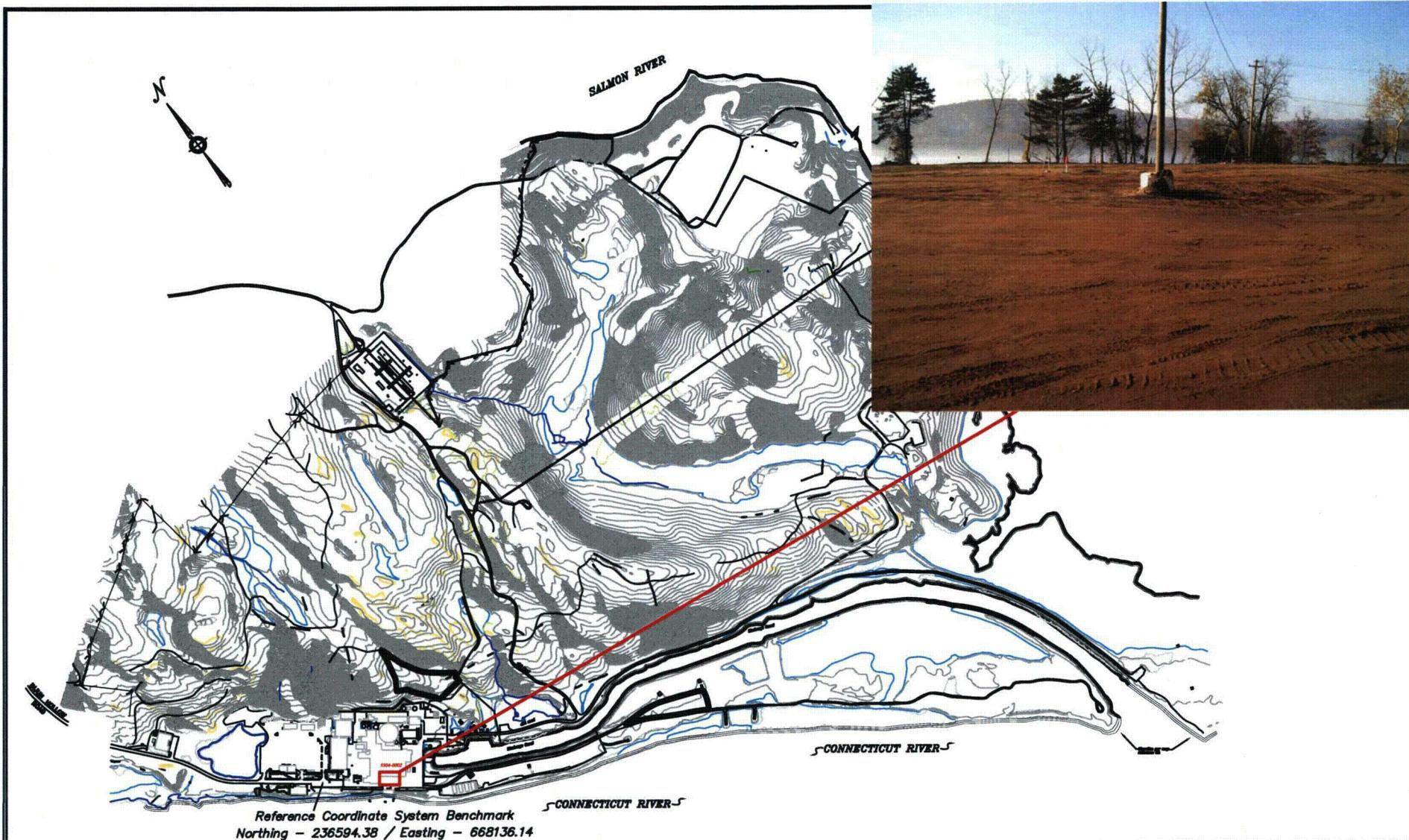
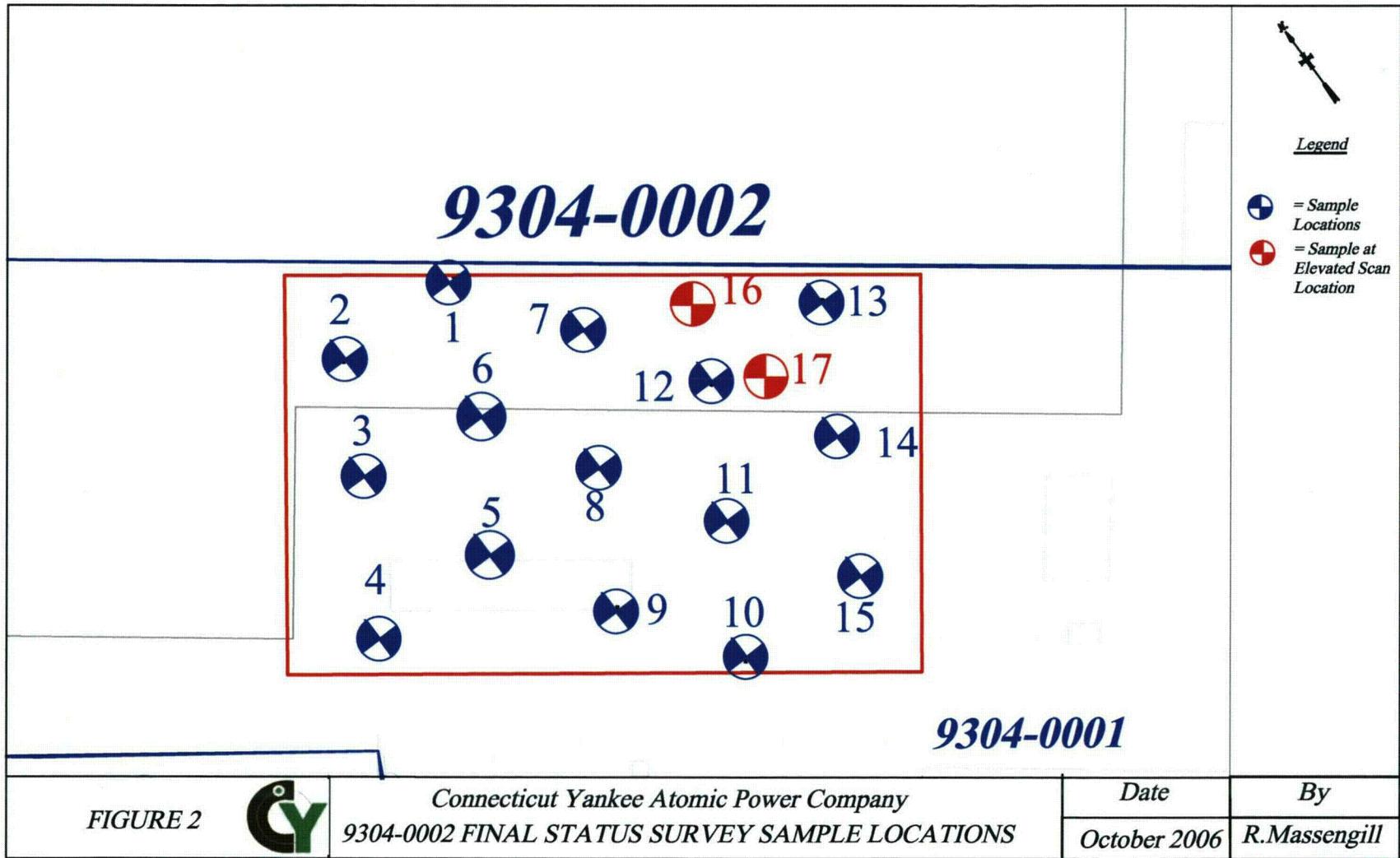


Figure 1

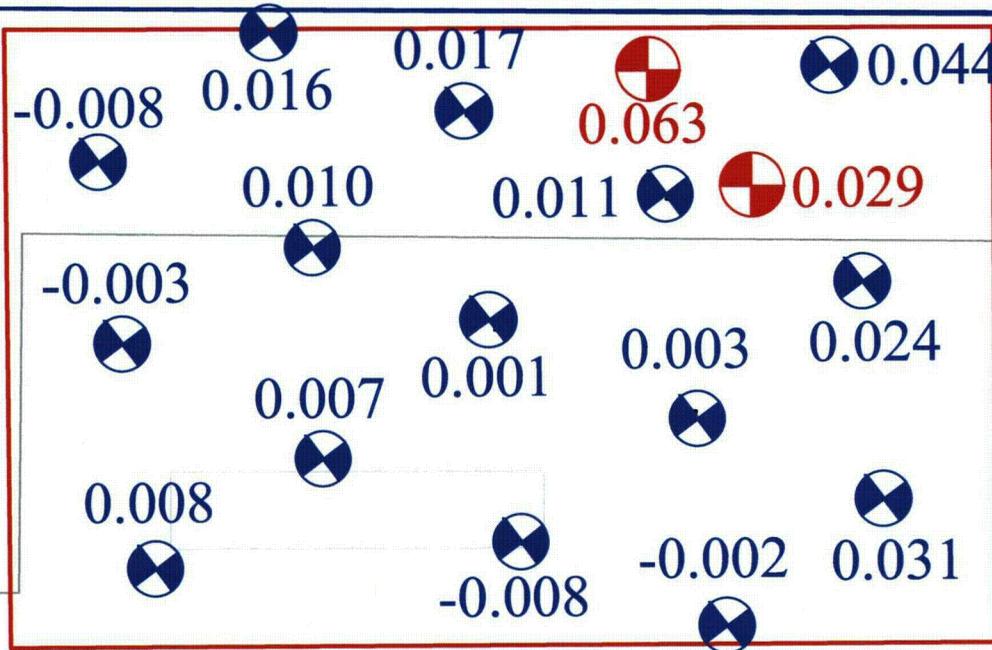


Connecticut Yankee Atomic Power Company
 Site Map With Reference To Survey Unit 9304-0002

Date	By
October 2006	R.W.M.



9304-0002



Legend

-  = Sample Locations
-  = Sample at Elevated Scan Location

Note:
Cesium-137
results are
given in p
Ci/g

9304-0001

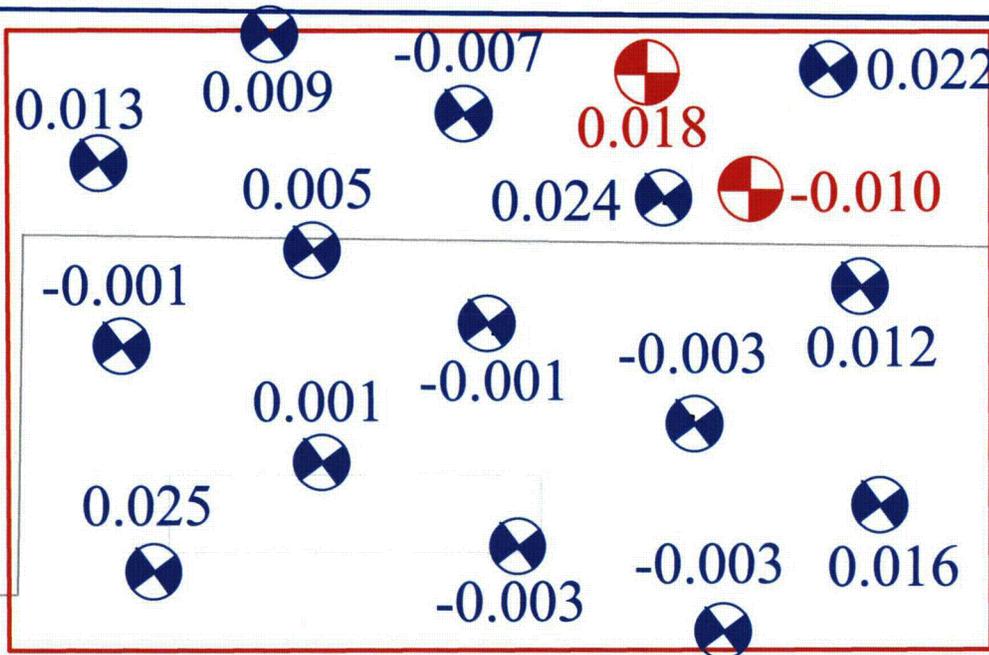
FIGURE 3



Connecticut Yankee Atomic Power Company
9304-0002 Final Status Survey Design
Cesium-137 Posting Plot

Date	By
October 2006	R. Massengill

9304-0002



Legend

-  = Sample Locations
-  = Sample at Elevated Scan Location

Note:
Cobalt-60
results are
given in ρ
Ci/g

9304-0001

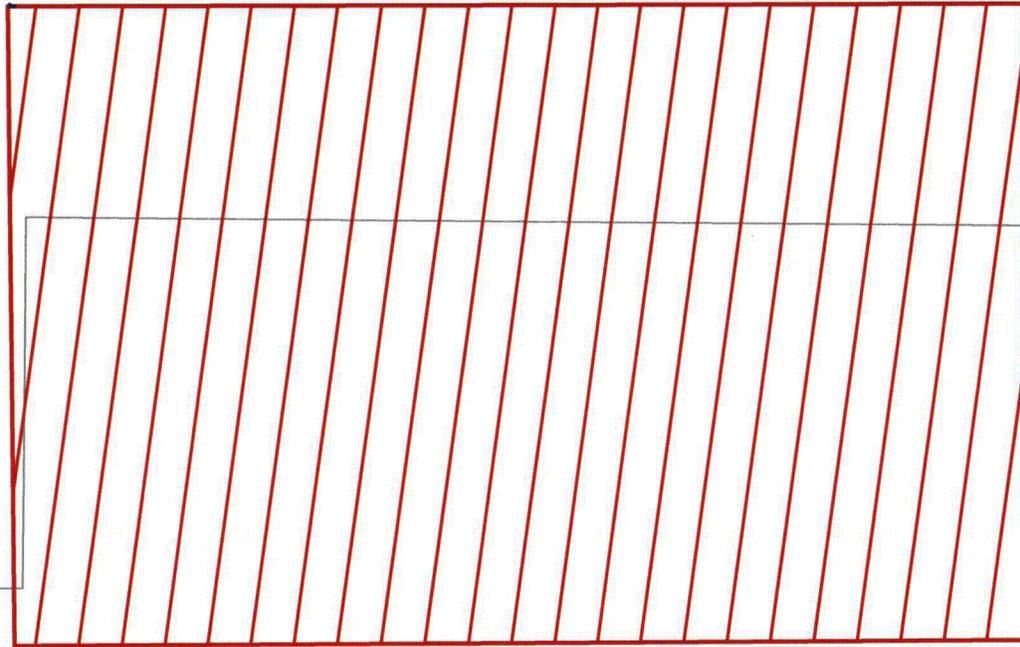
FIGURE 4



Connecticut Yankee Atomic Power Company
9304-0002 Final Status Survey Design
Cobalt-60 Posting Plot

Date	By
October 2006	R. Massengill

9304-0002



Legend

 = SCAN AREA

9304-0001

Figure 5



Connecticut Yankee Atomic Power Company
9304-0002 Final Status Survey Scan Area

Date	By
October 2006	R. Massengill

SOUTHWEST PROTECTED AREA GROUNDS
SURVEY UNIT 9304-0002

RELEASE RECORD

ATTACHMENT 2 (SCAN RESULTS)

FSS SURVEY UNIT
9304-0002
(CLASS 1 AREA)
SURVEY AREA SCAN DATA

Survey Location	Log Date	Log Time	Reading	AL	>AL	E-600 S/N	Probe S/N
9304-02-BC-01-01-0	8/18/2006	10:44:00	9.49E+03			1105	1012
9304-02-SC-01-01-0	8/18/2006	10:47:00	1.01E+04	1.09E+04		1105	1012
9304-02-BC-01-02-0	8/18/2006	10:35:00	8.69E+03			1105	1012
9304-02-SC-01-02-0	8/18/2006	10:44:00	9.44E+03	1.00E+04		1105	1012
9304-02-BC-01-03-0	8/18/2006	10:30:00	8.38E+03			1105	1012
9304-02-SC-01-03-0	8/18/2006	10:34:00	8.51E+03	9.69E+03		1105	1012
9304-02-BC-01-04-0	8/18/2006	10:25:00	9.53E+03			1105	1012
9304-02-SC-01-04-0	8/18/2006	10:28:00	8.53E+03	1.09E+04		1105	1012
9304-02-BC-01-05-0	8/18/2006	10:21:00	9.31E+03			1105	1012
9304-02-SC-01-05-0	8/18/2006	10:24:00	8.77E+03	1.07E+04		1105	1012
9304-02-BC-01-06-0	8/18/2006	10:16:00	9.43E+03			1105	1012
9304-02-SC-01-06-0	8/18/2006	10:20:00	8.32E+03	1.08E+04		1105	1012
9304-02-BC-01-07-0	8/18/2006	10:12:00	1.02E+04			1105	1012
9304-02-SC-01-07-0	8/18/2006	10:15:00	1.01E+04	1.16E+04		1105	1012
9304-02-BC-01-08-0	8/18/2006	10:07:00	9.85E+03			1105	1012
9304-02-SC-01-08-0	8/18/2006	10:11:00	9.94E+03	1.13E+04		1105	1012
9304-02-BC-01-09-0	8/18/2006	10:03:00	1.11E+04			1105	1012
9304-02-SC-01-09-0	8/18/2006	10:06:00	9.02E+03	1.26E+04		1105	1012
9304-02-BC-01-10-0	8/18/2006	9:58:00	9.45E+03			1105	1012
9304-02-SC-01-10-0	8/18/2006	10:02:00	8.42E+03	1.08E+04		1105	1012
9304-02-BC-01-11-0	8/18/2006	9:51:00	1.06E+04			1105	1012
9304-02-SC-01-11-0	8/18/2006	9:55:00	9.24E+03	1.21E+04		1105	1012
9304-02-BC-01-12-0	8/18/2006	9:45:00	1.08E+04			1105	1012
9304-02-SC-01-12-0	8/18/2006	9:50:00	9.65E+03	1.23E+04		1105	1012
9304-02-BC-01-13-0	8/18/2006	10:24:00	1.11E+04			1117	1001
9304-02-SC-01-13-0	8/18/2006	10:27:00	1.00E+04	1.26E+04		1117	1001
9304-02-BC-01-14-0	8/18/2006	10:28:00	1.18E+04			1117	1001
9304-02-SC-01-14-0	8/18/2006	10:31:00	1.00E+04	1.34E+04		1117	1001
9304-02-BC-01-15-0	8/18/2006	10:34:00	1.08E+04			1117	1001
9304-02-SC-01-15-0	8/18/2006	10:36:00	1.04E+04	1.23E+04		1117	1001
9304-02-BC-01-16-0	8/18/2006	10:38:00	1.07E+04			1117	1001
9304-02-SC-01-16-0	8/18/2006	10:40:00	9.12E+03	1.22E+04		1117	1001
9304-02-BC-01-17-0	8/18/2006	10:41:00	1.05E+04			1117	1001
9304-02-SC-01-17-0	8/18/2006	10:44:00	1.02E+04	1.20E+04		1117	1001
9304-02-BC-01-18-0	8/18/2006	10:45:00	1.02E+04			1117	1001
9304-02-SC-01-18-0	8/18/2006	10:48:00	1.06E+04	1.16E+04		1117	1001
9304-02-BC-01-19-0	8/18/2006	10:49:00	1.15E+04			1117	1001
9304-02-SC-01-19-0	8/18/2006	10:52:00	1.01E+04	1.30E+04		1117	1001
9304-02-BC-01-20-0	8/18/2006	10:53:00	1.13E+04			1117	1001
9304-02-SC-01-20-0	8/18/2006	10:56:00	1.07E+04	1.28E+04		1117	1001
9304-02-BC-01-21-0	8/18/2006	10:58:00	1.11E+04			1117	1001
9304-02-SC-01-21-0	8/18/2006	11:01:00	9.79E+03	1.26E+04		1117	1001
9304-02-BC-01-22-0	8/18/2006	11:02:00	1.05E+04			1117	1001
9304-02-SC-01-22-0	8/18/2006	11:04:00	9.54E+03	1.20E+04		1117	1001
9304-02-BC-01-23-0	8/18/2006	11:06:00	1.03E+04			1117	1001
9304-02-SC-01-23-0	8/18/2006	11:08:00	9.41E+03	1.17E+04		1117	1001
9304-02-BC-01-24-0	8/18/2006	11:09:00	1.03E+04			1117	1001
9304-02-SC-01-24-0	8/18/2006	11:12:00	1.08E+04	1.17E+04		1117	1001
9304-02-BC-01-25-0	8/18/2006	11:19:00	1.17E+04			1117	1001
9304-02-SC-01-25-0	8/18/2006	11:21:00	1.10E+04	1.32E+04		1117	1001

FSS SURVEY UNIT
9304-0002
(CLASS 1 AREA)
SURVEY AREA SCAN DATA

Survey Location	Log Date	Log Time	Reading	AL	>AL	E-600 S/N	Probe S/N
9304-02-BC-01-26-0	8/18/2006	11:23:00	1.12E+04			1117	1001
9304-02-SC-01-26-0	8/18/2006	11:26:00	1.12E+04	1.27E+04		1117	1001
9304-02-BC-01-27-0	8/18/2006	11:27:00	1.10E+04			1117	1001
9304-02-SC-01-27-0	8/18/2006	11:30:00	1.08E+04	1.25E+04		1117	1001
9304-02-BC-01-28-0	8/21/2006	9:53:00	1.13E+04			1105	1012
9304-02-SC-01-28-0	8/21/2006	9:57:00	1.16E+04	1.28E+04		1105	1012
9304-02-BC-01-29-0	8/18/2006	9:22:00	1.12E+04			1117	1001
9304-02-SC-01-29-0	8/18/2006	9:33:00	1.17E+04	1.27E+04		1117	1001
9304-02-ER-01-29-1	8/18/2006	9:47:00	5.89E+04	1.27E+04	+	1117	1001
9304-02-BC-01-30-0	8/18/2006	9:34:00	1.11E+04			1117	1001
9304-02-SC-01-30-0	8/18/2006	9:40:00	1.07E+04	1.26E+04		1117	1001
9304-02-BC-01-31-0	8/18/2006	9:41:00	1.19E+04			1117	1001
9304-02-SC-01-31-0	8/18/2006	9:45:00	1.24E+04	1.35E+04		1117	1001
9304-02-BC-01-32-0	8/18/2006	9:48:00	1.13E+04			1117	1001
9304-02-SC-01-32-0	8/18/2006	9:53:00	1.13E+04	1.28E+04		1117	1001
9304-02-BC-01-33-0	8/18/2006	9:57:00	1.23E+04			1117	1001
9304-02-SC-01-33-0	8/18/2006	10:07:00	1.15E+04	1.39E+04		1117	1001
9304-02-ER-01-33-1	8/18/2006	10:32:00	1.73E+05	1.39E+04	+	1117	1001
9304-02-BC-01-34-0	8/18/2006	10:08:00	1.14E+04			1117	1001
9304-02-SC-01-34-0	8/18/2006	10:12:00	1.02E+04	1.29E+04		1117	1001
9304-02-BC-01-35-0	8/18/2006	10:13:00	1.06E+04			1117	1001
9304-02-SC-01-35-0	8/18/2006	10:16:00	1.11E+04	1.21E+04		1117	1001
9304-02-BC-01-36-0	8/18/2006	10:19:00	1.15E+04			1117	1001
9304-02-SC-01-36-0	8/18/2006	10:22:00	1.12E+04	1.30E+04		1117	1001
9304-02-BC-01-37-0	8/18/2006	8:44:00	1.26E+04			1105	1012
9304-02-SC-01-37-0	8/18/2006	8:48:00	1.32E+04	1.42E+04		1105	1012
9304-02-BC-01-38-0	8/18/2006	8:49:00	1.06E+04			1105	1012
9304-02-SC-01-38-0	8/18/2006	8:53:00	1.11E+04	1.21E+04		1105	1012
9304-02-BC-01-39-0	8/18/2006	8:54:00	1.22E+04			1105	1012
9304-02-SC-01-39-0	8/18/2006	8:59:00	1.11E+04	1.38E+04		1105	1012
9304-02-BC-01-40-0	8/18/2006	9:00:00	1.05E+04			1105	1012
9304-02-SC-01-40-0	8/18/2006	9:09:00	1.08E+04	1.20E+04		1105	1012
9304-02-BC-01-41-0	8/18/2006	9:10:00	1.07E+04			1105	1012
9304-02-SC-01-41-0	8/18/2006	9:14:00	1.16E+04	1.22E+04		1105	1012
9304-02-BC-01-42-0	8/18/2006	9:16:00	1.16E+04			1105	1012
9304-02-SC-01-42-0	8/18/2006	9:20:00	1.15E+04	1.31E+04		1105	1012
9304-02-BC-01-43-0	8/18/2006	9:21:00	1.29E+04			1105	1012
9304-02-SC-01-43-0	8/18/2006	9:25:00	1.15E+04	1.45E+04		1105	1012
9304-02-BC-01-44-0	8/18/2006	9:26:00	1.14E+04			1105	1012
9304-02-SC-01-44-0	8/18/2006	9:30:00	1.09E+04	1.29E+04		1105	1012
9304-02-BC-01-45-0	8/18/2006	9:31:00	1.19E+04			1105	1012
9304-02-SC-01-45-0	8/18/2006	9:36:00	1.03E+04	1.35E+04		1105	1012
9304-02-BC-01-46-0	8/18/2006	10:54:00	1.04E+04			1105	1012
9304-02-SC-01-46-0	8/18/2006	10:57:00	9.75E+03	1.19E+04		1105	1012
9304-02-BC-01-47-0	8/18/2006	10:59:00	1.02E+04			1105	1012
9304-02-SC-01-47-0	8/18/2006	11:02:00	1.01E+04	1.16E+04		1105	1012

FSS SURVEY UNIT
 9304-0002
 (CLASS 1 AREA)
 FIXED SAMPLE LOCATION SCANS

Survey Location	Log Date	Log Time	Reading	AL	>AL	E-600 S/N	Probe S/N
9304-02-BL-00-01-0	8/21/2006	10:04:00	9.41E+03			1105	1012
9304-02-SL-00-01-0	8/21/2006	10:06:00	1.00E+04	1.08E+04		1105	1012
9304-02-BL-00-02-0	8/21/2006	10:16:00	1.01E+04			1105	1012
9304-02-SL-00-02-0	8/21/2006	10:20:00	1.02E+04	1.15E+04		1105	1012
9304-02-BL-00-03-0	8/21/2006	10:28:00	9.21E+03			1105	1012
9304-02-SL-00-03-0	8/21/2006	10:30:00	9.09E+03	1.06E+04		1105	1012
9304-02-BL-00-04-0	8/21/2006	10:38:00	9.36E+03			1105	1012
9304-02-SL-00-04-0	8/21/2006	10:40:00	8.90E+03	1.07E+04		1105	1012
9304-02-BL-00-05-0	8/21/2006	10:51:00	1.07E+04			1105	1012
9304-02-SL-00-05-0	8/21/2006	10:54:00	1.11E+04	1.22E+04		1105	1012
9304-02-BL-00-06-0	8/21/2006	11:03:00	9.19E+03			1105	1012
9304-02-SL-00-06-0	8/21/2006	11:05:00	8.44E+03	1.06E+04		1105	1012
9304-02-BL-00-07-0	8/21/2006	11:13:00	9.50E+03			1105	1012
9304-02-SL-00-07-0	8/21/2006	11:16:00	8.94E+03	1.09E+04		1105	1012
9304-02-BL-00-08-0	8/21/2006	11:20:00	9.62E+03			1105	1012
9304-02-SL-00-08-0	8/21/2006	11:23:00	1.07E+04	1.10E+04		1105	1012
9304-02-BL-00-09-0	8/21/2006	13:15:00	9.94E+03			1105	1012
9304-02-SL-00-09-0	8/21/2006	13:17:00	1.07E+04	1.14E+04		1105	1012
9304-02-BL-00-10-0	8/21/2006	13:26:00	1.07E+04			1105	1012
9304-02-SL-00-10-0	8/21/2006	13:29:00	1.01E+04	1.22E+04		1105	1012
9304-02-BL-00-11-0	8/21/2006	13:37:00	1.07E+04			1105	1012
9304-02-SL-00-11-0	8/21/2006	13:39:00	1.09E+04	1.22E+04		1105	1012
9304-02-BL-00-12-0	8/21/2006	13:45:00	1.07E+04			1105	1012
9304-02-SL-00-12-0	8/21/2006	13:48:00	1.18E+04	1.22E+04		1105	1012
9304-02-BL-00-13-0	8/21/2006	13:51:00	1.04E+04			1105	1012
9304-02-SL-00-13-0	8/21/2006	13:53:00	1.02E+04	1.19E+04		1105	1012
9304-02-BL-00-14-0	8/21/2006	13:58:00	1.17E+04			1105	1012
9304-02-SL-00-14-0	8/21/2006	14:00:00	1.06E+04	1.32E+04		1105	1012
9304-02-BL-00-15-0	8/21/2006	14:05:00	1.03E+04			1105	1012
9304-02-SL-00-15-0	8/21/2006	14:07:00	9.56E+03	1.17E+04		1105	1012
9304-02-BL-00-16-0	8/21/2006	14:14:00	1.59E+04			1105	1012
9304-02-SL-00-16-0	8/21/2006	14:15:00	6.29E+04	1.77E+04	+	1105	1012
9304-02-BL-00-17-0	8/21/2006	14:26:00	1.25E+04			1105	1012
9304-02-SL-00-17-0	8/21/2006	14:27:00	1.50E+05	1.41E+04	+	1105	1012

SOUTHWEST PROTECTED AREA GROUNDS
SURVEY UNIT 9304-0002

RELEASE RECORD

**ATTACHMENT 3
(LABORATORY DATA)**

General Narrative

**CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Soil
PO# 002332
Work Order: 170544
SDG: MSR#06-1174**

September 6, 2006

Laboratory Identification:

General Engineering Laboratories, LLC

Mailing Address:

P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:

2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:

(843) 556-8171

Summary:

Sample receipt

The sample(s) for this Project arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina on August 30, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures.

The laboratory received the following sample(s):

<u>Sample ID</u>	<u>Client Sample ID</u>
170544001	9304-0002-001F
170544002	9304-0002-001FS
170544003	9304-0002-002F
170544004	9304-0002-003F
170544005	9304-0002-004F
170544006	9304-0002-004FS
170544007	9304-0002-006F
170544008	9304-0002-007F
170544009	9304-0002-009F

170544010	9304-0002-010F
170544011	9304-0002-011F
170544012	9304-0002-012F
170544013	9304-0002-013F
170544014	9304-0002-014F
170544015	9304-0002-015F
170544016	9304-0002-016F
170544017	9304-0002-017F
170544018	9304-0002-005F
170544019	9304-0002-008F

Items of Note:

There are no items of note.

Case Narrative:

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

Analytical Request:

Seventeen soil samples were analyzed for FSSGAM.
Two soil samples were analyzed for FSSALL.

Internal Chain of Custody:

Custody was maintained for the sample(s).

Data Package:

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

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



Cheryl Jones
Project Manager

List of current GEL Certifications as of 06 September 2006

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

**Chain of Custody
And
Supporting
Documentation**

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

Chain of Custody Form

No. 2006-506
 00506

170544%

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size- & Type Code	Analyses Requested				Lab Use Only				
Contact Name & Phone: Jack McCarthy 860-267-3924						FSSGAM	FSSALL						Comments:	
Analytical Lab (Name, City, State): General Engineering Laboratories 2040 Savage Road Charleston, SC 29407 ATT: Cheryl Jones (843-556-8171)														
Priority: <input type="checkbox"/> 30 D. <input checked="" type="checkbox"/> 14 D. <input type="checkbox"/> 7 D. Other:														
Sample Designation	Date	Time								Comment, Preservation	Lab Sample ID			
9304-02-001F	8/21/06	1010	TS	G	BP	X								
9304-02-001FS	8/21/06	1010	TS	G	BP	X								
9304-02-002F	8/21/06	1025	TS	G	BP	X								
9304-02-003F	8/21/06	1035	TS	G	BP	X								
9304-02-004F	8/21/06	1045	TS	G	BP	X								
9304-02-004FS	8/21/06	1045	TS	G	BP	X								
9304-02-005F	8/21/06	1058	TS	G	BP		X							
9304-02-006F	8/21/06	1107	TS	G	BP	X								
9304-02-007F	8/21/06	1120	TS	G	BP	X								
9304-02-008F	8/21/06	1130	TS	G	BP		X							
NOTES: PO #: 002332 MSR #: 06-1174 <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA						Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other			Internal Container Temp.: 23 Deg. C Custody Sealed? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>					
1) Relinquished By <i>J. DeGroot</i>		Date/Time 8/29/06 1320		2) Received By <i>K. Leighton</i>		Date/Time 8/30/06 0915		79005137 8806 Bill of Lading #						
3) Relinquished By		Date/Time		4) Received By		Date/Time								
5) Relinquished By		Date/Time		6) Received By		Date/Time								

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Connecticut Yankee Atomic Power Company 362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556						Chain of Custody Form				No. 2006-00507					
Project Name: Haddam Neck Decommissioning						1705447/						Lab Use Only Comments:			
Contact Name & Phone: Jack McCarthy 860-267-3924						FSSGAM	FSSALL								
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road. Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones															
Priority: <input type="checkbox"/> 30 D. <input checked="" type="checkbox"/> 14 D. <input type="checkbox"/> 7 D. <input type="checkbox"/> 3 D.															
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- & Type Code							Comment, Preservation	Lab Sample ID		
9304-02-009F	8/21/06	1324	TS	G	BP	X									
9304-02-010F	8/21/06	1335	TS	G	BP	X									
9304-02-011F	8/21/06	1346	TS	G	BP	X									
9304-02-012F	8/21/06	1351	TS	G	BP	X									
9304-02-013F	8/21/06	1400	TS	G	BP	X									
9304-02-014F	8/21/06	1408	TS	G	BP	X									
9304-02-015F	8/21/06	1413	TS	G	BP	X									
	8/21/06														
	8/21/06														
NOTES: PO #: 002332 MSR #: 06-1174 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA						Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other						Internal Container Temp: 73 Deg. Custody Sealed? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>			
1) Relinquished By <i>John J. Gault</i>			Date/Time 8/29/06 1320			2) Received By <i>Kulanga</i>			Date/Time 8/30/06 0915			Bill of Lading # 7900 5137 8806			
3) Relinquished By			Date/Time			4) Received By			Date/Time						
5) Relinquished By			Date/Time			6) Received By			Date/Time						

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Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00509

170544%

Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size- & Type Code	Analyses Requested					Lab Use Only				
Contact Name & Phone: Jack McCarthy 860-267-3924						FSSGAM								Comments:	
Analytical Lab (Name, City, State):															
On Site Counting Facility															
Priority: <input type="checkbox"/> 30 D. <input checked="" type="checkbox"/> 14 D. <input type="checkbox"/> 7 D. Other:															
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID			
9304-02-016F	8/21/06	1425	TS	G	ILM	X									
9304-02-017F	8/21/06	1435	TS	G	ILM	X									
NOTES: PO #: 002332			MSR #:			<input checked="" type="checkbox"/> LTP QA			<input type="checkbox"/> Radwaste QA			<input type="checkbox"/> Non QA			
1) Relinquished By <i>R. J. Galt</i> Date/Time <i>8/29/06 1320</i>			2) Received By <i>K. W. Galt</i> Date/Time <i>8/30/06 0915</i>			Samples Shipped Via: <input type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other			Internal Container Temp.: <i>23</i> Deg. C Custody Sealed? Y <input checked="" type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>						
3) Relinquished By Date/Time			4) Received By Date/Time			790051378806 Bill of Lading #									
5) Relinquished By Date/Time			6) Received By Date/Time												

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Figure 1. Sample Check-in List

Date/Time Received: 8/30/00 0915

SDG#: MSR# 06-1174

Work Order Number: 170544

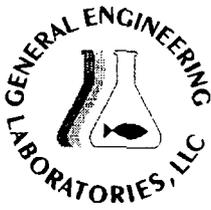
Shipping Container ID: 790051378804 Chain of Custody #: 2006-00806/7/9

1. Custody Seals on shipping container intact? Yes No
2. Custody Seals dated and signed? Yes No
3. Chain-of-Custody record present? Yes No
4. Cooler temperature 23°C - soil
5. Vermiculite/packing materials is: Wet Dry
6. Number of samples in shipping container: 19
7. Sample holding times exceeded? Yes No

8. Samples have:	
<input checked="" type="checkbox"/> tape	<input type="checkbox"/> hazard labels
<input checked="" type="checkbox"/> custody seals	<input checked="" type="checkbox"/> appropriate sample labels
9. Samples are:	
<input checked="" type="checkbox"/> in good condition	<input type="checkbox"/> leaking
<input type="checkbox"/> broken	<input type="checkbox"/> have air bubbles

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

Sample Custodian/Laboratory: K. W. Light Date: 8/30/00
Telephoned to: _____ On _____ By _____



SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: <u>Conn Yank. - Soil</u>	SDG/ARCOC/Work Order: <u>170544</u>
Date Received: <u>8/30/06</u>	PM(A) Review (ensure non-conforming items are resolved prior to signing): <u>[Signature]</u>
Received By: <u>[Signature]</u>	

#	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?				Circle Applicable: seals broken damaged container leaking container other (describe)
2	Samples requiring cold preservation within (4 +/- 2 C)? Record preservation method.				Circle Coolant # ice bags blue ice dry ice 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	<u>Chain # 2006-005010</u>		
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#	Suspected Hazard Information	Non-Regulated	Regulated	High Level	Comments
A	Radiological Classification?	✓	✗	✗	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
B	PCB Regulated?	✓	✗	✗	Maximum Counts Observed*: <u>cpm 20 Not Rad - Gf</u>
C	Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	✓	✗	✗	Comments: Hazard Class Shipped: UN#:

PM (or PMA) review of Hazard classification: _____	Initials: <u>[Signature]</u>	Date: <u>8/30/06</u>
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CONNECTICUT YANKEE

RE: Soil

PO# 002332

Work Order: 170543

SDG: MSR#06-1172

170543001	9304-0001-001F
170543002	9304-0001-002F
170543003	9304-0001-002FS
170543004	9304-0001-003F
170543005	9304-0001-004F
170543006	9304-0001-005F
170543007	9304-0001-009F
170543008	9304-0001-010F
170543009	9304-0001-010FS
170543010	9304-0001-011F
170543011	9304-0001-012F
170543012	9304-0001-014F
170543013	9304-0001-015F
170543014	9304-0001-016F
170543015	9304-0001-017F
170543016	9304-0001-018F
170543017	9304-0001-019F
170543018	9304-0001-020F
170543019	9304-0001-021F
170543020	9304-0001-008F
170543021	9304-0001-013F

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 170544**

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: 564247
Prep Batch Number: 563877
Dry Soil Prep GL-RAD-A-021 Batch Number: 563875

Sample ID	Client ID
170544018	9304-0002-005F
170544019	9304-0002-008F
1201173419	Method Blank (MB)
1201173420	170543020(9304-0001-008F) Sample Duplicate (DUP)
1201173421	170543020(9304-0001-008F) Matrix Spike (MS)
1201173422	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170543020 (9304-0001-008F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

Batch was cleaned-up and recounted due to Thorium interference.

Miscellaneous Information:

NCR Documentation

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Qualifier	Reason	Analyte	Sample
X	Results may be biased high due to Thorium interference in the sample.	Americium-241	170544018
			170544019
			1201173420
		Curium-243/244	170544018

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: 564258
Prep Batch Number: 563877
Dry Soil Prep GL-RAD-A-021 Batch Number: 563875

Sample ID	Client ID
170544018	9304-0002-005F
170544019	9304-0002-008F
1201173423	Method Blank (MB)
1201173424	170543020(9304-0001-008F) Sample Duplicate (DUP)
1201173425	170543020(9304-0001-008F) Matrix Spike (MS)
1201173426	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170543020 (9304-0001-008F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

Sample 1201173423 (MB) was recounted due to a negative result greater than three times the error.

Miscellaneous Information:

NCR Documentation

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Liquid Scint Pu241, Solid-ALL FSS
Analytical Method:	DOE EML HASL-300, Pu-11-RC Modified
Prep Method:	Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method:	Dry Soil Prep
Analytical Batch Number:	564259
Prep Batch Number:	563877
Dry Soil Prep GL-RAD-A-021 Batch Number:	563875

Sample ID	Client ID
170544018	9304-0002-005F
170544019	9304-0002-008F
1201173427	Method Blank (MB)
1201173428	170543020(9304-0001-008F) Sample Duplicate (DUP)
1201173429	170543020(9304-0001-008F) Matrix Spike (MS)
1201173430	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170543020 (9304-0001-008F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:

NCR Documentation

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

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

Manual Integration

No manual integrations were performed on data in this batch.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth Waived
Analytical Method:	EML HASL 300, 4.5.2.3
Prep Method:	Dry Soil Prep
Analytical Batch Number:	563988
Prep Batch Number:	563875

Sample ID	Client ID
170544001	9304-0002-001F
170544002	9304-0002-001FS
170544003	9304-0002-002F
170544004	9304-0002-003F
170544005	9304-0002-004F
170544006	9304-0002-004FS
170544007	9304-0002-006F
170544008	9304-0002-007F
170544009	9304-0002-009F
170544010	9304-0002-010F
170544011	9304-0002-011F
170544012	9304-0002-012F
170544013	9304-0002-013F
170544014	9304-0002-014F
170544015	9304-0002-015F
170544016	9304-0002-016F
170544017	9304-0002-017F
170544018	9304-0002-005F
170544019	9304-0002-008F
1201172834	Method Blank (MB)
1201172835	170543021(9304-0001-013F) Sample Duplicate (DUP)
1201172836	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 12.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170543021 (9304-0001-013F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:

NCR Documentation

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

Additional Comments

The duplicate and the sample 1201172835 (9304-0001-013F) did not meet the relative percent difference requirement for Bi-214 and Ra-226, but they do meet the relative error ratio requirement with a value of 1.79394.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high peak-width.	Bismuth-212	170544007
UI	Data rejected due to interference.	Europium-155	170544014
			170544015
UI	Data rejected due to low abundance.	Cesium-134	170544002
			170544005
			170544006
			170544007
			170544009
			170544012
			170544013
			170544014
			170544018
		Silver-108m	170544003

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: 564153
Prep Batch Number: 563877
Dry Soil Prep GL-RAD-A-021 Batch Number: 563875

Sample ID	Client ID
170544018	9304-0002-005F
170544019	9304-0002-008F
1201173179	Method Blank (MB)
1201173180	170544018(9304-0002-005F) Sample Duplicate (DUP)
1201173181	170544018(9304-0002-005F) Matrix Spike (MS)
1201173182	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-004 REV# 10.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170544018 (9304-0002-005F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

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: 564445

Sample ID	Client ID
170544018	9304-0002-005F
170544019	9304-0002-008F
1201173840	Method Blank (MB)
1201173841	170544018(9304-0002-005F) Sample Duplicate (DUP)
1201173842	170544018(9304-0002-005F) Matrix Spike (MS)
1201173843	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-005 REV# 13.

Calibration Information:**Calibration Information**

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

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

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

Designated QC

The following sample was used for QC: 170544018 (9304-0002-005F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

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:	564451
Prep Batch Number:	563877
Dry Soil Prep GL-RAD-A-021 Batch Number:	563875

Sample ID	Client ID
170544018	9304-0002-005F
170544019	9304-0002-008F
1201173858	Method Blank (MB)
1201173859	170543020(9304-0001-008F) Sample Duplicate (DUP)
1201173860	170543020(9304-0001-008F) Matrix Spike (MS)
1201173861	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-040 REV# 3.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170543020 (9304-0001-008F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

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:	564452
Prep Batch Number:	563877
Dry Soil Prep GL-RAD-A-021 Batch Number:	563875

Sample ID	Client ID
170544018	9304-0002-005F
170544019	9304-0002-008F
1201173872	Method Blank (MB)
1201173873	170543020(9304-0001-008F) Sample Duplicate (DUP)
1201173874	170543020(9304-0001-008F) Matrix Spike (MS)
1201173875	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-022 REV# 8.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170543020 (9304-0001-008F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:

NCR Documentation

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

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: LSC, Tritium Dist, Solid-HTD2,ALL FSS

Analytical Method: EPA 906.0 Modified

Analytical Batch Number: 564447

Sample ID	Client ID
170544018	9304-0002-005F
170544019	9304-0002-008F
1201173844	Method Blank (MB)
1201173845	170544018(9304-0002-005F) Sample Duplicate (DUP)
1201173846	170544018(9304-0002-005F) Matrix Spike (MS)
1201173847	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 13.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170544018 (9304-0002-005F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

Samples 1201173846 (9304-0002-005F) and 1201173847 (LCS) were recounted due to low/high recovery.

Miscellaneous Information:**NCR Documentation**

Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: NCR 356177 was generated due to Container scanning event for custody missed. 1. Container scanning event for custody missed: The analyst did not scan the samples into the batch prior to analysis, however the samples did remain in their custody at all times. 1. The error has been corrected and the analyst has been instructed on proper scanning procedures. Reporting results

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:	564449

Sample ID	Client ID
170544018	9304-0002-005F
170544019	9304-0002-008F
1201173848	Method Blank (MB)
1201173849	170544019(9304-0002-008F) Sample Duplicate (DUP)
1201173850	170544019(9304-0002-008F) Matrix Spike (MS)
1201173851	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-003 REV# 8.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170544019 (9304-0002-008F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

Sample 1201173849 (9304-0002-008F) was recounted due to a negative result greater than three times the error.

Miscellaneous Information:

NCR Documentation

COMPANY - WIDE NONCONFORMANCE REPORT

Mo.Day Yr. 08-SEP-06	Division: Radiochemistry	Quality Criteria: Specifications	Type: Process
Instrument Type: LSC	Test / Method: EPA 906.0 Modified	Matrix Type: Solid	Client Code: YANK
Batch ID: 564447	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 170543(MSR#06-1172),170544(MSR#06-1174),170683			
Application Issues: Container scanning event for custody missed			
Specification and Requirements Nonconformance Description:		NRG Disposition:	
1. Container scanning event for custody missed: The analyst did not scan the samples into the batch prior to analysis, however the samples did remain in their custody at all times.		1. The error has been corrected and the analyst has been instructed on proper scanning procedures. Reporting results	

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

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

Quality Review:

Director:

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis Report for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#06-1174 GEL Work Order: 170544

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
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- ND The analyte concentration is not detected above the detection limit.

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

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

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



Reviewed by _____

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID:	9304-0002-001F	Project:	YANK01204
Sample ID:	170544001	Client ID:	YANK001
Matrix:	Soil	Vol. Recv.:	
Collect Date:	21-AUG-06		
Receive Date:	30-AUG-06		
Collector:	Client		
Moisture:	5.39%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.675	+/-0.203	0.0819	+/-0.203	0.164	pCi/g		MJH1	09/10/06	1502	563988
Americium-241	U	0.0358	+/-0.0434	0.0307	+/-0.0434	0.0614	pCi/g					
Bismuth-212		0.444	+/-0.285	0.171	+/-0.285	0.342	pCi/g					
Bismuth-214		0.597	+/-0.116	0.0419	+/-0.116	0.0838	pCi/g					
Cesium-134	U	0.024	+/-0.0298	0.0277	+/-0.0298	0.0553	pCi/g					
Cesium-137	U	0.0159	+/-0.0266	0.0245	+/-0.0266	0.049	pCi/g					
Cobalt-60	U	0.00881	+/-0.0345	0.0259	+/-0.0345	0.0518	pCi/g					
Europium-152	U	0.0442	+/-0.0483	0.0481	+/-0.0483	0.0961	pCi/g					
Europium-154	U	0.0239	+/-0.087	0.0755	+/-0.087	0.151	pCi/g					
Europium-155	U	0.0074	+/-0.0551	0.0494	+/-0.0551	0.0987	pCi/g					
Lead-212		0.693	+/-0.085	0.0295	+/-0.085	0.059	pCi/g					
Lead-214		0.643	+/-0.102	0.039	+/-0.102	0.078	pCi/g					
Manganese-54	U	-0.00297	+/-0.0284	0.0209	+/-0.0284	0.0418	pCi/g					
Niobium-94	U	-0.0154	+/-0.0238	0.0198	+/-0.0238	0.0396	pCi/g					
Potassium-40		10.9	+/-1.04	0.234	+/-1.04	0.468	pCi/g					
Radium-226		0.597	+/-0.116	0.0419	+/-0.116	0.0838	pCi/g					
Silver-108m	U	-0.0115	+/-0.0218	0.0182	+/-0.0218	0.0365	pCi/g					
Thallium-208		0.250	+/-0.0482	0.0195	+/-0.0482	0.039	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-001F
Sample ID: 170544001

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

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

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

Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-001FS
 Sample ID: 170544002
 Matrix: Soil
 Collect Date: 21-AUG-06
 Receive Date: 30-AUG-06
 Collector: Client
 Moisture: 5.13%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.678	+/-0.158	0.056	+/-0.158	0.112	pCi/g		MJH1	09/10/06	1658	563988
Americium-241	U	0.0182	+/-0.0696	0.0564	+/-0.0696	0.113	pCi/g					
Bismuth-212		0.506	+/-0.234	0.129	+/-0.234	0.258	pCi/g					
Bismuth-214		0.572	+/-0.096	0.0306	+/-0.096	0.0612	pCi/g					
Cesium-134	UI	0.00	+/-0.0279	0.0205	+/-0.0279	0.0409	pCi/g					
Cesium-137	U	0.0245	+/-0.0316	0.0187	+/-0.0316	0.0373	pCi/g					
Cobalt-60	U	0.0139	+/-0.0196	0.0178	+/-0.0196	0.0356	pCi/g					
Europium-152	U	0.0427	+/-0.078	0.0434	+/-0.078	0.0868	pCi/g					
Europium-154	U	-0.0549	+/-0.0651	0.0494	+/-0.0651	0.0988	pCi/g					
Europium-155	U	0.0421	+/-0.0556	0.0508	+/-0.0556	0.101	pCi/g					
Lead-212		0.707	+/-0.0794	0.0271	+/-0.0794	0.0542	pCi/g					
Lead-214		0.610	+/-0.0923	0.0321	+/-0.0923	0.0641	pCi/g					
Manganese-54	U	-0.00669	+/-0.0195	0.0165	+/-0.0195	0.0329	pCi/g					
Niobium-94	U	-0.00231	+/-0.0176	0.0153	+/-0.0176	0.0306	pCi/g					
Potassium-40		11.4	+/-1.03	0.171	+/-1.03	0.341	pCi/g					
Radium-226		0.572	+/-0.096	0.0306	+/-0.096	0.0612	pCi/g					
Silver-108m	U	-0.0138	+/-0.017	0.014	+/-0.017	0.0279	pCi/g					
Thallium-208		0.236	+/-0.0442	0.0142	+/-0.0442	0.0284	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-001FS
Sample ID: 170544002

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-002F
 Sample ID: 170544003
 Matrix: Soil
 Collect Date: 21-AUG-06
 Receive Date: 30-AUG-06
 Collector: Client
 Moisture: 5.38%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.818	+/-0.198	0.0582	+/-0.198	0.116	pCi/g		MJH1	09/11/06	0828	563988
Americium-241	U	0.000923	+/-0.0732	0.058	+/-0.0732	0.116	pCi/g					
Bismuth-212		0.483	+/-0.303	0.133	+/-0.303	0.265	pCi/g					
Bismuth-214		0.612	+/-0.0992	0.034	+/-0.0992	0.0679	pCi/g					
Cesium-134	U	0.018	+/-0.0233	0.0213	+/-0.0233	0.0426	pCi/g					
Cesium-137	U	-0.00836	+/-0.0227	0.0185	+/-0.0227	0.037	pCi/g					
Cobalt-60	U	0.013	+/-0.0232	0.0183	+/-0.0232	0.0365	pCi/g					
Europium-152	U	0.0263	+/-0.0662	0.0491	+/-0.0662	0.098	pCi/g					
Europium-154	U	-0.00379	+/-0.0789	0.0608	+/-0.0789	0.121	pCi/g					
Europium-155	U	0.0654	+/-0.0695	0.0487	+/-0.0695	0.0973	pCi/g					
Lead-212		0.686	+/-0.0817	0.0278	+/-0.0817	0.0555	pCi/g					
Lead-214		0.648	+/-0.0951	0.035	+/-0.0951	0.070	pCi/g					
Manganese-54	U	0.0036	+/-0.0219	0.0192	+/-0.0219	0.0383	pCi/g					
Niobium-94	U	0.0118	+/-0.0191	0.0174	+/-0.0191	0.0348	pCi/g					
Potassium-40		11.4	+/-1.08	0.139	+/-1.08	0.278	pCi/g					
Radium-226		0.612	+/-0.0992	0.034	+/-0.0992	0.0679	pCi/g					
Silver-108m	UI	0.00	+/-0.0296	0.0152	+/-0.0296	0.0304	pCi/g					
Thallium-208		0.230	+/-0.0438	0.0162	+/-0.0438	0.0323	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-002F
Sample ID: 170544003

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

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-003F
Sample ID: 170544004
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 3.93%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.753	+/-0.140	0.0503	+/-0.140	0.111	pCi/g		MJH1	09/11/06	0927	563988
Americium-241	U	0.0553	+/-0.0789	0.0697	+/-0.0789	0.145	pCi/g					
Bismuth-212		0.476	+/-0.226	0.115	+/-0.226	0.251	pCi/g					
Bismuth-214		0.466	+/-0.0939	0.0318	+/-0.0939	0.0679	pCi/g					
Cesium-134	U	0.0381	+/-0.0291	0.0215	+/-0.0291	0.0461	pCi/g					
Cesium-137	U	-0.00316	+/-0.0183	0.0156	+/-0.0183	0.0338	pCi/g					
Cobalt-60	U	-7.740E-05	+/-0.0179	0.0153	+/-0.0179	0.0348	pCi/g					
Europium-152	U	0.00612	+/-0.0483	0.0414	+/-0.0483	0.0876	pCi/g					
Europium-154	U	0.0129	+/-0.0639	0.0564	+/-0.0639	0.124	pCi/g					
Europium-155	U	0.000165	+/-0.0506	0.0464	+/-0.0506	0.0964	pCi/g					
Lead-212		0.609	+/-0.0573	0.0246	+/-0.0573	0.0514	pCi/g					
Lead-214		0.607	+/-0.0855	0.0303	+/-0.0855	0.064	pCi/g					
Manganese-54	U	0.0223	+/-0.0179	0.0173	+/-0.0179	0.0373	pCi/g					
Niobium-94	U	-0.00811	+/-0.0164	0.0135	+/-0.0164	0.0293	pCi/g					
Potassium-40		11.6	+/-0.913	0.135	+/-0.913	0.311	pCi/g					
Radium-226		0.466	+/-0.0939	0.0318	+/-0.0939	0.0679	pCi/g					
Silver-108m	U	-0.00366	+/-0.0149	0.0131	+/-0.0149	0.028	pCi/g					
Thallium-208		0.177	+/-0.0462	0.0171	+/-0.0462	0.0366	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-003F
Sample ID: 170544004

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

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

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Certificate of Analysis

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

East Hampton, Connecticut 06424

Contact: Mr. Jack McCarthy

Project: Soils PO# 002332

Report Date: September 15, 2006

Client Sample ID: 9304-0002-004F
Sample ID: 170544005
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 3.21%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.758	+/-0.170	0.0623	+/-0.170	0.135	pCi/g		MJH1	09/11/06	1024	563988
Americium-241	U	0.0922	+/-0.106	0.0902	+/-0.106	0.187	pCi/g					
Bismuth-212		0.506	+/-0.275	0.121	+/-0.275	0.263	pCi/g					
Bismuth-214		0.552	+/-0.0891	0.0269	+/-0.0891	0.058	pCi/g					
Cesium-134	UI	0.00	+/-0.0271	0.0219	+/-0.0271	0.0469	pCi/g					
Cesium-137	U	0.00831	+/-0.0196	0.0175	+/-0.0196	0.0375	pCi/g					
Cobalt-60	U	0.0253	+/-0.0222	0.0202	+/-0.0222	0.0445	pCi/g					
Europium-152	U	-0.0134	+/-0.0538	0.045	+/-0.0538	0.0949	pCi/g					
Europium-154	U	0.0738	+/-0.0451	0.0522	+/-0.0451	0.116	pCi/g					
Europium-155	U	0.0703	+/-0.0546	0.0535	+/-0.0546	0.111	pCi/g					
Lead-212		0.652	+/-0.0609	0.0259	+/-0.0609	0.0542	pCi/g					
Lead-214		0.761	+/-0.0968	0.030	+/-0.0968	0.0635	pCi/g					
Manganese-54	U	-0.00241	+/-0.0206	0.0171	+/-0.0206	0.0369	pCi/g					
Niobium-94	U	0.0106	+/-0.0173	0.0156	+/-0.0173	0.0335	pCi/g					
Potassium-40		11.0	+/-0.854	0.129	+/-0.854	0.300	pCi/g					
Radium-226		0.552	+/-0.0891	0.0269	+/-0.0891	0.058	pCi/g					
Silver-108m	U	-0.0156	+/-0.0165	0.0137	+/-0.0165	0.0294	pCi/g					
Thallium-208		0.187	+/-0.0409	0.0158	+/-0.0409	0.0339	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-004F
Sample ID: 170544005

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-004FS
Sample ID: 170544006
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 3.03%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.574	+/-0.147	0.0692	+/-0.147	0.148	pCi/g		MJH1	09/11/06	1024	563988
Americium-241	U	0.0183	+/-0.0795	0.0674	+/-0.0795	0.140	pCi/g					
Bismuth-212		0.309	+/-0.290	0.126	+/-0.290	0.270	pCi/g					
Bismuth-214		0.497	+/-0.0896	0.0293	+/-0.0896	0.0625	pCi/g					
Cesium-134	UI	0.00	+/-0.0299	0.0215	+/-0.0299	0.0456	pCi/g					
Cesium-137	U	-0.00249	+/-0.0201	0.0174	+/-0.0201	0.037	pCi/g					
Cobalt-60	U	0.00133	+/-0.0188	0.0161	+/-0.0188	0.0359	pCi/g					
Europium-152	U	0.0114	+/-0.0518	0.0461	+/-0.0518	0.0967	pCi/g					
Europium-154	U	0.00293	+/-0.0637	0.0546	+/-0.0637	0.119	pCi/g					
Europium-155	U	0.0334	+/-0.055	0.0507	+/-0.055	0.105	pCi/g					
Lead-212		0.665	+/-0.0616	0.0256	+/-0.0616	0.0532	pCi/g					
Lead-214		0.609	+/-0.0859	0.0303	+/-0.0859	0.0639	pCi/g					
Manganese-54	U	-0.00658	+/-0.0205	0.017	+/-0.0205	0.0365	pCi/g					
Niobium-94	U	-0.0153	+/-0.0173	0.0139	+/-0.0173	0.0298	pCi/g					
Potassium-40		10.3	+/-0.814	0.151	+/-0.814	0.339	pCi/g					
Radium-226		0.497	+/-0.0896	0.0293	+/-0.0896	0.0625	pCi/g					
Silver-108m	U	0.0065	+/-0.0163	0.0144	+/-0.0163	0.0306	pCi/g					
Thallium-208		0.178	+/-0.0427	0.0175	+/-0.0427	0.0371	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-004FS
Sample ID: 170544006

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304–0002–006F
Sample ID: 170544007
Matrix: Soil
Collect Date: 21–AUG–06
Receive Date: 30–AUG–06
Collector: Client
Moisture: 4.15%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid–FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium–228		0.619	+/-0.171	0.0633	+/-0.171	0.137	pCi/g		MJH1	09/11/06	1025	563988
Americium–241	U	-0.0339	+/-0.085	0.0741	+/-0.085	0.154	pCi/g					
Bismuth–212	UI	0.00	+/-0.302	0.123	+/-0.302	0.266	pCi/g					
Bismuth–214		0.477	+/-0.0795	0.0367	+/-0.0795	0.078	pCi/g					
Cesium–134	UI	0.00	+/-0.0469	0.0218	+/-0.0469	0.0468	pCi/g					
Cesium–137	U	0.00955	+/-0.0215	0.0195	+/-0.0215	0.0416	pCi/g					
Cobalt–60	U	0.00527	+/-0.0216	0.0192	+/-0.0216	0.0425	pCi/g					
Europium–152	U	-0.0287	+/-0.0563	0.0471	+/-0.0563	0.0993	pCi/g					
Europium–154	U	-0.0554	+/-0.0564	0.042	+/-0.0564	0.0953	pCi/g					
Europium–155	U	0.00655	+/-0.0541	0.0516	+/-0.0541	0.107	pCi/g					
Lead–212		0.641	+/-0.0603	0.0275	+/-0.0603	0.0573	pCi/g					
Lead–214		0.660	+/-0.0925	0.0338	+/-0.0925	0.0712	pCi/g					
Manganese–54	U	0.00406	+/-0.0232	0.0178	+/-0.0232	0.0385	pCi/g					
Niobium–94	U	0.0166	+/-0.0221	0.0153	+/-0.0221	0.0329	pCi/g					
Potassium–40		11.3	+/-0.916	0.152	+/-0.916	0.346	pCi/g					
Radium–226		0.477	+/-0.0795	0.0367	+/-0.0795	0.078	pCi/g					
Silver–108m	U	-0.00541	+/-0.0191	0.0159	+/-0.0191	0.0337	pCi/g					
Thallium–208		0.228	+/-0.0414	0.018	+/-0.0414	0.0385	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL–RAD–A–021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-006F
Sample ID: 170544007

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-007F
Sample ID: 170544008
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 4.26%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.611	+/-0.138	0.061	+/-0.138	0.132	pCi/g		MJH1	09/11/06	1026	563988
Americium-241	U	0.0231	+/-0.104	0.0713	+/-0.104	0.148	pCi/g					
Bismuth-212		0.351	+/-0.184	0.141	+/-0.184	0.302	pCi/g					
Bismuth-214		0.502	+/-0.0794	0.0338	+/-0.0794	0.0717	pCi/g					
Cesium-134	U	0.0371	+/-0.0272	0.0215	+/-0.0272	0.0459	pCi/g					
Cesium-137	U	0.0168	+/-0.0266	0.0178	+/-0.0266	0.0381	pCi/g					
Cobalt-60	U	-0.00686	+/-0.0214	0.0173	+/-0.0214	0.0385	pCi/g					
Europium-152	U	-0.0104	+/-0.0497	0.0431	+/-0.0497	0.0909	pCi/g					
Europium-154	U	-0.014	+/-0.065	0.0539	+/-0.065	0.118	pCi/g					
Europium-155	U	0.0129	+/-0.054	0.0493	+/-0.054	0.102	pCi/g					
Lead-212		0.668	+/-0.0589	0.0242	+/-0.0589	0.0506	pCi/g					
Lead-214		0.519	+/-0.0803	0.0312	+/-0.0803	0.0658	pCi/g					
Manganese-54	U	0.0134	+/-0.0217	0.0195	+/-0.0217	0.0416	pCi/g					
Niobium-94	U	-0.015	+/-0.0196	0.016	+/-0.0196	0.0341	pCi/g					
Potassium-40		10.4	+/-0.868	0.169	+/-0.868	0.376	pCi/g					
Radium-226		0.502	+/-0.0794	0.0338	+/-0.0794	0.0717	pCi/g					
Silver-108m	U	-0.00476	+/-0.0175	0.0148	+/-0.0175	0.0313	pCi/g					
Thallium-208		0.170	+/-0.0567	0.0155	+/-0.0567	0.0331	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-007F
Sample ID: 170544008

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-009F
Sample ID: 170544009
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 4.23%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		1.04	+/-0.171	0.0603	+/-0.171	0.130	pCi/g		MJH1	09/11/06	1026	563988
Americium-241	U	-0.00988	+/-0.0968	0.0825	+/-0.0968	0.170	pCi/g					
Bismuth-212		0.588	+/-0.225	0.138	+/-0.225	0.294	pCi/g					
Bismuth-214		0.690	+/-0.089	0.0307	+/-0.089	0.0655	pCi/g					
Cesium-134	UI	0.00	+/-0.0287	0.0239	+/-0.0287	0.0506	pCi/g					
Cesium-137	U	-0.00814	+/-0.0216	0.018	+/-0.0216	0.0384	pCi/g					
Cobalt-60	U	-0.00282	+/-0.0227	0.0191	+/-0.0227	0.0419	pCi/g					
Europium-152	U	-0.0135	+/-0.0538	0.0483	+/-0.0538	0.101	pCi/g					
Europium-154	U	-0.059	+/-0.0672	0.0519	+/-0.0672	0.114	pCi/g					
Europium-155	U	0.0604	+/-0.0587	0.0561	+/-0.0587	0.116	pCi/g					
Lead-212		1.00	+/-0.0664	0.0255	+/-0.0664	0.0531	pCi/g					
Lead-214		0.803	+/-0.0888	0.0337	+/-0.0888	0.0708	pCi/g					
Manganese-54	U	0.030	+/-0.0272	0.0183	+/-0.0272	0.0392	pCi/g					
Niobium-94	U	0.0119	+/-0.0173	0.0157	+/-0.0173	0.0335	pCi/g					
Potassium-40		17.0	+/-1.07	0.153	+/-1.07	0.344	pCi/g					
Radium-226		0.690	+/-0.089	0.0307	+/-0.089	0.0655	pCi/g					
Silver-108m	U	-0.011	+/-0.017	0.0145	+/-0.017	0.0309	pCi/g					
Thallium-208		0.337	+/-0.0483	0.017	+/-0.0483	0.0361	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-009F
Sample ID: 170544009

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-010F
Sample ID: 170544010
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 5.58%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.921	+/-0.221	0.0758	+/-0.221	0.161	pCi/g		MJH1	09/11/06	1027	563988
Americium-241	U	0.0632	+/-0.150	0.0925	+/-0.150	0.190	pCi/g					
Bismuth-212		0.632	+/-0.394	0.154	+/-0.394	0.326	pCi/g					
Bismuth-214		0.726	+/-0.0865	0.0364	+/-0.0865	0.0769	pCi/g					
Cesium-134	U	0.0179	+/-0.0305	0.0255	+/-0.0305	0.0538	pCi/g					
Cesium-137	U	-0.00218	+/-0.0238	0.0206	+/-0.0238	0.0436	pCi/g					
Cobalt-60	U	-0.00271	+/-0.0225	0.0183	+/-0.0225	0.0405	pCi/g					
Europium-152	U	0.0279	+/-0.0609	0.0535	+/-0.0609	0.112	pCi/g					
Europium-154	U	-0.0123	+/-0.103	0.0721	+/-0.103	0.155	pCi/g					
Europium-155	U	0.105	+/-0.0774	0.0629	+/-0.0774	0.129	pCi/g					
Lead-212		1.07	+/-0.0714	0.031	+/-0.0714	0.0641	pCi/g					
Lead-214		0.767	+/-0.0815	0.0404	+/-0.0815	0.0841	pCi/g					
Manganese-54	U	0.00481	+/-0.0236	0.0205	+/-0.0236	0.0437	pCi/g					
Niobium-94	U	-0.00717	+/-0.0229	0.0194	+/-0.0229	0.041	pCi/g					
Potassium-40		18.2	+/-1.10	0.180	+/-1.10	0.398	pCi/g					
Radium-226		0.726	+/-0.0865	0.0364	+/-0.0865	0.0769	pCi/g					
Silver-108m	U	0.000781	+/-0.021	0.0178	+/-0.021	0.0374	pCi/g					
Thallium-208		0.326	+/-0.0511	0.0202	+/-0.0511	0.0426	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-010F
Sample ID: 170544010

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID:	9304-0002-011F	Project:	YANK01204
Sample ID:	170544011	Client ID:	YANK001
Matrix:	Soil	Vol. Recv.:	
Collect Date:	21-AUG-06		
Receive Date:	30-AUG-06		
Collector:	Client		
Moisture:	3.94%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		1.08	+/-0.154	0.0509	+/-0.154	0.108	pCi/g		MJH1	09/11/06	1027	563988
Americium-241	U	-0.0745	+/-0.139	0.0909	+/-0.139	0.188	pCi/g					
Bismuth-212		0.669	+/-0.219	0.110	+/-0.219	0.233	pCi/g					
Bismuth-214		0.630	+/-0.0788	0.0285	+/-0.0788	0.060	pCi/g					
Cesium-134	U	0.0357	+/-0.0311	0.0201	+/-0.0311	0.042	pCi/g					
Cesium-137	U	0.00279	+/-0.0196	0.0165	+/-0.0196	0.0346	pCi/g					
Cobalt-60	U	-0.00276	+/-0.0182	0.0153	+/-0.0182	0.0332	pCi/g					
Europium-152	U	0.00275	+/-0.0446	0.0396	+/-0.0446	0.0828	pCi/g					
Europium-154	U	-0.00394	+/-0.0583	0.0499	+/-0.0583	0.107	pCi/g					
Europium-155	U	0.0531	+/-0.0588	0.0549	+/-0.0588	0.113	pCi/g					
Lead-212		0.969	+/-0.0598	0.0246	+/-0.0598	0.0508	pCi/g					
Lead-214		0.753	+/-0.0824	0.0251	+/-0.0824	0.0527	pCi/g					
Manganese-54	U	0.0227	+/-0.0244	0.0149	+/-0.0244	0.0315	pCi/g					
Niobium-94	U	0.00322	+/-0.016	0.0142	+/-0.016	0.0298	pCi/g					
Potassium-40		17.6	+/-0.830	0.122	+/-0.830	0.268	pCi/g					
Radium-226		0.630	+/-0.0788	0.0285	+/-0.0788	0.060	pCi/g					
Silver-108m	U	0.00513	+/-0.0157	0.0139	+/-0.0157	0.029	pCi/g					
Thallium-208		0.319	+/-0.038	0.0146	+/-0.038	0.0307	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-011F
Sample ID: 170544011

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

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

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Certificate of Analysis

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

East Hampton, Connecticut 06424

Contact: Mr. Jack McCarthy

Project: Soils PO# 002332

Report Date: September 15, 2006

Client Sample ID: 9304-0002-012F
Sample ID: 170544012
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 5.14%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.623	+/-0.185	0.042	+/-0.185	0.0898	pCi/g		MJH1	09/11/06	1029	563988
Americium-241	U	0.0102	+/-0.0652	0.0544	+/-0.0652	0.112	pCi/g					
Bismuth-212		0.659	+/-0.223	0.0953	+/-0.223	0.203	pCi/g					
Bismuth-214		0.659	+/-0.086	0.0248	+/-0.086	0.0521	pCi/g					
Cesium-134	UI	0.00	+/-0.0289	0.0169	+/-0.0289	0.0354	pCi/g					
Cesium-137	U	0.0107	+/-0.0165	0.0144	+/-0.0165	0.0303	pCi/g					
Cobalt-60	U	0.0242	+/-0.0158	0.0137	+/-0.0158	0.0295	pCi/g					
Europium-152	U	-0.00833	+/-0.0457	0.0351	+/-0.0457	0.0733	pCi/g					
Europium-154	U	-0.0139	+/-0.0503	0.0408	+/-0.0503	0.0875	pCi/g					
Europium-155	U	0.00435	+/-0.049	0.0439	+/-0.049	0.0905	pCi/g					
Lead-212		0.683	+/-0.0495	0.0217	+/-0.0495	0.0449	pCi/g					
Lead-214		0.662	+/-0.0725	0.0254	+/-0.0725	0.053	pCi/g					
Manganese-54	U	0.0123	+/-0.0166	0.0151	+/-0.0166	0.0317	pCi/g					
Niobium-94	U	0.00425	+/-0.0142	0.0127	+/-0.0142	0.0268	pCi/g					
Potassium-40		12.7	+/-0.722	0.127	+/-0.722	0.276	pCi/g					
Radium-226		0.659	+/-0.086	0.0248	+/-0.086	0.0521	pCi/g					
Silver-108m	U	-0.00212	+/-0.0134	0.0116	+/-0.0134	0.0243	pCi/g					
Thallium-208		0.264	+/-0.0342	0.0121	+/-0.0342	0.0255	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-012F
Sample ID: 170544012

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-013F
 Sample ID: 170544013
 Matrix: Soil
 Collect Date: 21-AUG-06
 Receive Date: 30-AUG-06
 Collector: Client
 Moisture: 3.94%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.747	+/-0.185	0.0859	+/-0.185	0.183	pCi/g		MJH1	09/11/06	1039	563988
Americium-241	U	0.0204	+/-0.0351	0.0319	+/-0.0351	0.0655	pCi/g					
Bismuth-212	U	0.352	+/-0.306	0.179	+/-0.306	0.379	pCi/g					
Bismuth-214		0.586	+/-0.148	0.0447	+/-0.148	0.0941	pCi/g					
Cesium-134	UI	0.00	+/-0.0456	0.0303	+/-0.0456	0.0638	pCi/g					
Cesium-137	U	0.0438	+/-0.0358	0.0235	+/-0.0358	0.0497	pCi/g					
Cobalt-60	U	0.0222	+/-0.0284	0.0257	+/-0.0284	0.0557	pCi/g					
Europium-152	U	-0.0238	+/-0.0656	0.0546	+/-0.0656	0.114	pCi/g					
Europium-154	U	-0.0278	+/-0.0864	0.0704	+/-0.0864	0.152	pCi/g					
Europium-155	U	0.0512	+/-0.075	0.0485	+/-0.075	0.100	pCi/g					
Lead-212		0.582	+/-0.0781	0.0395	+/-0.0781	0.0814	pCi/g					
Lead-214		0.671	+/-0.0942	0.0388	+/-0.0942	0.0813	pCi/g					
Manganese-54	U	0.0267	+/-0.0273	0.0246	+/-0.0273	0.0521	pCi/g					
Niobium-94	U	-0.000123	+/-0.0243	0.0207	+/-0.0243	0.0438	pCi/g					
Potassium-40		12.8	+/-1.03	0.215	+/-1.03	0.471	pCi/g					
Radium-226		0.586	+/-0.148	0.0447	+/-0.148	0.0941	pCi/g					
Silver-108m	U	-0.00186	+/-0.0214	0.019	+/-0.0214	0.040	pCi/g					
Thallium-208		0.254	+/-0.0532	0.0232	+/-0.0532	0.049	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-013F
Sample ID: 170544013

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-014F
Sample ID: 170544014
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 3.65%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.978	+/-0.176	0.0653	+/-0.176	0.141	pCi/g		MJH1	09/11/06	1040	563988
Americium-241	U	0.00324	+/-0.030	0.0241	+/-0.030	0.0497	pCi/g					
Bismuth-212		0.591	+/-0.302	0.145	+/-0.302	0.310	pCi/g					
Bismuth-214		0.681	+/-0.0898	0.0352	+/-0.0898	0.0747	pCi/g					
Cesium-134	UI	0.00	+/-0.0469	0.0262	+/-0.0469	0.0553	pCi/g					
Cesium-137	U	0.024	+/-0.0255	0.019	+/-0.0255	0.0406	pCi/g					
Cobalt-60	U	0.012	+/-0.0241	0.0213	+/-0.0241	0.0466	pCi/g					
Europium-152	U	-0.018	+/-0.0549	0.0452	+/-0.0549	0.095	pCi/g					
Europium-154	U	-0.075	+/-0.072	0.0531	+/-0.072	0.117	pCi/g					
Europium-155	UI	0.00	+/-0.0819	0.0366	+/-0.0819	0.076	pCi/g					
Lead-212		0.948	+/-0.062	0.0241	+/-0.062	0.0503	pCi/g					
Lead-214		0.858	+/-0.0956	0.0298	+/-0.0956	0.0629	pCi/g					
Manganese-54	U3.090E-05		+/-0.0245	0.0203	+/-0.0245	0.0434	pCi/g					
Niobium-94	U	0.00428	+/-0.0201	0.0172	+/-0.0201	0.0367	pCi/g					
Potassium-40		15.7	+/-1.00	0.163	+/-1.00	0.366	pCi/g					
Radium-226		0.681	+/-0.0898	0.0352	+/-0.0898	0.0747	pCi/g					
Silver-108m	U	-0.0104	+/-0.0174	0.0148	+/-0.0174	0.0314	pCi/g					
Thallium-208		0.322	+/-0.0446	0.018	+/-0.0446	0.0384	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-014F
Sample ID: 170544014

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-015F
 Sample ID: 170544015
 Matrix: Soil
 Collect Date: 21-AUG-06
 Receive Date: 30-AUG-06
 Collector: Client
 Moisture: 4.74%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		1.02	+/-0.199	0.0755	+/-0.199	0.151	pCi/g		MJH1	09/11/06	1137	563988
Americium-241	U	0.0553	+/-0.0835	0.0665	+/-0.0835	0.133	pCi/g					
Bismuth-212		0.531	+/-0.343	0.149	+/-0.343	0.298	pCi/g					
Bismuth-214		0.718	+/-0.113	0.0359	+/-0.113	0.0717	pCi/g					
Cesium-134	U	0.0277	+/-0.034	0.0233	+/-0.034	0.0466	pCi/g					
Cesium-137	U	0.0311	+/-0.0234	0.0214	+/-0.0234	0.0427	pCi/g					
Cobalt-60	U	0.0157	+/-0.0273	0.024	+/-0.0273	0.048	pCi/g					
Europium-152	U	-0.0301	+/-0.0664	0.0505	+/-0.0664	0.101	pCi/g					
Europium-154	U	0.023	+/-0.0748	0.0643	+/-0.0748	0.128	pCi/g					
Europium-155	UI	0.00	+/-0.100	0.055	+/-0.100	0.110	pCi/g					
Lead-212		0.841	+/-0.0955	0.0303	+/-0.0955	0.0606	pCi/g					
Lead-214		0.720	+/-0.110	0.0355	+/-0.110	0.071	pCi/g					
Manganese-54	U	0.00593	+/-0.0257	0.0202	+/-0.0257	0.0405	pCi/g					
Niobium-94	U	0.00263	+/-0.0211	0.0185	+/-0.0211	0.0369	pCi/g					
Potassium-40		14.8	+/-1.36	0.173	+/-1.36	0.346	pCi/g					
Radium-226		0.718	+/-0.113	0.0359	+/-0.113	0.0717	pCi/g					
Silver-108m	U	0.00263	+/-0.0211	0.0182	+/-0.0211	0.0363	pCi/g					
Thallium-208		0.239	+/-0.0521	0.0206	+/-0.0521	0.0412	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

- * A quality control analyte recovery is outside of specified acceptance criteria
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GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-015F
Sample ID: 170544015

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-016F
 Sample ID: 170544016
 Matrix: Soil
 Collect Date: 21-AUG-06
 Receive Date: 30-AUG-06
 Collector: Client
 Moisture: 3.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.951	+/-0.208	0.0667	+/-0.208	0.133	pCi/g		MJH1	09/11/06	1137	563988
Americium-241	U	0.0192	+/-0.110	0.0823	+/-0.110	0.165	pCi/g					
Bismuth-212		0.457	+/-0.343	0.148	+/-0.343	0.295	pCi/g					
Bismuth-214		0.962	+/-0.128	0.0366	+/-0.128	0.0731	pCi/g					
Cesium-134	U	0.0371	+/-0.0268	0.0246	+/-0.0268	0.0493	pCi/g					
Cesium-137		0.0631	+/-0.0344	0.0206	+/-0.0344	0.0411	pCi/g					
Cobalt-60	U	0.0177	+/-0.0244	0.0221	+/-0.0244	0.0442	pCi/g					
Europium-152	U	0.017	+/-0.0714	0.0557	+/-0.0714	0.111	pCi/g					
Europium-154	U	-0.0354	+/-0.0687	0.0548	+/-0.0687	0.110	pCi/g					
Europium-155	U	0.0401	+/-0.0679	0.0614	+/-0.0679	0.123	pCi/g					
Lead-212		0.808	+/-0.0931	0.0309	+/-0.0931	0.0618	pCi/g					
Lead-214		1.03	+/-0.137	0.0371	+/-0.137	0.0742	pCi/g					
Manganese-54	U	0.0157	+/-0.0231	0.0211	+/-0.0231	0.0421	pCi/g					
Niobium-94	U	-0.0132	+/-0.0215	0.0173	+/-0.0215	0.0345	pCi/g					
Potassium-40		12.4	+/-1.23	0.177	+/-1.23	0.353	pCi/g					
Radium-226		0.962	+/-0.128	0.0366	+/-0.128	0.0731	pCi/g					
Silver-108m	U	0.0118	+/-0.0207	0.0186	+/-0.0207	0.0371	pCi/g					
Thallium-208		0.196	+/-0.0541	0.022	+/-0.0541	0.044	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-016F
Sample ID: 170544016

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-017F
Sample ID: 170544017
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 3.54%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Gamma Spec Analysis												
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>												
<i>Waived</i>												
Actinium-228		0.872	+/-0.325	0.138	+/-0.325	0.276	pCi/g		MJH1	09/11/06	1138	563988
Americium-241	U	0.098	+/-0.0815	0.0655	+/-0.0815	0.131	pCi/g					
Bismuth-212		0.791	+/-0.500	0.303	+/-0.500	0.606	pCi/g					
Bismuth-214		7.52	+/-0.808	0.0692	+/-0.808	0.138	pCi/g					
Cesium-134	U	0.030	+/-0.0491	0.044	+/-0.0491	0.0879	pCi/g					
Cesium-137	U	0.0292	+/-0.0494	0.039	+/-0.0494	0.078	pCi/g					
Cobalt-60	U	-0.0101	+/-0.050	0.0409	+/-0.050	0.0817	pCi/g					
Europium-152	U	-0.0955	+/-0.173	0.0986	+/-0.173	0.197	pCi/g					
Europium-154	U	0.0231	+/-0.166	0.121	+/-0.166	0.241	pCi/g					
Europium-155	U	0.0411	+/-0.150	0.095	+/-0.150	0.190	pCi/g					
Lead-212		0.855	+/-0.125	0.054	+/-0.125	0.108	pCi/g					
Lead-214		7.69	+/-0.715	0.0681	+/-0.715	0.136	pCi/g					
Manganese-54	U	-0.0178	+/-0.0532	0.0383	+/-0.0532	0.0766	pCi/g					
Niobium-94	U	0.0572	+/-0.0425	0.0391	+/-0.0425	0.0782	pCi/g					
Potassium-40		11.9	+/-1.34	0.390	+/-1.34	0.779	pCi/g					
Radium-226		7.52	+/-0.808	0.0692	+/-0.808	0.138	pCi/g					
Silver-108m	U	-0.0424	+/-0.0392	0.0321	+/-0.0392	0.0642	pCi/g					
Thallium-208		0.309	+/-0.0831	0.0327	+/-0.0831	0.0654	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-017F
Sample ID: 170544017

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

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-005F
Sample ID: 170544018
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 4.45%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	X	0.416	+/-0.254	0.00	+/-0.261	0.109	pCi/g		BXL1	09/14/06	0931	564247	
Curium-242	U	0.034	+/-0.0903	0.0402	+/-0.0904	0.202	pCi/g						
Curium-243/244	X	0.375	+/-0.253	0.0629	+/-0.259	0.235	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.0251	+/-0.0665	0.0296	+/-0.0665	0.149	pCi/g		BXL1	09/10/06	0859	564258	
Plutonium-239/240	U	-0.0396	+/-0.0347	0.0661	+/-0.035	0.222	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	11.0	+/-8.81	6.91	+/-8.87	14.5	pCi/g		BXL1	09/13/06	0941	564259	
Rad Gamma Spec Analysis													
<i>Gamma,Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.862	+/-0.189	0.0691	+/-0.189	0.138	pCi/g		MJH1	09/11/06	1524	563988	
Americium-241	U	0.0475	+/-0.0916	0.0761	+/-0.0916	0.152	pCi/g						
Bismuth-212		0.376	+/-0.342	0.149	+/-0.342	0.298	pCi/g						
Bismuth-214		0.665	+/-0.098	0.0348	+/-0.098	0.0695	pCi/g						
Cesium-134	UI	0.00	+/-0.0369	0.0244	+/-0.0369	0.0487	pCi/g						
Cesium-137	U	0.00701	+/-0.0214	0.0188	+/-0.0214	0.0375	pCi/g						
Cobalt-60	U	0.00123	+/-0.0207	0.0176	+/-0.0207	0.0352	pCi/g						
Europium-152	U	0.0143	+/-0.0598	0.0511	+/-0.0598	0.102	pCi/g						
Europium-154	U	-0.021	+/-0.077	0.0564	+/-0.077	0.113	pCi/g						
Europium-155	U	0.0156	+/-0.0608	0.0554	+/-0.0608	0.111	pCi/g						
Lead-212		0.868	+/-0.0965	0.0285	+/-0.0965	0.0569	pCi/g						
Lead-214		0.659	+/-0.0993	0.0364	+/-0.0993	0.0727	pCi/g						
Manganese-54	U	0.014	+/-0.0222	0.018	+/-0.0222	0.036	pCi/g						
Niobium-94	U	-0.00488	+/-0.0191	0.0159	+/-0.0191	0.0318	pCi/g						
Potassium-40		15.4	+/-1.29	0.167	+/-1.29	0.334	pCi/g						
Radium-226		0.665	+/-0.098	0.0348	+/-0.098	0.0695	pCi/g						
Silver-108m	U	-0.0112	+/-0.0188	0.0159	+/-0.0188	0.0318	pCi/g						
Thallium-208		0.317	+/-0.0522	0.0177	+/-0.0522	0.0354	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.0105	+/-0.0185	0.014	+/-0.0185	0.0328	pCi/g		KSD1	09/09/06	1605	564153	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2,ALL FSS</i>													
Tritium	U	1.53	+/-6.54	5.42	+/-6.54	11.4	pCi/g		DFA1	09/05/06	1744	564447	

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-005F
Sample ID: 170544018

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch
Rad Liquid Scintillation Analysis												
<i>Liquid Scint C14, Solid All, FSS</i>												
Carbon-14	U	-0.095	+/-0.0729	0.0628	+/-0.0729	0.128	pCi/g		AXD2	09/06/06	0701	564449
<i>Liquid Scint Fe55, Solid-ALL FSS</i>												
Iron-55	U	-7.85	+/-34.0	23.2	+/-34.0	48.2	pCi/g		MXP1	09/08/06	2325	564451
<i>Liquid Scint Ni63, Solid-ALL FSS</i>												
Nickel-63	U	3.94	+/-7.34	6.02	+/-7.35	12.5	pCi/g		MXP1	09/09/06	0319	564452
<i>Liquid Scint Tc99, Solid-ALL FSS</i>												
Technetium-99	U	0.128	+/-0.272	0.225	+/-0.272	0.463	pCi/g		KXR1	09/06/06	1605	564445

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	68	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	86	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	90	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	81	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	75	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	66	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	81	(15%-125%)

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-005F
Sample ID: 170544018

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

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

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-008F
Sample ID: 170544019
Matrix: Soil
Collect Date: 21-AUG-06
Receive Date: 30-AUG-06
Collector: Client
Moisture: 4.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	M
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241	X	0.421	+/-0.257	0.00	+/-0.263	0.111	pCi/g		BXL1	09/14/06	0931	564247	
Curium-242	U	0.0454	+/-0.089	0.00	+/-0.0891	0.123	pCi/g						
Curium-243/244	U	0.134	+/-0.164	0.0637	+/-0.165	0.239	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.00926	+/-0.0182	0.0346	+/-0.0182	0.174	pCi/g		BXL1	09/10/06	0859	564258	
Plutonium-239/240	U	0.0879	+/-0.135	0.0599	+/-0.135	0.224	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	-2.25	+/-7.22	6.16	+/-7.22	12.9	pCi/g		BXL1	09/13/06	0958	564259	
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.902	+/-0.268	0.0945	+/-0.268	0.189	pCi/g		MJH1	09/11/06	1524	563988	
Americium-241	U	0.043	+/-0.0406	0.0334	+/-0.0406	0.0668	pCi/g						
Bismuth-212		0.625	+/-0.369	0.182	+/-0.369	0.364	pCi/g						
Bismuth-214		0.610	+/-0.137	0.0427	+/-0.137	0.0853	pCi/g						
Cesium-134	U	0.0406	+/-0.035	0.0304	+/-0.035	0.0608	pCi/g						
Cesium-137	U	0.00127	+/-0.0295	0.026	+/-0.0295	0.0519	pCi/g						
Cobalt-60	U	-0.00106	+/-0.0351	0.0291	+/-0.0351	0.0582	pCi/g						
Europium-152	U	-0.00421	+/-0.0852	0.0607	+/-0.0852	0.121	pCi/g						
Europium-154	U	0.0662	+/-0.110	0.0972	+/-0.110	0.194	pCi/g						
Europium-155	U	-0.00259	+/-0.0574	0.0504	+/-0.0574	0.101	pCi/g						
Lead-212		0.756	+/-0.0918	0.0307	+/-0.0918	0.0615	pCi/g						
Lead-214		0.723	+/-0.116	0.0417	+/-0.116	0.0834	pCi/g						
Manganese-54	U	0.0269	+/-0.0305	0.0282	+/-0.0305	0.0564	pCi/g						
Niobium-94	U	-0.00728	+/-0.0274	0.0235	+/-0.0274	0.0469	pCi/g						
Potassium-40		12.9	+/-1.23	0.237	+/-1.23	0.473	pCi/g						
Radium-226		0.610	+/-0.137	0.0427	+/-0.137	0.0853	pCi/g						
Silver-108m	U	0.00253	+/-0.0238	0.0207	+/-0.0238	0.0414	pCi/g						
Thallium-208		0.248	+/-0.0567	0.0244	+/-0.0567	0.0488	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	-0.0042	+/-0.0116	0.0105	+/-0.0116	0.0248	pCi/g		KSD1	09/09/06	1605	564153	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid-HTD2, ALL FSS</i>													
Tritium	U	1.43	+/-6.09	5.05	+/-6.09	10.6	pCi/g		DFA1	09/05/06	1815	564447	

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Certificate of Analysis

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

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-008F Project: YANK01204
Sample ID: 170544019 Client ID: YANK001
Vol. Recv.:

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Liquid Scintillation Analysis													
<i>Liquid Scint C14, Solid ALL, FSS</i>													
Carbon-14	U	-0.0997	+/-0.0966	0.0841	+/-0.0966	0.174	pCi/g		AXD2	09/06/06	0833	564449	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	34.3	+/-41.0	27.1	+/-41.0	56.4	pCi/g		MXP1	09/08/06	2342	564451	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	9.11	+/-7.52	5.98	+/-7.52	12.5	pCi/g		MXP1	09/09/06	0351	564452	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	-0.0655	+/-0.262	0.221	+/-0.262	0.456	pCi/g		KXR1	09/06/06	1621	564445	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/30/06	1546	563875

The following Analytical Methods were performed

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

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243	Alphaspec Am241, Cm, Solid ALL	67	(15%-125%)
Plutonium-242	Alphaspec Pu, Solid-ALL FSS	74	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Pu241, Solid-ALL FS	100	(25%-125%)
Carrier/Tracer Recovery	GFPC, Sr90, solid-ALL FSS	103	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Fe55, Solid-ALL FS	68	(15%-125%)
Carrier/Tracer Recovery	Liquid Scint Ni63, Solid-ALL FS	71	(25%-125%)
Carrier/Tracer Recovery	Liquid Scint Tc99, Solid-ALL FS	81	(15%-125%)

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Certificate of Analysis

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

Report Date: September 15, 2006

Client Sample ID: 9304-0002-008F
Sample ID: 170544019

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

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

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

The above sample is reported on a dry weight basis.

QUALITY CONTROL DATA

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

QC Summary

Report Date: September 15, 2006
 Page 1 of 9

Client : Connecticut Yankee Atomic Power
 362 Injun Hollow Rd

Contact: East Hampton, Connecticut
 Mr. Jack McCarthy

Workorder: 170544

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	564247										
QC1201173420	170543020 DUP										
Americium-241	X	0.667	X	0.300	pCi/g	76		(0% - 100%)	BXL1	09/14/06	09:31
	Uncert:	+/-0.335		+/-0.218							
	TPU:	+/-0.348		+/-0.221							
Curium-242	U	0.082	U	0.0236	pCi/g	111		(0% - 100%)			
	Uncert:	+/-0.131		+/-0.0939							
	TPU:	+/-0.132		+/-0.0939							
Curium-243/244	U	0.255	U	0.0428	pCi/g	143		(0% - 100%)			
	Uncert:	+/-0.223		+/-0.120							
	TPU:	+/-0.226		+/-0.121							
QC1201173422	LCS										
Americium-241		13.0		11.7	pCi/g		90	(75%-125%)			
	Uncert:			+/-1.25							
	TPU:			+/-1.92							
Curium-242			U	0.0188	pCi/g						
	Uncert:			+/-0.075							
	TPU:			+/-0.075							
Curium-243/244		15.7		12.5	pCi/g		80	(75%-125%)			
	Uncert:			+/-1.30							
	TPU:			+/-2.02							
QC1201173419	MB										
Americium-241			U	-0.0458	pCi/g						
	Uncert:			+/-0.0756							
	TPU:			+/-0.0757							
Curium-242			U	0.00	pCi/g						
	Uncert:			+/-0.0739							
	TPU:			+/-0.0739							
Curium-243/244			U	-0.00877	pCi/g						
	Uncert:			+/-0.0737							
	TPU:			+/-0.0738							
QC1201173421	170543020 MS										
Americium-241	13.5	X	0.667		12.8	pCi/g		90	(75%-125%)		
	Uncert:		+/-0.335		+/-1.35						
	TPU:		+/-0.348		+/-2.10						
Curium-242		U	0.082	U	0.0211	pCi/g					
	Uncert:		+/-0.131		+/-0.084						
	TPU:		+/-0.132		+/-0.0841						
Curium-243/244	16.3	U	0.255		14.8	pCi/g		91	(75%-125%)		
	Uncert:		+/-0.223		+/-1.45						
	TPU:		+/-0.226		+/-2.36						
Batch	564258										
QC1201173424	170543020 DUP										
Plutonium-238		U	-0.0353	U	-0.00766	pCi/g	129	(0% - 100%)	BXL1	09/10/06	08:59

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QC Summary

Workorder: 170544

Page 2 of 9

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	564258										
Plutonium-239/240		Uncert:	+/-0.0346	+/-0.015							
		TPU:	+/-0.0349	+/-0.015							
	U		-0.025	U -0.0306	pCi/g	20		(0% - 100%)			
		Uncert:	+/-0.0854	+/-0.030							
		TPU:	+/-0.0855	+/-0.0302							
QC1201173426	LCS										
Plutonium-238				U 0.00736	pCi/g			(75%-125%)		09/10/06	08:59
		Uncert:		+/-0.0558							
		TPU:		+/-0.0558							
Plutonium-239/240	12.0			9.86	pCi/g		82	(75%-125%)			
		Uncert:		+/-1.00							
		TPU:		+/-1.39							
QC1201173423	MB										
Plutonium-238				U 0.0173	pCi/g					09/11/06	16:09
		Uncert:		+/-0.107							
		TPU:		+/-0.107							
Plutonium-239/240				U -0.0751	pCi/g						
		Uncert:		+/-0.0773							
		TPU:		+/-0.0776							
QC1201173425	170543020	MS									
Plutonium-238		U	-0.0353	U -0.0128	pCi/g			(75%-125%)		09/10/06	08:59
		Uncert:	+/-0.0346	+/-0.0662							
		TPU:	+/-0.0349	+/-0.0662							
Plutonium-239/240	12.5	U	-0.025	11.5	pCi/g		92	(75%-125%)			
		Uncert:	+/-0.0854	+/-1.14							
		TPU:	+/-0.0855	+/-1.62							
Batch	564259										
QC1201173428	170543020	DUP									
Plutonium-241		U	-4.55	U 4.44	pCi/g	0		(0% - 100%) BXL1		09/13/06	10:30
		Uncert:	+/-7.51	+/-8.58							
		TPU:	+/-7.51	+/-8.59							
QC1201173430	LCS										
Plutonium-241			137	140	pCi/g		103	(75%-125%)		09/13/06	11:03
		Uncert:		+/-14.1							
		TPU:		+/-19.7							
QC1201173427	MB										
Plutonium-241				U 1.82	pCi/g					09/13/06	10:14
		Uncert:		+/-7.33							
		TPU:		+/-7.33							
QC1201173429	170543020	MS									
Plutonium-241		U	139 -4.55	127	pCi/g		91	(75%-125%)		09/13/06	10:47
		Uncert:	+/-7.51	+/-12.9							
		TPU:	+/-7.51	+/-17.6							
Rad Gamma Spec											
Batch	563988										
QC1201172835	170543021	DUP									
Actinium-228			1.07	0.953	pCi/g	11		(0% - 100%) MJH1		09/11/06	15:13
		Uncert:	+/-0.229	+/-0.197							
				+/-0.197							

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 563988											
Americium-241		TPU:	+/-0.229								
	U		0.0273	U	-0.0503	pCi/g	677	(0% - 100%)			
		Uncert:	+/-0.0421		+/-0.0891						
Bismuth-212		TPU:	+/-0.0421		+/-0.0891	pCi/g	57	(0% - 100%)			
			0.437		0.783						
		Uncert:	+/-0.373		+/-0.404						
Bismuth-214		TPU:	+/-0.373		+/-0.404	pCi/g	20	(0% - 100%)			
			0.570		0.699						
		Uncert:	+/-0.128		+/-0.103						
Cesium-134		TPU:	+/-0.128		+/-0.103	pCi/g	12	(0% - 100%)			
	U		0.0383	U	0.0429						
		Uncert:	+/-0.0339		+/-0.0346						
Cesium-137		TPU:	+/-0.0339		+/-0.0346	pCi/g	34	(0% - 100%)			
	U		-0.011	U	-0.00779						
		Uncert:	+/-0.0293		+/-0.0221						
Cobalt-60		TPU:	+/-0.0293		+/-0.0221	pCi/g	268	(0% - 100%)			
	U		-0.00163	U	0.0113						
		Uncert:	+/-0.0332		+/-0.0398						
Europium-152		TPU:	+/-0.0332		+/-0.0398	pCi/g	2980	(0% - 100%)			
	U		0.044	U	-0.0504						
		Uncert:	+/-0.0764		+/-0.0579						
Europium-154		TPU:	+/-0.0764		+/-0.0579	pCi/g	371	(0% - 100%)			
	U		-0.00651	U	0.0217						
		Uncert:	+/-0.105		+/-0.0705						
Europium-155		TPU:	+/-0.105		+/-0.0705	pCi/g	124	(0% - 100%)			
	U		0.0206	U	0.0875						
		Uncert:	+/-0.0595		+/-0.0954						
Lead-212		TPU:	+/-0.0595		+/-0.0954	pCi/g	16	(0% - 20%)			
			0.772		0.903						
		Uncert:	+/-0.093		+/-0.0706						
Lead-214		TPU:	+/-0.093		+/-0.0706	pCi/g	16	(0% - 20%)			
			0.680		0.793						
		Uncert:	+/-0.109		+/-0.103						
Manganese-54		TPU:	+/-0.109		+/-0.103	pCi/g	120	(0% - 100%)			
	U		0.0306	U	0.00764						
		Uncert:	+/-0.0338		+/-0.0225						
Niobium-94		TPU:	+/-0.0338		+/-0.0225	pCi/g	201	(0% - 100%)			
	U		-1.500E-05	U	0.00524						
		Uncert:	+/-0.0317		+/-0.0208						
Potassium-40		TPU:	+/-0.0317		+/-0.0208	pCi/g	0	(0% - 20%)			
			15.3		15.2						
		Uncert:	+/-1.23		+/-0.985						
Radium-226		TPU:	+/-1.23		+/-0.985	pCi/g	20	(0% - 100%)			
			0.570		0.699						
		Uncert:	+/-0.128		+/-0.103						
Silver-108m		TPU:	+/-0.128		+/-0.103	pCi/g	7	(0% - 100%)			
	U		-0.00955	U	-0.00886						
		Uncert:	+/-0.0232		+/-0.0196						

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	563988									
Thallium-208			TPU: +/-0.0232 0.296							
			Uncert: +/-0.0555							
			TPU: +/-0.0555							
QC1201172836	LCS									
Actinium-228			U	0.434	pCi/g				09/11/06	15:13
			Uncert: +/-0.559							
			TPU: +/-0.559							
Americium-241	23.4			25.1	pCi/g		107 (75%-125%)			
			Uncert: +/-1.99							
			TPU: +/-1.99							
Bismuth-212			U	0.574	pCi/g					
			Uncert: +/-0.992							
			TPU: +/-0.992							
Bismuth-214			U	0.168	pCi/g					
			Uncert: +/-0.258							
			TPU: +/-0.258							
Cesium-134			U	0.0765	pCi/g					
			Uncert: +/-0.150							
			TPU: +/-0.150							
Cesium-137	9.58			10.0	pCi/g		105 (75%-125%)			
			Uncert: +/-0.520							
			TPU: +/-0.520							
Cobalt-60	14.5			15.4	pCi/g		106 (75%-125%)			
			Uncert: +/-0.671							
			TPU: +/-0.671							
Europium-152			U	0.317	pCi/g					
			Uncert: +/-0.314							
			TPU: +/-0.314							
Europium-154			U	-0.0025	pCi/g					
			Uncert: +/-0.308							
			TPU: +/-0.308							
Europium-155			U	0.102	pCi/g					
			Uncert: +/-0.323							
			TPU: +/-0.323							
Lead-212			U	0.0975	pCi/g					
			Uncert: +/-0.163							
			TPU: +/-0.163							
Lead-214			U	0.389	pCi/g					
			Uncert: +/-0.367							
			TPU: +/-0.367							
Manganese-54			U	0.006	pCi/g					
			Uncert: +/-0.141							
			TPU: +/-0.141							
Niobium-94			U	-0.0639	pCi/g					
			Uncert: +/-0.126							
			TPU: +/-0.126							
Potassium-40			U	0.0608	pCi/g					

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	563988									
Radium-226		U	0.168	pCi/g			(75%-125%)			
	Uncert:		+/-1.18							
	TPU:		+/-1.18							
Silver-108m		U	0.0118	pCi/g						
	Uncert:		+/-0.258							
	TPU:		+/-0.258							
Thallium-208		U	0.0723	pCi/g						
	Uncert:		+/-0.107							
	TPU:		+/-0.107							
QC1201172834 MB										
Actinium-228		U	-0.0134	pCi/g					09/11/06	15:25
	Uncert:		+/-0.0482							
	TPU:		+/-0.0482							
Americium-241		U	-0.00197	pCi/g						
	Uncert:		+/-0.0344							
	TPU:		+/-0.0344							
Bismuth-212		U	-0.0714	pCi/g						
	Uncert:		+/-0.104							
	TPU:		+/-0.104							
Bismuth-214		U	0.00749	pCi/g						
	Uncert:		+/-0.0298							
	TPU:		+/-0.0298							
Cesium-134		U	-0.00829	pCi/g						
	Uncert:		+/-0.012							
	TPU:		+/-0.012							
Cesium-137		U	0.00138	pCi/g						
	Uncert:		+/-0.012							
	TPU:		+/-0.012							
Cobalt-60		U	-0.00523	pCi/g						
	Uncert:		+/-0.0135							
	TPU:		+/-0.0135							
Europium-152		U	0.012	pCi/g						
	Uncert:		+/-0.0345							
	TPU:		+/-0.0345							
Europium-154		U	-0.000749	pCi/g						
	Uncert:		+/-0.0385							
	TPU:		+/-0.0385							
Europium-155		U	-0.00474	pCi/g						
	Uncert:		+/-0.0292							
	TPU:		+/-0.0292							
Lead-212		U	-0.022	pCi/g						
	Uncert:		+/-0.0278							
	TPU:		+/-0.0278							
Lead-214		U	-0.0013	pCi/g						
	Uncert:		+/-0.030							
	TPU:		+/-0.030							

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time		
Rad Gamma Spec												
Batch	563988											
Manganese-54		U	0.00461	pCi/g								
	Uncert:		+/-0.0114									
	TPU:		+/-0.0114									
Niobium-94		U	-0.000174	pCi/g								
	Uncert:		+/-0.0116									
	TPU:		+/-0.0116									
Potassium-40		U	-0.104	pCi/g								
	Uncert:		+/-0.181									
	TPU:		+/-0.181									
Radium-226		U	0.00749	pCi/g								
	Uncert:		+/-0.0298									
	TPU:		+/-0.0298									
Silver-108m		U	-0.00225	pCi/g								
	Uncert:		+/-0.0114									
	TPU:		+/-0.0114									
Thallium-208		U	0.0218	pCi/g								
	Uncert:		+/-0.0268									
	TPU:		+/-0.0268									
Rad Gas Flow												
Batch	564153											
QC1201173180	170544018	DUP										
Strontium-90		U	0.0105	U	0.00952	pCi/g	10	(0% - 100%) KSD1	09/09/06	16:05		
		Uncert:	+/-0.0185		+/-0.0141							
		TPU:	+/-0.0185		+/-0.0141							
QC1201173182	LCS											
Strontium-90			1.56		1.50	pCi/g	97	(75%-125%)	09/09/06	16:05		
		Uncert:			+/-0.0897							
		TPU:			+/-0.0997							
QC1201173179	MB											
Strontium-90				U	-0.0136	pCi/g			09/09/06	16:05		
		Uncert:			+/-0.0252							
		TPU:			+/-0.0252							
QC1201173181	170544018	MS										
Strontium-90			3.10	U	0.0105	pCi/g	75	(75%-125%)	09/09/06	16:05		
		Uncert:			+/-0.0185							
		TPU:			+/-0.0185							
Rad Liquid Scintillation												
Batch	564445											
QC1201173841	170544018	DUP										
Technetium-99				U	0.128	U	0.0496	pCi/g	0	(0% - 100%) KXR1	09/06/06	17:59
		Uncert:			+/-0.272		+/-0.251					
		TPU:			+/-0.272		+/-0.251					
QC1201173843	LCS											
Technetium-99			12.7		13.0	pCi/g	103	(75%-125%)	09/06/06	18:32		
		Uncert:			+/-0.501							
		TPU:			+/-0.582							
QC1201173840	MB											
Technetium-99				U	0.0991	pCi/g			09/06/06	17:43		

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	564445										
		Uncert:		+/-0.243							
		TPU:		+/-0.243							
QC1201173842	170544018	MS									
Technetium-99		13.1	U	0.128	13.3	pCi/g	102	(75%-125%)		09/06/06	18:15
		Uncert:		+/-0.272	+/-0.540						
		TPU:		+/-0.272	+/-0.620						
Batch	564447										
QC1201173845	170544018	DUP									
Tritium			U	1.53	U	0.760	pCi/g	0	(0% - 100%) DFA1	09/05/06	21:25
		Uncert:		+/-6.54	+/-5.24						
		TPU:		+/-6.54	+/-5.24						
QC1201173847	LCS										
Tritium		46.9			44.3	pCi/g	95	(75%-125%)		09/07/06	11:21
		Uncert:			+/-8.94						
		TPU:			+/-8.98						
QC1201173844	MB										
Tritium			U		-0.43	pCi/g				09/05/06	20:54
		Uncert:			+/-4.67						
		TPU:			+/-4.67						
QC1201173846	170544018	MS									
Tritium		54.5	U	1.53	57.4	pCi/g	105	(75%-125%)		09/07/06	11:05
		Uncert:		+/-6.54	+/-10.7						
		TPU:		+/-6.54	+/-10.7						
Batch	564449										
QC1201173849	170544019	DUP									
Carbon-14			U	-0.0997	U	-0.0804	pCi/g	0	(0% - 100%) AXD2	09/09/06	05:04
		Uncert:		+/-0.0966	+/-0.108						
		TPU:		+/-0.0966	+/-0.108						
QC1201173851	LCS										
Carbon-14		6.66			6.26	pCi/g	94	(75%-125%)		09/06/06	13:38
		Uncert:			+/-0.258						
		TPU:			+/-0.276						
QC1201173848	MB										
Carbon-14			U		-0.0326	pCi/g				09/06/06	12:02
		Uncert:			+/-0.102						
		TPU:			+/-0.102						
QC1201173850	170544019	MS									
Carbon-14		6.86	U	-0.0997	6.85	pCi/g	100	(75%-125%)		09/06/06	13:07
		Uncert:		+/-0.0966	+/-0.273						
		TPU:		+/-0.0966	+/-0.293						
Batch	564451										
QC1201173859	170543020	DUP									
Iron-55			U	77.6	U	25.2	pCi/g	0	(0% - 100%) MXP1	09/09/06	00:15
		Uncert:		+/-70.0	+/-35.2						
		TPU:		+/-70.2	+/-35.3						
QC1201173861	LCS										
Iron-55		628			652	pCi/g	104	(75%-125%)		09/09/06	00:49
		Uncert:			+/-52.8						
		TPU:			+/-66.0						

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation										
Batch	564451									
QC1201173858	MB									
Iron-55		U	9.45	pCi/g					09/08/06	23:59
		Uncert:	+/-38.6							
		TPU:	+/-38.6							
QC1201173860	170543020 MS									
Iron-55		707 U	77.6	734 pCi/g		104	(75%-125%)		09/09/06	00:32
		Uncert:	+/-70.0	+/-58.4						
		TPU:	+/-70.2	+/-74.2						
Batch	564452									
QC1201173873	170543020 DUP									
Nickel-63		U	1.42	U 7.28 pCi/g	0		(0% - 100%) MXP1		09/09/06	04:54
		Uncert:	+/-6.33	+/-7.57						
		TPU:	+/-6.33	+/-7.57						
QC1201173875	LCS									
Nickel-63		512		468 pCi/g		92	(75%-125%)		09/09/06	05:58
		Uncert:		+/-15.7						
		TPU:		+/-21.7						
QC1201173872	MB									
Nickel-63		U	10.4	pCi/g					09/09/06	04:23
		Uncert:	+/-7.87							
		TPU:	+/-7.87							
QC1201173874	170543020 MS									
Nickel-63		594 U	1.42	542 pCi/g		91	(75%-125%)		09/09/06	05:26
		Uncert:	+/-6.33	+/-20.8						
		TPU:	+/-6.33	+/-27.9						

Notes:

The Qualifiers in this report are defined as follows:

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

QC Summary

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
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^
 h Preparation or preservation holding time was exceeded

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

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

SOUTHWEST PROTECTED AREA GROUNDS
SURVEY UNIT 9304-0002

RELEASE RECORD

ATTACHMENT 4 (DQA RESULTS)

SOUTHWEST PROTECTED AREA GROUNDS
SURVEY UNIT 9304-0002

RELEASE RECORD

**ATTACHMENT 4A
(PRELIMINARY DATA REVIEW)**

Preliminary Data Review Form - Samples for the Sign Test

Survey Unit: 9304- 0002
 Survey Unit Name: Southwest Protected Area Grounds

Classification: 1
 Survey Media: Soil
 Type of Survey: Final Status Survey
 Type of Measurement: Gross Measurement
 Number of Measurements: 15
 Operational DCGL: 1

BASIC STATISTICAL QUANTITIES

	Cs-137	Co-60
Minimum Value:	-8.36E-03	-6.86E-03
Maximum Value:	4.38E-02	2.53E-02
Mean:	9.96E-03	7.43E-03
Median:	8.31E-03	5.27E-03
Standard Deviation:	1.46E-02	1.08E-02
Skew:	0.905	0.467

RADIONUCLIDE CONCENTRATION (pCi/g)

NUMBER	Cs-137	Co-60	Cs Identified?	Co Identified?
9304-0002-001F	1.59E-02	8.81E-03	NO	NO
9304-0002-002F	8.36E-03	1.30E-02	NO	NO
9304-0002-003F	3.16E-03	7.74E-05	NO	NO
9304-0002-004F	8.31E-03	2.53E-02	NO	YES
9304-0002-005F	7.01E-03	1.23E-03	NO	NO
9304-0002-006F	9.55E-03	5.27E-03	NO	NO
9304-0002-007F	1.68E-02	6.86E-03	NO	NO
9304-0002-008F	1.27E-03	1.06E-03	NO	NO
9304-0002-009F	8.14E-03	2.82E-03	NO	NO
9304-0002-010F	2.18E-03	2.71E-03	NO	NO
9304-0002-011F	2.79E-03	2.76E-03	NO	NO
9304-0002-012F	1.07E-02	2.42E-02	NO	YES
9304-0002-013F	4.38E-02	2.22E-02	YES	NO
9304-0002-014F	2.40E-02	1.20E-02	NO	NO
9304-0002-015F	3.11E-02	1.57E-02	YES	NO

Performed By: R. Massengill

Date: 10-9-06

Independent Review: [Signature]

Date: 10/9/06

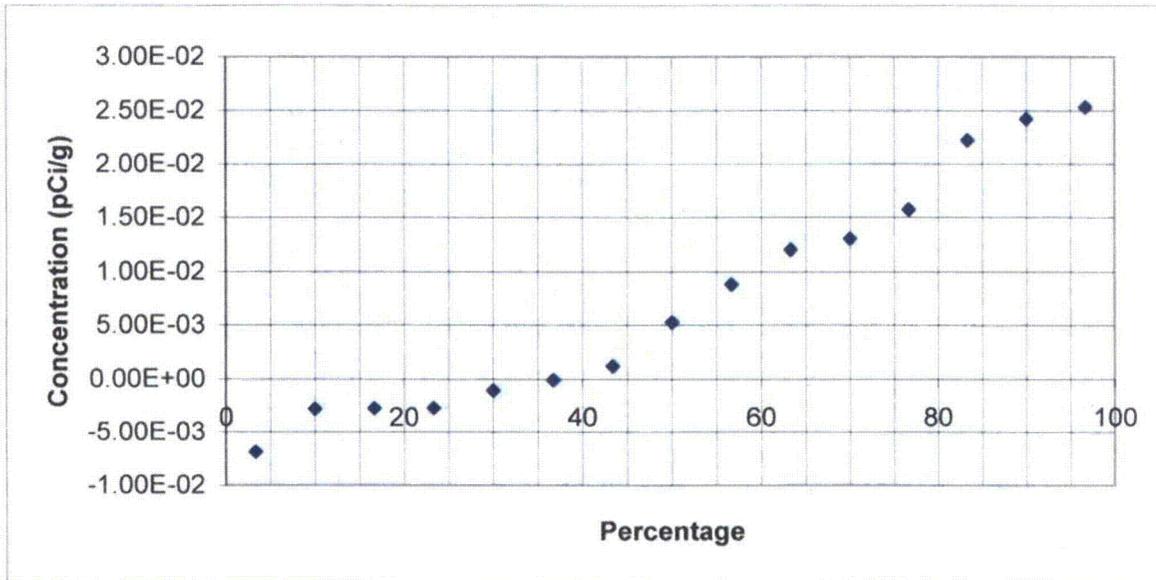
SOUTHWEST PROTECTED AREA GROUNDS
SURVEY UNIT 9304-0002

RELEASE RECORD

**ATTACHMENT 4B
(GRAPHICAL REPRESENTATION OF
DATA)**

Quantile Plot For Cobalt - 60

Survey Unit: 9304-0002
 Survey Unit Name: Southwest Protected Area Grounds
 Mean: 7.43E-03 pCi/g



Co-60	Rank	Percentage
-6.86E-03	1	3 %
-2.82E-03	2	10 %
-2.76E-03	3	17 %
-2.71E-03	4	23 %
-1.06E-03	5	30 %
-7.74E-05	6	37 %
1.23E-03	7	43 %
5.27E-03	8	50 %
8.81E-03	9	57 %
1.20E-02	10	63 %
1.30E-02	11	70 %
1.57E-02	12	77 %
2.22E-02	13	83 %
2.42E-02	14	90 %
2.53E-02	15	97 %

Prepared By: Robert Massery
 Reviewed By: E. Sargent

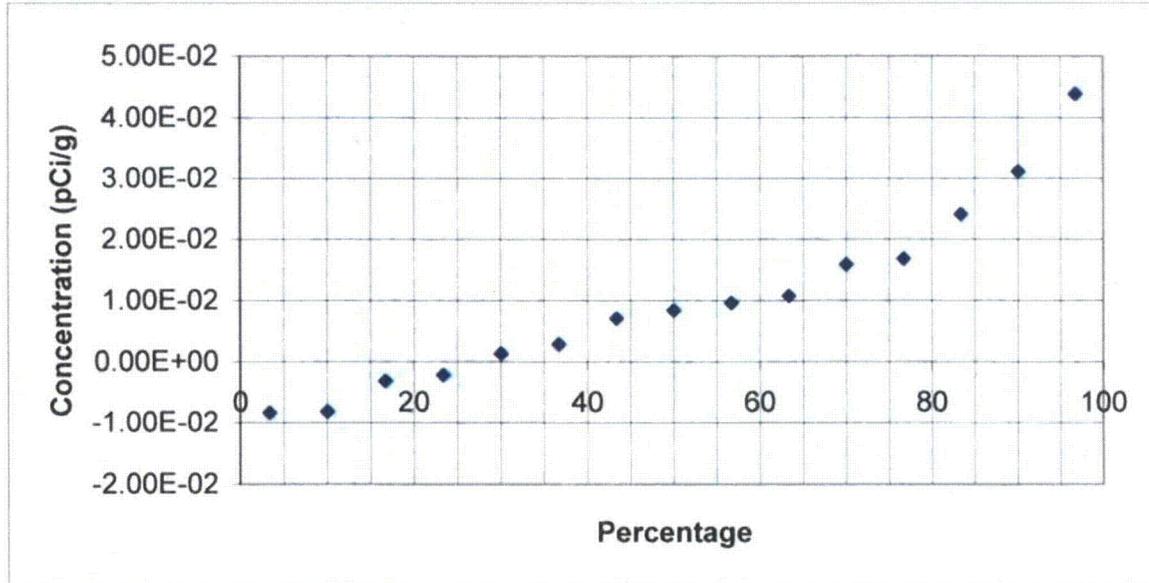
Date: 10-9-06
 Date: 1/23/07

Quantile Plot For Cesium - 137

Survey Unit: 9304-0002

Survey Unit Name: Southwest Protected Area Grounds

Mean: 9.96E-03 pCi/g



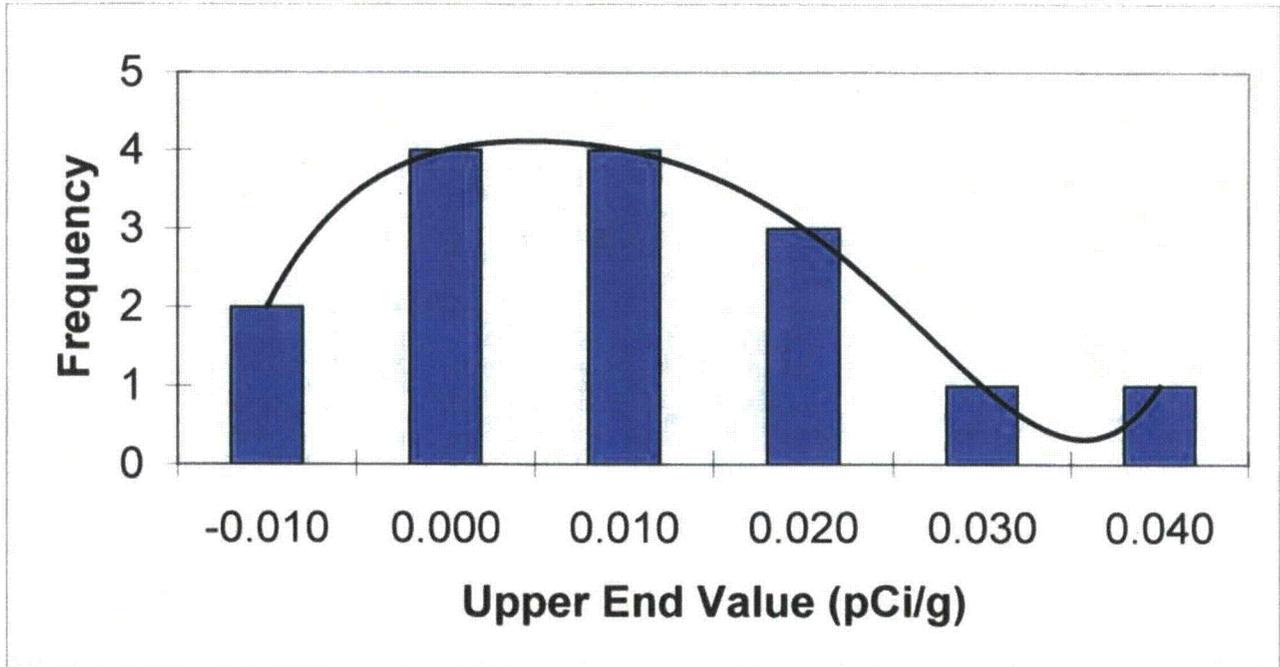
Cs-137	Rank	Percentage
-8.36E-03	1	3 %
-8.14E-03	2	10 %
-3.16E-03	3	17 %
-2.18E-03	4	23 %
1.27E-03	5	30 %
2.79E-03	6	37 %
7.01E-03	7	43 %
8.31E-03	8	50 %
9.55E-03	9	57 %
1.07E-02	10	63 %
1.59E-02	11	70 %
1.68E-02	12	77 %
2.40E-02	13	83 %
3.11E-02	14	90 %
4.38E-02	15	97 %

Prepared By: Robert Massensill
 Reviewed By: E. Sargent

Date: 10-9-06
 Date: 1/23/07

Frequency Plot For Cesium-137

Survey Unit: 9304-0002
 Survey Unit Name: Southwest Protected Area Grounds
 Mean: 0.013 pCi/g



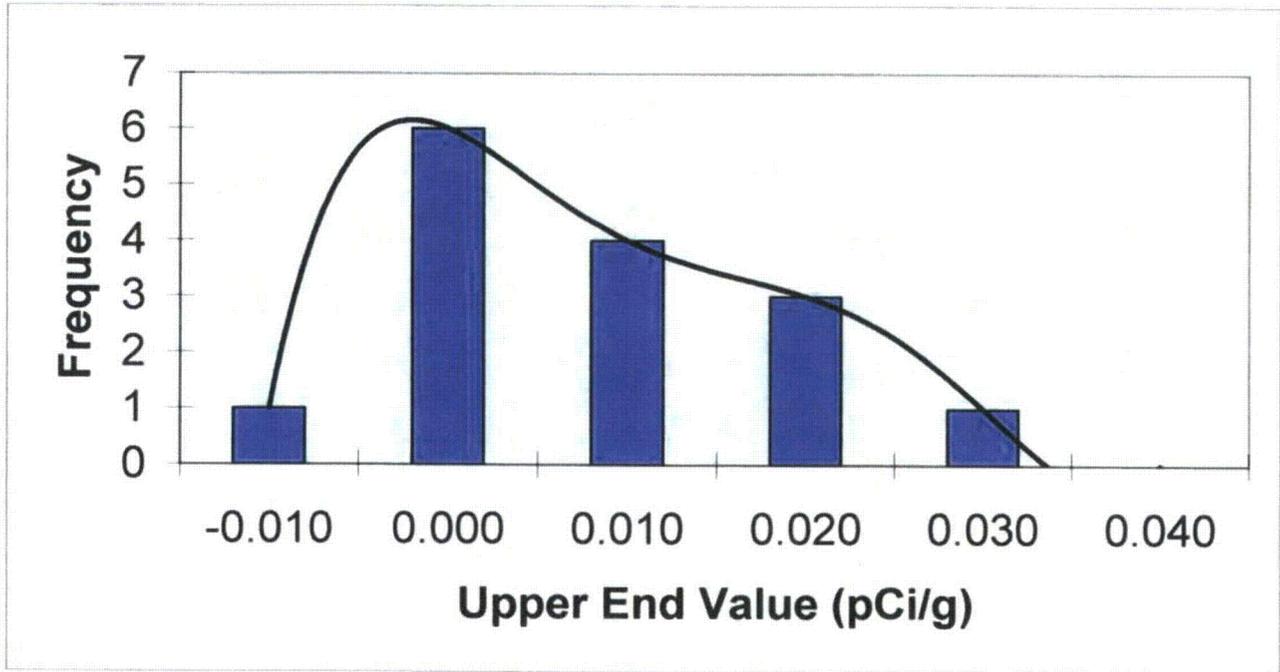
Upper End Value	Observation Frequency	Observation % Frequency
-0.010	2	13%
0.000	4	27%
0.010	4	27%
0.020	3	20%
0.030	1	7%
0.040	1	7%
Total	15	100%

Prepared By: Robert Massengill Date: 10-9-06

Reviewed By: E.E. Sergeant Date: 10/12/06

Frequency Plot For Cobalt-60

Survey Unit: 9304-0002
 Survey Unit Name: Southwest Protected Area Grounds
 Mean: 0.008 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
-0.010	1	7%
0.000	6	40%
0.010	4	27%
0.020	3	20%
0.030	1	7%
0.040	0	0%
Total	15	100%

Prepared By: Robert Massengill Date: 10-9-06

Reviewed By: EE Sergeant Date: 10/12/06

SOUTHWEST PROTECTED AREA GROUNDS
SURVEY UNIT 9304-0002

RELEASE RECORD

ATTACHMENT 4C (SIGN TEST)

Sign Test Calculation Sheet For Multiple Radionuclides

Survey Unit Number: 9304-0002					
Survey Unit Name: Southwest Protected Area Grounds					
WP&IR#: 2006-038					
Classification : 1		TYPE I (α error):0.05	TYPE I (β error):0.05		
Radionuclides:		Cs-137	Co-60		
Operational DCGL (pCi/g):		4.75	2.29		
Results Cs-137	Results Co-60	Weighted Sum (W _s)	DCGL-Result	Sign	
1.59E-02	8.81E-03	7.19E-03	9.93E-01	1	
-8.36E-03	1.30E-02	3.92E-03	9.96E-01	1	
-3.16E-03	-7.74E-05	-6.99E-04	1.00E+00	1	
8.31E-03	2.53E-02	1.28E-02	9.87E-01	1	
7.01E-03	1.23E-03	2.01E-03	9.98E-01	1	
9.55E-03	5.27E-03	4.31E-03	9.96E-01	1	
1.68E-02	-6.86E-03	5.41E-04	9.99E-01	1	
1.27E-03	-1.06E-03	-1.96E-04	1.00E+00	1	
-8.14E-03	-2.82E-03	-2.95E-03	1.00E+00	1	
-2.18E-03	-2.71E-03	-1.64E-03	1.00E+00	1	
2.79E-03	-2.76E-03	-6.18E-04	1.00E+00	1	
1.07E-02	2.42E-02	1.28E-02	9.87E-01	1	
4.38E-02	2.22E-02	1.89E-02	9.81E-01	1	
2.40E-02	1.20E-02	1.03E-02	9.90E-01	1	
3.11E-02	1.57E-02	-1.34E-02	9.87E-01	1	
Number of Positive Differences (S+):			15		

Critical Value: 13

Survey Unit: Meets Acceptance Criterion

Performed By: *Robert Massery II*

Date: 10-9-06

Independent Review: *E.S. Sargent*

Date: 10/12/06

SOUTHWEST PROTECTED AREA GROUNDS
SURVEY UNIT 9304-0002

RELEASE RECORD

**ATTACHMENT 4D
(QC SPLIT RESULTS)**

Split Sample Assessment Form

Survey Area #:	9304	Survey Unit #:	0002	Survey Unit Name:	Southwest Protected Area Grounds
Sample Plan or WPIR#:	2006-038			SML #:	9304-0002-001FS

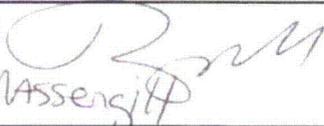
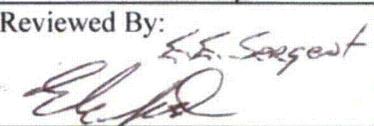
Sample Description: Comparison of split samples collected from sample measurement location #02 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was 9304-0002-001F the comparison sample was 9304-0002-001FS.

STANDARD					COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
Cs-137	1.59E-02	1.33E-02	1	NONE	2.45E-02	1.58E-02	1.54	N/A
Co-60	8.81E-03	1.73E-02	1	NONE	1.39E-02	9.80E-03	1.58	N/A
K-40	1.09E+01	5.20E-01	21	0.75 1.33	1.14E+01	5.15E-01	1.05	Y

Comments/Corrective Actions: Cs-137 & Co-60 are reported at levels significantly below detection limits, a small variance in the reported activity for the samples could result in a low resolution and a corresponding unsatisfactory comparison ratio. Guidance for sample agreement was developed from USNRC Inspection Procedure 84750 which does not provide agreement ranges for resolutions less than 4. Therefore, a statement of acceptability in such cases is not appropriate. However, K-40 was found to be present at an acceptable level of agreement. Therefore, no further action is warranted.

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

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

Performed By: 	Date: 10-11-06	Reviewed By: 	Date: 10/12/06
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WPIR – Work Plan and Inspection Record
SML – Sample Measurement Location designation

Split Sample Assessment Form

Survey Area#:	9304	Survey Unit #:	0002	Survey Unit Name:	Southwest Protected Area Grounds			
Sample Plan or WPIR#:				2006-038	SML #:	9304-0002-004FS		

Sample Description: Comparison of split samples collected from sample measurement location #10 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was 9304-0001-010F, the comparison sample was 9304-0001-010FS.

STANDARD					COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
Cs-137	8.31E-03	9.80E-03	1	NONE -	-2.49E-03	1.01E-02	-0.30	N/A
Co-60	2.53E-02	1.11E-02	2	NONE -	1.33E-03	9.40E-03	0.05	N/A
K-40	1.10E+01	4.27E-01	26	0.75 - 1.33	1.03E+01	4.07E-01	0.94	Y

Comments/Corrective Actions: Cs-137 & Co-60 are reported at levels significantly below detection limits, a small variance in the reported activity for the samples could result in a low resolution and a corresponding unsatisfactory comparison ratio. Guidance for sample agreement was developed from USNRC Inspection Procedure 84750 which does not provide agreement ranges for resolutions less than 4. Therefore, a statement of acceptability in such cases is not appropriate. However, K-40 was found to be present at an acceptable level of agreement. Therefore, no further action is warranted.

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

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

Performed By:	Date:	Reviewed By:	Date:
<i>R. Massena</i>	10-11-06	<i>E.E. Seeger</i>	10/12/06

WPIR – Work Plan and Inspection Record
SML – Sample Measurement Location designation

SOUTHWEST PROTECTED AREA GROUNDS
SURVEY UNIT 9304-0002

RELEASE RECORD

**ATTACHMENT 4E
(COMPASS DQA WITH POWER
CURVE)**



DQA Surface Soil Report

Assessment Summary

Site:	CY-03		
Planner(s):	RWM		
Survey Unit Name:	Southwest Protected Area Grounds		
Report Number:	1		
Survey Unit Samples:	15		
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

