

REPORT OF FINAL STATUS SURVEY

For:

Dartmouth College

**State of New Hampshire
Radioactive Materials License
276-R**

November 8, 2013

Prepared by:

**Clym Environmental Services, LLC
5104 Pegasus Court
Frederick, MD 21704**



Charles Watts
Project Manager

Table of Contents

1. Background.....	page 6
2. Prior Site Operations.....	page 6
3. Consolidated Decommissioning Guidance.....	page 7
4. MARSSIM.....	page 9
4.1 Background Survey.....	page 11
5. Final Status Survey Plan.....	page 13
6. Final Status Survey.....	page 14
6.1 Statistical Tests.....	page 14
6.2 ALARA Considerations.....	page 15
7. Quality Assurance.....	page 16
7.1 Daily Operational Checks for Portable Survey Instruments.....	page 16
7.2 Soil Sample Collection and Shipment.....	page 16
8. Disposition of Materials and Waste.....	page 17
9. Conclusion.....	page 17

ATTACHMENTS

Attachment One	Aerial Map of the Rennie Farm Property
Attachment Two	Topographical Map Groundwater Sample Results Potential Mixed Waste Sample Results
Attachment Three	Background Sampling Map and Results
Attachment Four	Maps of the Survey Unit and Sample Distribution
Attachment Five	Results of Final Status Soil Samples & Dose Rate Measurements
Attachment Six	Sign Test Results
Attachment Seven	Daily Operational Checks of Portable Survey Instruments

Abbreviations

ALARA	As Low As Reasonably Achievable
Clym	Clym Environmental Services, LLC
College	Dartmouth College
CPM	Counts per minute
CF	Correction Factor
Dartmouth	Dartmouth College
DCGL	Derived Concentration Guideline Level
DPM	Disintegrations per minute
FSS	Final Status Survey
GCPM	Gross counts per minute
LBGR	Lower bound of the gray region
MARSSIM	Multi-Agency Radiation Survey and Site Investigation Manual
MDC	Minimum detectable concentration
MDCR	Minimum Detectable Count Rate
NCPM	Net counts per minute
NH RHS	New Hampshire Radiological Health Section
NRC	Nuclear Regulatory Commission
QA	Quality Assurance
Rennie	Rennie Farm Property, Etna, NH
ROI	Region of Interest

References

1. Clym Environmental Services, “Rennie Farm Remediation: Phase One Summary Report,” February 1, 2013
2. Clym Environmental Services, “Project Health and Safety Plan,” September 11, 2011
3. New Hampshire “Rules for the Control of Radiation” (Chapter He-P 4000)
4. NUREG-1575, “Multi-Agency Radiological Survey and Site Investigation Manual, Revision 1”, August 2000
5. NUREG-1757, Vol. 1, “Consolidated NMSS Decommissioning Guidance, Decommissioning Process for Materials Licenses”, Final Report, NRC-Washington, DC, September 2002
6. NUREG-1757, Vol. 2, “Consolidated NMSS Decommissioning Guidance, Decommissioning Process for Materials Licenses”, Final Report, NRC-Washington, DC, September 2003
7. Title 10, Code of Federal Regulations

1.0 BACKGROUND

Dartmouth College (Dartmouth or the College) conducts life sciences investigational research and development operations from its main campus in Hanover, New Hampshire. In support of various research initiatives, the College has conducted protocols employing various radiolabeled compounds. The possession, use and storage of these radioactive materials are authorized by the State of New Hampshire, Department of Health and Human Services, Division of Public Health Services, Radiological Health Section (NH-RHS) via a radioactive materials license, number 276-R. This license provides for an adequate scope of use commonly associated with research and development activities.

Decades ago, prior to widely available commercial radioactive waste processing and disposal facilities, Dartmouth College was authorized to bury the wastes generated from licensed activities at its wholly owned property at 572 Hanover Center Road, Etna, New Hampshire known as the Rennie Farm. The College had selected a very small (< one acre), flat site toward the upper elevations of the property for the burial of human remains from donated research cadavers. Land disposal of radioactive wastes was subsequently authorized at this same site a short but distinct distance from the cadaver burial plot (see Attachment 1 for an aerial map of the property).

The College employed research methods that involved the use of low levels of radioactive materials in unsealed form. These protocols involved the bench top manipulation of short and long-lived radioactive materials. Both long and short-lived radioactive materials were reported buried at the Rennie Farm site. Given that the College is interested in potential divestiture or development of Rennie Farm, it is now conducting decommissioning operations in order to seek the unrestricted release of the site from radiological controls.

Dartmouth College, as a New Hampshire Radiological Health Section licensee, is required to demonstrate that the former Rennie Farm radioactive waste burial site is acceptable for release in accordance with the requirements and conditions specified by the NH-RHS. Dartmouth has retained the services of Clym Environmental Services, LLC (Clym) to assist in the decommissioning process. Clym routinely provides such decommissioning services to its customers. All decommissioning related activities were conducted under the authority of the current Dartmouth College radioactive materials license.

2.0 PRIOR SITE OPERATIONS

Remedial operations at the site have been detailed in previous reports, most recently in the Rennie Farm Remediation: Phase One Summary report prepared by Clym in February 2013. Proposed Phase One activities are also outlined in the Project Health & Safety Plan previously submitted and approved by the NH RHS. For the sake of brevity these documents are not included herein but are available upon request. This report focuses on the final status survey and associated decisions intended to demonstrate that the Rennie

Farm site is now suitable for release from radiological controls.

It should be noted that additional samples were collected during the remediation of the site, which were not included in the final status survey. This data includes results from characterization surveys of soil potentially contaminated with mixed waste and groundwater samples collected before and after remedial operations. Results from both of these data sets are included as Attachment 2.

As detailed in Clym's Phase One Summary Report, a plug of soil potentially contaminated with both chemical and radioactive waste was uncovered during the remedial process. Soil saturated with this waste was segregated from other soil on the site and secured into intermodal containers. Each intermodal container was subsequently sampled and these samples analyzed for the presence of significant chemical or radioactive contamination. Sample results showed no significant radioactivity and the College petitioned, and the NH-RHS subsequently approved, to dispose of the soil as non-radioactive.

The College had also installed groundwater-monitoring wells prior to deciding to remediate the Rennie Farm site (see Attachment 2). GZA GeoEnvironmental, Inc. periodically collected samples from the wells, as water levels allowed, and these samples were shipped for chemical and radio-analysis. This sampling continued during remedial operations. No significant findings were detected as a result of these analyses (see Attachment 2). After remedial operations were completed, and in conjunction with oversight from the New Hampshire Department of Environmental Services, groundwater sampling has continued. Sufficient sample volume for radioanalysis was not present until December 2012. The results of the sampling conducted at the time were similar to results documented prior to site operations (see Attachment 2).

3.0 CONSOLIDATED DECOMMISSIONING GUIDANCE (NUREG 1757, Volume 2, Revision 1)

The United States Nuclear Regulatory Commission (NRC) has provided guidance for licensees around the country and Agreement State regulators, such as the New Hampshire Radiological Health Section, on acceptable methods and techniques for radiological decommissioning of sites in NUREG 1757, Volume 2, Revision 1 entitled *Consolidated Decommissioning Guidance* (September 2006). This guidance document provides a roadmap for the decommissioning process and incorporates lessons learned and suggested workarounds for common issues encountered during decommissioning. The overarching intent of the guide is to provide a "risk-informed, performance-based and flexible" approach to decommissioning.

Given the complexities of radiological decommissioning and the significant number of potential variables realized from one site to another, NUREG 1757, Volume 2 seeks to qualify sites based on general characteristics first and then further refine that designation as more data is collected. The first qualification is to assign a site to a Decommissioning

Group based on the expected conditions at the site. These expected conditions are related to the types of operations authorized under the license. The Rennie Farm site has been designated as Group 3 based on a consideration of past licensed operations and the general description of this group as, “Licensed material was used in a way that could meet the screening criteria, but the license needs to be amended to modify or add procedures to remediate buildings or sites.” The typical example of such a site is “Licensees who may have occasionally released radioactivity within NRC limits (e.g. broad scope).”

The general description for Decommissioning Group 3 fits in this case as the radioactive materials authorized at the Rennie Farm site were limited in quantity and type by the College’s broad scope license. The College conducted limited burial operations, depositing waste at the site only a few times each year. The waste volumes were commensurate with small-scale research operations and never exceeded the capacity of the designated area. Further it was not uncommon for research facilities to seek and receive approval for onsite disposal of such low-level radioactive waste in the absence of off-site disposal alternatives. Lastly, the College did have to amend its license to account for necessary procedures and health and safety controls for the remediation of the Rennie Farm burial site.

With a proper Decommissioning Group selected, NUREG 1757, Volume 2 provides further guidance for Groups 2-7 in Appendix A. Here, another guidance document entitled the *Multi-Agency Radiation Survey and Site Investigation Manual (MARSSIM)* is referenced which outlines the Final Status Survey (FSS) process. The FSS process follows methods and procedures aimed at qualifying a site for release. In order to employ the proper methods and procedures, the site must first be classified based on the possibility of residual radioactivity from licensed activities. “Impacted” sites are those that may exhibit residual radioactivity. The Rennie site, even though the radioactive waste buried at the site has been removed, still clearly qualifies as “impacted.”

Next, all impacted sites should be designated as one of three defined classes:

- Class 1: Impacted areas that are expected to have concentrations of residual radioactivity that exceed the weighted derived concentration guideline level (DCGL_w)
- Class 2: Impacted areas that are not likely to have concentrations of residual radioactivity that exceed the DCGL_w
- Class 3: Impacted areas that have a low probability of containing residual radioactivity

Class 1 is considered unlikely due to the soil sample results collected post-remediation and the thoroughness of waste removal operations. Given that the Rennie site has been extensively remediated, with radioactive waste and a margin of contiguous soil removed, a Class 3 designation is not unreasonable. However, given the length of time that the

waste remained in the ground and the potential for contaminant migration, a more conservative classification would be Class 2. For this reason, Class 2 has been chosen for the Rennie site.

For sites with potential soil contamination, additional classification is required for Classes 1 and 2, namely whether or not substantial subsurface residual radioactivity remains. "Substantial residual radioactivity" is defined as an amount of radioactivity, or contaminated material (such as soil), that could contribute at least 10% of the potential dose to the average member of the critical group or soil that exceeded the elevated measurement comparison ($DCGL_{EMC}$). "Subsurface" is meant to define radioactivity deeper than 15 centimeters from the surface.

Though not anticipated, it is possible that subsurface residual radioactivity exists at the Rennie Farm site. If present, it is believed that the substantial remedial operations undertaken to date would have largely removed or reduced any remaining subsurface radioactivity significantly, thus resulting in only small amounts of potential residual radioactivity. NUREG 1757, Volume 2 Appendix A states, "when there are small amounts of residual radioactivity below 15 centimeters, the MARSSIM survey methods for surface measurements are acceptable."

Dartmouth College has therefore proposed, and the New Hampshire Radiological Health Section has since verbally approved, the use of the Screening Values (pCi/g) of Common Radionuclides for Soil Surface Contamination Levels found in Table H.2 of NUREG 1757, Volume 2, Revision 1. In addition, the guidance for Final Status Surveys found in MARSSIM has been adopted.

4.0 MARSSIM

The *Multi-Agency Radiation Survey and Site Investigation Manual* (MARSSIM) provides procedures and calculations resulting in statistically defensible evidence that survey results meet the current dose-based release criteria for facilities operating under radiological controls. This process culminates in the Final Status Survey (FSS). Inputs into the Final Status Survey design are from two sources: pre-release surveys and dose modeling. The pre-release surveys, including the historical site assessment, scoping survey, the characterization survey and the remedial action support survey, provide information into planning the FSS. The dose modeling provides Derived Concentration Guideline Levels (DCGL) for both the statistical test used in qualifying the uniformly distributed residual radioactivity ($DCGL_W$) and for the elevated measurement comparison ($DCGL_{EMC}$) of localized residual radioactivity.

MARSSIM provides a standardized statistical approach to sampling and describes the statistical tools, tests and assumptions needed. The intent of the statistical approach is to develop a representation of the distribution of residual radioactivity in a survey unit utilizing the least number of samples. Non-parametric statistical tests are used by MARSSIM to minimize the dependence on normality since many of these sampling

distributions are skewed by small areas of localized radioactivity that can result from remediation activities. A value of three times the standard deviation of the mean is chosen to minimize the likelihood of a survey unit containing only background values would fail the statistical test for release.

Sampling is required if a surface scan of adequate sensitivity cannot be obtained to show that the release criteria is met. Sampling and direct measurement cannot fully replace a 100% scan in terms of spatial coverage and therefore, the location of samples and the number of samples must provide enough information about the overall distribution of residual radioactivity to make a decision on releasing a survey unit. Given the critical importance of sufficient data, scoping surveys must meet the following key objectives: conservative classification, thorough consideration of all surfaces and designed to meet Final Status requirements based on initial classification.

A scoping survey is performed to substantiate and better define potential radioactive contaminants including the general extent of any residual activity. These surveys usually consist of surface scans and direct radiation level measurements at representative points. Given that Rennie Farm is a former burial site and that the College has chosen to remove the buried waste prior to decommissioning, surveys were undertaken during waste removal to determine site contaminants. Given that the remaining open earth soil at the site was not conducive to surface scanning and the nuclides present could not be adequately assessed *in situ*, radiation level measurements and soil sampling were conducted. All measurements and sample collection activities were conducted in accordance with industry standard procedures and good work practices.

As discussed previously, MARSSIM also assigns a greater level of effort on surveys conducted in areas that have, or had, the highest potential for contamination. The process by which an area is classified is based on the radiological characteristics. Areas that have no reasonable potential or extremely low probability of residual contamination are classified as non-impacted. Areas with some potential for residual contamination are classified as impacted.

The history of radioactive materials possession, use and storage at Dartmouth College is detailed in license related documents. Additional information was obtained from a review of historical records and interviews with the operational personnel. Records indicated that long-lived, open-form radioactive materials that were deposited at the Rennie Farm site included: Tritium (^3H), 14-Carbon (^{14}C), 210-Lead (^{210}Pb), and 63-Nickel (^{63}Ni). In addition, during inspection of the waste as it was removed from the site, 137-Cesium (^{137}C) was also identified. All other nuclides were short-lived and would have decayed over time to background levels.

The Final Status survey was designed to designate a single survey unit. In an attempt to gain operational efficiency, the remedial action survey was designed to meet the requirements of the Final Status Survey. The entire former burial site including an additional thirty feet from each perimeter plot was designated as impacted. The contiguous area inside the original fence line was also designated for survey (up to but

not including the area where the cadaver remains are located). The remaining areas of the property were deemed non-impacted.

The next step was to determine the Derived Concentration Guideline Levels (DCGLs) and select the Final Status Survey method in order to demonstrate compliance with the provisions for releasing the facility for unrestricted use. Screening values for soil surface contamination levels were obtained from NUREG-1757, Volume 2, Revision 1, Appendix H, Table H.2 for site contaminants. A listing of these approved screening values for soil surface contamination levels is provided in Table 1.

Table 1: Soil Surface Contamination Screening Values (pCi/g)

Radionuclide	Symbol	Acceptable Screening Level (DCGL)
Tritium	³ H	110
14-Carbon	¹⁴ C	12
210-Lead	²¹⁰ Pb	0.9
63-Nickel	⁶³ Ni	2100
137-Cesium	¹³⁷ Cs	11

4.1 Background Survey

In order to establish a baseline, or normal levels of radiation and radioactivity at the site, a background survey was conducted. Radiation level measurements were taken with handheld instrumentation and soil samples were conducted in areas near, but not likely impacted by, the burial site. This included the area above the burial plots as well as areas to the west, south and east of the site. A total of eighteen (18) soil samples were collected in association with the Background Survey.

Table 2 details the background samples that were collected. These samples were collected in locations that closely matched the physical, chemical, geological and biological characteristics of the soil in the burial site area.

Table 2: Background Sampling Summary

Sample ID	Location / Description	Dose Rate Reading (uR/hr)
290167-1	Plot area, east side, 2 ft depth	8
290167-2	South of plot area, 1 ft depth	10
291067-3	Plot area, over plots, 1 ft depth	10
291607-4	West of plot area, 1 ft depth	12
291607-5	South of plot area, 2 ft depth	8
291607-6	Plot area, east side, 1 ft depth	11
291607-7	Plot area, over plots, 2 ft depth	10
291607-8	West of plot area, 2 ft depth	9
303457-1	South of plot area, 4 ft depth	11
303457-2	South of plot area, 4 ft depth	10
303457-3	South of plot area, 4 ft depth	12
303457-4	South of plot area, 4 ft depth	10
303457-5	South of plot area, 4 ft depth	10
303457-6	West of plot area, 4 ft depth	11
303457-7	West of plot area, 4 ft depth	8
303457-8	West of plot area, 4 ft depth	9
303457-9	West of plot area, 4 ft depth	12
303457-10	West of plot area, 4 ft depth	10

Dose rate measurements were collected using a Ludlum Model 19 uR handheld instrument. Readings were collected as near to sample sites as possible. The average background dose rate reading was determined to be 10 uR/hr. Gross soil samples were collected using a “grab” method with the soil being contained in individual bags. Samples were prepared for shipment for off-site analysis by removing rocks and packaging the soil into containers provided by the laboratory. Samples were shipped at ambient temperature to GEL Laboratories, LLC (GEL) in Charleston, SC for radioanalysis. Table 3 summarizes the results of these analyses by radionuclide of interest in average picocuries per gram (pCi/g). Analytical results for background samples and a sample location map are included as Attachment 3.

In order to account for differences in background results, NUREG 1757 allows a value of three times the standard deviation of the mean of the background value to be added to the mean of the background result in order to define the background concentration for each radionuclide. Given the variation of some of the background readings, this concentration is key in assuring that samples are not mischaracterized. For instance, the DCGL for ²¹⁰Pb is 0.9 pCi/g. Six (6) of the eighteen (18) background samples actually exceed the DCGL in a direct comparison. Given that ²¹⁰Pb occurs naturally in our environment, it is not surprising to find such a variation in soil samples. In order for a true consideration of site conditions to be conducted, a calculation of background contributions will be subtracted from gross sample results as allowed by MARSSIM.

Table 3: Background Soil Sample Results Summary

Radionuclide	Activity in pCi/g		Background Concentration	
	Average	Uncertainty	+3 σ	-3 σ
³ H	-2.299	50.428	127.804	-132.403
¹⁴ C	0.16	4.691	11.216	-10.914
⁶³ Ni	7.031	47.035	24.308	-34.274
²¹⁰ Pb	0.615	0.518	1.872	-0.74
¹³⁷ Cs	0.009	0.026	0.093	-0.072

5.0 FINAL STATUS SURVEY PLAN

The Derived Concentration Guideline Levels and Final Status Survey methodology to demonstrate compliance with the provisions for releasing the site for unrestricted use were determined. The screening values for surface contamination were obtained using the values provided in NUREG-1757, Volume 2, Revision 1, Appendix H, Table H.2. A listing of the adopted screening values for soil surface contamination has been provided in Table 1. All waste burial plots were combined into one Class 2 Survey Unit.

Soil samples were collected from each plot area after all accessible waste items and contiguous soil had been removed as a part of the remedial action survey. Samples were collected from areas most likely to represent any remaining contamination (e.g. collected from the remaining soil underneath and beside each burial plot). Given the amorphous shape of the earth after remediation of each plot, samples were collected at varying depths up to nine feet below the surface. In general soil was collected approximately one foot below the deepest waste plug and one foot to the east from the center of the waste plug.

The result of the remedial action sampling was forty-three (43) samples, or one sample per former plot. Samples were packaged to meet the volume and containerization requirements of the receiving laboratory. Samples were stored in individual, sealed bags so as to prevent cross-contamination. Given the results of these samples, the College petitioned, and the NH-RHS approved, to use this data in support of final status surveying.

Statistical testing is used to determine whether or not a site meets release criteria. Various tests are defined in MARSSIM to guide this determination. In order to choose the appropriate test(s), a consideration of: whether or not radionuclides expected at the site are also present in background, and whether or not radionuclide-specific measurements have been made, should be undertaken. The Sign test was selected to compare levels of contaminants not present in background with the DCGL value.

Next, samples were analyzed such that radionuclide-specific measurements could be made. With these two determinations completed, MARSSIM offers the following guidance for statistical testing:

- 1) All survey results $< DCGL_W$ = Survey unit meets release criterion
- 2) Average $> DCGL_W$ = Survey unit does not meet release criterion
- 3) Any measurement $> DCGL_W$ and the average $< DCGL_W$ = Conduct Sign test and elevated measurement comparison

The objective of the Final Status Survey is to demonstrate that the residual radioactivity levels at the site meet the release criterion. In demonstrating that this objective is met, the null hypothesis (H_0) is tested, namely is the median concentration of residual radioactivity in the survey unit greater than the $DCGL_W$? The alternative hypothesis, H_a , would result in the median concentration of residual radioactivity in the survey unit being less than the $DCGL_W$.

H_0 : The median concentration of residual radioactivity in the survey unit is greater than the $DCGL_W$.

The Type I error (α) was specified as 0.05 and a Type II decision error (β) was set at 0.05. The number of data points required for the survey unit was determined to be 15. However, given that post-remediation samples were collected from each of the 43 burial plots, the number of data points was increased to 43.

6.0 FINAL STATUS SURVEY

One survey unit (Class 2) was designated for evaluation using Final Status Survey techniques. Since the survey unit is a remediated burial site, soil samples and dose rate measurements were relied on exclusively for survey data. The designation for each sample in the survey unit was identified using a numeric system that correlates the sample number to the burial plot. A diagram of the survey unit has been provided as Attachment 4. The results of soil sample radioanalyses collected throughout the survey unit have been provided as Attachment 5. The results of the dose rate survey conducted at each sample site are also included in Attachment 5.

6.1 Statistical Testing

The analytical results of the soil samples from each remediated plot were evaluated. The Sign test was selected to compare those contaminants not present in background. First, sample results were compared to the $DCGL_W$ value and the average of the measurements made in each survey unit was determined. After accounting for the background concentration, all samples were found to be below the respective DCGL. However, two (2) samples were found to exceed a specific DCGL when only accounting for the averaged background and were designated for further evaluation.

The first was for analyte ^{14}C in the sample from plot #39. The measured gross activity was reported to be 16.7 ± 5.34 pCi/g. Accounting for uncertainty the true activity lies between 22.04 pCi/g and 11.36 pCi/g. The DCGL plus the average background for ^{14}C is 12.16 pCi/g, or not definitively in excess of the DCGL. Therefore the measured activity for this sample has been deemed statistically insignificant. However, to assure that the sample result was not impactful to the characterization of the site, the Sign test was conducted. The results of this test are provided in Attachment 6.

The second sample was for analyte ^{210}Pb from plot #2. The measured gross activity was reported to be 1.85 ± 0.676 pCi/g. Accounting for uncertainty the true activity lies between 2.526 pCi/g and 1.174 pCi/g. The DCGL plus the average background for ^{210}Pb is 1.515 pCi/g, therefore the measured activity for this sample has been deemed statistically insignificant. However, to assure that the sample result was not impactful to the characterization of the site, the Sign test was conducted. The results of this test are also provided in Attachment 6.

Next, the mean of all sample results was compared to the DCGL_w value for each radionuclide. The results of this comparison are summarized in Table 4. The mean result for each nuclide of interest did not exceed the applicable DCGL.

Table 4: Sample Set Mean Comparison to DCGLs

Nuclide	DCGL (pCi/g)	Mean Sample Result (pCi/g)	Mean > DCGL?
^3H	110	2.605	No
^{14}C	12	-4.142	No
^{137}Cs	11	6.76e-05	No
^{63}Ni	2100	286	No
^{210}Pb	0.9	0.629	No

6.2 ALARA Considerations

As detailed previously, if all survey results are found to be less than the applicable DCGL, then the survey unit meets the release criterion. However, other factors also contribute to a site qualifying for unrestricted release from radiological controls. ALARA (As Low As Reasonably Achievable) considerations must also be included before determining whether or not a site meets release criterion. In the case of Rennie Farm, a number of ALARA actions should be factored in to the final site release decision-making. These include: conservative remediation procedures, use of surface soil DCGLs and use of increased data points.

First, when the Rennie site was designated for remediation, the College decided to remove all accessible waste from the site. In addition a margin of soil from around

each burial plug was also removed so as to account for possible contaminant migration. These wastes were characterized under a broad profile and shipped off site for processing and final disposal. By the end of the remedial process, over 90 tons of low-level radioactive and non-radioactive waste and soil had been removed from the site. This strategy greatly reduced the likelihood that any significant radioactivity from burial operations remained.

Next, though less restrictive DCGLs could likely have been obtained for subsurface soils via dose modeling, a more conservative approach was selected. Even though any residual radioactivity remaining at the site would likely reside at significant depth from the surface, surface soil DCGLs were selected so as to account for any contamination potentially moved closer to, or onto the surface, as a result of remedial operations. Thus final status sample results were scrutinized to a high standard to assure that the site did indeed qualify for unrestricted release.

Lastly, though the number of data points required for statistical testing was found to be 15, this number was increased to account for the samples collected from each burial plot. By increasing the sample count, a more conservative picture of site conditions was revealed. In sum, these actions more than meet the need for ALARA considerations during decommissioning and qualify the Rennie site for unrestricted release.

7.0 QUALITY ASSURANCE

The performance of decommissioning activities has been managed within a framework of policies and procedures, which assure the validity and quality of data. Procedures were established for activities requiring the application of standard and approved methods to ensure regulatory requirements were met. These procedures document the technical competence of the survey approach thus ensuring the use of effective processes. Procedures utilized by CLYM are documented using program-specific applications.

7.1 Daily Operational Checks for Portable Survey Instruments

The purpose of these procedures was to ensure portable dose rate meters were in proper working condition prior to placement into service. If an instrument failed an operational check, it was removed from service until the discrepancy could be resolved.

Both source and background measurements must fall within the acceptable range established for the site and were performed as follows:

- ✓ Prior to beginning the performance of data measurements and/or scanning for the day,
- ✓ After the lunch or noon break,

- ✓ Any time instrument's operation is in question.

Daily instrument checks included:

- 1) a determination of operational readiness,
- 2) ambient background determination, and
- 3) check source reproducibility determination.

The check source reproducibility determination involved obtaining the data necessary to calculate the average source count reading was within $\pm 10\%$. Additionally, the 2σ and 3σ values for the background and check source counts were calculated. A copy of these daily checks has been provided as Attachment 7.

7.2 Soil Sample Collection and Shipment

Soil samples were collected from each plot area after all accessible waste items had been removed. Samples were collected from areas most likely to represent any remaining contamination (e.g. collected from the remaining soil underneath and beside each burial plot) while avoiding rocks or other impurities. "Grab" samples were collected with clean trowels and stored in individual, sealed bags so as to prevent cross-contamination. Enough volume was collected so as to allow for primary and duplicate sample sets to be prepared. Each bag was labeled with the corresponding plot number. Samples were prepared for shipment in accordance with the packaging and volume requirements of the receiving laboratory. A chain of custody was completed for each sample set and accompanied the samples during shipment. Samples were shipped at ambient temperature and all samples shipped for radioanalysis were successfully delivered to the receiving laboratory.

8.0 DISPOSITION OF MATERIALS AND WASTE

All licensed radioactive material and waste has been removed from the site as of April 12, 2012.

9.0 CONCLUSION

The Final Status Survey conducted by Dartmouth College demonstrate compliance with the provisions specified by the State of New Hampshire for release of the Rennie Farm burial site in Etna, NH from radiological controls for unrestricted use.

ATTACHMENT ONE

AERIAL MAP OF RENNIE FARM PROPERTY

DARTMOUTH
COLLEGE
PROPERTY

MAP 13
LOT 14

Parcels 2010

DRAFT

0 200 400 800 Feet

Map Printed: July, 2011

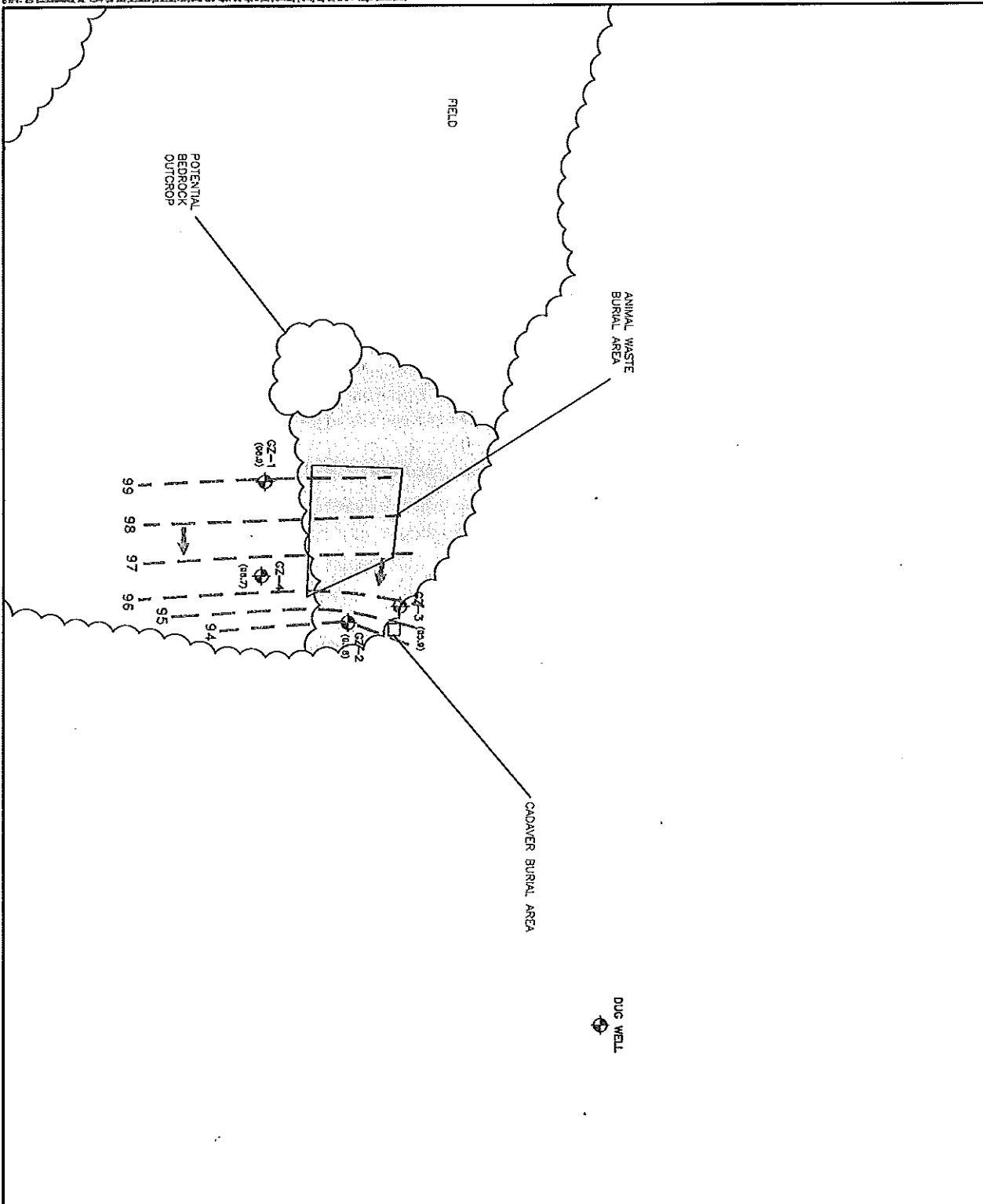


ATTACHMENT TWO

TOPOGRAPHICAL MAP OF BURIAL SITE

GROUNDWATER SAMPLING RESULTS

POTENTIAL MIXED WASTE SAMPLING RESULTS



LEGEND:

- GZ-2 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- (93a) CALCULATED GROUNDWATER SURFACE ELEVATION BASED ON DEPTH-TO-WATER LEVEL MEASUREMENTS MADE ON NOVEMBER 23, 2009
- 94 ESTIMATED GROUNDWATER SURFACE ELEVATION CONTOURS
- DIRECTION OF BULK GROUNDWATER FLOW
- RECENT PUPAR DISPERSEMENT

NOTES:

1. WATER QUALITY SAMPLES WERE COLLECTED ON 11/20/09.
2. ND^r INDICATES THE COMPOUND OR COMPOUNDS INDICATED WERE NOT DETECTED ABOVE THEIR RESPECTIVE LABORATORY REPORTING LIMITS. VODS^r INDICATES VOLATILE ORGANIC COMPOUNDS NICKEL AS RECORD IN MILLIGRAMS PER LITER RADIOLOGICAL RESULTS ARE RECORDED IN PICOCURIES PER LITER.
3. REFER TO TEXT FOR ADDITIONAL INFORMATION.
4. THE SELECTED SITE FEATURES WERE APPROXIMATELY DETERMINED BY GPS. THE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.



GROUNDWATER INVESTIGATION RENNIE FARM SITE

ETNA, NH

FOCUSED SITE PLAN

	Prepared by: CEA Environmental, Inc. Supervising and Responsible Geologist: [Name] Project No.: 000025040	Prepared for: [Name]
Date: April 2010	Scale: 1" = 40'	Figure: 4
Project No.: 000025040	Revision No.:	Date:

GROUNDWATER SAMPLE RESULTS

**Table 2 Radiological Parameters
Water Quality Data Summary**

Rennie Farm
Etna, New Hampshire

Well Location	Sample Date ⁽¹⁾	Parameter ⁽²⁾ <i>AGQS</i> ⁽³⁾	Radiologic (nCi/L) ⁽⁴⁾							
			Gross Gamma Spec Isotopes					Gross Alpha	Gross Beta	Radon
			Uranium	Bismuth-214	Lead-212	Lead-214	Potassium-40			
			<i>NE</i>	<i>NE</i>	<i>NE</i>	<i>NE</i>	<i>NE</i>	<i>15</i>	<i>NE</i>	<i>NE</i>
GZ-1	12-Dec-11		ND	ND	ND	ND	ND	ND	ND	NT
	5-Dec-11		ND	ND	ND	ND	ND	ND	ND	NT
	29-Nov-11		UI	ND	ND	ND	ND	ND	ND	NT
	20-Nov-11		ND	108	ND	100	ND	ND	ND	NT
	13-Nov-11		ND	UI	ND	ND	ND	ND	ND	NT
	6-Nov-11		ND	ND	ND	ND	ND	NT	NT	NT
	27-Oct-11		NT	NT	NT	NT	NT	ND	ND	NT
	4-Feb-10		0.00009 E	UI	ND	UI	ND	ND	ND	1,974
20-Nov-09 ⁽⁵⁾		NT	48.6	ND	51.2	ND	14.9	21.8	NT	
GZ-2	12-Dec-11		ND	ND	ND	ND	ND	ND	ND	NT
	5-Dec-11		ND	ND	ND	ND	ND	ND	ND	NT
	29-Nov-11		ND	ND	ND	ND	ND	ND	ND	NT
	20-Nov-11		ND	39.5	ND	UI	ND	ND	ND	NT
	13-Nov-11		ND	ND	ND	ND	ND	ND	ND	NT
	6-Nov-11		ND	ND	ND	ND	ND	NT	NT	NT
	27-Oct-11		NT	NT	NT	NT	NT	ND	3.21	NT
	4-Feb-10		0.000051 E	ND	ND	ND	ND	ND	ND	718
20-Nov-09 ⁽⁵⁾		0.0167	20.4	3.95	23.6	37.1	180	247	NT	
GZ-3	12-Dec-11		ND	ND	ND	UI	ND	ND	ND	NT
	5-Dec-11		ND	13.6	ND	UI	ND	ND	ND	NT
	29-Nov-11		ND	ND	ND	ND	ND	ND	ND	NT
	20-Nov-11		ND	117	ND	120	ND	ND	ND	NT
	13-Nov-11		ND	UI	ND	UI	ND	ND	ND	NT
	6-Nov-11		ND	ND	ND	ND	ND	NT	NT	NT
	27-Oct-11		NT	NT	NT	NT	NT	ND	ND	NT
	4-Feb-10		0.000070	29.2	ND	UI	ND	ND	ND	3,293
20-Nov-09 ⁽⁵⁾		NT	62.6	ND	63.6	ND	13.9	17.3	NT	
GZ-4 ⁽⁶⁾	12-Dec-11		ND	ND	ND	ND	ND	ND	ND	NT
	5-Dec-11		ND	35.3	ND	UI	ND	ND	ND	NT
	29-Nov-11		ND	ND	ND	ND	ND	ND	3.82	NT
	20-Nov-11		ND	188	ND	209	ND	ND	ND	NT
	13-Nov-11		ND	UI	ND	28.9	ND	ND	ND	NT
	6-Nov-11		ND	ND	ND	ND	ND	NT	NT	NT
	27-Oct-11		NT	NT	NT	NT	NT	ND	ND	NT
	4-Feb-10									
20-Nov-09										

Notes:

1. Samples collected by GZA GeoEnvironmental, Inc. (GZA) personnel on the date indicated in the table.
2. Samples analyzed by GEL Laboratories of Charleston, South Carolina.
3. NH AGQS indicates New Hampshire Ambient Groundwater Quality Standard as defined in State of New Hampshire Code of Administrative Rules Env-Or 603.03. Radionuclide contaminants are defined by Env-Dw 703.
4. µg/L indicates micrograms per liter, mg/L indicates milligrams per liter, and pCi/L indicates picocuries per liter.
5. Samples collected on this date were not field-filtered due to a misunderstanding between GZA and GEL Laboratories, and therefore considered non-representative because of naturally occurring radionuclides associated with sediment in samples.
6. Well GZ-4 was installed primarily for water levels only and was not sampled during initial rounds because it was considered to be hydrologically cross-gradient from the disposal pit area and not indicative of downgradient water quality. GZ-4 was added to later sampling round to provide additional information regarding area-wide groundwater quality.
7. ND indicates not detected above analytical laboratory reporting limit; BC indicates standards are by compound; NE indicates no AGQS established; NT indicates not tested and UI indicates uncertain identification at levels below quantitative detection levels (applies to gamma spectroscopy individual compounds).

GEL LABORATORIES LLC

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

Certificate of Analysis Report for

CLYM001 Clym Environmental Services

Client SDG: 317344 GEL Work Order: 317344

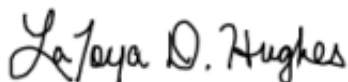
The Qualifiers in this report are defined as follows:

- * 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

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.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

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



Reviewed by _____

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: January 25, 2013

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: GZ-1	Project: CLYM00105
Sample ID: 317344001	Client ID: CLYM001
Matrix: Ground Water	
Collect Date: 20-DEC-12 11:30	
Receive Date: 28-DEC-12	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspac, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.26	29.7		pCi/L		KXG3	01/03/13	1050	1273083	1
Americium-241	U	-0.0367	26.2		pCi/L						
Antimony-124	U	-2.41	14.7		pCi/L						
Antimony-125	U	0.864	15.8		pCi/L						
Barium-133	U	-3.44	6.85		pCi/L						
Barium-140	U	0.501	15.5		pCi/L						
Beryllium-7	U	2.62	61.1		pCi/L						
Bismuth-212	U	27.4	88.0		pCi/L						
Bismuth-214		50.9	13.6		pCi/L						
Cerium-139	U	-1.45	4.83		pCi/L						
Cerium-141	U	6.95	11.0		pCi/L						
Cerium-144	U	27.1	37.3		pCi/L						
Cesium-134	U	-0.146	6.71		pCi/L						
Cesium-136	U	-8.27	15.4		pCi/L						
Cesium-137	U	-2.75	5.94	10.0	pCi/L						
Chromium-51	U	5.23	67.7		pCi/L						
Cobalt-56	U	0.457	6.65		pCi/L						
Cobalt-57	U	0.391	4.52		pCi/L						
Cobalt-58	U	-0.533	6.31		pCi/L						
Cobalt-60	U	4.50	8.28		pCi/L						
Europium-152	U	0.433	16.7		pCi/L						
Europium-154	U	0.135	18.7		pCi/L						
Europium-155	U	-0.446	17.7		pCi/L						
Iridium-192	U	-1.72	6.00		pCi/L						
Iron-59	U	4.53	15.9		pCi/L						
Lead-210	U	264	706		pCi/L						
Lead-212	U	0.221	9.54		pCi/L						
Lead-214		52.2	11.5		pCi/L						
Manganese-54	U	3.29	6.20		pCi/L						
Mercury-203	U	0.408	6.72		pCi/L						
Neodymium-147	U	-15.5	83.8		pCi/L						
Neptunium-239	U	7.45	45.8		pCi/L						
Niobium-94	U	4.11	6.24		pCi/L						
Niobium-95	U	-0.287	7.11		pCi/L						
Potassium-40	UI	0.00	47.3		pCi/L						
Promethium-144	U	0.645	6.11		pCi/L						
Promethium-146	U	-0.212	7.38		pCi/L						
Radium-228	U	8.26	29.7		pCi/L						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: January 25, 2013

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: GZ-1	Project: CLYM00105
Sample ID: 317344001	Client ID: CLYM001

Rad Gamma Spec Analysis

Gammaspec, Gamma, Liquid (Standard List) "As Received"

Isotope	Unit	Net Count	Gross Count	Concentration
Ruthenium-106	U	6.42	52.6	pCi/L
Silver-110m	U	-0.559	5.69	pCi/L
Sodium-22	U	0.104	6.61	pCi/L
Thallium-208	U	-3.14	6.94	pCi/L
Thorium-234	U	91.9	286	pCi/L
Tin-113	U	2.98	8.47	pCi/L
Uranium-235	U	5.71	33.1	pCi/L
Uranium-238	U	91.9	286	pCi/L
Yttrium-88	U	-2.06	5.94	pCi/L
Zinc-65	U	0.299	14.2	pCi/L
Zirconium-95	U	2.99	11.3	pCi/L

Rad Gas Flow Proportional Counting

GFPC, Gross A/B, liquid "As Received"

Alpha	U	1.18	2.69	5.00	pCi/L	DYT1 01/15/13 1619 1273343	2
Beta	U	1.07	3.58	5.00	pCi/L		

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: January 25, 2013

Company : Clym Environmental Services
Address : 5104 Pegasus Court
Suite J
Frederick, Maryland 21704
Contact: Mr. Charles Watts
Project: Dartmouth College Rennie Farm

Client Sample ID:	GZ-2	Project:	CLYM00105
Sample ID:	317344002	Client ID:	CLYM001
Matrix:	Ground Water		
Collect Date:	20-DEC-12 10:20		
Receive Date:	28-DEC-12		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspec, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.46	24.2		pCi/L		KXG3	01/03/13	1051	1273083	1
Americium-241	U	-21.9	43.0		pCi/L						
Antimony-124	U	-0.805	11.1		pCi/L						
Antimony-125	U	-1.16	14.0		pCi/L						
Barium-133	U	-0.0613	6.61		pCi/L						
Barium-140	U	2.51	14.1		pCi/L						
Beryllium-7	U	-4.13	46.4		pCi/L						
Bismuth-212	U	-33.1	61.8		pCi/L						
Bismuth-214		19.2	10.3		pCi/L						
Cerium-139	U	0.519	5.24		pCi/L						
Cerium-141	U	-4.49	10.9		pCi/L						
Cerium-144	U	-10.2	36.6		pCi/L						
Cesium-134	U	1.25	6.24		pCi/L						
Cesium-136	U	-1.55	14.6		pCi/L						
Cesium-137	U	0.511	5.76	10.0	pCi/L						
Chromium-51	U	-14.3	57.7		pCi/L						
Cobalt-56	U	-0.411	5.60		pCi/L						
Cobalt-57	U	-0.999	4.86		pCi/L						
Cobalt-58	U	1.23	5.22		pCi/L						
Cobalt-60	U	-1.27	4.44		pCi/L						
Europium-152	U	6.68	16.6		pCi/L						
Europium-154	U	3.42	14.8		pCi/L						
Europium-155	U	3.07	20.9		pCi/L						
Iridium-192	U	-2.78	5.02		pCi/L						
Iron-59	U	3.79	11.0		pCi/L						
Lead-210	U	660	2030		pCi/L						
Lead-212	U	2.78	10.8		pCi/L						
Lead-214	U	14.5	16.6		pCi/L						
Manganese-54	U	-2.6	4.34		pCi/L						
Mercury-203	U	0.142	6.23		pCi/L						
Neodymium-147	U	15.3	66.5		pCi/L						
Neptunium-239	U	35.3	54.1		pCi/L						
Niobium-94	U	-1.18	4.19		pCi/L						
Niobium-95	U	-0.15	5.14		pCi/L						
Potassium-40	U	-34.8	62.2		pCi/L						
Promethium-144	U	1.83	5.01		pCi/L						
Promethium-146	U	-1.1	5.76		pCi/L						
Radium-228	U	8.46	24.2		pCi/L						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: January 25, 2013

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: GZ-3	Project: CLYM00105
Sample ID: 317344003	Client ID: CLYM001
Matrix: Ground Water	
Collect Date: 20-DEC-12 10:40	
Receive Date: 28-DEC-12	
Collector: Client	

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspac, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	8.10	23.1		pCi/L		KXG3	01/03/13	1051	1273083	1
Americium-241	U	-11.2	36.6		pCi/L						
Antimony-124	U	-1.29	13.7		pCi/L						
Antimony-125	U	-6.37	11.2		pCi/L						
Barium-133	U	-0.979	5.57		pCi/L						
Barium-140	U	-3.0	10.3		pCi/L						
Beryllium-7	U	8.19	43.7		pCi/L						
Bismuth-212	U	10.0	66.3		pCi/L						
Bismuth-214		53.8	10.4		pCi/L						
Cerium-139	U	-2.67	4.11		pCi/L						
Cerium-141	UI	0.00	9.48		pCi/L						
Cerium-144	U	10.3	34.3		pCi/L						
Cesium-134	U	0.113	5.44		pCi/L						
Cesium-136	U	-0.235	11.7		pCi/L						
Cesium-137	U	-2.2	4.58	10.0	pCi/L						
Chromium-51	U	10.3	54.3		pCi/L						
Cobalt-56	U	0.883	4.48		pCi/L						
Cobalt-57	U	0.622	4.46		pCi/L						
Cobalt-58	U	-0.102	4.86		pCi/L						
Cobalt-60	U	-0.421	5.35		pCi/L						
Europium-152	U	-1.07	14.4		pCi/L						
Europium-154	U	-0.482	14.1		pCi/L						
Europium-155	U	5.85	19.0		pCi/L						
Iridium-192	U	0.145	4.81		pCi/L						
Iron-59	U	0.860	11.6		pCi/L						
Lead-210	U	26.5	1120		pCi/L						
Lead-212	U	6.65	8.68		pCi/L						
Lead-214		40.8	10.1		pCi/L						
Manganese-54	U	-0.611	4.12		pCi/L						
Mercury-203	U	-0.335	5.69		pCi/L						
Neodymium-147	U	-5.68	72.5		pCi/L						
Neptunium-239	U	-28.5	40.6		pCi/L						
Niobium-94	U	-0.55	4.67		pCi/L						
Niobium-95	U	0.717	6.51		pCi/L						
Potassium-40	U	15.2	51.5		pCi/L						
Promethium-144	U	1.86	4.44		pCi/L						
Promethium-146	U	-4.38	5.48		pCi/L						
Radium-228	U	8.10	23.1		pCi/L						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: January 25, 2013

Company : Clym Environmental Services
Address : 5104 Pegasus Court
Suite J
Frederick, Maryland 21704
Contact: Mr. Charles Watts
Project: Dartmouth College Rennie Farm

Client Sample ID:	GZ-3	Project:	CLYM00105
Sample ID:	317344003	Client ID:	CLYM001

Rad Gamma Spec Analysis

Gammascpec, Gamma, Liquid (Standard List) "As Received"

Ruthenium-106	U	-8.22	41.4	pCi/L
Silver-110m	U	0.348	4.25	pCi/L
Sodium-22	U	-0.114	5.00	pCi/L
Thallium-208	U	-0.277	5.41	pCi/L
Thorium-234	U	108	274	pCi/L
Tin-113	U	0.0999	6.50	pCi/L
Uranium-235	U	-6.28	32.8	pCi/L
Uranium-238	U	108	274	pCi/L
Yttrium-88	U	-0.884	5.92	pCi/L
Zinc-65	U	-2.42	10.5	pCi/L
Zirconium-95	U	1.10	9.11	pCi/L

Rad Gas Flow Proportional Counting

GFPC, Gross A/B, liquid "As Received"

Alpha	U	0.275	3.36	5.00	pCi/L	DYT1	01/15/13	1619	1273343	2
Beta		3.61	2.98	5.00	pCi/L					

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: January 25, 2013

Company : Clym Environmental Services
Address : 5104 Pegasus Court
Suite J
Frederick, Maryland 21704
Contact: Mr. Charles Watts
Project: Dartmouth College Rennie Farm

Client Sample ID:	GZ-4	Project:	CLYM00105
Sample ID:	317344004	Client ID:	CLYM001
Matrix:	Ground Water		
Collect Date:	20-DEC-12 09:35		
Receive Date:	28-DEC-12		
Collector:	Client		

Parameter	Qualifier	Result	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis											
Gammaspac, Gamma, Liquid (Standard List) "As Received"											
Actinium-228	U	4.26	33.0		pCi/L		KXG3	01/03/13	1103	1273083	1
Americium-241	U	-0.82	12.1		pCi/L						
Antimony-124	U	10.8	19.9		pCi/L						
Antimony-125	U	-3.89	16.2		pCi/L						
Barium-133	U	2.60	7.89		pCi/L						
Barium-140	U	-4.11	17.4		pCi/L						
Beryllium-7	U	-10.7	61.5		pCi/L						
Bismuth-212	U	30.9	101		pCi/L						
Bismuth-214		135	12.7		pCi/L						
Cerium-139	U	-1.01	5.77		pCi/L						
Cerium-141	U	-5.55	11.8		pCi/L						
Cerium-144	U	22.2	40.2		pCi/L						
Cesium-134	U	1.68	7.22		pCi/L						
Cesium-136	U	-3.7	18.3		pCi/L						
Cesium-137	U	0.190	7.47	10.0	pCi/L						
Chromium-51	U	-12.4	60.7		pCi/L						
Cobalt-56	U	3.32	7.41		pCi/L						
Cobalt-57	U	-0.121	4.58		pCi/L						
Cobalt-58	U	-0.0664	7.46		pCi/L						
Cobalt-60	U	0.0949	7.22		pCi/L						
Europium-152	U	-1.31	18.4		pCi/L						
Europium-154	U	-5.79	17.8		pCi/L						
Europium-155	U	-3.57	16.8		pCi/L						
Iridium-192	U	1.67	6.49		pCi/L						
Iron-59	U	-1.37	18.0		pCi/L						
Lead-210	U	-58.7	115		pCi/L						
Lead-212	U	9.52	9.55		pCi/L						
Lead-214		149	13.0		pCi/L						
Manganese-54	U	-0.379	6.99		pCi/L						
Mercury-203	U	-3.59	6.54		pCi/L						
Neodymium-147	U	5.41	92.4		pCi/L						
Neptunium-239	U	-9.74	46.8		pCi/L						
Niobium-94	U	6.20	7.02		pCi/L						
Niobium-95	U	4.69	9.73		pCi/L						
Potassium-40	U	19.2	85.1		pCi/L						
Promethium-144	U	0.808	6.63		pCi/L						
Promethium-146	U	-0.871	7.48		pCi/L						
Radium-228	U	4.26	33.0		pCi/L						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: January 25, 2013

Company : Clym Environmental Services
Address : 5104 Pegasus Court
Suite J
Frederick, Maryland 21704
Contact: Mr. Charles Watts
Project: Dartmouth College Rennie Farm

Client Sample ID: GZ-4 Project: CLYM00105
Sample ID: 317344004 Client ID: CLYM001

Rad Gamma Spec Analysis

Gammaspec, Gamma, Liquid (Standard List) "As Received"

Isotope	Unit	Count Rate	Concentration	Unit
Ruthenium-106	U	-5.8	54.9	pCi/L
Silver-110m	U	4.63	5.78	pCi/L
Sodium-22	U	-1.26	6.20	pCi/L
Thallium-208	U	-1.84	7.66	pCi/L
Thorium-234	U	-62.2	136	pCi/L
Tin-113	U	-3.63	7.83	pCi/L
Uranium-235	U	-1.71	39.4	pCi/L
Uranium-238	U	-62.2	136	pCi/L
Yttrium-88	U	4.77	10.5	pCi/L
Zinc-65	U	-1.71	13.4	pCi/L
Zirconium-95	U	0.697	13.6	pCi/L

Rad Gas Flow Proportional Counting

GFPC, Gross A/B, liquid "As Received"

Measurement	Unit	Count Rate	Concentration	Unit	Sample ID	Count	Standard Deviation	Count Rate	Concentration	
Alpha	U	0.534	3.25	5.00	pCi/L	DYT1	01/15/13	1619	1273343	2
Beta	U	0.784	3.34	5.00	pCi/L					

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	EPA 901.1	
2	EPA 900.0/SW846 9310	

POTENTIAL MIXED WASTE
SAMPLE RESULTS

GEL LABORATORIES LLC

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

Certificate of Analysis Report for

GZAI001 GZA GeoEnvironmental, Inc. (Quote 09–1031)

Client SDG: 296570 GEL Work Order: 296570

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.

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.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

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

Lajaya D. Hughes

Reviewed by _____

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C1S01	Project: GZAI00111
Sample ID: 296570001	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:20	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0196	+/-0.0226	0.0438	0.100	pCi/g		MXR1	02/29/12	0746	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.912	+/-0.380	0.481	5.00	pCi/g		JXR1	03/12/12	0548	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.32E-05	+/-2.48E-05	5.36E-05	0.050	uCi/g		BYS1	03/08/12	1256	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-1.70E-06	+/-4.98E-06	8.82E-06	0.050	uCi/g		EXK2	03/13/12	1343	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.511	+/-1.01	1.71	4.00	pCi/g		TYJ1	03/11/12	0643	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			124	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			61.8	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C1S02	Project: GZAI00111
Sample ID: 296570002	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:20	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	-0.00151	+/-0.0229	0.0433	0.100	pCi/g		MXR1	02/29/12	0746	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.306	+/-0.435	0.745	5.00	pCi/g		JXR1	03/12/12	0548	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-1.90E-05	+/-2.56E-05	5.40E-05	0.050	uCi/g		BYS1	03/08/12	1313	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	1.08E-07	+/-4.83E-06	8.42E-06	0.050	uCi/g		EXK2	03/13/12	1404	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	1.20	+/-0.816	1.34	4.00	pCi/g		TYJ1	03/11/12	0714	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			125	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			66.7	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C1S03	Project: GZAI00111
Sample ID: 296570003	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:25	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	-0.00336	+/-0.0217	0.0422	0.100	pCi/g		MXR1	02/29/12	0758	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.620	+/-0.355	0.513	5.00	pCi/g		JXR1	03/12/12	0548	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	0.00	+/-2.94E-05	5.57E-05	0.050	uCi/g		BYS1	03/08/12	1331	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-3.38E-07	+/-5.00E-06	8.75E-06	0.050	uCi/g		EXK2	03/13/12	1426	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.0416	+/-0.724	1.25	4.00	pCi/g		TYJ1	03/11/12	0746	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			124	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			76.3	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street
 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C1S04	Project: GZAI00111
Sample ID: 296570004	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:25	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0131	+/-0.0272	0.0527	0.100	pCi/g		MXR1	02/29/12	0759	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.228	+/-0.303	0.519	5.00	pCi/g		JXR1	03/12/12	0548	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	1.09E-05	+/-3.08E-05	5.57E-05	0.050	uCi/g		BYS1	03/08/12	1348	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-4.85E-07	+/-5.38E-06	9.43E-06	0.050	uCi/g		EXK2	03/13/12	1447	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.989	+/-0.895	1.49	4.00	pCi/g		TYJ1	03/11/12	0817	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			125	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			75.5	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C1S05	Project: GZAI00111
Sample ID: 296570005	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:30	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	-0.0112	+/-0.0298	0.0526	0.100	pCi/g		MXR1	02/29/12	0759	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.489	+/-0.456	0.748	5.00	pCi/g		JXR1	03/12/12	0548	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-1.04E-05	+/-2.65E-05	5.30E-05	0.050	uCi/g		BYS1	03/08/12	1406	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-1.72E-06	+/-4.44E-06	7.88E-06	0.050	uCi/g		EXK2	03/13/12	1509	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.970	+/-1.33	2.25	4.00	pCi/g		TYJ1	03/11/12	0848	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			114	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			51.0	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street
 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C1S06	Project: GZAI00111
Sample ID: 296570006	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:30	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	-0.0131	+/-0.0299	0.0553	0.100	pCi/g		MXR1	02/29/12	0800	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.900	+/-0.448	0.632	5.00	pCi/g		JXR1	03/12/12	0548	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.29E-06	+/-2.95E-05	5.66E-05	0.050	uCi/g		BYS1	03/08/12	1423	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14		1.44E-05	+/-5.32E-06	8.27E-06	0.050	uCi/g		EXK2	03/13/12	1530	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.806	+/-1.59	2.70	4.00	pCi/g		TYJ1	03/11/12	0919	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			101	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			40.6	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C2S01	Project: GZAI00111
Sample ID: 296570007	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:45	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	-0.0197	+/-0.0263	0.0452	0.100	pCi/g		MXR1	02/29/12	0800	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.757	+/-0.414	0.602	5.00	pCi/g		JXR1	03/12/12	0549	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-8.21E-06	+/-2.66E-05	5.27E-05	0.050	uCi/g		BYS1	03/08/12	1441	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-1.24E-06	+/-4.55E-06	8.04E-06	0.050	uCi/g		EXK2	03/13/12	1552	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.128	+/-1.12	1.93	4.00	pCi/g		TYJ1	03/11/12	0951	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			113	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			48.2	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street
 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C2S02	Project: GZAI00111
Sample ID: 296570008	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:45	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.00536	+/-0.0211	0.0398	0.100	pCi/g		MXR1	02/29/12	0800	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.747	+/-0.427	0.631	5.00	pCi/g		JXR1	03/12/12	0549	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	8.80E-06	+/-3.09E-05	5.64E-05	0.050	uCi/g		BYS1	03/08/12	1458	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-6.60E-07	+/-4.17E-06	7.33E-06	0.050	uCi/g		EXK2	03/13/12	1613	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.471	+/-1.19	2.03	4.00	pCi/g		TYJ1	03/11/12	1022	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			108	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			57.4	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street
 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C2S03	Project: GZAI00111
Sample ID: 296570009	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:50	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0311	+/-0.0217	0.0437	0.100	pCi/g		MXR1	02/29/12	0814	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.760	+/-0.408	0.586	5.00	pCi/g		JXR1	03/12/12	0549	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-1.19E-05	+/-2.48E-05	5.04E-05	0.050	uCi/g		BYS1	03/08/12	1516	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-7.15E-07	+/-4.52E-06	7.94E-06	0.050	uCi/g		EXK2	03/13/12	1635	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	1.03	+/-1.67	2.83	4.00	pCi/g		TYJ1	03/11/12	1053	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			115	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			39.0	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C2S04	Project: GZAI00111
Sample ID: 296570010	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:50	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	-0.000258	+/-0.0398	0.076	0.100	pCi/g		MXR1	02/29/12	0814	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.0774	+/-0.222	0.418	5.00	pCi/g		JXR1	03/12/12	0549	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.02E-05	+/-2.41E-05	5.13E-05	0.050	uCi/g		BYS1	03/08/12	1533	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-3.26E-07	+/-4.82E-06	8.44E-06	0.050	uCi/g		EXK2	03/13/12	1656	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.151	+/-0.880	1.52	4.00	pCi/g		TYJ1	03/11/12	1124	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			112	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			75.5	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C2S05	Project: GZAI00111
Sample ID: 296570011	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 09:55	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0126	+/-0.0437	0.044	0.100	pCi/g		MXR1	02/29/12	0830	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.548	+/-0.385	0.595	5.00	pCi/g		JXR1	03/12/12	0549	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-6.45E-06	+/-2.85E-05	5.59E-05	0.050	uCi/g		BYS1	03/08/12	1551	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.91E-07	+/-4.36E-06	7.66E-06	0.050	uCi/g		EXK2	03/13/12	1718	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	1.18	+/-1.33	2.23	4.00	pCi/g		TYJ1	03/10/12	0910	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			117	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			51.8	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C2S06	Project: GZAI00111
Sample ID: 296570012	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 10:00	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.00451	+/-0.0218	0.0421	0.100	pCi/g		MXR1	02/29/12	0903	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.330	+/-0.276	0.432	5.00	pCi/g		JXR1	03/12/12	0549	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.42E-05	+/-2.58E-05	5.59E-05	0.050	uCi/g		BYS1	03/08/12	1609	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.05E-06	+/-5.13E-06	9.35E-06	0.050	uCi/g		EXK2	03/13/12	1739	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	1.14	+/-0.864	1.43	4.00	pCi/g		TYJ1	03/10/12	0941	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			120	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			68.3	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C2S07	Project: GZAI00111
Sample ID: 296570013	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 10:00	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0216	+/-0.0336	0.0421	0.100	pCi/g		MXR1	02/29/12	1021	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	-0.12	+/-0.278	0.581	5.00	pCi/g		JXR1	03/12/12	0549	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.50E-05	+/-2.41E-05	5.28E-05	0.050	uCi/g		BYS1	03/08/12	1626	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	3.54E-06	+/-4.79E-06	8.10E-06	0.050	uCi/g		EXK2	03/13/12	1801	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	1.39	+/-1.39	2.32	4.00	pCi/g		TYJ1	03/10/12	1012	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			106	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			46.2	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C3S01	Project: GZAI00111
Sample ID: 296570014	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 10:45	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	-0.0363	+/-0.0396	0.0667	0.100	pCi/g		MXR1	02/29/12	1022	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.676	+/-0.335	0.449	5.00	pCi/g		JXR1	03/12/12	0549	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.42E-05	+/-2.33E-05	5.12E-05	0.050	uCi/g		BYS1	03/08/12	1644	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-1.65E-06	+/-5.17E-06	9.16E-06	0.050	uCi/g		EXK2	03/13/12	1822	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	1.68	+/-1.39	2.30	4.00	pCi/g		TYJ1	03/10/12	1044	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			116	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			44.6	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C3S02	Project: GZAI00111
Sample ID: 296570015	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 10:50	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0043	+/-0.0263	0.0497	0.100	pCi/g		MXR1	02/29/12	1022	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.799	+/-0.481	0.735	5.00	pCi/g		JXR1	03/12/12	0550	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-1.48E-05	+/-2.23E-05	4.65E-05	0.050	uCi/g		BYS1	03/08/12	1701	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	1.03E-06	+/-4.61E-06	7.98E-06	0.050	uCi/g		EXK2	03/13/12	1844	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.208	+/-0.910	1.57	4.00	pCi/g		TYJ1	03/10/12	1115	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			108	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			72.3	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C3S03	Project: GZAI00111
Sample ID: 296570016	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:00	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.00769	+/-0.0284	0.0542	0.100	pCi/g		MXR1	02/29/12	1023	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.931	+/-0.452	0.654	5.00	pCi/g		JXR1	03/12/12	0550	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-5.69E-06	+/-2.51E-05	4.92E-05	0.050	uCi/g		BYS1	03/08/12	1719	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-2.23E-06	+/-4.64E-06	8.27E-06	0.050	uCi/g		EXK2	03/13/12	1905	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.549	+/-1.38	2.37	4.00	pCi/g		TYJ1	03/10/12	1146	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			119	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			47.8	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C3S04	Project: GZAI00111
Sample ID: 296570017	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:05	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0128	+/-0.0199	0.0388	0.100	pCi/g		MXR1	02/29/12	1023	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		1.26	+/-0.493	0.668	5.00	pCi/g		JXR1	03/12/12	0550	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.41E-05	+/-2.57E-05	5.57E-05	0.050	uCi/g		BYS1	03/08/12	1737	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	5.64E-07	+/-4.21E-06	7.31E-06	0.050	uCi/g		EXK2	03/13/12	1927	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	-0.276	+/-0.789	1.39	4.00	pCi/g		TYJ1	03/10/12	1217	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			112	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			84.3	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street
 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C3S05	Project: GZAI00111
Sample ID: 296570018	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:05	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	-0.00933	+/-0.0295	0.0553	0.100	pCi/g		MXR1	02/29/12	1024	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.613	+/-0.337	0.478	5.00	pCi/g		JXR1	03/12/12	0550	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	0.00	+/-2.75E-05	5.23E-05	0.050	uCi/g		BYS1	03/08/12	1754	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	0.00	+/-5.07E-06	8.86E-06	0.050	uCi/g		EXK2	03/13/12	1948	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.539	+/-1.36	2.33	4.00	pCi/g		TYJ1	03/10/12	1248	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			125	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			47.0	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C3S06	Project: GZAI00111
Sample ID: 296570019	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:10	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0178	+/-0.0219	0.0424	0.100	pCi/g		MXR1	02/29/12	1024	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.428	+/-0.328	0.505	5.00	pCi/g		JXR1	03/12/12	0550	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.02E-05	+/-2.41E-05	5.14E-05	0.050	uCi/g		BYS1	03/08/12	1812	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-1.35E-06	+/-4.93E-06	8.71E-06	0.050	uCi/g		EXK2	03/13/12	2010	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63		3.47	+/-1.28	2.02	4.00	pCi/g		TYJ1	03/10/12	1320	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			103	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			57.8	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street
 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C3S07	Project: GZAI00111
Sample ID: 296570020	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:15	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0329	+/-0.0224	0.047	0.100	pCi/g		MXR1	02/29/12	1024	1191577	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		1.11	+/-0.390	0.447	5.00	pCi/g		JXR1	03/12/12	0550	1191788	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.20E-06	+/-2.84E-05	5.45E-05	0.050	uCi/g		BYS1	03/08/12	1829	1191736	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-2.10E-07	+/-4.68E-06	8.18E-06	0.050	uCi/g		EXK2	03/13/12	2031	1191734	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.355	+/-0.895	1.53	4.00	pCi/g		TYJ1	03/10/12	1351	1191732	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1102	1191293

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			114	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			73.5	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C4S01	Project: GZAI00111
Sample ID: 296570021	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:25	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.00187	+/-0.0275	0.0522	0.100	pCi/g		MXR1	02/29/12	1053	1191578	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.338	+/-0.316	0.513	5.00	pCi/g		JXR1	03/12/12	1457	1191789	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	6.28E-06	+/-4.71E-05	8.40E-05	0.050	uCi/g		BYS1	03/06/12	0255	1191737	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	1.28E-06	+/-2.98E-06	5.15E-06	0.050	uCi/g		EXK2	03/10/12	1644	1191735	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.325	+/-0.858	1.46	4.00	pCi/g		TYJ1	03/12/12	1928	1191733	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1119	1191294

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			121	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			71.9	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C4S02	Project: GZAI00111
Sample ID: 296570022	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:30	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0207	+/-0.0294	0.056	0.100	pCi/g		MXR1	02/29/12	1054	1191578	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.604	+/-0.432	0.682	5.00	pCi/g		JXR1	03/12/12	1457	1191789	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	2.24E-05	+/-5.33E-05	9.29E-05	0.050	uCi/g		BYS1	03/06/12	0321	1191737	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-8.14E-07	+/-2.21E-06	4.02E-06	0.050	uCi/g		EXK2	03/10/12	1701	1191735	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.474	+/-0.880	1.49	4.00	pCi/g		TYJ1	03/12/12	2004	1191733	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1119	1191294

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			122	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			65.1	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C4S03	Project: GZAI00111
Sample ID: 296570023	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:35	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.00964	+/-0.0355	0.0652	0.100	pCi/g		MXR1	02/29/12	1110	1191578	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.459	+/-0.339	0.527	5.00	pCi/g		JXR1	03/12/12	1457	1191789	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.17E-05	+/-4.92E-05	9.19E-05	0.050	uCi/g		BYS1	03/06/12	0348	1191737	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	1.27E-06	+/-2.08E-06	3.56E-06	0.050	uCi/g		EXK2	03/10/12	1717	1191735	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.0481	+/-0.879	1.51	4.00	pCi/g		TYJ1	03/12/12	2040	1191733	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1119	1191294

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			122	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			72.7	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C4S04	Project: GZAI00111
Sample ID: 296570024	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:35	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0421	+/-0.0319	0.0652	0.100	pCi/g		MXR1	02/29/12	1110	1191578	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.142	+/-0.468	0.831	5.00	pCi/g		JXR1	03/12/12	1456	1191789	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.30E-05	+/-5.23E-05	9.77E-05	0.050	uCi/g		BYS1	03/06/12	0414	1191737	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	2.90E-07	+/-3.38E-06	5.96E-06	0.050	uCi/g		EXK2	03/10/12	1733	1191735	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.0489	+/-0.895	1.54	4.00	pCi/g		TYJ1	03/12/12	2117	1191733	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1119	1191294

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			125	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			65.1	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C4S05	Project: GZAI00111
Sample ID: 296570025	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:40	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	0.0142	+/-0.0258	0.0503	0.100	pCi/g		MXR1	02/29/12	1111	1191578	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		2.20	+/-0.535	0.564	5.00	pCi/g		JXR1	03/12/12	1456	1191789	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-1.19E-05	+/-5.39E-05	9.90E-05	0.050	uCi/g		BYS1	03/06/12	0440	1191737	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	1.04E-06	+/-3.41E-06	5.94E-06	0.050	uCi/g		EXK2	03/10/12	1750	1191735	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	-0.0995	+/-0.906	1.57	4.00	pCi/g		TYJ1	03/12/12	2153	1191733	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1119	1191294

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			116	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			62.7	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 14, 2012

Company : GZA GeoEnvironmental, Inc.
 Address : 4 Free Street

 Portland, Maine 04101
 Contact: Mr. Timothy W. Kipp
 Project: Dartmouth Rennie Farm Site Project

Client Sample ID: C4S06	Project: GZAI00111
Sample ID: 296570026	Client ID: GZAI001
Matrix: Soil	
Collect Date: 22-FEB-12 11:45	
Receive Date: 24-FEB-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Cesium-137) "Dry Weight Corrected"												
Cesium-137	U	-0.00343	+/-0.0249	0.0448	0.100	pCi/g		MXR1	02/29/12	1111	1191578	1
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		1.22	+/-0.447	0.575	5.00	pCi/g		JXR1	03/12/12	1456	1191789	2
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-1.44E-05	+/-4.67E-05	8.63E-05	0.050	uCi/g		BYS1	03/06/12	0506	1191737	3
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	9.46E-07	+/-2.38E-06	4.12E-06	0.050	uCi/g		EXK2	03/10/12	1806	1191735	4
Liquid Scint Ni63, Solid "Dry Weight Corrected"												
Nickel-63	U	0.520	+/-1.37	2.34	4.00	pCi/g		TYJ1	03/12/12	2229	1191733	5

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	02/27/12	1119	1191294

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			112	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			36.1	(25%-125%)

ATTACHMENT THREE

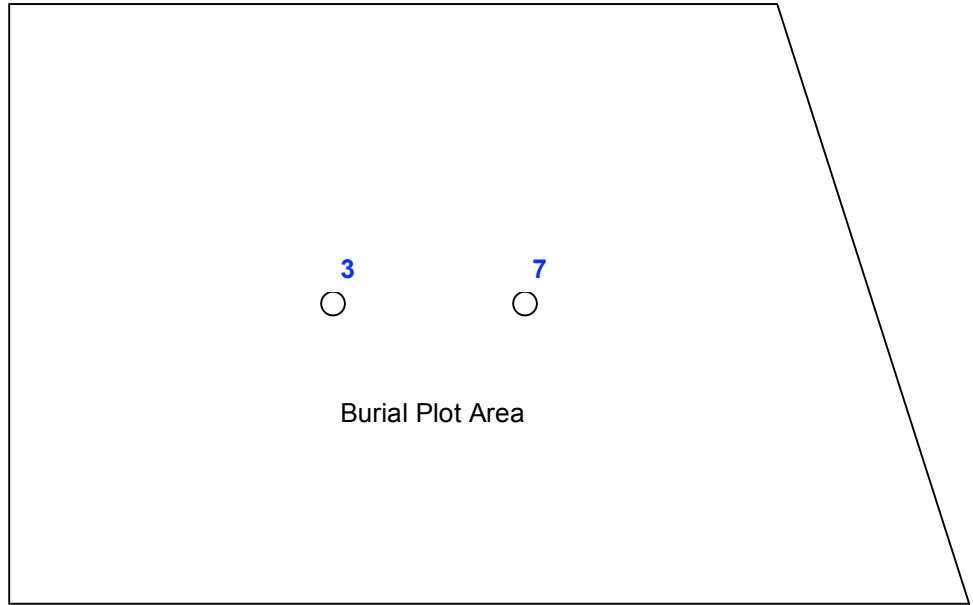
BACKGROUND SAMPLING MAP

BACKGROUND SAMPLING RESULTS



Stone Wall

Cadaver Burial Site



- 6
- 7
- 8
- 9
- 10

- 4
- 8

- 3
- 7

- 1
- 6

- 2
- 5

Background Soil Sample Locations

Blue = Sample Set #290167
Green = Sample Set #303457

- 1
- 2
- 3
- 4
- 5

Rennie Farm Background Soil Sample Analysis Summary

Sample ID	210Pb			3H			14C			137Cs			63Ni		
	Result (pCi/g)	Uncertainty	Detection Limit	Result (pCi/g)	Uncertainty	Detection Limit	Result (pCi/g)	Uncertainty	Detection Limit	Result (pCi/g)	Uncertainty	Detection Limit	Result (pCi/g)	Uncertainty	Detection Limit
290167-1	0.00962	0.477	0.871	-25.4	48.5	91.6	0.763	4.27	7.4				7.19	42	74.8
290167-2	1.22	0.591	0.891	-18.6	55.6	102	2.48	4.48	7.63				0	128	231
290167-3	1.26	0.568	0.865	11.8	52.8	93.7	0.831	4.15	7.18				16.7	33.8	58.7
290167-4	0.532	0.52	0.852	20.7	53.1	110	-0.31	4.4	7.69				52.3	116	201
290167-5	1.3	0.567	0.856	6.55	50.6	90.6	-2.23	3.81	6.82				-70.8	96.9	186
290167-6	0.979	0.585	0.9	52.3	54.7	110	2.26	4.87	8.33				58.8	141	247
290167-7	-0.0982	0.47	0.9	28.1	50.1	86.4	1.8	4.26	7.31				99.3	100	167
290167-8	0.201	0.481	0.9	-16.3	50.3	110	-1.05	4.07	7.18				12.9	75.4	134
303457-1	0.0931	0.449	0.831	-28.6	48.7	91.6	-1.07	5.78	10.1				-2.99	10.8	19.1
303457-2	0.343	0.455	0.78	-3.96	49.1	88.9	0.984	5.39	9.32	0	0.0367	0.0336	5.61	12.8	22
303457-3	0.717	0.524	0.853	-4.03	50	90.4	-2.36	4.93	8.74	-0.0142	0.0178	0.0304	-6.6	9.83	17.7
303457-4	0.758	0.521	0.758	-15.8	48.1	88.7	-1.04	4.58	8.04	-0.00741	0.0192	0.0343	-10.2	11	20
303457-5	0.938	0.565	0.825	30	52.1	89.6	0	5.82	10.1	0.00874	0.0189	0.036	-3.63	10.4	18.5
303457-6	0.527	0.483	0.774	-10.2	50.1	91.6	-0.0984	4.81	8.38	0.0147	0.0299	0.0382	-7.9	10.1	18.3
303457-7	0.265	0.466	0.824	-1.92	47.7	86.1	2.52	4.85	8.27	0.0155	0.018	0.0344	-8.39	11.5	20.8
303457-8	0.654	0.542	0.866	1.85	46.3	83.1	0.472	4.64	8.05	0.0104	0.0169	0.0316	-4.42	12.7	22.5
303457-9	0.945	0.568	0.835	27.1	50.2	86.7	-1.24	4.64	8.15	0.0312	0.0208	0.041	-8.39	11.3	20.3
303457-10	0.421	0.488	0.819	-12.2	49.7	91.2	0.763	4.27	7.4	-0.00465	0.0261	0.0488	-2.72	13.1	23.1
	Mean	Uncertainty	Detection Limit	Mean	Uncertainty	Detection Limit	Mean	Uncertainty	Detection Limit	Mean	Uncertainty	Detection Limit	Mean	Uncertainty	Detection Limit
	0.615	0.518	0.844	2.299	50.428	93.456	0.193	4.668	8.116	0.009	0.072	0.036	7.042	47.035	83.433

Note: Work Order 295636 is a relog of 290167 (less 63-Ni results) to account for refined detection limits and nuclides of interest

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: February 22, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Burial Site NH

Client Sample ID: Reference Plot 2 Foot	Project: CLYM00104
Sample ID: 295636001	Client ID: CLYM001
Matrix: Soil	
Collect Date: 03-NOV-11 13:00	
Receive Date: 14-NOV-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.00962	+/-0.477	0.871	0.900	pCi/g		JXR1	02/21/12	0816	1187313	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-25.4	+/-48.5	91.6	110	pCi/g		BYS1	02/15/12	0734	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	0.763	+/-4.27	7.40	12.0	pCi/g		EXK2	02/17/12	1226	1187612	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/14/11	1700	1186983

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			95.1	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: February 22, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Burial Site NH

Client Sample ID: Background South 1 Foot	Project: CLYM00104
Sample ID: 295636002	Client ID: CLYM001
Matrix: Soil	
Collect Date: 03-NOV-11 13:00	
Receive Date: 14-NOV-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		1.22	+/-0.591	0.891	0.900	pCi/g		JXR1	02/21/12	1636	1187313	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-18.6	+/-55.6	102	110	pCi/g		BYS1	02/16/12	1101	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	2.48	+/-4.48	7.63	12.0	pCi/g		EXK2	02/17/12	1247	1187612	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/14/11	1700	1186983

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			90.0	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: February 22, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Burial Site NH

Client Sample ID: Plots 1 Foot	Project: CLYM00104
Sample ID: 295636003	Client ID: CLYM001
Matrix: Soil	
Collect Date: 03-NOV-11 13:00	
Receive Date: 14-NOV-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		1.26	+/-0.568	0.865	0.900	pCi/g		JXR1	02/21/12	1636	1187313	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	11.8	+/-52.8	93.7	110	pCi/g		BYS1	02/15/12	0827	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	0.831	+/-4.15	7.18	12.0	pCi/g		EXK2	02/17/12	1308	1187612	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/14/11	1700	1186983

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			104	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: February 22, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Burial Site NH

Client Sample ID: Background West 1 Foot	Project: CLYM00104
Sample ID: 295636004	Client ID: CLYM001
Matrix: Soil	
Collect Date: 03-NOV-11 13:00	
Receive Date: 14-NOV-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.532	+/-0.520	0.852	0.900	pCi/g		JXR1	02/21/12	1636	1187313	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	20.7	+/-53.1	93.1	110	pCi/g		BYS1	02/15/12	0853	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-0.31	+/-4.40	7.69	12.0	pCi/g		EXK2	02/17/12	1330	1187612	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/14/11	1700	1186983

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			77.4	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: February 22, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Burial Site NH

Client Sample ID: Background South 2 Foot	Project: CLYM00104
Sample ID: 295636005	Client ID: CLYM001
Matrix: Soil	
Collect Date: 03-NOV-11 13:00	
Receive Date: 14-NOV-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		1.30	+/-0.567	0.856	0.900	pCi/g		JXR1	02/21/12	1637	1187313	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	6.55	+/-50.6	90.6	110	pCi/g		BYS1	02/15/12	0919	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-2.23	+/-3.81	6.82	12.0	pCi/g		EXK2	02/17/12	1351	1187612	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/14/11	1700	1186983

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			83.7	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: February 22, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Burial Site NH

Client Sample ID: Reference Plot 1 Foot	Project: CLYM00104
Sample ID: 295636006	Client ID: CLYM001
Matrix: Soil	
Collect Date: 03-NOV-11 13:00	
Receive Date: 14-NOV-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.979	+/-0.585	0.834	0.900	pCi/g		JXR1	02/21/12	1637	1187313	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	52.3	+/-54.7	91.4	110	pCi/g		BYS1	02/15/12	0945	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	2.26	+/-4.87	8.33	12.0	pCi/g		EXK2	02/17/12	1412	1187612	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/14/11	1700	1186983

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			73.9	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: February 22, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Burial Site NH

Client Sample ID: Plots 2 Foot	Project: CLYM00104
Sample ID: 295636007	Client ID: CLYM001
Matrix: Soil	
Collect Date: 03-NOV-11 13:00	
Receive Date: 14-NOV-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	-0.0892	+/-0.470	0.894	0.900	pCi/g		JXR1	02/21/12	0816	1187313	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	28.1	+/-50.1	86.4	110	pCi/g		BYS1	02/15/12	1011	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	1.80	+/-4.26	7.31	12.0	pCi/g		EXK2	02/17/12	1433	1187612	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/14/11	1700	1186983

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			92.8	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: February 22, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Burial Site NH

Client Sample ID: Background West 2 Foot	Project: CLYM00104
Sample ID: 295636008	Client ID: CLYM001
Matrix: Soil	
Collect Date: 03-NOV-11 13:00	
Receive Date: 14-NOV-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.201	+/-0.481	0.862	0.900	pCi/g		JXR1	02/21/12	0816	1187313	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-16.3	+/-50.3	93.6	110	pCi/g		BYS1	02/15/12	1038	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-1.05	+/-4.07	7.18	12.0	pCi/g		EXK2	02/17/12	1454	1187612	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	LYT1	11/14/11	1700	1186983

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			74.5	(25%-125%)

GEL LABORATORIES LLC

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

**Certificate of Analysis Report
for**

CLYM001 Clym Environmental Services

Client SDG: 303457 GEL Work Order: 303457

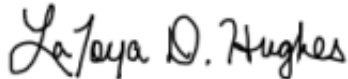
The Qualifiers in this report are defined as follows:

- * 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

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.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

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



Reviewed by _____

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
Address : 5104 Pegasus Court
Suite J
Frederick, Maryland 21704
Contact: Mr. Charles Watts
Project: Dartmouth College Rennie Farm

Client Sample ID: South 1
Sample ID: 303457001
Matrix: Soil
Collect Date: 12-APR-12 09:00
Receive Date: 28-APR-12
Collector: Client
Project: CLYM00105
Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Actinium-228		0.626	+/-0.150	0.111		pCi/g		MXR1	05/02/12	1409	1208325	1
Antimony-124	U	-0.00823	+/-0.0295	0.0548		pCi/g						
Antimony-125	U	-0.0175	+/-0.0444	0.0812		pCi/g						
Barium-133	U	0.00852	+/-0.0235	0.0395		pCi/g						
Barium-140	U	-0.0951	+/-0.176	0.309		pCi/g						
Beryllium-7	U	0.0163	+/-0.170	0.317		pCi/g						
Bismuth-212	UI	0.00	+/-0.338	0.522		pCi/g						
Bismuth-214		0.479	+/-0.0824	0.0662		pCi/g						
Cerium-139	U	-0.0159	+/-0.0149	0.027		pCi/g						
Cerium-141	U	0.0137	+/-0.0321	0.0617		pCi/g						
Cerium-144	U	-0.0756	+/-0.0976	0.180		pCi/g						
Cesium-134	U	0.0207	+/-0.0235	0.0384		pCi/g						
Cesium-136	U	0.0388	+/-0.0642	0.122		pCi/g						
Cesium-137	UI	0.00	+/-0.0367	0.0336	11.0	pCi/g						
Chromium-51	U	-0.137	+/-0.223	0.388		pCi/g						
Cobalt-56	U	0.00906	+/-0.0207	0.0393		pCi/g						
Cobalt-57	U	-0.00423	+/-0.0118	0.0224		pCi/g						
Cobalt-58	U	-0.0252	+/-0.0192	0.0323		pCi/g						
Cobalt-60	U	-0.0119	+/-0.0175	0.0307	0.700	pCi/g						
Europium-152	U	0.0285	+/-0.056	0.0949		pCi/g						
Europium-154	U	-0.0146	+/-0.054	0.0949		pCi/g						
Europium-155	U	-0.0205	+/-0.0458	0.0876		pCi/g						
Iridium-192	U	-0.000409	+/-0.0189	0.0339		pCi/g						
Iron-59	U	-0.00141	+/-0.0429	0.0779		pCi/g						
Lead-210	U	-0.347	+/-1.75	2.98		pCi/g						
Lead-212		0.626	+/-0.0829	0.0499		pCi/g						
Lead-214		0.592	+/-0.100	0.0684		pCi/g						
Manganese-54	U	0.0208	+/-0.0191	0.0372		pCi/g						
Mercury-203	U	0.0335	+/-0.0241	0.0409		pCi/g						
Neodymium-147	U	-0.228	+/-0.395	0.699		pCi/g						
Neptunium-239	U	0.0291	+/-0.182	0.351		pCi/g						
Niobium-94	U	-0.000585	+/-0.0154	0.0277		pCi/g						
Niobium-95	U	0.0279	+/-0.0222	0.0396		pCi/g						
Potassium-40		10.2	+/-1.08	0.265		pCi/g						
Promethium-144	U	-0.00314	+/-0.0169	0.0301		pCi/g						
Promethium-146	U	-0.015	+/-0.0205	0.0364		pCi/g						
Radium-228		0.626	+/-0.150	0.111		pCi/g						
Ruthenium-106	U	0.0546	+/-0.151	0.281		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: South 1	Project: CLYM00105
Sample ID: 303457001	Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspac, Gamma, Solid (Standard List) "As Received"												
Silver-110m	U	-0.00333	+/-0.0256	0.0469		pCi/g						
Sodium-22	U	-0.00524	+/-0.0191	0.0336		pCi/g						
Thallium-208		0.178	+/-0.0464	0.0303		pCi/g						
Thorium-234	U	0.262	+/-0.996	1.11		pCi/g						
Tin-113	U	0.0029	+/-0.0233	0.044		pCi/g						
Uranium-235	U	-0.063	+/-0.103	0.178		pCi/g						
Uranium-238	U	0.262	+/-0.996	1.11		pCi/g						
Yttrium-88	U	-0.00217	+/-0.016	0.0285		pCi/g						
Zinc-65	U	-0.00942	+/-0.0432	0.0656		pCi/g						
Zirconium-95	U	0.024	+/-0.0363	0.0704		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Pb210, Solid "Dry Weight Corrected"

Lead-210	U	0.0931	+/-0.449	0.831	0.900	pCi/g		JXR1	05/15/12	1702	1208287	2
----------	---	--------	----------	-------	-------	-------	--	------	----------	------	---------	---

Rad Liquid Scintillation Analysis

LSC, Tritium Dist, Solid "As Received"

Tritium	U	-28.6	+/-48.7	91.6	110	pCi/g		BYS1	05/10/12	1844	1209186	3
---------	---	-------	---------	------	-----	-------	--	------	----------	------	---------	---

Liquid Scint C14, Solid "As Received"

Carbon-14	U	-1.07	+/-5.78	10.1	12.0	pCi/g		EXK2	05/13/12	0534	1208749	4
-----------	---	-------	---------	------	------	-------	--	------	----------	------	---------	---

Liquid Scint Ni63, Solid "Dry Weight Corrected"

Nickel-63	U	-2.99	+/-10.8	19.1	2100	pci/g		MXP1	05/08/12	2359	1208742	5
-----------	---	-------	---------	------	------	-------	--	------	----------	------	---------	---

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	04/30/12	1534	1208077

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			110	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			61.0	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: South 2	Project: CLYM00105
Sample ID: 303457002	Client ID: CLYM001
Matrix: Soil	
Collect Date: 12-APR-12 09:00	
Receive Date: 28-APR-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspac, Gamma, Solid (Standard List) "As Received"												
Actinium-228	UI	0.00	+/-0.156	0.228		pCi/g		MXR1	05/02/12	1408	1208325	1
Antimony-124	U	0.0232	+/-0.0414	0.0848		pCi/g						
Antimony-125	U	-0.0324	+/-0.0479	0.0857		pCi/g						
Barium-133	U	0.032	+/-0.0246	0.0405		pCi/g						
Barium-140	U	-0.0251	+/-0.181	0.329		pCi/g						
Beryllium-7	U	-0.0803	+/-0.176	0.317		pCi/g						
Bismuth-212	UI	0.00	+/-0.454	0.619		pCi/g						
Bismuth-214		0.472	+/-0.111	0.0685		pCi/g						
Cerium-139	U	0.00313	+/-0.0142	0.0263		pCi/g						
Cerium-141	U	0.0185	+/-0.0324	0.0609		pCi/g						
Cerium-144	U	-0.0575	+/-0.0947	0.173		pCi/g						
Cesium-134	UI	0.00	+/-0.0274	0.045		pCi/g						
Cesium-136	U	0.0315	+/-0.0714	0.135		pCi/g						
Cesium-137	U	0.032	+/-0.0512	0.0336	11.0	pCi/g						
Chromium-51	U	-0.177	+/-0.219	0.377		pCi/g						
Cobalt-56	U	0.00938	+/-0.022	0.0405		pCi/g						
Cobalt-57	U	0.00981	+/-0.0112	0.0214		pCi/g						
Cobalt-58	U	-0.0087	+/-0.0218	0.0381		pCi/g						
Cobalt-60	U	-0.0155	+/-0.0204	0.0346	0.700	pCi/g						
Europium-152	U	-0.0137	+/-0.0657	0.0863		pCi/g						
Europium-154	U	-0.00546	+/-0.065	0.117		pCi/g						
Europium-155	U	0.0255	+/-0.0428	0.0818		pCi/g						
Iridium-192	U	0.0147	+/-0.0186	0.0344		pCi/g						
Iron-59	U	-0.00307	+/-0.0498	0.0909		pCi/g						
Lead-210		1.01	+/-0.540	0.426		pCi/g						
Lead-212		0.652	+/-0.096	0.0467		pCi/g						
Lead-214		0.658	+/-0.109	0.0647		pCi/g						
Manganese-54	U	0.00686	+/-0.0208	0.0379		pCi/g						
Mercury-203	U	0.00816	+/-0.0211	0.0386		pCi/g						
Neodymium-147	U	-0.0222	+/-0.401	0.734		pCi/g						
Neptunium-239	U	-0.0687	+/-0.174	0.322		pCi/g						
Niobium-94	U	0.00635	+/-0.0183	0.0336		pCi/g						
Niobium-95	U	0.0219	+/-0.0243	0.0456		pCi/g						
Potassium-40		12.1	+/-1.30	0.312		pCi/g						
Promethium-144	U	5.21E-05	+/-0.0192	0.0346		pCi/g						
Promethium-146	U	-0.0157	+/-0.0211	0.0375		pCi/g						
Radium-228	UI	0.00	+/-0.156	0.228		pCi/g						
Ruthenium-106	U	-0.0605	+/-0.169	0.300		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: South 2	Project: CLYM00105
Sample ID: 303457002	Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspac, Gamma, Solid (Standard List) "As Received"												
Silver-110m	U	0.0167	+/-0.0253	0.0475		pCi/g						
Sodium-22	U	-0.00193	+/-0.023	0.0414		pCi/g						
Thallium-208		0.220	+/-0.0429	0.0323		pCi/g						
Thorium-234		1.20	+/-0.681	0.496		pCi/g						
Tin-113	U	0.000799	+/-0.0235	0.0437		pCi/g						
Uranium-235	U	0.0707	+/-0.0929	0.175		pCi/g						
Uranium-238		1.20	+/-0.681	0.496		pCi/g						
Yttrium-88	U	-0.00906	+/-0.0172	0.0307		pCi/g						
Zinc-65	U	0.00651	+/-0.0504	0.0799		pCi/g						
Zirconium-95	U	0.0216	+/-0.0417	0.0771		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Pb210, Solid "Dry Weight Corrected"

Lead-210	U	0.343	+/-0.455	0.780	0.900	pCi/g		JXR1	05/15/12	1514	1208287	2
----------	---	-------	----------	-------	-------	-------	--	------	----------	------	---------	---

Rad Liquid Scintillation Analysis

LSC, Tritium Dist, Solid "As Received"

Tritium	U	-3.96	+/-49.1	88.9	110	pCi/g		BYS1	05/10/12	1911	1209186	3
---------	---	-------	---------	------	-----	-------	--	------	----------	------	---------	---

Liquid Scint C14, Solid "As Received"

Carbon-14	U	0.984	+/-5.39	9.32	12.0	pCi/g		EXK2	05/13/12	0555	1208749	4
-----------	---	-------	---------	------	------	-------	--	------	----------	------	---------	---

Liquid Scint Ni63, Solid "Dry Weight Corrected"

Nickel-63	U	5.61	+/-12.8	22.0	2100	pci/g		MXP1	05/09/12	0015	1208742	5
-----------	---	------	---------	------	------	-------	--	------	----------	------	---------	---

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	04/30/12	1534	1208077

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			108	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			54.6	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: South 3	Project: CLYM00105
Sample ID: 303457003	Client ID: CLYM001
Matrix: Soil	
Collect Date: 12-APR-12 09:00	
Receive Date: 28-APR-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Actinium-228		0.504	+/-0.160	0.115		pCi/g		MXR1	05/02/12	1427	1208325	1
Antimony-124	U	-0.0077	+/-0.0368	0.0685		pCi/g						
Antimony-125	U	-0.00786	+/-0.0419	0.0771		pCi/g						
Barium-133	U	0.00606	+/-0.0225	0.0374		pCi/g						
Barium-140	U	0.0324	+/-0.160	0.296		pCi/g						
Beryllium-7	U	0.0336	+/-0.160	0.298		pCi/g						
Bismuth-212	U	0.475	+/-0.262	0.503		pCi/g						
Bismuth-214		0.358	+/-0.0805	0.0608		pCi/g						
Cerium-139	U	-0.0143	+/-0.0149	0.0266		pCi/g						
Cerium-141	U	0.0162	+/-0.0329	0.0622		pCi/g						
Cerium-144	U	-0.00161	+/-0.0947	0.177		pCi/g						
Cesium-134	U	0.021	+/-0.0336	0.0385		pCi/g						
Cesium-136	U	0.0165	+/-0.0604	0.113		pCi/g						
Cesium-137	U	-0.0142	+/-0.0178	0.0304	11.0	pCi/g						
Chromium-51	U	-0.117	+/-0.210	0.364		pCi/g						
Cobalt-56	U	0.0142	+/-0.0183	0.0356		pCi/g						
Cobalt-57	U	0.00494	+/-0.0124	0.0236		pCi/g						
Cobalt-58	U	-0.00117	+/-0.0178	0.0317		pCi/g						
Cobalt-60	U	0.0112	+/-0.0161	0.0313	0.700	pCi/g						
Europium-152	U	0.0146	+/-0.047	0.0788		pCi/g						
Europium-154	U	0.0384	+/-0.0533	0.102		pCi/g						
Europium-155	U	-0.0325	+/-0.0486	0.0902		pCi/g						
Iridium-192	U	-0.000897	+/-0.0179	0.0319		pCi/g						
Iron-59	U	0.00478	+/-0.0454	0.0833		pCi/g						
Lead-210	U	-1.9	+/-1.89	3.14		pCi/g						
Lead-212		0.678	+/-0.0874	0.0469		pCi/g						
Lead-214		0.513	+/-0.0895	0.0626		pCi/g						
Manganese-54	U	0.0115	+/-0.017	0.0327		pCi/g						
Mercury-203	U	0.0276	+/-0.0205	0.0386		pCi/g						
Neodymium-147	U	0.138	+/-0.341	0.642		pCi/g						
Neptunium-239	U	-0.143	+/-0.187	0.344		pCi/g						
Niobium-94	U	-0.00749	+/-0.0166	0.0289		pCi/g						
Niobium-95	U	0.00923	+/-0.0208	0.038		pCi/g						
Potassium-40		10.6	+/-1.16	0.277		pCi/g						
Promethium-144	U	0.00893	+/-0.0175	0.0323		pCi/g						
Promethium-146	U	0.00732	+/-0.0199	0.0375		pCi/g						
Radium-228		0.504	+/-0.160	0.115		pCi/g						
Ruthenium-106	U	0.0205	+/-0.142	0.261		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: South 3	Project: CLYM00105
Sample ID: 303457003	Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspac, Gamma, Solid (Standard List) "As Received"												
Silver-110m	U	-0.0131	+/-0.0221	0.0393		pCi/g						
Sodium-22	U	0.0071	+/-0.0194	0.0361		pCi/g						
Thallium-208		0.182	+/-0.0398	0.0287		pCi/g						
Thorium-234		1.24	+/-1.12	1.14		pCi/g						
Tin-113	U	-0.00916	+/-0.0204	0.0373		pCi/g						
Uranium-235	U	-0.0048	+/-0.102	0.180		pCi/g						
Uranium-238		1.24	+/-1.12	1.14		pCi/g						
Yttrium-88	U	0.0117	+/-0.014	0.0303		pCi/g						
Zinc-65	U	-0.0428	+/-0.047	0.0653		pCi/g						
Zirconium-95	U	0.00489	+/-0.0344	0.0622		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Pb210, Solid "Dry Weight Corrected"

Lead-210	U	0.717	+/-0.524	0.853	0.900	pCi/g		JXR1	05/15/12	1228	1208287	2
----------	---	-------	----------	-------	-------	-------	--	------	----------	------	---------	---

Rad Liquid Scintillation Analysis

LSC, Tritium Dist, Solid "As Received"

Tritium	U	-4.03	+/-50.0	90.4	110	pCi/g		BYS1	05/10/12	1937	1209186	3
---------	---	-------	---------	------	-----	-------	--	------	----------	------	---------	---

Liquid Scint C14, Solid "As Received"

Carbon-14	U	-2.36	+/-4.93	8.74	12.0	pCi/g		EXK2	05/13/12	0616	1208749	4
-----------	---	-------	---------	------	------	-------	--	------	----------	------	---------	---

Liquid Scint Ni63, Solid "Dry Weight Corrected"

Nickel-63	U	-6.6	+/-9.83	17.7	2100	pci/g		MXP1	05/09/12	0031	1208742	5
-----------	---	------	---------	------	------	-------	--	------	----------	------	---------	---

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	04/30/12	1534	1208077

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			111	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			69.1	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: South 4	Project: CLYM00105
Sample ID: 303457004	Client ID: CLYM001
Matrix: Soil	
Collect Date: 12-APR-12 09:00	
Receive Date: 28-APR-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspac, Gamma, Solid (Standard List) "As Received"												
Actinium-228		0.503	+/-0.153	0.120		pCi/g		MXR1	05/02/12	1436	1208325	1
Antimony-124	U	-0.00882	+/-0.0395	0.0737		pCi/g						
Antimony-125	U	0.0294	+/-0.0471	0.0877		pCi/g						
Barium-133	U	0.0107	+/-0.0221	0.0367		pCi/g						
Barium-140	U	0.126	+/-0.176	0.334		pCi/g						
Beryllium-7	U	0.0247	+/-0.166	0.300		pCi/g						
Bismuth-212	UI	0.00	+/-0.374	0.565		pCi/g						
Bismuth-214		0.294	+/-0.0841	0.064		pCi/g						
Cerium-139	U	-0.0181	+/-0.0142	0.0241		pCi/g						
Cerium-141	U	-0.0219	+/-0.0322	0.0571		pCi/g						
Cerium-144	U	0.00211	+/-0.0901	0.166		pCi/g						
Cesium-134	U	0.0279	+/-0.0214	0.0417		pCi/g						
Cesium-136	U	-0.0276	+/-0.0661	0.118		pCi/g						
Cesium-137	U	-0.00741	+/-0.0192	0.0343	11.0	pCi/g						
Chromium-51	U	-0.0638	+/-0.207	0.376		pCi/g						
Cobalt-56	U	-0.00376	+/-0.0195	0.0347		pCi/g						
Cobalt-57	U	-0.00705	+/-0.0115	0.0207		pCi/g						
Cobalt-58	U	0.000989	+/-0.0206	0.0374		pCi/g						
Cobalt-60	U	-0.0113	+/-0.018	0.0307	0.700	pCi/g						
Europium-152	U	-0.0397	+/-0.0532	0.0807		pCi/g						
Europium-154	U	-0.00122	+/-0.0571	0.104		pCi/g						
Europium-155	U	0.0151	+/-0.0483	0.0913		pCi/g						
Iridium-192	U	0.0188	+/-0.0176	0.034		pCi/g						
Iron-59	U	0.0598	+/-0.0488	0.0965		pCi/g						
Lead-210	U	0.985	+/-2.53	5.08		pCi/g						
Lead-212		0.607	+/-0.0812	0.048		pCi/g						
Lead-214		0.499	+/-0.0991	0.0639		pCi/g						
Manganese-54	U	-0.00727	+/-0.0202	0.0353		pCi/g						
Mercury-203	U	0.00835	+/-0.0198	0.0375		pCi/g						
Neodymium-147	U	-0.0807	+/-0.374	0.692		pCi/g						
Neptunium-239	U	-0.163	+/-0.172	0.307		pCi/g						
Niobium-94	U	0.00212	+/-0.0159	0.0293		pCi/g						
Niobium-95	U	0.026	+/-0.0208	0.0407		pCi/g						
Potassium-40		9.74	+/-1.05	0.320		pCi/g						
Promethium-144	U	0.001	+/-0.0168	0.0308		pCi/g						
Promethium-146	U	-0.0025	+/-0.0194	0.0347		pCi/g						
Radium-228		0.503	+/-0.153	0.120		pCi/g						
Ruthenium-106	U	0.0735	+/-0.152	0.290		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: South 4	Project: CLYM00105
Sample ID: 303457004	Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Silver-110m	U	-0.013	+/-0.025	0.0429		pCi/g						
Sodium-22	U	-0.00147	+/-0.0203	0.0368		pCi/g						
Thallium-208		0.203	+/-0.0436	0.0303		pCi/g						
Thorium-234	U	0.051	+/-0.851	1.56		pCi/g						
Tin-113	U	-0.0182	+/-0.0229	0.0397		pCi/g						
Uranium-235	U	0.00868	+/-0.104	0.180		pCi/g						
Uranium-238	U	0.051	+/-0.851	1.56		pCi/g						
Yttrium-88	U	0.00287	+/-0.0197	0.0379		pCi/g						
Zinc-65	U	-0.0293	+/-0.0497	0.0728		pCi/g						
Zirconium-95	U	0.00783	+/-0.0376	0.0693		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Pb210, Solid "Dry Weight Corrected"

Lead-210	U	0.758	+/-0.521	0.785	0.900	pCi/g		JXR1	05/15/12	1514	1208287	2
----------	---	-------	----------	-------	-------	-------	--	------	----------	------	---------	---

Rad Liquid Scintillation Analysis

LSC, Tritium Dist, Solid "As Received"

Tritium	U	-15.8	+/-48.1	88.7	110	pCi/g		BYS1	05/10/12	2004	1209186	3
---------	---	-------	---------	------	-----	-------	--	------	----------	------	---------	---

Liquid Scint C14, Solid "As Received"

Carbon-14	U	-1.04	+/-4.58	8.04	12.0	pCi/g		EXK2	05/13/12	0638	1208749	4
-----------	---	-------	---------	------	------	-------	--	------	----------	------	---------	---

Liquid Scint Ni63, Solid "Dry Weight Corrected"

Nickel-63	U	-10.2	+/-11.0	20.0	2100	pci/g		MXP1	05/09/12	0047	1208742	5
-----------	---	-------	---------	------	------	-------	--	------	----------	------	---------	---

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	04/30/12	1534	1208077

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			109	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			53.8	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: South 5	Project: CLYM00105
Sample ID: 303457005	Client ID: CLYM001
Matrix: Soil	
Collect Date: 12-APR-12 09:00	
Receive Date: 28-APR-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Actinium-228		0.386	+/-0.148	0.108		pCi/g		MXR1	05/02/12	1437	1208325	1
Antimony-124	U	0.0289	+/-0.0378	0.0814		pCi/g						
Antimony-125	U	0.0304	+/-0.0477	0.0888		pCi/g						
Barium-133	U	0.00844	+/-0.0222	0.0366		pCi/g						
Barium-140	U	0.0049	+/-0.166	0.312		pCi/g						
Beryllium-7	U	-0.0611	+/-0.183	0.319		pCi/g						
Bismuth-212	UI	0.00	+/-0.361	0.561		pCi/g						
Bismuth-214		0.457	+/-0.0898	0.0603		pCi/g						
Cerium-139	U	-0.000543	+/-0.0142	0.0267		pCi/g						
Cerium-141	U	0.0294	+/-0.0333	0.0647		pCi/g						
Cerium-144	U	-0.000192	+/-0.0991	0.176		pCi/g						
Cesium-134	U	0.0292	+/-0.0209	0.0415		pCi/g						
Cesium-136	U	0.024	+/-0.0663	0.124		pCi/g						
Cesium-137	U	0.00874	+/-0.0189	0.036	11.0	pCi/g						
Chromium-51	U	-0.0429	+/-0.211	0.382		pCi/g						
Cobalt-56	U	-0.0149	+/-0.0193	0.0329		pCi/g						
Cobalt-57	U	0.00968	+/-0.0129	0.0237		pCi/g						
Cobalt-58	U	-0.0273	+/-0.0191	0.0302		pCi/g						
Cobalt-60	U	0.00711	+/-0.0183	0.0359	0.700	pCi/g						
Europium-152	U	-0.0012	+/-0.0509	0.0892		pCi/g						
Europium-154	U	-0.0251	+/-0.0621	0.111		pCi/g						
Europium-155	U	-0.00615	+/-0.0526	0.0941		pCi/g						
Iridium-192	U	0.0054	+/-0.0177	0.0329		pCi/g						
Iron-59	U	-0.0303	+/-0.0523	0.0884		pCi/g						
Lead-210	U	1.99	+/-4.36	8.32		pCi/g						
Lead-212		0.581	+/-0.0927	0.052		pCi/g						
Lead-214		0.559	+/-0.113	0.0616		pCi/g						
Manganese-54	U	0.0109	+/-0.0179	0.0342		pCi/g						
Mercury-203	U	0.00145	+/-0.0214	0.0393		pCi/g						
Neodymium-147	U	0.0504	+/-0.358	0.682		pCi/g						
Neptunium-239	U	0.0554	+/-0.192	0.348		pCi/g						
Niobium-94	U	0.0032	+/-0.0156	0.0292		pCi/g						
Niobium-95	U	0.00251	+/-0.0217	0.040		pCi/g						
Potassium-40		10.3	+/-1.13	0.262		pCi/g						
Promethium-144	U	-0.00204	+/-0.0158	0.029		pCi/g						
Promethium-146	U	-0.0153	+/-0.0208	0.0354		pCi/g						
Radium-228		0.386	+/-0.148	0.108		pCi/g						
Ruthenium-106	U	-0.108	+/-0.149	0.263		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: South 5	Project: CLYM00105
Sample ID: 303457005	Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Silver-110m	U	0.0103	+/-0.0242	0.0457		pCi/g						
Sodium-22	U	-0.013	+/-0.0224	0.0394		pCi/g						
Thallium-208		0.174	+/-0.0433	0.0313		pCi/g						
Thorium-234	U	0.804	+/-1.74	1.56		pCi/g						
Tin-113	U	0.00245	+/-0.0228	0.0414		pCi/g						
Uranium-235	U	-0.0951	+/-0.108	0.187		pCi/g						
Uranium-238	U	0.804	+/-1.74	1.56		pCi/g						
Yttrium-88	U	0.00285	+/-0.0153	0.0309		pCi/g						
Zinc-65	U	-0.129	+/-0.0538	0.0687		pCi/g						
Zirconium-95	U	0.00195	+/-0.037	0.0683		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Pb210, Solid "Dry Weight Corrected"

Lead-210	0.938	+/-0.565	0.825	0.900	pCi/g	JXR1	05/15/12	1702	1208287	2
----------	-------	----------	-------	-------	-------	------	----------	------	---------	---

Rad Liquid Scintillation Analysis

LSC, Tritium Dist, Solid "As Received"

Tritium	U	30.0	+/-52.1	89.6	110	pCi/g	BYS1	05/10/12	2030	1209186	3
---------	---	------	---------	------	-----	-------	------	----------	------	---------	---

Liquid Scint C14, Solid "As Received"

Carbon-14	U	0.00	+/-5.82	10.1	12.0	pCi/g	EXK2	05/13/12	0659	1208749	4
-----------	---	------	---------	------	------	-------	------	----------	------	---------	---

Liquid Scint Ni63, Solid "Dry Weight Corrected"

Nickel-63	U	-3.63	+/-10.4	18.5	2100	pci/g	MXP1	05/09/12	0103	1208742	5
-----------	---	-------	---------	------	------	-------	------	----------	------	---------	---

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	04/30/12	1534	1208077

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			104	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			64.3	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: West 1	Project: CLYM00105
Sample ID: 303457006	Client ID: CLYM001
Matrix: Soil	
Collect Date: 12-APR-12 09:00	
Receive Date: 28-APR-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Actinium-228		0.737	+/-0.169	0.135		pCi/g		MXR1	05/02/12	1437	1208325	1
Antimony-124	U	-0.00393	+/-0.0433	0.0833		pCi/g						
Antimony-125	U	-0.0137	+/-0.0487	0.085		pCi/g						
Barium-133	U	0.00294	+/-0.026	0.0413		pCi/g						
Barium-140	U	0.0131	+/-0.184	0.343		pCi/g						
Beryllium-7	U	0.0266	+/-0.180	0.339		pCi/g						
Bismuth-212	UI	0.00	+/-0.493	0.638		pCi/g						
Bismuth-214		0.463	+/-0.0988	0.0623		pCi/g						
Cerium-139	U	-0.00234	+/-0.0157	0.0293		pCi/g						
Cerium-141	U	0.000393	+/-0.0417	0.068		pCi/g						
Cerium-144	U	-0.0159	+/-0.108	0.191		pCi/g						
Cesium-134	U	0.010	+/-0.0363	0.0475		pCi/g						
Cesium-136	U	0.0507	+/-0.0703	0.138		pCi/g						
Cesium-137	U	0.0147	+/-0.0299	0.0382	11.0	pCi/g						
Chromium-51	U	0.0033	+/-0.226	0.409		pCi/g						
Cobalt-56	U	0.000353	+/-0.0196	0.0357		pCi/g						
Cobalt-57	U	-0.00385	+/-0.0143	0.0252		pCi/g						
Cobalt-58	U	-0.0036	+/-0.0206	0.0368		pCi/g						
Cobalt-60	U	-0.00594	+/-0.0202	0.036	0.700	pCi/g						
Europium-152	U	-0.0352	+/-0.0578	0.0919		pCi/g						
Europium-154	U	0.0026	+/-0.0671	0.123		pCi/g						
Europium-155	U	0.050	+/-0.0563	0.105		pCi/g						
Iridium-192	U	-0.00536	+/-0.0187	0.0334		pCi/g						
Iron-59	U	-0.013	+/-0.0533	0.0958		pCi/g						
Lead-210	U	0.715	+/-3.67	7.02		pCi/g						
Lead-212		0.672	+/-0.0944	0.0559		pCi/g						
Lead-214		0.596	+/-0.107	0.0725		pCi/g						
Manganese-54	U	0.000679	+/-0.0207	0.0371		pCi/g						
Mercury-203	U	0.0204	+/-0.0234	0.0443		pCi/g						
Neodymium-147	U	-0.212	+/-0.403	0.719		pCi/g						
Neptunium-239	U	0.0312	+/-0.215	0.387		pCi/g						
Niobium-94	U	0.00964	+/-0.0193	0.036		pCi/g						
Niobium-95	U	0.00681	+/-0.0231	0.0426		pCi/g						
Potassium-40		9.59	+/-1.09	0.313		pCi/g						
Promethium-144	U	-0.0212	+/-0.0191	0.0316		pCi/g						
Promethium-146	U	0.0102	+/-0.0228	0.0436		pCi/g						
Radium-228		0.737	+/-0.169	0.135		pCi/g						
Ruthenium-106	U	0.0737	+/-0.162	0.307		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: West 1	Project: CLYM00105
Sample ID: 303457006	Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Silver-110m	U	-0.00545	+/-0.0255	0.0472		pCi/g						
Sodium-22	U	-0.00438	+/-0.0243	0.0434		pCi/g						
Thallium-208		0.207	+/-0.0463	0.0332		pCi/g						
Thorium-234		1.83	+/-1.74	1.57		pCi/g						
Tin-113	U	0.0176	+/-0.026	0.0482		pCi/g						
Uranium-235	U	-0.0371	+/-0.122	0.196		pCi/g						
Uranium-238		1.83	+/-1.74	1.57		pCi/g						
Yttrium-88	U	0.00455	+/-0.0213	0.042		pCi/g						
Zinc-65	U	-0.0162	+/-0.0559	0.0848		pCi/g						
Zirconium-95	U	0.00799	+/-0.0415	0.0761		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Pb210, Solid "Dry Weight Corrected"

Lead-210	U	0.527	+/-0.483	0.774	0.900	pCi/g		JXR1	05/15/12	1514	1208287	2
----------	---	-------	----------	-------	-------	-------	--	------	----------	------	---------	---

Rad Liquid Scintillation Analysis

LSC, Tritium Dist, Solid "As Received"

Tritium	U	-10.2	+/-50.1	91.6	110	pCi/g		BYS1	05/10/12	2056	1209186	3
---------	---	-------	---------	------	-----	-------	--	------	----------	------	---------	---

Liquid Scint C14, Solid "As Received"

Carbon-14	U	-0.0984	+/-4.81	8.38	12.0	pCi/g		EXK2	05/13/12	0721	1208749	4
-----------	---	---------	---------	------	------	-------	--	------	----------	------	---------	---

Liquid Scint Ni63, Solid "Dry Weight Corrected"

Nickel-63	U	-7.9	+/-10.1	18.3	2100	pci/g		MXP1	05/09/12	0119	1208742	5
-----------	---	------	---------	------	------	-------	--	------	----------	------	---------	---

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	04/30/12	1534	1208077

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			118	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			66.3	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: West 2	Project: CLYM00105
Sample ID: 303457007	Client ID: CLYM001
Matrix: Soil	
Collect Date: 12-APR-12 09:00	
Receive Date: 28-APR-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Actinium-228		0.681	+/-0.171	0.128		pCi/g		MXR1	05/02/12	1437	1208325	1
Antimony-124	U	-0.00981	+/-0.0441	0.0808		pCi/g						
Antimony-125	U	-0.0372	+/-0.0426	0.076		pCi/g						
Barium-133	U	0.00797	+/-0.0238	0.0384		pCi/g						
Barium-140	U	-0.0409	+/-0.163	0.297		pCi/g						
Beryllium-7	U	0.128	+/-0.158	0.309		pCi/g						
Bismuth-212	UI	0.00	+/-0.360	0.578		pCi/g						
Bismuth-214		0.445	+/-0.0926	0.0616		pCi/g						
Cerium-139	U	-0.00193	+/-0.0142	0.0269		pCi/g						
Cerium-141	U	0.012	+/-0.0357	0.0645		pCi/g						
Cerium-144	U	0.013	+/-0.0988	0.179		pCi/g						
Cesium-134	U	0.0414	+/-0.0217	0.0431		pCi/g						
Cesium-136	U	0.0111	+/-0.0733	0.135		pCi/g						
Cesium-137	U	0.0155	+/-0.018	0.0344	11.0	pCi/g						
Chromium-51	U	-0.0726	+/-0.229	0.407		pCi/g						
Cobalt-56	U	-0.000818	+/-0.0193	0.036		pCi/g						
Cobalt-57	U	0.00193	+/-0.0121	0.0221		pCi/g						
Cobalt-58	U	-0.0038	+/-0.020	0.0369		pCi/g						
Cobalt-60	U	0.000475	+/-0.0206	0.0386	0.700	pCi/g						
Europium-152	U	-0.00544	+/-0.0582	0.091		pCi/g						
Europium-154	U	-0.0165	+/-0.0603	0.106		pCi/g						
Europium-155	U	0.0566	+/-0.0515	0.0975		pCi/g						
Iridium-192	U	0.0153	+/-0.0189	0.0356		pCi/g						
Iron-59	U	-0.0142	+/-0.0529	0.0938		pCi/g						
Lead-210	U	0.433	+/-2.99	5.81		pCi/g						
Lead-212		0.544	+/-0.0909	0.0581		pCi/g						
Lead-214		0.647	+/-0.109	0.0705		pCi/g						
Manganese-54	U	0.00542	+/-0.0181	0.0344		pCi/g						
Mercury-203	U	0.0314	+/-0.0216	0.0414		pCi/g						
Neodymium-147	U	0.117	+/-0.384	0.722		pCi/g						
Neptunium-239	U	0.0274	+/-0.200	0.364		pCi/g						
Niobium-94	U	-0.0133	+/-0.0191	0.0326		pCi/g						
Niobium-95	U	-0.00377	+/-0.0245	0.043		pCi/g						
Potassium-40		11.0	+/-1.34	0.299		pCi/g						
Promethium-144	U	6.64E-05	+/-0.0187	0.0336		pCi/g						
Promethium-146	U	0.011	+/-0.0203	0.0389		pCi/g						
Radium-228		0.681	+/-0.171	0.128		pCi/g						
Ruthenium-106	U	-0.044	+/-0.157	0.280		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: West 2	Project: CLYM00105
Sample ID: 303457007	Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspac, Gamma, Solid (Standard List) "As Received"												
Silver-110m	U	-0.00398	+/-0.0227	0.0419		pCi/g						
Sodium-22	U	-0.00562	+/-0.0214	0.0376		pCi/g						
Thallium-208		0.155	+/-0.0423	0.030		pCi/g						
Thorium-234	U	0.037	+/-1.36	1.31		pCi/g						
Tin-113	U	-0.000617	+/-0.0227	0.0405		pCi/g						
Uranium-235	U	0.0911	+/-0.104	0.189		pCi/g						
Uranium-238	U	0.037	+/-1.36	1.31		pCi/g						
Yttrium-88	U	0.00839	+/-0.0183	0.0368		pCi/g						
Zinc-65	U	-0.0211	+/-0.0493	0.0727		pCi/g						
Zirconium-95	U	0.0262	+/-0.0372	0.0702		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Pb210, Solid "Dry Weight Corrected"

Lead-210	U	0.265	+/-0.466	0.824	0.900	pCi/g		JXR1	05/15/12	1514	1208287	2
----------	---	-------	----------	-------	-------	-------	--	------	----------	------	---------	---

Rad Liquid Scintillation Analysis

LSC, Tritium Dist, Solid "As Received"

Tritium	U	-1.92	+/-47.7	86.1	110	pCi/g		BYS1	05/10/12	2123	1209186	3
---------	---	-------	---------	------	-----	-------	--	------	----------	------	---------	---

Liquid Scint C14, Solid "As Received"

Carbon-14	U	2.52	+/-4.85	8.27	12.0	pCi/g		EXK2	05/13/12	0742	1208749	4
-----------	---	------	---------	------	------	-------	--	------	----------	------	---------	---

Liquid Scint Ni63, Solid "Dry Weight Corrected"

Nickel-63	U	-8.59	+/-11.5	20.8	2100	pci/g		MXP1	05/09/12	0136	1208742	5
-----------	---	-------	---------	------	------	-------	--	------	----------	------	---------	---

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	04/30/12	1534	1208077

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			108	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			56.2	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: West 3	Project: CLYM00105
Sample ID: 303457008	Client ID: CLYM001
Matrix: Soil	
Collect Date: 12-APR-12 09:00	
Receive Date: 28-APR-12	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Actinium-228		0.424	+/-0.164	0.115		pCi/g		MXR1	05/02/12	1438	1208325	1
Antimony-124	U	0.0188	+/-0.0419	0.0843		pCi/g						
Antimony-125	U	0.0156	+/-0.0382	0.0723		pCi/g						
Barium-133	U	0.000599	+/-0.0186	0.0309		pCi/g						
Barium-140	U	-0.0768	+/-0.138	0.237		pCi/g						
Beryllium-7	U	-5.63E-05	+/-0.136	0.250		pCi/g						
Bismuth-212	U	0.355	+/-0.277	0.436		pCi/g						
Bismuth-214		0.368	+/-0.0766	0.0485		pCi/g						
Cerium-139	U	-0.0171	+/-0.0123	0.0211		pCi/g						
Cerium-141	U	-0.0252	+/-0.0311	0.0512		pCi/g						
Cerium-144	U	0.0199	+/-0.0839	0.142		pCi/g						
Cesium-134	U	0.0198	+/-0.0177	0.0355		pCi/g						
Cesium-136	U	0.0398	+/-0.062	0.120		pCi/g						
Cesium-137	U	0.0104	+/-0.0169	0.0316	11.0	pCi/g						
Chromium-51	U	-0.184	+/-0.175	0.284		pCi/g						
Cobalt-56	U	-0.00303	+/-0.0193	0.0353		pCi/g						
Cobalt-57	U	0.00905	+/-0.00993	0.0192		pCi/g						
Cobalt-58	U	-0.00454	+/-0.0166	0.0305		pCi/g						
Cobalt-60	U	-0.0213	+/-0.0201	0.0319	0.700	pCi/g						
Europium-152	U	0.0105	+/-0.0389	0.0718		pCi/g						
Europium-154	U	-0.00177	+/-0.054	0.0973		pCi/g						
Europium-155	U	0.0465	+/-0.0401	0.0787		pCi/g						
Iridium-192	U	0.0173	+/-0.0151	0.0283		pCi/g						
Iron-59	U	0.032	+/-0.0457	0.0877		pCi/g						
Lead-210	U	1.10	+/-1.55	2.69		pCi/g						
Lead-212		0.532	+/-0.0707	0.0421		pCi/g						
Lead-214		0.486	+/-0.0861	0.0554		pCi/g						
Manganese-54	U	0.00448	+/-0.0158	0.030		pCi/g						
Mercury-203	U	-0.00746	+/-0.0179	0.0308		pCi/g						
Neodymium-147	U	0.229	+/-0.336	0.638		pCi/g						
Neptunium-239	U	-0.132	+/-0.151	0.273		pCi/g						
Niobium-94	U	0.0193	+/-0.0154	0.0297		pCi/g						
Niobium-95	U	0.00891	+/-0.0186	0.0359		pCi/g						
Potassium-40		10.0	+/-1.13	0.244		pCi/g						
Promethium-144	U	0.0113	+/-0.0166	0.0309		pCi/g						
Promethium-146	U	0.00945	+/-0.0169	0.0323		pCi/g						
Radium-228		0.424	+/-0.164	0.115		pCi/g						
Ruthenium-106	U	0.0806	+/-0.127	0.241		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: West 3	Project: CLYM00105
Sample ID: 303457008	Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspac, Gamma, Solid (Standard List) "As Received"												
Silver-110m	U	0.00892	+/-0.0195	0.038		pCi/g						
Sodium-22	U	0.000193	+/-0.0192	0.0347		pCi/g						
Thallium-208		0.136	+/-0.0362	0.0259		pCi/g						
Thorium-234	U	-0.0747	+/-0.625	1.07		pCi/g						
Tin-113	U	-0.0153	+/-0.0184	0.0326		pCi/g						
Uranium-235	U	0.0773	+/-0.0898	0.158		pCi/g						
Uranium-238	U	-0.0747	+/-0.625	1.07		pCi/g						
Yttrium-88	U	-0.0046	+/-0.0145	0.0266		pCi/g						
Zinc-65	U	-0.015	+/-0.0456	0.0685		pCi/g						
Zirconium-95	U	0.0104	+/-0.0324	0.0621		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Pb210, Solid "Dry Weight Corrected"

Lead-210	U	0.654	+/-0.542	0.866	0.900	pCi/g		JXR1	05/15/12	1702	1208287	2
----------	---	-------	----------	-------	-------	-------	--	------	----------	------	---------	---

Rad Liquid Scintillation Analysis

LSC, Tritium Dist, Solid "As Received"

Tritium	U	1.85	+/-46.3	83.1	110	pCi/g		BYS1	05/10/12	2149	1209186	3
---------	---	------	---------	------	-----	-------	--	------	----------	------	---------	---

Liquid Scint C14, Solid "As Received"

Carbon-14	U	0.472	+/-4.64	8.05	12.0	pCi/g		EXK2	05/13/12	0803	1208749	4
-----------	---	-------	---------	------	------	-------	--	------	----------	------	---------	---

Liquid Scint Ni63, Solid "Dry Weight Corrected"

Nickel-63	U	-4.42	+/-12.7	22.5	2100	pci/g		MXP1	05/09/12	0152	1208742	5
-----------	---	-------	---------	------	------	-------	--	------	----------	------	---------	---

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	04/30/12	1534	1208077

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R	
2	DOE RP280 Modified	
3	EPA 906.0 Modified	
4	EPA EERF C-01 Modified	
5	DOE RESL Ni-1, Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			111	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			51.4	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
Address : 5104 Pegasus Court
Suite J
Frederick, Maryland 21704
Contact: Mr. Charles Watts
Project: Dartmouth College Rennie Farm

Client Sample ID: West 4 Project: CLYM00105
Sample ID: 303457009 Client ID: CLYM001
Matrix: Soil
Collect Date: 12-APR-12 09:00
Receive Date: 28-APR-12
Collector: Client

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Actinium-228		0.670	+/-0.178	0.115		pCi/g		MXR1	05/02/12	1438	1208325	1
Antimony-124	U	-0.0233	+/-0.044	0.0787		pCi/g						
Antimony-125	U	0.0373	+/-0.0463	0.0879		pCi/g						
Barium-133	U	-0.00965	+/-0.0244	0.0379		pCi/g						
Barium-140	U	0.0233	+/-0.182	0.330		pCi/g						
Beryllium-7	U	-0.0833	+/-0.171	0.300		pCi/g						
Bismuth-212	U	0.236	+/-0.331	0.540		pCi/g						
Bismuth-214		0.402	+/-0.0873	0.0629		pCi/g						
Cerium-139	U	0.0112	+/-0.0156	0.0292		pCi/g						
Cerium-141	U	-0.0142	+/-0.039	0.0656		pCi/g						
Cerium-144	U	-0.00682	+/-0.106	0.195		pCi/g						
Cesium-134	U	0.0332	+/-0.0229	0.0389		pCi/g						
Cesium-136	U	0.0269	+/-0.0682	0.126		pCi/g						
Cesium-137	U	0.0312	+/-0.0208	0.041	11.0	pCi/g						
Chromium-51	U	-0.155	+/-0.208	0.373		pCi/g						
Cobalt-56	U	-0.0224	+/-0.0213	0.0354		pCi/g						
Cobalt-57	U	-0.00225	+/-0.0128	0.0238		pCi/g						
Cobalt-58	U	-5.16E-07	+/-0.0193	0.0355		pCi/g						
Cobalt-60	U	0.000532	+/-0.0207	0.038	0.700	pCi/g						
Europium-152	U	0.0219	+/-0.0526	0.0871		pCi/g						
Europium-154	U	-0.0195	+/-0.0556	0.0994		pCi/g						
Europium-155	U	-0.0465	+/-0.0542	0.0988		pCi/g						
Iridium-192	U	0.010	+/-0.0177	0.0338		pCi/g						
Iron-59	U	-0.0118	+/-0.0511	0.0926		pCi/g						
Lead-210	U	-4.39	+/-4.67	7.99		pCi/g						
Lead-212		0.714	+/-0.0925	0.0508		pCi/g						
Lead-214		0.495	+/-0.0954	0.065		pCi/g						
Manganese-54	U	0.00256	+/-0.0184	0.0339		pCi/g						
Mercury-203	U	0.0203	+/-0.0227	0.0389		pCi/g						
Neodymium-147	U	-0.281	+/-0.391	0.666		pCi/g						
Neptunium-239	U	-0.0745	+/-0.209	0.386		pCi/g						
Niobium-94	U	0.0152	+/-0.0167	0.0323		pCi/g						
Niobium-95	U	0.0162	+/-0.0229	0.0435		pCi/g						
Potassium-40		10.1	+/-1.11	0.263		pCi/g						
Promethium-144	U	0.000532	+/-0.0173	0.032		pCi/g						
Promethium-146	U	-0.000288	+/-0.0216	0.0392		pCi/g						
Radium-228		0.670	+/-0.178	0.115		pCi/g						
Ruthenium-106	U	0.0603	+/-0.154	0.294		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: West 4	Project: CLYM00105
Sample ID: 303457009	Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspac, Gamma, Solid (Standard List) "As Received"												
Silver-110m	U	0.00261	+/-0.0231	0.0426		pCi/g						
Sodium-22	U	-0.0073	+/-0.0196	0.035		pCi/g						
Thallium-208		0.173	+/-0.0403	0.0356		pCi/g						
Thorium-234	U	1.04	+/-1.57	1.63		pCi/g						
Tin-113	U	-0.0173	+/-0.022	0.0387		pCi/g						
Uranium-235	U	-0.0175	+/-0.114	0.194		pCi/g						
Uranium-238	U	1.04	+/-1.57	1.63		pCi/g						
Yttrium-88	U	-0.00491	+/-0.0188	0.0346		pCi/g						
Zinc-65	U	0.0151	+/-0.0514	0.0837		pCi/g						
Zirconium-95	U	0.0092	+/-0.0389	0.0724		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Pb210, Solid "Dry Weight Corrected"

Lead-210	0.945	+/-0.568	0.835	0.900	pCi/g	JXR1	05/15/12	1957	1208287	2
----------	-------	----------	-------	-------	-------	------	----------	------	---------	---

Rad Liquid Scintillation Analysis

LSC, Tritium Dist, Solid "As Received"

Tritium	U	27.1	+/-50.2	86.7	110	pCi/g	BYS1	05/10/12	2216	1209186	3
---------	---	------	---------	------	-----	-------	------	----------	------	---------	---

Liquid Scint C14, Solid "As Received"

Carbon-14	U	-1.24	+/-4.64	8.15	12.0	pCi/g	EXK2	05/13/12	0825	1208749	4
-----------	---	-------	---------	------	------	-------	------	----------	------	---------	---

Liquid Scint Ni63, Solid "Dry Weight Corrected"

Nickel-63	U	-8.39	+/-11.3	20.3	2100	pci/g	MXP1	05/09/12	0208	1208742	5
-----------	---	-------	---------	------	------	-------	------	----------	------	---------	---

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	04/30/12	1534	1208077

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R		
2	DOE RP280 Modified		
3	EPA 906.0 Modified		
4	EPA EERF C-01 Modified		
5	DOE RESL Ni-1, Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			116	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			59.0	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
Address : 5104 Pegasus Court
Suite J
Frederick, Maryland 21704
Contact: Mr. Charles Watts
Project: Dartmouth College Rennie Farm

Client Sample ID:	West 5	Project:	CLYM00105
Sample ID:	303457010	Client ID:	CLYM001
Matrix:	Soil		
Collect Date:	12-APR-12 09:00		
Receive Date:	28-APR-12		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Actinium-228		0.622	+/-0.234	0.170		pCi/g		MXR1	05/03/12	0730	1208325	1
Antimony-124	U	-0.00256	+/-0.0495	0.101		pCi/g						
Antimony-125	U	-0.0476	+/-0.0628	0.110		pCi/g						
Barium-133	U	-0.00993	+/-0.0332	0.0529		pCi/g						
Barium-140	U	-0.00655	+/-0.253	0.466		pCi/g						
Beryllium-7	U	0.0585	+/-0.275	0.453		pCi/g						
Bismuth-212	U	0.478	+/-0.534	0.798		pCi/g						
Bismuth-214		0.468	+/-0.117	0.0991		pCi/g						
Cerium-139	U	0.00529	+/-0.0211	0.040		pCi/g						
Cerium-141	U	-0.0282	+/-0.0501	0.0891		pCi/g						
Cerium-144	U	-0.0821	+/-0.146	0.268		pCi/g						
Cesium-134	U	0.0433	+/-0.0478	0.0614		pCi/g						
Cesium-136	U	-0.0339	+/-0.0982	0.174		pCi/g						
Cesium-137	U	-0.00465	+/-0.0261	0.0488	11.0	pCi/g						
Chromium-51	U	-0.0731	+/-0.293	0.548		pCi/g						
Cobalt-56	U	0.000281	+/-0.0302	0.0564		pCi/g						
Cobalt-57	U	-0.00064	+/-0.0173	0.033		pCi/g						
Cobalt-58	U	0.00965	+/-0.0269	0.0525		pCi/g						
Cobalt-60	U	-0.0184	+/-0.0246	0.0421	0.700	pCi/g						
Europium-152	U	-0.0187	+/-0.0753	0.121		pCi/g						
Europium-154	U	-0.04	+/-0.080	0.143		pCi/g						
Europium-155	U	0.0228	+/-0.069	0.135		pCi/g						
Iridium-192	U	0.0214	+/-0.0259	0.0514		pCi/g						
Iron-59	U	-0.0303	+/-0.0677	0.123		pCi/g						
Lead-210	U	-1.98	+/-5.62	10.4		pCi/g						
Lead-212		0.775	+/-0.112	0.0658		pCi/g						
Lead-214		0.545	+/-0.131	0.0953		pCi/g						
Manganese-54	U	0.00764	+/-0.0246	0.0475		pCi/g						
Mercury-203	U	0.0408	+/-0.0298	0.0604		pCi/g						
Neodymium-147	U	0.270	+/-0.514	0.999		pCi/g						
Neptunium-239	U	-0.0341	+/-0.275	0.523		pCi/g						
Niobium-94	U	-0.00859	+/-0.0231	0.0421		pCi/g						
Niobium-95	U	0.00475	+/-0.0284	0.0544		pCi/g						
Potassium-40		10.0	+/-1.26	0.432		pCi/g						
Promethium-144	U	0.00136	+/-0.0219	0.0418		pCi/g						
Promethium-146	U	0.0153	+/-0.0282	0.0549		pCi/g						
Radium-228		0.622	+/-0.234	0.170		pCi/g						
Ruthenium-106	U	-0.112	+/-0.236	0.431		pCi/g						

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: May 16, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: West 5	Project: CLYM00105
Sample ID: 303457010	Client ID: CLYM001

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gamma Spec Analysis												
Gammaspec, Gamma, Solid (Standard List) "As Received"												
Silver-110m	U	-0.0277	+/-0.0293	0.0486		pCi/g						
Sodium-22	U	-0.0138	+/-0.0283	0.0506		pCi/g						
Thallium-208		0.174	+/-0.0512	0.0407		pCi/g						
Thorium-234	U	1.30	+/-2.37	2.24		pCi/g						
Tin-113	U	0.0168	+/-0.0316	0.0616		pCi/g						
Uranium-235	U	-0.121	+/-0.146	0.256		pCi/g						
Uranium-238	U	1.30	+/-2.37	2.24		pCi/g						
Yttrium-88	U	-0.00411	+/-0.0247	0.0482		pCi/g						
Zinc-65	U	-0.0143	+/-0.0719	0.113		pCi/g						
Zirconium-95	U	-0.0326	+/-0.0467	0.082		pCi/g						

Rad Gas Flow Proportional Counting

GFPC, Pb210, Solid "Dry Weight Corrected"

Lead-210	U	0.421	+/-0.488	0.819	0.900	pCi/g		JXR1	05/15/12	1957	1208287	2
----------	---	-------	----------	-------	-------	-------	--	------	----------	------	---------	---

Rad Liquid Scintillation Analysis

LSC, Tritium Dist, Solid "As Received"

Tritium	U	-12.2	+/-49.7	91.2	110	pCi/g		BYS1	05/10/12	2242	1209186	3
---------	---	-------	---------	------	-----	-------	--	------	----------	------	---------	---

Liquid Scint C14, Solid "As Received"

Carbon-14	U	-0.278	+/-4.52	7.89	12.0	pCi/g		EXK2	05/13/12	0846	1208749	4
-----------	---	--------	---------	------	------	-------	--	------	----------	------	---------	---

Liquid Scint Ni63, Solid "Dry Weight Corrected"

Nickel-63	U	-2.72	+/-13.1	23.1	2100	pci/g		MXP1	05/09/12	0224	1208742	5
-----------	---	-------	---------	------	------	-------	--	------	----------	------	---------	---

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	CXC1	04/30/12	1534	1208077

The following Analytical Methods were performed:

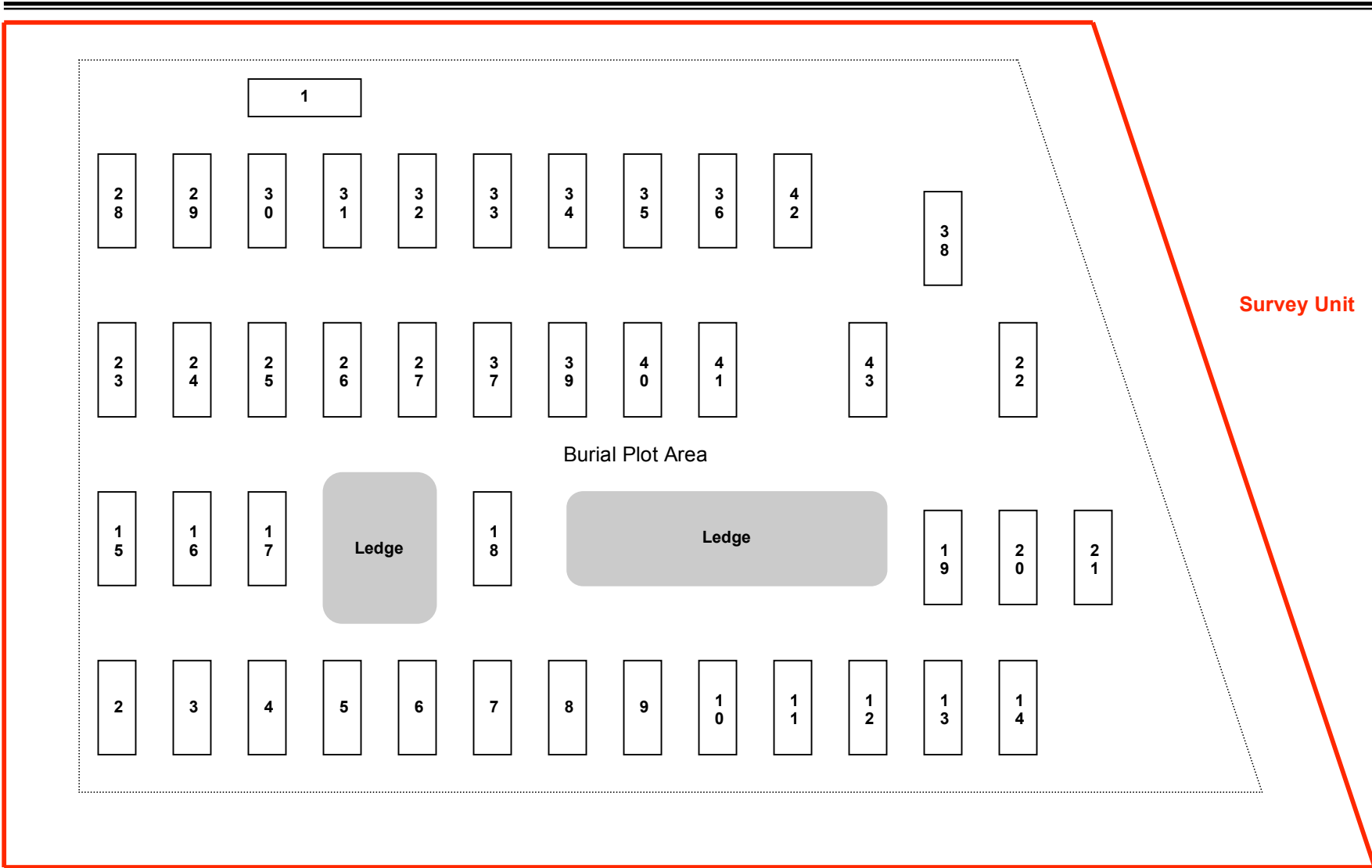
Method	Description	Analyst	Comments
1	DOE HASL 300, 4.5.2.3/Ga-01-R		
2	DOE RP280 Modified		
3	EPA 906.0 Modified		
4	EPA EERF C-01 Modified		
5	DOE RESL Ni-1, Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			102	(25%-125%)
Nickel Carrier	Liquid Scint Ni63, Solid "Dry Weight Corrected"			50.2	(25%-125%)

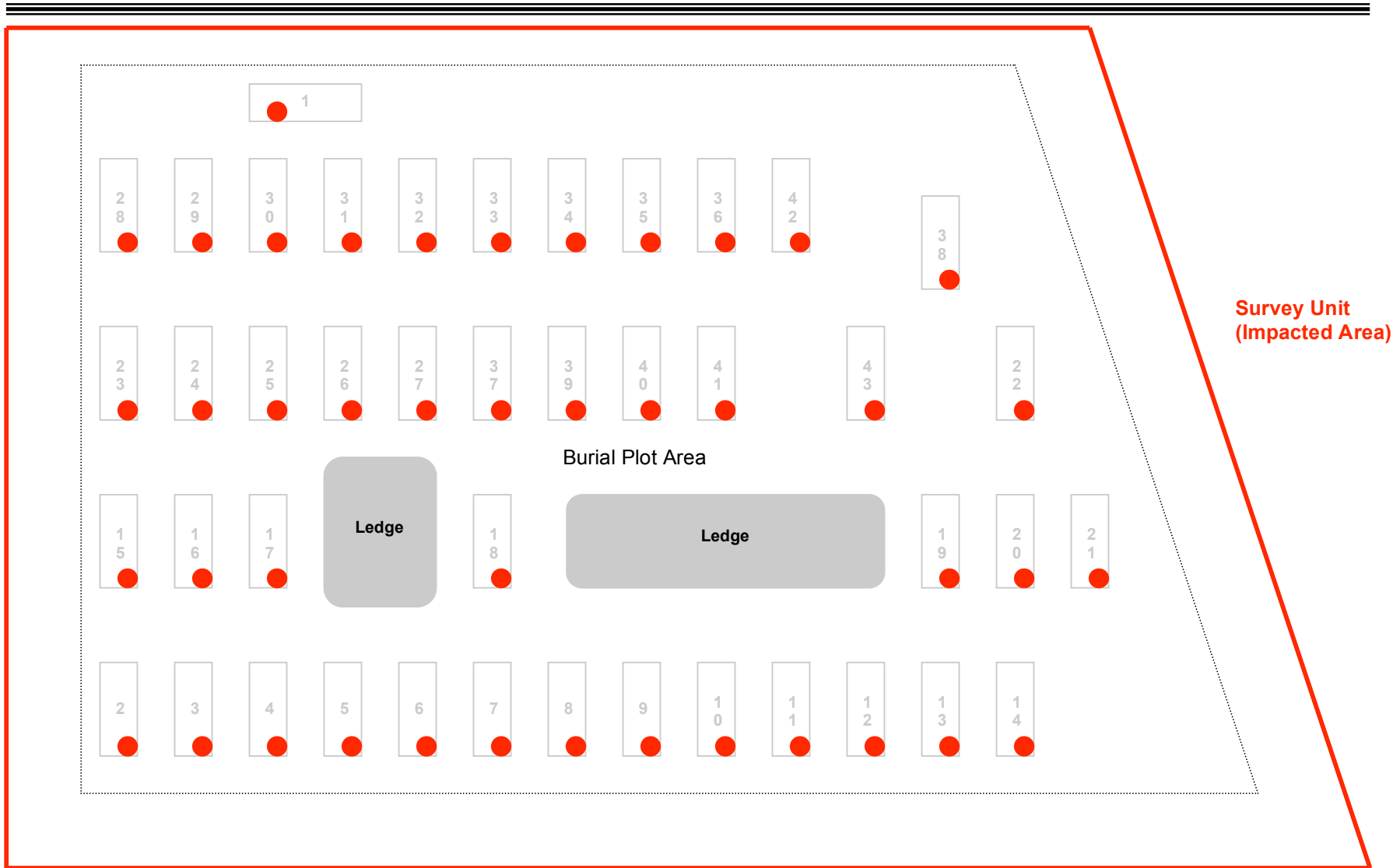
ATTACHMENT FOUR

SURVEY UNIT AND
SAMPLE DISTRIBUTION MAPS

Stone Wall



Stone Wall



Survey Unit
(Impacted Area)

Sample Location Overview

ATTACHMENT FIVE

FINAL STATUS SURVEY
SOIL SAMPLE AND DOSE RATE
MEASUREMENT RESULTS

Final Status Survey Results

Summary of Gross Measurements for ^{210}Pb

Sample #	Plot	Result (pCi/g)	Uncertainty	Detection Limit
295640-001	1	0.106	0.19	0.332
295640-002	2	1.85	0.676	0.813
295640-003	3	0.571	0.4	0.632
295640-004	4	0.486	0.333	0.514
295640-005	5	0.691	0.437	0.68
295640-006	6	0.892	0.378	0.527
295640-007	7	0.79	0.4	0.58
295640-008	8	0.824	0.373	0.532
295640-009	9	0.578	0.328	0.459
295640-010	10	0.551	0.297	0.416
295640-011	11	0.565	0.49	0.803
295640-012	12	0.981	0.427	0.604
295640-013	13	0.681	0.356	0.522
295640-014	14	0.338	0.322	0.53
295640-015	15	0.553	0.334	0.503
295640-016	16	0.637	0.332	0.47
295640-017	17	0.726	0.501	0.75
295640-018	18	0.73	0.406	0.576
295640-019	19	0.384	0.291	0.454
295640-020	20	0.272	0.281	0.464
295640-021	21	0.943	0.539	0.764
295640-022	22	0.725	0.546	0.843
295640-023	23	0.435	0.289	0.431
295640-024	24	0.548	0.329	0.484
295640-025	25	0.436	0.509	0.855
295640-026	26	0.521	0.505	0.819
295640-027	27	0.484	0.299	0.442
295640-028	28	0.48	0.289	0.42
295640-029	29	0.295	0.269	0.433
295640-030	30	0.401	0.295	0.458
295640-031	31	0.418	0.269	0.396
295640-032	32	0.78	0.348	0.483
295640-033	33	0.676	0.3	0.396
295640-034	34	0.664	0.403	0.617
295640-035	35	0.581	0.418	0.664
295640-036	36	0.274	0.381	0.652
295640-037	37	0.912	0.372	0.513
295640-038	38	0.649	0.382	0.577
295640-039	39	0.307	0.329	0.548
295640-040	40	1.35	0.421	0.647
295640-041	41	0.336	0.34	0.561
295640-042	42	0.55	0.318	0.466
295640-043	43	1.06	0.37	0.409
Mean:		0.629		

Final Status Survey Results

Summary of Gross Measurements for ^3H

Sample #	Plot	Result (pCi/g)	Uncertainty	Detection Limit
295640-001	1	-9.27	49.2	90.5
295640-002	2	2.08	47.9	86.4
295640-003	3	13.5	50.5	89.4
295640-004	4	-15	46.3	86.1
295640-005	5	32.5	54	93
295640-006	6	-13	46.5	86.2
295640-007	7	-2.14	48.9	88.8
295640-008	8	-2.16	49.5	89.8
295640-009	9	23.2	53.8	93.8
295640-010	10	20.2	51.9	90.8
295640-011	11	47.1	53.5	89.9
295640-012	12	2.14	49.2	88.8
295640-013	13	-2.45	43.7	79.6
295640-014	14	8.73	49.7	88.7
295640-015	15	11.5	52.8	93.9
295640-016	16	13	49.6	88
295640-017	17	73.6	52.7	84.8
295640-018	18	6.79	51.3	92
295640-019	19	-19.5	49.7	93.2
295640-020	20	-15.3	44.4	82.8
295640-021	21	-26.5	45.3	86.3
295640-022	22	-16.4	47.7	89
295640-023	23	28.2	50	86.4
295640-024	24	-11.2	47	86.9
295640-025	25	-15.9	46.1	86.1
295640-026	26	20.1	50.4	88.2
295640-027	27	23.2	52.7	92
295640-028	28	4.19	47.3	85.1
295640-029	29	13.9	53.3	94.4
295640-030	30	-8.84	45.9	84.6
295640-031	31	14.2	45.3	79.9
295640-032	32	2.05	46.2	83.5
295640-033	33	0	54.7	98.4
295640-034	34	-19.2	55.6	103
295640-035	35	-6.42	52.2	94.8
295640-036	36	7.26	55.5	98.9
295640-037	37	-6.23	50.6	92
295640-038	38	0	51.4	92.5
295640-039	39	-16.3	54.2	99.9
295640-040	40	6.74	51.5	91.8
295640-041	41	-29.4	47.5	89.8
295640-042	42	8.65	50.8	90.2
295640-043	43	-35.6	50.3	95.7
Mean:		2.605		

Final Status Survey Results

Summary of Gross Measurements for ¹⁴C

Sample #	Plot	Result (pCi/g)	Uncertainty	Detection Limit
295640-001	1	-3.49	2.51	4.39
295640-002	2	-6.78	4.53	7.95
295640-003	3	-10.6	4.96	8.81
295640-004	4	-3.57	3.57	6.21
295640-005	5	-5.34	4.63	8.07
295640-006	6	-7.84	5.7	9.97
295640-007	7	-8.24	5.64	9.89
295640-008	8	-4.3	5.03	8.73
295640-009	9	-5.52	3.64	6.39
295640-010	10	-5.06	5.62	9.75
295640-011	11	-4.11	5.8	10
295640-012	12	-4.95	3.69	6.46
295640-013	13	-3.54	3.73	6.49
295640-014	14	-7.45	4.62	8.12
295640-015	15	-3.49	5.07	8.77
295640-016	16	-5.45	5.89	10.2
295640-017	17	-4.45	3.43	5.99
295640-018	18	-10.3	5.26	9.31
295640-019	19	-5.49	4.48	7.82
295640-020	20	-9.11	4.84	8.55
295640-021	21	-5.32	4.08	7.1
295640-022	22	-4.21	5.75	9.96
295640-023	23	-2.71	4.92	8.49
295640-024	24	-5.07	3.38	5.9
295640-025	25	-3.38	4.53	7.86
295640-026	26	-1.75	2.97	5.13
295640-027	27	-2.06	5.77	9.92
295640-028	28	-7.92	5.2	9.08
295640-029	29	-9.57	5.27	9.32
295640-030	30	-5.95	4.48	7.82
295640-031	31	-5.11	3.58	6.25
295640-032	32	-8.6	5.85	10.2
295640-033	33	-3.98	5.83	10
295640-034	34	0.583	5.34	9.08
295640-035	35	-9.88	6.62	11.4
295640-036	36	-4.63	5.2	8.91
295640-037	37	-0.607	3.81	6.5
295640-038	38	1.17	4.72	8.01
295640-039	39	16.7	5.34	8.75
295640-040	40	-1.22	4.9	8.38
295640-041	41	0.0633	6.37	10.8
295640-042	42	3.74	5.51	9.29
295640-043	43	0.689	4.09	6.95
Mean:		-4.142		

Final Status Survey Results

Summary of Gross Measurements for ^{137}Cs

Sample #	Plot	Result (pCi/g)	Uncertainty	Detection Limit
295640-001	1	7E-05	3E-06	1.18E-11
295640-002	2	6E-05	-1E-05	1.11E-10
295640-003	3	7E-05	-3E-06	6.54E-12
295640-004	4	6E-05	-4E-06	1.27E-11
295640-005	5	7E-05	1E-06	2.08E-12
295640-006	6	8E-05	1E-05	1.31E-10
295640-007	7	5E-05	-1E-05	2.12E-10
295640-008	8	8E-05	1E-05	1.81E-10
295640-009	9	5E-05	-2E-05	3.83E-10
295640-010	10	6E-05	-1E-05	9.14E-11
295640-011	11	7E-05	6E-06	4.15E-11
295640-012	12	5E-05	-2E-05	3.44E-10
295640-013	13	5E-05	-2E-05	3.08E-10
295640-014	14	7E-05	6E-06	4.15E-11
295640-015	15	9E-05	2E-05	4.18E-10
295640-016	16	8E-05	9E-06	8.91E-11
295640-017	17	5E-05	-2E-05	3.08E-10
295640-018	18	8E-05	1E-05	2.09E-10
295640-019	19	7E-05	-3E-06	6.54E-12
295640-020	20	1.1E-04	4E-05	1.80E-09
295640-021	21	7E-05	-6E-07	3.12E-13
295640-022	22	6E-05	-1E-05	1.11E-10
295640-023	23	7E-05	-6E-07	3.12E-13
295640-024	24	7E-05	-2E-06	2.43E-12
295640-025	25	7E-05	4E-07	1.95E-13
295640-026	26	7E-05	4E-07	1.95E-13
295640-027	27	1E-04	4E-05	1.80E-09
295640-028	28	5E-05	-2E-05	3.83E-10
295640-029	29	6E-05	-1E-05	9.14E-11
295640-030	30	5E-05	-2E-05	3.44E-10
295640-031	31	8E-05	1E-05	1.55E-10
295640-032	32	7E-05	1E-06	2.08E-12
295640-033	33	7E-05	4E-07	1.95E-13
295640-034	34	6E-05	-7E-06	4.30E-11
295640-035	35	7E-05	5E-06	2.96E-11
295640-036	36	5E-05	-2E-05	3.44E-10
295640-037	37	6E-05	-1E-05	1.34E-10
295640-038	38	4E-05	-2E-05	5.55E-10
295640-039	39	6E-05	-1E-05	9.14E-11
295640-040	40	1E-04	3E-05	1.05E-09
295640-041	41	8E-05	1E-05	1.09E-10
295640-042	42	8E-05	2E-05	2.70E-10
295640-043	43	6E-05	-5E-06	2.08E-11
Mean:		6.76E-05		

Final Status Survey Results

Summary of Gross Measurements for ⁶³Ni

Sample #	Plot	Result (pCi/g)	Uncertainty	Detection Limit
295640-001	1	219	-67.023	4492.12
295640-002	2	392	105.977	11231.07
295640-003	3	355	68.977	4757.79
295640-004	4	242	-44.023	1938.05
295640-005	5	286	-0.023	0.00
295640-006	6	193	-93.023	8653.33
295640-007	7	384	97.977	9599.44
295640-008	8	342	55.977	3133.40
295640-009	9	149	-137.023	18775.37
295640-010	10	254	-32.023	1025.49
295640-011	11	359	72.977	5325.61
295640-012	12	361	74.977	5621.51
295640-013	13	452	165.977	27548.28
295640-014	14	337	50.977	2598.63
295640-015	15	234	-52.023	2706.42
295640-016	16	269	-17.023	289.79
295640-017	17	91	-195.023	38034.07
295640-018	18	217	-69.023	4764.21
295640-019	19	108	-178.023	31692.28
295640-020	20	270	-16.023	256.74
295640-021	21	625	338.977	114905.23
295640-022	22	104	-182.023	33132.47
295640-023	23	252	-34.023	1157.58
295640-024	24	122	-164.023	26903.63
295640-025	25	241	-45.023	2027.09
295640-026	26	422	135.977	18489.67
295640-027	27	181	-105.023	11029.88
295640-028	28	386	99.977	9995.35
295640-029	29	353	66.977	4485.88
295640-030	30	92	-194.023	37645.02
295640-031	31	349	62.977	3966.07
295640-032	32	238	-48.023	2306.23
295640-033	33	342	55.977	3133.40
295640-034	34	425	138.977	19314.54
295640-035	35	267	-19.023	361.88
295640-036	36	268	-18.023	324.84
295640-037	37	413	126.977	16123.09
295640-038	38	456	169.977	28892.09
295640-039	39	332	45.977	2113.86
295640-040	40	221	-65.023	4228.02
295640-041	41	268	-18.023	324.84
295640-042	42	252	-34.023	1157.58
295640-043	43	176	-110.023	12105.12
Mean:		286		

Final Status Survey Results

Summary of Dose Rate Measurements

Ludlum 19 (SN: 233432, DOC:5/17/11)

Plot	Reading (uR/hr)
1	10
2	10
3	10
4	10
5	8
6	9
7	9
8	9
9	9
10	10
11	9
12	9
13	9
14	8
15	9
16	9
17	9
18	9
19	9
20	9
21	9
22	9
23	10
24	9
25	9
26	9
27	9
28	9
29	10
30	10
31	9
32	9
33	8
34	9
35	8
36	9
37	8
38	9
39	10
40	10
41	9
42	8
43	8
Mean:	9

GEL LABORATORIES LLC

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

**Certificate of Analysis Report
for**

CLYM001 Clym Environmental Services

Client SDG: 295640 GEL Work Order: 295640

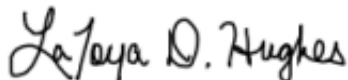
The Qualifiers in this report are defined as follows:

- * 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.

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.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

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



Reviewed by _____

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 1	Project: CLYM00105
Sample ID: 295640001	Client ID: CLYM001
Matrix: Soil	
Collect Date: 16-DEC-11 14:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.106	+/-0.190	0.332	0.900	pCi/g		AF1	02/07/12	2013	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-9.27	+/-49.2	90.5	110	pCi/g		BYS1	02/15/12	1104	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-3.49	+/-2.51	4.39	12.0	pCi/g		EXK2	02/13/12	1651	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			119	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 2	Project: CLYM00105
Sample ID: 295640002	Client ID: CLYM001
Matrix: Soil	
Collect Date: 16-DEC-11 14:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		1.85	+/-0.676	0.813	0.900	pCi/g		AF1	02/08/12	1317	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	2.08	+/-47.9	86.4	110	pCi/g		BYS1	02/15/12	1130	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-6.78	+/-4.53	7.95	12.0	pCi/g		EXK2	02/10/12	1707	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			44.1	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 3	Project: CLYM00105
Sample ID: 295640003	Client ID: CLYM001
Matrix: Soil	
Collect Date: 16-DEC-11 14:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.571	+/-0.400	0.632	0.900	pCi/g		AF1	02/07/12	1951	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	13.5	+/-50.5	89.4	110	pCi/g		BYS1	02/15/12	1156	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-10.6	+/-4.96	8.81	12.0	pCi/g		EXK2	02/13/12	1853	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE RP280 Modified		
2	EPA 906.0 Modified		
3	EPA EERF C-01 Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			108	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 4	Project: CLYM00105
Sample ID: 295640004	Client ID: CLYM001
Matrix: Soil	
Collect Date: 16-DEC-11 14:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.486	+/-0.333	0.514	0.900	pCi/g		AF1	02/08/12	1317	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-15	+/-46.3	86.1	110	pCi/g		BYS1	02/15/12	1223	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-3.57	+/-3.57	6.21	12.0	pCi/g		EXK2	02/10/12	2110	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			114	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 5	Project: CLYM00105
Sample ID: 295640005	Client ID: CLYM001
Matrix: Soil	
Collect Date: 16-DEC-11 14:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.691	+/-0.437	0.680	0.900	pCi/g		AF1	02/07/12	1951	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	32.5	+/-54.0	93.0	110	pCi/g		BYS1	02/15/12	1249	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.34	+/-4.63	8.07	12.0	pCi/g		EXK2	02/10/12	2311	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			100	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 6	Project: CLYM00105
Sample ID: 295640006	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.892	+/-0.378	0.527	0.900	pCi/g		AF1	02/07/12	1951	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-13	+/-46.5	86.2	110	pCi/g		BYS1	02/15/12	1315	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-7.84	+/-5.70	9.97	12.0	pCi/g		EXK2	02/11/12	0227	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			111	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 7	Project: CLYM00105
Sample ID: 295640007	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.790	+/-0.400	0.580	0.900	pCi/g		AF1	02/07/12	1951	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.14	+/-48.9	88.8	110	pCi/g		BYS1	02/15/12	1341	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-8.24	+/-5.64	9.89	12.0	pCi/g		EXK2	02/11/12	0429	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			92.3	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 8	Project: CLYM00105
Sample ID: 295640008	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.824	+/-0.373	0.532	0.900	pCi/g		AF1	02/07/12	1951	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.16	+/-49.5	89.8	110	pCi/g		BYS1	02/15/12	1407	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-4.3	+/-5.03	8.73	12.0	pCi/g		EXK2	02/13/12	2054	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			109	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 9	Project: CLYM00105
Sample ID: 295640009	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.578	+/-0.328	0.459	0.900	pCi/g		AF1	02/07/12	2001	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	23.2	+/-53.8	93.8	110	pCi/g		BYS1	02/15/12	1434	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.52	+/-3.64	6.39	12.0	pCi/g		EXK2	02/13/12	2255	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			83.7	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 10	Project: CLYM00105
Sample ID: 295640010	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.551	+/-0.297	0.416	0.900	pCi/g		AF1	02/07/12	2001	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	20.2	+/-51.9	90.8	110	pCi/g		BYS1	02/15/12	1500	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.06	+/-5.62	9.75	12.0	pCi/g		EXK2	02/14/12	0212	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			112	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 11	Project: CLYM00105
Sample ID: 295640011	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.565	+/-0.490	0.803	0.900	pCi/g		AF1	02/07/12	2001	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	47.1	+/-53.5	89.9	110	pCi/g		BYS1	02/15/12	1526	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-4.11	+/-5.80	10.0	12.0	pCi/g		EXK2	02/11/12	1234	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			96.3	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 12	Project: CLYM00105
Sample ID: 295640012	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.981	+/-0.427	0.604	0.900	pCi/g		AF1	02/07/12	2001	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	2.14	+/-49.2	88.8	110	pCi/g		BYS1	02/15/12	1552	1187120	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-4.95	+/-3.69	6.46	12.0	pCi/g		EXK2	02/11/12	1435	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE RP280 Modified		
2	EPA 906.0 Modified		
3	EPA EERF C-01 Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			112	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 13	Project: CLYM00105
Sample ID: 295640013	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.681	+/-0.356	0.522	0.900	pCi/g		AF1	02/07/12	2001	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-2.45	+/-43.7	79.6	110	pCi/g		BYS1	02/15/12	2243	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-3.54	+/-3.73	6.49	12.0	pCi/g		EXK2	02/14/12	0413	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			103	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 14	Project: CLYM00105
Sample ID: 295640014	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.338	+/-0.322	0.530	0.900	pCi/g		AF1	02/07/12	2003	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	8.73	+/-49.7	88.7	110	pCi/g		BYS1	02/15/12	2309	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-7.45	+/-4.62	8.12	12.0	pCi/g		EXK2	02/14/12	0614	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			121	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 15	Project: CLYM00105
Sample ID: 295640015	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.553	+/-0.334	0.503	0.900	pCi/g		AF1	02/07/12	2003	1187316	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	11.5	+/-52.8	93.9	110	pCi/g		BYS1	02/15/12	2335	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-3.49	+/-5.07	8.77	12.0	pCi/g		EXK2	02/14/12	0816	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			109	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 16	Project: CLYM00105
Sample ID: 295640016	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.637	+/-0.332	0.470	0.900	pCi/g		AF1	02/07/12	1735	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	13.0	+/-49.6	88.0	110	pCi/g		BYS1	02/16/12	0001	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.45	+/-5.89	10.2	12.0	pCi/g		EXK2	02/14/12	1017	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			109	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 17	Project: CLYM00105
Sample ID: 295640017	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.726	+/-0.501	0.750	0.900	pCi/g		AF1	02/07/12	1735	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	73.6	+/-52.7	84.8	110	pCi/g		BYS1	02/16/12	0028	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-4.45	+/-3.43	5.99	12.0	pCi/g		EXK2	02/14/12	1218	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			53.3	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 18	Project: CLYM00105
Sample ID: 295640018	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.730	+/-0.406	0.576	0.900	pCi/g		AF1	02/07/12	1735	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	6.79	+/-51.3	92.0	110	pCi/g		BYS1	02/16/12	0054	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-10.3	+/-5.26	9.31	12.0	pCi/g		EXK2	02/14/12	1419	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			75.1	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 19	Project: CLYM00105
Sample ID: 295640019	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.384	+/-0.291	0.454	0.900	pCi/g		AF1	02/07/12	1735	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-19.5	+/-49.7	93.2	110	pCi/g		BYS1	02/16/12	0120	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.49	+/-4.48	7.82	12.0	pCi/g		EXK2	02/14/12	1621	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			103	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 20	Project: CLYM00105
Sample ID: 295640020	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.272	+/-0.281	0.464	0.900	pCi/g		AF1	02/07/12	1735	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-15.3	+/-44.4	82.8	110	pCi/g		BYS1	02/16/12	0146	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-9.11	+/-4.84	8.55	12.0	pCi/g		EXK2	02/14/12	1822	1187609	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0844	1186985

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			106	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 21	Project: CLYM00105
Sample ID: 295640021	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.943	+/-0.539	0.764	0.900	pCi/g		AF1	02/07/12	1735	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-26.5	+/-45.3	86.3	110	pCi/g		BYS1	02/16/12	0212	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.32	+/-4.08	7.10	12.0	pCi/g		EXK2	02/10/12	2114	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			30.4	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 22	Project: CLYM00105
Sample ID: 295640022	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.725	+/-0.546	0.843	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-16.4	+/-47.7	89.0	110	pCi/g		BYS1	02/16/12	0238	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-4.21	+/-5.75	9.96	12.0	pCi/g		EXK2	02/15/12	1057	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			29.2	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 23	Project: CLYM00105
Sample ID: 295640023	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.435	+/-0.289	0.431	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	28.2	+/-50.0	86.4	110	pCi/g		BYS1	02/16/12	0305	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-2.71	+/-4.92	8.49	12.0	pCi/g		EXK2	02/15/12	1259	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			113	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 24	Project: CLYM00105
Sample ID: 295640024	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.548	+/-0.329	0.484	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-11.2	+/-47.0	86.9	110	pCi/g		BYS1	02/16/12	0331	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.07	+/-3.38	5.90	12.0	pCi/g		EXK2	02/11/12	0539	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			103	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 25	Project: CLYM00105
Sample ID: 295640025	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.436	+/-0.509	0.855	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-15.9	+/-46.1	86.1	110	pCi/g		BYS1	02/16/12	0357	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-3.38	+/-4.53	7.86	12.0	pCi/g		EXK2	02/15/12	1500	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			29.8	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 26	Project: CLYM00105
Sample ID: 295640026	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.521	+/-0.505	0.819	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	20.1	+/-50.4	88.2	110	pCi/g		BYS1	02/16/12	0423	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-1.75	+/-2.97	5.13	12.0	pCi/g		EXK2	02/15/12	1701	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			43.6	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 27	Project: CLYM00105
Sample ID: 295640027	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.484	+/-0.299	0.442	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	23.2	+/-52.7	92.0	110	pCi/g		BYS1	02/16/12	0449	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-2.06	+/-5.77	9.92	12.0	pCi/g		EXK2	02/15/12	1903	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst	Comments
1	DOE RP280 Modified		
2	EPA 906.0 Modified		
3	EPA EERF C-01 Modified		

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			103	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 28	Project: CLYM00105
Sample ID: 295640028	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.480	+/-0.289	0.420	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	4.19	+/-47.3	85.1	110	pCi/g		BYS1	02/16/12	0516	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-7.92	+/-5.20	9.08	12.0	pCi/g		EXK2	02/11/12	1455	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			111	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 29	Project: CLYM00105
Sample ID: 295640029	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.295	+/-0.269	0.433	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	13.9	+/-53.3	94.4	110	pCi/g		BYS1	02/16/12	0542	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-9.57	+/-5.27	9.32	12.0	pCi/g		EXK2	02/15/12	2104	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			115	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 30	Project: CLYM00105
Sample ID: 295640030	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.401	+/-0.295	0.458	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-8.84	+/-45.9	84.6	110	pCi/g		BYS1	02/16/12	0608	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.95	+/-4.48	7.82	12.0	pCi/g		EXK2	02/11/12	1858	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			103	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 31	Project: CLYM00105
Sample ID: 295640031	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.418	+/-0.269	0.396	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	14.2	+/-45.3	79.9	110	pCi/g		BYS1	02/16/12	0757	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-5.11	+/-3.58	6.25	12.0	pCi/g		EXK2	02/11/12	2059	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			92.8	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 32	Project: CLYM00105
Sample ID: 295640032	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.780	+/-0.348	0.483	0.900	pCi/g		AF1	02/07/12	1736	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	2.05	+/-46.2	83.5	110	pCi/g		BYS1	02/16/12	0823	1187122	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-8.6	+/-5.85	10.2	12.0	pCi/g		EXK2	02/11/12	2300	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			104	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 33	Project: CLYM00105
Sample ID: 295640033	Client ID: CLYM001
Matrix: Soil	
Collect Date: 17-DEC-11 07:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.676	+/-0.300	0.396	0.900	pCi/g		AF1	02/07/12	1737	1187355	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	0.00	+/-54.7	98.4	110	pCi/g		BYS1	02/16/12	1154	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-3.98	+/-5.83	10.0	12.0	pCi/g		EXK2	02/12/12	0101	1187618	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0852	1186986

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			114	(25%-125%)

GEL LABORATORIES LLC

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

**Certificate of Analysis Report
for**

CLYM001 Clym Environmental Services

Client SDG: 295642 GEL Work Order: 295642

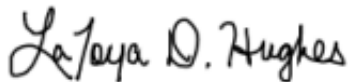
The Qualifiers in this report are defined as follows:

- * 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.

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.

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the detection limit.

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



Reviewed by _____

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 34	Project: CLYM00105
Sample ID: 295642001	Client ID: CLYM001
Matrix: Soil	
Collect Date: 18-DEC-11 09:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.664	+/-0.403	0.617	0.900	pCi/g		AF1	02/07/12	1756	1187365	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-19.2	+/-55.6	103	110	pCi/g		BYS1	02/16/12	1220	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	0.583	+/-5.34	9.08	12.0	pCi/g		EXK2	02/10/12	1902	1187604	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0841	1186987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			115	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 35	Project: CLYM00105
Sample ID: 295642002	Client ID: CLYM001
Matrix: Soil	
Collect Date: 18-DEC-11 09:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.581	+/-0.418	0.664	0.900	pCi/g		AF1	02/07/12	1741	1187365	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-6.42	+/-52.2	94.8	110	pCi/g		BYS1	02/16/12	1246	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-9.88	+/-6.62	11.4	12.0	pCi/g		EXK2	02/15/12	1312	1187604	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0841	1186987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			115	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 36	Project: CLYM00105
Sample ID: 295642003	Client ID: CLYM001
Matrix: Soil	
Collect Date: 18-DEC-11 09:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.274	+/-0.381	0.652	0.900	pCi/g		AF1	02/07/12	1741	1187365	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	7.26	+/-55.5	98.9	110	pCi/g		BYS1	02/16/12	1312	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-4.63	+/-5.20	8.91	12.0	pCi/g		EXK2	02/15/12	1717	1187604	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0841	1186987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			115	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 37	Project: CLYM00105
Sample ID: 295642004	Client ID: CLYM001
Matrix: Soil	
Collect Date: 18-DEC-11 09:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.912	+/-0.372	0.513	0.900	pCi/g		AF1	02/07/12	1741	1187365	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-6.23	+/-50.6	92.0	110	pCi/g		BYS1	02/16/12	1338	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-0.607	+/-3.81	6.50	12.0	pCi/g		EXK2	02/11/12	0223	1187604	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0841	1186987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			118	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 38	Project: CLYM00105
Sample ID: 295642005	Client ID: CLYM001
Matrix: Soil	
Collect Date: 18-DEC-11 09:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.649	+/-0.382	0.577	0.900	pCi/g		AF1	02/07/12	1756	1187365	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	0.00	+/-51.4	92.5	110	pCi/g		BYS1	02/16/12	1404	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	1.17	+/-4.72	8.01	12.0	pCi/g		EXK2	02/11/12	0426	1187604	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0841	1186987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			96.8	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 39	Project: CLYM00105
Sample ID: 295642006	Client ID: CLYM001
Matrix: Soil	
Collect Date: 18-DEC-11 09:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.307	+/-0.329	0.548	0.900	pCi/g		AF1	02/07/12	1741	1187365	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-16.3	+/-54.2	99.9	110	pCi/g		BYS1	02/16/12	1431	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14		16.7	+/-5.34	8.75	12.0	pCi/g		EXK2	02/15/12	2123	1187604	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0841	1186987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			117	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 40	Project: CLYM00105
Sample ID: 295642007	Client ID: CLYM001
Matrix: Soil	
Collect Date: 18-DEC-11 09:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		1.35	+/-0.421	0.467	0.900	pCi/g		AF1	02/07/12	1756	1187365	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	6.74	+/-51.5	91.8	110	pCi/g		BYS1	02/16/12	1457	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	-1.22	+/-4.90	8.38	12.0	pCi/g		EXK2	02/11/12	0833	1187604	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0841	1186987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			120	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 41	Project: CLYM00105
Sample ID: 295642008	Client ID: CLYM001
Matrix: Soil	
Collect Date: 18-DEC-11 09:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210	U	0.336	+/-0.340	0.561	0.900	pCi/g		AF1	02/07/12	1939	1187365	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-29.4	+/-47.5	89.8	110	pCi/g		BYS1	02/16/12	1523	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	0.0633	+/-6.37	10.8	12.0	pCi/g		EXK2	02/11/12	1036	1187604	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0841	1186987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			115	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 42	Project: CLYM00105
Sample ID: 295642009	Client ID: CLYM001
Matrix: Soil	
Collect Date: 18-DEC-11 09:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		0.550	+/-0.318	0.466	0.900	pCi/g		AF1	02/07/12	1940	1187365	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	8.65	+/-50.8	90.2	110	pCi/g		BYS1	02/16/12	1549	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	3.74	+/-5.51	9.29	12.0	pCi/g		EXK2	02/11/12	1239	1187604	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0841	1186987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			116	(25%-125%)

GEL LABORATORIES LLC

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

Certificate of Analysis

Report Date: March 21, 2012

Company : Clym Environmental Services
 Address : 5104 Pegasus Court
 Suite J
 Frederick, Maryland 21704
 Contact: Mr. Charles Watts
 Project: Dartmouth College Rennie Farm

Client Sample ID: 43	Project: CLYM00105
Sample ID: 295642010	Client ID: CLYM001
Matrix: Soil	
Collect Date: 18-DEC-11 09:00	
Receive Date: 20-DEC-11	
Collector: Client	

Parameter	Qualifier	Result	Uncertainty	DL	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "Dry Weight Corrected"												
Lead-210		1.06	+/-0.370	0.409	0.900	pCi/g		AF1	02/07/12	1940	1187365	1
Rad Liquid Scintillation Analysis												
LSC, Tritium Dist, Solid "As Received"												
Tritium	U	-35.6	+/-50.3	95.7	110	pCi/g		BYS1	02/16/12	1615	1187123	2
Liquid Scint C14, Solid "As Received"												
Carbon-14	U	0.689	+/-4.09	6.95	12.0	pCi/g		EXK2	02/11/12	1443	1187604	3

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	MYB2	12/21/11	0841	1186987

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 906.0 Modified	
3	EPA EERF C-01 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "Dry Weight Corrected"			117	(25%-125%)

ATTACHMENT SIX

SIGN TEST RESULTS

Sign Test ²¹⁰Pb

Plot	Net Result	DCGL-Net	Sign
1	-0.509	1.409	1
2	1.235	-0.335	-1
3	-0.044	0.944	1
4	-0.129	1.029	1
5	0.076	0.824	1
6	0.277	0.623	1
7	0.175	0.725	1
8	0.209	0.691	1
9	-0.037	0.937	1
10	-0.064	0.964	1
11	-0.050	0.950	1
12	0.366	0.534	1
13	0.066	0.834	1
14	-0.277	1.177	1
15	-0.062	0.962	1
16	0.022	0.878	1
17	0.111	0.789	1
18	0.115	0.785	1
19	-0.231	1.131	1
20	-0.343	1.243	1
21	0.328	0.572	1
22	0.110	0.790	1
23	-0.180	1.080	1
24	-0.067	0.967	1
25	-0.179	1.079	1
26	-0.094	0.994	1
27	-0.131	1.031	1
28	-0.135	1.035	1
29	-0.320	1.220	1
30	-0.214	1.114	1
31	-0.197	1.097	1
32	0.165	0.735	1
33	0.061	0.839	1
34	0.049	0.851	1
35	-0.034	0.934	1
36	-0.341	1.241	1
37	0.297	0.603	1
38	0.034	0.866	1
39	-0.308	1.208	1
40	0.735	0.165	1
41	-0.279	1.179	1
42	-0.065	0.965	1
43	0.445	0.455	1
Nr. Positive Differences S+ =			42

Value for K at 43 samples = 27
therefore the null is **rejected**

Sign Test ³H

Plot	Net Result	DCGL-Net	Sign
1	-6.971	116.971	1
2	4.379	105.621	1
3	15.799	94.201	1
4	-12.701	122.701	1
5	34.799	75.201	1
6	-10.701	120.701	1
7	0.159	109.841	1
8	0.139	109.861	1
9	25.499	84.501	1
10	22.499	87.501	1
11	49.399	60.601	1
12	4.439	105.561	1
13	-0.151	110.151	1
14	11.029	98.971	1
15	13.799	96.201	1
16	15.299	94.701	1
17	75.899	34.101	1
18	9.089	100.911	1
19	-17.201	127.201	1
20	-13.001	123.001	1
21	-24.201	134.201	1
22	-14.101	124.101	1
23	30.499	79.501	1
24	-8.901	118.901	1
25	-13.601	123.601	1
26	22.399	87.601	1
27	25.499	84.501	1
28	6.489	103.511	1
29	16.199	93.801	1
30	-6.541	116.541	1
31	16.499	93.501	1
32	4.349	105.651	1
33	2.299	107.701	1
34	-16.901	126.901	1
35	-4.121	114.121	1
36	9.559	100.441	1
37	-3.931	113.931	1
38	2.299	107.701	1
39	-14.001	124.001	1
40	9.039	100.961	1
41	-27.101	137.101	1
42	10.949	99.051	1
43	-33.301	143.301	1
Nr. Positive Differences S+ =			43

Value for K at 43 samples = 27
therefore the null is **rejected**

Sign Test ¹⁴C

Plot	Net Result	DCGL-Net	Sign
1	-3.650	15.65	1
2	-6.940	18.94	1
3	-10.760	22.76	1
4	-3.730	15.73	1
5	-5.500	17.50	1
6	-8.000	20.00	1
7	-8.400	20.40	1
8	-4.460	16.46	1
9	-5.680	17.68	1
10	-5.220	17.22	1
11	-4.270	16.27	1
12	-5.110	17.11	1
13	-3.700	15.70	1
14	-7.610	19.61	1
15	-3.650	15.65	1
16	-5.610	17.61	1
17	-4.610	16.61	1
18	-10.460	22.46	1
19	-5.650	17.65	1
20	-9.270	21.27	1
21	-5.480	17.48	1
22	-4.370	16.37	1
23	-2.870	14.87	1
24	-5.230	17.23	1
25	-3.540	15.54	1
26	-1.910	13.91	1
27	-2.220	14.22	1
28	-8.080	20.08	1
29	-9.730	21.73	1
30	-6.110	18.11	1
31	-5.270	17.27	1
32	-8.760	20.76	1
33	-4.140	16.14	1
34	0.423	11.58	1
35	-10.040	22.04	1
36	-4.790	16.79	1
37	-0.767	12.77	1
38	1.010	10.99	1
39	16.540	-4.54	-1
40	-1.380	13.38	1
41	-0.096	12.10	1
42	3.580	8.42	1
43	0.529	11.47	1
Nr. Positive Differences S+ =			42

Value for K at 43 samples = 27
therefore the null is **rejected**

Sign Test ¹³⁷Cs

Plot	Net Result	DCGL-Net	Sign
1	-9E-03	11	1
2	-9E-03	11	1
3	-9E-03	11	1
4	-9E-03	11	1
5	-9E-03	11	1
6	-9E-03	11	1
7	-9E-03	11	1
8	-9E-03	11	1
9	-9E-03	11	1
10	-9E-03	11	1
11	-9E-03	11	1
12	-9E-03	11	1
13	-9E-03	11	1
14	-9E-03	11	1
15	-9E-03	11	1
16	-9E-03	11	1
17	-9E-03	11	1
18	-9E-03	11	1
19	-9E-03	11	1
20	-9E-03	11	1
21	-9E-03	11	1
22	-9E-03	11	1
23	-9E-03	11	1
24	-9E-03	11	1
25	-9E-03	11	1
26	-9E-03	11	1
27	-9E-03	11	1
28	-9E-03	11	1
29	-9E-03	11	1
30	-9E-03	11	1
31	-9E-03	11	1
32	-9E-03	11	1
33	-9E-03	11	1
34	-9E-03	11	1
35	-9E-03	11	1
36	-9E-03	11	1
37	-9E-03	11	1
38	-9E-03	11	1
39	-9E-03	11	1
40	-9E-03	11	1
41	-9E-03	11	1
42	-9E-03	11	1
43	-9E-03	11	1
Nr. Positive Differences S+ =			43

Value for K at 43 samples = 27
therefore the null is **rejected**

Sign Test ⁶³Ni

Plot	Net Result	DCGL-Net	Sign
1	211.969	1888.031	1
2	384.969	1715.031	1
3	347.969	1752.031	1
4	234.969	1865.031	1
5	278.969	1821.031	1
6	185.969	1914.031	1
7	376.969	1723.031	1
8	334.969	1765.031	1
9	141.969	1958.031	1
10	246.969	1853.031	1
11	351.969	1748.031	1
12	353.969	1746.031	1
13	444.969	1655.031	1
14	329.969	1770.031	1
15	226.969	1873.031	1
16	261.969	1838.031	1
17	83.969	2016.031	1
18	209.969	1890.031	1
19	100.969	1999.031	1
20	262.969	1837.031	1
21	617.969	1482.031	1
22	96.969	2003.031	1
23	244.969	1855.031	1
24	114.969	1985.031	1
25	233.969	1866.031	1
26	414.969	1685.031	1
27	173.969	1926.031	1
28	378.969	1721.031	1
29	345.969	1754.031	1
30	84.969	2015.031	1
31	341.969	1758.031	1
32	230.969	1869.031	1
33	334.969	1765.031	1
34	417.969	1682.031	1
35	259.969	1840.031	1
36	260.969	1839.031	1
37	405.969	1694.031	1
38	448.969	1651.031	1
39	324.969	1775.031	1
40	213.969	1886.031	1
41	260.969	1839.031	1
42	244.969	1855.031	1
43	168.969	1931.031	1
Nr. Positive Differences S+ =			43

Value for K at 43 samples = 27
therefore the null is **rejected**

ATTACHMENT SEVEN

INSTRUMENT QUALITY ASSURANCE

Portable Instrument Quality Assurance Summary

Meter: Ludlum 19 Dose Rate (uR/hr) **Serial No.:** 233432
Cal Date: 5/17/11

Date	Technician Reviewer	Bkgd (uR/hr)		Acceptable Range (uR/hr)		Source Reading (uR/hr)		Acceptable Range (uR/hr)		Result
		x	\bar{x}	+20% -20%	+3 σ -3 σ	x	\bar{x}	+10% -10%	+3 σ -3 σ	
13-Nov	BP CW	5	5	6 4	6 4	110	117	128 106	132 102	PASS
14-Nov	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
15-Nov	BP FW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
16-Nov	BP FW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
17-Nov	BP FW	6	5	6 4	6 4	120	117	128 106	132 102	PASS
18-Nov	BP CW	5	5	6 4	6 4	110	117	128 106	132 102	PASS
19-Nov	BP CW	5	5	6 4	6 4	115	117	128 106	132 102	PASS
20-Nov	BP CW	5	5	6 4	6 4	115	117	128 106	132 102	PASS
21-Nov	BP CW	6	5	6 4	6 4	120	117	128 106	132 102	PASS
22-Nov	BP CW	6	5	6 4	6 4	115	117	128 106	132 102	PASS
23-Nov	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
24-Nov	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
25-Nov	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS

Portable Instrument Quality Assurance Summary

Meter: Ludlum 19 Dose Rate (uR/hr) **Serial No.:** 233432
Cal Date: 5/17/11

Date	Technician Reviewer	Bkgd (uR/hr)		Acceptable Range (uR/hr)		Source Reading (uR/hr)		Acceptable Range (uR/hr)		Result
		x	\bar{x}	+20% -20%	+3 σ -3 σ	x	\bar{x}	+10% -10%	+3 σ -3 σ	
26-Nov	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
27-Nov	LB FW	4	5	6 4	6 4	120	117	128 106	132 102	PASS
28-Nov	LB FW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
29-Nov	LB FW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
30-Nov	LB FW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
1-Dec	LB FW	4	5	6 4	6 4	110	117	128 106	132 102	PASS
2-Dec	BP CW	4	5	6 4	6 4	110	117	128 106	132 102	PASS
3-Dec	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
4-Dec	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
5-Dec	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
6-Dec	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
7-Dec	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
8-Dec	BP CW	5	5	6 4	6 4	110	117	128 106	132 102	PASS

Portable Instrument Quality Assurance Summary

Meter: Ludlum 19 Dose Rate (uR/hr) **Serial No.:** 233432
Cal Date: 5/17/11

Date	Technician Reviewer	Bkgd (uR/hr)		Acceptable Range (uR/hr)		Source Reading (uR/hr)		Acceptable Range (uR/hr)		Result
		x	\bar{x}	+20% -20%	+3 σ -3 σ	x	\bar{x}	+10% -10%	+3 σ -3 σ	
9-Dec	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
10-Dec	BP CW	5	5	6 4	6 4	120	117	128 106	132 102	PASS
12-Dec	BP CW	6	5	6 4	6 4	110	117	128 106	132 102	PASS
13-Dec	BP CW	6	5	6 4	6 4	110	117	128 106	132 102	PASS
14-Dec	BP FW	5	5	6 4	6 4	110	117	128 106	132 102	PASS
15-Dec	BP FW	5	5	6 4	6 4	110	117	128 106	132 102	PASS
16-Dec	BP FW	5	5	6 4	6 4	110	117	128 106	132 102	PASS
17-Dec	BP FW	5	5	6 4	6 4	110	117	128 106	132 102	PASS
18-Dec	BP FW	4	5	6 4	6 4	110	117	128 106	132 102	PASS
19-Dec	BP FW	5	5	6 4	6 4	110	117	128 106	132 102	PASS
20-Dec	BP FW	5	5	6 4	6 4	110	117	128 106	132 102	PASS