



Final Status Survey Final Report Phase VII

Appendix A17

Survey Unit Release Record

**9802-0000, Subsurface Area Associated
with the West Industrial Site Grounds
(non-protected area)**

May 2007



CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS - (NON-PROTECTED AREA)
SURVEY UNIT 9802-0000

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TOTAL 160

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1. SURVEY UNIT DESCRIPTION

Survey Unit 9802-0000 (Subsurface Area Associated with the West Industrial Site Grounds (non-protected area) is designated as Final Status Survey (FSS) Class "B" subsurface soils area and consists of approximately eighteen thousand two hundred and ninety two (18,292 m²) square meters of area under uninhabited land and is located approximately eleven hundred and eighty eight feet (1,188 ft) from the reference coordinate system benchmark used at Haddam Neck Plant (HNP) (see Attachment 1). Survey Unit 9802-0000 includes the subsurface soils located under open land area Survey Units 9304-0001, 9304-0002 and 9306-0000. Additionally parts of survey areas 9302, 9313 and 9512 are located over the footprint of Survey Unit 9802-0000. The southeast quadrant of the survey unit is comprised mostly of rock outcroppings, rock ledge, underbrush and trees. The survey unit has a moderate slope running from southeast to northwest.

The reference coordinates associated with this survey unit are E002 through E008 by S065 through S072 (refer to "*HNP License Termination Plan*" (LTP) Section 5.4.4). The reference coordinates provide the maximum dimensions of a rectangle containing this survey unit. Some areas contained in this rectangle may not be part of this survey unit. The boundary of the survey unit was defined using a Global Positioning System (GPS) based on the Connecticut State Plane System North American Datum (NAD) 1927.

2. CLASSIFICATION BASIS

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

The "*Classification Basis Summary*" conducted for Survey Unit 9802-0000 consisted of:

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

These documents identified a number of events that may have impacted this survey area:

- ACR #-95-509-Particle found near West gate during routine survey.
- Plant survey #10-Spot frisk survey performed in southwest protected area indicated some valves appeared to have residual contamination up to 150 corrected counts per minute (ccpm).
- CR# 98-0240- Contamination found in the sludge at the bottom of manhole #3, southwest of the 115kev yard.
- CR# 98-0992-During a clean-up outside the Radiological Control Area

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(RCA), sand was inadvertently scooped up and placed in a dumpster. Follow-up analysis indicated that the sand contained low levels of radioactive material above the environmental release levels.

- CR# 03-0450-Fixed contamination (3,400 ccpm) was found in the asphalt outside the North RCA gate.
- CR# 05-0509-Several Barrels were identified during excavation of the southwest portion of the former Service Building.
- CR# 05-0736-The north waste storage tent area was leaking through the north berm.

In July of 2006, the Circulation Water Piping system was excavated from this survey unit (in surface survey area 9306). During the backfill and survey of the excavation, a discrete area of radioactive soil contamination was observed. The area was remediated and re-surveyed and sampled and all post remediation surveys and samples did not indicate radioactive contamination above detection limits. However, because remediation was conducted within the boundaries of survey unit 9304-0001, it was re-classified as a Class 1 area.

The radiological assessments and characterization surveys of subsurface soil in this area to support decommissioning activities commenced in 2005 and continued through 2006 as work progressed. Sampling was performed in the footprints of the Control Building, Turbine Building, Service Building (excavations II and IV), and Discharge Tunnel (or Circulating Water) excavations. All soil samples were either analyzed at the on-site laboratory or at an approved off-site laboratory for all radionuclides of concern, including HTD radionuclides. Within the subsurface survey area 9802, samples were collected from surface survey units 9302-0000, 9313-0000, 9304-0001, 9304-0002 and 9306-0000. A total of one hundred and forty (140) samples were identified as either post remediation or subsurface characterization samples from this survey area. All of these samples were utilized to determine both the radionuclide(s) of concern and the standard deviation of the sample population for FSS plan development. A summary of the one hundred and forty (140) post remediation or subsurface characterization sample results are provided in Table 1. Following the removal of all above grade commodities, below grade systems and soils identified by previous surveys as contaminated, post-remediation soil samples were taken prior to backfill and grading.

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**Table 1 – Sample Analysis Results from Characterization Soil Samples
Taken Post-Remediation & Prior to Backfill**

	Cs-137 (ρ Ci/g)	Co-60 (ρ Ci/g)
Minimum Value:	-2.48E+00	-4.61E-02
Maximum Value:	4.56E-01	4.03E-01
Mean:	-2.07E-03	3.76E-03
Median:	6.25E-03	-4.30E-04
Standard Deviation:	2.17E-01	3.85E-02

The sample results indicate that Cs-137 and Co-60 were the primary radionuclides detected in the sample population and were detected in concentrations up to 21.2% of the Operational Derived Concentration Guideline Level (DCGL) when incorporating the “sum of fractions”. Cs-137 was the predominant radionuclide over Co-60 by a factor of 5 to 1. Cs-137 was positively identified (i.e. a result greater than two (2) standard deviations uncertainty) in thirty-three (33) samples where the sample results were predominantly at very low concentrations that were frequently approaching or below detection limits. Co-60 was positively identified (i.e. a result greater than two (2) standard deviations uncertainty) in thirteen (13) samples where the sample results were predominantly at very low concentrations that were frequently approaching or below detection limits. Therefore, both Cs-137 and Co-60 are both identified as radionuclides of concern for FSS.

Thirty-three (33) samples in this group were also sent to an approved off-site laboratory for HTD analysis. Other than Sr-90 and H-3, no additional HTD radionuclides were positively identified. Sr-90 and H-3 were positively identified (i.e. a result greater than two (2) standard deviations uncertainty) in seven (7) and ten (10) samples respectively. However, none of the thirty-three (33) samples analyzed for HTD were identified at levels above 5% or 10% of the Operational DCGL either individually or in combination. Therefore, Sr-90 and H-3 were de-selected as radionuclides of concern for FSS.

3. DATA QUALITY OBJECTIVES

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.

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

The primary objective of the FSS plan was to demonstrate that the level of residual radioactivity in Survey Unit 9802-0000 did not exceed the release criteria specified in the LTP and that the potential dose from residual radioactivity is As Low As Reasonably Achievable (ALARA).

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

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

Equation 1

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

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

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

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

Equation 2

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

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 DCGLs, Operational DCGLs and Required Minimum Detectable Concentrations (MDCs)

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

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

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

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

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

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

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Another important facet of the DQO process is to identify the radionuclides of concern and determine the concentration variability. During the characterization of the subsurface soils in this survey unit, Cs-137 and Co-60 were identified as the principle gamma emitting radionuclides which were present in sufficient concentrations that could potentially exceed the screening criteria.

Two (2) soil samples were selected to be analyzed by an approved off-site laboratory for all radionuclides specified in Table 2. This exceeds the LTP requirement that a minimum of 5% of the subsurface soil samples be analyzed by an approved off-site laboratory for all HTD radionuclides of concern as specified by the LTP.

As part of the DQOs applied to laboratory processes, analysis results were reported as actual calculated results. Sample report summaries included unique sample identification, analytical method, radionuclide, result, and uncertainty to two (2) standard deviations, laboratory data qualifiers, units, and the required and observed MDC.

4. SURVEY DESIGN

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

The DQO process determined that both Cs-137 and Co-60 would be the primary radionuclides of concern in Survey Unit 9802-0000. Other radionuclides positively identified in concentrations greater than the screening criteria during the performance of this FSS were evaluated to ensure adequate survey design. Radionuclide screening or de-selection is a process where an individual radionuclide or aggregates may be considered insignificant and eliminated from the FSS. The criteria for de-selection are concentrations less than 5% for individual radionuclides and less than 10% for aggregates.

The survey unit was classified as a Class B subsurface soils area as individual sample measurements exceeding the unitized DCGL were not expected.

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

LTP Section 5.7.3.2.2 states that there will be a minimum of twenty five (25) measurement locations in a Class B subsurface soils survey unit. In addition, four (4) biased measurements or samples were obtained at the locations of localized remediation efforts where there was the potential for soil contamination. LTP Section 5.7.3.2.2 states that the range of the number of measurements in Class B

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areas corresponds to the range of values for N (for Sign test), considering $\alpha = 0.05$, $\beta = 0.05$, and a relative shift of < 3.0 .

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

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

Table 3 - Sample Measurement Locations with Associated GPS Coordinates for Non-parametric Sample Population

Designation	Northing	Easting
9802-0000-001F	236636.45	668409.26
9802-0000-002F	236553.03	668361.10
9802-0000-003F	236553.03	668457.42
9802-0000-004F	236553.03	668553.75
9802-0000-005F	236469.61	668312.93
9802-0000-006F	236469.61	668409.26
9802-0000-007F	236469.61	668505.59
9802-0000-008F	236469.61	668601.91
9802-0000-009F	236386.18	668264.77
9802-0000-010F	236386.18	668361.10
9802-0000-011F	236386.18	668457.42
9802-0000-012F	236386.18	668553.75

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9802-0000-013F	236386.18	668650.08
9802-0000-014F	236386.18	668746.40
9802-0000-015F	236302.76	668409.26
9802-0000-016F	236302.76	668505.59
9802-0000-017F	236302.76	668601.91
9802-0000-019F	236302.76	668698.24
9802-0000-020F	236302.76	668794.57
9802-0000-021F	236219.34	668553.75
9802-0000-022F	236219.34	668650.08
9802-0000-023F	236219.34	668746.40
9802-0000-025F	236135.92	668601.91

During the performance of the survey, it was discovered that four (4) of the twenty-five (25) sample locations identified for non-parametric testing were deemed to be inaccessible due to the rapid change in elevation from east to west toward the canal, changes to the discharge structure, removal of the rip-rap, and area restoration to the banks of the discharge canal. The four (4) locations identified were 9802-0000-002F, 9802-0000-009F, 9802-000-015F and 9802-0000-023F. Subsequently, four (4) additional sample measurement locations were designated to replace the locations that were deemed to be inaccessible. The location of the samples were determined using Visual Sample Plan (VSP) in accordance with RPM 5.1-14, *"Identifying and Marking Surface Sample Locations for FSS in Open Land Areas"* using a random selection which is appropriate for relocating a small number of sample locations in a Class B area. Sample Measurement Locations for the additional samples are listed with the GPS coordinates in Table 4.

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Table 4 - Sample Measurement Locations with Associated GPS Coordinates for Replacement Sample Locations		
Designation	Northing	Easting
9802-0000-030F	236423.94	668525.90
9802-0000-031F	236372.76	668545.97
9802-0000-032F	236177.90	668706.11
9802-0000-033F	236267.54	668779.86

In accordance with LTP Section 5.7.3.2.2, four (4) judgmental (biased) samples were collected in this survey area. One (1) judgmental sample was located in the vicinity of the former control building, one (1) judgmental sample was situated at the vicinity of the Circulating Water piping excavation and two (2) judgmental samples were taken along the former location of the Service Building (next to the radiological control area). Sample Measurement Locations for the judgmental samples are listed with the GPS coordinates in Table 5.

Table 5 - Sample Measurement Locations with Associated GPS Coordinates for Judgmental Sample Locations		
Designation	Northing	Easting
9802-0000-026B	236562.45	668535.99
9802-0000-027B	236352.79	668557.07
9802-0000-028B	236501.75	668624.65
9802-0000-029B	236424.41	668725.38

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

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of two (2) soil samples for “split sample” analysis by the off-site laboratory. This location was selected randomly using the Microsoft Excel “RAND” function.

Survey Unit 9802-0000 is a subsurface survey unit. Subsequently, no scanning was required.

For this Class B survey unit, the “Investigation Level” for soil sample measurement results are those levels specified in LTP, Table 5-8. Table 6 provides a synopsis of the survey design.

Table 6 – Synopsis of the Survey Design		
Feature	Design Criteria	Basis
Subsurface Survey Unit Land Area	18,292 m ²	Based on AutoCAD-LT
Number of Measurements	29 (25 Systematic grid) (4 Judgmental)	IAW LTP Section 5.7.3.2.2 for a Class B Subsurface Soil Survey Unit
Grid Spacing	29.07 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	IAW Table 5-8 of the LTP

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

5. SURVEY IMPLEMENTATION

Final status survey field activities were conducted under Work Plan and Inspection Record (WP&IR) 2006-0007. The WP&IR package included a detailed FSS plan, job safety analysis, job planning checklist and related procedures for reference. Daily briefings were conducted to discuss the expectations for job performance and the safety aspects of the survey. The “Daily Survey Journal” was used to document field activities and other information pertaining to the FSS.

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

Twenty-nine (29) subsurface soil samples were collected and packaged in accordance with Haddam Neck Plant (HNP) Procedure RPM 5.1-3, “Collection of

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Sample Media for Final Status Survey” and FSS design. Samples were collected using direct push probe technology (GeoProbe[®]).

All samples were obtained to a depth of three (3) meters or where refusal was encountered due to the presence of bedrock prior to reaching a three (3) meter depth. In addition, four (4) sample locations 9802-0000-002F, 9802-0000-009F, 9802-0000-015F and 9802-0000-023F were relocated using the VSP software due to accessibility issues. Large stones, wood and/or root pieces were removed and the soil matrix was homogenized from each 3 meter soil column. Samples were controlled, transported, stored, and transferred to the off-site laboratory using Chain-of-Custody (COC) protocol in accordance with Procedure RPM 5.1-5, “*Chain of Custody for Final Status Survey Samples.*”

Two (2) samples (9802-0000-008F and 9802-0000-022F) were randomly selected for HTD radionuclide analysis.

The implementation of survey specific quality control measures included the collection of two (2) samples (9802-0000-011F and 9802-0000-013F) for “split sample” analysis.

6. SURVEY RESULTS

All field survey activities were conducted between April 3, 2007 and April 7, 2007.

The off-site laboratory employed for the radiological analyses of samples was General Engineering Laboratories, LLC. The laboratory analyzed the twenty-five (25) samples collected for non-parametric statistical testing, the associated field splits and the four (4) judgmental samples using gamma spectroscopy. Gamma spectroscopy analysis was performed to the required MDCs. Gamma spectroscopy results identified some radionuclides meeting the accepted criteria for detection (i.e., a result greater than two standard deviations uncertainty). However, Cs-137 and Co-60 were the only gamma-emitting radionuclides reported in concentrations exceeding the de-selection criteria.

Cs-137 was identified in six (6) and Co-60 was identified in three (3) of the twenty-five (25) samples collected for non-parametric statistical testing. The mean of the gamma spectroscopic analysis results for the sample population indicated that Cs-137 was present at levels lower than the concentrations of Cs-137 found in surface soil at off-site locations within the vicinity of the HNP as presented in the Health Physics TSD BCY-HP-0063. A summary of the twenty-five (25) samples collected for non-parametric statistical testing results is provided in Table 7.

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

Sample Number	Cs-137 pCi/g	Co-60 pCi/g
9802-0000-001F	2.09E-02	-4.84E-03
9802-0000-003F	6.63E-03	9.14E-04
9802-0000-004F	-8.41E-03	4.07E-03
9802-0000-005F	9.13E-03	3.34E-03
9802-0000-006F	1.90E-02	-1.14E-02
9802-0000-007F	3.96E-03	5.71E-03
9802-0000-008F	1.42E-02	-5.70E-03
9802-0000-010F	1.41E-02	1.95E-02
9802-0000-011F	7.98E-03	2.86E-03
9802-0000-012F	-2.33E-03	6.22E-03
9802-0000-013F	5.04E-02	4.90E-02
9802-0000-014F	5.30E-03	7.41E-04
9802-0000-016F	1.53E-02	-5.21E-05
9802-0000-017F	5.65E-03	5.14E-03
9802-0000-018F	-4.41E-05	-5.22E-03
9802-0000-019F	4.15E-03	6.44E-03
9802-0000-020F	9.80E-03	-5.79E-03
9802-0000-021F	1.66E-02	-1.34E-05
9802-0000-022F	1.26E-02	-8.10E-03
9802-0000-024F	2.33E-02	1.46E-02
9802-0000-025F	1.11E-02	1.06E-02
9802-0000-030F	2.56E-02	2.82E-02
9802-0000-031F	5.93E-03	1.84E-02
9802-0000-032F	2.39E-02	-1.22E-02
9802-0000-033F	-5.51E-03	9.73E-03

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.

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9802-0000

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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 9802-0000 are provided in Table 8 below.

Table 8 – Results of Unity Calculation for Subsurface Soil Samples Comprising the Statistical Sample Population ⁽³⁾			
Sample Number	Fraction of the Operational DCGL ⁽¹⁾		Unity
	Cs-137	Co-60	
9802-0000-001F	2.09E-02	-	4.40E-03
9802-0000-003F	6.63E-03	9.14E-04	1.80E-03
9802-0000-004F	-	4.07E-03	1.78E-03
9802-0000-005F	9.13E-03	3.34E-03	3.38E-03
9802-0000-006F	1.90E-02	-	4.00E-03
9802-0000-007F	3.96E-03	5.71E-03	3.33E-03
9802-0000-008F	1.42E-02	-	2.99E-03
9802-0000-010F	1.41E-02	1.95E-02	1.15E-02
9802-0000-011F	7.98E-03	2.86E-03	2.93E-03
9802-0000-012F	-	6.22E-03	2.72E-03
9802-0000-013F	5.04E-02	4.90E-02	2.12E-02
9802-0000-014F	5.30E-03	7.41E-04	1.44E-03

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9802-0000

RELEASE RECORD

Table 8 – Results of Unity Calculation for Subsurface Soil Samples Comprising the Statistical Sample Population ⁽²⁾			
Sample Number	Fraction of the Operational DCGL⁽¹⁾		Unity
	Cs-137	Cs-137	
9802-0000-016F	1.53E-02	-	3.22E-03
9802-0000-017F	5.65E-03	5.14E-03	3.44E-03
9802-0000-018F	-	-	0.00E+00
9802-0000-019F	4.15E-03	6.44E-03	3.69E-03
9802-0000-020F	9.80E-03	-	2.06E-03
9802-0000-021F	1.66E-02	-	3.50E-03
9802-0000-022F	1.26E-02	-	2.65E-03
9802-0000-024F	2.33E-02	1.46E-02	1.13E-02
9802-0000-025F	1.11E-02	1.06E-02	6.98E-03
9802-0000-030F	2.56E-02	2.82E-02	1.77E-02
9802-0000-031F	5.93E-03	1.84E-02	9.30E-03
9802-0000-032F	2.39E-02	-	5.04E-03
9802-0000-033F	-	9.73E-03	4.26E-03

(1) The Operational DCGL 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) Blank cells indicate that the radionuclide was reported at a negative value in the sample results.

Four (4) biased judgmental subsurface soil samples were collected. The judgmental soil samples were analyzed for Cs-137 and Co-60 in accordance with the DQOs used during the survey design. The samples are denoted as shown in location Table 6, with the sample results shown in Table 9 below.

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
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Table 9 - Judgmental Sample Results ⁽²⁾			
Sample Number	Cs-137 pCi/g	Co-60 pCi/g	Fraction of the Operational DCGL ⁽¹⁾
9802-0000-026B	2.29E-03	5.30E-03	2.80E-03
9802-0000-027B	-	-	0.00E+00
9802-0000-028B	1.46E-02	-	3.08E-03
9802-0000-029B	1.33E-02	2.37E-02	1.32E-02

(1) The Operational DCGL 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) Blank cells indicate that the radionuclide was reported at a negative value in the sample results.

7. QUALITY CONTROL

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

Cs-137 and Co-60 were not detected in sufficient quantities in the field split results at location 9802-0000-011 to evaluate in accordance with procedure. Evaluation using the reported results for naturally occurring K-40 resulted in acceptable agreement between the field-split results at these locations. An acceptable level of agreement was achieved for both radionuclides of concern in the other field-split sample result (9802-0000-013).

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

8. INVESTIGATIONS AND RESULTS

No investigations were conducted within this survey unit.

9. REMEDIATION AND RESULTS

Some minor remediation activities occurred in this survey unit prior to FSS. All above grade and below grade commodities and facility systems were removed and

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
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properly dispositioned. Contaminated soils were identified, excavated and removed. All excavations were characterized and backfilled with "clean" fill prior to performing 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 is unnecessary and that the remaining residual radioactivity in soil was ALARA.

10. CHANGES FROM THE FINAL STATUS SURVEY PLAN

During the performance of the survey, it was discovered that four (4) of the twenty-five (25) sample locations identified for non-parametric testing were deemed to be inaccessible. The four (4) locations identified were 9802-0000-002F, 9802-0000-009F, 9802-0000-015F and 9802-0000-023F. Subsequently, four (4) additional sample measurement locations (9802-0000-030F, 9802-0000-031F, 9802-0000-032F and 9802-0000-033F) were designated to replace the locations that were deemed to be inaccessible. This was accomplished through an addendum 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 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 B.

The preliminary data review consisted of calculating basic statistical quantities (e.g., mean, median, standard deviation). The mean and median values are well below the Operational DCGL. Therefore, the survey unit meets the unrestricted release criteria with adequate power as required by the DQOs. The basic statistical quantities for the statistical sample population are provided below in Table 12.

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

	Cs-137 pCi/g	Co-60 pCi/g
DCGL _{op} :	4.75E+00	2.29E+00
Minimum Value:	-8.41E-03	-1.22E-02
Maximum Value:	5.04E-02	2.82E-02
Mean:	1.16E-02	4.29E-03
Median:	9.80E-03	3.34E-03
Standard Deviation:	1.20E-02	1.06E-02

For both Cs-137 and Co-60, the range of the data, was about four (4) standard deviations, was not a particularly large variation considering that the levels were essentially at existing environmental levels where such variation is to be expected. The difference between the mean and median for both Cs-137 and Co-60 were about 20% of the standard deviation which indicates some skewness in the data. The data was represented graphically through posting plots, a frequency plot, and a quantile plot. The frequency plot indicates positive skewness for both isotopes, as confirmed by the calculated skew of 1.74 for Cs-137 and 0.99 for Co-60.

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

12. ANOMALIES

No anomalies were noted.

13. CONCLUSION

Subsurface soils Survey Unit 9802-0000 has met the final DQOs of the FSS plan. The ALARA criteria for soils as specified in Chapter 4 of the LTP were achieved. Elevated Measurement Comparison was not required.

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

The sample data passed the Sign Test. The null hypothesis was rejected. The survey unit is properly designated as Class B.

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The dose contribution from soil is 0.1 mrem/yr TEDE based on the average radionuclide concentrations in the samples used for non-parametric statistical sampling.

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

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

The average total dose from residual radioactivity in this survey unit, including exposures from the three (3) components as described in Section 3, that is, residual radioactivity in soil, existing groundwater radioactivity, and future groundwater radioactivity from the burial of concrete foundations or footings from site buildings containing residual radioactivity, will not exceed 4.1 mrem/yr TEDE. Therefore, Survey Unit 9802-0000 is acceptable for unrestricted release.

14. ATTACHMENTS

14.1 Attachment 1 – Survey Unit Location Map

14.3 Attachment 2 – Laboratory Results

14.4 Attachment 3 – DQA Results

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9802-0000

RELEASE RECORD

ATTACHMENT 1 (FIGURES)

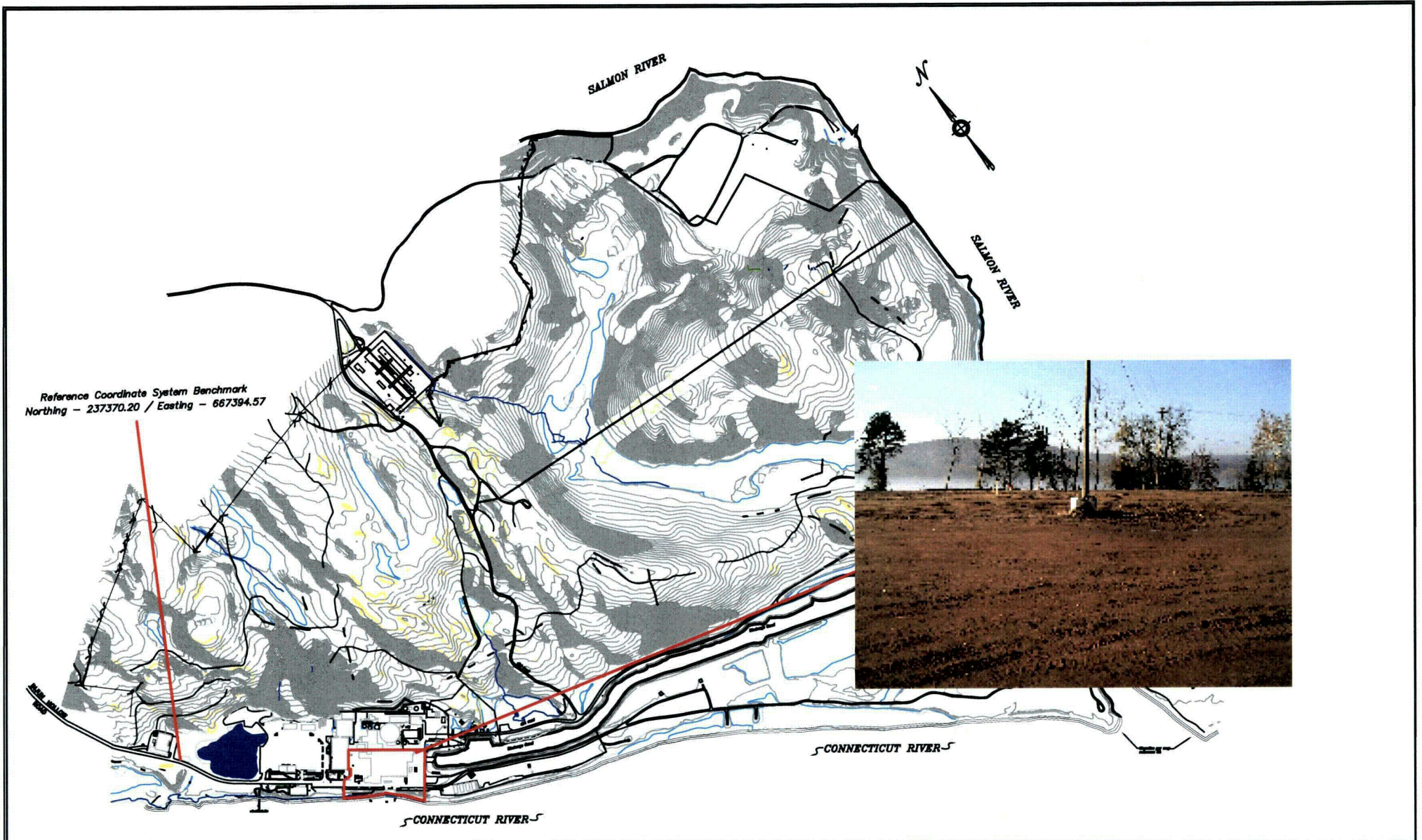


Figure 1



Connecticut Yankee Atomic Power Company
 Site Map With Reference To Survey Unit 9802-0000

Date	By
April 2007	D. Randall

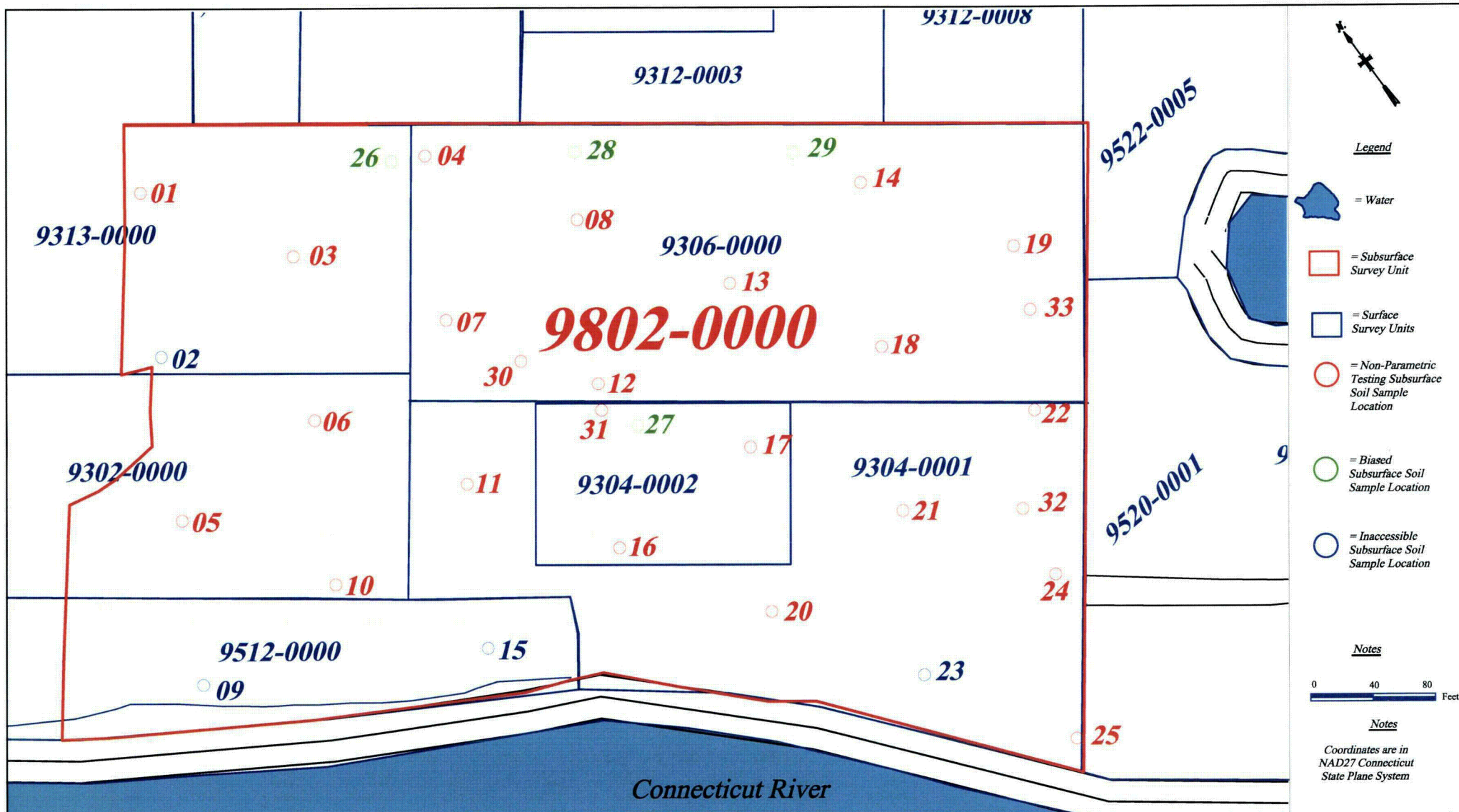


Figure 2

Connecticut Yankee Atomic Power Company
 Subsurface Soil Sampling Locations for Survey Unit 9802-0000

Date: April 2007

Revision: 0

Created by: D. Randall

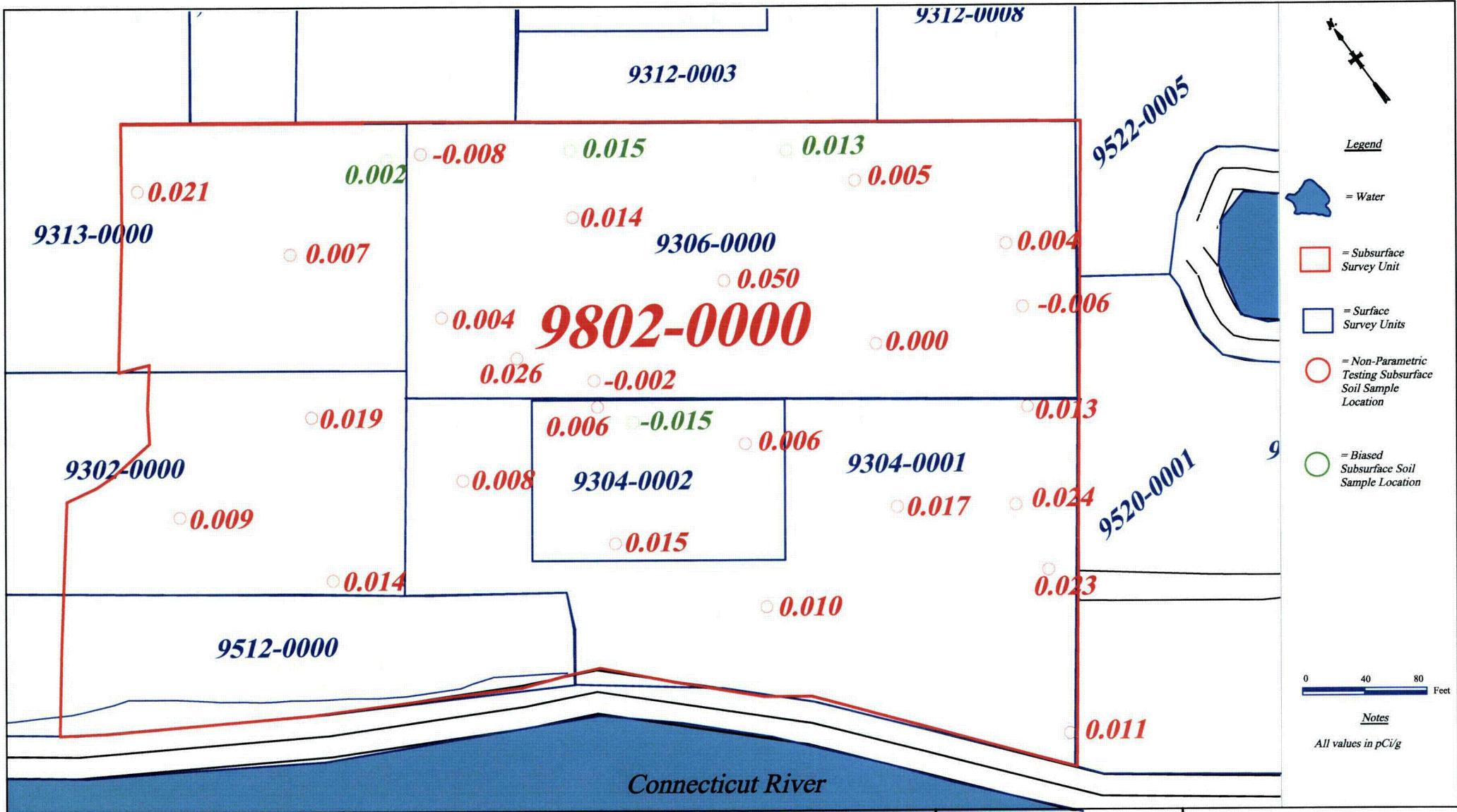


Figure 3

Connecticut Yankee Atomic Power Company
 Cs-137 Posting Plot for Subsurface Survey Unit 9802-0000

Date: April 2007

Revision: 0

Created by: D. Randall

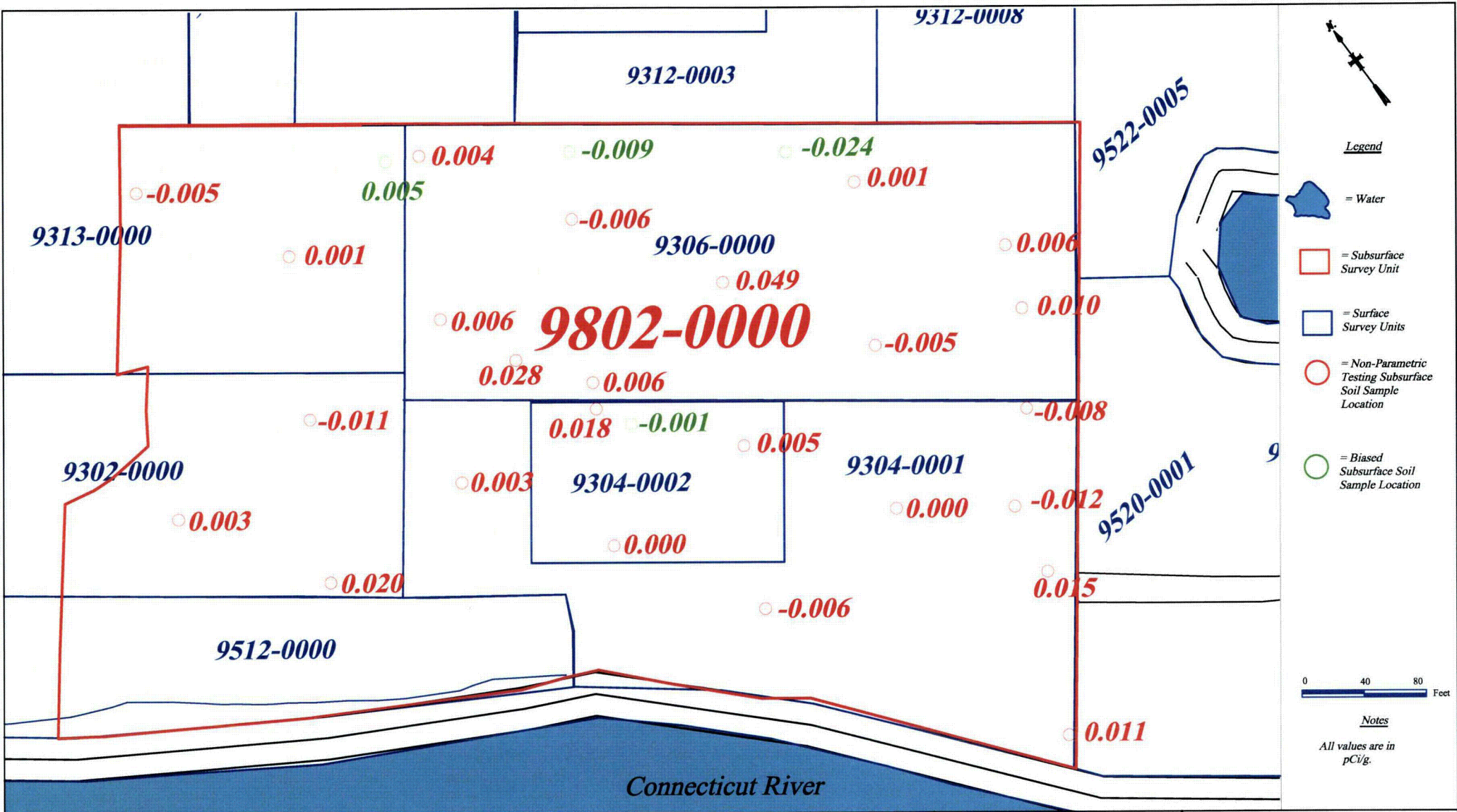


Figure 4

Connecticut Yankee Atomic Power Company
 Co-60 Posting Plot for Subsurface Soil Survey Unit 9802-0000

Date: April 2007

Revision: 0

Created by: D. Randall

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9802-0000

RELEASE RECORD

ATTACHMENT 2 (LABORATORY DATA)

General Narrative

**General Narrative
for
Connecticut Yankee Atomic Power Co.
Work Order: 183857
SDG: MSR#07-0143**

April 16, 2007

Laboratory Identification:

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

Summary

Sample receipt

The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on April 10, 2007 for analysis. Shipping container temperatures were checked, documented, and within specifications. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage.

Sample Identification The laboratory received the following samples:

<u>Laboratory Identification</u>	<u>Sample Description</u>
183857001	9802-0000-001F
183857002	9802-0000-003F
183857003	9802-0000-004F
183857004	9802-0000-005F
183857005	9802-0000-006F
183857006	9802-0000-007F
183857007	9802-0000-008F
183857008	9802-0000-010F
183857009	9802-0000-011F
183857010	9802-0000-011FS
183857011	9802-0000-012F
183857012	9802-0000-013F
183857013	9802-0000-013FS
183857014	9802-0000-014F
183857015	9802-0000-016F
183857016	9802-0000-017F
183857017	9802-0000-018F
183857018	9802-0000-019F
183857019	9802-0000-020F
183857020	9802-0000-021F
183857021	9802-0000-022F
183857022	9802-0000-024F
183857023	9802-0000-025F
183857024	9802-0000-026B
183857025	9802-0000-027B

183857026	9802-0000-028B
183857027	9802-0000-029B
183857028	9802-0000-030F
183857029	9802-0000-031F
183857030	9802-0000-032F
183857031	9802-0000-033F

Items of Note

There are no items to note.

Case Narrative

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

Analytical Request

Twenty-nine samples were analyzed for FSSGAM. Two samples were analyzed for FSSALL.

Data Package

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

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



Cheryl Jones
Project Manager

List of current GEL Certifications as of 16 April 2007

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

Chain of Custody and Supporting Documentation

Connecticut Yankee Atomic Power Company

362 Injun Hollow Road, East Hampton, CT 06424
860-267-2536

Chain of Custody Form

No. 2007-00115

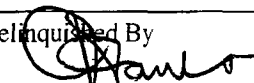
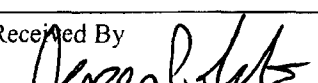
Project Name: Haddam Neck Decommissioning			Media Code	Sample Type Code	Container Size- & Type Code	Analyses Requested						Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-3924						FSSGAM	FSSALL							Comments:	
Analytical Lab (Name, City, State): General Engineering Laboratories 2040 Savage Road Charleston, SC 29407 ATT: Cheryl Jones (843-556-8171)														1838571	
Priority: <input type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input checked="" type="checkbox"/> 7 D. Other:															
Sample Designation	Date	Time									Comment, Preservation	Lab Sample ID			
9802-0000-001F	4/5/07	1030	TS	C	BP	X									
9802-0000-003F	4/5/07	0945	TS	C	BP	X									
9802-0000-004F	4/5/07	0815	TS	C	BP	X									
9802-0000-005F	4/5/07	1300	TS	C	BP	X									
9802-0000-006F	4/5/07	1055	TS	C	BP	X									
9802-0000-007F	4/5/07	0755	TS	C	BP	X									
9802-0000-008F	4/4/07	1305	TS	C	BP		X								
9802-0000-010F	4/5/07	1120	TS	C	BP	X									
9802-0000-011F	4/4/07	0810	TS	C	BP	X									
9802-0000-011FS	4/4/07	0810	TS	C	BP	X									
9802-0000-012F	4/4/07	1110	TS	C	BP	X									
NOTES: PO #: 002332 MSR #: 07-0143 <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA										Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: <u>13</u> Deg. C Custody Sealed? Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>			
1) Relinquished By <i>[Signature]</i>			Date/Time 4/9/07 1020		2) Received By <i>[Signature]</i>			Date/Time 4/10/07 9:15		Bill of Lading # _____					
3) Relinquished By			Date/Time		4) Received By			Date/Time							
5) Relinquished By			Date/Time		6) Received By			Date/Time							

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2007-00116

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						<table border="1"> <tr> <td colspan="2">Comments:</td> </tr> <tr> <td colspan="2" style="text-align: center; vertical-align: middle;">183857 %</td> </tr> </table>								Comments:		183857 %				
Comments:																				
183857 %																				
Analytical Lab (Name, City, State): General Engineering Laboratories 2040 Savage Road Charleston, SC 29407 ATT: Cheryl Jones (843-556-8171)			<table border="1"> <tr> <td colspan="2">Comment, Preservation</td> <td colspan="2">Lab Sample ID</td> </tr> <tr> <td colspan="2"></td> <td colspan="2"></td> </tr> </table>								Comment, Preservation		Lab Sample ID							
Comment, Preservation		Lab Sample ID																		
Priority: <input type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input checked="" type="checkbox"/> 7 D. Other:			<table border="1"> <tr> <td style="text-align: center;">FSSGAM</td> <td style="text-align: center;">FSSALL</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>								FSSGAM	FSSALL								
FSSGAM	FSSALL																			
Sample Designation	Date	Time																		
9802-0000-013F	4/4/07	1035	TS	C	BP	X														
9802-0000-013FS	4/4/07	1035	TS	C	BP	X														
9802-0000-014F	4/4/07	0950	TS	C	BP	X														
9802-0000-016F	4/4/07	0730	TS	C	BP	X														
9802-0000-017F	4/3/07	1422	TS	C	BP	X														
9802-0000-018F	4/4/07	0830	TS	C	BP	X														
9802-0000-019F	4/3/07	1025	TS	C	BP	X														
9802-0000-020F	4/3/07	1534	TS	C	BP	X														
9802-0000-021F	4/3/07	1400	TS	C	BP	X														
9802-0000-022F	4/3/07	1050	TS	C	BP		X													
9802-0000-024F	4/3/07	1110	TS	C	BP	X														
NOTES: PO #: 002332 MSR #: 07-0143 <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA						Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other			Internal Container Temp.: <u>15</u> Deg. C Custody Sealed? Custody Seal Intact? Y <input checked="" type="checkbox"/> N <input type="checkbox"/>											
1) Relinquished By 		Date/Time 4/9/07 10:15		2) Received By 		Date/Time 4/10/07 9:15		Bill of Lading #												
3) Relinquished By		Date/Time		4) Received By		Date/Time														
5) Relinquished By		Date/Time		6) Received By		Date/Time														

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2007-00117

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): General Engineering Laboratories 2040 Savage Road Charleston, SC 29407 ATT: Cheryl Jones (843-556-8171)											1838571	
Priority: <input type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input checked="" type="checkbox"/> 7 D. Other:											Comment, Preservation	Lab Sample ID
Sample Designation	Date	Time						Comment, Preservation	Lab Sample ID			
9802-0000-025F	4/3/07	1313	TS	C	BP	X						
9802-0000-026B	4/5/07	0840	TS	C	BP	X						
9802-0000-027B	4/3/07	1452	TS	C	BP	X						
9802-0000-028B	4/4/07	1330	TS	C	BP	X						
9802-0000-029B	4/4/07	1010	TS	C	BP	X						
9802-0000-030F	4/5/07	1330	TS	C	BP	X						
9802-0000-031F	4/5/07	1350	TS	C	BP	X						
9802-0000-032F	4/5/07	1410	TS	C	BP	X						
9802-0000-033F	4/5/07	1430	TS	C	BP	X						

NOTES: PO #: 002332 MSR #: 07-0143 LTP QA Radwaste QA Non QA

Samples Shipped Via:
 Fed Ex
 UPS
 Hand
 Other

Internal Container Temp.: 15 Deg. C
Custody Sealed? Custody Seal Intact?
Y N

Bill of Lading #

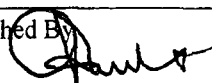
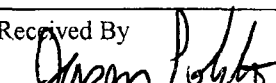
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3) Relinquished By	Date/Time	4) Received By	Date/Time
5) Relinquished By	Date/Time	6) Received By	Date/Time

Figure 1. Sample Check-in List

Date/Time Received: 4/10/07 9:15

SDG#: MSR#07-0143

Work Order Number: 183857

Shipping Container ID: see GEL SRR Chain of Custody # 2007-00117, 2007-00116, 2007-00115

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 see GEL SRR
5. Vermiculite/packing materials is: Wet Dry
6. Number of samples in shipping container: 31
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: Jean P. [Signature] Date: 4/10/07

Telephoned to: _____ On _____ By _____



SAMPLE RECEIPT & REVIEW FORM

PM use only

Client: <u>YANK</u>	SDG/ARCO/Work Order: <u>183857</u>
Date Received: <u>4/10/07</u>	PM(A) Review (ensure non-conforming items are resolved prior to signing): <i>[Signature]</i>
Received By: <u>JP</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>FedEx 791665929273 -15°</u> <u>9295-13°</u>			

Suspected Hazard Information	Non-Regulated	Regulated	High Level	RSO RAD Receipt # _____ *If > x2 area background is observed on samples identified as "non-regulated/non-radioactive", contact the Radiation Safety group for further investigation.
A Radiological Classification?	X			Maximum Counts Observed*: <u>40 cpm</u>
B PCB Regulated?	X			
C Shipped as DOT Hazardous Material? If yes, contact Waste Manager or ESH Manager.	X			Hazard Class Shipped: UN#:
D Regulated as a Foreign Soil?	X			
PM (or PM(A) or I) of Hazard classification: <u>✓</u> Initials <u>JP</u> Date: <u>4/10/07</u>				

Subject: Area 9802
From: "Rick E. Gault" <Gault@CYAPCO.com>
Date: Mon, 9 Apr 2007 12:25:45 -0400
To: "Cheryl Jones" <cj@gel.com>

Cheryl;

We're sending 31 samples under MSR 07-0143 to GEL today. All of the samples have a 7 day TAT request. It is acceptable for GEL to use the traced/untraced Tc-99 process for these quick TAT requests. See attached COC for requested analyses.

We will be sending another batch toward the end of the week (about 17-21 samples).

Thanks;
Rick Gault
CYAPCO
860-267-3903

COC 07_00115_00116_00117.pdf	Content-Description: COC 07_00115_00116_00117.pdf
	Content-Type: application/octet-stream
	Content-Encoding: base64

Data Review Qualifier Definitions

Data Review Qualifier Definitions

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

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 183857**

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:	624202
Prep Batch Number:	624162
Dry Soil Prep GL-RAD-A-021 Batch Number:	624161

Sample ID	Client ID
183857007	9802-0000-008F
183857021	9802-0000-022F
1201312066	Method Blank (MB)
1201312067	183857007(9802-0000-008F) Sample Duplicate (DUP)
1201312068	183857007(9802-0000-008F) Matrix Spike (MS)
1201312069	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 183857007 (9802-0000-008F).

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: 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: 624203
Prep Batch Number: 624162
Dry Soil Prep GL-RAD-A-021 Batch Number: 624161

Sample ID	Client ID
183857007	9802-0000-008F
183857021	9802-0000-022F
1201312070	Method Blank (MB)
1201312071	183857007(9802-0000-008F) Sample Duplicate (DUP)
1201312072	183857007(9802-0000-008F) Matrix Spike (MS)
1201312073	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 183857007 (9802-0000-008F).

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:	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:	624204
Prep Batch Number:	624162
Dry Soil Prep GL-RAD-A-021 Batch Number:	624161

Sample ID	Client ID
183857007	9802-0000-008F
183857021	9802-0000-022F
1201312074	Method Blank (MB)
1201312075	183857007(9802-0000-008F) Sample Duplicate (DUP)
1201312076	183857007(9802-0000-008F) Matrix Spike (MS)
1201312077	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 183857007 (9802-0000-008F).

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:	624576
Prep Batch Number:	624159

Sample ID	Client ID
183857001	9802-0000-001F
183857002	9802-0000-003F
183857003	9802-0000-004F
183857004	9802-0000-005F
183857005	9802-0000-006F
183857006	9802-0000-007F
183857007	9802-0000-008F
183857008	9802-0000-010F
183857009	9802-0000-011F
183857010	9802-0000-011FS
183857011	9802-0000-012F
183857012	9802-0000-013F
183857013	9802-0000-013FS
183857014	9802-0000-014F
183857015	9802-0000-016F
183857016	9802-0000-017F
183857017	9802-0000-018F
183857018	9802-0000-019F
183857019	9802-0000-020F
183857020	9802-0000-021F
1201312934	Method Blank (MB)
1201312935	183857002(9802-0000-003F) Sample Duplicate (DUP)
1201312936	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 14.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 183857002 (9802-0000-003F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to interference.	Cesium-134	183857016
		Europium-155	183857008
			183857010
			183857017
		Manganese-54	183857004
			183857017
		UI	Data rejected due to low abundance.
183857004			
183857007			
183857013			
1201312935			
Bismuth-212	183857003		
	183857013		
Cesium-134	183857002		
	183857003		
	183857004		
	183857005		
	183857006		
	183857007		
	183857009		
	183857011		
	183857012		
	183857013		
	183857014		
	183857015		
183857017			
183857018			
183857020			
1201312935			

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: 624577
Prep Batch Number: 624161

Sample ID	Client ID
183857021	9802-0000-022F
183857022	9802-0000-024F
183857023	9802-0000-025F
183857024	9802-0000-026B
183857025	9802-0000-027B
183857026	9802-0000-028B
183857027	9802-0000-029B
183857028	9802-0000-030F
183857029	9802-0000-031F
183857030	9802-0000-032F
183857031	9802-0000-033F
1201312937	Method Blank (MB)
1201312938	183857022(9802-0000-024F) Sample Duplicate (DUP)
1201312939	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 14.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 183857022 (9802-0000-024F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:

NCR Documentation

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

Additional Comments

The sample and the duplicate, 1201312938 (9802-0000-024F) and 183857022 (9802-0000-024F), did not meet the relative percent difference requirement for Ra-226 and Bi-214, however they do meet the relative error ratio requirement with value of 2.50269.

Qualifier information

Qualifier	Reason	Analyte	Sample	
UI	Data rejected due to low abundance.	Bismuth-212	183857026	
			183857027	
			183857028	
			183857031	
		Cesium-134	183857021	
			183857030	
			183857031	
			1201312938	
			Europium-154	183857022
				1201312938
UI	Data rejected due to no valid peak.	Cesium-134	183857026	

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: 624234

Prep Batch Number: 624162

Dry Soil Prep GL-RAD-A-021 Batch Number: 624161

Sample ID	Client ID
183857007	9802-0000-008F
183857021	9802-0000-022F
1201312111	Method Blank (MB)
1201312112	183857007(9802-0000-008F) Sample Duplicate (DUP)
1201312113	183857007(9802-0000-008F) Matrix Spike (MS)
1201312114	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 183857007 (9802-0000-008F).

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.

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: 624178

Sample ID	Client ID
183857007	9802-0000-008F
183857021	9802-0000-022F
1201311992	Method Blank (MB)
1201311993	183857007(9802-0000-008F) Sample Duplicate (DUP)
1201311994	183857007(9802-0000-008F) Matrix Spike (MS)
1201311995	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-005 REV# 14.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 183857007 (9802-0000-008F).

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 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:	624176
Prep Batch Number:	624162
Dry Soil Prep GL-RAD-A-021 Batch Number:	624161

Sample ID	Client ID
183857007	9802-0000-008F
183857021	9802-0000-022F
1201311984	Method Blank (MB)
1201311985	183857007(9802-0000-008F) Sample Duplicate (DUP)
1201311986	183857007(9802-0000-008F) Matrix Spike (MS)
1201311987	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:**Calibration Information**

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

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

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

Designated QC

The following sample was used for QC: 183857007 (9802-0000-008F).

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:	625941
Prep Batch Number:	624162
Dry Soil Prep GL-RAD-A-021 Batch Number:	624159

Sample ID	Client ID
183857007	9802-0000-008F
183857021	9802-0000-022F
1201316374	Method Blank (MB)
1201316375	183857021(9802-0000-022F) Sample Duplicate (DUP)
1201316376	183857021(9802-0000-022F) Matrix Spike (MS)
1201316377	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 183857021 (9802-0000-022F).

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 183857007 (9802-0000-008F) and 183857021 (9802-0000-022F) were reprepared due to low/high recovery.

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product:	LSC, Tritium Dist, Solid - 3 pCi/g
Analytical Method:	EPA 906.0 Modified
Analytical Batch Number:	624179

Sample ID	Client ID
183857007	9802-0000-008F
183857021	9802-0000-022F
1201311996	Method Blank (MB)
1201311997	183857021(9802-0000-022F) Sample Duplicate (DUP)
1201311998	183857021(9802-0000-022F) Matrix Spike (MS)
1201311999	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-002 REV# 14.

Calibration Information:**Calibration Information**

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

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

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

Designated QC

The following sample was used for QC: 183857021 (9802-0000-022F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: Liquid Scint C14, Solid All,FSS
Analytical Method: EPA EERF C-01 Modified
Analytical Batch Number: 624180

Sample ID	Client ID
183857007	9802-0000-008F
183857021	9802-0000-022F
1201312000	Method Blank (MB)
1201312001	183857021(9802-0000-022F) Sample Duplicate (DUP)
1201312002	183857021(9802-0000-022F) Matrix Spike (MS)
1201312003	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 183857021 (9802-0000-022F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:

NCR Documentation

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.


Certification Statement

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

Review Validation:

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

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

Reviewer/Date:  4/17/07

SAMPLE DATA SUMMARY

GEL LABORATORIES LLC

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

Certificate of Analysis Report for

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#07-0143 GEL Work Order: 183857

The Qualifiers in this report are defined as follows:

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

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

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

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



Reviewed by _____

GEL LABORATORIES LLC

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-001F
Sample ID: 183857001
Matrix: TS
Collect Date: 05-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 7.16%

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		0.680	+/-0.119	0.0339	+/-0.119	0.0678	pCi/g		MJH1	04/13/07	1827	624576
Americium-241	U	0.0251	+/-0.0754	0.0627	+/-0.0754	0.125	pCi/g					
Bismuth-212		0.360	+/-0.180	0.0803	+/-0.180	0.161	pCi/g					
Bismuth-214		0.699	+/-0.085	0.019	+/-0.085	0.0379	pCi/g					
Cesium-134	U	0.0248	+/-0.0151	0.0127	+/-0.0151	0.0253	pCi/g					
Cesium-137	U	0.0209	+/-0.0135	0.0123	+/-0.0135	0.0245	pCi/g					
Cobalt-60	U	-0.00484	+/-0.0122	0.00995	+/-0.0122	0.0199	pCi/g					
Europium-152	U	-0.0161	+/-0.0429	0.0291	+/-0.0429	0.0581	pCi/g					
Europium-154	U	0.00874	+/-0.0427	0.0317	+/-0.0427	0.0633	pCi/g					
Europium-155	U	0.0397	+/-0.0462	0.0348	+/-0.0462	0.0696	pCi/g					
Lead-212		0.668	+/-0.0618	0.0165	+/-0.0618	0.0331	pCi/g					
Lead-214		0.725	+/-0.080	0.0191	+/-0.080	0.0381	pCi/g					
Manganese-54	U	-0.00121	+/-0.0138	0.0104	+/-0.0138	0.0209	pCi/g					
Niobium-94	U	0.0025	+/-0.0116	0.010	+/-0.0116	0.0201	pCi/g					
Potassium-40		9.90	+/-0.821	0.0883	+/-0.821	0.176	pCi/g					
Radium-226		0.699	+/-0.085	0.019	+/-0.085	0.0379	pCi/g					
Silver-108m	U	-0.000562	+/-0.011	0.00977	+/-0.011	0.0195	pCi/g					
Thallium-208		0.193	+/-0.0284	0.00979	+/-0.0284	0.0196	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	LXM2	04/10/07	1040	624159

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 :

** Analyte is a surrogate compound

GEL LABORATORIES LLC

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-001F
Sample ID: 183857001

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

GEL LABORATORIES LLC

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-003F
Sample ID: 183857002
Matrix: TS
Collect Date: 05-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.86%

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		0.756	+/-0.128	0.0367	+/-0.128	0.0733	pCi/g		MJH1	04/13/07	1827	624576
Americium-241	UI	0.00	+/-0.0201	0.0175	+/-0.0201	0.0351	pCi/g					
Bismuth-212	U	0.00	+/-0.183	0.0865	+/-0.183	0.173	pCi/g					
Bismuth-214		0.565	+/-0.0841	0.0216	+/-0.0841	0.0432	pCi/g					
Cesium-134	UI	0.00	+/-0.0213	0.0137	+/-0.0213	0.0273	pCi/g					
Cesium-137	U	0.00663	+/-0.0152	0.0116	+/-0.0152	0.0232	pCi/g					
Cobalt-60	U	0.000914	+/-0.0157	0.0114	+/-0.0157	0.0228	pCi/g					
Europium-152	U	-0.0131	+/-0.0408	0.0286	+/-0.0408	0.0571	pCi/g					
Europium-154	U	-0.00914	+/-0.0413	0.0345	+/-0.0413	0.069	pCi/g					
Europium-155	U	0.0514	+/-0.0371	0.0286	+/-0.0371	0.0572	pCi/g					
Lead-212		0.648	+/-0.0795	0.0164	+/-0.0795	0.0328	pCi/g					
Lead-214		0.641	+/-0.0829	0.0206	+/-0.0829	0.0411	pCi/g					
Manganese-54	U	0.0131	+/-0.0159	0.0113	+/-0.0159	0.0226	pCi/g					
Niobium-94	U	0.000478	+/-0.0125	0.0107	+/-0.0125	0.0214	pCi/g					
Potassium-40		9.95	+/-0.774	0.0861	+/-0.774	0.172	pCi/g					
Radium-226		0.565	+/-0.0841	0.0216	+/-0.0841	0.0432	pCi/g					
Silver-108m	U	-0.0058	+/-0.0131	0.0099	+/-0.0131	0.0198	pCi/g					
Thallium-208		0.230	+/-0.0369	0.0103	+/-0.0369	0.0206	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

GEL LABORATORIES LLC

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-003F
Sample ID: 183857002

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-004F
Sample ID: 183857003
Matrix: TS
Collect Date: 05-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.35%

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		0.735	+/-0.137	0.0515	+/-0.137	0.103	pCi/g		MJH1	04/13/07	1828	624576
Americium-241	U	0.045	+/-0.0274	0.0235	+/-0.0274	0.047	pCi/g					
Bismuth-212	UI	0.00	+/-0.181	0.139	+/-0.181	0.278	pCi/g					
Bismuth-214		0.671	+/-0.0948	0.0269	+/-0.0948	0.0538	pCi/g					
Cesium-134	UI	0.00	+/-0.0272	0.0185	+/-0.0272	0.0369	pCi/g					
Cesium-137	U	-0.00841	+/-0.0176	0.0148	+/-0.0176	0.0296	pCi/g					
Cobalt-60	U	0.00407	+/-0.0172	0.0146	+/-0.0172	0.0293	pCi/g					
Europium-152	U	-0.0287	+/-0.0471	0.036	+/-0.0471	0.072	pCi/g					
Europium-154	U	-0.05	+/-0.0524	0.0419	+/-0.0524	0.0837	pCi/g					
Europium-155	U	0.0572	+/-0.0419	0.0341	+/-0.0419	0.0681	pCi/g					
Lead-212		0.722	+/-0.0772	0.0197	+/-0.0772	0.0393	pCi/g					
Lead-214		0.671	+/-0.0837	0.0262	+/-0.0837	0.0523	pCi/g					
Manganese-54	U	0.000577	+/-0.0192	0.0145	+/-0.0192	0.0291	pCi/g					
Niobium-94	U	0.00643	+/-0.0166	0.014	+/-0.0166	0.0279	pCi/g					
Potassium-40		11.4	+/-0.869	0.115	+/-0.869	0.230	pCi/g					
Radium-226		0.671	+/-0.0948	0.0269	+/-0.0948	0.0538	pCi/g					
Silver-108m	U	-0.00182	+/-0.0146	0.0129	+/-0.0146	0.0258	pCi/g					
Thallium-208		0.264	+/-0.0427	0.0141	+/-0.0427	0.0282	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

GEL LABORATORIES LLC

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-004F
Sample ID: 183857003

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

GEL LABORATORIES LLC

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-005F
Sample ID: 183857004
Matrix: TS
Collect Date: 05-APR-07
Receive Date: 10-APR-07
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		0.483	+/-0.0869	0.0299	+/-0.0869	0.0598	pCi/g					
Americium-241	UI	0.00	+/-0.0391	0.0323	+/-0.0391	0.0645	pCi/g					
Bismuth-212		0.346	+/-0.131	0.0669	+/-0.131	0.134	pCi/g					
Bismuth-214		0.469	+/-0.0635	0.0159	+/-0.0635	0.0318	pCi/g					
Cesium-134	UI	0.00	+/-0.0149	0.011	+/-0.0149	0.022	pCi/g					
Cesium-137	U	0.00913	+/-0.012	0.00902	+/-0.012	0.018	pCi/g					
Cobalt-60	U	0.00334	+/-0.011	0.00947	+/-0.011	0.0189	pCi/g					
Europium-152	U	-0.00331	+/-0.0287	0.0226	+/-0.0287	0.0451	pCi/g					
Europium-154	U	0.00444	+/-0.0312	0.0266	+/-0.0312	0.0532	pCi/g					
Europium-155	U	0.00668	+/-0.0274	0.0257	+/-0.0274	0.0513	pCi/g					
Lead-212		0.498	+/-0.0461	0.0136	+/-0.0461	0.0273	pCi/g					
Lead-214		0.436	+/-0.0536	0.0161	+/-0.0536	0.0323	pCi/g					
Manganese-54	UI	0.00	+/-0.00847	0.00662	+/-0.00847	0.0132	pCi/g					
Niobium-94	U	-0.00443	+/-0.0098	0.0082	+/-0.0098	0.0164	pCi/g					
Potassium-40		9.40	+/-0.714	0.0749	+/-0.714	0.150	pCi/g					
Radium-226		0.469	+/-0.0635	0.0159	+/-0.0635	0.0318	pCi/g					
Silver-108m	U	0.00286	+/-0.0094	0.0074	+/-0.0094	0.0148	pCi/g					
Thallium-208		0.180	+/-0.0265	0.00785	+/-0.0265	0.0157	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

GEL LABORATORIES LLC

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-005F
Sample ID: 183857004

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

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

GEL LABORATORIES LLC

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-006F
Sample ID: 183857005
Matrix: TS
Collect Date: 05-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.89%

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		0.654	+/-0.103	0.0272	+/-0.103	0.0544	pCi/g					
Americium-241	U	0.0302	+/-0.0557	0.0481	+/-0.0557	0.0962	pCi/g					
Bismuth-212		0.453	+/-0.136	0.0601	+/-0.136	0.120	pCi/g					
Bismuth-214		0.525	+/-0.0634	0.0156	+/-0.0634	0.0312	pCi/g					
Cesium-134	UI	0.00	+/-0.0147	0.00997	+/-0.0147	0.0199	pCi/g					
Cesium-137		0.019	+/-0.0118	0.00793	+/-0.0118	0.0158	pCi/g					
Cobalt-60	U	-0.0114	+/-0.00914	0.0073	+/-0.00914	0.0146	pCi/g					
Europium-152	U	-0.0108	+/-0.0283	0.0213	+/-0.0283	0.0425	pCi/g					
Europium-154	U	0.0175	+/-0.031	0.0254	+/-0.031	0.0508	pCi/g					
Europium-155	U	0.0371	+/-0.0425	0.0269	+/-0.0425	0.0537	pCi/g					
Lead-212		0.657	+/-0.0592	0.0126	+/-0.0592	0.0251	pCi/g					
Lead-214		0.614	+/-0.065	0.015	+/-0.065	0.0301	pCi/g					
Manganese-54	U	0.0155	+/-0.014	0.00798	+/-0.014	0.016	pCi/g					
Niobium-94	U	0.0111	+/-0.00952	0.00762	+/-0.00952	0.0152	pCi/g					
Potassium-40		10.4	+/-0.720	0.0709	+/-0.720	0.142	pCi/g					
Radium-226		0.525	+/-0.0634	0.0156	+/-0.0634	0.0312	pCi/g					
Silver-108m	U	-0.00192	+/-0.00794	0.00711	+/-0.00794	0.0142	pCi/g					
Thallium-208		0.204	+/-0.0282	0.00753	+/-0.0282	0.0151	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < 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: April 17, 2007

Client Sample ID: 9802-0000-006F
Sample ID: 183857005

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-007F
Sample ID: 183857006
Matrix: TS
Collect Date: 05-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.29%

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		0.634	+/-0.108	0.030	+/-0.108	0.060	pCi/g		MJH1	04/13/07	1828	624576
Americium-241	U	0.027	+/-0.0465	0.040	+/-0.0465	0.0799	pCi/g					
Bismuth-212		0.383	+/-0.148	0.0703	+/-0.148	0.141	pCi/g					
Bismuth-214		0.454	+/-0.0622	0.0179	+/-0.0622	0.0358	pCi/g					
Cesium-134	UI	0.00	+/-0.0187	0.0122	+/-0.0187	0.0243	pCi/g					
Cesium-137	U	0.00396	+/-0.012	0.00923	+/-0.012	0.0185	pCi/g					
Cobalt-60	U	0.00571	+/-0.0184	0.00925	+/-0.0184	0.0185	pCi/g					
Europium-152	U	-0.0347	+/-0.0349	0.0249	+/-0.0349	0.0497	pCi/g					
Europium-154	U	-0.0121	+/-0.0349	0.0294	+/-0.0349	0.0588	pCi/g					
Europium-155	U	0.0166	+/-0.0334	0.0292	+/-0.0334	0.0583	pCi/g					
Lead-212		0.555	+/-0.0525	0.0144	+/-0.0525	0.0288	pCi/g					
Lead-214		0.574	+/-0.0664	0.0173	+/-0.0664	0.0346	pCi/g					
Manganese-54	U	-0.00721	+/-0.0111	0.00913	+/-0.0111	0.0182	pCi/g					
Niobium-94	U	0.0171	+/-0.0128	0.00939	+/-0.0128	0.0188	pCi/g					
Potassium-40		10.4	+/-0.812	0.0784	+/-0.812	0.157	pCi/g					
Radium-226		0.454	+/-0.0622	0.0179	+/-0.0622	0.0358	pCi/g					
Silver-108m	U	-0.00336	+/-0.00924	0.0082	+/-0.00924	0.0164	pCi/g					
Thallium-208		0.168	+/-0.027	0.00929	+/-0.027	0.0186	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

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Certificate of Analysis

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-007F
Sample ID: 183857006

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

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-008F
Sample ID: 183857007
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.66%

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	U	0.00458	+/-0.0552	0.0399	+/-0.0552	0.200	pCi/g		BXJ1	04/13/07	1015	624202	
Curium-242	U	0.00	+/-0.0908	0.00	+/-0.0908	0.125	pCi/g						
Curium-243/244	U	0.00	+/-0.0872	0.00	+/-0.0872	0.121	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.00773	+/-0.0152	0.0289	+/-0.0152	0.145	pCi/g		BXJ1	04/13/07	1015	624203	
Plutonium-239/240	U	-0.00773	+/-0.0152	0.0289	+/-0.0152	0.145	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	6.49	+/-6.73	5.31	+/-6.76	11.3	pCi/g		BXJ1	04/16/07	1247	624204	
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.56	+/-0.221	0.0396	+/-0.221	0.0791	pCi/g		MJH1	04/13/07	1829	624576	
Americium-241	UI	0.00	+/-0.0604	0.0485	+/-0.0604	0.097	pCi/g						
Bismuth-212		1.00	+/-0.203	0.0867	+/-0.203	0.173	pCi/g						
Bismuth-214		1.53	+/-0.158	0.0208	+/-0.158	0.0416	pCi/g						
Cesium-134	UI	0.00	+/-0.028	0.0149	+/-0.028	0.0298	pCi/g						
Cesium-137	U	0.0142	+/-0.0154	0.0117	+/-0.0154	0.0233	pCi/g						
Cobalt-60	U	-0.0057	+/-0.0166	0.0118	+/-0.0166	0.0236	pCi/g						
Europium-152	U	0.00652	+/-0.0525	0.0312	+/-0.0525	0.0624	pCi/g						
Europium-154	U	0.0128	+/-0.0519	0.0383	+/-0.0519	0.0765	pCi/g						
Europium-155	U	0.0385	+/-0.0432	0.0374	+/-0.0432	0.0747	pCi/g						
Lead-212		1.53	+/-0.121	0.0188	+/-0.121	0.0376	pCi/g						
Lead-214		1.82	+/-0.160	0.0219	+/-0.160	0.0438	pCi/g						
Manganese-54	U	0.00988	+/-0.0154	0.0117	+/-0.0154	0.0234	pCi/g						
Niobium-94	U	0.00735	+/-0.0126	0.0109	+/-0.0126	0.0218	pCi/g						
Potassium-40		24.4	+/-1.61	0.102	+/-1.61	0.204	pCi/g						
Radium-226		1.53	+/-0.158	0.0208	+/-0.158	0.0416	pCi/g						
Silver-108m	U	-0.00203	+/-0.0118	0.010	+/-0.0118	0.0201	pCi/g						
Thallium-208		0.494	+/-0.0512	0.0107	+/-0.0512	0.0213	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00647	+/-0.0225	0.0178	+/-0.0225	0.0421	pCi/g		NXL3	04/12/07	0946	624234	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid - 3 pCi/g</i>													
Tritium	U	0.443	+/-1.49	1.23	+/-1.49	2.56	pCi/g		AXD2	04/12/07	0030	624179	

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-008F
Sample ID: 183857007

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	-0.0221	+/-0.0901	0.076	+/-0.0901	0.155	pCi/g		AXD2	04/11/07	1001	624180
<i>Liquid Scint Fe55, Solid-ALL FSS</i>												
Iron-55	U	20.4	+/-29.0	19.7	+/-29.1	41.6	pCi/g		MXP1	04/13/07	1011	624176
<i>Liquid Scint Ni63, Solid-ALL FSS</i>												
Nickel-63	U	3.51	+/-10.1	8.30	+/-10.1	17.4	pCi/g		MXP1	04/17/07	1143	625941
<i>Liquid Scint Tc99, Solid-ALL FSS</i>												
Technetium-99	U	0.131	+/-0.250	0.207	+/-0.250	0.423	pCi/g		MXP1	04/16/07	1051	624178

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	04/10/07	1040	624159

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 RESL Ni-1, Modified
11	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241, Cm, Solid ALL	58	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid-ALL FSS	83	(15%-125%)
Plutonium-242 Tracer	Liquid Scint Pu241, Solid-ALL FS	95	(25%-125%)
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	79	(25%-125%)
Iron-59 Tracer	Liquid Scint Fe55, Solid-ALL FS	73	(15%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid-ALL FS	73	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid-ALL FS	76	(15%-125%)

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-008F
Sample ID: 183857007

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:

The Qualifiers in this report are defined as follows :

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

The above sample is reported on a dry weight basis.

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-010F
Sample ID: 183857008
Matrix: TS
Collect Date: 05-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.64%

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		0.639	+/-0.123	0.0399	+/-0.123	0.0797	pCi/g		MJH1	04/14/07	0553	624576
Americium-241	U	0.0169	+/-0.0243	0.0159	+/-0.0243	0.0317	pCi/g					
Bismuth-212		0.397	+/-0.167	0.0893	+/-0.167	0.179	pCi/g					
Bismuth-214		0.468	+/-0.0733	0.0204	+/-0.0733	0.0407	pCi/g					
Cesium-134	U	0.0267	+/-0.023	0.014	+/-0.023	0.028	pCi/g					
Cesium-137	U	0.0141	+/-0.0164	0.0118	+/-0.0164	0.0236	pCi/g					
Cobalt-60	U	0.0195	+/-0.0137	0.0127	+/-0.0137	0.0253	pCi/g					
Europium-152	U	0.00112	+/-0.0385	0.0298	+/-0.0385	0.0595	pCi/g					
Europium-154	U	-0.0315	+/-0.0428	0.0344	+/-0.0428	0.0688	pCi/g					
Europium-155	UI	0.00	+/-0.040	0.0274	+/-0.040	0.0547	pCi/g					
Lead-212		0.582	+/-0.0725	0.016	+/-0.0725	0.032	pCi/g					
Lead-214		0.547	+/-0.0742	0.0204	+/-0.0742	0.0409	pCi/g					
Manganese-54	U	0.00229	+/-0.0129	0.0114	+/-0.0129	0.0229	pCi/g					
Niobium-94	U	0.0121	+/-0.0123	0.0109	+/-0.0123	0.0218	pCi/g					
Potassium-40		9.34	+/-0.724	0.0936	+/-0.724	0.187	pCi/g					
Radium-226		0.468	+/-0.0733	0.0204	+/-0.0733	0.0407	pCi/g					
Silver-108m	U	-0.00754	+/-0.0109	0.00941	+/-0.0109	0.0188	pCi/g					
Thallium-208		0.180	+/-0.0366	0.0115	+/-0.0366	0.0229	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < 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: April 17, 2007

Client Sample ID: 9802-0000-010F
Sample ID: 183857008

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-011F
Sample ID: 183857009
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5%

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		0.603	+/-0.125	0.036	+/-0.125	0.0719	pCi/g		MJH1	04/14/07	0554	624576
Americium-241	U	0.0512	+/-0.0539	0.0474	+/-0.0539	0.0948	pCi/g					
Bismuth-212		0.447	+/-0.139	0.077	+/-0.139	0.154	pCi/g					
Bismuth-214		0.503	+/-0.0688	0.0194	+/-0.0688	0.0387	pCi/g					
Cesium-134	UI	0.00	+/-0.0191	0.0131	+/-0.0191	0.0262	pCi/g					
Cesium-137	U	0.00798	+/-0.0179	0.0108	+/-0.0179	0.0216	pCi/g					
Cobalt-60	U	0.00286	+/-0.0132	0.0114	+/-0.0132	0.0228	pCi/g					
Europium-152	U	0.017	+/-0.0358	0.0286	+/-0.0358	0.0572	pCi/g					
Europium-154	U	0.0158	+/-0.0393	0.0345	+/-0.0393	0.069	pCi/g					
Europium-155	U	0.0347	+/-0.0399	0.0296	+/-0.0399	0.0592	pCi/g					
Lead-212		0.631	+/-0.0594	0.0164	+/-0.0594	0.0329	pCi/g					
Lead-214		0.552	+/-0.069	0.0202	+/-0.069	0.0403	pCi/g					
Manganese-54	U	0.0136	+/-0.0136	0.0102	+/-0.0136	0.0203	pCi/g					
Niobium-94	U	0.00268	+/-0.0118	0.0104	+/-0.0118	0.0208	pCi/g					
Potassium-40		9.57	+/-0.829	0.0878	+/-0.829	0.176	pCi/g					
Radium-226		0.503	+/-0.0688	0.0194	+/-0.0688	0.0387	pCi/g					
Silver-108m	U	-0.00632	+/-0.0108	0.00917	+/-0.0108	0.0183	pCi/g					
Thallium-208		0.201	+/-0.0287	0.00999	+/-0.0287	0.020	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

GEL 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: April 17, 2007

Client Sample ID: 9802-0000-011F
Sample ID: 183857009

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

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

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-011FS
Sample ID: 183857010
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.06%

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		0.622	+/-0.126	0.0365	+/-0.126	0.073	pCi/g		MJH1	04/14/07	0554	624576
Americium-241	U	0.0691	+/-0.0609	0.0522	+/-0.0609	0.104	pCi/g					
Bismuth-212		0.569	+/-0.185	0.0752	+/-0.185	0.150	pCi/g					
Bismuth-214		0.503	+/-0.0743	0.0198	+/-0.0743	0.0396	pCi/g					
Cesium-134	U	0.0141	+/-0.0167	0.0132	+/-0.0167	0.0264	pCi/g					
Cesium-137	U	-0.0146	+/-0.0153	0.0105	+/-0.0153	0.0209	pCi/g					
Cobalt-60	U	0.00343	+/-0.0127	0.0109	+/-0.0127	0.0217	pCi/g					
Europium-152	U	-0.0148	+/-0.0371	0.0268	+/-0.0371	0.0535	pCi/g					
Europium-154	U	-0.0506	+/-0.0496	0.0322	+/-0.0496	0.0643	pCi/g					
Europium-155	UI	0.00	+/-0.0477	0.0323	+/-0.0477	0.0645	pCi/g					
Lead-212		0.557	+/-0.0533	0.0152	+/-0.0533	0.0304	pCi/g					
Lead-214		0.495	+/-0.0653	0.0194	+/-0.0653	0.0387	pCi/g					
Manganese-54	U	-0.00108	+/-0.012	0.0104	+/-0.012	0.0209	pCi/g					
Niobium-94	U	0.00535	+/-0.0113	0.00981	+/-0.0113	0.0196	pCi/g					
Potassium-40		10.2	+/-0.805	0.086	+/-0.805	0.172	pCi/g					
Radium-226		0.503	+/-0.0743	0.0198	+/-0.0743	0.0396	pCi/g					
Silver-108m	U	-0.00513	+/-0.0104	0.00903	+/-0.0104	0.018	pCi/g					
Thallium-208		0.208	+/-0.0312	0.00992	+/-0.0312	0.0198	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < 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: April 17, 2007

Client Sample ID: 9802-0000-011FS
Sample ID: 183857010

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-012F
Sample ID: 183857011
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 3.02%

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		1.22	+/-0.181	0.0422	+/-0.181	0.0844	pCi/g		MJH1	04/14/07	0555	624576
Americium-241	U	0.042	+/-0.0699	0.0588	+/-0.0699	0.118	pCi/g					
Bismuth-212		0.771	+/-0.207	0.0876	+/-0.207	0.175	pCi/g					
Bismuth-214		0.860	+/-0.0965	0.0223	+/-0.0965	0.0446	pCi/g					
Cesium-134	UI	0.00	+/-0.0295	0.0158	+/-0.0295	0.0316	pCi/g					
Cesium-137	U	-0.00233	+/-0.0164	0.012	+/-0.0164	0.024	pCi/g					
Cobalt-60	U	0.00622	+/-0.0148	0.0127	+/-0.0148	0.0254	pCi/g					
Europium-152	U	-0.00482	+/-0.0457	0.0311	+/-0.0457	0.0621	pCi/g					
Europium-154	U	0.000208	+/-0.0521	0.0376	+/-0.0521	0.0752	pCi/g					
Europium-155	U	0.0578	+/-0.0512	0.0369	+/-0.0512	0.0737	pCi/g					
Lead-212		1.17	+/-0.0959	0.0189	+/-0.0959	0.0377	pCi/g					
Lead-214		0.956	+/-0.102	0.0225	+/-0.102	0.045	pCi/g					
Manganese-54	U	0.00982	+/-0.025	0.0113	+/-0.025	0.0225	pCi/g					
Niobium-94	U	0.0121	+/-0.0134	0.0118	+/-0.0134	0.0235	pCi/g					
Potassium-40		16.0	+/-1.23	0.102	+/-1.23	0.204	pCi/g					
Radium-226		0.860	+/-0.0965	0.0223	+/-0.0965	0.0446	pCi/g					
Silver-108m	U	-0.00777	+/-0.012	0.0104	+/-0.012	0.0207	pCi/g					
Thallium-208		0.344	+/-0.0392	0.012	+/-0.0392	0.024	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	LXM2	04/10/07	1040	624159

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 :

** Analyte is a surrogate compound

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-012F
Sample ID: 183857011

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

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-013F
Sample ID: 183857012
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.57%

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		0.593	+/-0.125	0.0363	+/-0.125	0.0726	pCi/g		MJH1	04/14/07	0555	624576
Americium-241	U	0.0269	+/-0.058	0.0467	+/-0.058	0.0933	pCi/g					
Bismuth-212		0.512	+/-0.192	0.082	+/-0.192	0.164	pCi/g					
Bismuth-214		0.630	+/-0.0834	0.0202	+/-0.0834	0.0404	pCi/g					
Cesium-134	UI	0.00	+/-0.0244	0.0136	+/-0.0244	0.0271	pCi/g					
Cesium-137		0.0504	+/-0.0242	0.0115	+/-0.0242	0.023	pCi/g					
Cobalt-60		0.049	+/-0.0182	0.0149	+/-0.0182	0.0299	pCi/g					
Europium-152	U	0.00456	+/-0.0355	0.0285	+/-0.0355	0.0569	pCi/g					
Europium-154	U	0.0259	+/-0.0405	0.036	+/-0.0405	0.0719	pCi/g					
Europium-155	U	0.0191	+/-0.0355	0.0334	+/-0.0355	0.0667	pCi/g					
Lead-212		0.654	+/-0.0612	0.017	+/-0.0612	0.0339	pCi/g					
Lead-214		0.666	+/-0.0795	0.0202	+/-0.0795	0.0404	pCi/g					
Manganese-54	U	0.0178	+/-0.0125	0.0101	+/-0.0125	0.0201	pCi/g					
Niobium-94	U	0.000196	+/-0.012	0.0104	+/-0.012	0.0207	pCi/g					
Potassium-40		11.4	+/-0.905	0.0852	+/-0.905	0.170	pCi/g					
Radium-226		0.630	+/-0.0834	0.0202	+/-0.0834	0.0404	pCi/g					
Silver-108m	U	0.00721	+/-0.0116	0.0101	+/-0.0116	0.0202	pCi/g					
Thallium-208		0.202	+/-0.0307	0.0113	+/-0.0307	0.0226	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

GEL 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: April 17, 2007

Client Sample ID: 9802-0000-013F
Sample ID: 183857012

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-013FS
Sample ID: 183857013
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.53%

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		0.715	+/-0.155	0.0534	+/-0.155	0.107	pCi/g		MJH1	04/14/07	0556	624576
Americium-241	UI	0.00	+/-0.0294	0.0247	+/-0.0294	0.0493	pCi/g					
Bismuth-212	UI	0.00	+/-0.231	0.148	+/-0.231	0.297	pCi/g					
Bismuth-214		0.637	+/-0.0985	0.0296	+/-0.0985	0.0592	pCi/g					
Cesium-134	UI	0.00	+/-0.0265	0.0183	+/-0.0265	0.0366	pCi/g					
Cesium-137		0.0686	+/-0.0283	0.0164	+/-0.0283	0.0328	pCi/g					
Cobalt-60	U	0.0248	+/-0.0207	0.0184	+/-0.0207	0.0367	pCi/g					
Europium-152	U	-0.0178	+/-0.0548	0.0391	+/-0.0548	0.0782	pCi/g					
Europium-154	U	0.0185	+/-0.0575	0.0489	+/-0.0575	0.0978	pCi/g					
Europium-155	U	0.0539	+/-0.0514	0.0355	+/-0.0514	0.071	pCi/g					
Lead-212		0.679	+/-0.075	0.0216	+/-0.075	0.0431	pCi/g					
Lead-214		0.568	+/-0.0833	0.0275	+/-0.0833	0.0549	pCi/g					
Manganese-54	U	-0.00507	+/-0.0195	0.0168	+/-0.0195	0.0335	pCi/g					
Niobium-94	U	0.00229	+/-0.018	0.0152	+/-0.018	0.0304	pCi/g					
Potassium-40		10.2	+/-0.842	0.142	+/-0.842	0.284	pCi/g					
Radium-226		0.637	+/-0.0985	0.0296	+/-0.0985	0.0592	pCi/g					
Silver-108m	U	0.00217	+/-0.0156	0.0136	+/-0.0156	0.0272	pCi/g					
Thallium-208		0.229	+/-0.0402	0.0153	+/-0.0402	0.0305	pCi/g					

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < 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: April 17, 2007

Client Sample ID: 9802-0000-013FS
Sample ID: 183857013

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-014F
Sample ID: 183857014
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.91%

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		0.568	+/-0.0999	0.0299	+/-0.0999	0.0597	pCi/g		MJH1	04/14/07	0556	624576
Americium-241	U	0.0641	+/-0.0384	0.0327	+/-0.0384	0.0654	pCi/g					
Bismuth-212		0.353	+/-0.150	0.0664	+/-0.150	0.133	pCi/g					
Bismuth-214		0.521	+/-0.0654	0.0161	+/-0.0654	0.0322	pCi/g					
Cesium-134	UI	0.00	+/-0.0158	0.0111	+/-0.0158	0.0223	pCi/g					
Cesium-137	U	0.0053	+/-0.0119	0.00906	+/-0.0119	0.0181	pCi/g					
Cobalt-60	U	0.000741	+/-0.0116	0.00985	+/-0.0116	0.0197	pCi/g					
Europium-152	U	-0.00719	+/-0.0304	0.0246	+/-0.0304	0.0492	pCi/g					
Europium-154	U	-0.0217	+/-0.0327	0.0266	+/-0.0327	0.0532	pCi/g					
Europium-155	U	0.0308	+/-0.0349	0.0268	+/-0.0349	0.0536	pCi/g					
Lead-212		0.568	+/-0.0525	0.0141	+/-0.0525	0.0282	pCi/g					
Lead-214		0.554	+/-0.0614	0.0176	+/-0.0614	0.0352	pCi/g					
Manganese-54	U	-0.00438	+/-0.0105	0.00905	+/-0.0105	0.0181	pCi/g					
Niobium-94	U	-0.00813	+/-0.0116	0.00812	+/-0.0116	0.0162	pCi/g					
Potassium-40		9.59	+/-0.714	0.0732	+/-0.714	0.146	pCi/g					
Radium-226		0.521	+/-0.0654	0.0161	+/-0.0654	0.0322	pCi/g					
Silver-108m	U	0.00459	+/-0.00931	0.00771	+/-0.00931	0.0154	pCi/g					
Thallium-208		0.168	+/-0.0286	0.00862	+/-0.0286	0.0172	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

GEL LABORATORIES LLC

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-014F
Sample ID: 183857014

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-016F
Sample ID: 183857015
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.48%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	N
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.589	+/-0.110	0.0345	+/-0.110	0.0689	pCi/g						
Americium-241	U	0.0195	+/-0.0173	0.0148	+/-0.0173	0.0297	pCi/g						
Bismuth-212		0.386	+/-0.143	0.0822	+/-0.143	0.164	pCi/g						
Bismuth-214		0.504	+/-0.0682	0.0186	+/-0.0682	0.0371	pCi/g						
Cesium-134	UI	0.00	+/-0.0195	0.0127	+/-0.0195	0.0253	pCi/g						
Cesium-137	U	0.0153	+/-0.0119	0.0108	+/-0.0119	0.0215	pCi/g						
Cobalt-60	U	-5.210E-05	+/-0.0129	0.0109	+/-0.0129	0.0217	pCi/g						
Europium-152	U	-0.00218	+/-0.0323	0.0253	+/-0.0323	0.0505	pCi/g						
Europium-154	U	-0.0118	+/-0.0447	0.0315	+/-0.0447	0.063	pCi/g						
Europium-155	U	0.0185	+/-0.0319	0.0243	+/-0.0319	0.0485	pCi/g						
Lead-212		0.636	+/-0.0724	0.014	+/-0.0724	0.0279	pCi/g						
Lead-214		0.570	+/-0.0683	0.0179	+/-0.0683	0.0358	pCi/g						
Manganese-54	U	-0.00143	+/-0.0136	0.0102	+/-0.0136	0.0204	pCi/g						
Niobium-94	U	0.00881	+/-0.011	0.0097	+/-0.011	0.0194	pCi/g						
Potassium-40		9.76	+/-0.759	0.0872	+/-0.759	0.174	pCi/g						
Radium-226		0.504	+/-0.0682	0.0186	+/-0.0682	0.0371	pCi/g						
Silver-108m	U	-0.00713	+/-0.00952	0.00818	+/-0.00952	0.0164	pCi/g						
Thallium-208		0.198	+/-0.029	0.00965	+/-0.029	0.0193	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	LXM2	04/10/07	1040	624159

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 :

** Analyte is a surrogate compound

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-016F
Sample ID: 183857015

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-017F
Sample ID: 183857016
Matrix: TS
Collect Date: 03-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.64%

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		0.573	+/-0.108	0.0326	+/-0.108	0.0652	pCi/g		MJH1	04/14/07	0556	624576
Americium-241	U	0.0136	+/-0.0412	0.0346	+/-0.0412	0.0691	pCi/g					
Bismuth-212		0.380	+/-0.131	0.0728	+/-0.131	0.146	pCi/g					
Bismuth-214		0.573	+/-0.0689	0.0166	+/-0.0689	0.0333	pCi/g					
Cesium-134	UI	0.00	+/-0.0197	0.00996	+/-0.0197	0.0199	pCi/g					
Cesium-137	U	0.00565	+/-0.0131	0.00995	+/-0.0131	0.0199	pCi/g					
Cobalt-60	U	0.00514	+/-0.0116	0.0101	+/-0.0116	0.0202	pCi/g					
Europium-152	U	-0.00394	+/-0.0332	0.0258	+/-0.0332	0.0515	pCi/g					
Europium-154	U	-0.00793	+/-0.0363	0.0302	+/-0.0363	0.0605	pCi/g					
Europium-155	U	0.0526	+/-0.0371	0.0278	+/-0.0371	0.0555	pCi/g					
Lead-212		0.626	+/-0.0566	0.0147	+/-0.0566	0.0293	pCi/g					
Lead-214		0.633	+/-0.0669	0.0173	+/-0.0669	0.0345	pCi/g					
Manganese-54	U	0.014	+/-0.0114	0.00958	+/-0.0114	0.0191	pCi/g					
Niobium-94	U	0.00135	+/-0.011	0.00913	+/-0.011	0.0183	pCi/g					
Potassium-40		11.3	+/-0.843	0.0866	+/-0.843	0.173	pCi/g					
Radium-226		0.573	+/-0.0689	0.0166	+/-0.0689	0.0333	pCi/g					
Silver-108m	U	0.00861	+/-0.00968	0.00882	+/-0.00968	0.0176	pCi/g					
Thallium-208		0.193	+/-0.0304	0.00912	+/-0.0304	0.0182	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < 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: April 17, 2007

Client Sample ID: 9802-0000-017F
Sample ID: 183857016

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-018F
Sample ID: 183857017
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 4.8%

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		0.755	+/-0.125	0.0334	+/-0.125	0.0667	pCi/g		MJH1	04/14/07	0602	624576
Americium-241	U	0.0652	+/-0.0505	0.0434	+/-0.0505	0.0867	pCi/g					
Bismuth-212		0.314	+/-0.161	0.078	+/-0.161	0.156	pCi/g					
Bismuth-214		0.630	+/-0.0811	0.019	+/-0.0811	0.038	pCi/g					
Cesium-134	UI	0.00	+/-0.0184	0.0124	+/-0.0184	0.0247	pCi/g					
Cesium-137	U	-4.410E-05	+/-0.0121	0.0105	+/-0.0121	0.021	pCi/g					
Cobalt-60	U	-0.00522	+/-0.0119	0.00988	+/-0.0119	0.0198	pCi/g					
Europium-152	U	-0.0458	+/-0.046	0.0267	+/-0.046	0.0533	pCi/g					
Europium-154	U	-0.037	+/-0.0366	0.0293	+/-0.0366	0.0585	pCi/g					
Europium-155	UI	0.00	+/-0.0406	0.0306	+/-0.0406	0.0611	pCi/g					
Lead-212		0.717	+/-0.0651	0.0158	+/-0.0651	0.0316	pCi/g					
Lead-214		0.686	+/-0.0762	0.018	+/-0.0762	0.036	pCi/g					
Manganese-54	UI	0.00	+/-0.0215	0.00961	+/-0.0215	0.0192	pCi/g					
Niobium-94	U	-0.00449	+/-0.0125	0.00909	+/-0.0125	0.0182	pCi/g					
Potassium-40		10.2	+/-0.819	0.0818	+/-0.819	0.164	pCi/g					
Radium-226		0.630	+/-0.0811	0.019	+/-0.0811	0.038	pCi/g					
Silver-108m	U	-0.00208	+/-0.0102	0.00901	+/-0.0102	0.018	pCi/g					
Thallium-208		0.217	+/-0.0333	0.0097	+/-0.0333	0.0194	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	LXM2	04/10/07	1040	624159

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 :

** Analyte is a surrogate compound

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-018F
Sample ID: 183857017

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-019F
Sample ID: 183857018
Matrix: TS
Collect Date: 03-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 6.34%

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		0.576	+/-0.101	0.0282	+/-0.101	0.0565	pCi/g		MJH1	04/14/07	0557	624576
Americium-241	U	0.0293	+/-0.040	0.033	+/-0.040	0.066	pCi/g					
Bismuth-212		0.443	+/-0.156	0.0607	+/-0.156	0.121	pCi/g					
Bismuth-214		0.511	+/-0.063	0.0153	+/-0.063	0.0306	pCi/g					
Cesium-134	UI	0.00	+/-0.0145	0.00989	+/-0.0145	0.0198	pCi/g					
Cesium-137	U	0.00415	+/-0.0102	0.00778	+/-0.0102	0.0155	pCi/g					
Cobalt-60	U	0.00644	+/-0.00964	0.00854	+/-0.00964	0.0171	pCi/g					
Europium-152	U	0.00832	+/-0.0312	0.0213	+/-0.0312	0.0425	pCi/g					
Europium-154	U	-0.0136	+/-0.0306	0.0259	+/-0.0306	0.0517	pCi/g					
Europium-155	U	0.0318	+/-0.0325	0.0261	+/-0.0325	0.0522	pCi/g					
Lead-212		0.681	+/-0.0576	0.0127	+/-0.0576	0.0253	pCi/g					
Lead-214		0.617	+/-0.0633	0.0151	+/-0.0633	0.0301	pCi/g					
Manganese-54	U	0.0125	+/-0.012	0.00805	+/-0.012	0.0161	pCi/g					
Niobium-94	U	0.000288	+/-0.00874	0.00754	+/-0.00874	0.0151	pCi/g					
Potassium-40		11.6	+/-0.828	0.0708	+/-0.828	0.142	pCi/g					
Radium-226		0.511	+/-0.063	0.0153	+/-0.063	0.0306	pCi/g					
Silver-108m	U	0.00824	+/-0.00922	0.00719	+/-0.00922	0.0144	pCi/g					
Thallium-208		0.209	+/-0.027	0.00735	+/-0.027	0.0147	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < 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: April 17, 2007

Client Sample ID: 9802-0000-019F
Sample ID: 183857018

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

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-020F
Sample ID: 183857019
Matrix: TS
Collect Date: 03-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.71%

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		0.628	+/-0.116	0.0383	+/-0.116	0.0765	pCi/g		MJH1	04/14/07	0559	624576
Americium-241	U	-0.32	+/-0.0805	0.0604	+/-0.0805	0.121	pCi/g					
Bismuth-212		0.324	+/-0.180	0.0851	+/-0.180	0.170	pCi/g					
Bismuth-214		0.496	+/-0.0696	0.0202	+/-0.0696	0.0404	pCi/g					
Cesium-134	U	0.0216	+/-0.0211	0.0133	+/-0.0211	0.0265	pCi/g					
Cesium-137	U	0.0098	+/-0.013	0.0115	+/-0.013	0.0229	pCi/g					
Cobalt-60	U	-0.00579	+/-0.0126	0.0102	+/-0.0126	0.0204	pCi/g					
Europium-152	U	-0.0313	+/-0.0411	0.0291	+/-0.0411	0.0581	pCi/g					
Europium-154	U	0.0181	+/-0.0442	0.0333	+/-0.0442	0.0665	pCi/g					
Europium-155	U	0.0393	+/-0.0466	0.0366	+/-0.0466	0.0732	pCi/g					
Lead-212		0.607	+/-0.0592	0.017	+/-0.0592	0.034	pCi/g					
Lead-214		0.547	+/-0.069	0.0211	+/-0.069	0.0422	pCi/g					
Manganese-54	U	0.00194	+/-0.0131	0.0115	+/-0.0131	0.0231	pCi/g					
Niobium-94	U	0.00703	+/-0.0119	0.0104	+/-0.0119	0.0208	pCi/g					
Potassium-40		9.98	+/-0.840	0.0993	+/-0.840	0.199	pCi/g					
Radium-226		0.496	+/-0.0696	0.0202	+/-0.0696	0.0404	pCi/g					
Silver-108m	U	0.0109	+/-0.0124	0.00992	+/-0.0124	0.0198	pCi/g					
Thallium-208		0.198	+/-0.0322	0.0101	+/-0.0322	0.0202	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	LXM2	04/10/07	1040	624159

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

GEL 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: April 17, 2007

Client Sample ID: 9802-0000-020F
Sample ID: 183857019

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

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-021F
Sample ID: 183857020
Matrix: TS
Collect Date: 03-APR-07
Receive Date: 10-APR-07
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		0.691	+/-0.107	0.0272	+/-0.107	0.0543	pCi/g		MJH1	04/14/07	0604	624576
Americium-241	U	0.0456	+/-0.0557	0.0484	+/-0.0557	0.0966	pCi/g					
Bismuth-212		0.442	+/-0.115	0.0569	+/-0.115	0.114	pCi/g					
Bismuth-214		0.473	+/-0.0591	0.0151	+/-0.0591	0.0302	pCi/g					
Cesium-134	UI	0.00	+/-0.0142	0.00981	+/-0.0142	0.0196	pCi/g					
Cesium-137	U	0.0166	+/-0.0124	0.00835	+/-0.0124	0.0167	pCi/g					
Cobalt-60	U	-1.340E-05	+/-0.00939	0.0081	+/-0.00939	0.0162	pCi/g					
Europium-152	U	-0.0362	+/-0.0265	0.0212	+/-0.0265	0.0424	pCi/g					
Europium-154	U	-0.0178	+/-0.0338	0.0241	+/-0.0338	0.0482	pCi/g					
Europium-155	U	0.00771	+/-0.0369	0.028	+/-0.0369	0.0559	pCi/g					
Lead-212		0.606	+/-0.0552	0.0124	+/-0.0552	0.0248	pCi/g					
Lead-214		0.598	+/-0.0618	0.0153	+/-0.0618	0.0306	pCi/g					
Manganese-54	U	-0.0038	+/-0.00933	0.00806	+/-0.00933	0.0161	pCi/g					
Niobium-94	U	0.00188	+/-0.00854	0.00737	+/-0.00854	0.0147	pCi/g					
Potassium-40		10.1	+/-0.700	0.0701	+/-0.700	0.140	pCi/g					
Radium-226		0.473	+/-0.0591	0.0151	+/-0.0591	0.0302	pCi/g					
Silver-108m	U	-0.00302	+/-0.00781	0.00696	+/-0.00781	0.0139	pCi/g					
Thallium-208		0.186	+/-0.0252	0.00764	+/-0.0252	0.0153	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	LXM2	04/10/07	1040	624159

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 :

** Analyte is a surrogate compound

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Report Date: April 17, 2007

Client Sample ID: 9802-0000-021F
Sample ID: 183857020

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

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

Report Date: April 17, 2007

Client Sample ID:	9802-0000-022F	Project:	YANK01204
Sample ID:	183857021	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	03-APR-07		
Receive Date:	10-APR-07		
Collector:	Client		
Moisture:	8.45%		

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	U	-0.0381	+/-0.0733	0.0326	+/-0.0734	0.164	pCi/g		BXJ1	04/13/07	1015	624202	
Curium-242	U	0.038	+/-0.0745	0.00	+/-0.0746	0.103	pCi/g						
Curium-243/244	U	0.0276	+/-0.0733	0.0326	+/-0.0734	0.164	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	-0.00697	+/-0.0137	0.0261	+/-0.0137	0.131	pCi/g		BXJ1	04/13/07	1015	624203	
Plutonium-239/240	U	-0.0209	+/-0.0236	0.0451	+/-0.0238	0.169	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	3.63	+/-7.10	5.77	+/-7.11	12.2	pCi/g		BXJ1	04/16/07	1303	624204	
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.727	+/-0.180	0.0597	+/-0.180	0.119	pCi/g		MJH1	04/13/07	0944	624577	
Americium-241	U	0.0965	+/-0.100	0.0887	+/-0.100	0.177	pCi/g						
Bismuth-212		0.680	+/-0.245	0.119	+/-0.245	0.238	pCi/g						
Bismuth-214		0.699	+/-0.116	0.0341	+/-0.116	0.0682	pCi/g						
Cesium-134	UI	0.00	+/-0.0269	0.0238	+/-0.0269	0.0475	pCi/g						
Cesium-137	U	0.0126	+/-0.0246	0.0197	+/-0.0246	0.0393	pCi/g						
Cobalt-60	U	-0.0081	+/-0.0264	0.0217	+/-0.0264	0.0433	pCi/g						
Europium-152	U	0.0527	+/-0.0631	0.0523	+/-0.0631	0.105	pCi/g						
Europium-154	U	-0.0512	+/-0.0673	0.0521	+/-0.0673	0.104	pCi/g						
Europium-155	U	-0.00809	+/-0.0585	0.0529	+/-0.0585	0.106	pCi/g						
Lead-212		0.740	+/-0.083	0.0309	+/-0.083	0.0618	pCi/g						
Lead-214		0.671	+/-0.115	0.0352	+/-0.115	0.0703	pCi/g						
Manganese-54	U	-0.00672	+/-0.0227	0.0189	+/-0.0227	0.0379	pCi/g						
Niobium-94	U	-0.0055	+/-0.0201	0.0171	+/-0.0201	0.0342	pCi/g						
Potassium-40		11.1	+/-1.13	0.135	+/-1.13	0.270	pCi/g						
Radium-226		0.699	+/-0.116	0.0341	+/-0.116	0.0682	pCi/g						
Silver-108m	U	-0.00607	+/-0.0196	0.0166	+/-0.0196	0.0332	pCi/g						
Thallium-208		0.227	+/-0.0483	0.0187	+/-0.0483	0.0374	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid-ALL FSS</i>													
Strontium-90	U	0.00633	+/-0.0204	0.0161	+/-0.0204	0.0383	pCi/g		NXL3	04/12/07	0947	624234	
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid - 3 pCi/g</i>													
Tritium	U	-0.0783	+/-1.49	1.25	+/-1.49	2.60	pCi/g		AXD2	04/12/07	0132	624179	

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-022F
Sample ID: 183857021

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	-0.0142	+/-0.0924	0.0778	+/-0.0924	0.159	pCi/g	AXD2	04/11/07	1102	624180	
<i>Liquid Scint Fe55, Solid-ALL FSS</i>												
Iron-55	U	10.8	+/-27.5	18.9	+/-27.5	39.9	pCi/g	MXP1	04/13/07	1027	624176	
<i>Liquid Scint Ni63, Solid-ALL FSS</i>												
Nickel-63	U	-2.98	+/-8.86	7.57	+/-8.86	15.9	pCi/g	MXP1	04/17/07	1159	625941	
<i>Liquid Scint Tc99, Solid-ALL FSS</i>												
Technetium-99	U	0.213	+/-0.251	0.207	+/-0.251	0.422	pCi/g	MXP1	04/16/07	1134	624178	

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM2	04/10/07	1049	624161

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 RESL Ni-1, Modified
11	DOE EML HASL-300, Tc-02-RC Modified

Surrogate/Tracer recovery	Test	Recovery%	Acceptable Limits
Americium-243 Tracer	Alphaspec Am241, Cm, Solid ALL	71	(15%-125%)
Plutonium-242 Tracer	Alphaspec Pu, Solid-ALL FSS	96	(15%-125%)
Plutonium-242 Tracer	Liquid Scint Pu241, Solid-ALL FS	88	(25%-125%)
Strontium Carrier	GFPC, Sr90, solid-ALL FSS	80	(25%-125%)
Iron-59 Tracer	Liquid Scint Fe55, Solid-ALL FS	76	(15%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid-ALL FS	82	(25%-125%)
Technetium-99m Tracer	Liquid Scint Tc99, Solid-ALL FS	74	(15%-125%)

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-022F
Sample ID: 183857021

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 :

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

The above sample is reported on a dry weight basis.

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-024F
Sample ID: 183857022
Matrix: TS
Collect Date: 03-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 9.24%

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		0.730	+/-0.163	0.0575	+/-0.163	0.115	pCi/g		MJH1	04/13/07	0945	624577
Americium-241	U	0.0265	+/-0.103	0.0863	+/-0.103	0.173	pCi/g					
Bismuth-212	U	0.337	+/-0.267	0.177	+/-0.267	0.353	pCi/g					
Bismuth-214		0.469	+/-0.113	0.0331	+/-0.113	0.0661	pCi/g					
Cesium-134	U	0.0258	+/-0.0473	0.0215	+/-0.0473	0.0429	pCi/g					
Cesium-137	U	0.0233	+/-0.0216	0.0188	+/-0.0216	0.0375	pCi/g					
Cobalt-60	U	0.0146	+/-0.0227	0.0205	+/-0.0227	0.041	pCi/g					
Europium-152	U	-0.0379	+/-0.0595	0.044	+/-0.0595	0.0879	pCi/g					
Europium-154	UI	0.00	+/-0.121	0.0709	+/-0.121	0.142	pCi/g					
Europium-155	U	0.0869	+/-0.0787	0.0539	+/-0.0787	0.108	pCi/g					
Lead-212		0.611	+/-0.0717	0.0274	+/-0.0717	0.0547	pCi/g					
Lead-214		0.499	+/-0.0917	0.0343	+/-0.0917	0.0686	pCi/g					
Manganese-54	U	-0.00951	+/-0.0211	0.0178	+/-0.0211	0.0356	pCi/g					
Niobium-94	U	0.0206	+/-0.0205	0.0187	+/-0.0205	0.0373	pCi/g					
Potassium-40		9.60	+/-1.01	0.123	+/-1.01	0.246	pCi/g					
Radium-226		0.469	+/-0.113	0.0331	+/-0.113	0.0661	pCi/g					
Silver-108m	U	0.000427	+/-0.022	0.0168	+/-0.022	0.0337	pCi/g					
Thallium-208		0.216	+/-0.0463	0.0159	+/-0.0463	0.0317	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	LXM2	04/10/07	1049	624161

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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- < Result is less than value reported

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-024F
Sample ID: 183857022

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

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

Report Date: April 17, 2007

Client Sample ID: 9802–0000–025F
Sample ID: 183857023
Matrix: TS
Collect Date: 03–APR–07
Receive Date: 10–APR–07
Collector: Client
Moisture: 11.2%

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		0.360	+/-0.112	0.0521	+/-0.112	0.104	pCi/g		MJH1	04/13/07	0945	624577
Americium–241	U	0.0137	+/-0.0782	0.067	+/-0.0782	0.134	pCi/g					
Bismuth–212	U	0.093	+/-0.202	0.118	+/-0.202	0.236	pCi/g					
Bismuth–214		0.336	+/-0.0828	0.029	+/-0.0828	0.0579	pCi/g					
Cesium–134	U	0.0325	+/-0.0357	0.0184	+/-0.0357	0.0368	pCi/g					
Cesium–137	U	0.0111	+/-0.0183	0.0165	+/-0.0183	0.033	pCi/g					
Cobalt–60	U	0.0106	+/-0.0179	0.0162	+/-0.0179	0.0323	pCi/g					
Europium–152	U	0.0115	+/-0.0548	0.0441	+/-0.0548	0.0881	pCi/g					
Europium–154	U	-0.00443	+/-0.0524	0.044	+/-0.0524	0.088	pCi/g					
Europium–155	U	0.0364	+/-0.0515	0.0444	+/-0.0515	0.0888	pCi/g					
Lead–212		0.420	+/-0.0547	0.024	+/-0.0547	0.0481	pCi/g					
Lead–214		0.362	+/-0.0734	0.0297	+/-0.0734	0.0593	pCi/g					
Manganese–54	U	-0.00188	+/-0.0184	0.0162	+/-0.0184	0.0323	pCi/g					
Niobium–94	U	-0.00767	+/-0.0165	0.0136	+/-0.0165	0.0272	pCi/g					
Potassium–40		8.82	+/-0.874	0.121	+/-0.874	0.241	pCi/g					
Radium–226		0.336	+/-0.0828	0.029	+/-0.0828	0.0579	pCi/g					
Silver–108m	U	0.00284	+/-0.0164	0.0129	+/-0.0164	0.0258	pCi/g					
Thallium–208		0.126	+/-0.0432	0.017	+/-0.0432	0.034	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	LXM2	04/10/07	1049	624161

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-025F
Sample ID: 183857023

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
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 - ND Analyte concentration is not detected above the detection limit
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Address : 362 Injun Hollow Rd

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-026B
Sample ID: 183857024
Matrix: TS
Collect Date: 05-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 6.86%

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		0.816	+/-0.196	0.0614	+/-0.196	0.123	pCi/g		MJH1	04/13/07	0946	624577
Americium-241	U	0.0589	+/-0.0723	0.0619	+/-0.0723	0.124	pCi/g					
Bismuth-212		0.616	+/-0.242	0.119	+/-0.242	0.238	pCi/g					
Bismuth-214		0.768	+/-0.118	0.0308	+/-0.118	0.0615	pCi/g					
Cesium-134	U	0.0268	+/-0.0228	0.0215	+/-0.0228	0.0429	pCi/g					
Cesium-137	U	0.00229	+/-0.0203	0.0175	+/-0.0203	0.035	pCi/g					
Cobalt-60	U	0.0053	+/-0.0206	0.0178	+/-0.0206	0.0357	pCi/g					
Europium-152	U	-0.0132	+/-0.060	0.0461	+/-0.060	0.0921	pCi/g					
Europium-154	U	-0.0402	+/-0.0727	0.0505	+/-0.0727	0.101	pCi/g					
Europium-155	U	0.021	+/-0.0523	0.0485	+/-0.0523	0.097	pCi/g					
Lead-212		0.728	+/-0.0771	0.0263	+/-0.0771	0.0527	pCi/g					
Lead-214		0.834	+/-0.112	0.0317	+/-0.112	0.0633	pCi/g					
Manganese-54	U	0.0077	+/-0.0196	0.0177	+/-0.0196	0.0353	pCi/g					
Niobium-94	U	0.0184	+/-0.0186	0.0169	+/-0.0186	0.0338	pCi/g					
Potassium-40		12.2	+/-1.08	0.143	+/-1.08	0.287	pCi/g					
Radium-226		0.768	+/-0.118	0.0308	+/-0.118	0.0615	pCi/g					
Silver-108m	U	-0.00763	+/-0.0175	0.015	+/-0.0175	0.030	pCi/g					
Thallium-208		0.219	+/-0.0429	0.0191	+/-0.0429	0.0381	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	LXM2	04/10/07	1049	624161

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

GEL LABORATORIES LLC

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-026B
Sample ID: 183857024

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

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-027B
Sample ID: 183857025
Matrix: TS
Collect Date: 03-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.72%

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		0.506	+/-0.166	0.0572	+/-0.166	0.114	pCi/g		MJH1	04/13/07	0946	624577
Americium-241	U	0.00732	+/-0.0925	0.0751	+/-0.0925	0.150	pCi/g					
Bismuth-212		0.278	+/-0.228	0.129	+/-0.228	0.259	pCi/g					
Bismuth-214		0.537	+/-0.0979	0.0307	+/-0.0979	0.0614	pCi/g					
Cesium-134	U	0.0252	+/-0.0277	0.021	+/-0.0277	0.042	pCi/g					
Cesium-137	U	-0.0147	+/-0.0225	0.018	+/-0.0225	0.036	pCi/g					
Cobalt-60	U	-0.001	+/-0.0195	0.0166	+/-0.0195	0.0331	pCi/g					
Europium-152	U	-0.0536	+/-0.0573	0.0428	+/-0.0573	0.0856	pCi/g					
Europium-154	U	-0.0251	+/-0.0583	0.0476	+/-0.0583	0.0952	pCi/g					
Europium-155	U	0.0171	+/-0.0567	0.0541	+/-0.0567	0.108	pCi/g					
Lead-212		0.629	+/-0.0728	0.0264	+/-0.0728	0.0528	pCi/g					
Lead-214		0.608	+/-0.0924	0.0313	+/-0.0924	0.0627	pCi/g					
Manganese-54	U	0.000636	+/-0.0197	0.0169	+/-0.0197	0.0337	pCi/g					
Niobium-94	U	0.000518	+/-0.0211	0.0159	+/-0.0211	0.0318	pCi/g					
Potassium-40		10.5	+/-1.06	0.159	+/-1.06	0.318	pCi/g					
Radium-226		0.537	+/-0.0979	0.0307	+/-0.0979	0.0614	pCi/g					
Silver-108m	U	-0.00772	+/-0.0171	0.0141	+/-0.0171	0.0283	pCi/g					
Thallium-208		0.203	+/-0.047	0.0167	+/-0.047	0.0334	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	LXM2	04/10/07	1049	624161

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-027B
Sample ID: 183857025

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

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-028B
Sample ID: 183857026
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.96%

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		0.827	+/-0.194	0.0647	+/-0.194	0.129	pCi/g		MJH1	04/13/07	0947	624577
Americium-241	U	0.0524	+/-0.0769	0.0626	+/-0.0769	0.125	pCi/g					
Bismuth-212	UI	0.00	+/-0.263	0.189	+/-0.263	0.378	pCi/g					
Bismuth-214		0.757	+/-0.112	0.0326	+/-0.112	0.0652	pCi/g					
Cesium-134	UI	0.00	+/-0.0311	0.0191	+/-0.0311	0.0381	pCi/g					
Cesium-137	U	0.0146	+/-0.0228	0.0201	+/-0.0228	0.0401	pCi/g					
Cobalt-60	U	-0.00872	+/-0.0216	0.0173	+/-0.0216	0.0346	pCi/g					
Europium-152	U	0.00517	+/-0.0683	0.0495	+/-0.0683	0.099	pCi/g					
Europium-154	U	0.0715	+/-0.173	0.0577	+/-0.173	0.115	pCi/g					
Europium-155	U	-0.0229	+/-0.0628	0.0528	+/-0.0628	0.105	pCi/g					
Lead-212		0.727	+/-0.0982	0.0431	+/-0.0982	0.0861	pCi/g					
Lead-214		0.801	+/-0.110	0.0339	+/-0.110	0.0678	pCi/g					
Manganese-54	U	0.0119	+/-0.0201	0.0182	+/-0.0201	0.0364	pCi/g					
Niobium-94	U	-0.016	+/-0.0198	0.0156	+/-0.0198	0.0312	pCi/g					
Potassium-40		13.6	+/-1.19	0.154	+/-1.19	0.309	pCi/g					
Radium-226		0.757	+/-0.112	0.0326	+/-0.112	0.0652	pCi/g					
Silver-108m	U	-0.00169	+/-0.019	0.0164	+/-0.019	0.0327	pCi/g					
Thallium-208		0.272	+/-0.0496	0.0171	+/-0.0496	0.0342	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	LXM2	04/10/07	1049	624161

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-028B
Sample ID: 183857026

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-029B
Sample ID: 183857027
Matrix: TS
Collect Date: 04-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 5.11%

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		0.594	+/-0.171	0.0663	+/-0.171	0.133	pCi/g		MJH1	04/13/07	1001	624577
Americium-241	U	0.0328	+/-0.108	0.0869	+/-0.108	0.174	pCi/g					
Bismuth-212	UI	0.00	+/-0.236	0.184	+/-0.236	0.367	pCi/g					
Bismuth-214		0.549	+/-0.113	0.0336	+/-0.113	0.0671	pCi/g					
Cesium-134	U	0.0309	+/-0.0287	0.0224	+/-0.0287	0.0447	pCi/g					
Cesium-137	U	0.0133	+/-0.0259	0.0206	+/-0.0259	0.0412	pCi/g					
Cobalt-60	U	0.0237	+/-0.0254	0.0238	+/-0.0254	0.0476	pCi/g					
Europium-152	U	0.0838	+/-0.0901	0.0522	+/-0.0901	0.104	pCi/g					
Europium-154	U	-0.0284	+/-0.0692	0.0575	+/-0.0692	0.115	pCi/g					
Europium-155	U	0.0244	+/-0.080	0.0574	+/-0.080	0.115	pCi/g					
Lead-212		0.641	+/-0.0807	0.0275	+/-0.0807	0.0549	pCi/g					
Lead-214		0.631	+/-0.111	0.0354	+/-0.111	0.0707	pCi/g					
Manganese-54	U	0.017	+/-0.0214	0.0196	+/-0.0214	0.0392	pCi/g					
Niobium-94	U	0.0106	+/-0.0208	0.0188	+/-0.0208	0.0376	pCi/g					
Potassium-40		10.7	+/-1.04	0.149	+/-1.04	0.298	pCi/g					
Radium-226		0.549	+/-0.113	0.0336	+/-0.113	0.0671	pCi/g					
Silver-108m	U	-0.007	+/-0.018	0.0151	+/-0.018	0.0301	pCi/g					
Thallium-208		0.232	+/-0.0493	0.0174	+/-0.0493	0.0348	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	LXM2	04/10/07	1049	624161

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-029B
Sample ID: 183857027

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-030F
Sample ID: 183857028
Matrix: TS
Collect Date: 05-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 4.12%

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		1.06	+/-0.251	0.0638	+/-0.251	0.128	pCi/g		MJH1	04/13/07	1002	624577
Americium-241	U	0.0398	+/-0.105	0.0891	+/-0.105	0.178	pCi/g					
Bismuth-212	UI	0.00	+/-0.268	0.229	+/-0.268	0.458	pCi/g					
Bismuth-214		0.654	+/-0.116	0.0418	+/-0.116	0.0835	pCi/g					
Cesium-134	U	0.0508	+/-0.0319	0.0294	+/-0.0319	0.0588	pCi/g					
Cesium-137	U	0.0256	+/-0.0258	0.0233	+/-0.0258	0.0465	pCi/g					
Cobalt-60	U	0.0282	+/-0.0253	0.0237	+/-0.0253	0.0474	pCi/g					
Europium-152	U	0.018	+/-0.0886	0.0589	+/-0.0886	0.118	pCi/g					
Europium-154	U	0.0336	+/-0.0868	0.066	+/-0.0868	0.132	pCi/g					
Europium-155	U	0.0238	+/-0.071	0.0653	+/-0.071	0.131	pCi/g					
Lead-212		0.967	+/-0.100	0.0322	+/-0.100	0.0643	pCi/g					
Lead-214		0.886	+/-0.122	0.0417	+/-0.122	0.0834	pCi/g					
Manganese-54	U	-0.00392	+/-0.0264	0.0226	+/-0.0264	0.0451	pCi/g					
Niobium-94	U	0.0108	+/-0.0224	0.0203	+/-0.0224	0.0405	pCi/g					
Potassium-40		15.2	+/-1.33	0.197	+/-1.33	0.394	pCi/g					
Radium-226		0.654	+/-0.116	0.0418	+/-0.116	0.0835	pCi/g					
Silver-108m	U	0.0233	+/-0.0199	0.0184	+/-0.0199	0.0368	pCi/g					
Thallium-208		0.334	+/-0.0529	0.0209	+/-0.0529	0.0418	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	LXM2	04/10/07	1049	624161

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 :

- ** Analyte is a surrogate compound
- < 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: April 17, 2007

Client Sample ID: 9802-0000-030F
Sample ID: 183857028

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802–0000–031F
Sample ID: 183857029
Matrix: TS
Collect Date: 05–APR–07
Receive Date: 10–APR–07
Collector: Client
Moisture: 1.43%

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		0.794	+/-0.214	0.0801	+/-0.214	0.160	pCi/g		MJH1	04/13/07	1035	624577
Americium–241	U	0.033	+/-0.0409	0.0358	+/-0.0409	0.0715	pCi/g					
Bismuth–212	U	0.458	+/-0.317	0.246	+/-0.317	0.492	pCi/g					
Bismuth–214		0.571	+/-0.122	0.0419	+/-0.122	0.0837	pCi/g					
Cesium–134	U	-0.00253	+/-0.0575	0.0272	+/-0.0575	0.0544	pCi/g					
Cesium–137	U	0.00593	+/-0.0293	0.0256	+/-0.0293	0.0512	pCi/g					
Cobalt–60	U	0.0184	+/-0.0292	0.0255	+/-0.0292	0.051	pCi/g					
Europium–152	U	-0.0136	+/-0.0795	0.0614	+/-0.0795	0.123	pCi/g					
Europium–154	U	-0.0197	+/-0.0877	0.072	+/-0.0877	0.144	pCi/g					
Europium–155	U	0.0984	+/-0.0974	0.0561	+/-0.0974	0.112	pCi/g					
Lead–212		0.717	+/-0.106	0.033	+/-0.106	0.0659	pCi/g					
Lead–214		0.601	+/-0.118	0.0439	+/-0.118	0.0877	pCi/g					
Manganese–54	U	0.0176	+/-0.022	0.0233	+/-0.022	0.0465	pCi/g					
Niobium–94	U	0.0156	+/-0.0262	0.0235	+/-0.0262	0.047	pCi/g					
Potassium–40		10.5	+/-1.22	0.227	+/-1.22	0.455	pCi/g					
Radium–226		0.571	+/-0.122	0.0419	+/-0.122	0.0837	pCi/g					
Silver–108m	U	-0.00318	+/-0.0238	0.021	+/-0.0238	0.0419	pCi/g					
Thallium–208		0.173	+/-0.0618	0.0218	+/-0.0618	0.0436	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	LXM2	04/10/07	1049	624161

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 :

- ** Analyte is a surrogate compound
- < Result is less than value reported

GEL LABORATORIES LLC

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

Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-031F
Sample ID: 183857029

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID: 9802-0000-032F
Sample ID: 183857030
Matrix: TS
Collect Date: 05-APR-07
Receive Date: 10-APR-07
Collector: Client
Moisture: 6.2%

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		0.786	+/-0.181	0.0533	+/-0.181	0.107	pCi/g		MJH1	04/14/07	2228	624577
Americium-241	U	0.0557	+/-0.0736	0.0594	+/-0.0736	0.119	pCi/g					
Bismuth-212		0.699	+/-0.228	0.106	+/-0.228	0.211	pCi/g					
Bismuth-214		0.561	+/-0.089	0.0301	+/-0.089	0.0601	pCi/g					
Cesium-134	UI	0.00	+/-0.0282	0.0197	+/-0.0282	0.0393	pCi/g					
Cesium-137	U	0.0239	+/-0.0412	0.0169	+/-0.0412	0.0338	pCi/g					
Cobalt-60	U	-0.0122	+/-0.0188	0.0148	+/-0.0188	0.0296	pCi/g					
Europium-152	U	0.0123	+/-0.0652	0.0454	+/-0.0652	0.0908	pCi/g					
Europium-154	U	-0.0416	+/-0.0555	0.0437	+/-0.0555	0.0874	pCi/g					
Europium-155	U	0.0642	+/-0.0635	0.0526	+/-0.0635	0.105	pCi/g					
Lead-212		0.776	+/-0.084	0.0271	+/-0.084	0.0541	pCi/g					
Lead-214		0.687	+/-0.0981	0.0302	+/-0.0981	0.0603	pCi/g					
Manganese-54	U	0.0135	+/-0.0194	0.0152	+/-0.0194	0.0304	pCi/g					
Niobium-94	U	-0.00358	+/-0.0185	0.0155	+/-0.0185	0.031	pCi/g					
Potassium-40		10.6	+/-0.918	0.117	+/-0.918	0.234	pCi/g					
Radium-226		0.561	+/-0.089	0.0301	+/-0.089	0.0601	pCi/g					
Silver-108m	U	-0.00509	+/-0.0167	0.0146	+/-0.0167	0.0291	pCi/g					
Thallium-208		0.266	+/-0.0456	0.0158	+/-0.0456	0.0316	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	LXM2	04/10/07	1049	624161

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 :

- ** Analyte is a surrogate compound
- < 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: April 17, 2007

Client Sample ID: 9802-0000-032F
Sample ID: 183857030

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

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Certificate of Analysis

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

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

Report Date: April 17, 2007

Client Sample ID:	9802-0000-033F	Project:	YANK01204
Sample ID:	183857031	Client ID:	YANK001
Matrix:	TS	Vol. Recv.:	
Collect Date:	05-APR-07		
Receive Date:	10-APR-07		
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		0.614	+/-0.151	0.0541	+/-0.151	0.108	pCi/g		MJH1	04/13/07	1106	624577
Americium-241	U	0.0234	+/-0.0579	0.0501	+/-0.0579	0.100	pCi/g					
Bismuth-212	UI	0.00	+/-0.231	0.157	+/-0.231	0.313	pCi/g					
Bismuth-214		0.426	+/-0.0759	0.0315	+/-0.0759	0.063	pCi/g					
Cesium-134	UI	0.00	+/-0.0301	0.022	+/-0.0301	0.0439	pCi/g					
Cesium-137	U	-0.00551	+/-0.0229	0.0175	+/-0.0229	0.035	pCi/g					
Cobalt-60	U	0.00973	+/-0.0191	0.017	+/-0.0191	0.034	pCi/g					
Europium-152	U	0.0382	+/-0.0564	0.0445	+/-0.0564	0.0889	pCi/g					
Europium-154	U	-0.00985	+/-0.0519	0.0431	+/-0.0519	0.0862	pCi/g					
Europium-155	U	0.0687	+/-0.0509	0.0496	+/-0.0509	0.0991	pCi/g					
Lead-212		0.557	+/-0.0659	0.0239	+/-0.0659	0.0477	pCi/g					
Lead-214		0.454	+/-0.0793	0.0312	+/-0.0793	0.0623	pCi/g					
Manganese-54	U	-0.0015	+/-0.0192	0.0169	+/-0.0192	0.0337	pCi/g					
Niobium-94	U	0.00955	+/-0.0183	0.0163	+/-0.0183	0.0325	pCi/g					
Potassium-40		9.98	+/-0.900	0.109	+/-0.900	0.218	pCi/g					
Radium-226		0.426	+/-0.0759	0.0315	+/-0.0759	0.063	pCi/g					
Silver-108m	U	-0.00541	+/-0.0167	0.0147	+/-0.0167	0.0293	pCi/g					
Thallium-208		0.199	+/-0.0421	0.0151	+/-0.0421	0.0302	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	LXM2	04/10/07	1049	624161

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 :

** Analyte is a surrogate compound

GEL 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: April 17, 2007

Client Sample ID: 9802-0000-033F
Sample ID: 183857031

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

QUALITY CONTROL DATA

GEL LABORATORIES LLC

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

QC Summary

Report Date: April 17, 2007
Page 1 of 12

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

Contact: East Hampton, Connecticut
Mr. Jack McCarthy

Workorder: 183857

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	624202										
QC1201312067	183857007	DUP									
Americium-241		U	0.00458	U	0.00771	pCi/g	51	(0% - 100%)	BXJ1	04/13/07	10:15
			Uncert: +/-0.0552		+/-0.0332						
			TPU: +/-0.0552		+/-0.0332						
Curium-242		U	0.00	U	0.0388	pCi/g		(0% - 100%)			
			Uncert: +/-0.0908		+/-0.076						
			TPU: +/-0.0908		+/-0.0761						
Curium-243/244		U	0.00	U	0.00	pCi/g	0	(0% - 100%)			
			Uncert: +/-0.0872		+/-0.073						
			TPU: +/-0.0872		+/-0.073						
QC1201312069	LCS										
Americium-241			13.4		13.0	pCi/g	97	(75%-125%)			
			Uncert: +/-1.31								
			TPU: +/-2.19								
Curium-242				U	-0.00844	pCi/g					
			Uncert: +/-0.0165								
			TPU: +/-0.0166								
Curium-243/244			16.0		14.3	pCi/g	89	(75%-125%)			
			Uncert: +/-1.38								
			TPU: +/-2.37								
QC1201312066	MB										
Americium-241				U	-0.00363	pCi/g					
			Uncert: +/-0.0288								
			TPU: +/-0.0288								
Curium-242				U	0.0342	pCi/g					
			Uncert: +/-0.067								
			TPU: +/-0.0672								
Curium-243/244				U	-0.00809	pCi/g					
			Uncert: +/-0.0158								
			TPU: +/-0.0159								
QC1201312068	183857007	MS									
Americium-241		U	0.00458		11.2	pCi/g	84	(75%-125%)			
			Uncert: +/-0.0552		+/-1.23						
			TPU: +/-0.0552		+/-1.96						
Curium-242		U	0.00	U	0.0368	pCi/g					
			Uncert: +/-0.0908		+/-0.0722						
			TPU: +/-0.0908		+/-0.0724						
Curium-243/244		U	0.00		13.1	pCi/g	82	(75%-125%)			
			Uncert: +/-0.0872		+/-1.34						
			TPU: +/-0.0872		+/-2.23						
Batch	624203										
QC1201312071	183857007	DUP									
Plutonium-238		U	-0.00773	U	-0.00644	pCi/g	18	(0% - 100%)	BXJ1	04/13/07	10:15

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QC Summary

Workorder: 183857

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	624203										
Plutonium-239/240		Uncert:		+/-0.0152				+/-0.0126			
		TPU:		+/-0.0152				+/-0.0126			
	U			-0.00773	U	0.0268	pCi/g	362	(0% - 100%)		
		Uncert:		+/-0.0152				+/-0.0526			
		TPU:		+/-0.0152				+/-0.0527			
QC1201312073	LCS										
Plutonium-238			U	0.0144	pCi/g			(75%-125%)			
		Uncert:		+/-0.0573							
		TPU:		+/-0.0573							
Plutonium-239/240		13.3		12.9	pCi/g		97	(75%-125%)			
		Uncert:		+/-1.17							
		TPU:		+/-1.86							
QC1201312070	MB										
Plutonium-238			U	-0.0145	pCi/g						
		Uncert:		+/-0.0201							
		TPU:		+/-0.0202							
Plutonium-239/240			U	0.0157	pCi/g						
		Uncert:		+/-0.0625							
		TPU:		+/-0.0626							
QC1201312072	183857007	MS									
Plutonium-238			U	-0.00773	pCi/g			(75%-125%)			
		Uncert:		+/-0.0152							
		TPU:		+/-0.0152							
Plutonium-239/240		13.3	U	-0.00773	pCi/g		96	(75%-125%)			
		Uncert:		+/-0.0152							
		TPU:		+/-0.0152							
Batch	624204										
QC1201312075	183857007	DUP									
Plutonium-241			U	6.49	U	2.06	pCi/g	0	(0% - 100%)	BXJ1	04/16/07 13:35
		Uncert:		+/-6.73		+/-6.40					
		TPU:		+/-6.76		+/-6.40					
QC1201312077	LCS										
Plutonium-241		140		124	pCi/g		89	(75%-125%)		04/16/07 14:08	
		Uncert:		+/-12.5							
		TPU:		+/-17.5							
QC1201312074	MB										
Plutonium-241			U	1.68	pCi/g					04/16/07 13:19	
		Uncert:		+/-7.42							
		TPU:		+/-7.43							
QC1201312076	183857007	MS									
Plutonium-241		141	U	6.49	pCi/g		82	(75%-125%)		04/16/07 13:52	
		Uncert:		+/-6.73		+/-12.0					
		TPU:		+/-6.76		+/-16.9					
Rad Gamma Spec											
Batch	624576										
QC1201312935	183857002	DUP									
Actinium-228				0.756		0.665	pCi/g	13	(0% - 100%)	MJH1	04/14/07 09:50
		Uncert:		+/-0.128		+/-0.145					
						+/-0.145					

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

QC Summary

Workorder: 183857

Page 3 of 12

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	624576										
Americium-241		TPU:	+/-0.128								
	UI		0.00	U	0.034	pCi/g	4	(0% - 100%)			
		Uncert:	+/-0.0201		+/-0.0566						
Bismuth-212		TPU:	+/-0.0201		+/-0.0566						
	U		0.00	UI	0.00	pCi/g	5	(0% - 100%)			
		Uncert:	+/-0.183		+/-0.164						
Bismuth-214		TPU:	+/-0.183		+/-0.164						
			0.565		0.651	pCi/g	14	(0% - 100%)			
		Uncert:	+/-0.0841		+/-0.0776						
Cesium-134		TPU:	+/-0.0841		+/-0.0776						
	UI		0.00	UI	0.00	pCi/g	21	(0% - 100%)			
		Uncert:	+/-0.0213		+/-0.026						
Cesium-137		TPU:	+/-0.0213		+/-0.026						
	U		0.00663	U	0.0117	pCi/g	55	(0% - 100%)			
		Uncert:	+/-0.0152		+/-0.0138						
Cobalt-60		TPU:	+/-0.0152		+/-0.0138						
	U		0.000914	U	-0.00615	pCi/g	270	(0% - 100%)			
		Uncert:	+/-0.0157		+/-0.0143						
Europium-152		TPU:	+/-0.0157		+/-0.0143						
	U		-0.0131	U	-0.0221	pCi/g	51	(0% - 100%)			
		Uncert:	+/-0.0408		+/-0.0454						
Europium-154		TPU:	+/-0.0408		+/-0.0454						
	U		-0.00914	U	-0.055	pCi/g	143	(0% - 100%)			
		Uncert:	+/-0.0413		+/-0.0442						
Europium-155		TPU:	+/-0.0413		+/-0.0442						
	U		0.0514	U	0.00268	pCi/g	180	(0% - 100%)			
		Uncert:	+/-0.0371		+/-0.0357						
Lead-212		TPU:	+/-0.0371		+/-0.0357						
			0.648		0.679	pCi/g	5	(0% - 20%)			
		Uncert:	+/-0.0795		+/-0.0632						
Lead-214		TPU:	+/-0.0795		+/-0.0632						
			0.641		0.688	pCi/g	7	(0% - 20%)			
		Uncert:	+/-0.0829		+/-0.0798						
Manganese-54		TPU:	+/-0.0829		+/-0.0798						
	U		0.0131	U	-0.00284	pCi/g	311	(0% - 100%)			
		Uncert:	+/-0.0159		+/-0.013						
Niobium-94		TPU:	+/-0.0159		+/-0.013						
	U		0.000478	U	0.00352	pCi/g	152	(0% - 100%)			
		Uncert:	+/-0.0125		+/-0.0119						
Potassium-40		TPU:	+/-0.0125		+/-0.0119						
			9.95		9.54	pCi/g	4	(0% - 20%)			
		Uncert:	+/-0.774		+/-0.759						
Radium-226		TPU:	+/-0.774		+/-0.759						
			0.565		0.651	pCi/g	14	(0% - 100%)			
		Uncert:	+/-0.0841		+/-0.0776						
Silver-108m		TPU:	+/-0.0841		+/-0.0776						
	U		-0.0058	U	0.00329	pCi/g	722	(0% - 100%)			
		Uncert:	+/-0.0131		+/-0.0127						

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QC Summary

Workorder: 183857

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec									
Batch 624576									
Thallium-208	TPU:	+/-0.0131	+/-0.0127						
		0.230	0.226	pCi/g	2		(0% - 100%)		
	Uncert:	+/-0.0369	+/-0.0354						
	TPU:	+/-0.0369	+/-0.0354						
QC1201312936 LCS Actinium-228			1.07	pCi/g					04/16/07 10:04
	Uncert:		+/-0.594						
	TPU:		+/-0.594						
Americium-241	16.0		14.3	pCi/g		89	(75%-125%)		
	Uncert:		+/-2.21						
	TPU:		+/-2.21						
Bismuth-212		U	0.849	pCi/g					
	Uncert:		+/-0.953						
	TPU:		+/-0.953						
Bismuth-214			0.902	pCi/g					
	Uncert:		+/-0.275						
	TPU:		+/-0.275						
Cesium-134		U	0.122	pCi/g					
	Uncert:		+/-0.109						
	TPU:		+/-0.109						
Cesium-137	6.20		5.70	pCi/g		92	(75%-125%)		
	Uncert:		+/-0.482						
	TPU:		+/-0.482						
Cobalt-60	9.28		9.54	pCi/g		103	(75%-125%)		
	Uncert:		+/-0.712						
	TPU:		+/-0.712						
Europium-152		U	-0.00879	pCi/g					
	Uncert:		+/-0.249						
	TPU:		+/-0.249						
Europium-154		U	-0.12	pCi/g					
	Uncert:		+/-0.244						
	TPU:		+/-0.244						
Europium-155		U	0.0195	pCi/g					
	Uncert:		+/-0.290						
	TPU:		+/-0.290						
Lead-212			0.974	pCi/g					
	Uncert:		+/-0.218						
	TPU:		+/-0.218						
Lead-214			1.03	pCi/g					
	Uncert:		+/-0.337						
	TPU:		+/-0.337						
Manganese-54		U	-0.00401	pCi/g					
	Uncert:		+/-0.103						
	TPU:		+/-0.103						
Niobium-94		U	0.0176	pCi/g					
	Uncert:		+/-0.0898						
	TPU:		+/-0.0898						
Potassium-40		U	0.456	pCi/g					

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QC Summary

Workorder: 183857

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec Batch 624576										
	Uncert:		+/-1.15							
	TPU:		+/-1.15							
Radium-226			0.902	pCi/g			(75%-125%)			
	Uncert:		+/-0.275							
	TPU:		+/-0.275							
Silver-108m		U	-0.00417	pCi/g						
	Uncert:		+/-0.0845							
	TPU:		+/-0.0845							
Thallium-208			0.330	pCi/g						
	Uncert:		+/-0.153							
	TPU:		+/-0.153							
QC1201312934 MB Actinium-228		U	0.0144	pCi/g					04/14/07	09:46
	Uncert:		+/-0.0757							
	TPU:		+/-0.0757							
Americium-241		U	0.00241	pCi/g						
	Uncert:		+/-0.0102							
	TPU:		+/-0.0102							
Bismuth-212		U	-0.0984	pCi/g						
	Uncert:		+/-0.117							
	TPU:		+/-0.117							
Bismuth-214		U	0.0149	pCi/g						
	Uncert:		+/-0.0364							
	TPU:		+/-0.0364							
Cesium-134		U	-0.00358	pCi/g						
	Uncert:		+/-0.0105							
	TPU:		+/-0.0105							
Cesium-137		U	-0.000627	pCi/g						
	Uncert:		+/-0.00998							
	TPU:		+/-0.00998							
Cobalt-60		U	0.00527	pCi/g						
	Uncert:		+/-0.00975							
	TPU:		+/-0.00975							
Europium-152		U	0.0158	pCi/g						
	Uncert:		+/-0.023							
	TPU:		+/-0.023							
Europium-154		U	0.00783	pCi/g						
	Uncert:		+/-0.0308							
	TPU:		+/-0.0308							
Europium-155		U	0.00149	pCi/g						
	Uncert:		+/-0.0196							
	TPU:		+/-0.0196							
Lead-212		U	0.0108	pCi/g						
	Uncert:		+/-0.0202							
	TPU:		+/-0.0202							
Lead-214		U	0.0137	pCi/g						
	Uncert:		+/-0.0328							
	TPU:		+/-0.0328							

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QC Summary

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec									
Batch	624576								
Manganese-54		U	0.00192	pCi/g					
	Uncert:		+/-0.00911						
	TPU:		+/-0.00911						
Niobium-94		U	0.00586	pCi/g					
	Uncert:		+/-0.00921						
	TPU:		+/-0.00921						
Potassium-40		U	0.097	pCi/g					
	Uncert:		+/-0.0984						
	TPU:		+/-0.0984						
Radium-226		U	0.0149	pCi/g					
	Uncert:		+/-0.0364						
	TPU:		+/-0.0364						
Silver-108m		U	0.000412	pCi/g					
	Uncert:		+/-0.00776						
	TPU:		+/-0.00776						
Thallium-208		U	0.00707	pCi/g					
	Uncert:		+/-0.0165						
	TPU:		+/-0.0165						
Batch	624577								
QC1201312938 183857022 DUP									
Actinium-228		U	0.730	pCi/g	18		(0% - 100%)	MJH1	04/15/07 03:33
	Uncert:		+/-0.163						
	TPU:		+/-0.163						
Americium-241		U	0.0265	pCi/g	19		(0% - 100%)		
	Uncert:		+/-0.103						
	TPU:		+/-0.103						
Bismuth-212		U	0.337	pCi/g	39		(0% - 100%)		
	Uncert:		+/-0.267						
	TPU:		+/-0.267						
Bismuth-214			0.469	pCi/g	34		(0% - 100%)		
	Uncert:		+/-0.113						
	TPU:		+/-0.113						
Cesium-134		U	0.0258	pCi/g	76		(0% - 100%)		
	Uncert:		+/-0.0473						
	TPU:		+/-0.0473						
Cesium-137		U	0.0233	pCi/g	60		(0% - 100%)		
	Uncert:		+/-0.0216						
	TPU:		+/-0.0216						
Cobalt-60		U	0.0146	pCi/g	157		(0% - 100%)		
	Uncert:		+/-0.0227						
	TPU:		+/-0.0227						
Europium-152		U	-0.0379	pCi/g	297		(0% - 100%)		
	Uncert:		+/-0.0595						
	TPU:		+/-0.0595						
Europium-154		UI	0.00	pCi/g	74		(0% - 100%)		
	Uncert:		+/-0.121						
	TPU:		+/-0.121						
Europium-155		U	0.0869	pCi/g	111		(0% - 100%)		
	Uncert:		+/-0.0754						
	TPU:		+/-0.0754						

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QC Summary

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 624577											
		Uncert:									
		TPU:									
Lead-212					pCi/g	1		(0% - 20%)			
		Uncert:									
		TPU:									
Lead-214					pCi/g	7		(0%-20%)			
		Uncert:									
		TPU:									
Manganese-54			U		pCi/g	6110		(0% - 100%)			
		Uncert:									
		TPU:									
Niobium-94			U		pCi/g	115		(0% - 100%)			
		Uncert:									
		TPU:									
Potassium-40					pCi/g	1		(0% - 20%)			
		Uncert:									
		TPU:									
Radium-226					pCi/g	34		(0% - 100%)			
		Uncert:									
		TPU:									
Silver-108m			U		pCi/g	270		(0% - 100%)			
		Uncert:									
		TPU:									
Thallium-208					pCi/g	1		(0% - 100%)			
		Uncert:									
		TPU:									
QC1201312939	LCS										
Actinium-228					pCi/g					04/15/07	08:37
		Uncert:									
		TPU:									
Americium-241		16.0			pCi/g		91	(75%-125%)			
		Uncert:									
		TPU:									
Bismuth-212			U		pCi/g						
		Uncert:									
		TPU:									
Bismuth-214					pCi/g						
		Uncert:									
		TPU:									
Cesium-134			U		pCi/g						
		Uncert:									
		TPU:									
Cesium-137		6.20			pCi/g		100	(75%-125%)			
		Uncert:									
		TPU:									
Cobalt-60		9.28			pCi/g		100	(75%-125%)			
		Uncert:									
		TPU:									

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QC Summary

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	624577									
Europium-152		U	-0.0791	pCi/g						
	Uncert:		+/-0.347							
	TPU:		+/-0.347							
Europium-154		U	0.046	pCi/g						
	Uncert:		+/-0.208							
	TPU:		+/-0.208							
Europium-155		U	-0.127	pCi/g						
	Uncert:		+/-0.309							
	TPU:		+/-0.309							
Lead-212			0.786	pCi/g						
	Uncert:		+/-0.259							
	TPU:		+/-0.259							
Lead-214			0.664	pCi/g						
	Uncert:		+/-0.417							
	TPU:		+/-0.417							
Manganese-54		U	0.00219	pCi/g						
	Uncert:		+/-0.0971							
	TPU:		+/-0.0971							
Niobium-94		U	-0.00763	pCi/g						
	Uncert:		+/-0.0969							
	TPU:		+/-0.0969							
Potassium-40		U	1.00	pCi/g						
	Uncert:		+/-1.64							
	TPU:		+/-1.64							
Radium-226			0.758	pCi/g			(75%-125%)			
	Uncert:		+/-0.341							
	TPU:		+/-0.341							
Silver-108m		U	0.0041	pCi/g						
	Uncert:		+/-0.0911							
	TPU:		+/-0.0911							
Thallium-208			0.464	pCi/g						
	Uncert:		+/-0.201							
	TPU:		+/-0.201							
QC1201312937	MB									
Actinium-228		U	-0.0065	pCi/g					04/13/07	11:32
	Uncert:		+/-0.0584							
	TPU:		+/-0.0584							
Americium-241		U	-0.0433	pCi/g						
	Uncert:		+/-0.0173							
	TPU:		+/-0.0173							
Bismuth-212		U	0.192	pCi/g						
	Uncert:		+/-0.112							
	TPU:		+/-0.112							
Bismuth-214		U	-0.0259	pCi/g						
	Uncert:		+/-0.0326							
	TPU:		+/-0.0326							
Cesium-134		U	0.0141	pCi/g						
	Uncert:		+/-0.0148							

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QC Summary

Workorder: 183857

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Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	624577										
Cesium-137		TPU:		+/-0.0148							
			U	0.0189	pCi/g						
		Uncert:		+/-0.0182							
Cobalt-60		TPU:		+/-0.0182							
			U	-0.00566	pCi/g						
		Uncert:		+/-0.0166							
Europium-152		TPU:		+/-0.0166							
			U	-0.00102	pCi/g						
		Uncert:		+/-0.0367							
Europium-154		TPU:		+/-0.0367							
			U	0.00478	pCi/g						
		Uncert:		+/-0.0445							
Europium-155		TPU:		+/-0.0445							
			U	0.016	pCi/g						
		Uncert:		+/-0.0299							
Lead-212		TPU:		+/-0.0299							
			U	0.0278	pCi/g						
		Uncert:		+/-0.0248							
Lead-214		TPU:		+/-0.0248							
			U	0.00464	pCi/g						
		Uncert:		+/-0.0303							
Manganese-54		TPU:		+/-0.0303							
			U	0.00903	pCi/g						
		Uncert:		+/-0.013							
Niobium-94		TPU:		+/-0.013							
			U	0.00262	pCi/g						
		Uncert:		+/-0.0145							
Potassium-40		TPU:		+/-0.0145							
			U	0.0088	pCi/g						
		Uncert:		+/-0.203							
Radium-226		TPU:		+/-0.203							
			U	-0.0259	pCi/g						
		Uncert:		+/-0.0326							
Silver-108m		TPU:		+/-0.0326							
			U	0.00999	pCi/g						
		Uncert:		+/-0.0133							
Thallium-208		TPU:		+/-0.0133							
			U	0.00639	pCi/g						
		Uncert:		+/-0.019							
		TPU:		+/-0.019							
Rad Gas Flow											
Batch	624234										
QC1201312112	183857007	DUP									
Strontium-90			U	0.00647	U	0.0262	pCi/g	0	(0% - 100%) NXL3	04/12/07	09:47
		Uncert:		+/-0.0225		+/-0.029					
		TPU:		+/-0.0225		+/-0.029					
QC1201312114	LCS										
Strontium-90			1.48			1.59	pCi/g	107	(75%-125%)	04/12/07	09:47

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QC Summary

Workorder: 183857

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Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow									
Batch	624234								
			Uncert:						+/-0.112
			TPU:						+/-0.121
QC1201312111	MB								
Strontium-90		U	-0.00217	pCi/g					04/12/07 09:47
			Uncert:						+/-0.0174
			TPU:						+/-0.0174
QC1201312113	183857007	MS							
Strontium-90		3.25 U	0.00647	3.18	pCi/g	98	(75%-125%)		04/12/07 09:47
			Uncert:						+/-0.0225
			TPU:						+/-0.0225
Rad Liquid Scintillation									
Batch	624176								
QC1201311985	183857007	DUP							
Iron-55		U	20.4	U	7.36	pCi/g	0	(0% - 100%) MXP1	04/13/07 11:00
			Uncert:						+/-29.0
			TPU:						+/-29.1
QC1201311987	LCS								
Iron-55		1190		1080	pCi/g	91	(75%-125%)		04/13/07 11:33
			Uncert:						+/-58.7
			TPU:						+/-95.8
QC1201311984	MB								
Iron-55		U	-6.54	pCi/g					04/13/07 10:44
			Uncert:						+/-24.4
			TPU:						+/-24.4
QC1201311986	183857007	MS							
Iron-55		1220 U	20.4	1130	pCi/g	93	(75%-125%)		04/13/07 11:17
			Uncert:						+/-29.0
			TPU:						+/-29.1
Batch	624178								
QC1201311993	183857007	DUP							
Technetium-99		U	0.131	U	0.302	pCi/g	0	(0% - 100%) MXP1	04/16/07 13:00
			Uncert:						+/-0.250
			TPU:						+/-0.250
QC1201311995	LCS								
Technetium-99		19.6		18.7	pCi/g	96	(75%-125%)		04/16/07 14:00
			Uncert:						+/-0.715
			TPU:						+/-0.856
QC1201311992	MB								
Technetium-99		U	-0.0685	pCi/g					04/16/07 12:17
			Uncert:						+/-0.216
			TPU:						+/-0.216
QC1201311994	183857007	MS							
Technetium-99		20.0 U	0.131	19.9	pCi/g	100	(75%-125%)		04/16/07 13:42
			Uncert:						+/-0.250
			TPU:						+/-0.250
Batch	624179								
QC1201311997	183857021	DUP							
Tritium		U	-0.0783	U	0.200	pCi/g	0	(0% - 100%) AXD2	04/12/07 03:35

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Parname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time	
Rad Liquid Scintillation												
Batch	624179											
		Uncert:	+/-1.49	+/-1.53								
		TPU:	+/-1.49	+/-1.53								
QC1201311999	LCS											
Tritium		11.5		12.3	pCi/g		107	(75%-125%)		04/12/07	05:38	
		Uncert:		+/-1.86								
		TPU:		+/-1.88								
QC1201311996	MB											
Tritium			U	1.12	pCi/g					04/12/07	02:33	
		Uncert:		+/-1.51								
		TPU:		+/-1.51								
QC1201311998	183857021	MS										
Tritium		12.0	U	-0.0783	pCi/g		97	(75%-125%)		04/12/07	04:36	
		Uncert:		+/-1.49								
		TPU:		+/-1.49								
Batch	624180											
QC1201312001	183857021	DUP										
Carbon-14			U	-0.0142	U	-0.0391	pCi/g	0	(0% - 100%)	AXD2	04/11/07	13:05
		Uncert:		+/-0.0924		+/-0.0868						
		TPU:		+/-0.0924		+/-0.0868						
QC1201312003	LCS											
Carbon-14		6.78		6.79	pCi/g		100	(75%-125%)		04/11/07	15:07	
		Uncert:		+/-0.188								
		TPU:		+/-0.215								
QC1201312000	MB											
Carbon-14			U	-0.0282	pCi/g					04/11/07	12:03	
		Uncert:		+/-0.0892								
		TPU:		+/-0.0892								
QC1201312002	183857021	MS										
Carbon-14		7.06	U	-0.0142	pCi/g		98	(75%-125%)		04/11/07	14:06	
		Uncert:		+/-0.0924								
		TPU:		+/-0.0924								
Batch	625941											
QC1201316375	183857021	DUP										
Nickel-63			U	-2.98	U	7.52	pCi/g	0	(0% - 100%)	MXP1	04/17/07	12:31
		Uncert:		+/-8.86		+/-10.5						
		TPU:		+/-8.86		+/-10.5						
QC1201316377	LCS											
Nickel-63		545		554	pCi/g		102	(75%-125%)		04/17/07	13:04	
		Uncert:		+/-24.3								
		TPU:		+/-31.2								
QC1201316374	MB											
Nickel-63			U	-5.48	pCi/g					04/17/07	12:15	
		Uncert:		+/-8.74								
		TPU:		+/-8.74								
QC1201316376	183857021	MS										
Nickel-63		573	U	-2.98	pCi/g		102	(75%-125%)		04/17/07	12:48	
		Uncert:		+/-8.86								
		TPU:		+/-8.86								

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QC Summary

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

The Qualifiers in this report are defined as follows:

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

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.

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9802-0000

RELEASE RECORD

ATTACHMENT 3 (DQA RESULTS)

Revision 0

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9802-0000

RELEASE RECORD

ATTACHMENT 3A (PRELIMINARY DATA REVIEW)

Preliminary Data Review Form - Samples for the Sign Test

Survey Unit: 9802- 0000
 Survey Unit Name: Northeast Protected Area Grounds
 Classification: B
 Survey Media: Soil
 Type of Survey: Final Status Survey
 Type of Measurement: Gross Measurement
 Number of Measurements: 25
 Operational DCGL: 1

BASIC STATISTICAL QUANTITIES

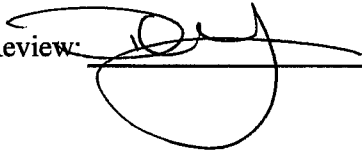
	Cs-137	Co-60
Minimum Value:	-8.41E-03	-1.22E-02
Maximum Value:	5.04E-02	4.90E-02
Mean:	1.16E-02	5.29E-03
Median:	9.80E-03	3.34E-03
Standard Deviation:	1.20E-02	1.33E-02

RADIONUCLIDE CONCENTRATION (pCi/g)

NUMBER	Cs-137	Co-60	Identified?	Identified?
9802-0000-001F	2.09E-02	-4.84E-03	Y	N
9802-0000-003F	6.63E-03	9.14E-04	N	N
9802-0000-004F	-8.41E-03	4.07E-03	N	N
9802-0000-005F	9.13E-03	3.34E-03	N	N
9802-0000-006F	1.90E-02	-1.14E-02	Y	N
9802-0000-007F	3.96E-03	5.71E-03	N	N
9802-0000-008F	1.42E-02	-5.70E-03	N	N
9802-0000-010F	1.41E-02	1.95E-02	N	Y
9802-0000-011F	7.98E-03	2.86E-03	N	N
9802-0000-012F	-2.33E-03	6.22E-03	N	N
9802-0000-013F	5.04E-02	4.90E-02	Y	Y
9802-0000-014F	5.30E-03	7.41E-04	N	N
9802-0000-016F	1.53E-02	-5.21E-05	Y	N
9802-0000-017F	5.65E-03	5.14E-03	N	N
9802-0000-018F	-4.41E-05	-5.22E-03	N	N
9802-0000-019F	4.15E-03	6.44E-03	N	N
9802-0000-020F	9.80E-03	-5.79E-03	N	N
9802-0000-021F	1.66E-02	-1.34E-05	Y	N
9802-0000-022F	1.26E-02	-8.10E-03	N	N
9802-0000-024F	2.33E-02	1.46E-02	Y	N
9802-0000-025F	1.11E-02	1.06E-02	N	N
9802-0000-030F	2.56E-02	2.82E-02	N	Y
9802-0000-031F	5.93E-03	1.84E-02	N	N
9802-0000-032F	2.39E-02	-1.22E-02	N	N
9802-0000-033F	-5.51E-03	9.73E-03	N	N

Performed By: Oak Marshall

Date: 4-26-07

Independent Review: 

Date: 5/1/07

Preliminary Data Review Form - Judgemental Samples

Survey Unit: 9802- 0000
Survey Unit Name: West Industrial Site (non-protected area)
Classification: B
Survey Media: Soil
Type of Survey: Final Status Survey
Type of Measurement: Gross Measurement
Number of Measurements: 4
Operational DCGL: 1

BASIC STATISTICAL QUANTITIES

	Cs-137	Co-60
Minimum Value:	-1.47E-02	-8.72E-03
Maximum Value:	1.46E-02	2.37E-02
Mean:	3.87E-03	4.82E-03
Median:	7.80E-03	2.15E-03
Standard Deviation:	1.36E-02	1.38E-02

RADIONUCLIDE CONCENTRATION (pCi/g)

NUMBER	Cs-137	Co-60	Identified?	
9802-0000-026B	2.29E-03	5.30E-03	N	N
9802-0000-027B	-1.47E-02	-1.00E-03	N	N
9802-0000-028B	1.46E-02	-8.72E-03	N	N
9802-0000-029B	1.33E-02	2.37E-02	N	N

Performed By: *Paul Marshall*

Date: 4-26-07

Independent Review: *[Signature]*

Date: 5/1/07

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9802-0000

RELEASE RECORD

**ATTACHMENT 3B (GRAPHICAL REPRESENTATION OF
DATA)**

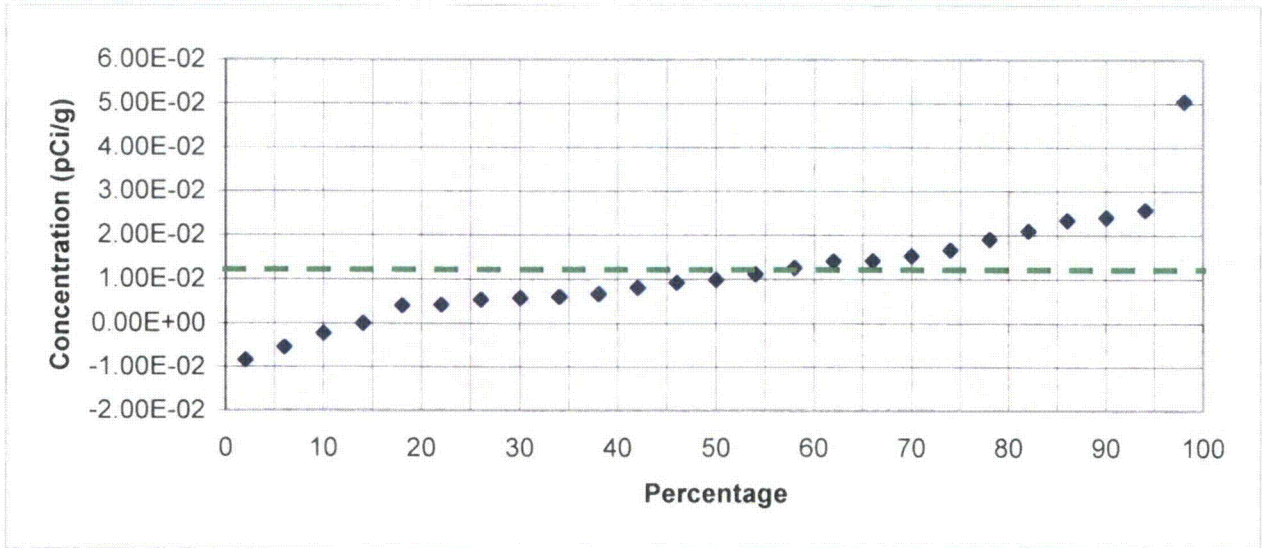
Revision 0

Quantile Plot For Cesium - 137

Survey Unit: 9802-0000

Survey Unit Name: West Industrial Site (non-protected area)

Mean: 1.16E-02 pCi/g

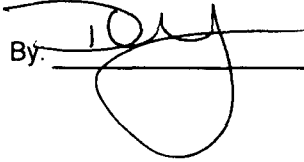


Cs-137	Rank	Percentage
-8.41E-03	1	2 %
-5.51E-03	2	6 %
-2.33E-03	3	10 %
-4.41E-05	4	14 %
3.96E-03	5	18 %
4.15E-03	6	22 %
5.30E-03	7	26 %
5.65E-03	8	30 %
5.93E-03	9	34 %
6.63E-03	10	38 %
7.98E-03	11	42 %
9.13E-03	12	46 %
9.80E-03	13	50 %
1.11E-02	14	54 %
1.26E-02	15	58 %
1.41E-02	16	62 %
1.42E-02	17	66 %
1.53E-02	18	70 %
1.66E-02	19	74 %
1.90E-02	20	78 %
2.09E-02	21	82 %
2.33E-02	22	86 %

2.39E-02	23	90 %
2.56E-02	24	94 %
5.04E-02	25	98 %

Prepared By: Paul Marshall

Date: 4-26-07

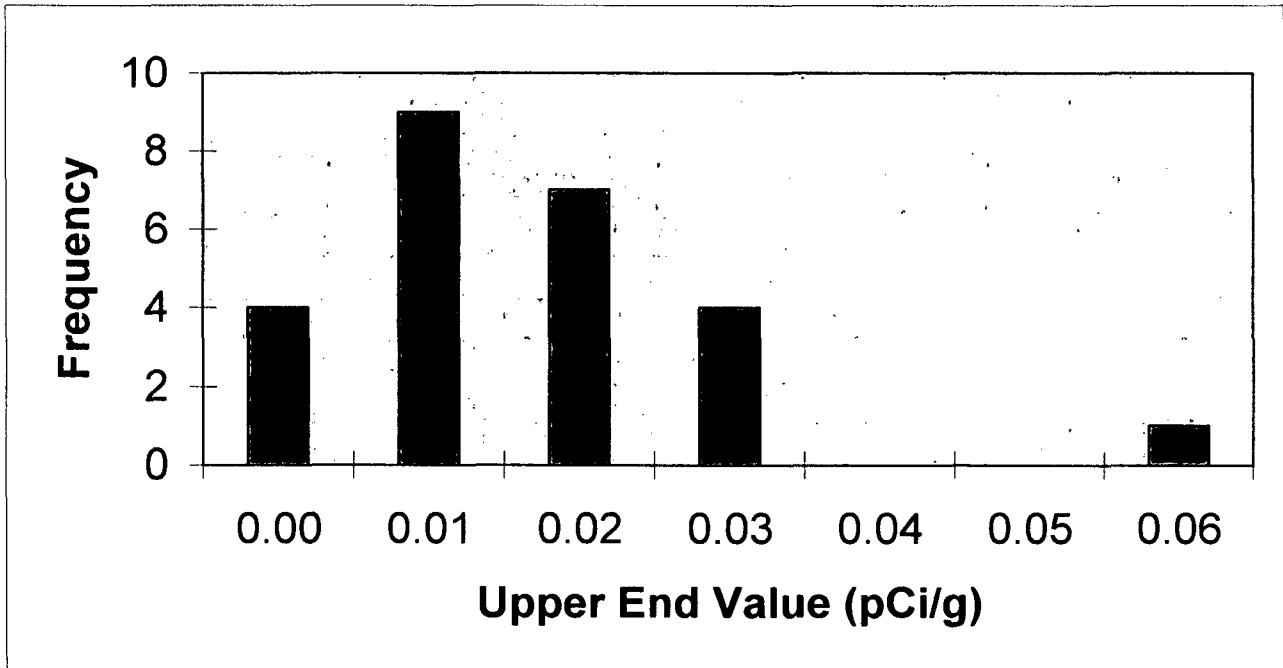
Reviewed By: 

Date: 5/1/07

Frequency Plot For Cesium-137

Survey Unit: 9802-0000
Survey Unit Name: West Industrial Site (non-protected area)

Mean: 0.012 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
0.00	4	16%
0.01	9	36%
0.02	7	28%
0.03	4	16%
0.04	0	0%
0.05	0	0%
0.06	1	4%
Total	25	100%

Prepared By: *Paul Marshall*

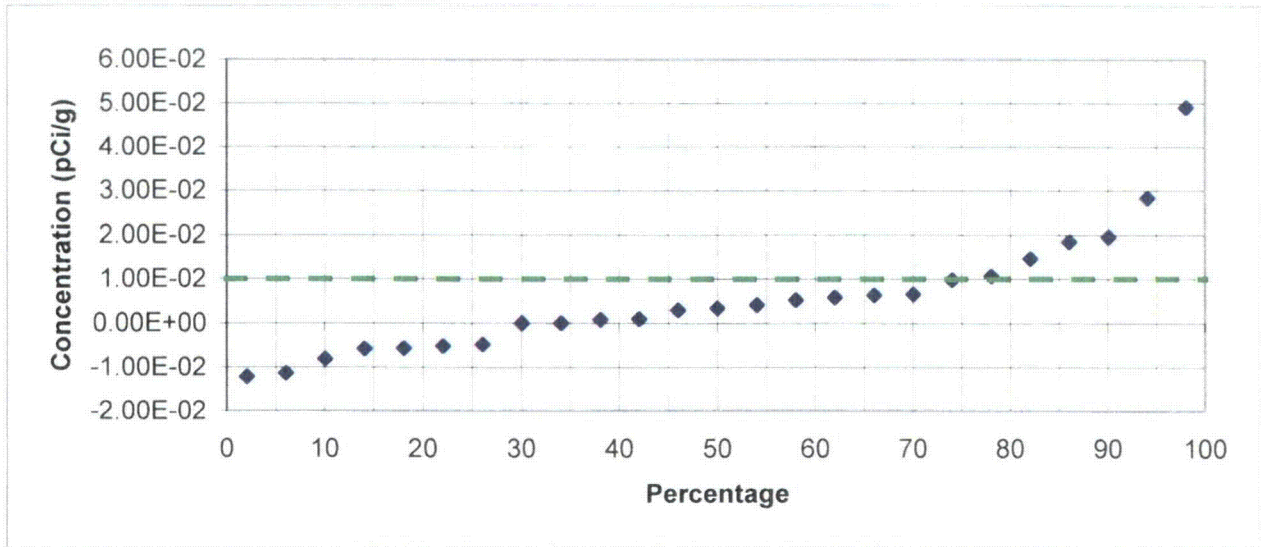
Date: 4-26-07

Reviewed By: *[Signature]*

Date: 5/1/07

Quantile Plot For Cobalt - 60

Survey Unit: 9802-0000
 Survey Unit Name: West Industrial Site (non-protected area)
 Mean: 5.29E-03 pCi/g

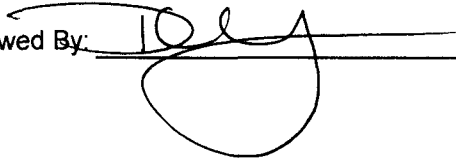


Co-60	Rank	Percentage
-1.22E-02	1	2 %
-1.14E-02	2	6 %
-8.10E-03	3	10 %
-5.79E-03	4	14 %
-5.70E-03	5	18 %
-5.22E-03	6	22 %
-4.84E-03	7	26 %
-5.21E-05	8	30 %
-1.34E-05	9	34 %
7.41E-04	10	38 %
9.14E-04	11	42 %
2.86E-03	12	46 %
3.34E-03	13	50 %
4.07E-03	14	54 %
5.14E-03	15	58 %
5.71E-03	16	62 %
6.22E-03	17	66 %
6.44E-03	18	70 %
9.73E-03	19	74 %
1.06E-02	20	78 %
1.46E-02	21	82 %
1.84E-02	22	86 %

1.95E-02	23	90 %
2.82E-02	24	94 %
4.90E-02	25	98 %

Prepared By: Dan Romball

Date: 4-26-07

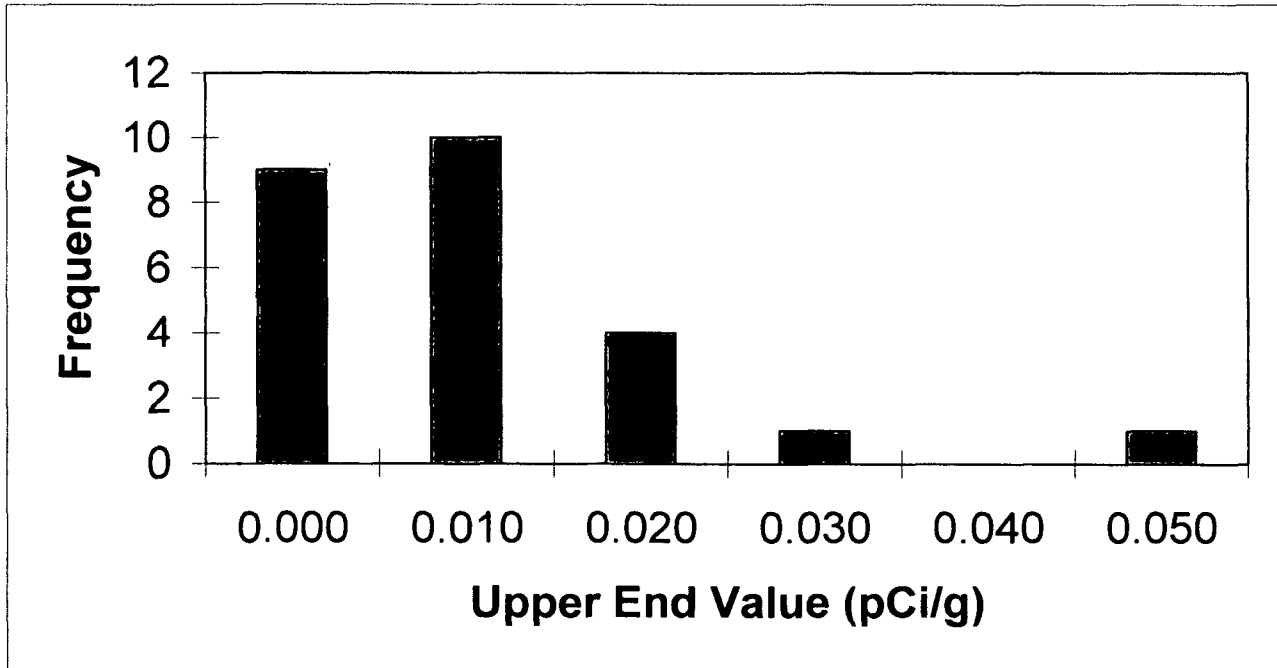
Reviewed By: 

Date: 5/1/07

Frequency Plot For Cobalt - 60

Survey Unit: 9802-0000
 Survey Unit Name: West Industrial Site (non-protected area)

Mean: 0.005 pCi/g



Upper End Value	Observation Frequency	Observation % Frequency
0.000	9	36%
0.010	10	40%
0.020	4	16%
0.030	1	4%
0.040	0	0%
0.050	1	4%
Total	25	100%

Prepared By: *Dee Marshall*

Date: 4-26-07

Reviewed By: *[Signature]*

Date: 5/1/07

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9802-0000

RELEASE RECORD

ATTACHMENT 3C (SIGN TEST)

Sign Test Calculation Sheet For Multiple Radionuclides

Survey Unit Number: 9802-0000

Survey Unit Name: West Industrial Site (non-protected area)

WP&IR#: 9802-0000

Classification : B

TYPE I (α error):0.05

TYPE I (β error):0.05

Radionuclides:

Cs-137

Co-60

Survey Design DCGL (pCi/g):

4.75

2.29

Results Cs-137	Results Co-60	Weighted Sum (W_s)	DCGL-Result	Sign
2.09E-02	-4.84E-03	2.29E-03	9.98E-01	1
6.63E-03	9.14E-04	1.80E-03	9.98E-01	1
-8.41E-03	4.07E-03	8.38E-06	1.00E+00	1
9.13E-03	3.34E-03	3.38E-03	9.97E-01	1
1.90E-02	-1.14E-02	-9.84E-04	1.00E+00	1
3.96E-03	5.71E-03	3.33E-03	9.97E-01	1
1.42E-02	-5.70E-03	4.99E-04	1.00E+00	1
1.41E-02	1.95E-02	1.15E-02	9.88E-01	1
7.98E-03	2.86E-03	2.93E-03	9.97E-01	1
-2.33E-03	6.22E-03	2.23E-03	9.98E-01	1
5.04E-02	4.90E-02	3.21E-02	9.68E-01	1
5.30E-03	7.41E-04	1.44E-03	9.99E-01	1
1.53E-02	-5.21E-05	3.20E-03	9.97E-01	1
5.65E-03	5.14E-03	3.44E-03	9.97E-01	1
-4.41E-05	-5.22E-03	-2.29E-03	1.00E+00	1
4.15E-03	6.44E-03	3.69E-03	9.96E-01	1
9.80E-03	-5.79E-03	-4.68E-04	1.00E+00	1
1.66E-02	-1.34E-05	3.49E-03	9.97E-01	1
1.26E-02	-8.10E-03	-8.88E-04	1.00E+00	1
2.33E-02	1.46E-02	1.13E-02	9.89E-01	1
1.11E-02	1.06E-02	6.98E-03	9.93E-01	1
2.56E-02	2.82E-02	1.77E-02	9.82E-01	1
5.93E-03	1.84E-02	9.30E-03	9.91E-01	1
2.39E-02	-1.22E-02	-3.01E-04	1.00E+00	1
-5.51E-03	9.73E-03	3.10E-03	9.97E-01	1

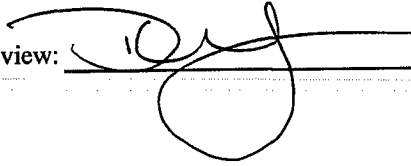
Number of Positive Differences (S+): 25

Critical Value: 17

Survey Unit: Meets Acceptance Criterion

Performed By: Dan Marshall

Date: 4-26-07

Independent Review: 

Date: 5/1/07

SUBSURFACE AREA ASSOCIATED WITH THE WEST
INDUSTRIAL SITE GROUNDS (NON-PROTECTED AREA)
SURVEY UNIT 9802-0000

RELEASE RECORD

ATTACHMENT 3D (QC SPLIT RESULTS)

Split Sample Assessment Form

Survey Area #: 9802	Survey Unit #: 0000	Survey Unit Name: West Industrial Site (non-protected area)
Sample Plan or WPIR#: 9802-0000		SML #: 9802-0000-011


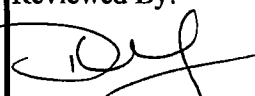
Sample Description: Comparison of split samples collected from sample measurement location #11 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was 9802-0000-011F the comparison sample was 9802-0000-011FS.

STANDARD					COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
Cs-137	7.98E-03	8.95E-03	1	NONE -	-1.46E-02	7.65E-03	-1.83	N/A
Co-60	2.86E-03	6.60E-03	0	NONE -	3.43E-03	6.35E-03	N/A	N/A
K-40	9.57E+00	4.15E-01	23	0.75 - 1.33	1.02E+01	4.03E-01	1.07	Y

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

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

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

Performed By: 	Date: 4-26-07	Reviewed By: 	Date: 5/1/07
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WPIR – Work Plan and Inspection Record
SML – Sample Measurement Location designation

Split Sample Assessment Form

Survey Area#:	9802	Survey Unit #:	0000	Survey Unit Name:	West Industrial Site (non-protected area)
Sample Plan or WPIR#:				9802-0000	
				SML #: 9802-0000-013	

Sample Description: Comparison of split samples collected from sample measurement location #13 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was 9802-0000-013F, the comparison sample was 9802-0000-013FS.

STANDARD					COMPARISON			
Radionuclide	Activity Value	Standard Error	Resolution	Agreement Range	Activity Value	Standard Error	Comparison Ratio	Acceptable (Y/N)
Cs-137	5.04E-02	1.21E-02	4	0.5 - 2	6.86E-02	1.42E-02	1.36	Y
Co-60	4.90E-02	9.10E-03	5	0.5 - 2	2.48E-02	1.04E-02	0.51	Y
K-40	1.14E+01	4.53E-01	25	0.75 - 1.33	1.02E+01	4.21E-01	0.89	Y

Comments/Corrective Actions: Since Cs-137, Co-60 and K-40 were also found to be present at an acceptable level of agreement, no further action is warranted.

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

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

Performed By:	Date:	Reviewed By:	Date:
<i>Oal Marshall</i>	4-26-07	<i>[Signature]</i>	5/1/07

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