



Final Status Survey Final Report Phase IV

**Appendix A1
Survey Unit Release Record
9106-0001, Discharge Canal**

November 2006



CYAPCO
FINAL STATUS SURVEY RELEASE RECORD
DISCHARGE CANAL
SURVEY UNIT 9106-0001

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DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

TABLE OF CONTENTS

1.	SURVEY UNIT DESCRIPTION	3
2.	CLASSIFICATION BASIS	3
3.	DATA QUALITY OBJECTIVES (DQO).....	5
4.	SURVEY DESIGN	10
5.	SURVEY IMPLEMENTATION	14
6.	SURVEY RESULTS.....	14
7.	QUALITY CONTROL	17
8.	INVESTIGATIONS AND RESULTS.....	17
9.	REMEDIATION AND RESULTS	21
10.	CHANGES FROM THE FINAL STATUS SURVEY PLAN	21
11.	DATA QUALITY ASSESSMENT (DQA).....	21
12.	ANOMALIES	22
13.	CONCLUSION	22
14.	ATTACHMENTS	23
14.1	Attachment 1 – Figures (6 pages including cover)	
14.2	Attachment 2 – Sample and Statistical Data (221 pages including covers)	

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

1. SURVEY UNIT DESCRIPTION

Survey Unit 9106-0001 (Discharge Canal) is designated as Final Status Survey (FSS) Class 1 survey area and consists of approximately 1,917 m² (0.47 acres) of water covered sediment in an area located approximately 0.16 miles from the reference coordinate system benchmark used at the Haddam Neck Plant (HNP) (see Attachment 1, Figure 1). The Discharge Canal is a man-made mile long waterway that runs parallel to, and ultimately communicates with, the Connecticut River. The Discharge Canal is subdivided into fifteen (15) survey units including two (2) permanent wetland areas for FSS purposes. The survey unit is bounded as follows: Survey Area 9522 is to the north and east (called north as orientated with the north to south flow of the Connecticut River), Survey Area 9520 is to the north and west, Discharge Canal Survey Unit 9106-0014 is to the south. The survey unit comprises the canal sediments to the depth of three feet from the top of the sediment layer or the original construction depth and it extends up the canal banks to the mean high water level.

This survey unit is bounded by reference coordinates E006 through E010 and by S072 through S078 (refer to License Termination Plan Section 5.4.4). The reference coordinates provide the maximum dimensions of a rectangle containing this survey unit; some areas contained in this rectangle may not be part of this survey unit. The boundary of the survey unit was defined using a Global Positioning System (GPS) based on the Connecticut State Plane System North American Datum (NAD) 1927.

2. CLASSIFICATION BASIS

The survey unit was classified in accordance with Procedure RPM 5.1-10, "Survey Unit Classification." The "Classification Basis Summary" conducted for this survey unit consisted of:

- a) A review of the 10CFR50.75 (g) (1) database,
- b) A review of the "Initial Characterization Report" and the "Historic Site Assessment (HSA) Supplement,"
- c) Historic and current survey records review,
- d) Visual inspections and a "walkdown."
- e) Formal or informal interviews with cognizant personnel.

A review of the 10CFR50.75(g)(1) database report identified a number of events that may have impacted this survey unit. This was expected since the discharge canal served as the licensed discharge pathway for liquid releases. Several events indicated the potential for plant related contamination in the survey unit. These included a number of primary side system to secondary side system leakage events, contamination found to be present in secondary side systems and components, and unmonitored spills that drained to the discharge canal. In 1986, samples were taken from the legacy dredge spoils removed in 1979 dredged spoils area and from recently dredged canal sediment. The

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

sample analyses indicated that the concentrations of Cs-137, Co-60 and other radionuclides were a small fraction of the Derived Concentration Guideline Limits (DCGLs) for those nuclides that could be identified by gamma spectroscopy. (refer to NE-86-RA-1142 dated 11-13-86). None of the available historical information reviewed would support a conclusion that any residual activity in this survey unit is likely to be present at concentrations greater than the respective DCGLs.

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

This area was initially a larger Class 2 survey unit, also designated as 9106-0001. Upon reviewing the FSS data for this area, it was determined that at least one (1) sample exceeded the DCGL for the area. This required that the area be reclassified as two (2), Class 1 survey units. In order to optimize the amount of area covered by the Class 1 surveys, a portion of Class 2 Survey Unit 9106-0002 was also included into the southern most area of the two newly designated Class 1 survey units. Survey Unit 9106-0001 encompasses the northern portion of the newly reclassified area and Survey Unit 9106-0014 (new) encompasses the southern portion of the newly reclassified area.

An initial characterization was performed in April and May of 2004 to obtain the necessary data of sufficient data quality for final status survey (FSS) planning purposes. Fifteen (15) samples were obtained by biased sampling from five (5) locations throughout the area. The samples were analyzed, at an approved off-site laboratory, by gamma spectroscopy and with radiochemical analyses for Sr-90 and Tritium. Hard-to-Detect analyses were also conducted on one (1) of the fifteen (15) samples. The only plant-related dosimetrically significant radionuclides identified in the samples were Cs-137 and Co-60. All sample analysis results were below the ten (10) mrem/yr design DCGL. Co-60 accounted for the majority of the dose in these samples with a maximum concentration of 1.04 pCi/g.

A final characterization survey was performed in May of 2006. Samples were collected and analyzed on-site by gamma spectroscopy. Fifteen (15) sediment samples from fifteen (15) locations were collected and analyzed for radioactive materials. All of the samples were analyzed by gamma spectroscopy. A summary of the results are presented in Table 1 below.

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

**Table 1 – Basic Statistical Quantities for Cs-137 and Co-60
from the Characterization Survey**

Parameter	Cs-137 (pCi/g)	Co-60 (pCi/g)
Minimum Value:	2.15E-02	1.03E-03
Maximum Value:	1.57E+00	2.25E+00
Mean:	5.96E-01	6.15E-01
Median:	6.39E-01	3.81E-01
Standard Deviation:	4.96E-01	6.97E-01

NOTE: The Operational DCGLs from Table 2 are 5.38 pCi/g for Cs-137 and 2.59 pCi/g for Co-60; these are used in conjunction with the unity rule to achieve seventeen (17) mrem/yr Total Effective Dose Equivalent (TEDE).

Based upon the results of radiological surveys performed during characterization, it was concluded that there was a significant probability for residual radioactivity to be present in this survey unit in concentrations greater than the Operational DCGL justifying a final survey unit classification of Class 1 (refer to Section 3).

Since the pre-remediation data presented in Table 1 is determined to be sufficient to adequately characterize the survey area, no further characterization efforts were undertaken.

A Class 1 Final Status Survey (FSS) plan was developed and implemented in this survey unit starting in May of 2006.

Prior to completion of the FSS plan, it was determined that a remediation was required to remove sediment material in a region exceeding the associated $DCGL_{EMC}$. A post-remediation Remedial Action Survey (RAS) was performed under SSWP 06-07-002. This survey confirmed that grab samples of the dredge spoils materials were below the Operational DCGL, indicating that remediation was completed in the affected areas.

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

3. DATA QUALITY OBJECTIVES (DQO)

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

The DQO process incorporates hypothesis testing and probabilistic sampling distributions to control decision errors during data analysis. Hypothesis testing is a process based on the scientific method that compares a baseline condition to

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

an alternate condition. The baseline condition is technically known as the null hypothesis. Hypothesis testing rests on the premise that the null hypothesis is true and that sufficient evidence must be provided for rejection. In designing the survey plan, the underlying assumption, or null hypothesis was that residual activity in the survey unit exceeded the release criteria. Rejection of the null hypothesis would satisfy the release criteria objective of the FSS.

The primary objective of the Final Status Survey Plan (FSSP) was to demonstrate that the level of residual radioactivity in Survey Unit 9106-0001 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 the concentration of radioactivity above background, equivalent to a dose-based release criterion and is presented in terms of surface or mass activity concentrations. Chapter 6 of the LTP describes in detail the modeling used to develop the DCGLs for soil (called Base Case Soil DCGL), for existing groundwater radioactivity and for future groundwater radioactivity that will be contributed by building foundations and footings.

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

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

Equation 1:

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

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

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

This survey unit is affected by existing groundwater (reference CY memo ISC 06-024). The dose contribution from existing groundwater is less than two (2) mrem/yr TEDE, based on field data.

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

Equation 2:

$$19 \text{ mrem/yr}_{\text{Total}} = 17 \text{ mrem/yr}_{\text{Soil}} + 2 \text{ mrem/yr}_{\text{Existing GW}} + 0 \text{ mrem/yr}_{\text{Future GW}}$$

The allowable dose for soil in this survey unit is seventeen (17) mrem/yr TEDE as shown by Equation 2 above. The concentration of residual radioactivity resulting in seventeen (17) mrem/yr TEDE is designated as the Operational DCGL, and has been established for the radionuclides of concern as provided in Table 2.

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

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

Table 2 – Radionuclide Specific Base Case Soil DCGL, Operational DCGLs and Required Minimum Detectable Concentrations			
Radionuclide ⁽¹⁾	Base Case Soil DCGL (pCi/g) ⁽²⁾	Operational DCGL (pCi/g) ⁽³⁾	Required MDC (pCi/g) ⁽⁴⁾
H-3	4.12E+02	2.80E+02	1.65E+01
C-14	5.66E+00	3.85E+00	2.26E-01
Mn-54	1.74E+01	1.18E+01	6.96E-01
Fe-55	2.74E+04	1.86E+04	1.10E+03
Co-60	3.81E+00	2.59E+00	1.52E-01
Ni-63	7.23E+02	4.92E+02	2.89E+01
Sr-90	1.55E+00	1.05E+00	6.20E-02
Nb-94	7.12E+00	4.84E+00	2.85E-01
Tc-99	1.26E+01	8.57E+00	5.04E-01
Ag-108m	7.14E+00	4.86E+00	2.86E-01
Cs-134	4.67E+00	3.18E+00	1.87E-01
Cs-137	7.91E+00	5.38E+00	3.16E-01
Eu-152	1.01E+01	6.87E+00	4.04E-01
Eu-154	9.29E+00	6.32E+00	3.72E-01
Eu-155	3.92E+02	2.67E+02	1.57E+01
Pu-238	2.96E+01	2.01E+01	1.18E+00
Pu-239/240	2.67E+01	1.82E+01	1.07E+00
Pu-241	8.70E+02	5.92E+02	3.48E+01
Am-241 ⁽⁵⁾	2.58E+01	1.75E+01	1.03E+00
Cm-243/244	2.90E+01	1.97E+01	1.16E+00

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

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

(3) The Operational DCGL is equivalent to seventeen (17) mrem/yr TEDE.

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

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

Another important facet of the DQO process is to identify the radionuclides of concern and determine the concentration variability. Initial characterization was performed in April and May of 2004 and final characterization in May of 2006 as discussed in Section 2. Cs-137 and Co-60 were found to be the predominate radionuclides of concern. The basic statistical quantities (i.e., mean, standard deviation, median) for Cs-137 and Co-60 are provided in Table 1.

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

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

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.

The Elevated Measurement Comparison (EMC) consists of comparing each measurement from the survey unit with the investigation levels discussed in Section 4.0 (and presented in Table 4). As stated in section 5.8.3 of the LTP, any measurement from the survey unit that is greater than an investigation level indicates an area of relatively high concentrations that should be investigated, regardless of the outcome of the nonparametric statistical tests. Thus the use of the EMC against the investigation levels may be viewed as assurance that unusually large measurements will receive proper attention regardless of the outcome of those tests and that any area having the potential for significant dose contributions will be identified.

The LTP (by way of Equation 5-31) states that if elevated levels of residual radioactivity are present over portions of the survey unit area, they will be evaluated in conjunction with the average level of residual activity present across the balance of the survey unit to determine whether the total dose associated with the distribution of activity present is in compliance with the release criteria. This is demonstrated in Equation 3.

DISCHARGE CANAL
SURVEY UNIT 9106-0001
RELEASE RECORD

Equation 3 (LTP Equation 5-31):

$$\frac{\delta}{DCGL_w} + \frac{\bar{C}_{elevated} - \delta}{(AreaFactor) \times DCGL_w} < 1$$

Where:

δ = Average concentration outside the elevated area,

$\bar{C}_{elevated}$ = Average concentration inside the elevated area.

A separate term will be used in Equation 3 for each elevated area in a survey unit.

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 dose for soil used for this survey unit to demonstrate compliance with the LTP criteria is seventeen (17) mrem/yr TEDE, as discussed in Section 3 of this Release Record.

The DQO process determined that Cs-137 and Co-60 were the radionuclides of concern (refer to Section 2). The sum of fractions or unity rule was used with the individual Operational DCGLs because multiple radionuclides (Cs-137 and Co-60) were considered in the survey design.

Surrogate DCGLs were not required for this survey unit based on process knowledge from FSS of nearby adjacent areas and via screening process described in LTP Section 5.4.7.2, "Gross Activity DCGLs".

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

The Elevated Measurement Comparison (EMC) applies to this survey unit since it is a Class 1 area and discrete, elevated areas of contamination are expected. A description of the application of the EMC is provided in section 3.0.

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

The Sign Test was selected as the non-parametric statistical test to demonstrate that the null hypothesis was rejected. The use of the Sign Test did not require the selection or use of a background reference area, which simplified survey design and implementation. In addition, this approach is conservative since it includes background Cs-137 as part of the sample set.

The number of sediment samples for FSS was determined in accordance with Procedure RPM 5.1-12, "*Determination of the Number of Samples for Final Status Survey.*" The Lower Bound of the Gray Region (LBGR) was set in accordance with Procedure RPM 5.1-11 to 0.652 to maintain the relative shift (Δ/σ) in the range of 1 and 3. The resulting relative shift was 2.3. A Prospective Power Curve was generated using COMPASS, a software package developed under the sponsorship of the United States Nuclear Regulatory Commission (USNRC) for implementation of MARSSIM in support of the decommissioning license termination rule (10 CFR 20, Subpart E). The result of the COMPASS computer run showed adequate power for the survey design. This indicates that the survey unit has a high probability of rejecting the null hypothesis, assuming that the characterization data are representative of the FSS results. For statistical purposes, the survey design specified fifteen (15) samples were required. However, due to a special requirement to double the number of statistical samples in this section of the discharge canal, resulting from an agreement with the State of Connecticut Department of Environmental Protection (CTDEP), this number needed to be doubled to thirty (30) sediment core samples for non-parametric statistical testing.

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

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

DISCHARGE CANAL
SURVEY UNIT 9106-0001
RELEASE RECORD

Table 3 - Sample Measurement Locations with Associated GPS Coordinates

Designation	Northing	Easting
9106-0001-101F	236249.32	668909.83
9106-0001-103F	236224.86	668923.95
9106-0001-104F	236224.86	668952.20
9106-0001-106F	236200.40	668881.58
9106-0001-107F	236200.40	668966.32
9106-0001-108F	236200.40	668994.57
9106-0001-109F	236200.40	669022.82
9106-0001-110F	236175.93	668867.45
9106-0001-111F	236175.93	668895.70
9106-0001-112F	236175.93	668923.95
9106-0001-113F	236175.93	668952.20
9106-0001-114F	236175.93	668980.44
9106-0001-115F	236175.93	669008.69
9106-0001-116F	236175.93	669036.94
9106-0001-117F	236175.93	669065.19
9106-0001-119F	236151.47	668909.83
9106-0001-120F	236151.47	668938.07
9106-0001-121F	236151.47	668966.32
9106-0001-122F	236151.47	668994.57
9106-0001-123F	236151.47	669022.82
9106-0001-124F	236151.47	669051.06
9106-0001-125F	236127.01	668923.95
9106-0001-126F	236127.01	668952.20
9106-0001-127F	236127.01	668980.44
9106-0001-128F	236127.01	669008.69
9106-0001-129F	236102.55	668966.32
9106-0001-130F	236102.55	668994.57
9106-0001-131F	236178.99	668971.40
9106-0001-132F	236118.53	669020.35
9106-0001-133F	236172.48	669019.85

The sample location designations of Table 3 are not sequentially inclusive because of the necessity to relocate samples due to the inaccessibility of original sample locations. Sample locations 9106-0001-102F, 9106-0001-105F and 9106-0001-118F were found to be on dry land. Consequently, they were randomly re-located using the VSP software to three (3) new locations designated as 9106-0001-131F through 9106-001-0133F.

The sample plan specified that all sample were to be collected within three (3) meters of the specified coordinates. This is a satisfactory positioning tolerance given the challenges associated with positioning the sampling vessel to fixed locations. In addition, sample procurement was, at times, hindered by rock and other obstructions that limited the penetration of the coring device and in some

DISCHARGE CANAL
SURVEY UNIT 9106-0001
RELEASE RECORD

cases prevented sampling all together. The vendor's positioning logs were reviewed to determine that the positioning was within the specified tolerances. It was determined that for this survey unit, the maximum sample location offset was found to be 8.51 feet (2.59 meters) at sample point 9106-0001-119.

Three (3) sediment samples were analyzed for the full suite of radionuclides specified in Table 1, exceeding the requirement to analyze 5% of the sample population for HTD analysis specified in procedure RPM 5.1-11. Two (2) of the three (3) samples were randomly selected using the Microsoft Excel "RAND" function. Additionally, the gamma results were screened to ensure that the sample exhibiting the highest observed radionuclide concentration by gamma analysis was selected. This process resulted in selecting an additional sample for HTD analyses.

The implementation of quality control measures as referenced by Procedure RPM 5.1-24, "*Split Sample Assessment for Final Status Survey*," required the collection of two (2) samples for "split sample" analysis by the off-site laboratory. These locations were selected randomly using the Microsoft Excel "RAND" function. The number of quality control samples exceeded the 5% requirement as specified by the LTP.

Section 5.7.3.2.6 of the LTP specifies that scanning is not required for the FSS of the Discharge Canal. Table 4 provides a synopsis of the survey design.

Table 4 – Synopsis of the Survey Design		
Feature	Design Criteria	Basis
Survey Unit Land Area	1,917 m ²	Based on AutoCAD-LT and VSP calculations
Number of Measurements ⁽¹⁾	30	Type 1 and Type 2 errors were 0.05, sigma was 0.284 the LBGR was set to 0.652 to maintain Relative Shift in the range of 1 and 3, Relative Shift was 2.3
Grid Spacing	8.59 m	Based on triangular grid
Operational DCGL	5.38 pCi/g Cs-137 2.59 pCi/g Co-60	To achieve seventeen (17) mrem/yr TEDE ⁽²⁾ to demonstrate compliance with Equation 2 of this Release Record
Scan Coverage	N/A	The LTP exempts this area
Sediment Investigation Level	5.38 pCi/g Cs-137 2.59 pCi/g Co-60	The Operational DCGL meets the LTP criteria for a Class 1 survey unit

(1) Section 5.7 of the LTP requires that the calculated number of statistical samples (n=15) be doubled for this survey unit.

(2) The allowable dose for soil in this survey unit is seventeen (17) 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).

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

5. SURVEY IMPLEMENTATION

Final Status Survey field activities were conducted under Work Plan and Inspection Record (WP&IR) 2006-0021. The WP&IR package included a detailed FSSP, job safety analysis, job planning checklist and related procedures for reference. Daily briefings were conducted to discuss the expectations for job performance and the safety aspects of the survey. The "Daily Survey Journal" was used to document field activities and other information pertaining to the FSS.

Measurement locations were identified in North American Datum (NAD) 1927 coordinates that were supplied to the sampling vendor, Ocean Survey, Inc. (OSI) of Old Saybrook, Connecticut. Discharge Canal sampling was accomplished using direct push technology to collect composite samples of bottom and mean high water mark sediments. Sediment cores from the Discharge Canal were obtained by OSI using a vibrating corer that is platform mounted on a sampling vessel. The core barrel was a three (3) inch diameter thin-walled aluminum tube which also served as a core liner (ten feet or less). A core catcher was available to prevent the sample from sliding out of the bottom of the tube. Vessel positioning and the determination of sample locations were accomplished using a GPS interfaced with a navigation and data logging system.

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

The thirty (30) sediment samples were collected and packaged in accordance with Haddam Neck Plant (HNP) Procedure RPM 5.1-3, "*Collection of Sample Media for Final Status Survey*". Samples were controlled, transported, stored, and transferred to the off-site laboratory using COC protocols.

Three (3) samples (9106-0001-112F, 9106-0001-121F and 9106-0001-132F) were selected for HTD radionuclide analysis by the off-site laboratory.

The implementation of quality control measures included the collection of two (2) split samples at locations 9106-0001-106F and 9106-0001-117F for comparative analysis by the off-site laboratory.

6. SURVEY RESULTS

The off-site laboratory employed for the radiological analyses of samples was General Engineering Laboratories (GEL) – Charleston, South Carolina. The

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

laboratory analyzed the thirty (30) samples taken for non-parametric statistical testing and the associated duplicates using gamma spectroscopy. All analyses were performed to the required MDC.

Cs-137 was positively identified (i.e., a result greater than two (2) standard deviations uncertainty) in twenty-five (25) and Co-60 was positively identified in twenty-one (21) of the thirty (30) samples. The results reported for the remaining sample analyses indicated that activity was present at levels approaching or below the established detection limits in the remaining samples collected and analyzed for non-parametric testing.

Several other radionuclides which were positively identified (i.e., a result greater than two (2) standard deviations uncertainty) could be de-selected or excluded using the 5% and 10% rule described in Section 5.4.7.2 of the LTP.

One (1) of the sample results exceeded the Operational DCGL and required further investigation. A summary of the sample results is provided in Table 5.

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

Table 5- Summary of Sediment Sample Results				
Sample Number	Cs-137 $\mu\text{Ci/g}$	Co-60 $\mu\text{Ci/g}$	Fraction of the Operational DCGL ⁽¹⁾	
			Nuclides of concern	Unity (Sign Test) ⁽²⁾
9106-0001-101F	5.04E-01	1.28E-02	9.86E-02	1.58E-01
9106-0001-103F	9.09E-01	4.14E-01	3.29E-01	3.88E-01
9106-0001-104F	2.89E-01	3.15E-02	6.59E-02	1.25E-01
9106-0001-106F	1.63E-01	1.48E-01	8.74E-02	1.47E-01
9106-0001-107F	6.95E-01	2.46E-01	2.24E-01	2.83E-01
9106-0001-108F	2.07E-02	1.70E-02	1.04E-02	6.95E-02
9106-0001-109F	-6.78E-04	-4.42E-03	-1.83E-03	5.73E-02
9106-0001-110F	6.09E-02	0.00E+00	1.13E-02	7.04E-02
9106-0001-111F	1.61E-01	1.14E-01	7.39E-02	1.33E-01
9106-0001-112F	2.34E+00	2.65E+00	1.46E+00	1.53E+00
9106-0001-113F	3.87E-01	2.59E-01	1.72E-01	2.31E-01
9106-0001-114F	7.93E-01	3.70E-01	2.90E-01	3.49E-01
9106-0001-115F	7.60E-01	5.97E-01	3.72E-01	4.31E-01
9106-0001-116F	1.38E-02	3.26E-02	1.52E-02	7.43E-02
9106-0001-117F	1.38E-02	5.25E-04	2.77E-03	6.19E-02
9106-0001-119F	2.20E-01	1.12E-01	8.41E-02	1.43E-01
9106-0001-120F	7.39E-01	7.08E-01	4.11E-01	4.70E-01
9106-0001-121F	7.43E-01	6.27E-01	3.80E-01	4.04E-01
9106-0001-122F	4.59E-01	4.22E-01	2.48E-01	3.07E-01
9106-0001-123F	6.77E-01	7.65E-01	4.21E-01	4.80E-01
9106-0001-124F	2.85E-01	2.54E-01	1.51E-01	2.10E-01
9106-0001-125F	2.71E-02	0.00E+00	5.04E-03	6.42E-02
9106-0001-126F	2.44E-01	1.07E-01	8.67E-02	1.46E-01
9106-0001-127F	4.78E-01	7.86E-01	3.92E-01	4.51E-01
9106-0001-128F	8.50E-01	8.18E-01	4.74E-01	5.33E-01
9106-0001-129F	6.10E-02	-3.30E-03	1.01E-02	6.92E-02
9106-0001-130F	0.00E+00	0.00E+00	0.00E+00	5.91E-02
9106-0001-131F	5.66E-01	2.58E-01	2.05E-01	2.64E-01
9106-0001-132F	5.58E-01	1.66E+00	7.45E-01	8.29E-01
9106-0001-133F	6.08E-01	7.84E-01	4.16E-01	4.75E-01

(1) The Operational DCGLs from Table 2 are 5.38 $\mu\text{Ci/g}$ for Cs-137 and 2.59 $\mu\text{Ci/g}$ for Co-60; these are used in conjunction with the unity rule to achieve seventeen (17) mrem/yr TEDE

(2) This column is the sum of the DCGL unity fraction from identified radionuclides of concern and an HTD isotope (C-14) that exceeded the 5%/10% rule for one (1) or more FSS samples. For those samples not measured for HTD isotopes, an average calculated value of 5.9% of the DCGL was added to each sample.

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

The off-site laboratory also processed a total of three (3) samples for full HTD analysis as required by the sample plan, and for gamma results that indicated additional testing was warranted. The requested analyses included alpha spectroscopy and liquid scintillation depending upon the radionuclide and the measurement method. All analyses were performed to the required MDC. Several of the HTD radionuclides met the accepted criteria for detection (i.e., a result greater than two standard deviations uncertainty) in one (1) or more samples; however, each of the positive results for HTD radionuclides could be de-selected based on the 5% and 10% rules, except for C-14. These results are presented in Table 6.

Sample Number	C-14 pCi/g	Fraction of the Operational DCGL ⁽²⁾
9106-0001-112F	9.16E-02	0.0238
9106-0001-121F	2.67E-01	0.0694
9106-0001-132F	3.24E-01	0.0842

(1) The Operational DCGL from Table 2 is 3.85 pCi/g for C-14.

7. **QUALITY CONTROL**

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

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

8. **INVESTIGATIONS AND RESULTS**

In order to expedite the survey design and implementation, unprocessed excess sample aliquot was measured on-site in non-specification geometry (usually a plastic bag). This provided the ability to screen as many sample locations as possible, in advance of receiving the official results from the offsite laboratory, to determine whether any locations may exceed the investigation levels. In turn, this allowed locations to be investigated to assess the extent of suspected elevated areas on a shortened schedule. This process identified two (2) sample results that appeared to exceed the Operational DCGL of seventeen (17) mrem/yr, exceeding the investigation level from Table 4. Thus investigations were required to determine compliance with Equation 3 of Section 3.

The locations identified for investigation were 9106-0001-112F and 9106-0001-132F. Investigational sample plans were designed and implemented for these locations.

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

Upon receiving the official off-site laboratory results it was found that only one (1) (9106-0001-112F) of the two (2) investigated samples exceeded the Operational DCGL. However, investigational sample 9106-0001-132B, intended to bound the extent of contamination about sample 9106-0001-132F, was found to exceed the Operational DCGL. As a result, the EMC test was applied to the elevated region surrounding samples 9106-0001-112F and sample 9106-0001-132B.

The first step in assessing compliance with the EMC unity rule is to determine the extent of the elevated measurement region. In the case of elevated sample location 9106-0001-112F, this was done by taking investigation samples at a distance of approximately two (2) meters in each of the four (4) major compass directions (north, east, south, and west) about the elevated sample point. The actual area for the elevated measurement location was determined by using actual GPS log data and is graphically displayed in Figures 6 & 7 of this report. The extent of the elevated area was approximately 20.2 m².

For sample 9106-0001-132B, which was found to be in excess of the Operational DCGL after demobilization of the sampling contractor, the extent of the elevated area was bounded by using existing statistical sampling grid points and boundaries. Samples 9106-0001-123F, 9106-0001-124F, 9106-0001-128F and 9106-0001-132F in conjunction with the survey area boundary with Survey Unit 9106-0014 were used to completely bound the elevated area. The actual area for the elevated measurement location was determined by using actual GPS log data and is graphically displayed in Figures 6 & 7 of this report. The extent of the elevated area was approximately 80.4 m².

Table 7 provides sample measurement location information (in NAD 1927) and distances from sample locations 9106-0001-112F and 9106-0001-132B respectively.

DISCHARGE CANAL
SURVEY UNIT 9106-0001
RELEASE RECORD

Table 7 – Investigation Sample Measurement Locations with Associated GPS Coordinates			
Designation	Northing	Easting	Distance from 9106-0001-112F (m)
9106-0001-112F	236176.63	668921.35	-
9106-0001-112A	236178.98	668927.68	2.06
9106-0001-112B	236184.70	668923.36	2.54
9106-0001-112C	236177.87	668914.97	1.98
9106-0001-112D	236169.65	668920.03	2.17
Area (m²)⁽¹⁾			20.2
Area Factor Table Value (m²)			25
Designation	Northing	Easting	Distance from 9106-0001-132B (m)
9106-0001-132B	236123.81	669022.89	-
9106-0001-132F	236118.53	669020.35	1.79
9106-0001-123F	236148.80	669024.97	7.65
9106-0001-124F	236152.46	669056.08	13.37
9106-0001-128F	236124.76	669007.80	4.61
Area (m²)⁽¹⁾			80.4
Area Factor Table Value (m²)			100

(1) The Area of each EMC is graphically depicted on Figures 6 & 7 of this report.

Since the bounded areas were determined to be 20 m² and 80 m² respectively, the Area Factor (AF) values from Table 5-5 of the LTP for 25 m² and 100 m² were conservatively applied to determine the DCGL_{EMC} for each nuclide. With this information, it was possible to assess compliance with the EMC rule. This is demonstrated in Table 8.

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

Table 8-Investigation Results				
Sample Number	Cs-137 pCi/g	Co-60 pCi/g	C-14 pCi/g	Fraction of the Operational DCGL
Area Factor (25 m ²)	3.89	1.82	1,480	
DCGL _{EMC}	20.92	4.72	5,698	
9106-0001-112F	2.34E+00	2.65E+00	2.67E-01	1.53E+00
9106-0001-112A	2.20E+00	1.83E+00	2.67E-01	1.18E+00
9106-0001-112B	1.48E+00	9.81E-01	2.67E-01	7.23E-01
9106-0001-112C	7.46E-01	5.20E-01	2.67E-01	4.09E-01
9106-0001-112D	5.42E-01	3.08E-01	2.67E-01	2.89E-01
EMC Comparison for 9106-0001-112F (Equation 3)				
$\bar{C}_{elevated}$	1.46E+00	1.26E+00	2.67E-01	EMC unity fraction
$\bar{C}_{elevated} - \delta$	1.11E+00	1.02E+00	1.75E-01	
$\frac{\bar{C}_{elevated} - \delta}{DCGL_{EMC}}$	5.28E-02	2.16E-01	3.08E-05	2.68E-01
Sample Number	Cs-137 pCi/g	Co-60 pCi/g	C-14 pCi/g	Fraction of the Operational DCGL
Area Factor (100 m ²)	2.93	1.41	203	
DCGL _{EMC}	15.76	3.65	782	
9106-0001-132B	1.25E+00	3.56E+00	3.24E-01	1.69E+00
9106-0001-132F	5.58E-01	1.66E+00	3.24E-01	8.29E-01
9106-0001-123F	6.77E-01	7.65E-01	3.24E-01	5.05E-01
9106-0001-124F	2.85E-01	2.54E-01	3.24E-01	2.35E-01
9106-0001-128F	8.50E-01	8.18E-01	3.24E-01	5.58E-01
EMC Comparison for 9106-0001-132B (Equation 3)				
$\bar{C}_{elevated}$	7.24E-01	1.41E+00	3.24E-01	EMC unity fraction
$\bar{C}_{elevated} - \delta$	3.67E-01	1.17E+00	2.32E-01	
$\frac{\bar{C}_{elevated} - \delta}{DCGL_{EMC}}$	2.33E-02	3.20E-01	2.97E-04	3.44E-01
$\frac{\delta}{DCGL}$	6.63E-02	9.32E-02	2.38E-02	1.83E-01
EMC for sample 9106-0001-132B				3.44E-01
EMC for sample 9106-0001-112F				2.68E-01
Total For the Survey Unit (must be <1 in accordance with the LTP (Equation 5-31) & Equation 3 of this report)				7.95E-01

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

Sample 9106-0001-112A exceeded the Operational DCGL. It would not normally be acceptable to consider samples exceeding the Operational DCGL to be bounding. However, the samples are located essentially on a survey unit boundary, (refer to the maps of attachment 2.) thus, the elevated area extent within the survey unit is bounded. More specifically, in this case, the sample was located adjacent to the concrete pad of the discharge canal outfall structure. This structure, which was surveyed and released as part of the buried concrete dose model, was observed to have insufficient depths of sediment to permit sampling.

9. REMEDIATION AND RESULTS

Prior to designing and implementing this FSS, a Remedial Action Survey (RAS) was performed to determine when the remediation was complete. When an area was believed to be remediated, grab samples were collected from the dredge spoils media and counted on-site using gamma spectroscopy. It was determined that the remediation was completed when dredge materials from the survey unit were below the operational DCGL unitized concentrations.

10. CHANGES FROM THE FINAL STATUS SURVEY PLAN

No significant changes were made to the Final Status Survey Plan as a result of remediation of a portion of the survey unit.

11. DATA QUALITY ASSESSMENT (DQA)

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

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

The preliminary data review consisted of calculating basic statistical quantities (e.g., mean, median, standard deviation). The standard deviation was slightly more than the value used for the survey design. This is represented by the shift in the retrospective power curve as shown in Attachment 2f. This would indicate a need to change the original LBGR in order to maintain the number of samples at thirty (30) to meet the Operational DCGL. However, the value of LBGR is not a critical issue as the survey unit has passed the statistical test, and the mean and median values are well below the Operational DCGL when used in conjunction with the unity rule. Also, the retrospective power curve shows that a sufficient number of samples were collected to achieve the desired power. Therefore, the survey unit meets the unrestricted release criterion with adequate power as required by the DQOs

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

The range of the data, about 4.91 standard deviations, was larger than other survey units in the discharge canal, as would be expected for a Class 1 survey unit. The difference between the mean and median was 26.6% of the standard deviation which indicates some skewness in the data. The data was represented graphically through posting plots, a frequency plot, and a quantile plot. The frequency plot shows some positive skewness as confirmed by the calculated skew of 2.62.

The survey area had two (2) elevated measurement locations, which were evaluated using the EMC unity test. This resulted in a less than unity combined passing value of 0.786.

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

12. ANOMALIES

The anomalies associated with having bounding samples for elevated areas exceeding the operational DCGL are discussed in Section 8. These anomalies had no consequences with regards to the conclusion or other findings of this report.

13. CONCLUSION

Survey Unit 9106-0001 has demonstrated compliance with the dose based, unrestricted release criterion. The sample data passed the Sign Test and the null hypothesis was rejected. The ALARA criteria for soils as specified in Chapter 4 of the LTP were achieved. Reclassification and remediation of this survey unit were required prior to performing the FSS survey presented in this document.

Graphical representation of data indicates some positive skewness that is probably due to localized differences in particulate deposition rates, hydraulic velocity and sedimentation rates. The Retrospective Power Curve generated using COMPASS shows adequate power was achieved. The survey unit was properly designated as a Class 1 survey unit.

The dose contribution from sediment in this survey unit is 4.1 mrem/yr TEDE based on the average concentration of the samples used for non-parametric statistical sampling.

This survey unit is affected by existing groundwater (reference CY memo ISC 06-024). It has been determined that the dose contribution from groundwater sources is bounded by two (2) mrem/yr TEDE.

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

DISCHARGE CANAL
SURVEY UNIT 9106-0001

RELEASE RECORD

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 6.1 mrem/yr Total Effective Dose Equivalent (TEDE).

14. ATTACHMENTS

14.1 Attachment 1 – Figures

14.2 Attachment 2 – Sample and Statistical Data

DISCHARGE CANAL
SURVEY UNIT 9106-0001
RELEASE RECORD

Attachment 1
Figures
(6 pages)

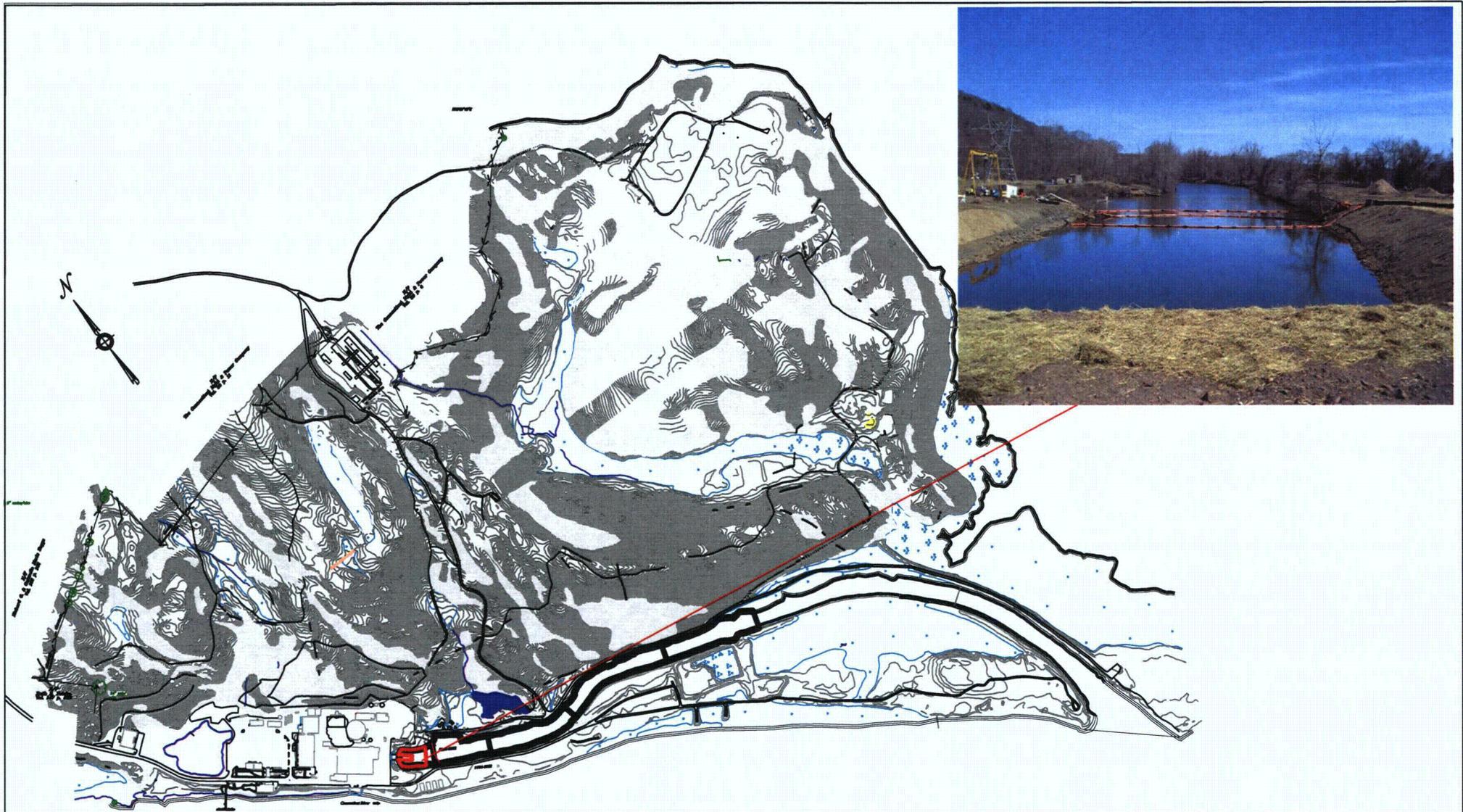


Figure 1

Connecticut Yankee Atomic Power Company
Site Map With Reference To Survey Unit 9106-0001

<i>Date</i>	<i>By</i>
<i>October 2006</i>	<i>E. Sergent</i>

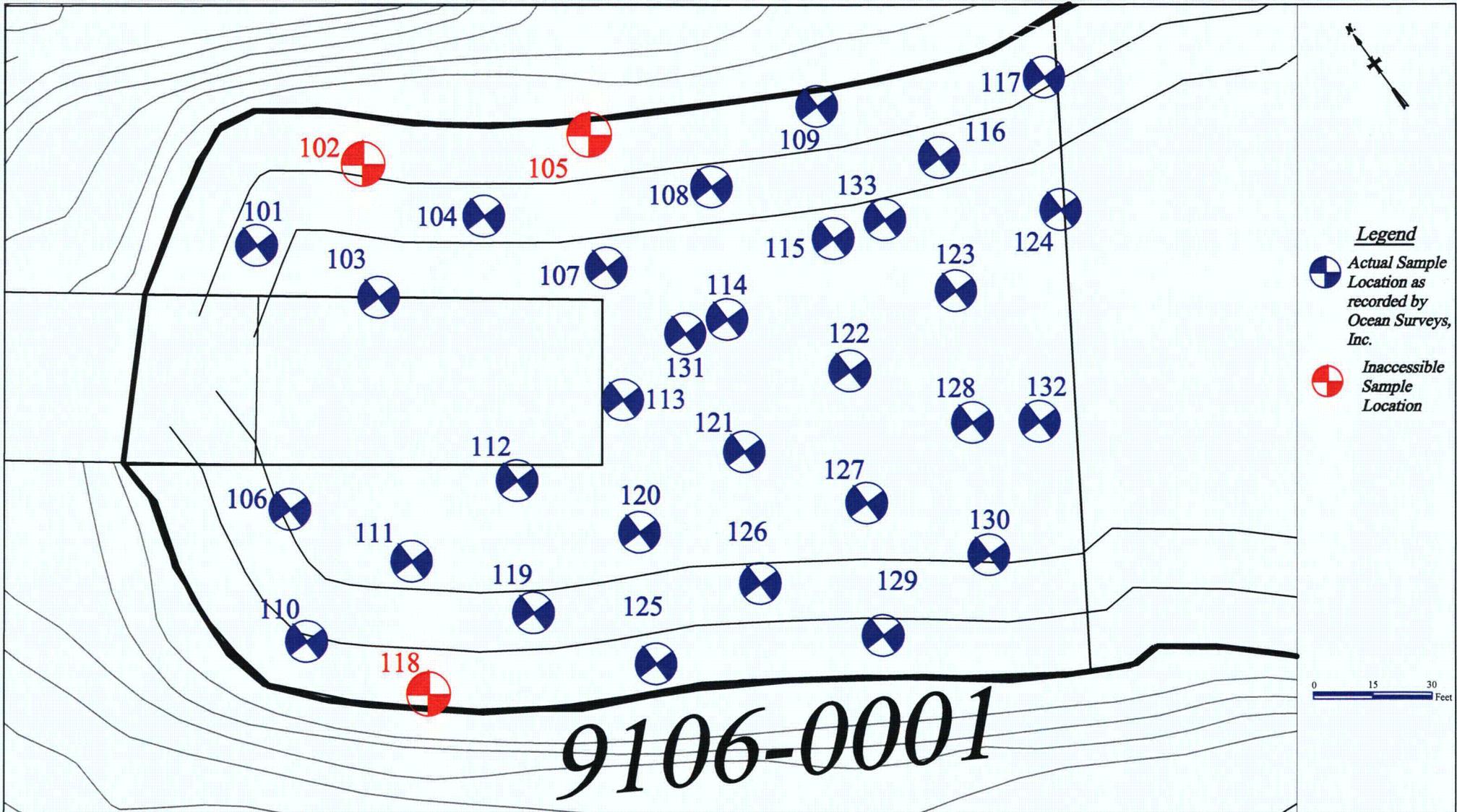


Figure 2

Connecticut Yankee Atomic Power Company
 9106-0001 Final Status Survey Design

Date	By
October 2006	E. Sergent

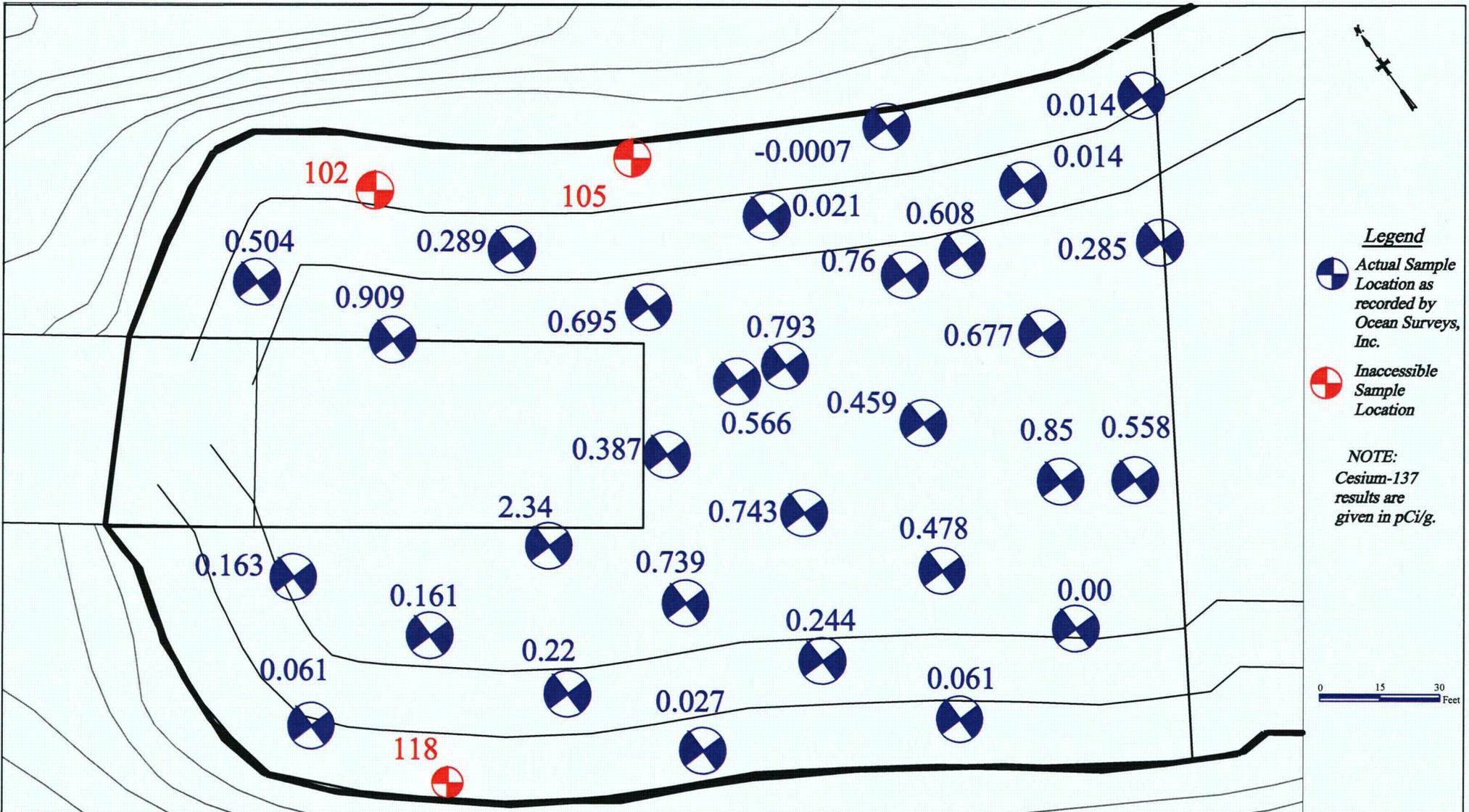


Figure 3

Connecticut Yankee Atomic Power Company
 9106-0001 Final Status Survey
 Cesium-137 Posting Plot

Date	By
October 2006	E. Sergeant

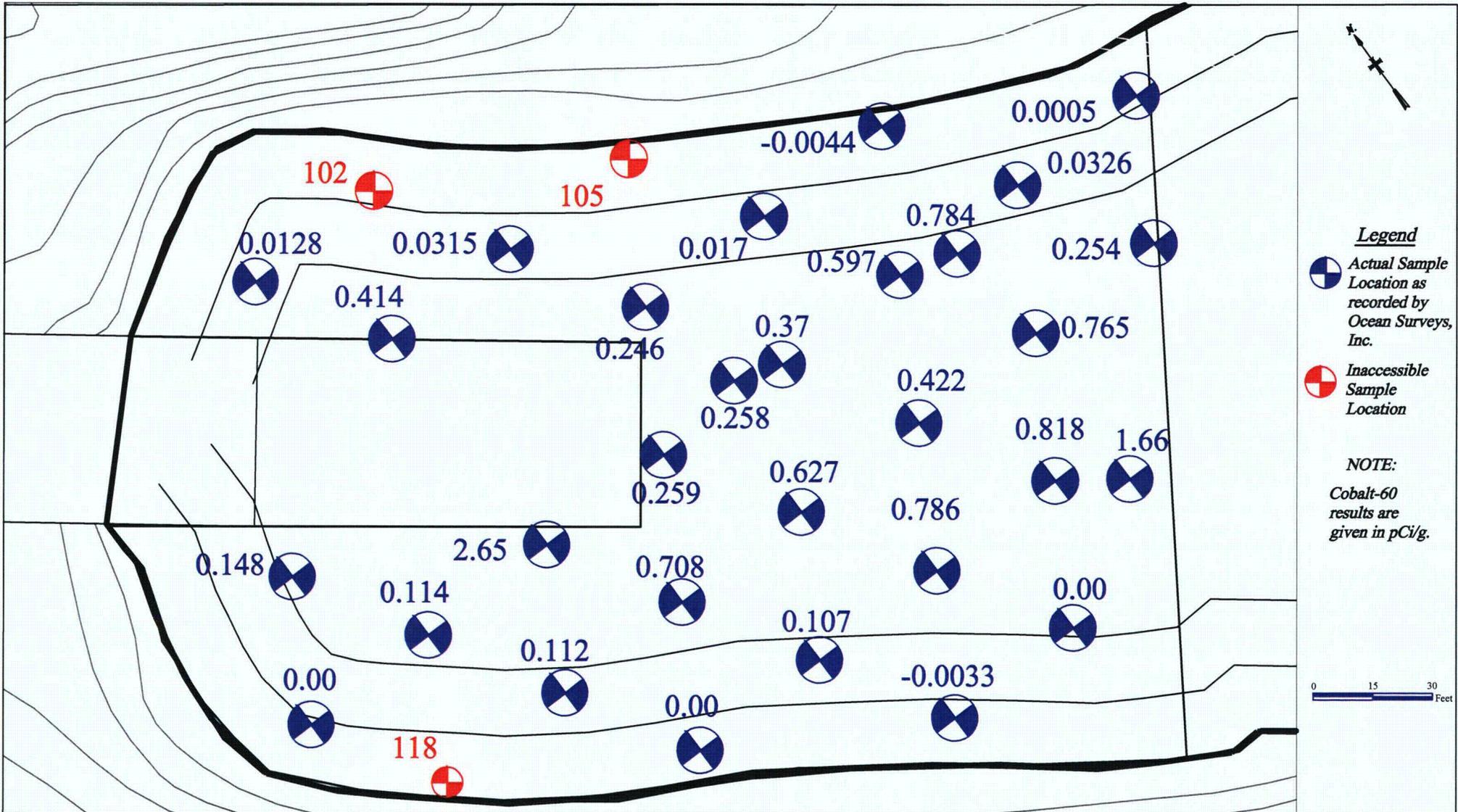


Figure 4

Connecticut Yankee Atomic Power Company
 9106-0001 Final Status Survey
 Cobalt-60 Posting Plot

Date	By
October 2006	E. Sergent

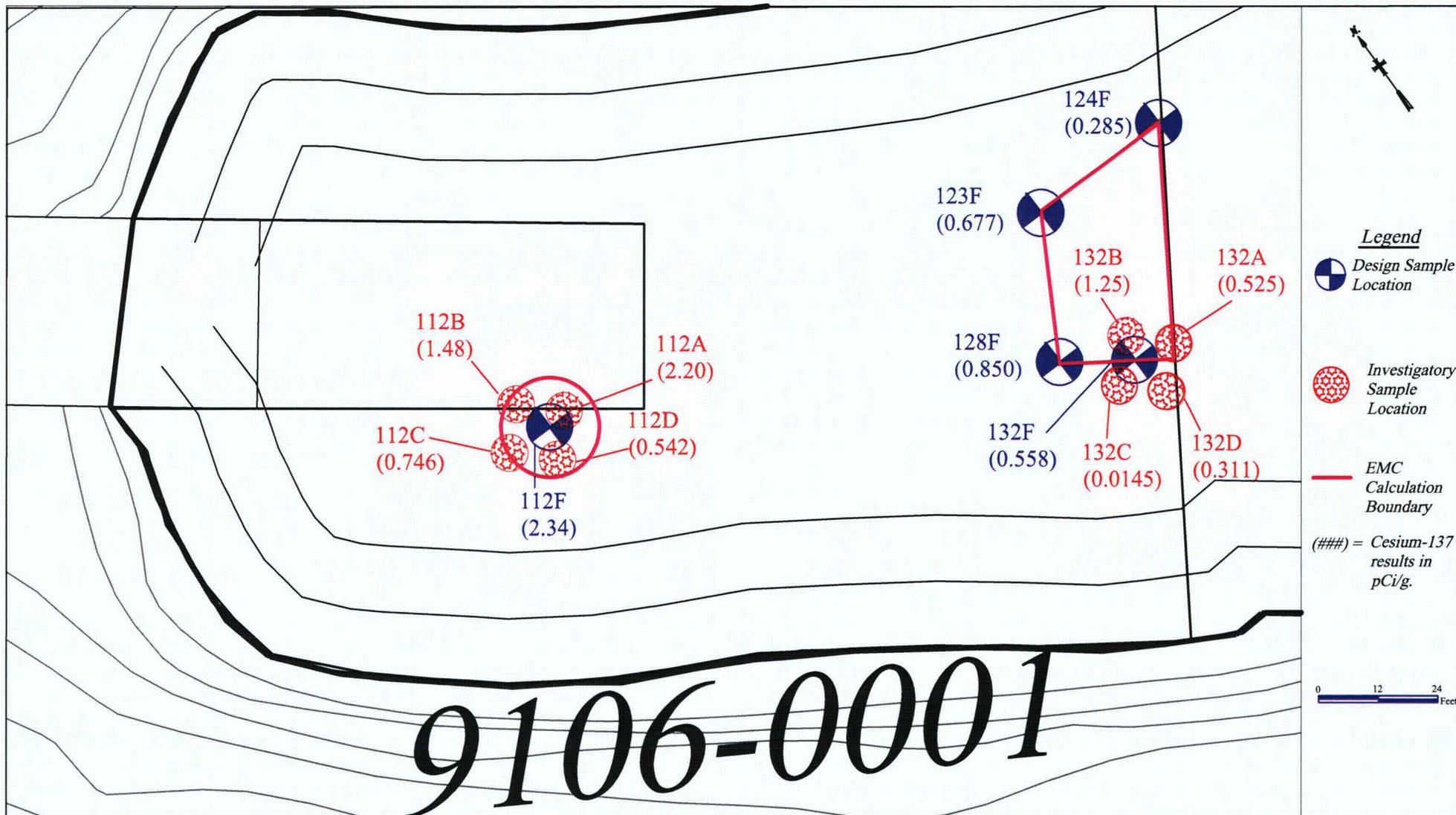


Figure 5a

Connecticut Yankee Atomic Power Company
 9106-0001 Elevated Measurement Comparison (EMC) Calculation Data for Cesium-137

Date	By
November 2006	E. Sergent

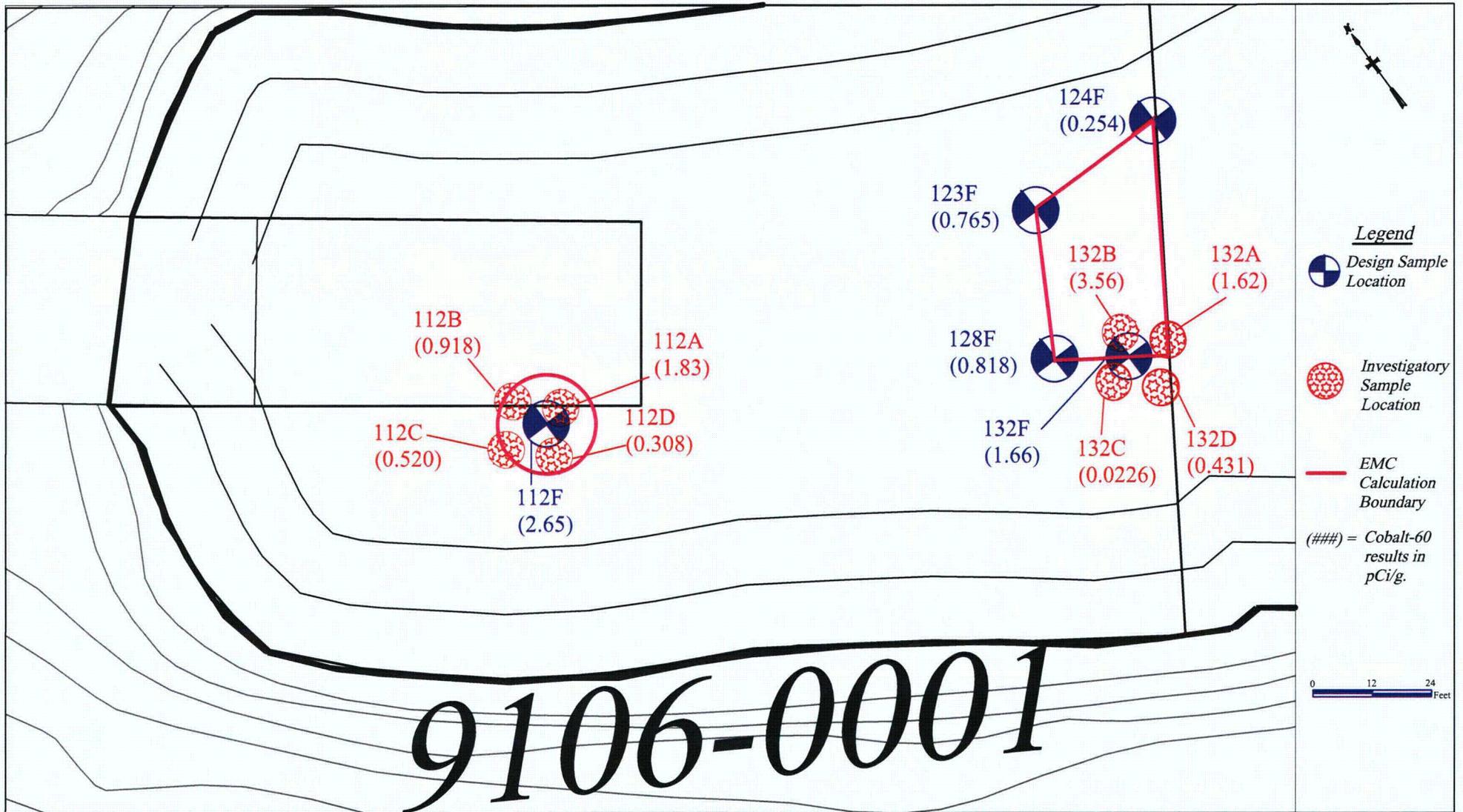


Figure 5b	Connecticut Yankee Atomic Power Company 9106-0001 Elevated Measurement Comparison (EMC) Calculation Data for Cobalt-60	Date	By
		November 2006	E. Sergent

DISCHARGE CANAL
SURVEY UNIT 9106-0001
RELEASE RECORD

Attachment 2
Sample and Statistical Data

DISCHARGE CANAL
SURVEY UNIT 9106-0001
RELEASE RECORD

Attachment 2a
Sample Data
(199 Pages)

Table of Contents

General Narrative	1
Chain of Custody and Supporting Documentation	6
Radiological Analysis	15
Sample Data Summary	38
Quality Control Data	102

General Narrative

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Soil
PO# 002332
Work Order: 170132
SDG: MSR #06-1156

September 6, 2006

Laboratory Identification:

General Engineering Laboratories, LLC

Mailing Address:

P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:

2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:

(843) 556-8171

Summary:

Sample receipt

The sample(s) for this Project arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina on August 25, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures.

Analytical results were requested within seven days of receipt, with the data package due fourteen calendar days after the receipt date. The data was emailed on time on September 1, 2006.

The laboratory received the following sample(s):

<u>Sample ID</u>	<u>Client Sample ID</u>
170132001	9106-0001-121F
170132002	9106-0001-121F
170132003	9106-0001-127F
170132004	9106-0001-128F
170132005	9106-0001-129F

170132006	9106-0001-130F
170132007	9106-0001-131F
170132008	9106-0001-133F
170132009	9106-0001-117F
170132010	9106-0001-117FS
170132011	9106-0001-113F
170132012	9106-0001-114F
170132013	9106-0001-116F
170132014	9106-0001-120F
170132015	9106-0001-104F
170132016	9106-0001-107F
170132017	9106-0001-115F
170132018	9106-0001-108F
170132019	9106-0001-119F
170132020	9106-0001-101F
170132021	9106-0001-103F
170132022	9106-0001-106F
170132023	9106-0001-106FS
170132024	9106-0001-110F
170132025	9106-0001-109F
170132026	9106-0001-111F
170132027	9106-0001-122F
170132028	9106-0001-123F
170132029	9106-0001-124F
170132030	9106-0001-125F
170132031	9106-0001-126F

Items of Note:

There are no items of note.

Case Narrative:

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

Analytical Request:

One soil samples was analyzed for CHALL.
Twenty-nine soil samples were analyzed for FSSGAM.

Internal Chain of Custody:

Custody was maintained for the sample(s).

Data Package:

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

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



Cheryl Jones
Project Manager

List of current GEL Certifications as of 06 September 2006

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

**Chain of Custody
And
Supporting
Documentation**

Connecticut Yankee Atomic Power Company						Chain of Custody Form					No. 2006-00517			
362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556														
Project Name: Haddam Neck Decommissioning						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 843 556 8171. Attn. Cheryl Jones														
Priority: <input type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input checked="" type="checkbox"/> 7 D. <input type="checkbox"/> 3 D.														
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- & Type Code						Comment, Preservation	Lab Sample ID		
9106-0001-113F	8/3/06	08:12	SE	C	BP	X					Transferred from COC 2006-00484			
9106-0001-114F	8/3/06	08:38	SE	C	BP	X					Transferred from COC 2006-00484			
9106-0001-116F	8/3/06	10:04	SE	C	BP	X					Transferred from COC 2006-00484			
9106-0001-120F	8/3/06	14:06	SE	C	BP	X					Transferred from COC 2006-00484			
9106-0001-121F	8/3/06	14:32	SE	C	BP		X				Transferred from COC 2006-00484			
9106-0001-104F	8/8/06	10:28	SE	C	BP	X					Transferred from COC 2006-00488			
9106-0001-107F	8/8/06	08:59	SE	C	BP	X					Transferred from COC 2006-00484			
9106-0001-115F	8/8/06	08:14	SE	C	BP	X					Transferred from COC 2006-00484			
NOTES: PO #: 002332 MSR #: 06-1156 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA										Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: ___ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>		
1) Relinquished By <i>SAME REARSE</i>			Date/Time <i>8-23-06 / 1340</i>			2) Received By <i>[Signature]</i>			Date/Time <i>8/25/06 900</i>			Bill of Lading # <i>7905 3767 2195</i>		
3) Relinquished By			Date/Time			4) Received By			Date/Time					
5) Relinquished By			Date/Time			6) Received By			Date/Time					

Connecticut Yankee Atomic Power Company 362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556						Chain of Custody Form					No. 2006-00518		
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 843 556 8171. Attn. Cheryl Jones													
Priority: <input type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input checked="" type="checkbox"/> 7 D. <input type="checkbox"/> 3 D.													
Sample Designation	Date	Time								Comment, Preservation	Lab Sample ID		
9106-0001-108F	8/7/06	14:42	SE	C	BP	X					Transferred from COC 2006-00487		
9106-0001-119F	8/7/06	11:01	SE	C	BP	X					Transferred from COC 2006-00487		
9106-0001-101F	7/31/06	13:25	SE	C	BP	X					Transferred from COC 2006-00478		
9106-0001-103F	7/31/06	15:00	SE	C	BP	X					Transferred from COC 2006-00478		
9106-0001-106F	8/2/06	08:00	SE	C	BP	X					Transferred from COC 2006-00484		
9106-0001-106FS	8/2/06	08:00	SE	C	BP	X					Transferred from COC 2006-00488		
9106-0001-110F	8/2/06	10:20	SE	C	BP	X					Transferred from COC 2006-00482		
NOTES: PO #: 002332 MSR #: 06-1156 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA										Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: ___ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By <i>JAMES RICHART</i>			Date/Time <i>8-23-06/1340</i>			2) Received By <i>Marianne Galtas</i>			Date/Time <i>8/25/06 0900</i>			Bill of Lading # <i>7905 3767 2200</i>	
3) Relinquished By			Date/Time			4) Received By			Date/Time				
5) Relinquished By			Date/Time			6) Received By			Date/Time				

Connecticut Yankee Atomic Power Company

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

Chain of Custody Form

No. 2006-00519

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 843 556 8171. Attn. Cheryl Jones																				
Priority: <input type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input checked="" type="checkbox"/> 7 D. <input type="checkbox"/> 3 D.																				
Sample Designation	Date	Time								Comment, Preservation	Lab Sample ID									
9106-0001-109F	8/2/06	09:37	SE	C	BP	X				Transferred from COC 2006-00482										
9106-0001-111F	8/2/06	13:23	SE	C	BP	X				Transferred from COC 2006-00482										
9106-0001-122F	8/4/06	07:55	SE	C	BP	X				Transferred from COC 2006-00485										
9106-0001-123F	8/4/06	09:45	SE	C	BP	X				Transferred from COC 2006-00485										
9106-0001-124F	8/4/06	11:18	SE	C	BP	X				Transferred from COC 2006-00485										
9106-0001-125F	8/4/06	12:54	SE	C	BP	X				Transferred from COC 2006-00485										
9106-0001-126F	8/4/06	13:39	SE	C	BP	X				Transferred from COC 2006-00485										
NOTES: PO #: 002332 MSR #: 06-1156 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA										Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp.: ___ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>								
1) Relinquished By <i>SAME RUCARTE</i>			Date/Time <i>8-23-06/1340</i>			2) Received By <i>Maria C. Lathrop</i>			Date/Time <i>8/25/06 0900</i>			Bill of Lading # <i>7905 3767 2210</i>								
3) Relinquished By			Date/Time			4) Received By			Date/Time											
5) Relinquished By			Date/Time			6) Received By			Date/Time											

Figure 1. Sample Check-in List

Date/Time Received: 8/25/06
SDG#: MSR#06-1156
Work Order Number: 170132
Shipping Container ID: 790537672184 Chain of Custody #: 2006-005116

1. Custody Seals on shipping container intact? Yes No
2. Custody Seals dated and signed? Yes No
3. Chain-of-Custody record present? Yes No
4. Cooler temperature 23°C
5. Vermiculite/packing materials is: Wet Dry
6. Number of samples in shipping container: 8
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 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: Marial Githens Date: 8/25/06 0900
Telephoned to: _____ On _____ By _____

Figure 1. Sample Check-in List

Date/Time Received: 8/25/06
SDG#: MSR#06-1156
Work Order Number: 170132
Shipping Container ID: 79053767 2195 Chain of Custody #: 2006-00517

- 1. Custody Seals on shipping container intact? Yes No
- 2. Custody Seals dated and signed? Yes No
- 3. Chain-of-Custody record present? Yes No
- 4. Cooler temperature 23°C
- 5. Vermiculite/packing materials is: Wet Dry
- 6. Number of samples in shipping container: 8
- 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 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: Marian E. [Signature] Date: 8/25/06 0900
Telephoned to: _____ On _____ By _____

Figure 1. Sample Check-in List

Date/Time Received: 8/25/06 0900
SDG#: MSR#06-1156
Work Order Number: 170132
Shipping Container ID: 790537672200 Chain of Custody #: 2006-00518

1. Custody Seals on shipping container intact? Yes No
2. Custody Seals dated and signed? Yes No
3. Chain-of-Custody record present? Yes No
4. Cooler temperature 23°C
5. Vermiculite/packing materials is: Wet Dry
6. Number of samples in shipping container: 7
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 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: *Amica* Date: 8/25/06 0900
Telephoned to: _____ On _____ By _____

Figure 1. Sample Check-in List

Date/Time Received: 8/23/06
SDG#: MSR# 06-1156
Work Order Number: 170132
Shipping Container ID: 7905 3767 2210 Chain of Custody #: 2006-00519

1. Custody Seals on shipping container intact? Yes No
2. Custody Seals dated and signed? Yes No
3. Chain-of-Custody record present? Yes No
4. Cooler temperature 23°C
5. Vermiculite/packing materials is: Wet Dry
6. Number of samples in shipping container: 7
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 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: Maria Letha Date: 8/23/06 0900
Telephoned to: _____ On _____ By _____

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 170132**

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: 562551
Prep Batch Number: 562335
Dry Soil Prep GL-RAD-A-021 Batch Number: 562334

Sample ID	Client ID
170132002	9106-0001-121F
1201169377	Method Blank (MB)
1201169378	170125005(9522-0006-ASPHALT-015) Sample Duplicate (DUP)
1201169379	170125005(9522-0006-ASPHALT-015) Matrix Spike (MS)
1201169380	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170125005 (9522-0006-ASPHALT-015).

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: 562552
Prep Batch Number: 562335
Dry Soil Prep GL-RAD-A-021 Batch Number: 562334

Sample ID	Client ID
170132002	9106-0001-121F
1201169381	Method Blank (MB)
1201169382	170125005(9522-0006-ASPHALT-015) Sample Duplicate (DUP)
1201169383	170125005(9522-0006-ASPHALT-015) Matrix Spike (MS)
1201169384	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170125005 (9522-0006-ASPHALT-015).

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:	562553
Prep Batch Number:	562335
Dry Soil Prep GL-RAD-A-021 Batch Number:	562334

Sample ID	Client ID
170132002	9106-0001-121F
1201169385	Method Blank (MB)
1201169386	170125005(9522-0006-ASPHALT-015) Sample Duplicate (DUP)
1201169387	170125005(9522-0006-ASPHALT-015) Matrix Spike (MS)
1201169388	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170125005 (9522-0006-ASPHALT-015).

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: 562372
Prep Batch Number: 562337

Sample ID	Client ID
170132022	9106-0001-106F
170132023	9106-0001-106FS
170132024	9106-0001-110F
170132025	9106-0001-109F
170132026	9106-0001-111F
170132027	9106-0001-122F
170132028	9106-0001-123F
170132029	9106-0001-124F
170132030	9106-0001-125F
170132031	9106-0001-126F
1201168947	Method Blank (MB)
1201168948	170125001(9522-0006-ASPHALT-015) Sample Duplicate (DUP)
1201168949	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 11.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170125001 (9522-0006-ASPHALT-015).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:

Holding Time

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:

NCR Documentation

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high peak-width.	Bismuth-212	170132028
		Cobalt-60	170132030
UI	Data rejected due to interference.	Manganese-54	170132027
UI	Data rejected due to low abundance.	Actinium-228	1201168948
		Cesium-134	170132028
			170132029
		Cobalt-60	170132024

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: 562373
Prep Batch Number: 562334

Sample ID	Client ID
170132001	9106-0001-121F
170132003	9106-0001-127F
170132004	9106-0001-128F
170132005	9106-0001-129F
170132006	9106-0001-130F
170132007	9106-0001-131F
170132008	9106-0001-133F
170132009	9106-0001-117F
170132010	9106-0001-117FS
170132011	9106-0001-113F
170132012	9106-0001-114F
170132013	9106-0001-116F
170132014	9106-0001-120F
170132015	9106-0001-104F
170132016	9106-0001-107F
170132017	9106-0001-115F
170132018	9106-0001-108F
170132019	9106-0001-119F
170132020	9106-0001-101F
170132021	9106-0001-103F
1201168950	Method Blank (MB)
1201168951	170132001(9106-0001-121F) Sample Duplicate (DUP)
1201168952	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 11.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170132001 (9106-0001-121F).

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 relative percent difference between samples 1201168951 (9106-0001-121F) and 170132001 (9106-0001-121F) for T1-208 did not meet with in the duplication criteria. However, when a relative error ratio, precision is shown at 2.45394.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high counting uncertainty.	Bismuth-212	170132007
UI	Data rejected due to high peak-width.		170132020
			170132021
		Cesium-137	170132006
UI	Data rejected due to interference.	Europium-155	170132003
			170132006
			170132009
			170132010
			170132018
UI	Data rejected due to low abundance.	Cesium-134	170132003
			170132006
			170132009
			170132010
			170132012
			170132013
			170132015
			170132017
			170132018
			1201168951
		Niobium-94	170132016
			170132017
		Silver-108m	170132019
UI	Data rejected due to no valid peak.	Cobalt-60	170132006

Method/Analysis Information

Product: GFPC, Sr90, solid - 0.025 pCi/g
Analytical Method: EPA 905.0 Modified
Prep Method: Ash Soil Prep
Dry Soil Prep GL-RAD-A-021 Method: Dry Soil Prep
Analytical Batch Number: 562545
Prep Batch Number: 562335
Dry Soil Prep GL-RAD-A-021 Batch Number: 562334

Sample ID	Client ID
170132001	9106-0001-121F
1201169351	Method Blank (MB)
1201169352	170132001(9106-0001-121F) Sample Duplicate (DUP)
1201169353	170132001(9106-0001-121F) Matrix Spike (MS)
1201169354	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170132001 (9106-0001-121F).

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: 562651

Sample ID	Client ID
170132002	9106-0001-121F
1201169591	Method Blank (MB)
1201169592	170132002(9106-0001-121F) Sample Duplicate (DUP)
1201169593	170132002(9106-0001-121F) Matrix Spike (MS)
1201169594	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170132002 (9106-0001-121F).

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: 562520

Prep Batch Number: 562335

Dry Soil Prep GL-RAD-A-021 Batch Number: 562334

Sample ID	Client ID
170132002	9106-0001-121F
1201169282	Method Blank (MB)
1201169283	170125007(9522-0006-ASPHALT-014) Sample Duplicate (DUP)
1201169284	170125007(9522-0006-ASPHALT-014) Matrix Spike (MS)
1201169285	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170125007 (9522-0006-ASPHALT-014).

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:	562521
Prep Batch Number:	562335
Dry Soil Prep GL-RAD-A-021 Batch Number:	562334

Sample ID	Client ID
170132002	9106-0001-121F
1201169286	Method Blank (MB)
1201169287	170125007(9522-0006-ASPHALT-014) Sample Duplicate (DUP)
1201169288	170125007(9522-0006-ASPHALT-014) Matrix Spike (MS)
1201169289	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:**Calibration Information**

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

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

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

Designated QC

The following sample was used for QC: 170125007 (9522-0006-ASPHALT-014).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

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

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Manual qualifiers were not required.

Method/Analysis Information

Product: LSC, Tritium Dist, Solid - 3 pCi/g
Analytical Method: EPA 906.0 Modified
Analytical Batch Number: 562518

Sample ID	Client ID
170132001	9106-0001-121F
1201169278	Method Blank (MB)
1201169279	170125003(9522-0006-ASPHALT-014) Sample Duplicate (DUP)
1201169280	170125003(9522-0006-ASPHALT-014) Matrix Spike (MS)
1201169281	Laboratory Control Sample (LCS)

SOP Reference

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

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170125003 (9522-0006-ASPHALT-014).

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 1201169278 (MB), 1201169279 (9522-0006-ASPHALT-014) and 170132001 (9106-0001-121F) were recounted due to high MDAs.

Miscellaneous Information:

NCR Documentation

Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: NCR 353427 was generated due to Container scanning event for custody missed. 1. Samples 170125001, 170125002, 170125003, 170125004, and 170132001 were not scanned into the batch prior to analysis. Custody of the samples was maintained at all times. 1. Reporting results. The error has been corrected, and the analyst has been instructed on proper scanning procedure.

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: 562522

Sample ID	Client ID
170132002	9106-0001-121F
1201169290	Method Blank (MB)
1201169291	170132002(9106-0001-121F) Sample Duplicate (DUP)
1201169292	170132002(9106-0001-121F) Matrix Spike (MS)
1201169293	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this

narrative has been analyzed in accordance with GL-RAD-A-003 REV# 8.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

Quality Control (QC) Information:

Blank Information

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

Designated QC

The following sample was used for QC: 170132002 (9106-0001-121F).

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

COMPANY - WIDE NONCONFORMANCE REPORT			
Mo.Day Yr. 31-AUG-06	Division: Radiochemistry	Quality Criteria: Specifications	Type: Process
Instrument Type: LSC	Test / Method: EPA 906.0 Modified	Matrix Type: Solid	Client Code: YANK
Batch ID: 562518	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 170125(MSR#06-1155),170132(MSR#06-1156)			
Application Issues: Container scanning event for custody missed			
Specification and Requirements		NRG Disposition:	
Nonconformance Description:			
<p>1. Samples 170125001, 170125002, 170125003, 170125004, and 170132001 were not scanned into the batch prior to analysis. Custody of the samples was maintained at all times.</p>		<p>1. Reporting results. The error has been corrected, and the analyst has been instructed on proper scanning procedure.</p>	

Originator's Name:
 John Parker 31-AUG-06

Data Validator/Group Leader:
 Melanie Aycock 01-SEP-06

Quality Review:

Director:

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

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

**Certificate of Analysis Report
for**

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#06-1156 GEL Work Order: 170132

The Qualifiers in this report are defined as follows:

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

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

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

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



Reviewed by _____

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

Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID:	9106-0001-121F	Project:	YANK01204
Sample ID:	170132001	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	03-AUG-06		
Receive Date:	25-AUG-06		
Collector:	Client		
Moisture:	23.5%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.940	+/-0.143	0.0524	+/-0.143	0.111	pCi/g		MJH1	08/28/06	2336	562373	1
Americium-241	U	-0.0463	+/-0.0742	0.061	+/-0.0742	0.125	pCi/g						
Bismuth-212		0.504	+/-0.254	0.117	+/-0.254	0.247	pCi/g						
Bismuth-214		0.724	+/-0.0757	0.0291	+/-0.0757	0.0609	pCi/g						
Cesium-134	U	0.0291	+/-0.032	0.0211	+/-0.032	0.0441	pCi/g						
Cesium-137		0.743	+/-0.0489	0.0145	+/-0.0489	0.0306	pCi/g						
Cobalt-60		0.627	+/-0.0612	0.013	+/-0.0612	0.0286	pCi/g						
Europium-152	U	-0.00488	+/-0.0485	0.0407	+/-0.0485	0.0844	pCi/g						
Europium-154	U	0.029	+/-0.0513	0.0464	+/-0.0513	0.0997	pCi/g						
Europium-155	U	0.0447	+/-0.0581	0.0384	+/-0.0581	0.0789	pCi/g						
Lead-212		0.941	+/-0.0572	0.0226	+/-0.0572	0.0466	pCi/g						
Lead-214		0.858	+/-0.0803	0.0286	+/-0.0803	0.0594	pCi/g						
Manganese-54	U	0.0142	+/-0.0214	0.0168	+/-0.0214	0.0354	pCi/g						
Niobium-94	U	0.00021	+/-0.0166	0.0143	+/-0.0166	0.0299	pCi/g						
Potassium-40		10.8	+/-0.700	0.106	+/-0.700	0.238	pCi/g						
Radium-226		0.724	+/-0.0757	0.0291	+/-0.0757	0.0609	pCi/g						
Silver-108m	U	-0.00568	+/-0.0162	0.0142	+/-0.0162	0.0295	pCi/g						
Thallium-208		0.261	+/-0.0377	0.016	+/-0.0377	0.0334	pCi/g						
Rad Gas Flow Proportional Counting													
<i>GFPC, Sr90, solid - 0.025 pCi/g</i>													
Strontium-90	U	0.00389	+/-0.0104	0.00841	+/-0.0104	0.0185	pCi/g		KSD1	08/30/06	1844	562545	2
Rad Liquid Scintillation Analysis													
<i>LSC, Tritium Dist, Solid - 3 pCi/g</i>													
Tritium	U	1.29	+/-1.53	1.17	+/-1.53	2.58	pCi/g		DFA1	08/31/06	1221	562518	3

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

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

Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-121F
Sample ID: 170132002
Matrix: SE
Collect Date: 03-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 23.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Alpha Spec Analysis													
<i>Alphaspec Am241, Cm, Solid ALL FSS</i>													
Americium-241		0.861	+/-0.333	0.0504	+/-0.351	0.189	pCi/g		DDR1	09/03/06	1211	562551	1
Curium-242	U	-0.0089	+/-0.0174	0.0333	+/-0.0175	0.167	pCi/g						
Curium-243/244		0.433	+/-0.250	0.0772	+/-0.256	0.243	pCi/g						
<i>Alphaspec Pu, Solid-ALL FSS</i>													
Plutonium-238	U	0.00157	+/-0.0855	0.0706	+/-0.0855	0.248	pCi/g		DDR1	09/03/06	1206	562552	2
Plutonium-239/240	U	-0.0566	+/-0.0894	0.0864	+/-0.0894	0.279	pCi/g						
<i>Liquid Scint Pu241, Solid-ALL FSS</i>													
Plutonium-241	U	-6.93	+/-13.0	11.2	+/-13.0	23.4	pCi/g		DDR1	09/06/06	1618	562553	3
Rad Liquid Scintillation Analysis													
<i>Liquid Scint C14, Solid All,FSS</i>													
Carbon-14		0.155	+/-0.0912	0.0686	+/-0.0912	0.145	pCi/g		AXD2	08/30/06	0307	562522	4
<i>Liquid Scint Fe55, Solid-ALL FSS</i>													
Iron-55	U	51.5	+/-52.6	34.0	+/-52.7	70.7	pCi/g		MXP1	09/01/06	1903	562520	5
<i>Liquid Scint Ni63, Solid-ALL FSS</i>													
Nickel-63	U	4.91	+/-7.64	6.30	+/-7.64	12.9	pCi/g		MXP1	09/01/06	0320	562521	6
<i>Liquid Scint Tc99, Solid-ALL FSS</i>													
Technetium-99	U	0.00437	+/-0.175	0.146	+/-0.175	0.300	pCi/g		KXR1	09/02/06	1207	562651	7

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

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

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

Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-127F
 Sample ID: 170132003
 Matrix: SE
 Collect Date: 01-AUG-06
 Receive Date: 25-AUG-06
 Collector: Client
 Moisture: 16%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.848	+/-0.170	0.0681	+/-0.170	0.143	pCi/g						
Americium-241	U	0.0252	+/-0.0326	0.0218	+/-0.0326	0.0445	pCi/g		MJH1	08/28/06	2336	562373	1
Bismuth-212		0.657	+/-0.311	0.126	+/-0.311	0.265	pCi/g						
Bismuth-214		0.729	+/-0.0884	0.0298	+/-0.0884	0.0624	pCi/g						
Cesium-134	UI	0.00	+/-0.039	0.0225	+/-0.039	0.0468	pCi/g						
Cesium-137		0.478	+/-0.0432	0.0182	+/-0.0432	0.0379	pCi/g						
Cobalt-60		0.786	+/-0.0635	0.0161	+/-0.0635	0.0346	pCi/g						
Europium-152	U	-0.00832	+/-0.0462	0.0412	+/-0.0462	0.0852	pCi/g						
Europium-154	U	0.0439	+/-0.056	0.0502	+/-0.056	0.107	pCi/g						
Europium-155	UI	0.00	+/-0.0708	0.0367	+/-0.0708	0.0751	pCi/g						
Lead-212		0.947	+/-0.0548	0.0224	+/-0.0548	0.046	pCi/g						
Lead-214		0.817	+/-0.0803	0.0281	+/-0.0803	0.0584	pCi/g						
Manganese-54	U	0.0273	+/-0.0257	0.0176	+/-0.0257	0.0368	pCi/g						
Niobium-94	U	-0.00739	+/-0.019	0.0156	+/-0.019	0.0327	pCi/g						
Potassium-40		10.5	+/-0.707	0.138	+/-0.707	0.301	pCi/g						
Radium-226		0.729	+/-0.0884	0.0298	+/-0.0884	0.0624	pCi/g						
Silver-108m	U	-0.0162	+/-0.0161	0.0135	+/-0.0161	0.0281	pCi/g						
Thallium-208		0.301	+/-0.0409	0.0162	+/-0.0409	0.0339	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-128F
Sample ID: 170132004
Matrix: SE
Collect Date: 01-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 23.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.03	+/-0.175	0.0612	+/-0.175	0.129	pCi/g		MJH1	08/29/06	0457	562373	1
Americium-241	U	0.0227	+/-0.0297	0.0233	+/-0.0297	0.0475	pCi/g						
Bismuth-212		0.484	+/-0.256	0.138	+/-0.256	0.288	pCi/g						
Bismuth-214		0.732	+/-0.0823	0.030	+/-0.0823	0.0625	pCi/g						
Cesium-134	U	0.032	+/-0.0345	0.0226	+/-0.0345	0.047	pCi/g						
Cesium-137		0.850	+/-0.0592	0.0157	+/-0.0592	0.0329	pCi/g						
Cobalt-60		0.818	+/-0.0581	0.0151	+/-0.0581	0.0325	pCi/g						
Europium-152	U	-0.0101	+/-0.0473	0.0424	+/-0.0473	0.0875	pCi/g						
Europium-154	U	0.00382	+/-0.0554	0.0471	+/-0.0554	0.100	pCi/g						
Europium-155	U	0.0371	+/-0.0419	0.0394	+/-0.0419	0.0805	pCi/g						
Lead-212		0.982	+/-0.0559	0.023	+/-0.0559	0.0472	pCi/g						
Lead-214		0.822	+/-0.0761	0.0302	+/-0.0761	0.0624	pCi/g						
Manganese-54	U	0.003	+/-0.020	0.0178	+/-0.020	0.0373	pCi/g						
Niobium-94	U	0.0111	+/-0.0179	0.0157	+/-0.0179	0.0328	pCi/g						
Potassium-40		11.8	+/-0.779	0.134	+/-0.779	0.292	pCi/g						
Radium-226		0.732	+/-0.0823	0.030	+/-0.0823	0.0625	pCi/g						
Silver-108m	U	0.00397	+/-0.0168	0.015	+/-0.0168	0.0311	pCi/g						
Thallium-208		0.316	+/-0.0465	0.0151	+/-0.0465	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-128F
Sample ID: 170132004

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

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

GENERAL ENGINEERING LABORATORIES, LLC

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-129F
Sample ID: 170132005
Matrix: SE
Collect Date: 07-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 12.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.701	+/-0.197	0.0708	+/-0.197	0.149	pCi/g		MJH1	08/29/06	0702	562373	1
Americium-241	U	0.00649	+/-0.0351	0.028	+/-0.0351	0.0572	pCi/g						
Bismuth-212		0.557	+/-0.324	0.152	+/-0.324	0.319	pCi/g						
Bismuth-214		0.717	+/-0.109	0.0374	+/-0.109	0.0779	pCi/g						
Cesium-134	U	0.044	+/-0.0348	0.0259	+/-0.0348	0.054	pCi/g						
Cesium-137		0.061	+/-0.0496	0.0202	+/-0.0496	0.0422	pCi/g						
Cobalt-60	U	-0.0033	+/-0.0253	0.0208	+/-0.0253	0.0445	pCi/g						
Europium-152	U	-0.0226	+/-0.0599	0.0492	+/-0.0599	0.102	pCi/g						
Europium-154	U	-0.00152	+/-0.0846	0.061	+/-0.0846	0.130	pCi/g						
Europium-155	U	0.0851	+/-0.0996	0.0432	+/-0.0996	0.0885	pCi/g						
Lead-212		0.750	+/-0.0729	0.0345	+/-0.0729	0.0706	pCi/g						
Lead-214		0.753	+/-0.0882	0.0361	+/-0.0882	0.0747	pCi/g						
Manganese-54	U	0.0115	+/-0.0268	0.0227	+/-0.0268	0.0474	pCi/g						
Niobium-94	U	0.0013	+/-0.0218	0.0183	+/-0.0218	0.0384	pCi/g						
Potassium-40		12.1	+/-0.864	0.197	+/-0.864	0.422	pCi/g						
Radium-226		0.717	+/-0.109	0.0374	+/-0.109	0.0779	pCi/g						
Silver-108m	U	-0.00081	+/-0.0188	0.0165	+/-0.0188	0.0343	pCi/g						
Thallium-208		0.269	+/-0.0566	0.020	+/-0.0566	0.0417	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-129F
Sample ID: 170132005

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-130F
Sample ID: 170132006
Matrix: SE
Collect Date: 01-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 14.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.952	+/-0.128	0.0454	+/-0.128	0.0959	pCi/g		MJH1	08/29/06	0702	562373	1
Americium-241	U	-0.0124	+/-0.019	0.0169	+/-0.019	0.0346	pCi/g						
Bismuth-212		0.596	+/-0.191	0.102	+/-0.191	0.214	pCi/g						
Bismuth-214		0.747	+/-0.0748	0.0217	+/-0.0748	0.0456	pCi/g						
Cesium-134	UI	0.00	+/-0.0362	0.0177	+/-0.0362	0.037	pCi/g						
Cesium-137	UI	0.00	+/-0.0192	0.0129	+/-0.0192	0.0271	pCi/g						
Cobalt-60	UI	0.00	+/-0.0261	0.0162	+/-0.0261	0.0343	pCi/g						
Europium-152	U	0.0176	+/-0.0349	0.031	+/-0.0349	0.0642	pCi/g						
Europium-154	U	0.0194	+/-0.0433	0.0382	+/-0.0433	0.0817	pCi/g						
Europium-155	UI	0.00	+/-0.0481	0.027	+/-0.0481	0.0555	pCi/g						
Lead-212		0.886	+/-0.043	0.0178	+/-0.043	0.0367	pCi/g						
Lead-214		0.839	+/-0.0578	0.0224	+/-0.0578	0.0464	pCi/g						
Manganese-54	U	0.0174	+/-0.0177	0.0126	+/-0.0177	0.0266	pCi/g						
Niobium-94	U	0.0185	+/-0.0134	0.0124	+/-0.0134	0.026	pCi/g						
Potassium-40		10.2	+/-0.600	0.117	+/-0.600	0.254	pCi/g						
Radium-226		0.747	+/-0.0748	0.0217	+/-0.0748	0.0456	pCi/g						
Silver-108m	U	-0.00797	+/-0.0121	0.0106	+/-0.0121	0.0221	pCi/g						
Thallium-208		0.311	+/-0.0331	0.0112	+/-0.0331	0.0236	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-130F
Sample ID: 170132006

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-131F
Sample ID: 170132007
Matrix: SE
Collect Date: 07-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 16.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.762	+/-0.229	0.0761	+/-0.229	0.164	pCi/g						
Americium-241	U	0.0168	+/-0.0333	0.0326	+/-0.0333	0.0669	pCi/g		MJH1	08/29/06	0721	562373	1
Bismuth-212	UI	0.00	+/-0.430	0.163	+/-0.430	0.349	pCi/g						
Bismuth-214		0.670	+/-0.105	0.0418	+/-0.105	0.0885	pCi/g						
Cesium-134	U	0.0558	+/-0.0362	0.0299	+/-0.0362	0.0632	pCi/g						
Cesium-137		0.566	+/-0.0691	0.0212	+/-0.0691	0.0452	pCi/g						
Cobalt-60		0.258	+/-0.0709	0.0231	+/-0.0709	0.0507	pCi/g						
Europium-152	U	0.0317	+/-0.0576	0.0542	+/-0.0576	0.114	pCi/g						
Europium-154	U	-0.0547	+/-0.0703	0.0542	+/-0.0703	0.121	pCi/g						
Europium-155	U	0.0667	+/-0.0646	0.0485	+/-0.0646	0.100	pCi/g						
Lead-212		0.814	+/-0.0651	0.0285	+/-0.0651	0.0594	pCi/g						
Lead-214		0.731	+/-0.105	0.0395	+/-0.105	0.0826	pCi/g						
Manganese-54	U	0.00911	+/-0.0281	0.0244	+/-0.0281	0.0519	pCi/g						
Niobium-94	U	0.0199	+/-0.0266	0.0216	+/-0.0266	0.0458	pCi/g						
Potassium-40		9.45	+/-0.974	0.202	+/-0.974	0.450	pCi/g						
Radium-226		0.670	+/-0.105	0.0418	+/-0.105	0.0885	pCi/g						
Silver-108m	U	-0.00604	+/-0.0218	0.0192	+/-0.0218	0.0405	pCi/g						
Thallium-208		0.260	+/-0.0608	0.0223	+/-0.0608	0.0473	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-133F
Sample ID: 170132008
Matrix: SE
Collect Date: 08-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 24.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.960	+/-0.222	0.0697	+/-0.222	0.148	pCi/g						
Americium-241	U	0.0263	+/-0.0493	0.0448	+/-0.0493	0.0923	pCi/g		MJH1	08/29/06	0722	562373	1
Bismuth-212		0.750	+/-0.290	0.165	+/-0.290	0.348	pCi/g						
Bismuth-214		0.697	+/-0.108	0.0358	+/-0.108	0.0754	pCi/g						
Cesium-134	U	0.0398	+/-0.0419	0.0255	+/-0.0419	0.0536	pCi/g						
Cesium-137		0.608	+/-0.0796	0.0195	+/-0.0796	0.0411	pCi/g						
Cobalt-60		0.784	+/-0.083	0.0166	+/-0.083	0.0366	pCi/g						
Europium-152	U	-0.0146	+/-0.0549	0.0471	+/-0.0549	0.0985	pCi/g						
Europium-154	U	-0.0185	+/-0.0601	0.0477	+/-0.0601	0.105	pCi/g						
Europium-155	U	0.0575	+/-0.0533	0.0478	+/-0.0533	0.0986	pCi/g						
Lead-212		0.921	+/-0.0972	0.028	+/-0.0972	0.0579	pCi/g						
Lead-214		0.834	+/-0.123	0.0333	+/-0.123	0.0697	pCi/g						
Manganese-54	U	0.00563	+/-0.0225	0.0199	+/-0.0225	0.0422	pCi/g						
Niobium-94	U	-0.000437	+/-0.0184	0.0161	+/-0.0184	0.0342	pCi/g						
Potassium-40		11.9	+/-1.08	0.145	+/-1.08	0.323	pCi/g						
Radium-226		0.697	+/-0.108	0.0358	+/-0.108	0.0754	pCi/g						
Silver-108m	U	0.008	+/-0.0201	0.0176	+/-0.0201	0.0368	pCi/g						
Thallium-208		0.264	+/-0.0577	0.0184	+/-0.0577	0.0389	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-133F
Sample ID: 170132008

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-117F
Sample ID: 170132009
Matrix: SE
Collect Date: 03-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 16.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.854	+/-0.122	0.0425	+/-0.122	0.0907	pCi/g		MJH1	08/29/06	0722	562373	1
Americium-241	U	0.00795	+/-0.0589	0.0551	+/-0.0589	0.113	pCi/g						
Bismuth-212		0.586	+/-0.288	0.100	+/-0.288	0.212	pCi/g						
Bismuth-214		0.685	+/-0.0696	0.0288	+/-0.0696	0.0601	pCi/g						
Cesium-134	UI	0.00	+/-0.026	0.0166	+/-0.026	0.0348	pCi/g						
Cesium-137	U	0.0138	+/-0.0176	0.0127	+/-0.0176	0.0268	pCi/g						
Cobalt-60	U	0.000525	+/-0.0153	0.0128	+/-0.0153	0.0276	pCi/g						
Europium-152	U	0.00368	+/-0.0435	0.0342	+/-0.0435	0.0715	pCi/g						
Europium-154	U	-0.00778	+/-0.0434	0.0355	+/-0.0434	0.0768	pCi/g						
Europium-155	UI	0.00	+/-0.0763	0.0427	+/-0.0763	0.0879	pCi/g						
Lead-212		0.791	+/-0.0539	0.0224	+/-0.0539	0.0462	pCi/g						
Lead-214		0.772	+/-0.0754	0.0251	+/-0.0754	0.0524	pCi/g						
Manganese-54	U	0.00517	+/-0.0151	0.0134	+/-0.0151	0.0284	pCi/g						
Niobium-94	U	0.000367	+/-0.0135	0.0119	+/-0.0135	0.0251	pCi/g						
Potassium-40		10.1	+/-0.622	0.105	+/-0.622	0.230	pCi/g						
Radium-226		0.685	+/-0.0696	0.0288	+/-0.0696	0.0601	pCi/g						
Silver-108m	U	0.00923	+/-0.0134	0.0121	+/-0.0134	0.0254	pCi/g						
Thallium-208		0.260	+/-0.0364	0.0127	+/-0.0364	0.0267	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-117F
 Sample ID: 170132009

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-117FS
Sample ID: 170132010
Matrix: SE
Collect Date: 03-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 15.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.863	+/-0.148	0.0411	+/-0.148	0.0867	pCi/g		MJH1	08/29/06	0734	562373	1
Americium-241	U	-0.0492	+/-0.101	0.087	+/-0.101	0.179	pCi/g						
Bismuth-212		0.589	+/-0.197	0.0809	+/-0.197	0.171	pCi/g						
Bismuth-214		0.643	+/-0.0878	0.0222	+/-0.0878	0.0462	pCi/g						
Cesium-134	UI	0.00	+/-0.028	0.0151	+/-0.028	0.0315	pCi/g						
Cesium-137	U	0.00646	+/-0.034	0.0116	+/-0.034	0.0243	pCi/g						
Cobalt-60	U	0.00392	+/-0.0134	0.0117	+/-0.0134	0.0252	pCi/g						
Europium-152	U	-0.0139	+/-0.0379	0.0318	+/-0.0379	0.0659	pCi/g						
Europium-154	U	-0.0529	+/-0.0464	0.0358	+/-0.0464	0.0765	pCi/g						
Europium-155	UI	0.00	+/-0.0713	0.0376	+/-0.0713	0.077	pCi/g						
Lead-212		0.783	+/-0.0865	0.0186	+/-0.0865	0.0382	pCi/g						
Lead-214		0.748	+/-0.0985	0.0234	+/-0.0985	0.0485	pCi/g						
Manganese-54	U	0.018	+/-0.0197	0.0115	+/-0.0197	0.0243	pCi/g						
Niobium-94	U	0.00153	+/-0.0125	0.0108	+/-0.0125	0.0225	pCi/g						
Potassium-40		10.3	+/-0.895	0.107	+/-0.895	0.233	pCi/g						
Radium-226		0.643	+/-0.0878	0.0222	+/-0.0878	0.0462	pCi/g						
Silver-108m	U	0.0105	+/-0.0116	0.0109	+/-0.0116	0.0226	pCi/g						
Thallium-208		0.256	+/-0.0371	0.0124	+/-0.0371	0.0258	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
I	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-117FS
 Sample ID: 170132010

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID:	9106-0001-113F	Project:	YANK01204
Sample ID:	170132011	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	03-AUG-06		
Receive Date:	25-AUG-06		
Collector:	Client		
Moisture:	14.9%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
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Rad Gamma Spec Analysis

*Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth
Waived*

Actinium-228		0.761	+/-0.200	0.0898	+/-0.200	0.179	pCi/g		MJH1	08/29/06	0739	562373	1
Americium-241	U	0.0461	+/-0.0416	0.0349	+/-0.0416	0.0697	pCi/g						
Bismuth-212		0.611	+/-0.344	0.185	+/-0.344	0.371	pCi/g						
Bismuth-214		0.767	+/-0.144	0.0444	+/-0.144	0.0888	pCi/g						
Cesium-134	U	0.027	+/-0.0425	0.0308	+/-0.0425	0.0616	pCi/g						
Cesium-137		0.387	+/-0.0685	0.025	+/-0.0685	0.0499	pCi/g						
Cobalt-60		0.259	+/-0.0727	0.0258	+/-0.0727	0.0517	pCi/g						
Europium-152	U	-0.119	+/-0.130	0.0576	+/-0.130	0.115	pCi/g						
Europium-154	U	0.000805	+/-0.0891	0.075	+/-0.0891	0.150	pCi/g						
Europium-155	U	0.0487	+/-0.066	0.0559	+/-0.066	0.112	pCi/g						
Lead-212		0.850	+/-0.0977	0.0318	+/-0.0977	0.0636	pCi/g						
Lead-214		0.792	+/-0.144	0.0417	+/-0.144	0.0833	pCi/g						
Manganese-54	U	0.00206	+/-0.0321	0.0281	+/-0.0321	0.0561	pCi/g						
Niobium-94	U	0.016	+/-0.0263	0.0242	+/-0.0263	0.0483	pCi/g						
Potassium-40		10.7	+/-1.02	0.189	+/-1.02	0.378	pCi/g						
Radium-226		0.767	+/-0.144	0.0444	+/-0.144	0.0888	pCi/g						
Silver-108m	U	-0.0206	+/-0.0314	0.0224	+/-0.0314	0.0448	pCi/g						
Thallium-208		0.307	+/-0.0628	0.0263	+/-0.0628	0.0527	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
I	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-113F
 Sample ID: 170132011

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

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-114F
Sample ID: 170132012
Matrix: SE
Collect Date: 03-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 20.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.722	+/-0.127	0.0422	+/-0.127	0.0901	pCi/g						
Americium-241	U	-0.0207	+/-0.0659	0.0547	+/-0.0659	0.113	pCi/g		MJH1	08/29/06	1045	562373	1
Bismuth-212		0.434	+/-0.239	0.115	+/-0.239	0.240	pCi/g						
Bismuth-214		0.545	+/-0.0769	0.0249	+/-0.0769	0.0522	pCi/g						
Cesium-134	UI	0.00	+/-0.0243	0.0168	+/-0.0243	0.0353	pCi/g						
Cesium-137		0.793	+/-0.0493	0.0134	+/-0.0493	0.0282	pCi/g						
Cobalt-60		0.370	+/-0.0518	0.0108	+/-0.0518	0.0238	pCi/g						
Europium-152	U	-0.0119	+/-0.044	0.0339	+/-0.044	0.0707	pCi/g						
Europium-154	U	-0.00625	+/-0.048	0.0396	+/-0.048	0.0848	pCi/g						
Europium-155	U	0.00	+/-0.0492	0.0462	+/-0.0492	0.095	pCi/g						
Lead-212		0.776	+/-0.0533	0.0217	+/-0.0533	0.0448	pCi/g						
Lead-214		0.644	+/-0.0632	0.0291	+/-0.0632	0.0603	pCi/g						
Manganese-54	U	0.00559	+/-0.0161	0.0143	+/-0.0161	0.0302	pCi/g						
Niobium-94	U	-0.00431	+/-0.0137	0.0119	+/-0.0137	0.0251	pCi/g						
Potassium-40		10.6	+/-0.695	0.108	+/-0.695	0.235	pCi/g						
Radium-226		0.545	+/-0.0769	0.0249	+/-0.0769	0.0522	pCi/g						
Silver-108m	U	0.00137	+/-0.0144	0.0127	+/-0.0144	0.0265	pCi/g						
Thallium-208		0.214	+/-0.032	0.0141	+/-0.032	0.0296	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
I	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-114F
 Sample ID: 170132012

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-116F
Sample ID: 170132013
Matrix: SE
Collect Date: 03-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 12.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.756	+/-0.134	0.0493	+/-0.134	0.109	pCi/g						
Americium-241	U	0.0108	+/-0.0922	0.0769	+/-0.0922	0.159	pCi/g		MJH1	08/29/06	1103	562373	1
Bismuth-212	U	0.289	+/-0.343	0.153	+/-0.343	0.326	pCi/g						
Bismuth-214		0.577	+/-0.100	0.0315	+/-0.100	0.0674	pCi/g						
Cesium-134	UI	0.00	+/-0.0373	0.0241	+/-0.0373	0.0513	pCi/g						
Cesium-137	U	0.0138	+/-0.0209	0.0193	+/-0.0209	0.0411	pCi/g						
Cobalt-60	U	0.0326	+/-0.0229	0.0228	+/-0.0229	0.0496	pCi/g						
Europium-152	U	-0.0074	+/-0.0561	0.0485	+/-0.0561	0.102	pCi/g						
Europium-154	U	0.0116	+/-0.0608	0.0539	+/-0.0608	0.119	pCi/g						
Europium-155	U	0.00	+/-0.0517	0.0518	+/-0.0517	0.107	pCi/g						
Lead-212		0.706	+/-0.0606	0.028	+/-0.0606	0.0582	pCi/g						
Lead-214		0.676	+/-0.108	0.0335	+/-0.108	0.0705	pCi/g						
Manganese-54	U	0.0262	+/-0.0271	0.0152	+/-0.0271	0.0331	pCi/g						
Niobium-94	U	0.00164	+/-0.020	0.0176	+/-0.020	0.0375	pCi/g						
Potassium-40		9.32	+/-0.927	0.168	+/-0.927	0.377	pCi/g						
Radium-226		0.577	+/-0.100	0.0315	+/-0.100	0.0674	pCi/g						
Silver-108m	U	0.00992	+/-0.0183	0.0163	+/-0.0183	0.0345	pCi/g						
Thallium-208		0.189	+/-0.044	0.0194	+/-0.044	0.0412	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-116F
 Sample ID: 170132013

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

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-120F
Sample ID: 170132014
Matrix: SE
Collect Date: 03-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 19.8%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.05	+/-0.200	0.057	+/-0.200	0.119	pCi/g		MJH1	08/29/06	1104	562373	1
Americium-241	U	-0.0753	+/-0.124	0.0937	+/-0.124	0.191	pCi/g						
Bismuth-212		0.597	+/-0.357	0.120	+/-0.357	0.251	pCi/g						
Bismuth-214		0.760	+/-0.118	0.0287	+/-0.118	0.0597	pCi/g						
Cesium-134	U	0.0284	+/-0.0315	0.0199	+/-0.0315	0.0415	pCi/g						
Cesium-137		0.739	+/-0.0787	0.0162	+/-0.0787	0.0337	pCi/g						
Cobalt-60		0.708	+/-0.0781	0.0152	+/-0.0781	0.0325	pCi/g						
Europium-152	U	0.00273	+/-0.0478	0.0411	+/-0.0478	0.0847	pCi/g						
Europium-154	U	-0.061	+/-0.0547	0.0411	+/-0.0547	0.0879	pCi/g						
Europium-155	U	0.0174	+/-0.0551	0.0471	+/-0.0551	0.0961	pCi/g						
Lead-212		0.967	+/-0.0943	0.023	+/-0.0943	0.0473	pCi/g						
Lead-214		0.934	+/-0.118	0.0278	+/-0.118	0.0575	pCi/g						
Manganese-54	U	0.0104	+/-0.0201	0.0177	+/-0.0201	0.0368	pCi/g						
Niobium-94	U	0.0223	+/-0.0168	0.0153	+/-0.0168	0.0319	pCi/g						
Potassium-40		11.7	+/-1.03	0.118	+/-1.03	0.258	pCi/g						
Radium-226		0.760	+/-0.118	0.0287	+/-0.118	0.0597	pCi/g						
Silver-108m	U	0.00417	+/-0.0167	0.0143	+/-0.0167	0.0295	pCi/g						
Thallium-208		0.323	+/-0.045	0.0141	+/-0.045	0.0295	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-120F
 Sample ID: 170132014

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

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-104F
Sample ID: 170132015
Matrix: SE
Collect Date: 08-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 11.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.644	+/-0.143	0.0561	+/-0.143	0.121	pCi/g		MJH1	08/29/06	1105	562373	1
Americium-241	U	-0.15	+/-0.095	0.0754	+/-0.095	0.155	pCi/g						
Bismuth-212		0.646	+/-0.228	0.116	+/-0.228	0.249	pCi/g						
Bismuth-214		0.446	+/-0.067	0.0342	+/-0.067	0.0721	pCi/g						
Cesium-134	UI	0.00	+/-0.0237	0.0208	+/-0.0237	0.0441	pCi/g						
Cesium-137		0.289	+/-0.0526	0.0161	+/-0.0526	0.0342	pCi/g						
Cobalt-60	U	0.0315	+/-0.0262	0.0172	+/-0.0262	0.0377	pCi/g						
Europium-152	U	-0.0171	+/-0.0524	0.045	+/-0.0524	0.0942	pCi/g						
Europium-154	U	-0.0153	+/-0.0591	0.0479	+/-0.0591	0.105	pCi/g						
Europium-155	U	0.00	+/-0.0552	0.0551	+/-0.0552	0.113	pCi/g						
Lead-212		0.668	+/-0.0532	0.0285	+/-0.0532	0.0588	pCi/g						
Lead-214		0.476	+/-0.0773	0.0322	+/-0.0773	0.0674	pCi/g						
Manganese-54	U	0.0279	+/-0.0165	0.0155	+/-0.0165	0.0332	pCi/g						
Niobium-94	U	0.00824	+/-0.0167	0.0153	+/-0.0167	0.0324	pCi/g						
Potassium-40		9.62	+/-0.738	0.145	+/-0.738	0.323	pCi/g						
Radium-226		0.446	+/-0.067	0.0342	+/-0.067	0.0721	pCi/g						
Silver-108m	U	-0.00821	+/-0.0194	0.0139	+/-0.0194	0.0294	pCi/g						
Thallium-208		0.187	+/-0.0448	0.0163	+/-0.0448	0.0346	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-104F
Sample ID: 170132015

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-107F
Sample ID: 170132016
Matrix: SE
Collect Date: 08-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 16.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.875	+/-0.197	0.0826	+/-0.197	0.177	pCi/g		MJH1	08/29/06	1251	562373	1
Americium-241	U	-0.141	+/-0.107	0.0807	+/-0.107	0.167	pCi/g						
Bismuth-212		0.861	+/-0.481	0.157	+/-0.481	0.336	pCi/g						
Bismuth-214		0.543	+/-0.0961	0.0453	+/-0.0961	0.0953	pCi/g						
Cesium-134	U	0.00	+/-0.0409	0.0254	+/-0.0409	0.0542	pCi/g						
Cesium-137		0.695	+/-0.0741	0.0199	+/-0.0741	0.0426	pCi/g						
Cobalt-60		0.246	+/-0.0507	0.0231	+/-0.0507	0.0508	pCi/g						
Europium-152	U	0.0178	+/-0.0651	0.0569	+/-0.0651	0.119	pCi/g						
Europium-154	U	0.0182	+/-0.0767	0.0664	+/-0.0767	0.145	pCi/g						
Europium-155	U	0.00	+/-0.0629	0.0568	+/-0.0629	0.118	pCi/g						
Lead-212		0.856	+/-0.0734	0.0331	+/-0.0734	0.0687	pCi/g						
Lead-214		0.739	+/-0.0994	0.0406	+/-0.0994	0.0851	pCi/g						
Manganese-54	U	0.0111	+/-0.0307	0.0233	+/-0.0307	0.0496	pCi/g						
Niobium-94	UI	0.00	+/-0.0272	0.020	+/-0.0272	0.0425	pCi/g						
Potassium-40		11.2	+/-0.933	0.151	+/-0.933	0.348	pCi/g						
Radium-226		0.543	+/-0.0961	0.0453	+/-0.0961	0.0953	pCi/g						
Silver-108m	U	0.000917	+/-0.0226	0.0191	+/-0.0226	0.0403	pCi/g						
Thallium-208		0.251	+/-0.0525	0.0207	+/-0.0525	0.0439	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-107F
Sample ID: 170132016

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-115F
Sample ID: 170132017
Matrix: SE
Collect Date: 08-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 25.1%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.772	+/-0.186	0.0701	+/-0.186	0.151	pCi/g						
Americium-241	U	0.0775	+/-0.0941	0.088	+/-0.0941	0.182	pCi/g		MJH1	08/29/06	1251	562373	1
Bismuth-212		0.765	+/-0.300	0.177	+/-0.300	0.375	pCi/g						
Bismuth-214		0.621	+/-0.108	0.0362	+/-0.108	0.0768	pCi/g						
Cesium-134	UI	0.00	+/-0.0437	0.0285	+/-0.0437	0.060	pCi/g						
Cesium-137		0.760	+/-0.0771	0.0197	+/-0.0771	0.0419	pCi/g						
Cobalt-60		0.597	+/-0.0718	0.0199	+/-0.0718	0.0438	pCi/g						
Europium-152	U	0.0063	+/-0.0603	0.0534	+/-0.0603	0.112	pCi/g						
Europium-154	U	0.0188	+/-0.0736	0.0633	+/-0.0736	0.137	pCi/g						
Europium-155	U	0.00	+/-0.063	0.0563	+/-0.063	0.116	pCi/g						
Lead-212		0.782	+/-0.0699	0.0292	+/-0.0699	0.0607	pCi/g						
Lead-214		0.791	+/-0.0962	0.039	+/-0.0962	0.0816	pCi/g						
Manganese-54	U	0.0156	+/-0.0252	0.0224	+/-0.0252	0.0475	pCi/g						
Niobium-94	UI	0.00	+/-0.0338	0.0219	+/-0.0338	0.0462	pCi/g						
Potassium-40		12.5	+/-0.997	0.217	+/-0.997	0.474	pCi/g						
Radium-226		0.621	+/-0.108	0.0362	+/-0.108	0.0768	pCi/g						
Silver-108m	U	0.00503	+/-0.0205	0.018	+/-0.0205	0.0379	pCi/g						
Thallium-208		0.257	+/-0.0561	0.0212	+/-0.0561	0.0449	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	LXM1	08/25/06	1557	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-115F
Sample ID: 170132017

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

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

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-108F
 Sample ID: 170132018
 Matrix: SE
 Collect Date: 07-AUG-06
 Receive Date: 25-AUG-06
 Collector: Client
 Moisture: 13.8%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.04	+/-0.246	0.0835	+/-0.246	0.179	pCi/g		MJH1	08/29/06	1251	562373	1
Americium-241	U	0.0106	+/-0.0417	0.0342	+/-0.0417	0.0703	pCi/g						
Bismuth-212		0.539	+/-0.378	0.202	+/-0.378	0.427	pCi/g						
Bismuth-214		0.857	+/-0.129	0.0427	+/-0.129	0.0902	pCi/g						
Cesium-134	UI	0.00	+/-0.0364	0.0326	+/-0.0364	0.0687	pCi/g						
Cesium-137	U	0.0207	+/-0.0385	0.0235	+/-0.0385	0.0498	pCi/g						
Cobalt-60	U	0.017	+/-0.028	0.025	+/-0.028	0.0544	pCi/g						
Europium-152	U	0.00148	+/-0.0661	0.0559	+/-0.0661	0.117	pCi/g						
Europium-154	U	0.0537	+/-0.0799	0.0718	+/-0.0799	0.155	pCi/g						
Europium-155	UI	0.00	+/-0.0809	0.0549	+/-0.0809	0.113	pCi/g						
Lead-212		0.721	+/-0.0888	0.0417	+/-0.0888	0.0858	pCi/g						
Lead-214		0.887	+/-0.116	0.0438	+/-0.116	0.0915	pCi/g						
Manganese-54	U	0.0278	+/-0.0333	0.0293	+/-0.0333	0.0618	pCi/g						
Niobium-94	U	-0.00411	+/-0.025	0.021	+/-0.025	0.0445	pCi/g						
Potassium-40		10.7	+/-0.925	0.203	+/-0.925	0.450	pCi/g						
Radium-226		0.857	+/-0.129	0.0427	+/-0.129	0.0902	pCi/g						
Silver-108m	U	-0.00713	+/-0.0237	0.0207	+/-0.0237	0.0435	pCi/g						
Thallium-208		0.299	+/-0.0688	0.0231	+/-0.0688	0.0487	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	LXM1	08/25/06	1558	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-108F Project: YANK01204
 Sample ID: 170132018 Client ID: YANK001
 Vol. Recv.:

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-119F
Sample ID: 170132019
Matrix: SE
Collect Date: 07-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 13.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.519	+/-0.162	0.0585	+/-0.162	0.127	pCi/g						
Americium-241	U	0.00832	+/-0.0234	0.021	+/-0.0234	0.0435	pCi/g		MJH1	08/29/06	1252	562373	1
Bismuth-212		0.334	+/-0.225	0.138	+/-0.225	0.295	pCi/g						
Bismuth-214		0.421	+/-0.0823	0.030	+/-0.0823	0.064	pCi/g						
Cesium-134	U	0.00	+/-0.0292	0.021	+/-0.0292	0.0447	pCi/g						
Cesium-137		0.220	+/-0.0394	0.0169	+/-0.0394	0.0361	pCi/g						
Cobalt-60		0.112	+/-0.0464	0.0153	+/-0.0464	0.0343	pCi/g						
Europium-152	U	0.00995	+/-0.0455	0.0393	+/-0.0455	0.0828	pCi/g						
Europium-154	U	0.035	+/-0.0546	0.0498	+/-0.0546	0.110	pCi/g						
Europium-155	U	0.00	+/-0.0357	0.035	+/-0.0357	0.0726	pCi/g						
Lead-212		0.547	+/-0.0471	0.0205	+/-0.0471	0.0428	pCi/g						
Lead-214		0.553	+/-0.0721	0.0262	+/-0.0721	0.0555	pCi/g						
Manganese-54	U	-0.0173	+/-0.0198	0.0151	+/-0.0198	0.0327	pCi/g						
Niobium-94	U	0.00613	+/-0.0168	0.0148	+/-0.0168	0.0316	pCi/g						
Potassium-40		8.91	+/-0.798	0.110	+/-0.798	0.258	pCi/g						
Radium-226		0.421	+/-0.0823	0.030	+/-0.0823	0.064	pCi/g						
Silver-108m	UI	0.00	+/-0.0227	0.0128	+/-0.0227	0.0273	pCi/g						
Thallium-208		0.158	+/-0.0348	0.0157	+/-0.0348	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	LXM1	08/25/06	1558	562334

The following Analytical Methods were performed

Method	Description
I	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-119F
Sample ID: 170132019

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-101F
Sample ID: 170132020
Matrix: SE
Collect Date: 31-JUL-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 12.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.678	+/-0.206	0.0548	+/-0.206	0.110	pCi/g						
Americium-241	U	0.0343	+/-0.0373	0.0312	+/-0.0373	0.0624	pCi/g		MJH1	08/29/06	1304	562373	1
Bismuth-212	UI	0.00	+/-0.589	0.153	+/-0.589	0.305	pCi/g						
Bismuth-214		0.547	+/-0.117	0.0382	+/-0.117	0.0763	pCi/g						
Cesium-134	U	0.00	+/-0.058	0.033	+/-0.058	0.0659	pCi/g						
Cesium-137		0.504	+/-0.0828	0.0213	+/-0.0828	0.0426	pCi/g						
Cobalt-60	U	0.0128	+/-0.028	0.025	+/-0.028	0.0499	pCi/g						
Europium-152	U	-0.0402	+/-0.0953	0.0544	+/-0.0953	0.109	pCi/g						
Europium-154	U	0.0507	+/-0.0898	0.0803	+/-0.0898	0.161	pCi/g						
Europium-155	U	0.00	+/-0.0541	0.0495	+/-0.0541	0.0989	pCi/g						
Lead-212		0.624	+/-0.0796	0.0335	+/-0.0796	0.067	pCi/g						
Lead-214		0.609	+/-0.110	0.0384	+/-0.110	0.0767	pCi/g						
Manganese-54	U	-0.0178	+/-0.0251	0.0203	+/-0.0251	0.0405	pCi/g						
Niobium-94	U	0.0296	+/-0.0262	0.0248	+/-0.0262	0.0495	pCi/g						
Potassium-40		9.59	+/-0.982	0.229	+/-0.982	0.457	pCi/g						
Radium-226		0.547	+/-0.117	0.0382	+/-0.117	0.0763	pCi/g						
Silver-108m	U	-0.00266	+/-0.0226	0.0195	+/-0.0226	0.039	pCi/g						
Thallium-208		0.184	+/-0.0512	0.0203	+/-0.0512	0.0406	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	LXM1	08/25/06	1558	562334

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-101F
Sample ID: 170132020

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID:	9106-0001-103F	Project:	YANK01204
Sample ID:	170132021	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	31-JUL-06		
Receive Date:	25-AUG-06		
Collector:	Client		
Moisture:	17.4%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
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Rad Gamma Spec Analysis

*Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth
Waived*

Actinium-228		0.574	+/-0.146	0.0667	+/-0.146	0.141	pCi/g		MJH1	08/29/06	1428	562373	1
Americium-241	U	0.0403	+/-0.113	0.0732	+/-0.113	0.150	pCi/g						
Bismuth-212	UI	0.00	+/-0.360	0.129	+/-0.360	0.274	pCi/g						
Bismuth-214		0.372	+/-0.0778	0.0326	+/-0.0778	0.0686	pCi/g						
Cesium-134	U	0.00	+/-0.0251	0.0215	+/-0.0251	0.0454	pCi/g						
Cesium-137		0.909	+/-0.0585	0.0172	+/-0.0585	0.0365	pCi/g						
Cobalt-60		0.414	+/-0.0505	0.0151	+/-0.0505	0.0332	pCi/g						
Europium-152	U	0.0242	+/-0.052	0.0472	+/-0.052	0.0982	pCi/g						
Europium-154	U	-0.0362	+/-0.0528	0.0406	+/-0.0528	0.0895	pCi/g						
Europium-155	U	0.00	+/-0.0536	0.0523	+/-0.0536	0.108	pCi/g						
Lead-212		0.573	+/-0.0504	0.0271	+/-0.0504	0.0561	pCi/g						
Lead-214		0.509	+/-0.0895	0.0306	+/-0.0895	0.0639	pCi/g						
Manganese-54	U	-0.00731	+/-0.0194	0.0165	+/-0.0194	0.0351	pCi/g						
Niobium-94	U	0.0186	+/-0.0153	0.0143	+/-0.0153	0.0304	pCi/g						
Potassium-40		10.1	+/-0.742	0.126	+/-0.742	0.282	pCi/g						
Radium-226		0.372	+/-0.0778	0.0326	+/-0.0778	0.0686	pCi/g						
Silver-108m	U	-0.000807	+/-0.0182	0.0158	+/-0.0182	0.0331	pCi/g						
Thallium-208		0.168	+/-0.0358	0.0163	+/-0.0358	0.0345	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-103F
Sample ID: 170132021

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-106F
Sample ID: 170132022
Matrix: SE
Collect Date: 02-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 16.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.892	+/-0.192	0.0622	+/-0.192	0.124	pCi/g		MJH1	08/28/06	1701	562372	1
Americium-241	U	0.0412	+/-0.0772	0.061	+/-0.0772	0.122	pCi/g						
Bismuth-212		0.610	+/-0.303	0.139	+/-0.303	0.278	pCi/g						
Bismuth-214		0.718	+/-0.108	0.0348	+/-0.108	0.0695	pCi/g						
Cesium-134	U	0.0471	+/-0.046	0.0237	+/-0.046	0.0474	pCi/g						
Cesium-137		0.163	+/-0.0448	0.0186	+/-0.0448	0.0371	pCi/g						
Cobalt-60		0.148	+/-0.0466	0.021	+/-0.0466	0.042	pCi/g						
Europium-152	U	-0.0545	+/-0.0732	0.0448	+/-0.0732	0.0894	pCi/g						
Europium-154	U	0.0228	+/-0.0661	0.0574	+/-0.0661	0.115	pCi/g						
Europium-155	U	0.039	+/-0.0725	0.0505	+/-0.0725	0.101	pCi/g						
Lead-212		0.713	+/-0.0811	0.0286	+/-0.0811	0.0571	pCi/g						
Lead-214		0.734	+/-0.110	0.0353	+/-0.110	0.0705	pCi/g						
Manganese-54	U	-0.0271	+/-0.0227	0.0177	+/-0.0227	0.0355	pCi/g						
Niobium-94	U	-0.00686	+/-0.0193	0.0165	+/-0.0193	0.033	pCi/g						
Potassium-40		12.2	+/-1.09	0.130	+/-1.09	0.259	pCi/g						
Radium-226		0.718	+/-0.108	0.0348	+/-0.108	0.0695	pCi/g						
Silver-108m	U	0.000841	+/-0.0201	0.0169	+/-0.0201	0.0337	pCi/g						
Thallium-208		0.240	+/-0.051	0.0172	+/-0.051	0.0344	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-106F
 Sample ID: 170132022

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-106FS
Sample ID: 170132023
Matrix: SE
Collect Date: 02-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 16.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.676	+/-0.168	0.0598	+/-0.168	0.129	pCi/g						
Americium-241	U	-0.0251	+/-0.108	0.087	+/-0.108	0.180	pCi/g		MJH1	08/28/06	1757	562372	1
Bismuth-212		0.464	+/-0.301	0.124	+/-0.301	0.268	pCi/g						
Bismuth-214		0.504	+/-0.0851	0.032	+/-0.0851	0.0682	pCi/g						
Cesium-134	U	0.032	+/-0.016	0.0218	+/-0.016	0.0465	pCi/g						
Cesium-137		0.234	+/-0.0437	0.0164	+/-0.0437	0.0353	pCi/g						
Cobalt-60		0.230	+/-0.0517	0.0198	+/-0.0517	0.0435	pCi/g						
Europium-152	U	-0.0134	+/-0.0527	0.0444	+/-0.0527	0.0935	pCi/g						
Europium-154	U	-0.0267	+/-0.0592	0.0475	+/-0.0592	0.106	pCi/g						
Europium-155	U	-0.00242	+/-0.0531	0.0502	+/-0.0531	0.104	pCi/g						
Lead-212		0.684	+/-0.0599	0.0247	+/-0.0599	0.0516	pCi/g						
Lead-214		0.553	+/-0.0816	0.0323	+/-0.0816	0.068	pCi/g						
Manganese-54	U	-0.00702	+/-0.0224	0.0184	+/-0.0224	0.0393	pCi/g						
Niobium-94	U	0.0177	+/-0.0251	0.0163	+/-0.0251	0.0347	pCi/g						
Potassium-40		10.2	+/-0.810	0.144	+/-0.810	0.327	pCi/g						
Radium-226		0.504	+/-0.0851	0.032	+/-0.0851	0.0682	pCi/g						
Silver-108m	U	-0.00683	+/-0.0178	0.0157	+/-0.0178	0.0331	pCi/g						
Thallium-208		0.228	+/-0.040	0.0178	+/-0.040	0.0379	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

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: September 7, 2006

Client Sample ID: 9106-0001-106FS
Sample ID: 170132023

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

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

- > Result is greater than value reported
 - A The TIC is a suspected aldol-condensation product
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 - H Analytical holding time was exceeded
 - J Value is estimated
 - N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
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 - UI Gamma Spectroscopy—Uncertain identification
 - X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
 - Y QC Samples were not spiked with this compound
 - ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
 - h Preparation or preservation holding time was exceeded
- The above sample is reported on a dry weight basis.

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-110F
Sample ID: 170132024
Matrix: SE
Collect Date: 02-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 11.8%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.640	+/-0.148	0.0589	+/-0.148	0.128	pCi/g		MJH1	08/28/06	1757	562372	1
Americium-241	U	-0.0447	+/-0.117	0.0916	+/-0.117	0.191	pCi/g						
Bismuth-212		0.384	+/-0.269	0.139	+/-0.269	0.298	pCi/g						
Bismuth-214		0.513	+/-0.084	0.0293	+/-0.084	0.0626	pCi/g						
Cesium-134	U	0.0326	+/-0.0274	0.0208	+/-0.0274	0.0444	pCi/g						
Cesium-137		0.0609	+/-0.0269	0.0167	+/-0.0269	0.0358	pCi/g						
Cobalt-60	UI	0.00	+/-0.0366	0.0272	+/-0.0366	0.0582	pCi/g						
Europium-152	U	0.0514	+/-0.0503	0.0458	+/-0.0503	0.0962	pCi/g						
Europium-154	U	-0.0268	+/-0.0584	0.0465	+/-0.0584	0.104	pCi/g						
Europium-155	U	0.0111	+/-0.0518	0.0488	+/-0.0518	0.101	pCi/g						
Lead-212		0.584	+/-0.0556	0.0254	+/-0.0556	0.0529	pCi/g						
Lead-214		0.598	+/-0.0802	0.0285	+/-0.0802	0.0603	pCi/g						
Manganese-54	U	0.019	+/-0.0322	0.0168	+/-0.0322	0.0362	pCi/g						
Niobium-94	U	0.00338	+/-0.0169	0.0147	+/-0.0169	0.0315	pCi/g						
Potassium-40		8.86	+/-0.820	0.091	+/-0.820	0.221	pCi/g						
Radium-226		0.513	+/-0.084	0.0293	+/-0.084	0.0626	pCi/g						
Silver-108m	U	-0.011	+/-0.016	0.0136	+/-0.016	0.0289	pCi/g						
Thallium-208		0.201	+/-0.0386	0.0146	+/-0.0386	0.0315	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-110F
 Sample ID: 170132024

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-109F
Sample ID: 170132025
Matrix: SE
Collect Date: 02-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 14.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.01	+/-0.174	0.0584	+/-0.174	0.128	pCi/g		MJH1	08/28/06	1758	562372	1
Americium-241	U	-0.0336	+/-0.107	0.0851	+/-0.107	0.176	pCi/g						
Bismuth-212	U	0.306	+/-0.287	0.163	+/-0.287	0.348	pCi/g						
Bismuth-214		0.657	+/-0.0986	0.0393	+/-0.0986	0.0833	pCi/g						
Cesium-134	U	0.0496	+/-0.0372	0.0257	+/-0.0372	0.0545	pCi/g						
Cesium-137	U	-0.000678	+/-0.0234	0.0204	+/-0.0234	0.0435	pCi/g						
Cobalt-60	U	-0.00442	+/-0.0213	0.0178	+/-0.0213	0.0399	pCi/g						
Europium-152	U	-0.05	+/-0.0625	0.0512	+/-0.0625	0.108	pCi/g						
Europium-154	U	0.00746	+/-0.0686	0.0599	+/-0.0686	0.132	pCi/g						
Europium-155	U	0.0219	+/-0.0696	0.0515	+/-0.0696	0.107	pCi/g						
Lead-212		0.946	+/-0.0691	0.0321	+/-0.0691	0.0667	pCi/g						
Lead-214		0.805	+/-0.0924	0.0424	+/-0.0924	0.0886	pCi/g						
Manganese-54	U	0.0114	+/-0.0221	0.0198	+/-0.0221	0.0426	pCi/g						
Niobium-94	U	0.00952	+/-0.0215	0.0193	+/-0.0215	0.041	pCi/g						
Potassium-40		8.69	+/-0.941	0.180	+/-0.941	0.404	pCi/g						
Radium-226		0.657	+/-0.0986	0.0393	+/-0.0986	0.0833	pCi/g						
Silver-108m	U	0.00241	+/-0.0198	0.0169	+/-0.0198	0.0358	pCi/g						
Thallium-208		0.289	+/-0.0551	0.0179	+/-0.0551	0.0382	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

< Result is less than value reported

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-109F
Sample ID: 170132025

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-111F
 Sample ID: 170132026
 Matrix: SE
 Collect Date: 02-AUG-06
 Receive Date: 25-AUG-06
 Collector: Client
 Moisture: 14.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.799	+/-0.183	0.061	+/-0.183	0.132	pCi/g		MJH1	08/28/06	1758	562372	1
Americium-241	U	0.0218	+/-0.0914	0.0787	+/-0.0914	0.162	pCi/g						
Bismuth-212		0.561	+/-0.319	0.116	+/-0.319	0.251	pCi/g						
Bismuth-214		0.670	+/-0.0906	0.0372	+/-0.0906	0.0785	pCi/g						
Cesium-134	U	0.0281	+/-0.0255	0.0219	+/-0.0255	0.0466	pCi/g						
Cesium-137		0.161	+/-0.0372	0.0169	+/-0.0372	0.0361	pCi/g						
Cobalt-60		0.114	+/-0.0405	0.0157	+/-0.0405	0.0352	pCi/g						
Europium-152	U	-0.0276	+/-0.0569	0.049	+/-0.0569	0.103	pCi/g						
Europium-154	U	0.00614	+/-0.0742	0.0638	+/-0.0742	0.138	pCi/g						
Europium-155	U	0.0488	+/-0.0625	0.049	+/-0.0625	0.101	pCi/g						
Lead-212		0.790	+/-0.0634	0.0269	+/-0.0634	0.0559	pCi/g						
Lead-214		0.762	+/-0.0956	0.034	+/-0.0956	0.0712	pCi/g						
Manganese-54	U	0.000471	+/-0.0278	0.0206	+/-0.0278	0.0437	pCi/g						
Niobium-94	U	0.0111	+/-0.0188	0.0171	+/-0.0188	0.0363	pCi/g						
Potassium-40		9.54	+/-0.814	0.156	+/-0.814	0.350	pCi/g						
Radium-226		0.670	+/-0.0906	0.0372	+/-0.0906	0.0785	pCi/g						
Silver-108m	U	0.00951	+/-0.0179	0.0161	+/-0.0179	0.0339	pCi/g						
Thallium-208		0.264	+/-0.0403	0.0184	+/-0.0403	0.0391	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-111F
 Sample ID: 170132026

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-122F
Sample ID: 170132027
Matrix: SE
Collect Date: 04-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 21.2%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid--FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.01	+/-0.178	0.0692	+/-0.178	0.150	pCi/g		MJH1	08/28/06	1758	562372	1
Americium-241	U	0.00742	+/-0.106	0.0874	+/-0.106	0.181	pCi/g						
Bismuth-212		0.593	+/-0.342	0.161	+/-0.342	0.344	pCi/g						
Bismuth-214		0.744	+/-0.102	0.039	+/-0.102	0.0828	pCi/g						
Cesium-134	U	0.0465	+/-0.0409	0.0219	+/-0.0409	0.047	pCi/g						
Cesium-137		0.459	+/-0.0528	0.0219	+/-0.0528	0.0466	pCi/g						
Cobalt-60		0.422	+/-0.0575	0.0176	+/-0.0575	0.0396	pCi/g						
Europium-152	U	0.0297	+/-0.0563	0.0516	+/-0.0563	0.109	pCi/g						
Europium-154	U	-0.0577	+/-0.0671	0.0504	+/-0.0671	0.113	pCi/g						
Europium-155	U	0.0335	+/-0.066	0.060	+/-0.066	0.124	pCi/g						
Lead-212		0.969	+/-0.0669	0.0332	+/-0.0669	0.0689	pCi/g						
Lead-214		0.973	+/-0.0888	0.0331	+/-0.0888	0.070	pCi/g						
Manganese-54	UI	0.00	+/-0.0361	0.019	+/-0.0361	0.0411	pCi/g						
Niobium-94	U	-0.00348	+/-0.0223	0.0186	+/-0.0223	0.0396	pCi/g						
Potassium-40		10.5	+/-0.894	0.148	+/-0.894	0.341	pCi/g						
Radium-226		0.744	+/-0.102	0.039	+/-0.102	0.0828	pCi/g						
Silver-108m	U	0.0072	+/-0.0214	0.0191	+/-0.0214	0.0403	pCi/g						
Thallium-208		0.297	+/-0.0501	0.0223	+/-0.0501	0.0472	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-122F
 Sample ID: 170132027

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

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-123F
Sample ID: 170132028
Matrix: SE
Collect Date: 04-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 24.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.999	+/-0.216	0.0826	+/-0.216	0.176	pCi/g		MJH1	08/28/06	1759	562372	1
Americium-241	U	-0.0566	+/-0.142	0.0882	+/-0.142	0.182	pCi/g						
Bismuth-212	UI	0.00	+/-0.367	0.172	+/-0.367	0.366	pCi/g						
Bismuth-214		0.697	+/-0.097	0.0381	+/-0.097	0.081	pCi/g						
Cesium-134	UI	0.00	+/-0.0669	0.0311	+/-0.0669	0.0655	pCi/g						
Cesium-137		0.677	+/-0.0743	0.0227	+/-0.0743	0.0482	pCi/g						
Cobalt-60		0.765	+/-0.0797	0.0233	+/-0.0797	0.051	pCi/g						
Europium-152	U	-0.0283	+/-0.0665	0.0568	+/-0.0665	0.119	pCi/g						
Europium-154	U	0.0474	+/-0.0919	0.0802	+/-0.0919	0.172	pCi/g						
Europium-155	U	0.0227	+/-0.0704	0.0621	+/-0.0704	0.128	pCi/g						
Lead-212		0.945	+/-0.0833	0.0326	+/-0.0833	0.0677	pCi/g						
Lead-214		0.898	+/-0.108	0.0434	+/-0.108	0.0906	pCi/g						
Manganese-54	U	-0.0138	+/-0.0278	0.0231	+/-0.0278	0.0493	pCi/g						
Niobium-94	U	-0.00151	+/-0.0236	0.0194	+/-0.0236	0.0414	pCi/g						
Potassium-40		13.1	+/-0.943	0.166	+/-0.943	0.376	pCi/g						
Radium-226		0.697	+/-0.097	0.0381	+/-0.097	0.081	pCi/g						
Silver-108m	U	0.0262	+/-0.0237	0.0216	+/-0.0237	0.0453	pCi/g						
Thallium-208		0.376	+/-0.0729	0.0202	+/-0.0729	0.043	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-124F
Sample ID: 170132029
Matrix: SE
Collect Date: 04-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 15.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.603	+/-0.135	0.0498	+/-0.135	0.106	pCi/g						
Americium-241	U	0.0229	+/-0.132	0.087	+/-0.132	0.179	pCi/g		MJH1	08/28/06	1759	562372	1
Bismuth-212		0.568	+/-0.276	0.104	+/-0.276	0.221	pCi/g						
Bismuth-214		0.337	+/-0.0681	0.025	+/-0.0681	0.0527	pCi/g						
Cesium-134	UI	0.00	+/-0.0175	0.0174	+/-0.0175	0.0366	pCi/g						
Cesium-137		0.285	+/-0.0412	0.0126	+/-0.0412	0.0266	pCi/g						
Cobalt-60		0.254	+/-0.0465	0.0155	+/-0.0465	0.0335	pCi/g						
Europium-152	U	0.0171	+/-0.0391	0.0357	+/-0.0391	0.0743	pCi/g						
Europium-154	U	0.00232	+/-0.0457	0.0388	+/-0.0457	0.0842	pCi/g						
Europium-155	U	0.0775	+/-0.0639	0.0413	+/-0.0639	0.085	pCi/g						
Lead-212		0.519	+/-0.0608	0.0214	+/-0.0608	0.0442	pCi/g						
Lead-214		0.495	+/-0.0854	0.024	+/-0.0854	0.0502	pCi/g						
Manganese-54	U	0.00887	+/-0.0167	0.0152	+/-0.0167	0.0321	pCi/g						
Niobium-94	U	-0.00207	+/-0.0137	0.0121	+/-0.0137	0.0256	pCi/g						
Potassium-40		10.2	+/-0.920	0.143	+/-0.920	0.311	pCi/g						
Radium-226		0.337	+/-0.0681	0.025	+/-0.0681	0.0527	pCi/g						
Silver-108m	U	-0.00278	+/-0.0138	0.012	+/-0.0138	0.025	pCi/g						
Thallium-208		0.191	+/-0.0398	0.0129	+/-0.0398	0.0273	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-124F
 Sample ID: 170132029

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

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-125F
Sample ID: 170132030
Matrix: SE
Collect Date: 04-AUG-06
Receive Date: 25-AUG-06
Collector: Client
Moisture: 14.3%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.865	+/-0.174	0.058	+/-0.174	0.125	pCi/g		MJH1	08/28/06	1759	562372	1
Americium-241	U	-0.00558	+/-0.141	0.0859	+/-0.141	0.176	pCi/g						
Bismuth-212		0.440	+/-0.357	0.115	+/-0.357	0.248	pCi/g						
Bismuth-214		0.680	+/-0.0966	0.0341	+/-0.0966	0.0719	pCi/g						
Cesium-134	U	0.0459	+/-0.0287	0.023	+/-0.0287	0.0485	pCi/g						
Cesium-137	U	0.0271	+/-0.0264	0.0168	+/-0.0264	0.0359	pCi/g						
Cobalt-60	U1	0.00	+/-0.056	0.0181	+/-0.056	0.0396	pCi/g						
Europium-152	U	-0.098	+/-0.0665	0.0445	+/-0.0665	0.0933	pCi/g						
Europium-154	U	-0.00194	+/-0.0598	0.0497	+/-0.0598	0.109	pCi/g						
Europium-155	U	0.0163	+/-0.0619	0.058	+/-0.0619	0.119	pCi/g						
Lead-212		0.868	+/-0.0614	0.0281	+/-0.0614	0.0582	pCi/g						
Lead-214		0.745	+/-0.085	0.0376	+/-0.085	0.0783	pCi/g						
Manganese-54	U	0.0147	+/-0.0216	0.0175	+/-0.0216	0.0374	pCi/g						
Niobium-94	U	-4.970E-05	+/-0.0185	0.0161	+/-0.0185	0.0343	pCi/g						
Potassium-40		9.34	+/-0.827	0.148	+/-0.827	0.330	pCi/g						
Radium-226		0.680	+/-0.0966	0.0341	+/-0.0966	0.0719	pCi/g						
Silver-108m	U	-0.00151	+/-0.0187	0.0159	+/-0.0187	0.0334	pCi/g						
Thallium-208		0.279	+/-0.0439	0.0186	+/-0.0439	0.0392	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-125F
 Sample ID: 170132030

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

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

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

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

Report Date: September 7, 2006

Client Sample ID:	9106-0001-126F	Project:	YANK01204
Sample ID:	170132031	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	04-AUG-06		
Receive Date:	25-AUG-06		
Collector:	Client		
Moisture:	15.3%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
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Rad Gamma Spec Analysis

*Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth
Waived*

Actinium-228		0.904	+/-0.256	0.0859	+/-0.256	0.184	pCi/g		MJH1	08/28/06	1800	562372	1
Americium-241	U	-0.0153	+/-0.0414	0.0328	+/-0.0414	0.0675	pCi/g						
Bismuth-212		0.827	+/-0.447	0.171	+/-0.447	0.366	pCi/g						
Bismuth-214		0.766	+/-0.125	0.0446	+/-0.125	0.0942	pCi/g						
Cesium-134	U	0.0359	+/-0.0647	0.032	+/-0.0647	0.0675	pCi/g						
Cesium-137		0.244	+/-0.0636	0.025	+/-0.0636	0.053	pCi/g						
Cobalt-60		0.107	+/-0.0605	0.0254	+/-0.0605	0.0554	pCi/g						
Europium-152	U	0.0382	+/-0.0714	0.062	+/-0.0714	0.129	pCi/g						
Europium-154	U	0.000532	+/-0.0894	0.075	+/-0.0894	0.162	pCi/g						
Europium-155	U	0.0784	+/-0.0637	0.0563	+/-0.0637	0.116	pCi/g						
Lead-212		0.734	+/-0.0846	0.0411	+/-0.0846	0.0847	pCi/g						
Lead-214		0.840	+/-0.117	0.0446	+/-0.117	0.0931	pCi/g						
Manganese-54	U	0.033	+/-0.0308	0.0277	+/-0.0308	0.0585	pCi/g						
Niobium-94	U	-0.00241	+/-0.0294	0.0247	+/-0.0294	0.0521	pCi/g						
Potassium-40		10.3	+/-0.956	0.256	+/-0.956	0.556	pCi/g						
Radium-226		0.766	+/-0.125	0.0446	+/-0.125	0.0942	pCi/g						
Silver-108m	U	0.00154	+/-0.0244	0.0217	+/-0.0244	0.0455	pCi/g						
Thallium-208		0.268	+/-0.0712	0.0248	+/-0.0712	0.0523	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	JMB1	08/25/06	1728	562337

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: September 7, 2006

Client Sample ID: 9106-0001-126F
 Sample ID: 170132031

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

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

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

QUALITY CONTROL DATA

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QC Summary

Report Date: September 7, 2006

Page 1 of 12

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

Contact: East Hampton, Connecticut
Mr. Jack McCarthy

Workorder: 170132

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch 562551											
QC1201169378 170125005 DUP											
Americium-241		U	0.0864	U	0.067	pCi/g	25	(0% - 100%)	DDR1	09/03/06	12:11
			Uncert: +/-0.0853		+/-0.138						
			TPU: +/-0.086		+/-0.138						
Curium-242		U	0.0159	U	-0.0253	pCi/g	877	(0% - 100%)			
			Uncert: +/-0.0423		+/-0.0286						
			TPU: +/-0.0423		+/-0.0288						
Curium-243/244		U	0.0681	U	0.0674	pCi/g	1.	(0% - 100%)			
			Uncert: +/-0.077		+/-0.134						
			TPU: +/-0.0774		+/-0.134						
QC1201169380 LCS											
Americium-241	7.03				6.32	pCi/g	90	(75%-125%)		09/03/06	12:11
			Uncert: +/-0.638		+/-1.05						
			TPU: +/-1.05		-0.0483						
Curium-242				U	-0.0483	pCi/g					
			Uncert: +/-0.0462		+/-0.0466						
			TPU: +/-0.0466		7.03						
Curium-243/244	8.50				7.03	pCi/g	83	(75%-125%)			
			Uncert: +/-0.676		+/-1.15						
			TPU: +/-1.15								
QC1201169377 MB											
Americium-241				U	0.117	pCi/g				09/03/06	12:11
			Uncert: +/-0.126		+/-0.126						
			TPU: +/-0.126		-0.0282						
Curium-242				U	-0.0282	pCi/g					
			Uncert: +/-0.0226		+/-0.0229						
			TPU: +/-0.0229		0.00383						
Curium-243/244				U	0.00383	pCi/g					
			Uncert: +/-0.0932		+/-0.0932						
			TPU: +/-0.0932								
QC1201169379 170125005 MS											
Americium-241	10.8	U	0.0864		10.7	pCi/g	99	(75%-125%)		09/03/06	12:11
			Uncert: +/-0.0853		+/-1.83						
			TPU: +/-0.086		-0.00492						
Curium-242		U	0.0159	U	-0.00492	pCi/g					
			Uncert: +/-0.0423		+/-0.0956						
			TPU: +/-0.0423		+/-0.0956						
Curium-243/244	13.0	U	0.0681		12.6	pCi/g	97	(75%-125%)			
			Uncert: +/-0.077		+/-2.09						
			TPU: +/-0.0774								
Batch 562552											
QC1201169382 170125005 DUP											
Plutonium-238		U	0.00945	U	-0.0244	pCi/g	453	(0% - 100%)	DDR1	09/03/06	12:11

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QC Summary

Workorder: 170132

Page 2 of 12

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Alpha Spec											
Batch	562552										
Plutonium-239/240		Uncert:		+/-0.102							
		TPU:		+/-0.102							
	U		U	-0.0435		-0.0188					
		Uncert:		+/-0.0791		+/-0.0643					
		TPU:		+/-0.0793		+/-0.0643					
QC1201169384	LCS										
Plutonium-238			U	0.046	pCi/g			(75%-125%)		09/03/06	12:11
		Uncert:		+/-0.089							
		TPU:		+/-0.0891							
Plutonium-239/240	6.50			6.14	pCi/g		95	(75%-125%)			
		Uncert:		+/-0.642							
		TPU:		+/-0.894							
QC1201169381	MB										
Plutonium-238			U	-0.00886	pCi/g					09/03/06	12:11
		Uncert:		+/-0.0458							
		TPU:		+/-0.0458							
Plutonium-239/240			U	-0.00403	pCi/g						
		Uncert:		+/-0.0448							
		TPU:		+/-0.0448							
QC1201169383	170125005	MS									
Plutonium-238		U	0.00945	U	-0.0645	pCi/g		(75%-125%)			
		Uncert:		+/-0.102		+/-0.0868					
		TPU:		+/-0.102		+/-0.0871					
Plutonium-239/240	9.95	U	-0.0435		8.77	pCi/g		88 (75%-125%)			
		Uncert:		+/-0.0791		+/-0.927					
		TPU:		+/-0.0793		+/-1.28					
Batch	562553										
QC1201169386	170125005	DUP									
Plutonium-241		U	-11.3	U	-7.26	pCi/g	0	(0% - 100%) DDR1		09/06/06	16:50
		Uncert:		+/-11.8		+/-11.7					
		TPU:		+/-11.8		+/-11.7					
QC1201169388	LCS										
Plutonium-241	188				160	pCi/g		85 (75%-125%)		09/06/06	17:22
		Uncert:			+/-15.5						
		TPU:			+/-22.2						
QC1201169385	MB										
Plutonium-241				U	-8.25	pCi/g				09/06/06	16:34
		Uncert:			+/-9.47						
		TPU:			+/-9.47						
QC1201169387	170125005	MS									
Plutonium-241	201	U	-11.3		203	pCi/g		101 (75%-125%)		09/06/06	17:06
		Uncert:		+/-11.8		+/-19.1					
		TPU:		+/-11.8		+/-28.7					
Rad Gamma Spec											
Batch	562372										
QC1201168948	170125001	DUP									
Actinium-228			0.305	UI	0.00	pCi/g	6	(0% - 100%) MJH1		08/29/06	14:27
		Uncert:		+/-0.0937		+/-0.0926					
						+/-0.0926					

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QC Summary

Workorder: 170132

Page 3 of 12

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 562372											
Americium-241		TPU:		+/-0.0937							
	U			-0.00488	U	-0.0681		pCi/g	173		(0% - 100%)
		Uncert:		+/-0.0494		+/-0.139					
Bismuth-212		TPU:		+/-0.0494		+/-0.139					
			U	0.199	U	0.242		pCi/g	20		(0% - 100%)
		Uncert:		+/-0.157		+/-0.144					
Bismuth-214		TPU:		+/-0.157		+/-0.144					
				0.213		0.230		pCi/g	8		(0% - 100%)
		Uncert:		+/-0.053		+/-0.0744					
Cesium-134		TPU:		+/-0.053		+/-0.0744					
	U		U	-0.000615	U	0.017		pCi/g	215		(0% - 100%)
		Uncert:		+/-0.0135		+/-0.0186					
Cesium-137		TPU:		+/-0.0135		+/-0.0186					
				0.235		0.204		pCi/g	14		(0% - 100%)
		Uncert:		+/-0.0299		+/-0.0397					
Cobalt-60		TPU:		+/-0.0299		+/-0.0397					
				0.0679		0.0892		pCi/g	27		(0% - 100%)
		Uncert:		+/-0.0301		+/-0.0361					
Europium-152		TPU:		+/-0.0301		+/-0.0361					
	U		U	0.015	U	-0.0104		pCi/g	1120		(0% - 100%)
		Uncert:		+/-0.033		+/-0.0473					
Europium-154		TPU:		+/-0.033		+/-0.0473					
	U		U	0.0132	U	-0.0214		pCi/g	844		(0% - 100%)
		Uncert:		+/-0.0356		+/-0.0491					
Europium-155		TPU:		+/-0.0356		+/-0.0491					
	U		U	-0.0237	U	-0.00448		pCi/g	136		(0% - 100%)
		Uncert:		+/-0.0376		+/-0.0462					
Lead-212		TPU:		+/-0.0376		+/-0.0462					
				0.269		0.244		pCi/g	10		(0% - 100%)
		Uncert:		+/-0.0389		+/-0.0483					
Lead-214		TPU:		+/-0.0389		+/-0.0483					
				0.268		0.223		pCi/g	18		(0% - 100%)
		Uncert:		+/-0.0568		+/-0.0607					
Manganese-54		TPU:		+/-0.0568		+/-0.0607					
	U		U	0.00705	U	0.00379		pCi/g	60		(0% - 100%)
		Uncert:		+/-0.0128		+/-0.0164					
Niobium-94		TPU:		+/-0.0128		+/-0.0164					
	U		U	-0.00239	U	0.000295		pCi/g	256		(0% - 100%)
		Uncert:		+/-0.0114		+/-0.016					
Potassium-40		TPU:		+/-0.0114		+/-0.016					
				5.10		4.91		pCi/g	4		(0%-20%)
		Uncert:		+/-0.471		+/-0.656					
Radium-226		TPU:		+/-0.471		+/-0.656					
				0.213		0.230		pCi/g	8		(0% - 100%)
		Uncert:		+/-0.053		+/-0.0744					
Silver-108m		TPU:		+/-0.053		+/-0.0744					
	U		U	-0.00762	U	-0.00096		pCi/g	155		(0% - 100%)
		Uncert:		+/-0.012		+/-0.0146					

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QC Summary

Workorder: 170132

Page 4 of 12

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch 562372											
Thallium-208		TPU:	+/-0.012	+/-0.0146							
			0.0606	0.106	pCi/g	54		(0% - 100%)			
		Uncert:	+/-0.0255	+/-0.0385							
		TPU:	+/-0.0255	+/-0.0385							
QC1201168949	LCS										
Actinium-228				U	-0.109	pCi/g				08/28/06	18:06
		Uncert:			+/-0.648						
		TPU:			+/-0.648						
Americium-241	23.4				24.5	pCi/g	105	(75%-125%)			
		Uncert:			+/-0.624						
		TPU:			+/-0.624						
Bismuth-212				U	1.13	pCi/g					
		Uncert:			+/-1.10						
		TPU:			+/-1.10						
Bismuth-214				U	0.00418	pCi/g					
		Uncert:			+/-0.263						
		TPU:			+/-0.263						
Cesium-134				U	0.0393	pCi/g					
		Uncert:			+/-0.159						
		TPU:			+/-0.159						
Cesium-137	9.58				10.4	pCi/g	108	(75%-125%)			
		Uncert:			+/-0.509						
		TPU:			+/-0.509						
Cobalt-60	14.5				15.4	pCi/g	106	(75%-125%)			
		Uncert:			+/-0.682						
		TPU:			+/-0.682						
Europium-152					0.495	pCi/g					
		Uncert:			+/-0.394						
		TPU:			+/-0.394						
Europium-154				U	-0.144	pCi/g					
		Uncert:			+/-0.295						
		TPU:			+/-0.295						
Europium-155				U	0.295	pCi/g					
		Uncert:			+/-0.369						
		TPU:			+/-0.369						
Lead-212				U	-0.0816	pCi/g					
		Uncert:			+/-0.166						
		TPU:			+/-0.166						
Lead-214				U	0.121	pCi/g					
		Uncert:			+/-0.199						
		TPU:			+/-0.199						
Manganese-54				U	0.0342	pCi/g					
		Uncert:			+/-0.146						
		TPU:			+/-0.146						
Niobium-94				U	-0.14	pCi/g					
		Uncert:			+/-0.131						
		TPU:			+/-0.131						
Potassium-40				U	0.363	pCi/g					

GENERAL ENGINEERING LABORATORIES, LLC

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

QC Summary

Workorder: 170132

Page 5 of 12

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec									
Batch	562372								
Radium-226		U	0.00418	pCi/g			(75%-125%)		
	Uncert:		+/-1.23						
	TPU:		+/-1.23						
Silver-108m		U	-0.0232	pCi/g					
	Uncert:		+/-0.263						
	TPU:		+/-0.263						
Thallium-208		U	-0.106	pCi/g					
	Uncert:		+/-0.118						
	TPU:		+/-0.118						
QC1201168947 MB									
Actinium-228		U	0.0253	pCi/g					08/28/06 18:00
	Uncert:		+/-0.0412						
	TPU:		+/-0.0412						
Americium-241		U	-0.000294	pCi/g					
	Uncert:		+/-0.0103						
	TPU:		+/-0.0103						
Bismuth-212		U	-0.0573	pCi/g					
	Uncert:		+/-0.105						
	TPU:		+/-0.105						
Bismuth-214		U	0.0142	pCi/g					
	Uncert:		+/-0.0246						
	TPU:		+/-0.0246						
Cesium-134		U	-0.006	pCi/g					
	Uncert:		+/-0.013						
	TPU:		+/-0.013						
Cesium-137		U	0.00358	pCi/g					
	Uncert:		+/-0.0115						
	TPU:		+/-0.0115						
Cobalt-60		U	0.00466	pCi/g					
	Uncert:		+/-0.0132						
	TPU:		+/-0.0132						
Europium-152		U	-0.0168	pCi/g					
	Uncert:		+/-0.0401						
	TPU:		+/-0.0401						
Europium-154		U	-0.0107	pCi/g					
	Uncert:		+/-0.0371						
	TPU:		+/-0.0371						
Europium-155		U	0.00224	pCi/g					
	Uncert:		+/-0.0185						
	TPU:		+/-0.0185						
Lead-212		U	0.0215	pCi/g					
	Uncert:		+/-0.0162						
	TPU:		+/-0.0162						
Lead-214		U	0.0147	pCi/g					
	Uncert:		+/-0.0208						
	TPU:		+/-0.0208						

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

QC Summary

Workorder: 170132

Page 6 of 12

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec									
Batch	562372								
Manganese-54		U	0.00907	pCi/g					
	Uncert:		+/-0.0108						
	TPU:		+/-0.0108						
Niobium-94		U	-0.00448	pCi/g					
	Uncert:		+/-0.00974						
	TPU:		+/-0.00974						
Potassium-40		U	0.303	pCi/g					
	Uncert:		+/-0.175						
	TPU:		+/-0.175						
Radium-226		U	0.0142	pCi/g					
	Uncert:		+/-0.0246						
	TPU:		+/-0.0246						
Silver-108m		U	0.000295	pCi/g					
	Uncert:		+/-0.00968						
	TPU:		+/-0.00968						
Thallium-208		U	0.0058	pCi/g					
	Uncert:		+/-0.0123						
	TPU:		+/-0.0123						
Batch	562373								
QC1201168951	170132001 DUP								
Actinium-228			0.940	pCi/g	3		(0% - 100%)	MJH1	08/29/06 14:29
	Uncert:		+/-0.143						
	TPU:		+/-0.143						
Americium-241	U	U	-0.0463	pCi/g	1190		(0% - 100%)		
	Uncert:		+/-0.0742						
	TPU:		+/-0.0742						
Bismuth-212			0.504	pCi/g	14		(0% - 100%)		
	Uncert:		+/-0.254						
	TPU:		+/-0.254						
Bismuth-214			0.724	pCi/g	0		(0% - 100%)		
	Uncert:		+/-0.0757						
	TPU:		+/-0.0757						
Cesium-134	U	UI	0.0291	pCi/g	60		(0% - 100%)		
	Uncert:		+/-0.032						
	TPU:		+/-0.032						
Cesium-137			0.743	pCi/g	2		(0% - 100%)		
	Uncert:		+/-0.0489						
	TPU:		+/-0.0489						
Cobalt-60			0.627	pCi/g	15		(0% - 100%)		
	Uncert:		+/-0.0612						
	TPU:		+/-0.0612						
Europium-152	U	U	-0.00488	pCi/g	95		(0% - 100%)		
	Uncert:		+/-0.0485						
	TPU:		+/-0.0485						
Europium-154	U	U	0.029	pCi/g	294		(0% - 100%)		
	Uncert:		+/-0.0513						
	TPU:		+/-0.0513						
Europium-155	U	U	0.0447	pCi/g	25		(0% - 100%)		

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

QC Summary

Workorder: 170132

Page 8 of 12

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec									
Batch	562373								
Europium-152		U	-0.18	pCi/g					
	Uncert:		+/-0.328						
	TPU:		+/-0.328						
Europium-154		U	0.227	pCi/g					
	Uncert:		+/-0.271						
	TPU:		+/-0.271						
Europium-155		U	-0.143	pCi/g					
	Uncert:		+/-0.295						
	TPU:		+/-0.295						
Lead-212		U	-0.0695	pCi/g					
	Uncert:		+/-0.169						
	TPU:		+/-0.169						
Lead-214		U	0.0167	pCi/g					
	Uncert:		+/-0.233						
	TPU:		+/-0.233						
Manganese-54		U	-0.104	pCi/g					
	Uncert:		+/-0.143						
	TPU:		+/-0.143						
Niobium-94		U	-0.0889	pCi/g					
	Uncert:		+/-0.120						
	TPU:		+/-0.120						
Potassium-40		U	0.272	pCi/g					
	Uncert:		+/-1.10						
	TPU:		+/-1.10						
Radium-226		U	0.190	pCi/g			(75%-125%)		
	Uncert:		+/-0.239						
	TPU:		+/-0.239						
Silver-108m		U	-0.0248	pCi/g					
	Uncert:		+/-0.120						
	TPU:		+/-0.120						
Thallium-208		U	-0.134	pCi/g					
	Uncert:		+/-0.124						
	TPU:		+/-0.124						
QC1201168950 MB									
Actinium-228		U	0.0216	pCi/g					08/29/06 14:28
	Uncert:		+/-0.0695						
	TPU:		+/-0.0695						
Americium-241		U	0.0136	pCi/g					
	Uncert:		+/-0.0649						
	TPU:		+/-0.0649						
Bismuth-212		U	-0.0269	pCi/g					
	Uncert:		+/-0.0962						
	TPU:		+/-0.0962						
Bismuth-214		U	0.0038	pCi/g					
	Uncert:		+/-0.0237						
	TPU:		+/-0.0237						
Cesium-134		U	0.00475	pCi/g					
	Uncert:		+/-0.0121						

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

QC Summary

Workorder: 170132

Page 9 of 12

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	562373										
Cesium-137		TPU:		+/-0.0121							
			U	0.00641	pCi/g						
		Uncert:		+/-0.0202							
Cobalt-60		TPU:		+/-0.0202							
			U	0.00173	pCi/g						
		Uncert:		+/-0.0104							
Europium-152		TPU:		+/-0.0104							
			U	-0.00536	pCi/g						
		Uncert:		+/-0.0301							
Europium-154		TPU:		+/-0.0301							
			U	-0.00864	pCi/g						
		Uncert:		+/-0.0277							
Europium-155		TPU:		+/-0.0277							
			U	-0.0398	pCi/g						
		Uncert:		+/-0.0316							
Lead-212		TPU:		+/-0.0316							
			U	0.0203	pCi/g						
		Uncert:		+/-0.0328							
Lead-214		TPU:		+/-0.0328							
			U	0.0056	pCi/g						
		Uncert:		+/-0.0235							
Manganese-54		TPU:		+/-0.0235							
			U	-0.00481	pCi/g						
		Uncert:		+/-0.0107							
Niobium-94		TPU:		+/-0.0107							
			U	-0.00067	pCi/g						
		Uncert:		+/-0.0103							
Potassium-40		TPU:		+/-0.0103							
			U	0.0956	pCi/g						
		Uncert:		+/-0.244							
Radium-226		TPU:		+/-0.244							
			U	0.0038	pCi/g						
		Uncert:		+/-0.0237							
Silver-108m		TPU:		+/-0.0237							
			U	-0.00607	pCi/g						
		Uncert:		+/-0.00977							
Thallium-208		TPU:		+/-0.00977							
			U	0.0123	pCi/g						
		Uncert:		+/-0.011							
		TPU:		+/-0.011							
Rad Gas Flow											
Batch	562545										
	QC1201169352 170132001 DUP										
Strontium-90		U	0.00389	U	-0.00664	pCi/g	0	(0% - 100%)	KSD1	08/30/06	18:45
		Uncert:	+/-0.0104		+/-0.0116						
		TPU:	+/-0.0104		+/-0.0116						
	QC1201169354 LCS										
Strontium-90	1.21				1.03	pCi/g	86	(75%-125%)		08/30/06	19:22

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QC Summary

Workorder: 170132

Page 11 of 12

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Liquid Scintillation											
Batch	562521										
		Uncert:	+/-8.38								
		TPU:	+/-8.38								
QC1201169289	LCS										
Nickel-63		512		442	pCi/g		86	(75%-125%)		09/01/06	05:26
		Uncert:		+/-15.2							
		TPU:		+/-20.7							
QC1201169286	MB										
Nickel-63			U	3.69	pCi/g					09/01/06	03:51
		Uncert:		+/-7.93							
		TPU:		+/-7.93							
QC1201169288	170125007	MS									
Nickel-63		512	U	9.73	pCi/g		89	(75%-125%)		09/01/06	04:55
		Uncert:		+/-8.38							
		TPU:		+/-8.38							
Batch	562522										
QC1201169291	170132002	DUP									
Carbon-14			U	0.155	pCi/g	12		(0% - 100%)	AXD2	08/30/06	04:42
		Uncert:		+/-0.0912							
		TPU:		+/-0.0912							
QC1201169293	LCS										
Carbon-14		6.87		6.52	pCi/g		95	(75%-125%)		08/30/06	05:47
		Uncert:		+/-0.495							
		TPU:		+/-0.505							
QC1201169290	MB										
Carbon-14			U	-0.0361	pCi/g					08/30/06	03:54
		Uncert:		+/-0.0805							
		TPU:		+/-0.0805							
QC1201169292	170132002	MS									
Carbon-14		7.26		0.155	pCi/g		95	(75%-125%)		08/30/06	05:29
		Uncert:		+/-0.0912							
		TPU:		+/-0.0912							
Batch	562651										
QC1201169592	170132002	DUP									
Technetium-99			U	0.00437	pCi/g	0		(0% - 100%)	KXR1	09/02/06	13:09
		Uncert:		+/-0.175							
		TPU:		+/-0.175							
QC1201169594	LCS										
Technetium-99		12.9		11.6	pCi/g		90	(75%-125%)		09/02/06	14:12
		Uncert:		+/-0.350							
		TPU:		+/-0.439							
QC1201169591	MB										
Technetium-99			U	-0.00485	pCi/g					09/02/06	12:38
		Uncert:		+/-0.166							
		TPU:		+/-0.166							
QC1201169593	170132002	MS									
Technetium-99		12.9	U	0.00437	pCi/g		93	(75%-125%)		09/02/06	13:41
		Uncert:		+/-0.175							
		TPU:		+/-0.175							

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

QC Summary

Workorder: 170132

Page 12 of 12

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:

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

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

** Indicates analyte is a surrogate compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the 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.

Table of Contents

General Narrative	1
Chain of Custody and Supporting Documentation	4
Radiological Analysis	9
Sample Data Summary	14
Quality Control Data	36

General Narrative

CASE NARRATIVE
For
CONNECTICUT YANKEE
RE: Soil
PO# 002332
Work Order: 169489
SDG: MSR #06-1130

August 21, 2006

Laboratory Identification:

General Engineering Laboratories, LLC

Mailing Address:

P.O. Box 30712
Charleston, South Carolina 29417

Express Mail Delivery and Shipping Address:

2040 Savage Road
Charleston, South Carolina 29407

Telephone Number:

(843) 556-8171

Summary:

Sample receipt

The sample(s) for this Project arrived at General Engineering Laboratories, LLC, (GEL) in Charleston, South Carolina on August 17, 2006. All sample containers arrived without any visible signs of tampering or breakage. The chain of custody contained the proper documentation and signatures.

The laboratory received the following sample(s):

<u>Sample ID</u>	<u>Client Sample ID</u>
169489001	9106-0001-132F
169489002	9106-0001-112F
169489003	9106-0001-132A
169489004	9106-0001-132B
169489005	9106-0001-132C
169489006	9106-0001-132D
169489007	9106-0001-112A
169489008	9106-0001-112B
169489009	9106-0001-112C
169489010	9106-0001-112D

Items of Note:

There are no items of note.

Case Narrative:

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

Analytical Request:

Ten soil samples were analyzed for FSSGAM.

Internal Chain of Custody:

Custody was maintained for the sample(s).

Data Package:

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

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



Cheryl Jones
Project Manager

**Chain of Custody
And
Supporting
Documentation**

Connecticut Yankee Atomic Power Company						Chain of Custody Form				No. 2006-00496			
362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556													
Project Name: Haddam Neck Decommissioning						Analyses Requested				Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3924										Comments: <div style="text-align: center; font-size: 2em; font-weight: bold;">1694891</div>			
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones													
Priority: <input type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D. <input checked="" type="checkbox"/> 3 D.													
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size & Type Code	FSSGAM	FSSALL				Comment, Preservation	Lab Sample ID	
9106-0001-132F			SE	C	BP	X							
9106-0001-112F			SE	C	BP	X							
9106-0001-132A			SE	C	BP	X							
9106-0001-132B			SE	C	BP	X							
9106-0001-132C			SE	C	BP	X							
9106-0001-132D			SE	C	BP	X							
9106-0001-112A			SE	C	BP	X							
9106-0001-112B			SE	C	BP	X							
9106-0001-112C			SE	C	BP	X							
NOTES: PO #: 002332 MSR #: 06-1130 SSWP# NA <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: _____ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By <i>JAIME RICARTE</i>			Date/Time <i>8-16-06/1155</i>			2) Received By <i>C. Desirotta</i>			Date/Time <i>8/17/06/915A</i>			Bill of Lading # <i>7921 8130 3482</i>	
3) Relinquished By			Date/Time			4) Received By			Date/Time				
5) Relinquished By			Date/Time			6) Received By			Date/Time				

5

Chain of Custody Form

No. 2006-00497

Connecticut Yankee Atomic Power Company

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

Project Name: Haddam Neck Decommissioning			Analyses Requested				Lab Use Only		
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3924			Media Code	Sample Type Code	Container Size- & Type Code	FSSGAM	FSSALL	Comments:	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones									
Priority: <input type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D. <input checked="" type="checkbox"/> 3 D.									
Sample Designation	Date	Time						Comment, Preservation	Lab Sample ID
9106-0001-112D			SE	C	BP	X			
NOTES: PO #: 002332 MSR #: 06-1130 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA							Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp: _____ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>
1) Relinquished By <i>JAIME RICARTE</i>			Date/Time <i>8-16-06/1155</i>		2) Received By <i>C. Demicott</i>		Date/Time <i>8/17/06 @ 9:15a</i>		
3) Relinquished By			Date/Time		4) Received By		Date/Time		
5) Relinquished By			Date/Time		6) Received By		Date/Time		
							Bill of Lading # <i>7921 8130 3482</i>		

Figure 1. Sample Check-in List

Date/Time Received: 8/17/04 @ 915A.

SDG#: MSR#06-1130

Work Order Number: 1694897

Shipping Container ID: 7921 8130 3482 Chain of Custody #: 2606-80496

- 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 26°C
- 5. Vermiculite/packing materials is: Wet [] Dry []
- 6. Number of samples in shipping container: 10 - samples
- 7. Sample holding times exceeded? Yes [] No []

8. Samples have:	
<input checked="" type="checkbox"/> tape	<input type="checkbox"/> hazard labels
<input checked="" type="checkbox"/> custody seals	<input 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): none

Sample Custodian/Laboratory: C. Sauri Date: 8/17/04

Telephoned to: _____ On _____ By _____

RADIOLOGICAL ANALYSIS

**Radiochemistry Case Narrative
Connecticut Yankee Atomic Power Co. (YANK)
Work Order 169489**

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: 559393
Prep Batch Number: 559366

Sample ID	Client ID
169489001	9106-0001-132F
169489002	9106-0001-112F
169489003	9106-0001-132A
169489004	9106-0001-132B
169489005	9106-0001-132C
169489006	9106-0001-132D
169489007	9106-0001-112A
169489008	9106-0001-112B
169489009	9106-0001-112C
169489010	9106-0001-112D
1201161904	Method Blank (MB)
1201161905	169489001(9106-0001-132F) Sample Duplicate (DUP)
1201161906	Laboratory Control Sample (LCS)

SOP Reference

Procedure for preparation, analysis and reporting of analytical data are controlled by General Engineering Laboratories, LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-013 REV# 11.

Calibration Information:

Calibration Information

All initial and continuing calibration requirements have been met.

Standards Information

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

Sample Geometry

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

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

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

Designated QC

The following sample was used for QC: 169489001 (9106-0001-132F).

QC Information

All of the QC samples met the required acceptance limits.

Technical Information:**Holding Time**

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

Preparation Information

All preparation criteria have been met for these analyses.

Sample Re-prep/Re-analysis

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

Miscellaneous Information:**NCR Documentation**

Nonconformance reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. The following NCR was generated for this SDG: NCR 348221 was generated due to Failed RPD for DUP. 1. The relative percent difference (169489001 and 1201161905) did not meet the required duplication criteria for Lead-212 at 23.486%. 1. Pb-212 is a naturally emitting isotope. Reporting results.

Additional Comments

Additional comments were not required for this sample set.

Qualifier information

Qualifier	Reason	Analyte	Sample
UI	Data rejected due to high peak-width.	Bismuth-212	169489001
UI	Data rejected due to interference.	Cesium-134	169489003
		Europium-155	169489001
			169489003
UI	Data rejected due to low abundance.	Cesium-134	169489002
			169489004
			169489005
			169489007
			169489008
			169489009
			169489010
			1201161905

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: *L. Gmel* 8/21/06

COMPANY - WIDE NONCONFORMANCE REPORT			
Mo.Day Yr. 21-AUG-06	Division: Radiochemistry	Quality Criteria: Specifications	Type: Process
Instrument Type: GAMMA SPECTROMETER	Test / Method: EML HASL 300, 4.5.2.3	Matrix Type: Solid	Client Code: YANK
Batch ID: 559393	Sample Numbers: See Below		
Potentially affected work order(s)(SDG): 169489(MSR#06-1130),169493(MSR#06-1131)			
Application Issues: Failed RPD for DUP			
Specification and Requirements		NRG Disposition:	
Nonconformance Description:			
1. The relative percent difference (169489001 and 1201161905) did not meet the required duplication criteria for Lead-212 at 23.486%.		1. Pb-212 is a naturally emitting isotope. Reporting results.	

Originator's Name:
 Jimmy Hartley 21-AUG-06

Data Validator/Group Leader:
 Heather Anderson 21-AUG-06

Quality Review:

Director:

SAMPLE DATA SUMMARY

GENERAL ENGINEERING LABORATORIES, LLC

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

**Certificate of Analysis Report
for**

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#06-1130 GEL Work Order: 169489

The Qualifiers in this report are defined as follows:

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

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

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

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



Reviewed by _____

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID:	9106-0001-132F	Project:	YANK01204
Sample ID:	169489001	Client ID:	YANK001
Matrix:	SE	Vol. Recv.:	
Collect Date:	07-AUG-06		
Receive Date:	17-AUG-06		
Collector:	Client		
Moisture:	27.9%		

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.03	+/-0.245	0.0918	+/-0.245	0.196	pCi/g		MJH1	08/18/06	1315	559393	1
Americium-241	U	0.0548	+/-0.103	0.087	+/-0.103	0.180	pCi/g						
Bismuth-212	UI	0.00	+/-0.427	0.207	+/-0.427	0.436	pCi/g						
Bismuth-214		0.654	+/-0.137	0.0399	+/-0.137	0.0847	pCi/g						
Cesium-134	U	0.0706	+/-0.0524	0.0345	+/-0.0524	0.0725	pCi/g						
Cesium-137		0.558	+/-0.0668	0.0252	+/-0.0668	0.0533	pCi/g						
Cobalt-60		1.66	+/-0.124	0.0235	+/-0.124	0.0517	pCi/g						
Europium-152	U	-0.0057	+/-0.0712	0.0589	+/-0.0712	0.123	pCi/g						
Europium-154	U	-0.0388	+/-0.0741	0.0596	+/-0.0741	0.132	pCi/g						
Europium-155	UI	0.00	+/-0.111	0.0544	+/-0.111	0.113	pCi/g						
Lead-212		0.799	+/-0.0747	0.0323	+/-0.0747	0.067	pCi/g						
Lead-214		0.805	+/-0.123	0.0402	+/-0.123	0.0843	pCi/g						
Manganese-54	U	-0.000465	+/-0.0303	0.0254	+/-0.0303	0.0539	pCi/g						
Niobium-94	U	-0.00327	+/-0.0264	0.0223	+/-0.0264	0.0471	pCi/g						
Potassium-40		11.3	+/-1.02	0.185	+/-1.02	0.419	pCi/g						
Radium-226		0.654	+/-0.137	0.0399	+/-0.137	0.0847	pCi/g						
Silver-108m	U	0.00854	+/-0.0236	0.0212	+/-0.0236	0.0445	pCi/g						
Thallium-208		0.394	+/-0.0629	0.0188	+/-0.0629	0.0403	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	AXP2	08/17/06	1312	559366

The following Analytical Methods were performed

Method	Description
I	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-132F Project: YANK01204
 Sample ID: 169489001 Client ID: YANK001
 Vol. Recv.:

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

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

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-112F
Sample ID: 169489002
Matrix: SE
Collect Date: 02-AUG-06
Receive Date: 17-AUG-06
Collector: Client
Moisture: 43.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.06	+/-0.211	0.107	+/-0.211	0.221	pCi/g						
Americium-241	U	0.125	+/-0.116	0.0817	+/-0.116	0.167	pCi/g		MJH1	08/18/06	1315	559393	1
Bismuth-212		0.851	+/-0.345	0.188	+/-0.345	0.390	pCi/g						
Bismuth-214		0.905	+/-0.111	0.0425	+/-0.111	0.0881	pCi/g						
Cesium-134	UI	0.00	+/-0.0393	0.0314	+/-0.0393	0.0651	pCi/g						
Cesium-137		2.34	+/-0.111	0.0256	+/-0.111	0.0532	pCi/g						
Cobalt-60		2.65	+/-0.124	0.0239	+/-0.124	0.0508	pCi/g						
Europium-152	U	-0.00432	+/-0.0724	0.0607	+/-0.0724	0.125	pCi/g						
Europium-154	U	-0.0153	+/-0.0839	0.0694	+/-0.0839	0.147	pCi/g						
Europium-155	U	0.0707	+/-0.0686	0.0593	+/-0.0686	0.121	pCi/g						
Lead-212		1.25	+/-0.0793	0.0339	+/-0.0793	0.0694	pCi/g						
Lead-214		0.949	+/-0.113	0.045	+/-0.113	0.0927	pCi/g						
Manganese-54	U	0.0451	+/-0.0419	0.0263	+/-0.0419	0.0547	pCi/g						
Niobium-94	U	0.012	+/-0.0252	0.0217	+/-0.0252	0.0451	pCi/g						
Potassium-40		13.9	+/-0.991	0.207	+/-0.991	0.444	pCi/g						
Radium-226		0.905	+/-0.111	0.0425	+/-0.111	0.0881	pCi/g						
Silver-108m	U	0.0214	+/-0.0315	0.0236	+/-0.0315	0.0485	pCi/g						
Thallium-208		0.418	+/-0.0636	0.0225	+/-0.0636	0.0468	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	AXP2	08/17/06	1312	559366

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-112F
 Sample ID: 169489002

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

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-132A
Sample ID: 169489003
Matrix: SE
Collect Date: 11-AUG-06
Receive Date: 17-AUG-06
Collector: Client
Moisture: 31.8%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.19	+/-0.207	0.0693	+/-0.207	0.144	pCi/g						
Americium-241	U	0.0893	+/-0.121	0.0963	+/-0.121	0.197	pCi/g		MJH1	08/18/06	1315	559393	1
Bismuth-212		0.712	+/-0.213	0.133	+/-0.213	0.276	pCi/g						
Bismuth-214		0.833	+/-0.0801	0.0311	+/-0.0801	0.0645	pCi/g						
Cesium-134	UI	0.00	+/-0.0324	0.0188	+/-0.0324	0.0393	pCi/g						
Cesium-137		0.525	+/-0.0438	0.0172	+/-0.0438	0.0357	pCi/g						
Cobalt-60		1.62	+/-0.0869	0.0166	+/-0.0869	0.0354	pCi/g						
Europium-152	U	-0.0472	+/-0.0519	0.0414	+/-0.0519	0.0855	pCi/g						
Europium-154	U	0.0684	+/-0.0623	0.0535	+/-0.0623	0.113	pCi/g						
Europium-155	UI	0.00	+/-0.0727	0.0442	+/-0.0727	0.0905	pCi/g						
Lead-212		1.08	+/-0.0562	0.0234	+/-0.0562	0.048	pCi/g						
Lead-214		0.970	+/-0.0862	0.0306	+/-0.0862	0.0632	pCi/g						
Manganese-54	U-0.000782		+/-0.0227	0.0187	+/-0.0227	0.039	pCi/g						
Niobium-94	U	0.00632	+/-0.0182	0.0156	+/-0.0182	0.0324	pCi/g						
Potassium-40		13.0	+/-0.754	0.126	+/-0.754	0.274	pCi/g						
Radium-226		0.833	+/-0.0801	0.0311	+/-0.0801	0.0645	pCi/g						
Silver-108m	U	-0.00519	+/-0.017	0.0147	+/-0.017	0.0305	pCi/g						
Thallium-208		0.316	+/-0.0483	0.016	+/-0.0483	0.0332	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	AXP2	08/17/06	1312	559366

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-132A
 Sample ID: 169489003

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

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-132B
Sample ID: 169489004
Matrix: SE
Collect Date: 11-AUG-06
Receive Date: 17-AUG-06
Collector: Client
Moisture: 28.5%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.08	+/-0.244	0.113	+/-0.244	0.233	pCi/g		MJH1	08/18/06	1315	559393	1
Americium-241	U	0.147	+/-0.110	0.0817	+/-0.110	0.167	pCi/g						
Bismuth-212		0.681	+/-0.364	0.202	+/-0.364	0.419	pCi/g						
Bismuth-214		0.521	+/-0.110	0.0448	+/-0.110	0.0926	pCi/g						
Cesium-134	UI	0.00	+/-0.0539	0.0325	+/-0.0539	0.0671	pCi/g						
Cesium-137		1.25	+/-0.0738	0.0253	+/-0.0738	0.0524	pCi/g						
Cobalt-60		3.56	+/-0.133	0.0219	+/-0.133	0.0469	pCi/g						
Europium-152	U	-0.0214	+/-0.0677	0.0569	+/-0.0677	0.117	pCi/g						
Europium-154	U	0.0341	+/-0.0832	0.0718	+/-0.0832	0.152	pCi/g						
Europium-155	U	0.0966	+/-0.0619	0.0555	+/-0.0619	0.114	pCi/g						
Lead-212		0.903	+/-0.0645	0.0321	+/-0.0645	0.0657	pCi/g						
Lead-214		0.706	+/-0.0984	0.0431	+/-0.0984	0.0887	pCi/g						
Manganese-54	U	0.00978	+/-0.0344	0.0291	+/-0.0344	0.0601	pCi/g						
Niobium-94	U	-0.00758	+/-0.0277	0.0232	+/-0.0277	0.0481	pCi/g						
Potassium-40		13.2	+/-0.906	0.185	+/-0.906	0.400	pCi/g						
Radium-226		0.521	+/-0.110	0.0448	+/-0.110	0.0926	pCi/g						
Silver-108m	U	-0.00177	+/-0.0264	0.022	+/-0.0264	0.0453	pCi/g						
Thallium-208		0.297	+/-0.0591	0.0236	+/-0.0591	0.0488	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	AXP2	08/17/06	1312	559366

The following Analytical Methods were performed

Method	Description
I	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

- * A quality control analyte recovery is outside of specified acceptance criteria
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East Hampton, Connecticut 06424
 Contact: Mr. Jack McCarthy
 Project: Soils PO# 002332

Report Date: August 21, 2006

Client Sample ID: 9106-0001-132B
 Sample ID: 169489004

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

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

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Address : 362 Injun Hollow Rd

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-132C
Sample ID: 169489005
Matrix: SE
Collect Date: 11-AUG-06
Receive Date: 17-AUG-06
Collector: Client
Moisture: 18%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.814	+/-0.152	0.0601	+/-0.152	0.130	pCi/g						
Americium-241	U	0.0306	+/-0.0879	0.0846	+/-0.0879	0.174	pCi/g		MJH1	08/18/06	1316	559393	1
Bismuth-212		0.532	+/-0.294	0.117	+/-0.294	0.253	pCi/g						
Bismuth-214		0.821	+/-0.0975	0.0329	+/-0.0975	0.0699	pCi/g						
Cesium-134	UI	0.00	+/-0.0308	0.0215	+/-0.0308	0.0458	pCi/g						
Cesium-137	U	0.0145	+/-0.0195	0.0179	+/-0.0195	0.0381	pCi/g						
Cobalt-60	U	0.0226	+/-0.0231	0.0217	+/-0.0231	0.0471	pCi/g						
Europium-152	U	-0.0194	+/-0.0484	0.043	+/-0.0484	0.0907	pCi/g						
Europium-154	U	-0.00311	+/-0.0706	0.0601	+/-0.0706	0.130	pCi/g						
Europium-155	U	0.0612	+/-0.0812	0.0518	+/-0.0812	0.107	pCi/g						
Lead-212		0.865	+/-0.0633	0.0279	+/-0.0633	0.058	pCi/g						
Lead-214		0.945	+/-0.0936	0.0309	+/-0.0936	0.0651	pCi/g						
Manganese-54	U	0.028	+/-0.0186	0.0155	+/-0.0186	0.0334	pCi/g						
Niobium-94	U	-0.0121	+/-0.0182	0.0147	+/-0.0182	0.0315	pCi/g						
Potassium-40		10.4	+/-0.911	0.163	+/-0.911	0.364	pCi/g						
Radium-226		0.821	+/-0.0975	0.0329	+/-0.0975	0.0699	pCi/g						
Silver-108m	U	-0.00579	+/-0.0171	0.0149	+/-0.0171	0.0316	pCi/g						
Thallium-208		0.275	+/-0.0501	0.0174	+/-0.0501	0.0369	pCi/g						

The following Prep Methods were performed

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	AXP2	08/17/06	1312	559366

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: August 21, 2006

Client Sample ID: 9106-0001-132C
Sample ID: 169489005

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

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-132D
Sample ID: 169489006
Matrix: SE
Collect Date: 11-AUG-06
Receive Date: 17-AUG-06
Collector: Client
Moisture: 24.4%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.953	+/-0.221	0.068	+/-0.221	0.146	pCi/g		MJH1	08/18/06	1316	559393	1
Americium-241	U	0.0091	+/-0.126	0.084	+/-0.126	0.173	pCi/g						
Bismuth-212		1.15	+/-0.319	0.126	+/-0.319	0.271	pCi/g						
Bismuth-214		0.780	+/-0.0989	0.0349	+/-0.0989	0.0738	pCi/g						
Cesium-134	U	0.0515	+/-0.0385	0.0247	+/-0.0385	0.0522	pCi/g						
Cesium-137		0.311	+/-0.0437	0.0189	+/-0.0437	0.0402	pCi/g						
Cobalt-60		0.431	+/-0.062	0.0153	+/-0.062	0.0342	pCi/g						
Europium-152	U	-0.00842	+/-0.0543	0.048	+/-0.0543	0.101	pCi/g						
Europium-154	U	-0.00698	+/-0.0661	0.0549	+/-0.0661	0.120	pCi/g						
Europium-155	U	0.0858	+/-0.061	0.0577	+/-0.061	0.119	pCi/g						
Lead-212		0.927	+/-0.0645	0.0295	+/-0.0645	0.0611	pCi/g						
Lead-214		0.809	+/-0.0949	0.0368	+/-0.0949	0.0768	pCi/g						
Manganese-54	U	0.0222	+/-0.0269	0.0194	+/-0.0269	0.0413	pCi/g						
Niobium-94	U	0.021	+/-0.020	0.0181	+/-0.020	0.0384	pCi/g						
Potassium-40		11.0	+/-0.892	0.152	+/-0.892	0.341	pCi/g						
Radium-226		0.780	+/-0.0989	0.0349	+/-0.0989	0.0738	pCi/g						
Silver-108m	U	-0.00199	+/-0.0198	0.0172	+/-0.0198	0.0362	pCi/g						
Thallium-208		0.287	+/-0.0511	0.0182	+/-0.0511	0.0386	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	AXP2	08/17/06	1312	559366

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-132D
Sample ID: 169489006

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

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-112A
Sample ID: 169489007
Matrix: SE
Collect Date: 14-AUG-06
Receive Date: 17-AUG-06
Collector: Client
Moisture: 39.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.17	+/-0.220	0.0988	+/-0.220	0.205	pCi/g						
Americium-241	U	0.128	+/-0.116	0.0835	+/-0.116	0.171	pCi/g		MJH1	08/18/06	1316	559393	1
Bismuth-212		0.828	+/-0.299	0.169	+/-0.299	0.352	pCi/g						
Bismuth-214		0.741	+/-0.104	0.0446	+/-0.104	0.0924	pCi/g						
Cesium-134	UI	0.00	+/-0.0571	0.0293	+/-0.0571	0.0608	pCi/g						
Cesium-137		2.20	+/-0.0876	0.0219	+/-0.0876	0.0457	pCi/g						
Cobalt-60		1.83	+/-0.0987	0.0192	+/-0.0987	0.0414	pCi/g						
Europium-152	U	-0.0307	+/-0.0725	0.0592	+/-0.0725	0.122	pCi/g						
Europium-154	U	0.00545	+/-0.0739	0.0609	+/-0.0739	0.130	pCi/g						
Europium-155	U	-0.0387	+/-0.0683	0.0583	+/-0.0683	0.119	pCi/g						
Lead-212		1.11	+/-0.0677	0.0321	+/-0.0677	0.0658	pCi/g						
Lead-214		0.883	+/-0.109	0.0473	+/-0.109	0.0972	pCi/g						
Manganese-54	U	0.00409	+/-0.0279	0.0236	+/-0.0279	0.0491	pCi/g						
Niobium-94	U	0.011	+/-0.0235	0.0203	+/-0.0235	0.0423	pCi/g						
Potassium-40		14.1	+/-0.876	0.164	+/-0.876	0.358	pCi/g						
Radium-226		0.741	+/-0.104	0.0446	+/-0.104	0.0924	pCi/g						
Silver-108m	U	-0.0107	+/-0.0258	0.0208	+/-0.0258	0.043	pCi/g						
Thallium-208		0.370	+/-0.0475	0.0219	+/-0.0475	0.0455	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	AXP2	08/17/06	1312	559366

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

GENERAL ENGINEERING LABORATORIES, LLC

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-112A
Sample ID: 169489007

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

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-112B
Sample ID: 169489008
Matrix: SE
Collect Date: 14-AUG-06
Receive Date: 17-AUG-06
Collector: Client
Moisture: 28.7%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		1.07	+/-0.147	0.0548	+/-0.147	0.114	pCi/g		MJH1	08/18/06	1317	559393	1
Americium-241	U	0.0756	+/-0.106	0.0857	+/-0.106	0.176	pCi/g						
Bismuth-212		0.644	+/-0.196	0.108	+/-0.196	0.225	pCi/g						
Bismuth-214		0.703	+/-0.0761	0.0287	+/-0.0761	0.0594	pCi/g						
Cesium-134	UI	0.00	+/-0.0284	0.0184	+/-0.0284	0.0382	pCi/g						
Cesium-137		1.48	+/-0.0633	0.0143	+/-0.0633	0.0298	pCi/g						
Cobalt-60		0.981	+/-0.0677	0.0132	+/-0.0677	0.0281	pCi/g						
Europium-152	U	0.0301	+/-0.0672	0.041	+/-0.0672	0.0846	pCi/g						
Europium-154	U	0.019	+/-0.0512	0.0435	+/-0.0512	0.0918	pCi/g						
Europium-155	U	0.0394	+/-0.0692	0.0479	+/-0.0692	0.0982	pCi/g						
Lead-212		1.00	+/-0.0537	0.0236	+/-0.0537	0.0485	pCi/g						
Lead-214		0.848	+/-0.0763	0.0286	+/-0.0763	0.0589	pCi/g						
Manganese-54	U	0.0186	+/-0.0222	0.0165	+/-0.0222	0.0342	pCi/g						
Niobium-94	U	0.00178	+/-0.018	0.0131	+/-0.018	0.0273	pCi/g						
Potassium-40		14.2	+/-0.695	0.101	+/-0.695	0.219	pCi/g						
Radium-226		0.703	+/-0.0761	0.0287	+/-0.0761	0.0594	pCi/g						
Silver-108m	U	0.00208	+/-0.0164	0.0144	+/-0.0164	0.0298	pCi/g						
Thallium-208		0.301	+/-0.042	0.0145	+/-0.042	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	AXP2	08/17/06	1312	559366

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-112B
Sample ID: 169489008

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
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- > Result is greater than value reported
 - A The TIC is a suspected aldol-condensation product
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 - D Results are reported from a diluted aliquot of the sample
 - H Analytical holding time was exceeded
 - J Value is estimated
 - N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
 - R Sample results are rejected
 - U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
 - UI Gamma Spectroscopy--Uncertain identification
 - X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
 - Y QC Samples were not spiked with this compound
 - ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
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- 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: August 21, 2006

Client Sample ID: 9106-0001-112C
Sample ID: 169489009
Matrix: SE
Collect Date: 15-AUG-06
Receive Date: 17-AUG-06
Collector: Client
Moisture: 19.9%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.801	+/-0.180	0.056	+/-0.180	0.119	pCi/g						
Americium-241	U	0.0214	+/-0.0414	0.0394	+/-0.0414	0.0812	pCi/g		MJH1	08/18/06	1317	559393	1
Bismuth-212		0.465	+/-0.239	0.138	+/-0.239	0.291	pCi/g						
Bismuth-214		0.545	+/-0.0847	0.0288	+/-0.0847	0.0607	pCi/g						
Cesium-134	UI	0.00	+/-0.0334	0.0233	+/-0.0334	0.0487	pCi/g						
Cesium-137		0.746	+/-0.0861	0.0163	+/-0.0861	0.0343	pCi/g						
Cobalt-60		0.520	+/-0.0652	0.0152	+/-0.0652	0.0332	pCi/g						
Europium-152	U	0.0216	+/-0.045	0.0413	+/-0.045	0.0862	pCi/g						
Europium-154	U	-0.0288	+/-0.0508	0.0395	+/-0.0508	0.0867	pCi/g						
Europium-155	U	0.0581	+/-0.0468	0.0439	+/-0.0468	0.0903	pCi/g						
Lead-212		0.787	+/-0.0899	0.0303	+/-0.0899	0.0623	pCi/g						
Lead-214		0.576	+/-0.0834	0.0279	+/-0.0834	0.0585	pCi/g						
Manganese-54	U	-0.00473	+/-0.0188	0.0162	+/-0.0188	0.0344	pCi/g						
Niobium-94	U	0.00483	+/-0.0155	0.0141	+/-0.0155	0.0299	pCi/g						
Potassium-40		10.6	+/-0.950	0.112	+/-0.950	0.252	pCi/g						
Radium-226		0.545	+/-0.0847	0.0288	+/-0.0847	0.0607	pCi/g						
Silver-108m	U	0.00971	+/-0.0166	0.015	+/-0.0166	0.0314	pCi/g						
Thallium-208		0.272	+/-0.0457	0.0164	+/-0.0457	0.0344	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	AXP2	08/17/06	1313	559366

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

The Qualifiers in this report are defined as follows :

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

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Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-112C
 Sample ID: 169489009

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
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- > Result is greater than value reported
 - A The TIC is a suspected aldol-condensation product
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 - H Analytical holding time was exceeded
 - J Value is estimated
 - N/A Spike recovery limits do not apply. Sample concentration exceeds spike concentration by 4X or more
 - R Sample results are rejected
 - U Analyte was analyzed for, but not detected above the MDL, MDA, or LOD.
 - UI Gamma Spectroscopy—Uncertain identification
 - X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
 - Y QC Samples were not spiked with this compound
 - ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL
 - h Preparation or preservation holding time was exceeded
- 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: August 21, 2006

Client Sample ID: 9106-0001-112D
Sample ID: 169489010
Matrix: SE
Collect Date: 15-AUG-06
Receive Date: 17-AUG-06
Collector: Client
Moisture: 19.6%

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

Parameter	Qualifier	Result	Uncertainty	LC	TPU	MDA	Units	DF	Analyst	Date	Time	Batch	Mtd
Rad Gamma Spec Analysis													
<i>Gamma, Solid-FSS GAM & ALL FSS 226 Ingrowth</i>													
<i>Waived</i>													
Actinium-228		0.729	+/-0.146	0.0411	+/-0.146	0.087	pCi/g		MJH1	08/18/06	1317	559393	1
Americium-241	U	-0.0381	+/-0.0558	0.0534	+/-0.0558	0.110	pCi/g						
Bismuth-212		0.574	+/-0.213	0.0874	+/-0.213	0.184	pCi/g						
Bismuth-214		0.581	+/-0.0677	0.0243	+/-0.0677	0.0507	pCi/g						
Cesium-134	UI	0.00	+/-0.0226	0.0156	+/-0.0226	0.0326	pCi/g						
Cesium-137		0.542	+/-0.0411	0.0121	+/-0.0411	0.0255	pCi/g						
Cobalt-60		0.308	+/-0.0358	0.011	+/-0.0358	0.0238	pCi/g						
Europium-152	U	0.00733	+/-0.0366	0.0338	+/-0.0366	0.0702	pCi/g						
Europium-154	U	0.0297	+/-0.0423	0.0377	+/-0.0423	0.0803	pCi/g						
Europium-155	U	0.0713	+/-0.0587	0.0392	+/-0.0587	0.0806	pCi/g						
Lead-212		0.771	+/-0.0446	0.0202	+/-0.0446	0.0416	pCi/g						
Lead-214		0.672	+/-0.071	0.0227	+/-0.071	0.0471	pCi/g						
Manganese-54	U	0.00752	+/-0.0139	0.0127	+/-0.0139	0.0266	pCi/g						
Niobium-94	U	0.00559	+/-0.0126	0.0116	+/-0.0126	0.0243	pCi/g						
Potassium-40		10.9	+/-0.586	0.0941	+/-0.586	0.206	pCi/g						
Radium-226		0.581	+/-0.0677	0.0243	+/-0.0677	0.0507	pCi/g						
Silver-108m	U	0.00191	+/-0.0126	0.0114	+/-0.0126	0.0238	pCi/g						
Thallium-208		0.236	+/-0.0295	0.0125	+/-0.0295	0.0262	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	AXP2	08/17/06	1313	559366

The following Analytical Methods were performed

Method	Description
1	EML HASL 300, 4.5.2.3

Notes:

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

Certificate of Analysis

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

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

Report Date: August 21, 2006

Client Sample ID: 9106-0001-112D
 Sample ID: 169489010

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

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

QUALITY CONTROL DATA

GENERAL ENGINEERING LABORATORIES, LLC

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

QC Summary

Client : Connecticut Yankee Atomic Power
362 Injun Hollow Rd

Report Date: August 21, 2006
Page 1 of 5

Contact: East Hampton, Connecticut
Mr. Jack McCarthy

Workorder: 169489

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	559393										
QC1201161905 169489001 DUP											
Actinium-228		1.03		0.939	pCi/g	10		(0% - 100%)	MJH1	08/18/06	16:29
	Uncert:	+/-0.245		+/-0.174							
	TPU:	+/-0.245		+/-0.174							
Americium-241	U	0.0548	U	0.153	pCi/g	95		(0% - 100%)			
	Uncert:	+/-0.103		+/-0.118							
	TPU:	+/-0.103		+/-0.118							
Bismuth-212	UI	0.00		0.672	pCi/g	13*		(0% - 100%)			
	Uncert:	+/-0.427		+/-0.252							
	TPU:	+/-0.427		+/-0.252							
Bismuth-214		0.654		0.799	pCi/g	20		(0% - 100%)			
	Uncert:	+/-0.137		+/-0.0914							
	TPU:	+/-0.137		+/-0.0914							
Cesium-134	U	0.0706	UI	0.00	pCi/g	24		(0% - 100%)			
	Uncert:	+/-0.0524		+/-0.0359							
	TPU:	+/-0.0524		+/-0.0359							
Cesium-137		0.558		0.562	pCi/g	1		(0% - 100%)			
	Uncert:	+/-0.0668		+/-0.0427							
	TPU:	+/-0.0668		+/-0.0427							
Cobalt-60		1.66		1.72	pCi/g	3		(0% - 20%)			
	Uncert:	+/-0.124		+/-0.087							
	TPU:	+/-0.124		+/-0.087							
Europium-152	U	-0.0057	U	-0.0116	pCi/g	68		(0% - 100%)			
	Uncert:	+/-0.0712		+/-0.0537							
	TPU:	+/-0.0712		+/-0.0537							
Europium-154	U	-0.0388	U	-0.0661	pCi/g	52		(0% - 100%)			
	Uncert:	+/-0.0741		+/-0.0619							
	TPU:	+/-0.0741		+/-0.0619							
Europium-155	UI	0.00	U	0.0287	pCi/g	136		(0% - 100%)			
	Uncert:	+/-0.111		+/-0.052							
	TPU:	+/-0.111		+/-0.052							
Lead-212		0.799		1.01	pCi/g	24		(0% - 20%)			
	Uncert:	+/-0.0747		+/-0.0574							
	TPU:	+/-0.0747		+/-0.0574							
Lead-214		0.805		0.946	pCi/g	16		(0% - 20%)			
	Uncert:	+/-0.123		+/-0.0832							
	TPU:	+/-0.123		+/-0.0832							
Manganese-54	U	-0.000465	U	0.00889	pCi/g	222		(0% - 100%)			
	Uncert:	+/-0.0303		+/-0.0174							
	TPU:	+/-0.0303		+/-0.0174							
Niobium-94	U	-0.00327	U	0.00534	pCi/g	833		(0% - 100%)			
	Uncert:	+/-0.0264		+/-0.0181							
	TPU:	+/-0.0264		+/-0.0181							

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QC Summary

Workorder: 169489

Page 2 of 5

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec											
Batch	559393										
Potassium-40		11.3		12.9	pCi/g	13		(0% - 20%)			
	Uncert:	+/-1.02		+/-0.740							
	TPU:	+/-1.02		+/-0.740							
Radium-226		0.654		0.799	pCi/g	20		(0% - 100%)			
	Uncert:	+/-0.137		+/-0.0914							
	TPU:	+/-0.137		+/-0.0914							
Silver-108m	U	0.00854	U	-0.0148	pCi/g	748		(0% - 100%)			
	Uncert:	+/-0.0236		+/-0.0167							
	TPU:	+/-0.0236		+/-0.0167							
Thallium-208		0.394		0.332	pCi/g	17		(0% - 100%)			
	Uncert:	+/-0.0629		+/-0.0441							
	TPU:	+/-0.0629		+/-0.0441							
QC1201161906	LCS										
Actinium-228			U	0.692	pCi/g					08/18/06	16:30
	Uncert:			+/-0.624							
	TPU:			+/-0.624							
Americium-241	23.4			25.5	pCi/g		109	(75%-125%)			
	Uncert:			+/-1.42							
	TPU:			+/-1.42							
Bismuth-212			U	0.670	pCi/g						
	Uncert:			+/-1.36							
	TPU:			+/-1.36							
Bismuth-214			U	0.0325	pCi/g						
	Uncert:			+/-0.247							
	TPU:			+/-0.247							
Cesium-134			U	-0.00147	pCi/g						
	Uncert:			+/-0.156							
	TPU:			+/-0.156							
Cesium-137	9.58			9.55	pCi/g		100	(75%-125%)			
	Uncert:			+/-0.496							
	TPU:			+/-0.496							
Cobalt-60	14.6			15.6	pCi/g		107	(75%-125%)			
	Uncert:			+/-0.680							
	TPU:			+/-0.680							
Europium-152			U	0.193	pCi/g						
	Uncert:			+/-0.310							
	TPU:			+/-0.310							
Europium-154			U	-0.0809	pCi/g						
	Uncert:			+/-0.407							
	TPU:			+/-0.407							
Europium-155			U	-0.0999	pCi/g						
	Uncert:			+/-0.330							
	TPU:			+/-0.330							
Lead-212			U	0.0195	pCi/g						
	Uncert:			+/-0.167							
	TPU:			+/-0.167							
Lead-214			U	-0.188	pCi/g						
	Uncert:			+/-0.225							

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QC Summary

Workorder: 169489

Page 3 of 5

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	559393									
Manganese-54	TPU:		+/-0.225							
		U	-0.037	pCi/g						
	Uncert:		+/-0.167							
Niobium-94	TPU:		+/-0.167							
		U	0.00951	pCi/g						
	Uncert:		+/-0.128							
Potassium-40	TPU:		+/-0.128							
		U	-0.215	pCi/g						
	Uncert:		+/-1.21							
Radium-226	TPU:		+/-1.21							
		U	0.0325	pCi/g			(75%-125%)			
	Uncert:		+/-0.247							
Silver-108m	TPU:		+/-0.247							
		U	0.0256	pCi/g						
	Uncert:		+/-0.118							
Thallium-208	TPU:		+/-0.118							
		U	-0.021	pCi/g						
	Uncert:		+/-0.129							
	TPU:		+/-0.129							
QC1201161904	MB									
Actinium-228									08/18/06	16:29
	Uncert:		+/-0.0385							
Americium-241	TPU:		+/-0.0385							
		U	0.00443	pCi/g						
	Uncert:		+/-0.0405							
Bismuth-212	TPU:		+/-0.0405							
		U	0.0079	pCi/g						
	Uncert:		+/-0.0865							
Bismuth-214	TPU:		+/-0.0865							
		U	0.0138	pCi/g						
	Uncert:		+/-0.0472							
Cesium-134	TPU:		+/-0.0472							
		U	-0.00723	pCi/g						
	Uncert:		+/-0.00999							
Cesium-137	TPU:		+/-0.00999							
		U	-0.00436	pCi/g						
	Uncert:		+/-0.0111							
Cobalt-60	TPU:		+/-0.0111							
		U	0.00225	pCi/g						
	Uncert:		+/-0.0112							
Europium-152	TPU:		+/-0.0112							
		U	-0.00921	pCi/g						
	Uncert:		+/-0.028							
Europium-154	TPU:		+/-0.028							
		U	0.00916	pCi/g						
	Uncert:		+/-0.0359							
Europium-155	TPU:		+/-0.0359							
		U	-0.0231	pCi/g						

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QC Summary

Workorder: 169489

Page 4 of 5

Parmname	NOM	Sample Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time
Rad Gamma Spec										
Batch	559393									
Lead-212	Uncert:		+/-0.0264							
	TPU:		+/-0.0264							
Lead-214	Uncert:	U	0.000175	pCi/g						
	TPU:		+/-0.0255							
Manganese-54	Uncert:	U	0.0241	pCi/g						
	TPU:		+/-0.023							
Niobium-94	Uncert:	U	-0.0049	pCi/g						
	TPU:		+/-0.023							
Potassium-40	Uncert:	U	+/-0.0123							
	TPU:		+/-0.0123							
Radium-226	Uncert:	U	-0.0093	pCi/g						
	TPU:		+/-0.0127							
Silver-108m	Uncert:	U	+/-0.0127							
	TPU:		+/-0.0127							
Thallium-208	Uncert:	U	0.0553	pCi/g						
	TPU:		+/-0.228							
	Uncert:	U	+/-0.228							
	TPU:		0.0138	pCi/g						
	Uncert:	U	+/-0.0472							
	TPU:		+/-0.0472							
	Uncert:	U	0.00363	pCi/g						
	TPU:		+/-0.0106							
	Uncert:	U	+/-0.0106							
	TPU:		0.00849	pCi/g						
	Uncert:	U	+/-0.0123							
	TPU:		+/-0.0123							

Notes:

The Qualifiers in this report are defined as follows:

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

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QC Summary

Workorder: 169489

Page 5 of 5

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

Table of Contents

General Narrative	1
Chain of Custody and Supporting Documentation	5
Data Review Qualifier Definitions	12
Radiological Analysis.....	14
Sample Data Summary	30
Quality Control Data	35

General Narrative

**General Narrative
for
Connecticut Yankee Atomic Power Co.
Work Order: 173770
SDG: MSR#06-1130**

October 16, 2006

Laboratory Identification:

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

Summary

Sample receipt

The sample arrived at General Engineering Laboratories, LLC, Charleston, South Carolina on August 17, 2006 for analysis. Shipping container temperature was checked, documented, and within specifications. The sample was 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 sample:

Laboratory Identification	Sample Description
173770001	9106-0001-112F

Items of Note

Dale Randall requested FSSALL (sans gamma) be analyzed on the sample above via email on 10/11/06.

Case Narrative

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

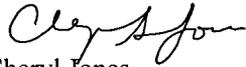
Analytical Request

One soil sample was reanalyzed for FSSALL, sans gamma.

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 October 2006

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

**Chain of Custody
and
Supporting
Documentation**

Connecticut Yankee Atomic Power Company 362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556						Chain of Custody Form				No. 2006-00496			
Project Name: Haddam Neck Decommissioning						Analyses Requested				Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3924						FSSGAM	FSSALL					Comments:	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones												169489%	
Priority: <input type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D. <input checked="" type="checkbox"/> 3 D.												relog 173770	
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size- & Type Code					Comment, Preservation	Lab Sample ID		
9106-0001-132F			SE	C	BP	X							
9106-0001-112F			SE	C	BP	X							
9106-0001-132A			SE	C	BP	X							
9106-0001-132B			SE	C	BP	X							
9106-0001-132C			SE	C	BP	X							
9106-0001-132D			SE	C	BP	X							
9106-0001-112A			SE	C	BP	X							
9106-0001-112B			SE	C	BP	X							
9106-0001-112C			SE	C	BP	X							
NOTES: PO #: 002332 MSR #: 06-1130 SSWP# NA <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: _____ Deg. C Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>			
1) Relinquished By <i>JAIME RICARTE</i>			Date/Time <i>8-16-06/1155</i>			2) Received By <i>C. Desirot</i>			Date/Time <i>8/17/06/915A</i>			Bill of Lading # <i>7921 8130 3482</i>	
3) Relinquished By			Date/Time			4) Received By			Date/Time				
5) Relinquished By			Date/Time			6) Received By			Date/Time				

9

Connecticut Yankee Atomic Power Company 362 Injun Hollow Road, East Hampton, CT 06424 860-267-2556						Chain of Custody Form				No. 2006-00497			
Project Name: Haddam Neck Decommissioning						Analyses Requested				Lab Use Only			
Contact Name & Phone: Jack McCarthy 860-267-2556 Ext. 3924						FSSGAM	FSSALL					Comments	
Analytical Lab (Name, City, State) General Engineering Laboratories 2040 Savage Road, Charleston SC. 29407 843 556 8171. Attn. Cheryl Jones													
Priority: <input type="checkbox"/> 30 D. <input type="checkbox"/> 14 D. <input type="checkbox"/> 7 D. <input checked="" type="checkbox"/> 3 D.													
Sample Designation	Date	Time	Media Code	Sample Type Code	Container Size & Type Code						Comment, Preservation	Lab Sample ID	
9106-0001-112D			SE	C	BP	X							
NOTES: PO #: 002332 MSR #: 06-1130 SSWP# NA <input checked="" type="checkbox"/> LTP QA <input type="checkbox"/> Radwaste QA <input type="checkbox"/> Non QA										Samples Shipped Via: <input checked="" type="checkbox"/> Fed Ex <input type="checkbox"/> UPS <input type="checkbox"/> Hand <input type="checkbox"/> Other		Internal Container Temp: _____ Deg Custody Sealed? Y <input type="checkbox"/> N <input type="checkbox"/> Custody Seal Intact? Y <input type="checkbox"/> N <input type="checkbox"/>	
1) Relinquished By <i>JAME RICARTE</i>			Date/Time <i>8-16-06/1155</i>			2) Received By <i>C. Duricota</i>			Date/Time <i>8/17/06 @ 915a</i>				Bill of Lading # <i>7921 8130 3482</i>
3) Relinquished By			Date/Time			4) Received By			Date/Time				
5) Relinquished By			Date/Time			6) Received By			Date/Time				

7

Figure 1. Sample Check-in List

Date/Time Received: 8/17/06 @ 915A.
SDG#: MSR#06-1130
Work Order Number: 169489/.
Shipping Container ID: 792181303482 Chain of Custody #: 2606-80496

- 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 26.0
- 5. Vermiculite/packing materials is: Wet [] Dry []
- 6. Number of samples in shipping container: 10 - samples
- 7. Sample holding times exceeded? Yes [] No []

8. Samples have:	
<input checked="" type="checkbox"/> tape	<input type="checkbox"/> hazard labels
<input checked="" type="checkbox"/> custody seals	<input 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): none

Sample Custodian/Laboratory: C. Sui Date: 8/17/06
Telephoned to: _____ On _____ By _____

RE: Please send your request for analysis

Subject: RE: Please send your request for analysis

From: "Dale Randall" <randall@cyapco.com>

Date: Wed, 11 Oct 2006 09:21:19 -0400

To: "Cheryl Jones" <cj@gel.com>

CC: "Arthur L. Hammond" <Hammond@CYAPCO.com>, "John McCarthy" <McCarthy@CYAPCO.com>

Sorry, old habits die hard, it is:
9106-0001-112F

-----Original Message-----

From: Cheryl Jones [mailto:cj@gel.com]

Sent: Wednesday, October 11, 2006 9:17 AM

To: Dale Randall

Cc: Arthur L. Hammond; John McCarthy

Subject: Re: Please send your request for analysis

Dale,

Please confirm that ID. Our system lists MSR#06-1130 as containing the following IDs:

9106-0001-132F
9106-0001-112F
9106-0001-132A
9106-0001-132B
9106-0001-132C
9106-0001-132D
9106-0001-112A
9106-0001-112B
9106-0001-112C
9106-0001-112D

I will check with the lab on the available TAT and let you know yet this morning.
Thanks,
Cheryl

Dale Randall wrote:

Cheryl,

The Sample ID is 9106-0001-012F, to be tested for FSSALL. This sample has been tested to the FSSGAM protocol as part of MSR#06-1130, COC#2006-00496. Can this be done on a 7-day turn?

Thank you,

Dale Randall
FSS Engineer
Connecticut Yankee

(860) 267-3133

-----Original Message-----

From: Cheryl Jones [mailto:cj@gel.com]

Sent: Tuesday, October 10, 2006 5:30 PM

To: Dale Randall

Subject: Please send your request for analysis

Dale,

I was interrupted while listening to the voice mail you left me

this

afternoon and somehow deleted it. Could you please send me the ID that
you need and the analysis? I apologize for the inconvenience.

Thanks,
Cheryl

--

~~~~~  
Cheryl A. Jones  
Project Manager/PM Team Leader  
General Engineering Laboratories, LLC  
2040 Savage Road  
Charleston, SC (USA) 29407  
Direct: 843.769.7388  
Main: 843.556.8171 x 4243  
Fax: 843.766.1178  
E-mail: [cj@gel.com](mailto:cj@gel.com)  
Web: [www.gel.com](http://www.gel.com)

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INC.



# **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 173770**

**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:** 578392  
**Prep Batch Number:** 578049  
**Dry Soil Prep GL-RAD-A-021 Batch Number:** 578048

| <b>Sample ID</b> | <b>Client ID</b>                                 |
|------------------|--------------------------------------------------|
| 173770001        | 9106-0001-112F                                   |
| 1201205231       | Method Blank (MB)                                |
| 1201205232       | 173770001(9106-0001-112F) Sample Duplicate (DUP) |
| 1201205233       | 173770001(9106-0001-112F) Matrix Spike (MS)      |
| 1201205234       | Laboratory Control Sample (LCS)                  |

**SOP Reference**

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

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

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

**Sample Geometry**

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

**Quality Control (QC) Information:**

**Blank Information**

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

**Designated QC**

The following sample was used for QC: 173770001 (9106-0001-112F).

**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: 578394

Prep Batch Number: 578049

Dry Soil Prep GL-RAD-A-021 Batch Number: 578048

| <b>Sample ID</b> | <b>Client ID</b>                                 |
|------------------|--------------------------------------------------|
| 173770001        | 9106-0001-112F                                   |
| 1201205235       | Method Blank (MB)                                |
| 1201205236       | 173770001(9106-0001-112F) Sample Duplicate (DUP) |
| 1201205237       | 173770001(9106-0001-112F) Matrix Spike (MS)      |
| 1201205238       | Laboratory Control Sample (LCS)                  |

**SOP Reference**

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

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

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

**Sample Geometry**

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

**Quality Control (QC) Information:**

**Blank Information**

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

**Designated QC**

The following sample was used for QC: 173770001 (9106-0001-112F).

**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**

|                                          |                                          |
|------------------------------------------|------------------------------------------|
| <b>Product:</b>                          | <b>Liquid Scint Pu241, Solid-ALL FSS</b> |
| 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:                 | 578398                                   |
| Prep Batch Number:                       | 578049                                   |
| Dry Soil Prep GL-RAD-A-021 Batch Number: | 578048                                   |

| <b>Sample ID</b> | <b>Client ID</b>                                 |
|------------------|--------------------------------------------------|
| 173770001        | 9106-0001-112F                                   |
| 1201205248       | Method Blank (MB)                                |
| 1201205249       | 173770001(9106-0001-112F) Sample Duplicate (DUP) |
| 1201205250       | 173770001(9106-0001-112F) Matrix Spike (MS)      |
| 1201205251       | Laboratory Control Sample (LCS)                  |

**SOP Reference**

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

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

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

**Sample Geometry**

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

**Quality Control (QC) Information:**

**Blank Information**

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

**Designated QC**

The following sample was used for QC: 173770001 (9106-0001-112F).

**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**

|                                          |                                  |
|------------------------------------------|----------------------------------|
| <b>Product:</b>                          | <b>GFPC, Sr90, solid-ALL FSS</b> |
| 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:                 | 578500                           |
| Prep Batch Number:                       | 578049                           |
| Dry Soil Prep GL-RAD-A-021 Batch Number: | 578048                           |

| <b>Sample ID</b> | <b>Client ID</b>                                 |
|------------------|--------------------------------------------------|
| 173770001        | 9106-0001-112F                                   |
| 1201205511       | Method Blank (MB)                                |
| 1201205512       | 173770001(9106-0001-112F) Sample Duplicate (DUP) |
| 1201205513       | 173770001(9106-0001-112F) Matrix Spike (MS)      |
| 1201205514       | Laboratory Control Sample (LCS)                  |

**SOP Reference**

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

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

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

**Sample Geometry**

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

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

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

**Designated QC**

The following sample was used for QC: 173770001 (9106-0001-112F).

**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**

|                          |                                         |
|--------------------------|-----------------------------------------|
| <b>Product:</b>          | <b>Liquid Scint Tc99, Solid-ALL FSS</b> |
| Analytical Method:       | DOE EML HASL-300, Tc-02-RC Modified     |
| Analytical Batch Number: | 578363                                  |

| <b>Sample ID</b> | <b>Client ID</b>                                 |
|------------------|--------------------------------------------------|
| 173770001        | 9106-0001-112F                                   |
| 1201205177       | Method Blank (MB)                                |
| 1201205178       | 173770001(9106-0001-112F) Sample Duplicate (DUP) |
| 1201205179       | 173770001(9106-0001-112F) Matrix Spike (MS)      |
| 1201205180       | Laboratory Control Sample (LCS)                  |

**SOP Reference**

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

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

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

**Sample Geometry**

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

**Quality Control (QC) Information:**

**Blank Information**

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

**Designated QC**

The following sample was used for QC: 173770001 (9106-0001-112F).

**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**

|                                          |                                         |
|------------------------------------------|-----------------------------------------|
| <b>Product:</b>                          | <b>Liquid Scint Fe55, Solid-ALL FSS</b> |
| 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:                 | 578445                                  |
| Prep Batch Number:                       | 578049                                  |
| Dry Soil Prep GL-RAD-A-021 Batch Number: | 578048                                  |

| <b>Sample ID</b> | <b>Client ID</b>                                 |
|------------------|--------------------------------------------------|
| 173770001        | 9106-0001-112F                                   |
| 1201205350       | Method Blank (MB)                                |
| 1201205351       | 173770001(9106-0001-112F) Sample Duplicate (DUP) |
| 1201205352       | 173770001(9106-0001-112F) Matrix Spike (MS)      |
| 1201205353       | Laboratory Control Sample (LCS)                  |

**SOP Reference**

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

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

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

**Sample Geometry**

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

**Quality Control (QC) Information:**

**Blank Information**

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

**Designated QC**

The following sample was used for QC: 173770001 (9106-0001-112F).

**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: 578448  
Prep Batch Number: 578049  
Dry Soil Prep GL-RAD-A-021 Batch Number: 578048

| <b>Sample ID</b> | <b>Client ID</b>                                 |
|------------------|--------------------------------------------------|
| 173770001        | 9106-0001-112F                                   |
| 1201205362       | Method Blank (MB)                                |
| 1201205363       | 173770001(9106-0001-112F) Sample Duplicate (DUP) |
| 1201205364       | 173770001(9106-0001-112F) Matrix Spike (MS)      |
| 1201205365       | Laboratory Control Sample (LCS)                  |

**SOP Reference**

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

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

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

**Sample Geometry**

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

**Quality Control (QC) Information:**

**Blank Information**

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

**Designated QC**

The following sample was used for QC: 173770001 (9106-0001-112F).

**QC Information**

All of the QC samples met the required acceptance limits.

**Technical Information:**

**Holding Time**

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

**Preparation Information**

All preparation criteria have been met for these analyses.

**Sample Re-prep/Re-analysis**

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

**Miscellaneous Information:**

**NCR Documentation**

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

**Additional Comments**

Additional comments were not required for this sample set.

**Qualifier information**

Manual qualifiers were not required.

**Method/Analysis Information**

**Product:** LSC, Tritium Dist, Solid-HTD2,ALL FSS  
**Analytical Method:** EPA 906.0 Modified  
**Analytical Batch Number:** 578364

| <b>Sample ID</b> | <b>Client ID</b>                                 |
|------------------|--------------------------------------------------|
| 173770001        | 9106-0001-112F                                   |
| 1201205181       | Method Blank (MB)                                |
| 1201205182       | 173770001(9106-0001-112F) Sample Duplicate (DUP) |
| 1201205183       | 173770001(9106-0001-112F) Matrix Spike (MS)      |
| 1201205184       | Laboratory Control Sample (LCS)                  |

**SOP Reference**

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

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

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

**Sample Geometry**

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

**Quality Control (QC) Information:**

**Blank Information**

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

**Designated QC**

The following sample was used for QC: 173770001 (9106-0001-112F).

**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:** 578362

| <b>Sample ID</b> | <b>Client ID</b>                                 |
|------------------|--------------------------------------------------|
| 173770001        | 9106-0001-112F                                   |
| 1201205173       | Method Blank (MB)                                |
| 1201205174       | 173435001(9520-0003-039F) Sample Duplicate (DUP) |
| 1201205175       | 173435001(9520-0003-039F) Matrix Spike (MS)      |
| 1201205176       | Laboratory Control Sample (LCS)                  |

**SOP Reference**

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

**Calibration Information:**

**Calibration Information**

All initial and continuing calibration requirements have been met.

**Standards Information**

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

**Sample Geometry**

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

**Quality Control (QC) Information:**

**Blank Information**

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

**Designated QC**

The following sample was used for QC: 173435001 (9520-0003-039F).

**QC Information**

All of the QC samples met the required acceptance limits.

**Technical Information:**

**Holding Time**

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

**Preparation Information**

All preparation criteria have been met for these analyses.

**Sample Re-prep/Re-analysis**

The background was recounted due to high MDAs.

**Miscellaneous Information:**

**NCR Documentation**

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

**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:                     A. E. G. U. J. 10/18/06

# SAMPLE DATA SUMMARY

**GENERAL ENGINEERING LABORATORIES, LLC**

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

**Certificate of Analysis Report  
for**

YANK001 Connecticut Yankee Atomic Power Co.

Client SDG: MSR#06-1130 GEL Work Order: 173770

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

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

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

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

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



Reviewed by \_\_\_\_\_

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

**Certificate of Analysis**

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

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

Report Date: October 18, 2006

|                   |                |             |           |
|-------------------|----------------|-------------|-----------|
| Client Sample ID: | 9106-0001-112F | Project:    | YANK01204 |
| Sample ID:        | 173770001      | Client ID:  | YANK001   |
| Matrix:           | TS             | Vol. Recv.: |           |
| Collect Date:     | 02-AUG-06      |             |           |
| Receive Date:     | 17-AUG-06      |             |           |
| Collector:        | Client         |             |           |
| Moisture:         | 38.5%          |             |           |

| Parameter                                     | Qualifier | Result  | Uncertainty | LC      | TPU       | MDA    | Units | DF | Analyst | Date     | Time | Batch  | Mtd |
|-----------------------------------------------|-----------|---------|-------------|---------|-----------|--------|-------|----|---------|----------|------|--------|-----|
| <b>Rad Alpha Spec Analysis</b>                |           |         |             |         |           |        |       |    |         |          |      |        |     |
| <i>Alphaspec Am241, Cm, Solid ALL FSS</i>     |           |         |             |         |           |        |       |    |         |          |      |        |     |
| Americium-241                                 |           | 0.0478  | +/-0.0378   | 0.00908 | +/-0.0383 | 0.0375 | pCi/g |    | MXA     | 10/16/06 | 0853 | 578392 | 1   |
| Curium-242                                    | U         | 0.00985 | +/-0.0193   | 0.00    | +/-0.0193 | 0.0267 | pCi/g |    |         |          |      |        |     |
| Curium-243/244                                | U         | 0.0199  | +/-0.0247   | 0.00646 | +/-0.0248 | 0.0324 | pCi/g |    |         |          |      |        |     |
| <i>Alphaspec Pu, Solid-ALL FSS</i>            |           |         |             |         |           |        |       |    |         |          |      |        |     |
| Plutonium-238                                 |           | 0.0551  | +/-0.0409   | 0.00929 | +/-0.0413 | 0.0384 | pCi/g |    | MXA     | 10/15/06 | 0837 | 578394 | 2   |
| Plutonium-239/240                             | U         | 0.0257  | +/-0.0291   | 0.00928 | +/-0.0292 | 0.0384 | pCi/g |    |         |          |      |        |     |
| <i>Liquid Scint Pu241, Solid-ALL FSS</i>      |           |         |             |         |           |        |       |    |         |          |      |        |     |
| Plutonium-241                                 | U         | 0.274   | +/-1.93     | 1.61    | +/-1.93   | 3.36   | pCi/g |    | MXA     | 10/17/06 | 1559 | 578398 | 3   |
| <b>Rad Gas Flow Proportional Counting</b>     |           |         |             |         |           |        |       |    |         |          |      |        |     |
| <i>GFPC, Sr90, solid-ALL FSS</i>              |           |         |             |         |           |        |       |    |         |          |      |        |     |
| Strontium-90                                  | U         | 0.00433 | +/-0.0204   | 0.0164  | +/-0.0204 | 0.0389 | pCi/g |    | TC1     | 10/17/06 | 0743 | 578500 | 4   |
| <b>Rad Liquid Scintillation Analysis</b>      |           |         |             |         |           |        |       |    |         |          |      |        |     |
| <i>LSC, Tritium Dist, Solid-HTD2, ALL FSS</i> |           |         |             |         |           |        |       |    |         |          |      |        |     |
| Tritium                                       | U         | 1.60    | +/-5.76     | 4.73    | +/-5.76   | 10.1   | pCi/g |    | DFA1    | 10/15/06 | 0104 | 578364 | 5   |
| <i>Liquid Scint C14, Solid All, FSS</i>       |           |         |             |         |           |        |       |    |         |          |      |        |     |
| Carbon-14                                     |           | 0.267   | +/-0.116    | 0.0912  | +/-0.116  | 0.187  | pCi/g |    | AXD2    | 10/13/06 | 1917 | 578362 | 6   |
| <i>Liquid Scint Fe55, Solid-ALL FSS</i>       |           |         |             |         |           |        |       |    |         |          |      |        |     |
| Iron-55                                       | U         | -10.1   | +/-21.2     | 15.5    | +/-21.2   | 32.1   | pCi/g |    | MXP1    | 10/17/06 | 2304 | 578445 | 7   |
| <i>Liquid Scint Ni63, Solid-ALL FSS</i>       |           |         |             |         |           |        |       |    |         |          |      |        |     |
| Nickel-63                                     | U         | -2.53   | +/-9.07     | 7.73    | +/-9.07   | 16.2   | pCi/g |    | MXP1    | 10/17/06 | 1802 | 578448 | 8   |
| <i>Liquid Scint Tc99, Solid-ALL FSS</i>       |           |         |             |         |           |        |       |    |         |          |      |        |     |
| Technetium-99                                 | U         | 0.222   | +/-0.296    | 0.242   | +/-0.296  | 0.500  | pCi/g |    | KXR1    | 10/18/06 | 0455 | 578363 | 9   |

**The following Prep Methods were performed**

| Method        | Description                | Analyst | Date     | Time | Prep Batch |
|---------------|----------------------------|---------|----------|------|------------|
| Dry Soil Prep | Dry Soil Prep GL-RAD-A-021 | AXP2    | 10/11/06 | 2056 | 578048     |

**The following Analytical Methods were performed**

# GENERAL ENGINEERING LABORATORIES, LLC

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

## Certificate of Analysis

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

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

Report Date: October 18, 2006

Client Sample ID: 9106-0001-112F  
Sample ID: 173770001

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

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

**The following Analytical Methods were performed**

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

| Surrogate/Tracer recovery | Test                             | Recovery% | Acceptable Limits |
|---------------------------|----------------------------------|-----------|-------------------|
| Americium-243             | Alphaspec Am241, Cm, Solid ALL   | 83        | (15%-125%)        |
| Plutonium-242             | Alphaspec Pu, Solid-ALL FSS      | 76        | (15%-125%)        |
| Carrier/Tracer Recovery   | Liquid Scint Pu241, Solid-ALL FS | 80        | (25%-125%)        |
| Technetium-99m            | Liquid Scint Tc99, Solid-ALL FS  | 69        |                   |
| Carrier/Tracer Recovery   | Liquid Scint Tc99, Solid-ALL FS  | 69        |                   |

**Notes:**

The Qualifiers in this report are defined as follows :

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

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

**Certificate of Analysis**

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

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

Report Date: October 18, 2006

Client Sample ID: 9106-0001-112F  
 Sample ID: 173770001

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

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

Y QC Samples were not spiked with this compound  
 ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL  
 h Preparation or preservation holding time was exceeded  
 The above sample is reported on a dry weight basis.

# QUALITY CONTROL DATA

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

**QC Summary**

Report Date: October 18, 2006  
 Page 1 of 5

**Client :** Connecticut Yankee Atomic Power  
 362 Injun Hollow Rd  
  
 East Hampton, Connecticut  
**Contact:** Mr. Jack McCarthy  
**Workorder:** 173770

| Parname                    | NOM | Sample            | Qual   | QC        | Units | RPD% | REC% | Range       | Anlst | Date     | Time  |
|----------------------------|-----|-------------------|--------|-----------|-------|------|------|-------------|-------|----------|-------|
| Rad Alpha Spec             |     |                   |        |           |       |      |      |             |       |          |       |
| Batch 578392               |     |                   |        |           |       |      |      |             |       |          |       |
| QC1201205232 173770001 DUP |     |                   |        |           |       |      |      |             |       |          |       |
| Americium-241              |     | 0.0478            |        | 0.109     | pCi/g | 78   |      | (0% - 100%) | AXA1  | 10/16/06 | 08:53 |
|                            |     | Uncert: +/-0.0378 |        | +/-0.0598 |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.0383    |        | +/-0.0612 |       |      |      |             |       |          |       |
| Curium-242                 | U   | 0.00985           | U      | 0.0221    | pCi/g | 77   |      | (0% - 100%) |       |          |       |
|                            |     | Uncert: +/-0.0193 |        | +/-0.0338 |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.0193    |        | +/-0.0339 |       |      |      |             |       |          |       |
| Curium-243/244             | U   | 0.0199            | U      | 0.0263    | pCi/g | 28   |      | (0% - 100%) |       |          |       |
|                            |     | Uncert: +/-0.0247 |        | +/-0.0445 |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.0248    |        | +/-0.0446 |       |      |      |             |       |          |       |
| QC1201205234 LCS           |     |                   |        |           |       |      |      |             |       |          |       |
| Americium-241              |     | 2.69              |        | 2.88      | pCi/g |      | 107  | (75%-125%)  |       |          |       |
|                            |     | Uncert: +/-0.328  |        | +/-0.502  |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.502     |        | +/-0.0271 |       |      |      |             |       |          |       |
| Curium-242                 |     |                   | U      | 0.0195    | pCi/g |      |      |             |       |          |       |
|                            |     | Uncert: +/-0.027  |        | +/-0.0271 |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.0271    |        | 3.01      | pCi/g |      | 93   | (75%-125%)  |       |          |       |
| Curium-243/244             |     | 3.24              |        | 3.01      | pCi/g |      |      |             |       |          |       |
|                            |     | Uncert: +/-0.335  |        | +/-0.519  |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.519     |        |           |       |      |      |             |       |          |       |
| QC1201205231 MB            |     |                   |        |           |       |      |      |             |       |          |       |
| Americium-241              |     |                   |        | -0.017    | pCi/g |      |      |             |       |          |       |
|                            |     | Uncert: +/-0.0116 |        | +/-0.0118 |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.0118    |        | 0.0121    | pCi/g |      |      |             |       |          |       |
| Curium-242                 |     |                   | U      | 0.0121    | pCi/g |      |      |             |       |          |       |
|                            |     | Uncert: +/-0.0193 |        | +/-0.0194 |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.0194    |        | 0.0488    | pCi/g |      |      |             |       |          |       |
| Curium-243/244             |     |                   | U      | 0.0488    | pCi/g |      |      |             |       |          |       |
|                            |     | Uncert: +/-0.0482 |        | +/-0.0485 |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.0485    |        |           |       |      |      |             |       |          |       |
| QC1201205233 173770001 MS  |     |                   |        |           |       |      |      |             |       |          |       |
| Americium-241              |     | 2.72              | 0.0478 | 2.74      | pCi/g |      | 99   | (75%-125%)  |       |          |       |
|                            |     | Uncert: +/-0.0378 |        | +/-0.409  |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.0383    |        | 0.0286    | pCi/g |      |      |             |       |          |       |
| Curium-242                 | U   | 0.00985           | U      | 0.0286    | pCi/g |      |      |             |       |          |       |
|                            |     | Uncert: +/-0.0193 |        | +/-0.0394 |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.0193    |        | 2.75      | pCi/g |      | 83   | (75%-125%)  |       |          |       |
| Curium-243/244             | U   | 0.0199            |        | 2.75      | pCi/g |      |      |             |       |          |       |
|                            |     | Uncert: +/-0.0247 |        | +/-0.411  |       |      |      |             |       |          |       |
|                            |     | TPU: +/-0.0248    |        |           |       |      |      |             |       |          |       |
| Batch 578394               |     |                   |        |           |       |      |      |             |       |          |       |
| QC1201205236 173770001 DUP |     |                   |        |           |       |      |      |             |       |          |       |
| Plutonium-238              |     | 0.0551            | U      | 0.00929   | pCi/g | 142  |      | (0% - 100%) | AXA1  | 10/15/06 | 08:37 |

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

**QC Summary**

Workorder: 173770

Page 2 of 5

| Parmname              | NOM       | Sample  | Qual      | QC        | Units     | RPD%  | REC% | Range       | Anlst | Date     | Time  |
|-----------------------|-----------|---------|-----------|-----------|-----------|-------|------|-------------|-------|----------|-------|
| <b>Rad Alpha Spec</b> |           |         |           |           |           |       |      |             |       |          |       |
| Batch                 | 578394    |         |           |           |           |       |      |             |       |          |       |
| Plutonium-239/240     |           | Uncert: | +/-0.0409 | +/-0.021  |           |       |      |             |       |          |       |
|                       |           | TPU:    | +/-0.0413 | +/-0.021  |           |       |      |             |       |          |       |
|                       | U         |         | 0.0257    | U         | 0.0328    | pCi/g | 24   | (0% - 100%) |       |          |       |
|                       |           | Uncert: | +/-0.0291 | +/-0.0321 |           |       |      |             |       |          |       |
|                       |           | TPU:    | +/-0.0292 | +/-0.0323 |           |       |      |             |       |          |       |
| QC1201205238          | LCS       |         |           |           |           |       |      |             |       |          |       |
| Plutonium-238         |           |         |           | U         | 0.00764   | pCi/g |      | (75%-125%)  |       | 10/15/06 | 08:37 |
|                       |           | Uncert: |           |           | +/-0.0215 |       |      |             |       |          |       |
|                       |           | TPU:    |           |           | +/-0.0215 |       |      |             |       |          |       |
| Plutonium-239/240     |           | 2.49    |           |           | 2.81      | pCi/g | 113  | (75%-125%)  |       |          |       |
|                       |           | Uncert: |           |           | +/-0.282  |       |      |             |       |          |       |
|                       |           | TPU:    |           |           | +/-0.441  |       |      |             |       |          |       |
| QC1201205235          | MB        |         |           |           |           |       |      |             |       |          |       |
| Plutonium-238         |           |         |           | U         | -0.00339  | pCi/g |      |             |       | 10/15/06 | 08:37 |
|                       |           | Uncert: |           |           | +/-0.0146 |       |      |             |       |          |       |
|                       |           | TPU:    |           |           | +/-0.0146 |       |      |             |       |          |       |
| Plutonium-239/240     |           |         |           | U         | -0.0031   | pCi/g |      |             |       |          |       |
|                       |           | Uncert: |           |           | +/-0.016  |       |      |             |       |          |       |
|                       |           | TPU:    |           |           | +/-0.016  |       |      |             |       |          |       |
| QC1201205237          | 173770001 | MS      |           |           |           |       |      |             |       |          |       |
| Plutonium-238         |           |         | 0.0551    |           | 0.0421    | pCi/g |      | (75%-125%)  |       |          |       |
|                       |           | Uncert: | +/-0.0409 |           | +/-0.0369 |       |      |             |       |          |       |
|                       |           | TPU:    | +/-0.0413 |           | +/-0.0372 |       |      |             |       |          |       |
| Plutonium-239/240     |           | 2.52    | U         | 0.0257    | 2.54      | pCi/g | 101  | (75%-125%)  |       |          |       |
|                       |           | Uncert: | +/-0.0291 |           | +/-0.274  |       |      |             |       |          |       |
|                       |           | TPU:    | +/-0.0292 |           | +/-0.382  |       |      |             |       |          |       |
| Batch                 | 578398    |         |           |           |           |       |      |             |       |          |       |
| QC1201205249          | 173770001 | DUP     |           |           |           |       |      |             |       |          |       |
| Plutonium-241         |           | U       | 0.274     | U         | 0.507     | pCi/g | 0    | (0% - 100%) | 4XA1  | 10/17/06 | 16:42 |
|                       |           | Uncert: | +/-1.93   |           | +/-1.96   |       |      |             |       |          |       |
|                       |           | TPU:    | +/-1.93   |           | +/-1.96   |       |      |             |       |          |       |
| QC1201205251          | LCS       |         |           |           |           |       |      |             |       |          |       |
| Plutonium-241         |           | 35.9    |           |           | 37.4      | pCi/g | 104  | (75%-125%)  |       | 10/17/06 | 17:24 |
|                       |           | Uncert: |           |           | +/-3.27   |       |      |             |       |          |       |
|                       |           | TPU:    |           |           | +/-5.07   |       |      |             |       |          |       |
| QC1201205248          | MB        |         |           |           |           |       |      |             |       |          |       |
| Plutonium-241         |           |         |           | U         | 0.00      | pCi/g |      |             |       | 10/17/06 | 16:20 |
|                       |           | Uncert: |           |           | +/-1.50   |       |      |             |       |          |       |
|                       |           | TPU:    |           |           | +/-1.50   |       |      |             |       |          |       |
| QC1201205250          | 173770001 | MS      |           |           |           |       |      |             |       |          |       |
| Plutonium-241         |           | 36.4    | U         | 0.274     | 30.9      | pCi/g | 85   | (75%-125%)  |       | 10/17/06 | 17:03 |
|                       |           | Uncert: | +/-1.93   |           | +/-2.68   |       |      |             |       |          |       |
|                       |           | TPU:    | +/-1.93   |           | +/-4.01   |       |      |             |       |          |       |
| <b>Rad Gas Flow</b>   |           |         |           |           |           |       |      |             |       |          |       |
| Batch                 | 578500    |         |           |           |           |       |      |             |       |          |       |
| QC1201205512          | 173770001 | DUP     |           |           |           |       |      |             |       |          |       |
| Strontium-90          |           | U       | 0.00433   | U         | 0.0168    | pCi/g | 0    | (0% - 100%) | TCI   | 10/17/06 | 07:43 |
|                       |           | Uncert: | +/-0.0204 |           | +/-0.0206 |       |      |             |       |          |       |
|                       |           |         |           |           | +/-0.0206 |       |      |             |       |          |       |

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**QC Summary**

Workorder: 173770

Page 3 of 5

| Parname                         | NOM       | Sample Qual | QC        | Units     | RPD%     | REC%   | Range      | Anlst      | Date        | Time                |
|---------------------------------|-----------|-------------|-----------|-----------|----------|--------|------------|------------|-------------|---------------------|
| <b>Rad Gas Flow</b>             |           |             |           |           |          |        |            |            |             |                     |
| Batch                           | 578500    |             |           |           |          |        |            |            |             |                     |
|                                 |           | TPU:        | +/-0.0204 |           |          |        |            |            |             |                     |
| QC1201205514                    | LCS       |             |           |           |          |        |            |            |             |                     |
| Strontium-90                    |           | 7.81        |           | 7.63      | pCi/g    | 98     | (75%-125%) |            | 10/17/06    | 07:44               |
|                                 |           | Uncert:     |           | +/-0.241  |          |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.312  |          |        |            |            |             |                     |
| QC1201205511                    | MB        |             |           |           |          |        |            |            |             |                     |
| Strontium-90                    |           |             | U         | -0.0145   | pCi/g    |        |            |            | 10/17/06    | 07:43               |
|                                 |           | Uncert:     |           | +/-0.0207 |          |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.0207 |          |        |            |            |             |                     |
| QC1201205513                    | 173770001 | MS          |           |           |          |        |            |            |             |                     |
| Strontium-90                    |           | 7.65        | U         | 0.00433   | 7.33     | pCi/g  | 96         | (75%-125%) | 10/17/06    | 07:43               |
|                                 |           | Uncert:     |           | +/-0.0204 | +/-0.225 |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.0204 | +/-0.280 |        |            |            |             |                     |
| <b>Rad Liquid Scintillation</b> |           |             |           |           |          |        |            |            |             |                     |
| Batch                           | 578362    |             |           |           |          |        |            |            |             |                     |
| QC1201205174                    | 173435001 | DUP         |           |           |          |        |            |            |             |                     |
| Carbon-14                       |           |             | U         | 0.0477    | U        | -0.118 | pCi/g      | 0          | (0% - 100%) | AXD2 10/13/06 22:26 |
|                                 |           | Uncert:     |           | +/-0.111  | +/-0.110 |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.111  | +/-0.110 |        |            |            |             |                     |
| QC1201205176                    | LCS       |             |           |           |          |        |            |            |             |                     |
| Carbon-14                       |           | 7.27        |           | 8.66      | pCi/g    | 119    | (75%-125%) |            | 10/14/06    | 00:00               |
|                                 |           | Uncert:     |           | +/-0.265  |          |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.297  |          |        |            |            |             |                     |
| QC1201205173                    | MB        |             |           |           |          |        |            |            |             |                     |
| Carbon-14                       |           |             | U         | -0.0701   | pCi/g    |        |            |            | 10/13/06    | 21:38               |
|                                 |           | Uncert:     |           | +/-0.113  |          |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.113  |          |        |            |            |             |                     |
| QC1201205175                    | 173435001 | MS          |           |           |          |        |            |            |             |                     |
| Carbon-14                       |           | 7.10        | U         | 0.0477    | 8.27     | pCi/g  | 116        | (75%-125%) | 10/13/06    | 23:13               |
|                                 |           | Uncert:     |           | +/-0.111  | +/-0.257 |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.111  | +/-0.287 |        |            |            |             |                     |
| Batch                           | 578363    |             |           |           |          |        |            |            |             |                     |
| QC1201205178                    | 173770001 | DUP         |           |           |          |        |            |            |             |                     |
| Technetium-99                   |           |             | U         | 0.222     | U        | 0.373  | pCi/g      | 0          | (0% - 100%) | KXR1 10/18/06 06:00 |
|                                 |           | Uncert:     |           | +/-0.296  | +/-0.287 |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.296  | +/-0.287 |        |            |            |             |                     |
| QC1201205180                    | LCS       |             |           |           |          |        |            |            |             |                     |
| Technetium-99                   |           | 13.0        |           | 12.6      | pCi/g    | 97     | (75%-125%) |            | 10/18/06    | 06:32               |
|                                 |           | Uncert:     |           | +/-0.542  |          |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.625  |          |        |            |            |             |                     |
| QC1201205177                    | MB        |             |           |           |          |        |            |            |             |                     |
| Technetium-99                   |           |             | U         | 0.179     | pCi/g    |        |            |            | 10/18/06    | 05:44               |
|                                 |           | Uncert:     |           | +/-0.238  |          |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.238  |          |        |            |            |             |                     |
| QC1201205179                    | 173770001 | MS          |           |           |          |        |            |            |             |                     |
| Technetium-99                   |           | 13.1        | U         | 0.222     | 12.1     | pCi/g  | 92         | (75%-125%) | 10/18/06    | 06:16               |
|                                 |           | Uncert:     |           | +/-0.296  | +/-0.569 |        |            |            |             |                     |
|                                 |           | TPU:        |           | +/-0.296  | +/-0.642 |        |            |            |             |                     |
| Batch                           | 578364    |             |           |           |          |        |            |            |             |                     |

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## QC Summary

Workorder: 173770

Page 4 of 5

| Parname                         | NOM       | Sample  | Qual | QC      | Units | RPD% | REC% | Range       | Anlst | Date     | Time  |
|---------------------------------|-----------|---------|------|---------|-------|------|------|-------------|-------|----------|-------|
| <b>Rad Liquid Scintillation</b> |           |         |      |         |       |      |      |             |       |          |       |
| Batch 578364                    |           |         |      |         |       |      |      |             |       |          |       |
| QC1201205182                    | 173770001 | DUP     |      |         |       |      |      |             |       |          |       |
| Tritium                         | U         | 1.60    | U    | -1.29   | pCi/g | 0    |      | (0% - 100%) | DFA1  | 10/15/06 | 02:10 |
|                                 |           | Uncert: |      | +/-5.76 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-5.76 |       |      |      |             |       |          |       |
| QC1201205184                    | LCS       |         |      |         |       |      |      |             |       |          |       |
| Tritium                         |           | 10.4    |      | 9.95    | pCi/g |      | 96   | (75%-125%)  |       | 10/15/06 | 02:42 |
|                                 |           | Uncert: |      | +/-1.86 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-1.86 |       |      |      |             |       |          |       |
| QC1201205181                    | MB        |         |      |         |       |      |      |             |       |          |       |
| Tritium                         |           |         | U    | -0.187  | pCi/g |      |      |             |       | 10/15/06 | 01:53 |
|                                 |           | Uncert: |      | +/-1.17 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-1.17 |       |      |      |             |       |          |       |
| QC1201205183                    | 173770001 | MS      |      |         |       |      |      |             |       |          |       |
| Tritium                         | U         | 57.8    | U    | 1.60    | pCi/g |      | 84   | (75%-125%)  |       | 10/15/06 | 02:26 |
|                                 |           | Uncert: |      | +/-5.76 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-5.76 |       |      |      |             |       |          |       |
| Batch 578445                    |           |         |      |         |       |      |      |             |       |          |       |
| QC1201205351                    | 173770001 | DUP     |      |         |       |      |      |             |       |          |       |
| Iron-55                         | U         | -10.1   | U    | -8.61   | pCi/g | 0    |      | (0% - 100%) | MXPI  | 10/18/06 | 01:11 |
|                                 |           | Uncert: |      | +/-21.2 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-21.2 |       |      |      |             |       |          |       |
| QC1201205353                    | LCS       |         |      |         |       |      |      |             |       |          |       |
| Iron-55                         |           | 612     |      | 540     | pCi/g |      | 88   | (75%-125%)  |       | 10/18/06 | 02:15 |
|                                 |           | Uncert: |      | +/-28.0 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-44.2 |       |      |      |             |       |          |       |
| QC1201205350                    | MB        |         |      |         |       |      |      |             |       |          |       |
| Iron-55                         |           |         | U    | -2.86   | pCi/g |      |      |             |       | 10/18/06 | 00:40 |
|                                 |           | Uncert: |      | +/-17.3 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-17.3 |       |      |      |             |       |          |       |
| QC1201205352                    | 173770001 | MS      |      |         |       |      |      |             |       |          |       |
| Iron-55                         | U         | 650     | U    | -10.1   | pCi/g |      | 85   | (75%-125%)  |       | 10/18/06 | 01:43 |
|                                 |           | Uncert: |      | +/-21.2 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-21.2 |       |      |      |             |       |          |       |
| Batch 578448                    |           |         |      |         |       |      |      |             |       |          |       |
| QC1201205363                    | 173770001 | DUP     |      |         |       |      |      |             |       |          |       |
| Nickel-63                       | U         | -2.53   | U    | -4.02   | pCi/g | 0    |      | (0% - 100%) | MXPI  | 10/17/06 | 19:07 |
|                                 |           | Uncert: |      | +/-9.07 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-9.07 |       |      |      |             |       |          |       |
| QC1201205365                    | LCS       |         |      |         |       |      |      |             |       |          |       |
| Nickel-63                       |           | 520     |      | 441     | pCi/g |      | 85   | (75%-125%)  |       | 10/17/06 | 19:40 |
|                                 |           | Uncert: |      | +/-20.5 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-25.6 |       |      |      |             |       |          |       |
| QC1201205362                    | MB        |         |      |         |       |      |      |             |       |          |       |
| Nickel-63                       |           |         | U    | -4.42   | pCi/g |      |      |             |       | 10/17/06 | 18:51 |
|                                 |           | Uncert: |      | +/-8.74 |       |      |      |             |       |          |       |
|                                 |           | TPU:    |      | +/-8.74 |       |      |      |             |       |          |       |
| QC1201205364                    | 173770001 | MS      |      |         |       |      |      |             |       |          |       |
| Nickel-63                       | U         | 563     | U    | -2.53   | pCi/g |      | 83   | (75%-125%)  |       | 10/17/06 | 19:24 |
|                                 |           | Uncert: |      | +/-9.07 |       |      |      |             |       |          |       |

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

## QC Summary

Workorder: 173770

Page 5 of 5

| Parmname                 | NOM    | Sample Qual | QC      | Units | RPD% | REC% | Range | Anlst | Date | Time |
|--------------------------|--------|-------------|---------|-------|------|------|-------|-------|------|------|
| Rad Liquid Scintillation |        |             |         |       |      |      |       |       |      |      |
| Batch                    | 578448 |             |         |       |      |      |       |       |      |      |
|                          | TPU:   | +/-9.07     | +/-28.2 |       |      |      |       |       |      |      |

### Notes:

The Qualifiers in this report are defined as follows:

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

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more.

\*\* Indicates analyte is a surrogate compound.

^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the 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.

DISCHARGE CANAL  
SURVEY UNIT 9106-0001  
RELEASE RECORD

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Attachment 2b  
Split Sample Assessment Forms  
(2 Pages)

**Split Sample Assessment Form**

| Survey Area#:                                                                                                                                                                                                                                                              | 9106           | Survey Unit #: | 0001       | Survey Unit Name: | Discharge Canal                                                             |                |                  |                  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|------------|-------------------|-----------------------------------------------------------------------------|----------------|------------------|------------------|--|--|
| Sample Plan or WPIR#:                                                                                                                                                                                                                                                      |                |                |            |                   | 2006-0021                                                                   |                |                  |                  |  |  |
|                                                                                                                                                                                                                                                                            |                |                |            |                   | SML #: 9106-0001-106                                                        |                |                  |                  |  |  |
| Sample Description: Comparison of split samples collected from sample measurement location #106 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was <u>9106-0001-106F</u> , the comparison sample was <u>9106-0001-106FS</u> . |                |                |            |                   |                                                                             |                |                  |                  |  |  |
| STANDARD                                                                                                                                                                                                                                                                   |                |                |            |                   | COMPARISON                                                                  |                |                  |                  |  |  |
| Radionuclide                                                                                                                                                                                                                                                               | Activity Value | Standard Error | Resolution | Agreement Range   | Activity Value                                                              | Standard Error | Comparison Ratio | Acceptable (Y/N) |  |  |
| Cs-137                                                                                                                                                                                                                                                                     | 1.63E-01       | 2.24E-02       | 7          | 0.5- 2            | 2.34E-01                                                                    | 2.19E-02       | 1.44             | Y                |  |  |
| Co-60                                                                                                                                                                                                                                                                      | 1.48E-01       | 2.33E-02       | 6          | 0.5 - 2           | 2.30E-01                                                                    | 2.59E-02       | 1.55             | Y                |  |  |
| K-40                                                                                                                                                                                                                                                                       | 1.22E+01       | 5.45E-01       | 22         | 0.75 - 1.33       | 1.02E+01                                                                    | 4.05E-01       | 0.84             | Y                |  |  |
|                                                                                                                                                                                                                                                                            |                |                |            |                   |                                                                             |                |                  |                  |  |  |
|                                                                                                                                                                                                                                                                            |                |                |            |                   |                                                                             |                |                  |                  |  |  |
|                                                                                                                                                                                                                                                                            |                |                |            |                   |                                                                             |                |                  |                  |  |  |
|                                                                                                                                                                                                                                                                            |                |                |            |                   |                                                                             |                |                  |                  |  |  |
|                                                                                                                                                                                                                                                                            |                |                |            |                   |                                                                             |                |                  |                  |  |  |
| Comments/Corrective Actions: N/A                                                                                                                                                                                                                                           |                |                |            |                   | 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>Oral Randall</i>                                                                                                                                                                                                                                                        |                |                | 11-6-06    |                   | <i>Robert J. M.</i>                                                         |                | 11-15-06         |                  |  |  |

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

**Split Sample Assessment Form**

| Survey Area #: 9106                                                                                                                                                                                                                                                                                                                                                                               | Survey Unit #: 0001 | Survey Unit Name: Discharge Canal |                      |                 |                                                                             |                |                  |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-----------------------------------|----------------------|-----------------|-----------------------------------------------------------------------------|----------------|------------------|------------------|
| Sample Plan or WPIR#: 2006-021                                                                                                                                                                                                                                                                                                                                                                    |                     |                                   | SML #: 9106-0001-117 |                 |                                                                             |                |                  |                  |
| Sample Description: Comparison of split samples collected from sample measurement location #04 and analyzed using gamma spectroscopy by an off-site vendor laboratory. The standard sample was 9106-0001-117F the comparison sample was 9106-0001-117FS.                                                                                                                                          |                     |                                   |                      |                 |                                                                             |                |                  |                  |
| STANDARD                                                                                                                                                                                                                                                                                                                                                                                          |                     |                                   |                      | COMPARISON      |                                                                             |                |                  |                  |
| Radionuclide                                                                                                                                                                                                                                                                                                                                                                                      | Activity Value      | Standard Error                    | Resolution           | Agreement Range | Activity Value                                                              | Standard Error | Comparison Ratio | Acceptable (Y/N) |
| Cs-137                                                                                                                                                                                                                                                                                                                                                                                            | 1.38E-02            | 8.80E-03                          | 2                    | NONE -          | 6.46E-03                                                                    | 1.70E-02       | 0.47             | N/A              |
| Co-60                                                                                                                                                                                                                                                                                                                                                                                             | 5.25E-04            | 7.65E-03                          | 0                    | NONE -          | 3.92E-03                                                                    | 6.70E-03       | 7.47             | N/A              |
| K-40                                                                                                                                                                                                                                                                                                                                                                                              | 1.01E+01            | 3.11E-01                          | 32                   | 0.75 1.33       | 1.03E+01                                                                    | 4.48E-01       | 1.02             | 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:                |                 | Reviewed By:                                                                |                |                  | Date:            |
| <i>Paul Randall</i>                                                                                                                                                                                                                                                                                                                                                                               |                     |                                   | 11-6-06              |                 | <i>Robert [Signature]</i>                                                   |                |                  | 11-15-06         |

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

DISCHARGE CANAL  
SURVEY UNIT 9106-0001  
RELEASE RECORD

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Attachment 2c  
Preliminary Data Forms  
(2 Pages)

### Preliminary Data Review Form - Samples for the Sign Test

Survey Unit: 9106- 0001  
 Survey Unit Name: Discharge Canal

Classification: 2  
 Survey Media: Soil  
 Type of Survey: Final Status Survey  
 Type of Measurement: Radionuclide Specific  
 Number of Measurements: 30  
 Operational DCGL: 1

#### BASIC STATISTICAL QUANTITIES

|                     | Cs-137    | Co-60     |
|---------------------|-----------|-----------|
| Minimum Value:      | -6.78E-04 | -4.42E-03 |
| Maximum Value:      | 2.34E+00  | 2.65E+00  |
| Mean:               | 4.54E-01  | 4.06E-01  |
| Median:             | 4.23E-01  | 2.50E-01  |
| Standard Deviation: | 4.65E-01  | 5.68E-01  |

#### RADIONUCLIDE CONCENTRATION (pCi/g)

| NUMBER         | Cs-137    | Co-60     | Identified? | Identified? |
|----------------|-----------|-----------|-------------|-------------|
| 9106-0001-101F | 5.04E-01  | 1.28E-02  | Y           | N           |
| 9106-0001-103F | 9.09E-01  | 4.14E-01  | Y           | Y           |
| 9106-0001-104F | 2.89E-01  | 3.15E-02  | Y           | Y           |
| 9106-0001-106F | 1.63E-01  | 1.48E-01  | Y           | Y           |
| 9106-0001-107F | 6.95E-01  | 2.46E-01  | Y           | Y           |
| 9106-0001-108F | 2.07E-02  | 1.70E-02  | N           | N           |
| 9106-0001-109F | -6.78E-04 | -4.42E-03 | N           | N           |
| 9106-0001-110F | 6.09E-02  | 0.00E+00  | Y           | N           |
| 9106-0001-111F | 1.61E-01  | 1.14E-01  | Y           | Y           |
| 9106-0001-112F | 2.34E+00  | 2.65E+00  | Y           | Y           |
| 9106-0001-113F | 3.87E-01  | 2.59E-01  | Y           | Y           |
| 9106-0001-114F | 7.93E-01  | 3.70E-01  | Y           | Y           |
| 9106-0001-115F | 7.60E-01  | 5.97E-01  | Y           | Y           |
| 9106-0001-116F | 1.38E-02  | 3.26E-02  | N           | N           |
| 9106-0001-117F | 1.38E-02  | 5.25E-04  | N           | N           |
| 9106-0001-119F | 2.20E-01  | 1.12E-01  | Y           | Y           |
| 9106-0001-120F | 7.39E-01  | 7.08E-01  | Y           | Y           |
| 9106-0001-121F | 7.43E-01  | 6.27E-01  | Y           | Y           |
| 9106-0001-122F | 4.59E-01  | 4.22E-01  | Y           | Y           |
| 9106-0001-123F | 6.77E-01  | 7.65E-01  | Y           | Y           |
| 9106-0001-124F | 2.85E-01  | 2.54E-01  | Y           | Y           |
| 9106-0001-125F | 2.71E-02  | 0.00E+00  | Y           | N           |
| 9106-0001-126F | 2.44E-01  | 1.07E-01  | Y           | Y           |
| 9106-0001-127F | 4.78E-01  | 7.86E-01  | Y           | Y           |

|                |          |           |   |   |
|----------------|----------|-----------|---|---|
| 9106-0001-128F | 8.50E-01 | 8.18E-01  | Y | Y |
| 9106-0001-129F | 6.10E-02 | -3.30E-03 | Y | N |
| 9106-0001-130F | 0.00E+00 | 0.00E+00  | N | N |
| 9106-0001-131F | 5.66E-01 | 2.58E-01  | Y | Y |
| 9106-0001-132F | 5.58E-01 | 1.66E+00  | Y | Y |
| 9106-0001-133F | 6.08E-01 | 7.84E-01  | Y | Y |

Performed By: *Dul Randall*

Date: *11-15-06*

Independent Review: *Robert J. M.*

Date: *11-15-06*

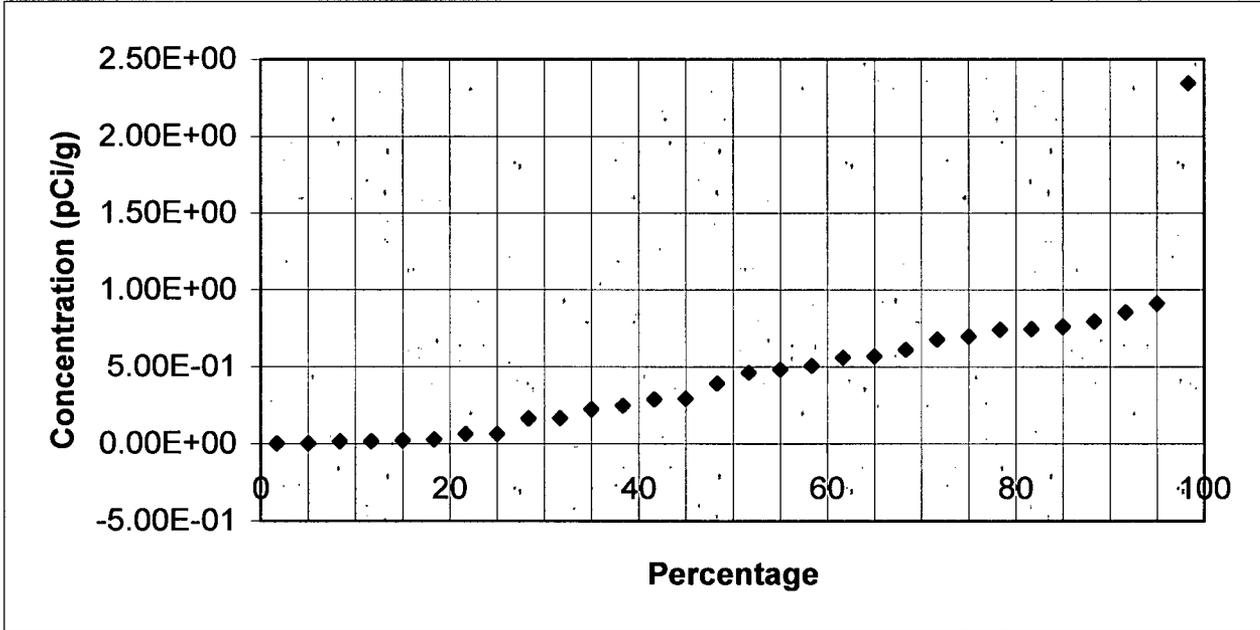
DISCHARGE CANAL  
SURVEY UNIT 9106-0001  
RELEASE RECORD

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Attachment 2d  
Graphical Representation of Data  
(4 Pages)

**Quantile Plot For Cesium - 137**

Survey Unit: 9106-0001  
 Survey Unit Name: Discharge Canal  
 Mean: 4.54E-01 pCi/g



| Cs-137    | Rank | Percentage | Cs-137   | Rank | Percentage |
|-----------|------|------------|----------|------|------------|
| -6.78E-04 | 1    | 2 %        | 4.59E-01 | 16   | 52 %       |
| 0.00E+00  | 2    | 5 %        | 4.78E-01 | 17   | 55 %       |
| 1.38E-02  | 3    | 8 %        | 5.04E-01 | 18   | 58 %       |
| 1.38E-02  | 4    | 12 %       | 5.58E-01 | 19   | 62 %       |
| 2.07E-02  | 5    | 15 %       | 5.66E-01 | 20   | 65 %       |
| 2.71E-02  | 6    | 18 %       | 6.08E-01 | 21   | 68 %       |
| 6.09E-02  | 7    | 22 %       | 6.77E-01 | 22   | 72 %       |
| 6.10E-02  | 8    | 25 %       | 6.95E-01 | 23   | 75 %       |
| 1.61E-01  | 9    | 28 %       | 7.39E-01 | 24   | 78 %       |
| 1.63E-01  | 10   | 32 %       | 7.43E-01 | 25   | 82 %       |
| 2.20E-01  | 11   | 35 %       | 7.60E-01 | 26   | 85 %       |
| 2.44E-01  | 12   | 38 %       | 7.93E-01 | 27   | 88 %       |
| 2.85E-01  | 13   | 42 %       | 8.50E-01 | 28   | 92 %       |
| 2.89E-01  | 14   | 45 %       | 9.09E-01 | 29   | 95 %       |
| 3.87E-01  | 15   | 48 %       | 2.34E+00 | 30   | 98 %       |

Prepared By: *Paul Marshall*

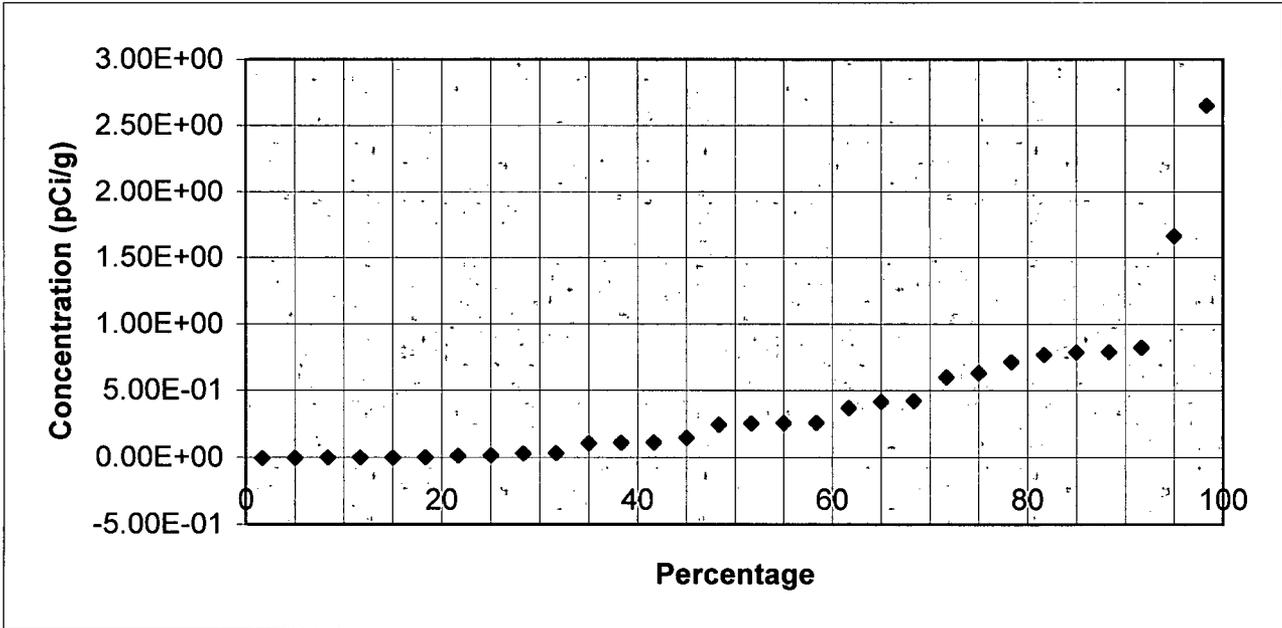
Date: 11-6-06

Reviewed By: *[Signature]*

Date: 11-15-06

### Quantile Plot For Cobalt - 60

Survey Unit: 9106-0001  
 Survey Unit Name: Discharge Canal  
 Mean: 4.06E-01 pCi/g



| Co-60     | Rank | Percentage | Co-60    | Rank | Percentage |
|-----------|------|------------|----------|------|------------|
| -4.42E-03 | 1    | 2 %        | 2.54E-01 | 16   | 52 %       |
| -3.30E-03 | 2    | 5 %        | 2.58E-01 | 17   | 55 %       |
| 0.00E+00  | 3    | 8 %        | 2.59E-01 | 18   | 58 %       |
| 0.00E+00  | 4    | 12 %       | 3.70E-01 | 19   | 62 %       |
| 0.00E+00  | 5    | 15 %       | 4.14E-01 | 20   | 65 %       |
| 5.25E-04  | 6    | 18 %       | 4.22E-01 | 21   | 68 %       |
| 1.28E-02  | 7    | 22 %       | 5.97E-01 | 22   | 72 %       |
| 1.70E-02  | 8    | 25 %       | 6.27E-01 | 23   | 75 %       |
| 3.15E-02  | 9    | 28 %       | 7.08E-01 | 24   | 78 %       |
| 3.26E-02  | 10   | 32 %       | 7.65E-01 | 25   | 82 %       |
| 1.07E-01  | 11   | 35 %       | 7.84E-01 | 26   | 85 %       |
| 1.12E-01  | 12   | 38 %       | 7.86E-01 | 27   | 88 %       |
| 1.14E-01  | 13   | 42 %       | 8.18E-01 | 28   | 92 %       |
| 1.48E-01  | 14   | 45 %       | 1.66E+00 | 29   | 95 %       |
| 2.46E-01  | 15   | 48 %       | 2.65E+00 | 30   | 98 %       |

Prepared By: Don Burdick

Date: 11-15-06

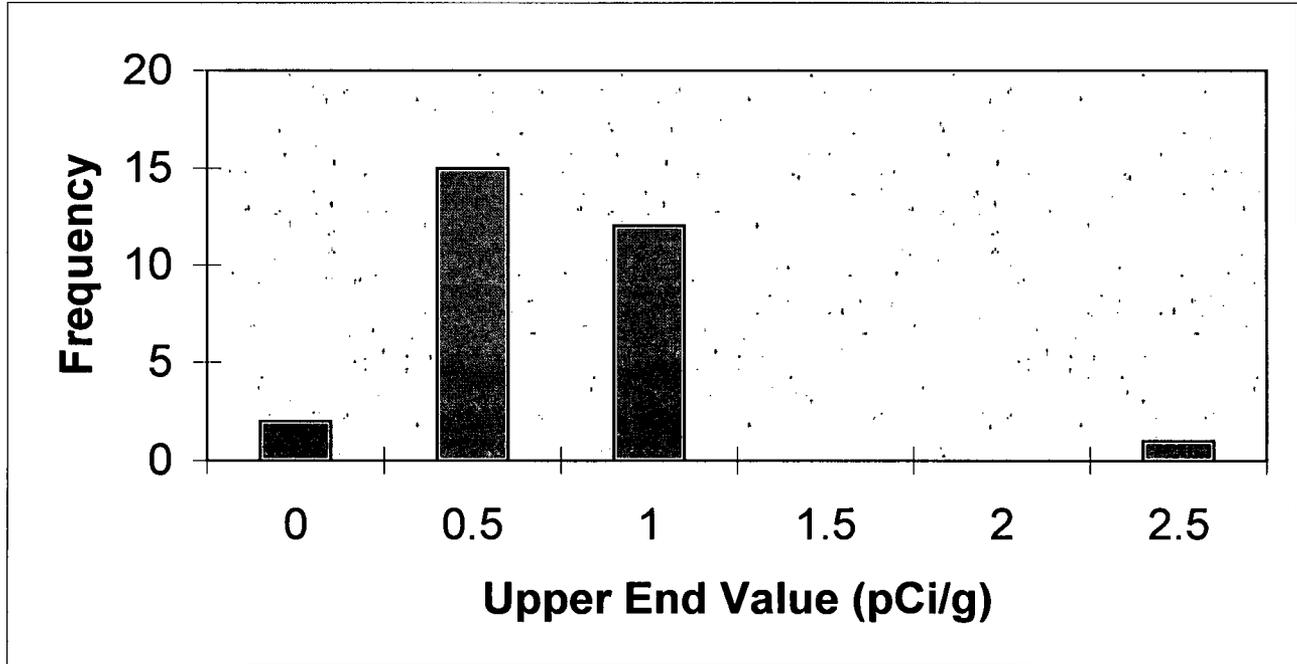
Reviewed By: Robert J. M.

Date: 11-15-06

**Frequency Plot For Cesium - 137**

Survey Unit: 9106-0001  
 Survey Unit Name: Discharge Canal

Mean: 0.454 pCi/g



| Upper End Value | Observation Frequency | Observation Frequency |
|-----------------|-----------------------|-----------------------|
| 0               | 2                     | 7%                    |
| 0.5             | 15                    | 50%                   |
| 1               | 12                    | 40%                   |
| 1.5             | 0                     | 0%                    |
| 2               | 0                     | 0%                    |
| 2.5             | 1                     | 3%                    |
| Total           | 30                    | 100%                  |

Prepared By: *Orel Romball*

Date: 11-6-06

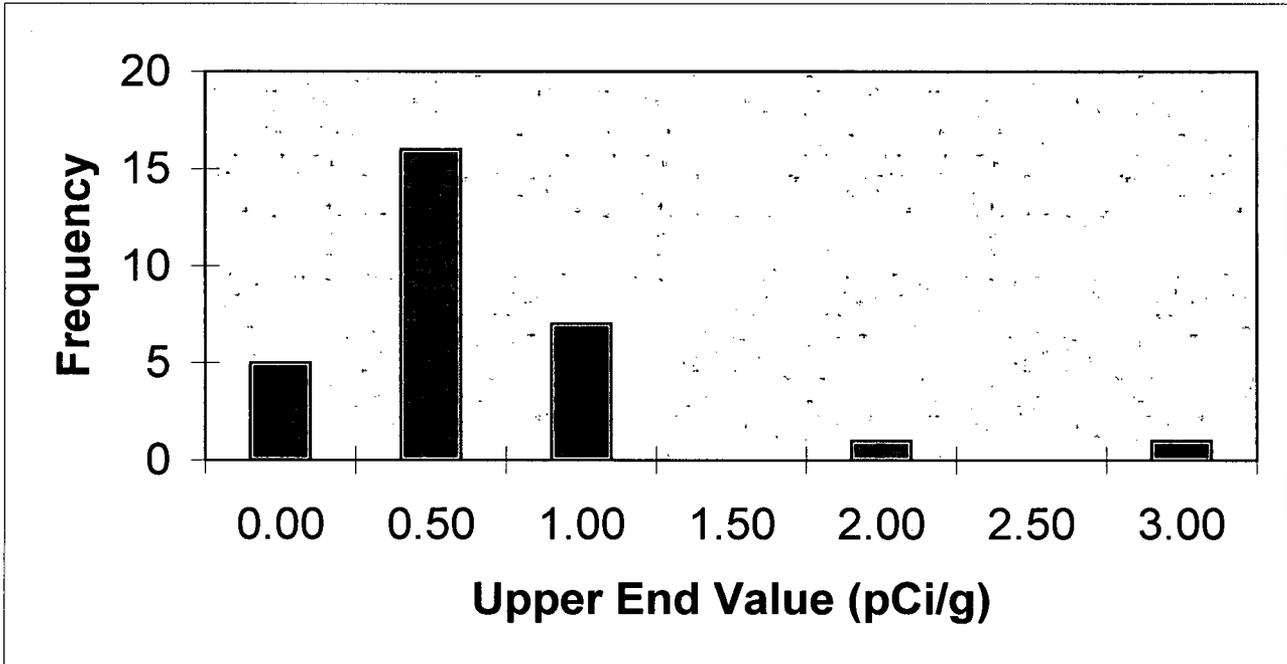
Reviewed By: *Polym*

Date: 11-15-06

**Frequency Plot For Co - 60**

Survey Unit: 9106-0001  
 Survey Unit Name: Discharge Canal

Mean: 0.406 pCi/g



| Upper End Value | Observation Frequency | Observation Frequency |
|-----------------|-----------------------|-----------------------|
| 0.00            | 5                     | 17%                   |
| 0.50            | 16                    | 53%                   |
| 1.00            | 7                     | 23%                   |
| 1.50            | 0                     | 0%                    |
| 2.00            | 1                     | 3%                    |
| 2.50            | 0                     | 0%                    |
| 3.00            | 1                     | 3%                    |
| <b>Total</b>    | <b>30</b>             | <b>100%</b>           |

Prepared By: \_\_\_\_\_

Date: \_\_\_\_\_

Reviewed By: Robert J. [Signature]

Date: 11-15-06

DISCHARGE CANAL  
SURVEY UNIT 9106-0001  
RELEASE RECORD

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Attachment 2e  
Sign Test Calculation  
(2 Page)

**Sign Test Calculation Sheet For Multiple Radionuclides**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                             |                               |                              |      |  |                |        |       |      |  |                             |      |      |      |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------|------------------------------|------|--|----------------|--------|-------|------|--|-----------------------------|------|------|------|
| Survey Unit Number: 9106-0001                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                             |                               |                              |      |  |                |        |       |      |  |                             |      |      |      |
| Survey Unit Name: Discharge Canal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                             |                               |                              |      |  |                |        |       |      |  |                             |      |      |      |
| WP&IR#: 2006-021                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                             |                               |                              |      |  |                |        |       |      |  |                             |      |      |      |
| Classification : 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                             | TYPE I ( $\alpha$ error):0.05 | TYPE I ( $\beta$ error):0.05 |      |  |                |        |       |      |  |                             |      |      |      |
| <table border="0" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:30%;"></td> <td style="text-align: center;">Radionuclides:</td> <td style="text-align: center;">Cs-137</td> <td style="text-align: center;">Co-60</td> <td style="text-align: center;">C-14</td> </tr> <tr> <td></td> <td style="text-align: center;">Survey Design DCGL (pCi/g):</td> <td style="text-align: center;">5.38</td> <td style="text-align: center;">2.59</td> <td style="text-align: center;">3.85</td> </tr> </table> |                             |                               |                              |      |  | Radionuclides: | Cs-137 | Co-60 | C-14 |  | Survey Design DCGL (pCi/g): | 5.38 | 2.59 | 3.85 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Radionuclides:              | Cs-137                        | Co-60                        | C-14 |  |                |        |       |      |  |                             |      |      |      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Survey Design DCGL (pCi/g): | 5.38                          | 2.59                         | 3.85 |  |                |        |       |      |  |                             |      |      |      |
| Results Cs-137                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Results Co-60               | Weighted Sum ( $W_s$ )        | DCGL-Result                  | Sign |  |                |        |       |      |  |                             |      |      |      |
| 5.04E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.28E-02                    | 1.58E-01                      | 8.42E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 9.09E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 4.14E-01                    | 3.88E-01                      | 6.12E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 2.89E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3.15E-02                    | 1.25E-01                      | 8.75E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 1.63E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.48E-01                    | 1.47E-01                      | 8.53E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 6.95E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2.46E-01                    | 2.83E-01                      | 7.17E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 2.07E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.70E-02                    | 6.95E-02                      | 9.30E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| -6.78E-04                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | -4.42E-03                   | 5.73E-02                      | 9.43E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 6.09E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.00E+00                    | 7.04E-02                      | 9.30E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 1.61E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.14E-01                    | 1.33E-01                      | 8.67E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 2.34E+00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2.65E+00                    | 1.53E+00                      | -5.27E-01                    | -1   |  |                |        |       |      |  |                             |      |      |      |
| 3.87E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2.59E-01                    | 2.31E-01                      | 7.69E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 7.93E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3.70E-01                    | 3.49E-01                      | 6.51E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 7.60E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5.97E-01                    | 4.31E-01                      | 5.69E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 1.38E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3.26E-02                    | 7.43E-02                      | 9.26E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 1.38E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 5.25E-04                    | 6.19E-02                      | 9.38E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 2.20E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.12E-01                    | 1.43E-01                      | 8.57E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 7.39E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7.08E-01                    | 4.70E-01                      | 5.30E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 7.43E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 6.27E-01                    | 4.04E-01                      | 5.96E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 4.59E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 4.22E-01                    | 3.07E-01                      | 6.93E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 6.77E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7.65E-01                    | 4.80E-01                      | 5.20E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 2.85E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2.54E-01                    | 2.10E-01                      | 7.90E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 2.71E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.00E+00                    | 6.42E-02                      | 9.36E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 2.44E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.07E-01                    | 1.46E-01                      | 8.54E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 4.78E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7.86E-01                    | 4.51E-01                      | 5.49E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 8.50E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 8.18E-01                    | 5.33E-01                      | 4.67E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 6.10E-02                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -3.30E-03                   | 6.92E-02                      | 9.31E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 0.00E+00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0.00E+00                    | 5.91E-02                      | 9.41E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 5.66E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2.58E-01                    | 2.64E-01                      | 7.36E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 5.58E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 1.66E+00                    | 8.29E-01                      | 1.71E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| 6.08E-01                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 7.84E-01                    | 4.75E-01                      | 5.25E-01                     | 1    |  |                |        |       |      |  |                             |      |      |      |
| Number of Positive Differences (S+):                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                             |                               | 29                           |      |  |                |        |       |      |  |                             |      |      |      |

Critical Value: 19

Survey Unit: Meets Acceptance Criterion

Performed By: *Owl Marshall*

Date: 11-15-06

Independent Review: *Robert M*

Date: 11-15-06

DISCHARGE CANAL  
SURVEY UNIT 9106-0001

RELEASE RECORD

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Attachment 2f  
COMPASS DQA Surface Soil Report with  
Retrospective Power Curve  
(5 Pages)



# DQA Surface Soil Report

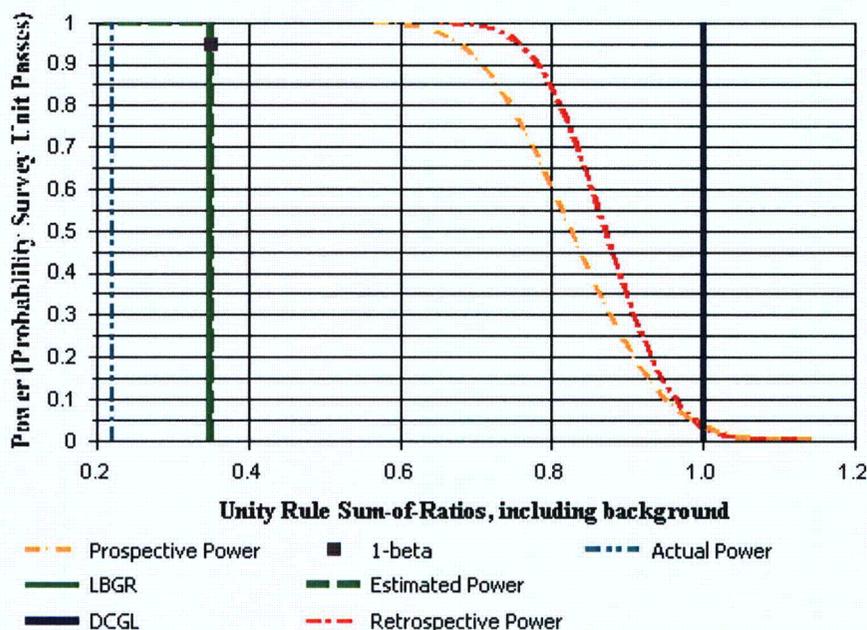
## Assessment Summary

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|                         |                                                    |              |               |
|-------------------------|----------------------------------------------------|--------------|---------------|
| Site:                   | 9106-0001 17 mrem/yr w/HTDs                        |              |               |
| Planner(s):             | Dale Randall                                       |              |               |
| Survey Unit Name:       | 9106-0001 17 mrem/yr w/HTDs                        |              |               |
| Report Number:          | 1                                                  |              |               |
| Survey Unit Samples:    | 30                                                 |              |               |
| Reference Area Samples: | 0                                                  |              |               |
| Test Performed:         | Sign                                               | Test Result: | Pass          |
| Judgmental Samples:     | 0                                                  | EMC Result:  | Not Performed |
| Assessment Conclusion:  | <b>Reject Null Hypothesis (Survey Unit PASSES)</b> |              |               |

## Retrospective Power Curve

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# DQA Surface Soil Report

## Survey Unit Data

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NOTE: Type = "S" indicates survey unit sample.  
Type = "R" indicates reference area sample.

| Sample Number  | Type | C-14 (pCi/g) | Co-60 (pCi/g) | Cs-137 (pCi/g) |
|----------------|------|--------------|---------------|----------------|
| 9106-0001-101F | S    | 0.23         | 0.01          | 0.5            |
| 9106-0001-103F | S    | 0.23         | 0.41          | 0.91           |
| 9106-0001-104F | S    | 0.23         | 0.03          | 0.29           |
| 9106-0001-106F | S    | 0.23         | 0.15          | 0.16           |
| 9106-0001-107F | S    | 0.23         | 0.25          | 0.7            |
| 9106-0001-108F | S    | 0.23         | 0.02          | 0.02           |
| 9106-0001-109F | S    | 0.23         | 0             | 0              |
| 9106-0001-110F | S    | 0.23         | 0             | 0.06           |
| 9106-0001-111F | S    | 0.23         | 0.11          | 0.16           |
| 9106-0001-112F | S    | 0.27         | 2.65          | 2.34           |
| 9106-0001-113F | S    | 0.23         | 0.26          | 0.39           |
| 9106-0001-114F | S    | 0.23         | 0.37          | 0.79           |
| 9106-0001-115F | S    | 0.23         | 0.6           | 0.76           |
| 9106-0001-116F | S    | 0.23         | 0.03          | 0.01           |
| 9106-0001-117F | S    | 0.23         | 0             | 0.01           |
| 9106-0001-119F | S    | 0.23         | 0.11          | 0.22           |
| 9106-0001-120F | S    | 0.23         | 0.71          | 0.74           |
| 9106-0001-121F | S    | 0.09         | 0.63          | 0.74           |
| 9106-0001-122F | S    | 0.23         | 0.42          | 0.46           |
| 9106-0001-123F | S    | 0.23         | 0.76          | 0.68           |
| 9106-0001-124F | S    | 0.23         | 0.25          | 0.28           |
| 9106-0001-125F | S    | 0.23         | 0             | 0.03           |
| 9106-0001-126F | S    | 0.23         | 0.11          | 0.24           |
| 9106-0001-127F | S    | 0.23         | 0.79          | 0.48           |
| 9106-0001-128F | S    | 0.23         | 0.82          | 0.85           |
| 9106-0001-129F | S    | 0.23         | 0             | 0.06           |
| 9106-0001-130F | S    | 0.23         | 0             | 0              |
| 9106-0001-131F | S    | 0.23         | 0.26          | 0.57           |
| 9106-0001-132F | S    | 0.32         | 1.66          | 0.56           |
| 9106-0001-133F | S    | 0.23         | 0.78          | 0.61           |



# DQA Surface Soil Report

## Modified Data (Unity Rule SOR)

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NOTE: Type = "S" indicates survey unit sample.  
Type = "R" indicates reference area sample.

| Sample Number  | Type | Sum-of-Ratios (SOR) |
|----------------|------|---------------------|
| 9106-0001-101F | S    | 0.16                |
| 9106-0001-103F | S    | 0.39                |
| 9106-0001-104F | S    | 0.12                |
| 9106-0001-106F | S    | 0.15                |
| 9106-0001-107F | S    | 0.28                |
| 9106-0001-108F | S    | 0.07                |
| 9106-0001-109F | S    | 0.06                |
| 9106-0001-110F | S    | 0.07                |
| 9106-0001-111F | S    | 0.13                |
| 9106-0001-112F | S    | 1.53                |
| 9106-0001-113F | S    | 0.23                |
| 9106-0001-114F | S    | 0.35                |
| 9106-0001-115F | S    | 0.43                |
| 9106-0001-116F | S    | 0.07                |
| 9106-0001-117F | S    | 0.06                |
| 9106-0001-119F | S    | 0.14                |
| 9106-0001-120F | S    | 0.47                |
| 9106-0001-121F | S    | 0.4                 |
| 9106-0001-122F | S    | 0.31                |
| 9106-0001-123F | S    | 0.48                |
| 9106-0001-124F | S    | 0.21                |
| 9106-0001-125F | S    | 0.06                |
| 9106-0001-126F | S    | 0.15                |
| 9106-0001-127F | S    | 0.45                |
| 9106-0001-128F | S    | 0.53                |
| 9106-0001-129F | S    | 0.07                |
| 9106-0001-130F | S    | 0.06                |
| 9106-0001-131F | S    | 0.26                |
| 9106-0001-132F | S    | 0.83                |
| 9106-0001-133F | S    | 0.47                |



# DQA Surface Soil Report

## Basic Statistical Quantities Summary

| Statistic        | Survey Unit | Background | DQO Results |
|------------------|-------------|------------|-------------|
| Sample Number    | 30          | N/A        | N=15        |
| Mean (SOR)       | 0.30        | N/A        | 0.35        |
| Median (SOR)     | 0.22        | N/A        | N/A         |
| Std Dev (SOR)    | 0.30        | N/A        | 0.28        |
| High Value (SOR) | 1.53        | N/A        | N/A         |
| Low Value (SOR)  | 0.06        | N/A        | N/A         |

## Statistical Test Summary

S+: 29  
 Critical Value: 20  
 Result: Pass

| Data | DCGLw - Data | Sign |
|------|--------------|------|
| 0.16 | 0.84         | +    |
| 0.39 | 0.61         | +    |
| 0.12 | 0.88         | +    |
| 0.15 | 0.85         | +    |
| 0.28 | 0.72         | +    |
| 0.07 | 0.93         | +    |
| 0.06 | 0.94         | +    |
| 0.07 | 0.93         | +    |
| 0.13 | 0.87         | +    |
| 1.53 | -0.53        | -    |
| 0.23 | 0.77         | +    |
| 0.35 | 0.65         | +    |
| 0.43 | 0.57         | +    |
| 0.07 | 0.93         | +    |
| 0.06 | 0.94         | +    |
| 0.14 | 0.86         | +    |
| 0.47 | 0.53         | +    |
| 0.4  | 0.60         | +    |
| 0.31 | 0.69         | +    |
| 0.48 | 0.52         | +    |
| 0.21 | 0.79         | +    |
| 0.06 | 0.94         | +    |
| 0.15 | 0.85         | +    |
| 0.45 | 0.55         | +    |
| 0.53 | 0.47         | +    |
| 0.07 | 0.93         | +    |
| 0.06 | 0.94         | +    |



# DQA Surface Soil Report

## Statistical Test Summary

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| Data | DCGLw - Data | Sign |
|------|--------------|------|
| 0.26 | 0.74         | +    |
| 0.83 | 0.17         | +    |
| 0.47 | 0.53         | +    |