APPENDIX 3.14-A

Baseline
Radiological Report

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BASELINE RADIOLOGICAL INVESTIGATION REPORT

POWERTECH (USA) INC.
DEWEY-BURDOCK ISR LICENSING SUPPORT
KNIGHT PIESOLD PROJECT NO. DV10200279.01

January 29, 2009

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POWERTECH (USA) INC.
BASELINE SOIL AND VEGETATION RADIOLOGICAL INVESTIGATION
KNIGHT PIESOLD PROJECT NO. DV10200279.01

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Acronyms and Abbreviations

Acronym	Definition
AMS	Air Monitoring Station
CFR	Code of Federal Regulations
cm	centimeters
cpm	counts per minute
Powertech	Powertech Uranium (Corporation)
ERG	Environmental Restoration Group
EPA	U.S. Environmental Protection Agency
GIS	Geographic Information System
GPS	Global Positioning System
IQR	Interquartile Range
ISR	In Situ Recovery
LLD	Lower Limit of Detection
MDC	Minimum Detectable Concentration
mrem/yr	millirem per year
N	sample number
NaI	Sodium Iodide (detector)
NESHAPS	National Emissions Standards for Hazardous Air Pollutants
pCi/f, g, L, m^2-s	picocuries per filter, gram, liter, per meter square per second
PIC	pressurized ion chamber
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
RER	Relative Error Ratio
RPD	Relative Percent Difference
SOP	Standard Operating Procedure
TLD	Thermoluminescent Detector
µCi/g, kg, ml	microcuries per gram, kilogram, milliliter

Acronyms and Abbreviations (concluded)

Acronym	Definition
U-nat	Natural Uranium
μR/hr	microRoentgens per hour

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1.0 INTRODUCTION

This report presents the results of a baseline radiological study conducted for the Dewey-Burdock uranium in situ recovery (ISR) Project site owned by Powertech (USA), Inc. The work was performed by Environmental Restoration Group (ERG) under contract to Knight Piesold and Company (Knight Piesold) in accordance with the Baseline Radiological Sampling Plan, herein referred to as the Sampling Plan (ERG, 2007). The work was performed between August 2007 and August 2008 to obtain a radioactive materials license from the U.S. Nuclear Regulatory Commission (NRC).

1.1 Description of the Project

The approximately 11,000-acre project site is a sparsely populated region of open rangeland north of the city of Edgemont, South Dakota as shown in Figure 1-1. It is located in Fall River and Custer Counties on the southwest flank of the Black Hills uplift. It is part of the northern extension of the Edgemont uranium district discovered in the 1950s. The eastern portion of the site includes historic open pit surface uranium mines that have not been reclaimed. This is area is referred to as the surface mine area in this report.

The general process of uranium in situ recovery will involve the oxidation of uranium from its reduced state within the rollfront using a leaching solution (lixiviant) such as gaseous oxygen, hydrogen peroxide and gaseous carbon dioxide to solubilize the uranium ion causing it to go into solution in the ore bearing aquifer. Once solubilized, the uranium will be pumped to the surface where it is complexed onto ion exchange resins, then eluted and precipitated before drying and packaging. Mining units will include wellfields consisting of injection, recovery and monitoring wells. A central processing plant will be constructed on the site to recover and package the final product.

Figure 1-2 shows the site, including the roll fronts near the towns of Dewey and Burdock, the main permit and surface mine areas, and an anomalous area of elevated radioactivity in the north portion of the main permit area.

1.2 Purpose and Scope

This report provides baseline radiological data for surface soils (0-5 and 0-15 centimeters [cm]), subsurface soils to a depth of 1 meter, vegetation, locally grazed livestock, direct radiation, radon-222 in air; and radon-222 flux rates representative of the Dewey-Burdock property.

Field investigations, sample collection, and other quality-related work performed were conducted in accordance with applicable ERG standard operating procedures (SOPs), listed below:

- SOP .010 Radon Flux Cannister Deployment
- SOP 1.22 Determining the Concentration of Airborne Radioactive Particles
- SOP 1.05 Calibration of Scaler, Ratemeters

- SOP 1.51 Correlation between Gamma-Ray Count Rate and Exposure Rate
- SOP 2.02 General Equipment Decontamination
- SOP 2.07 Function Check of Equipment
- SOP 2.09 Correlation between Gamma-Ray Measurements and Radium-226 in Soil
- SOP 3.02 Sample Control and Documentation
- SOP 5.01 Setup and Operation of Trimble Pro XRS GPS Receiver with Trimble TSCe Datalogger
- SOP 5.02 Download, Correction, and Export of GPS Survey Data
- SOP 5.06 Creating, Uploading, and Navigating to Waypoints
- SOP 7.08 Surface and Shallow Subsurface Soil Sampling
- SOP 7.09 Vegetation Sampling

2.0 SCOPE OF BASELINE FIELD INVESTIGATION

2.1 Overall Scope of Project

The baseline radiological field investigations consisted of the following activities:

- Performing a Global Positioning System (GPS)-based gamma survey at 100 to 500 meter transects spanning the permit area;
- Performing a second GPS-based gamma survey of two, collective land application areas at 100 meter transects;
- Collecting surface soil samples (0-15 cm) at 75 randomly selected and at 5 biased locations;
- Collecting subsurface soil samples at nine randomly selected locations taken at depth intervals of 15-30 cm and 30-100 cm;
- Collecting surface (0-15 cm) and subsurface samples at the same depth intervals at 17 randomly selected locations in the land application areas;
- Monitoring radionuclide concentrations in air at one background and seven additional Air Monitoring Stations (AMS) locations;

- Collecting shallow (0-5 cm) surface soil and vegetation samples at each AMS;
- Monitoring radon concentrations in ambient air;
- Taking radon flux measurements at nine locations coinciding with the subsurface samples;
- Monitoring exposure rates, using a High Pressurized Ion Chamber (PIC) and thermoluminescent detectors (TLDs); and
- Collecting three samples of locally grazed livestock.

Table 2-1 summarizes the scope of the field investigation. All soil, vegetation, and air particulate samples were shipped under chain-of-custody to a National Environmental Accreditation Conference-certified laboratory, Energy Laboratories in Casper, Wyoming.

The units reported in the body, tables, and figures of this document vary. NRC Regulatory Guide 4.14, *Radiological Effluent and Environmental Monitoring at Uranium Mills* has specific requirements for unit reporting in tables. For example, NRC Regulatory Guide 4.14 recommends that radionuclide soil concentrations be reported in units of microcuries per gram (μCi/g). Where applicable, the tables adopt this unit. The main body of the report, however, adopts the unit picocuries per gram (pCi/g) for this parameter, as this unit is used more generally and consistently by the uranium industry and public.

3.0 GPS-BASED GAMMA-RAY (DIRECT RADIATION) SURVEYS

This section documents the results of the baseline direct radiation (gamma-ray) survey of the Dewey-Burdock property conducted in September 2007. An introduction to the survey methods is followed by a discussion of the results.

3.1 GPS Survey Methods

A GPS-based gamma survey was conducted over the main permit and surface mine areas of the Dewey-Burdock Uranium Project from September 13-27, 2007 and completed on July 14, 2008. Unshielded 2"x 2" sodium iodide (NaI) detectors were coupled to a ratemeter/scaler (set in ratemeter mode) and a Trimble Pro XRS GPS Receiver with Trimble TSCe Datalogger. Survey transects were spaced at approximately 500-meter intervals in the main permit area and 100 meters in the surface mine area. The transect spacing was reduced in the surface mine area in anticipation of finding a greater variation in gamma-ray emissions, due to historical mining in the area. The survey speed was maintained between 2 and 5 feet per second with x- and y-coordinates and gamma-ray count rates recorded every second. The detector height was held relatively constant at approximately 18 inches above ground surface. Depending on the terrain, field personnel surveyed using ATVs or by walking with the equipment in backpacks.

A second GPS-based gamma survey was conducted over the land application areas from July 17-19, 2008, using the Ludlum gamma-ray detection system described above with the same response characteristics as used in the initial survey. The scanning speed and detection height were unchanged from the initial survey and the transect spacing was 100 meters.

The function of survey instruments was checked at the beginning and end of each work day using a National Institute of Standards and Technology-traceable cesium-137 source. Calibration Sheets and function check data are provided in Appendix A.

3.2 Observed Gamma-Ray Count Rates

The gamma-ray count rate data were first evaluated as an entire set and then subdivided into the main permit (the entire data set less the surface mine area) and surface mine areas.

The observed gamma-ray count rates are presented as colors representing ranges of counts in Figure 3-1. This figure was developed using ArcView Geographic Information System (GIS), Version 9.3. Table 3-1 presents summary statistics for each data set. The difference between the median and mean count rates is the first indication of skewness in each of the data set. The count rate data are presented as histograms in Figures 3-2a through 3-2f. Neither the entire data set nor the main permit and surface mine area data sets pass the Anderson-Darling Normality Test at a 95 percent level of significance. That is, the data sets are not normally distributed. Additional tests of the data sets indicated that none of them followed a lognormal or exponential distribution. Furthermore, normalizing data transformations were conducted and the transformed data did not follow standard distributions. For these reasons, data analysis and summaries were performed using non-parametric statistical methods, which are less sensitive to extreme observations typical of skewed data distributions.

The median and interquartile range (IQR) are non-parametric measures of central tendency and variability, respectively. The IQR is the difference between the first (Q1) and third (Q3) quartiles, i.e., 25 and 75 percent of the data area less than Q1 and Q3, respectively. Any datum that is outside the range of 1.5 times the IQR lower than Q1 and 1.5 times the IQR higher than Q3 is considered an outlier. Extreme outliers, or extremes, are those exceeding three times the IQR to the left and right from the first and third quartiles respectively (Ott and Longnecker, 2001).

3.2.1 Entire Data Set

The summary statistics of the GPS-based gamma-ray survey are listed in Table 3.-1. The median of the gamma-ray count rates for the overall data set was 12,687 counts per minute (cpm). Field personnel collected 157,075 readings ranging from 5,550 to 460,485 cpm.

3.2.2 Main Permit Area

As shown in Table 3-1, the median gamma-ray count rate for the main permit area data set was 12,664 cpm for 71,148 observations. The IQR was 2,539 cpm. The count rates ranged from 5,883 to 171,243 cpm.

Low outliers in the main permit area data set, count rates below 7,790 cpm, appear to be limited to two clusters. High outliers in the data set, count rates exceeding 17,946 cpm, appear to be limited to an approximately 600-acre located at the north end of the main permit area. The area is identified as an anomalous area on Figure 3-1.

Approximately 0.2 and 3 % of the gamma-ray count rates observed in the main permit area are comprised of low and high outliers, respectively.

The majority of high outliers are located in the north section of the main permit area. The source of these anomalous gamma-ray count rate data has not been characterized. The count rates ranged from to 8,863 to 22,130 cpm and the median was 15,503 cpm.

High outliers also occur in the southeast portion of the main permit area. The elevated count rates occur near an artesian well and associated localized discharge. This area is identified on Figure 3-1.

3.2.2 Surface Mine Area

In the surface mine area, the gamma-ray count rates ranged from 5,550 to 460,485 cpm and the median was 12,717 cpm. The IQR was 3,658. In general, clusters of higher readings are associated with open pits, waste rock, and drainages in the surface mine area. Low and high outliers in this area are gamma-ray count rates below 5,638 cpm and exceeding 20,270 cpm, respectively. Approximately 0.004 and 9 % of the gamma-ray count rates observed in the surface mine area are low and high outliers, respectively.

3.2.3 Discussion

Given the greater variability in the surface mine area data and the assumption that elevated areas of activity are indicative of statistically significant differences in the data sets, the variations in the main permit and surface mine area data sets were compared using Levene's Test for Equal Variance, a non-parametric statistical test. The Levene's Test was also used to compare the variances of the main permit and anomalous north area gamma-ray count rates.

The null hypothesis in this case is that the two variances are equal. The results of the Levene's Test indicate that the null hypothesis can be rejected at the level of 95 percent significance level. That is, there is sufficient evidence for the variances in the main permit and surface mine area gamma-ray count rates being distinct. The variances in the main permit anomalous area are also distinct.

Based on the above information, it is clear that the surface mine area in the eastern quarter of the site exhibits radiological impacts from historic and/or current anthropogenic activities within the area. In addition, gamma-ray count rates in the anomalous north area also are clearly distinct from those in the wider main permit area. The precise sources of the differences are not relevant in the context of this investigation since they are part of the baseline or background radiological characteristics of the site.

3.2.4 Land Application Areas

The summary statistics of the GPS-based gamma-ray survey of the Dewey and Burdock land application areas are listed in Table 3-2. The gamma-ray count rates obtained in the main permit area are listed in the table to facilitate comparison between the land application areas and the larger area in which they occur. The data are shown as ranges of count rates on Figure 3-3.

Gamma-ray count rates in the land application areas are similar to those obtained in the larger main permit area. In the Dewey land application area, the median of the gamma-ray count rates was 12,523 cpm. Field personnel collected 23,480 readings ranging from 6,798 to 20,422 cpm. In the Burdock land application area, the median of the gamma-ray count rates was 12,232 cpm. Field personnel collected 13,647 readings ranging from 8,498 to 24,248 cpm.

4.0 BASELINE RADIOLOGICAL INVESTIGATION SOIL SAMPLING

This section presents the results of the baseline soil sampling conducted in October 2007 and July 2008. Baseline soil sampling in the land application areas is included. Table 2-1 summarizes the Dewey-Burdock baseline soil sampling program.

4.1 Sampling Strategy and Methods

The soil sampling strategy for the Dewey-Burdock site consisted of biased and random sampling at the eight AMS (Figure 4-1), a set of 80 additional locations (Figure 4-2), and 17 locations in the land applications areas (Figure 4-3).

Shallow (0-5 cm) surface soil samples were collected at the eight AMS locations (the seven surrounding and one background locations shown on Figure 4.1). The offsite AMS is located approximately 3 miles west of the site.

Biased samples were collected at 5 of the set of 80 locations, the remainder was placed randomly, using Visual Sampling Plan, Version 5.0. The biased samples were obtained in the surface mine area and selected to bound the upper range of radionuclide concentrations. The five biased samples are not sufficient to characterize radium-226 concentrations in impacted areas.

The additional 80 surface soil samples were collected from 0 to 15 cm below ground surface. Seventy one of these samples were collected using a hand shovel. A hand auger was used to collect samples at 0 to 15, 15 to 30, and 30 to 100 cm at nine of the 80 locations.

The 17 land application soil samples were placed randomly, using Visual Sampling Plan, Version 5.0. With one exception, the samples were collected from 0 to 15, 15 to 30, and 30 to 100 cm below ground surface, using a hand auger. The exception occurred due to refusal encountered in one borehole.

All samples were analyzed for radium-226. Ten of the set of 80 samples were also analyzed for natural uranium, lead-210, and thorium-230. Thirteen duplicates were collected in the set of 80 samples: 11 with the surface set and two with the subsurface set. All duplicate samples in this set were analyzed for radium-226 while two were also analyzed for natural uranium, thorium-230, and lead-210.
All of the samples collected from the land application area were analyzed for radium-226, natural uranium, thorium-230 and lead-210. Duplicate samples were collected at one location for the three depth intervals and analyzed for the same radionuclides.

The analytes and corresponding analytical methods were:

- Radium-226 via gamma spectroscopy or radon emanation: U.S. Environmental Protection Agency (EPA) Methods 901.1 and 903.1, respectively. *Prescribed Procedures for Measurement of Radioactivity in Drinking Water* (EPA/600/4-80-032), August, 1980. The majority of radium-226 analyses were performed using EPA Method 901.1.

- Thorium-230: EPA 907.0 *Prescribed Procedures for Measurement of Radioactivity in Drinking Water* (EPA/600/4-80-032), August, 1980.

- Natural Uranium: EPA 6020 ICP-MS, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846)*, June, 2007

- Lead-210: EPA 909.0M *Prescribed Procedures for Measurement of Radioactivity in Drinking Water* (EPA/600/4-80-032), August, 1980.

4.2 Analytical Results for Soil Samples

Table 4-1 presents the radionuclide concentrations in soil samples collected as part of the baseline radiological investigation. The radium-226 results described in this section are those determined using only EPA Method 901.1.

Samples are identified as follows, with duplicates labeled as "dup":

- AMS: air monitoring station

- SMA: surface mine area

- MPA: main permit area

- NEA: northeast area

- RFA: roll front area

- LAN: land application area north (Dewey)

- LAS: land application south (Burdock)

The laboratory analytical data reports are provided in Appendix B.

4.3 Analysis of Concentration of Radium in Soil

The purpose of the following analysis is to determine the baseline distributions of radium-226 concentrations in site soils.

4.3.1 Surface Soil Concentrations in Overall Data Set

In the set of 80 surface samples, the mean and median radium-226 concentrations are 2.9 and 1.3 pCi/g, respectively. Q1 and Q3 are 1.1 and 1.7 pCi/g, respectively (Table 4-1). The IQR is 0.6. The mode is 1.1 pCi/g (12 observations). One result (0.45 pCi/g, Sample Location SMA-18) was a low outlier. Thirteen values exceeded 2.3 pCi/g, the cutoff for high outliers.

The soil data were fitted to normal and lognormal distributions. The p-values for both distributions are less than 0.005, indicating that at a 95% confidence level ($p = 0.05$), the distributions are non-normal and non-lognormal.

Considering that the data do not fit normal or lognormal distributions, and clear differences in the gamma-ray count rates obtained in the surface mine and main permit areas are indicative of differences in the levels of gamma-emitting radionuclides therein, the set of surface soil data was divided into surface mine and main permit area subsets, as discussed in the following sections.

4.3.2 Surface Soil Concentrations in Surface Mine Area

Twenty-five surface soil samples were collected in the surface mine area. The mean and median radium-226 concentrations in the surface mine area are 5.9 and 1.4 pCi/g respectively. Q1 and Q3 are 1.0 and 2.75 pCi/g, respectively. The IQR is 1.75. The mode is 1.0 pCi/g (3 observations).

The data were compiled into a histogram and fitted to a normal distribution and a lognormal distribution. When tests for goodness of fit were applied to the distributions, the associated p-values were both less than 0.005 for the normal and lognormal distributions. These low p-values denote the hypotheses that the data came from a normal distribution or a lognormal distribution are rejected at a 95% confidence level.

There are five values exceeding 5.9 pCi/g, the cutoff for outliers. The outliers are the radium-226 concentrations in the five biased samples, all collected in the surface mine area. All of the other samples (75 of 80) were placed randomly in undisturbed areas. The five biased samples are not sufficient to characterize radium-226 concentrations in impacted areas.

With the outliers omitted from the surface mine area data set, the process of fitting its histogram was repeated. The resulting p-values were 0.006 (for normal distribution) and 0.418 (lognormal distribution). The p-value for the data being a lognormal distribution is greater than 0.05, thus the distribution is accepted as lognormal, with statistical significance.

The central tendency and variability of a lognormal distribution are best represented by the geometric mean and geometric standard deviation, each of which is 1.3 pCi/g radium-226 in the case of the surface mine area data set. The data lie within a population range of $1.3/1.3^2$ to $1.3*1.3^2$, or 0.76 to 2.2 pCi/g.

4.3.3 Surface Soil Concentrations in Main Permit Area

Fifty-five surface soil samples were collected in the main permit area. The data were compiled into a histogram and fitted to normal and lognormal distributions. When tests for goodness of fit were applied to the distributions, the associated p-values were both less than 0.005. These low p-values denote the hypotheses that the data came from a normal or lognormal distribution are both rejected at a 95% confidence level.

The mean and median radium-226 concentrations in the main permit area are 1.5 and 1.3 pCi/g respectively. Q1 and Q3 are 1.1 and 1.7 pCi/g, respectively. The IQR is 0.6 pCi/g. There are three values exceeding 2.6 pCi/g, the cutoff for outliers in the main permit area data set. With the outliers omitted from the main permit area data set, the process of fitting its histogram was repeated. The results of fitting the histogram without the possible outliers were p-values of less than 0.005 (normal distribution) and 0.068 (lognormal distribution). The p-value for the data being a lognormal distribution is greater than 0.05, thus the distribution is accepted as lognormal, with statistical significance.

The geometric mean and geometric standard deviation of the set of main permit area radium-226 concentrations are each 1.3 pCi/g. The data lie within a population range of $1.3/1.3^2$ to $1.3*1.3^2$, or 0.76 to 2.2 pCi/g.

4.3.3.1 North Section of Main Permit Area

It was stated above that elevated gamma-ray count rates were observed in an approximately 600-acre area located at the north end of the main permit area. Considering that the elevated levels are likely due to relatively higher increased levels of one or more gamma-emitting radionuclides, radium-226 concentrations in soil samples collected from this area were evaluated.

Eight surface soil samples were collected in this area (MPA-R01, NEA-R02, NEA-R03, NEA-R04, NEA-R05, RFA-03, RFA-06, and RFA-17). One of these samples was considered an outlier of the main permit area data set (NEA-R05).

There are too few soil samples collected in this area to characterize it statistically. However, the gamma-ray count rates therein differ from the main permit area, with statistical significance.

4.3.4 Surface Soil Concentrations in Land Application Area Soils

Radium-226 concentrations in surface soils in the land application areas are summarized as follows:

- In both areas, radium-226 concentrations ranged from 0.7 to 4.4 pCi/g, with a median of 0.9 and average of 1.1 pCi/g.
- The median radium-226 concentration in the Dewey land application area was 1.0 pCi/g.
- The median radium-226 concentration in the Burdock land application area was 0.8 pCi/g.

4.3.5 Discussion

Although the distributions of the main permit and surface mine area radium-226 concentration data sets are similar, the gamma-ray count rate distributions in these two areas differ, with statistical significance. The gamma-ray count rates observed in the anomalous portion of the main permit area also differ from the main permit area.

4.4 Subsurface Soil Sampling Results

Table 4-1 lists the subset of subsurface biased samples that were collected at depth in the Dewey and Burdock roll front areas: RFA-B01, RFA-B02 RFA-B13 RFA-B15, RFA-B17, RFA-B21, RFA-B30, RFA-B36, and RFA-B37. Subsurface radium-226 concentrations in these samples, ranging from 0.7 to 5.6 pCi/g, are comparable to those observed in the associated 0 to 15 cm surface samples in the samples. There is no apparent trend with depth.

Subsurface radium-226 concentrations in the land application areas can be summarized as follows:

- Radium-226 concentrations range from 0.4 to 4.1 pCi/g, with a median of 0.9 pCi/g.
- Radium-226 concentrations in the Dewey land application area have a median of 1.2 pCi/g.
- Radium-226 concentrations in the Burdock land application area have a median of 0.8 pCi/g.

The subsurface results in both land application areas are comparable to those observed in the 0 to 15 cm surface samples in the samples. There is no apparent trend with depth.

4.5 Other Radiological Parameters

Table 4-1 summarizes the analytical results for all samples analyzed for the extended suite of radiological parameters (all locations and depths combined). Table 4-2 summarizes the concentrations of all radionuclides by depth interval. Arithmetic and geometric means and standard deviations can be used to compare normal and lognormal distributions, respectively. Medians can be used to compare non-parametric distributions. A positive relationship between

radium-226 concentrations and concentrations of natural uranium, thorium-230, and lead-210 is apparent at all depths. At 0 to 15, 15 to 30, and 30 to 100 cm:

- Radium-226 concentrations are 1.0 (median), 1.0 (median) and 1.1 (geometric mean) pCi/g.
- Thorium-230 concentrations are 0.6 (mean), 0.5 (median) and 0.7 (mean) pCi/g.
- Natural uranium concentrations are 1.0 (mean), 1.0 (median) and 1.2 (geometric mean) pCi/g.
- Lead-210 concentrations are 1.2 (mean), 1.1 (median) and 0.9 (mean) pCi/g.

The concentrations of uranium, lead-210, and thorium-230 are consistently lower in the Burdock than in the Dewey Land Application Area, indicating that the lower radium-226 concentration in Burdock is not a laboratory artifact.

4.6 Soil Data Quality

4.6.1 Analysis of Duplicate Samples

This section briefly summarizes the results of the quality control (QC) samples collected for the baseline soil sampling program. The results of this QC effort are documented in Table 4-3, which lists the analytical results for each duplicate pair along with corresponding errors and lower limits of detection (LLDs). Table 4-3 documents associated comparisons, presenting the corresponding RPD (in the case of natural uranium) and/or Replicate Error Ratio (RER) for each QC pair. The calculation of RPDs and RERs is a standard technique used to evaluate laboratory precision.

The RPD is calculated as follows:

$$RPD = \frac{|A - B|}{\frac{A + B}{2}}$$

Where A and B are the sample and duplicate results, respectively.

The RER is calculated as follows:

$$RER = \frac{|S - R|}{\sqrt{(Sx0.15)^2 + (E_s)^2} + \sqrt{(Rx0.15)^2 + (E_R)^2}}$$

Where S and are the sample and duplicate concentrations, respectively. E_S and E_R are the sample (E_S) and duplicate errors (E_R). The factor of 0.15 accounts for any inherent systematic error which cannot be quantified.

The acceptance criteria are an RPD and RER of less than 40 and 1 percent for data above the minimal detectable concentration (MDC), respectively, as established in a Quality Assurance Project Plan (QAPP) (ERG 2006).

This data set shows four cases where the RER for lead-210 was greater than 1 and five cases where the RPD exceeded 40. There are three cases where the RER for radium-226 is exceeded.

The consequences of the few results exceeding the acceptance criteria are minimal since in each case the concentrations are low. In addition, lead-210 largely has no impact when addressing the impact of the baseline radiological characteristics of the site and potential impacts from site operations.

There is close agreement for all other analytical results reported for each duplicate pair collected for all parameters. Overall, duplicate results are generally comparable for the majority of QC samples collected. Considering the low level of radioactivity observed in most of the QC pairs, the laboratory performance on blind duplicates is satisfactory.

4.6.2 Limits of Detection

A summary of the results with respect to reporting limits and minimum detectable concentrations (MDCs) is as follows:

- The radium-226, lead-210, and thorium-230 LLDs (reported as MDCs or reporting limits) in the NEA, MPA, RFA, and SMA soil samples were all $1*10^{-7}$ μCi/g.
- The natural uranium LLDs in the NEA, MPA, RFA, and SMA samples ranged from $1.7*10^{-8}$ to $2.0*10^{-8}$ μCi/g.
- None of the results NEA, MPA, RFA, and SMA samples were below their respective LLDs.
- The lead-210 LLDs for the LAN and LAS samples ranged from $1.9*10^{-6}$ to $3.8*10^{-6}$ μCi/g. In all but one case, the lead-210 results were lower than their respective LLDs.
- The radium-226 LLDs for the LAN and LAS samples ranged from $4.0*10^{-8}$ to $1.0*10^{-7}$ μCi/g. All of the LAN and LAS results exceeded their respective LLDs.
- The thorium-230 LLD for the LAN and LAS samples was $1.0*10^{-7}$ μCi/g. Results for 17 of the 53 (surface and subsurface) samples were reported below $1.0*10^{-7}$ μCi/g.
- The natural uranium LLD for the LAN and LAS samples was $7.0*10^{-9}$ μCi/g. All of the results exceeded the LLD.

The LLD recommended in RG 4.14 for natural uranium, thorium-230, radium-226, and lead-210 in soils is $2*10^{-7}$ µCi/g. The only case for which the guidance values were not attained was the LLD for lead-210 in the LAN and LAS samples.

5.0 RADIUM-226 ESTIMATES BASED ON GAMMA-SOIL CORRELATION

To estimate site-wide radium-226 concentrations at each of the GPS-based gamma survey points, a gamma-soil radium correlation was established by performing a regression between the surface soil analytical results documented in Section 4 for the 80 surface (0 to 15 cm) soil samples and one-minute integrated direct radiation measurements collected at each of these locations prior to sample collection. The measurements were collected with the same Ludlum 44-10/2221 2-in by 2-in sodium iodide gamma detection systems used in the GPS-based gamma survey. The measurements are listed in Table 4-1.

Two linear correlation iterations were performed to derive the site-wide gamma-soil radium correlation used as the basis for the soil radium-226 values plotted in Figures 5-1 and 5-2. The first attempt included all 80 data points, followed by the use of a truncated data set that excluded outlying data.

Figure 5-1 displays a plot of concentrations of radium in soil over 1-minute counts of gamma radiation (all 80 points). Overlaid on the plot are a linear fit and its 95% predicted interval. The linear fit of the data resulted in an R^2 of 0.75, denoting that 75% of the variability of the data is accounted for by the linear fit. The equation of the linear fit is:

$$[Radium\text{-}226] = -0.87+0.0002 \times Gamma\ Count\ Rate$$

Where [Radium-226] is the predicted concentration based on the gamma-ray count rate in cpm.

While the R^2 determines that the linear fit is a fair model for all the data, it appears that outliers and large values of radium-226 are increasing the slope of the line, resulting in an over prediction of radium-226 concentrations. The regression analysis was repeated after removing the five outlying radium-226 results from the surface mine area data set. The data without the five outliers are shown in Figure 5-2 and the equation of the linear fit is:

$$[Radium\text{-}226] = -1.04+0.000187 \times Gamma\ Count\ Rate$$

This model has an R^2 of 0.43, denoting a poor fit, the model accounting for 43 percent of the variance in the data set.

The two equations predict slightly different radium-226 concentrations. Using an arbitrary gamma count rate of 10,000 cpm in both equations yields predicted radium-226 concentrations of 1.1 pCi/g in the first case and 0.83 pCi/g with the five outliers removed.

Using the latter equation, soil radium-226 concentrations were estimated for each discrete gamma survey measurement. These data were then interpolated as reflected in Figure 5-3, using

a grid block averaging method. The smallest sized grid block that fits within the survey transects without missing data coverage is 700x700 ft. Table 5-1 lists summary data for the predicted radium-226 concentrations in each of the major areas.

Of the 1,015 grid blocks covering the entire permit area, the majority (approximately 78 percent) of the interpolated surface radium-226 concentrations is less than 1.5 pCi/g. In the overall data set, the median predicted radium-226 concentration is 1.1 pCi/g and the range is 0.0 to 24.9 pCi/g. In the main permit area (excluding the anomalous area), the median predicted radium-226 concentration is 0.0 pCi/g and the range is 0.0 to 9.0 pCi/g. In the surface mine area, the median predicted radium-226 concentration is 1.5 pCi/g and the range is 0.0 to 24.9 pCi/g. In the anomalous portion of the main permit area, the median predicted radium-226 concentration is 1.4 pCi/g and the range is 0.0 to 2.3 pCi/g.

It is important to acknowledge that discrepancies between measured soil radium-226 concentrations reported by the laboratory and corresponding radium-226 concentrations estimated by gamma surveys are inevitable in a characterization survey of this nature and magnitude, given the heterogeneity of the site (at least in some areas) and differing detector-source geometry at various sample/survey locations.

At the same time, Figure 5-3 shows that without a gamma survey, reliance on a random soil sampling program alone would not have identified elevated areas of radioactivity at the site.

6.0 RADON FLUX MEASUREMENTS

This section documents the results of pre-operational radon-222 (radon) flux measurements and ambient air monitoring.

6.1 Radon Flux Measurements

The Sampling Plan specified that three rounds of radon flux measurements would be taken to characterize pre-operational conditions in accordance with NRC Regulatory Guide 4.14. The following documents the results of the three rounds of measurements taken in September 2007; and April and July 2008.

Radon flux rates were measured at nine locations on three occasions in the Dewey and Burdock roll front areas. The locations are shown on Figure 4-1. The locations coincide with the nine soil samples collected from 0 to 100 cm below ground surface (not in land application areas).

The first round of flux canisters was deployed on September 26, retrieved on September 27, and analyzed on September 28, 2007. The second round of flux canisters was deployed on April 20, retrieved on April 21, and analyzed on April 22, 2008. The third round of flux canisters was deployed on July 14, retrieved on July 15, and analyzed on July 16, 2008. The canisters were analyzed using EPA Test Method 115, *Monitoring for Radon-222 Emissions* (40 *Code of Federal Regulations* [CFR] 61, Appendix B) . Results are documented in the Table 6-1. Sampling for the three periods yielded average flux rates of 1.22, 0.74, and 1.5 picocuries per

meter squared second (pCi/m^2-s), respectively. Flux rates ranged between 0.68 and 1.77 pCi/m^2-s in Fall 2007, 0.28 and 1.33 pCi/m^2-s in Spring 2008 and 0.48 and 2.38 pCi/m^2-s in Summer 2008.

These values are one to two orders of magnitude below the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) requirements of 20 pCi/m^2-s specified in 10 CFR 40, Appendix A, Criterion 6. Although the latter requirement applies to tailings and thus is not directly germane to this characterization, it is useful as a context to demonstrate the relatively low magnitude of baseline radon flux rates measured at the site.

Completed radon flux measurement forms are provided in Appendix C.

7.0 VEGETATION CHARACTERIZATION

This section documents the results of the first round of vegetation sampling conducted for the baseline radiological characterization.

7.1 Sampling Methods and Analytes

One vegetation sample was collected at each AMS in August, 2007; and April and July, 2008. The samples were collected using grass clippers and placed in large plastic lawn bags, labeled appropriately, and stored in a laboratory supplied cooler until transferred to the laboratory. The analytes and corresponding analytical methods were the same as those used for soil. Polonium-210, determined using a laboratory-specific digestion and alpha spectrometry method, was added to the analytical suite (Energy Laboratories, 2008).

7.2 Results

Table 7-1 presents the results of the vegetation sampling. There appear to be no temporal or spatial trends in the data. The following list is a summary of the averages for the set of samples:

- Radium-226 concentrations ranged from 0.02 to 0.09 pCi/g, averaging 0.05 pCi/g.
- Natural uranium concentrations ranged from 0.01 to 0.04 pCi/g, averaging 0.02 pCi/g.
- Thorium-230 concentrations ranged from 0.01 to 0.03 pCi/g, averaging 0.02 pCi/g.
- Lead-210 concentrations ranged from 0.6 to 1.7 pCi/g, averaging 1.2 pCi/g.
- Polonium-210 concentrations ranged from 0.08 to 0.23 pCi/g, averaging 0.15 pCi/g.

Analytical errors associated with the reported concentrations results are high, relative to the reported means.

With the exception of lead-210, radionuclide concentrations in the vegetation samples are one to orders of magnitude lower than those in the corresponding shallow (0 to 5 cm) soil samples. There are no apparent spatial or temporal patterns in the vegetation.

8.0 AIR MONITORING

This section documents the results of baseline radiological air monitoring, which was comprised of two tasks: high volume particulate and radon sampling.

Eight Hi-Q Model HVP-4200AFC high volume air samplers were established within and surrounding the proposed permit area. The samplers operated continuously from August 13, 2007 to August 13, 2008. The locations of the air samplers are shown on Figure 4-1.

Passive track etch detectors were placed at each of the eight AMS locations and an additional eight biased locations to measure radon-222 concentrations in air. For QC purposes, one duplicate detector was placed at each of two locations during each sampling event. The locations of the passive radon detectors are also shown on Figure 4-1.

8.1 Sampling Methods and Analytes

8.1.1 High Volume Air Sampling

Airborne particulates were collected using the Hi-Q high volume air samplers. The samplers operated nearly continuously from August 2007 to August 2008. The locations of the air samplers are shown on Figure 4-1.

Each high volume air sampler was equipped with an 8-in. by 10-in. 0.8 micron glass fiber filter paper. The air filters were collected approximately bi-weekly, prior to saturation, from each of the eight air samplers. Flow rate and total flow data were recorded at the same time. Over the course of 351 days, the filters were collected as follows:

- Period 1: August 13 to October 2, 2007
- Period 2: October 2, 2007 to January 4, 2008
- Period 3: January 4 to April 1, 2008.
- Period 4: April 1 to July 9, 2008
- Period 5: July 9 to August 13, 2008

The filters were composited and digested by the external analytical laboratory. The samples were analyzed for radium-226, thorium-230, natural uranium, and lead-210, using the same methods as listed for the soil samples.

The laboratory data were reported in units of picocuries per filter composite (pCi/f). The data were converted to units of micocuries per milliliter (μCi/ml), as follows:

$$Concentration, \mu Ci/ml = \frac{Filter\ Concentration}{Total\ Flow}(1*10^{-12})$$

The units of total flow and filter concentration in the equation are cubic meters and pCi/f, respectively. The resulting concentrations for each radionuclide and high volume sampler were compared to effluent concentration limits listed in Table 2 of 10 CFR 20 Appendix B and reported in Table 8-1 as percentages of the respective effluent limits. The most conservative effluent limits were applied to thorium-230 ($3*10^{-12}$ μCi/ml) and lead-210 ($6*10^{-13}$ μCi/ml). The Class D and W limits were applied to natural uranium ($3*10^{-12}$ μCi/ml) and radium-226 ($9*10^{-13}$ μCi/ml), respectively.

8.1.2 Ambient Radon

Radtrak passive radon-222 (track etch) detectors were used to determine ambient radon concentrations in air.

The detector measures average radon concentrations in air over the measurement period. The results are reported in picocuries per liter (pCi/L).

With an overlap in time across the group of detectors, but not on an individual location basis, the four quarterly measurement periods were: August 14 to September 27, 2007; September 27, 2007 to February 1 through 12, 2008; February 1 through 12, 2008 to May 17, 2008; and May 17 to July 17, 2008.

8.2 Results

8.2.1 High Volume Air Sampling

In general and relative to one another (e.g., natural uranium to radium-226), the average concentrations of radionuclides were consistent at each location from period to period. The radionuclide with the lowest average concentration was radium-226, followed by thorium-230, natural uranium, and lead-210. Average radium-226 concentrations were five orders of magnitude lower than lead-210 concentrations. The data are listed in Table 8-1, where they are also summarized as averages and ranges.

Site-wide, the data can be summarized as follows:

- Natural uranium concentrations ranged from $-3.0*10^{-17}$ to $9.1*10^{-15}$ μCi/ml and averaged $7.5*10^{-16}$ μCi/ml.
- Thorium-230 concentrations ranged from $-9.5*10^{-19}$ to $5.6*10^{-17}$ μCi/ml and averaged $1.2*10^{-17}$ μCi/ml.

- Radium-226 concentrations ranged from $-4.9*10^{-17}$ to $4.7*10^{-17}$ μCi/ml and averaged $8.9*10^{-19}$ μCi/ml.

- Lead-210 concentrations ranged from $-1.1*10^{-16}$ to $4.1*10^{-14}$ μCi/ml and averaged $1.4*10^{-14}$ μCi/ml.

There are no clear patterns in the radionuclide concentrations, when evaluating them spatially or temporally. Natural uranium concentrations at each location were on the order of 10^{-16} μCi/ml over the course of monitoring. Thorium-230 concentrations fluctuated between the orders of 10^{-17} and 10^{-18} μCi/ml. Radium-226 concentrations fluctuated between the orders of 10^{-17} and 10^{-19} μCi/ml. Finally, lead-210 concentrations at each location were all on the order of 10^{-14} μCi/ml over the course of monitoring.

With the exception of natural uranium, the values determined above are similar to U.S. background concentrations reported in the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) Report to the General Assembly, Sources and Effects of Ionizing Radiation, Annex B. The regional concentrations reported in this reference document are: uranium-238 ($2.4*10^{-17}$ to $1.4*10^{-16}$ μCi/ml), thorium-230 ($1.6*10^{-17}$ μCi/ml), radium-226 ($1.6*10^{-17}$ μCi/ml), and lead-210 ($2.7*10^{-15}$ to $2.7*10^{-14}$ μCi/ml).

In terms of comparison to 10 CFR 20 Appendix B effluent concentrations, the data can be summarized as follows:

- Natural uranium concentrations were 0.0 to 0.3 percent of its effluent concentration.

- Thorium-230 concentrations were 0.0 percent of its effluent concentration.

- Radium-226 concentrations were -0.01 to 0.01 percent of its effluent concentration.

- Lead-210 concentrations were -0.02 to 6.78 percent of its effluent concentration.

The LLDs, in pCi/f, reported by the laboratory for each radionuclide were converted to μCi/ml by multiplying pCi/f by $1*10^{-12}$. In no cases were the LLDs higher that their respective 10 CFR 20 effluent concentration limits. The LLDs reported in Period 2 by the laboratory for uranium exceeded the recommendation in NRC Regulatory Guide 4.14.

The LLDs for each of the radionuclides are listed in Table 8-1.

8.2.2 Ambient Radon

The ambient radon monitoring results are listed in Table 8-2. Quarter 1 ambient radon concentrations ranged from 1.0 to 9.8, averaging 2.4 pCi/L. Quarter 2 concentrations ranged from 0.4 to 1.8, averaging 1.2 pCi/L. Quarter 3 concentrations ranged from 0.4 to 3.3, averaging 1.8 pCi/L. Quarter 4 concentrations ranged from 0.5 to 0.8, averaging 0.5 pCi/L. Site-wide, annual radon concentrations ranged from to 0.6 to 3.9, and averaged 1.7 pCi/L.

Figure 8-1 presents the ambient radon concentrations in relation to the radium-226 concentrations predicted from the gamma-ray count rate data. One expects higher radon concentrations in the historically mined areas. However, there is only one case where this is true: the Quarter 1 observation at Rn-02, located adjacent to the edge of an open pit mine, is 9.8 pCi/l. There appear to be no spatial trends in the current data set, other than the levels are within the same order of magnitude across the site.

Duplicates were collected at AMS-01 and AMS-BKG in each of the monitoring periods. The QC summary for the radon monitoring is as follows:

- AMS-01: In Quarters 1 and 4, the RPD was 0. In Quarters 2 and 3, the RPD was 55.5.
- AMS-BKG: The RPDs were 30 (Quarter 1), 6.5 (Quarter 2), 12.5 (Quarter 3), and 0.7 (Quarter 4).

In terms of effluent concentrations, the measured values exceed the 10 CFR 20 limit of 0.1 pCi/L for radon-222 with daughters present. However, on average the measured values are within the range of reported worldwide ambient background radon concentrations, 0.027 to 2.7 pCi/L (United Nations Scientific Committee on the Effects of Atomic Radiation [UNSCEAR], 2000).

9.0 AMBIENT EXPOSURE RATES

9.1 Cross-Calibration of Sodium Iodide Detectors and High-Pressure Ion Chamber

Both the sodium iodide detector and PIC measure gamma radiation. The sodium iodide detection system measures the rate that the gamma rays interact with the detector in cpm, has a lower sensitivity than the PIC and is energy dependent. The PIC is a highly accurate ionization chamber for measuring exposure rate in micoRoentgens per hour (μR/h) but requires a longer count time. The PIC was used because it measures exposure rates directly and is considered a primary standard by NIST, when calibrated. The PIC measures gamma, X-rays, and cosmic radiation without discrimination. It is highly stable, relatively energy independent, and serves as an excellent tool to calibrate other survey equipment to measure exposure rates. Because of its portability and shorter measurement times, the sodium iodide detector is more efficient than the PIC for use in large area surveys. By performing the large area gamma surveys with sodium iodide detectors, then developing a correlation between the two instruments, exposure rates derived from the sodium iodide measurements can represent site wide gamma emissions from surface soils.

Powertech collected 12 co-located static gamma counts and exposure rate measurements to develop the correlation between gamma counts and exposure rates. The locations were biased towards areas where gamma shine was not relatively high; that is, where gamma count rates remained relatively constant at 18 in, 1 m, and 2 m above ground surface. In addition, locations were chosen to encompass most of the range of sodium iodide detector readings observed in the GPS-based gamma surveys. The sodium iodide measurements were taken using one of the 2-inch

by 2-inch sodium iodide detectors that was used in the baseline gamma survey. A 1-minute integrated count was taken at each of the 12 locations with the detector suspended at 18 in. above the ground surface. Exposure rate measurements were then collected at a 1-m height at each location, directly above the location where the sodium iodide detector was held. Exposure rates were determined after 20-minute integrated counts. The PIC and gross gamma measurements were performed on July 14 to 16, 2008 at the locations shown on Figure 9-1.

The linear equation representing the correlation between exposure rates and gamma-ray count rates, determined using the PIC and average of the two sodium iodide detectors is:

$$\textit{Exposure Rate} = 0.0007 \times \textit{Gamma Count Rate} + 2.02$$

where the exposure rate is in gross microRoentgens per hour (μR/hr) and the gamma count rate is in gross cpm.

The linear regression model for the average is a good fit, with an R^2 of 0.96. Nearly all of the data align along the slope of the line, as shown in Figure 9-2. The correlations are similar for the individual sodium iodide detectors and not discussed further.

The linear regression model predicts an average exposure rate of 10.9 μR/hr for the site. The range of predicted exposure rates is 5.9 to 324 μR/hr, based on the observed gamma-ray count rates at the site. The predicted site-wide exposure rates are shown as ranges of colors in 700 by 700 ft grid block averages on Figure 9-3.

9.2 Ambient Exposure Rates Determined using Thermoluminescent Detectors

Ambient exposure rates were determined for three periods, using TLDs supplied and analyzed by Landauer, Inc. The monitoring periods were: August 18, 2007 to February 4, 2008, February 4 to May 17, 2008, and May 17 to July 17, 2008.

The TLDs were deployed at each of the eight AMS locations. Duplicates were deployed at AMS-01 and the background location (AMS-BKG).

Five of the nine TLDs deployed in the August 2007 to February 2008 period were lost, presumably by way of cattle consumption and/or disturbance.

The ambient gamma dose rate monitoring results are listed in Table 9-1. The results for the TLDs reported in millirem per year (mrem/yr) ambient dose equivalents are as follows:

- AMS-01: 94.9 for 303 monitored days, projected to 114 mrem/yr
- AMS-02: 54.0 for 61 monitored days, projected to 323 mrem/yr
- AMS-03: 38.6 for 103 monitored days, projected to 137 mrem/yr
- AMS-04: 152.8 for 303 monitored days, projected to 184 mrem/yr

- AMS-05: 123.7 for 303 monitored days, projected to 149 mrem/yr
- AMS-06: 88.0, for 164 monitored days projected to 196 mrem/yr
- AMS-07: 145.3 for 303 monitored days, projected to 175 mrem/yr
- AMS-BKG: 167.8 for 303 monitored days, projected to 202 mrem/yr

Excluding the result at AMS-02, the range of exposure rates (114 to 202 mrem/yr) and average (165 mrem/yr) is similar to average worldwide exposures to natural radiation sources comprised of comic radiation, cosmogenic radionuclides, and external terrestrial radiation reported in the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) Report to the General Assembly, Sources and Effects of Ionizing Radiation, Annex. The typical ranges of average worldwide exposures reported in this reference document are to 60 to160 mrem/yr.

10.0 FOOD SAMPLING

To determine baseline radionuclide concentrations in local food, Powertech collected three tissue samples (one of liver [DBAT-03], two of meat [DBAT-01, DBAT-02]) from a locally grazing cow on June 25, 2008. The samples were analyzed for natural uranium, radium-226, lead-210, and polonium-210. The results are listed in Table 10-1.

For the majority of analytes, the reported concentrations are at or below LLDs that, in turn, exceed the LLDs recommended in RG 4.14. This is evident for all reported concentrations of natural uranium, radium-226 and polonium-210 in Sample DBAT-01, and lead-210 in all three samples. There are only three cases where radionuclide concentrations exceed LLDs. Radium-226 concentrations are 0.003 and 0.06 pCi/g in Samples DBAT-01 and DBAT-02. The concentration of polonium-210 in Sample DBAT-03 is 0.02 pCi/g.

11.0 SUMMARY AND CONCLUSIONS

The results of the Dewey-Burdock baseline field investigation documented herein indicate the following:

- Baseline gamma-ray count rates have been obtained across the permit area. Twenty-five percent of the count rates were lower than 11,395 cpm. Seventy-five percent of the count rates were below 14,437 cpm. Three distinct populations of gamma-ray count rates were observed: an anomalous 600-acre portion of the main permit area, the main permit area itself, and the surface mine area. Considered individually, each has non-parametric count-rate distributions.
- Elevated levels of radioactivity, as characterized by gamma readings greater than 17,945 cpm in the main permit area and 20,270 cpm in the surface mine area, occur in the

anomalous portion of the main permit area and legacy mine wastes and open pits in the surface mine area.

- The surface soil sampling results corroborate the findings discussed above regarding spatial trends of radioactivity at the site. The majority of the site is characterized by an average predicted surface radium-226 concentration of 0.9 pCi/g. One exception is in the north end of the main permit area where the average predicted radium-226 concentration is 1.1 pCi/g. Also, areas in the surface mine area exhibit higher levels of radioactivity which are indicative of anthropogenic or other impacts.

- Experience at other milling sites underscores the need for using detailed baseline radiological information that shows varying site wide radium-226 concentrations, as adherence to a single number (especially if a conservative estimator such as a mean is used) can result in unnecessary cleanup and/or habitat destruction.

- Average radon flux rates ranged between 0.60 and 1.57 pCi/m^2-s. The highest individual measurement was 2.38 pCi/m^2-s These values are one to two orders of magnitude below the NESHAPS limit of 20 pCi/m^2-s specified in 10 CFR 40, Appendix A, Criterion 6. Although the latter requirement applies to uranium mill tailings and thus is not directly germane to this characterization, it is informative to demonstrate the relatively low magnitude of baseline radon flux levels measured at the site.

- Analytical errors associated with the low radionuclide concentrations in vegetation samples do not allow for a correlation to radionuclide concentrations in soils at the same sample locations.

- Particulate radionuclide concentrations in air across the site have been consistently low and at levels at least 95 % below their respective 10 CFR 20 effluent levels.

- Site-wide, annual radon concentrations ranged from to 0.6 to 3.9, and averaged 1.7 pCi/L. There appear to be no temporal or spatial trends in the current data set other than the levels are within the same order of magnitude across the site.

- A linear regression model comparing PIC to gamma-ray count rate measurements predicts an average exposure rate of 10.9 μR/hr for the site. The range of predicted exposure rates is 5.9 to 324 μR/hr, based on the observed gamma-ray count rates at the site.

- Baseline ambient exposure rates, as determined using TLDs, range from 108.6 to 158.2 mrem/yr.

In summary, it is clear that portions of the surface mine area, in the eastern quarter of the site exhibits radiological impacts from historic and or current anthropogenic activities within the area. The precise sources of these impacts are not relevant in the context of this investigation since the apparent impacts are part of the baseline or background radiological characteristics of the site.

11.0 REFERENCES

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Tables

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Table 2-1. Summary of Baseline Radiological Investigation Scope

Survey Method/Endpoint	Baseline Investigation Scope	Parameters Evaluated
A. GPS-based Gamma Surveys	18- inch high, unshielded gamma-ray readings coupled with x- and y- coordinates taken every second moving along 100 or 500 meter transects at ≤1.5 meters per second. Surveys were made over the entire site along 17 transects in the main permit area, 48 transects in the surface mine area, and along two roads. A second survey covered land application areas along 100 meter transects.	Serve as basis to estimate exposure rates, surface soil radium-226 concentrations, and to identify additional areas for biased sampling.
B. Biased Soil Sampling	Biased samples at 5 locations, all collected from 0 to 15 cm.	Radium-226 for all samples; Thorium-230, natural uranium, lead-210, for a subset (2 locations)
C. Random Soil Sampling	Random samples at 75 locations. Nine of the 75 locations were sampled at depth (15-30 cm and 30-100 cm). Ten duplicates at 0 to 15 cm. One duplicate at 15 to 30 cm. One duplicate at 30 to 100 cm.	Radium-226 for all samples; Thorium-230, natural uranium, lead-210 (8 from 0 to 15 cm and one each at 15 to 30 and 30 to 100 cm)
D. Soil sampling in land application areas	Random samples at 17 locations, all but one of which were sampled at 0 to 15, 15 to 30 and 30 to 100 cm. Refusal was encountered at 45 cm in the exceptional location. One duplicate each at 0 to 5, 15 to 30, and 30 to 100 cm.	Radium-226, thorium-230, natural uranium, and lead-210 for all samples
E. Exposure Rate Monitoring	Exposure rate determinations based on TLD and PIC measurements. TLD measurements collected for four quarters.	Exposure Rates
F. Soil and Vegetation Sampling at Air Monitoring Stations	Eight locations: seven onsite (AMS-01 through AMS-07) and one located approximately 1.9 miles west of the southwest corner of the permit area (AMS-BKG). Vegetation samples collected for four quarters. Given the diurnal nature of winds, at various times this station would be representative of downwind and upwind locations.	Vegetation: radium-226, thorium-230, natural uranium, lead-210, and polonium-210 Soil: All of above except polonium-210
G. Air Particulate Sampling	Eight locations: seven onsite (AMS-01 through AMS-07) and one located approximately 1.9 miles west of the southwest corner of the permit area (AMS-BKG). Air particulate samples collected for four quarters.	Air filters: radium-226, thorium-230, natural uranium, lead-210 and polonium-210

Table 2-1. Summary of Baseline Radiological Investigation Scope (concluded)

Survey Method/Endpoint	Baseline Investigation Scope	Parameters Evaluated
H. Radon in air	16 locations: eight AMS and eight additional locations. Radon in air measurements taken for four quarters.	Radon-222
I. Radon Flux Measurements	Radon flux measurements at nine locations (coinciding with biased soil samples collected at depth in Task C above). The first two of three rounds of measurements is documented herein.	Radon-222
J. Locally Grazed Livestock Sampling	Three samples collected from one locally grazing cow.	Radium-226, thorium-230, natural uranium, lead-210 and polonium-210

Table 3-1. Statistical Summary of Gamma-Ray Count Rates in Entire Data Set, Main Permit and Surface Mine Areas

	Gamma-Ray Count Rate (cpm)		
Statistic	**Entire Data Set**	**Main Permit Area**	**Surface Mine Area**
Mean	15,025	13,073	16,823
Standard Deviation	17,095	2,995	23,377
Median	12,687	12,664	12,717
Mode	12,487 (n=53)	12,585 (n=35)	12,138 (n=31)
Minimum	5,550	5,883	5,550
Maximum	460,485	171,243	460,485
Q1	11,395	11,598	11,125
Q3	14,437	14,137	14,783
IQR	3,042	2,539	3,658
No. of Counts	157,075	75,345	81,757

Notes:
Entire data set does not include gamma-ray counts obtained along the eastern haul road. In addition, the sum of the counts in the main permit and surface mine areas is 27 counts greater than the counts in the entire data set, due to an overlap in counts within the two shapes placed as a layer in ArcView GIS to select the data sets. .

Table 3-2. Statistical Summary of Gamma-Ray Count Rates in Land Application Areas

	Gamma-Ray Count Rate (cpm)		
		Land Application Area	
Statistic	**Main Permit Area**	**Dewey**	**Burdock**
Mean	13,073	12,815	12,308
Standard Deviation	2,995	1,940	1,318
Median	12,664	12,523	12,232
Mode	12,585 (n=35)	11,778 (n=15)	12,266 (n=16)
Minimum	5,883	6,798	8,498
Maximum	171,243	20,422	24,248
Q1	11,598	11,437	11,504
Q3	14,137	13,993	12,958
IQR	2,539	2,556	1,454
No. of Counts	75,345	23,480	13,647

Table 4-1. Radionuclide Concentrations in All Soil Samples

Sample ID	Date Collected	Depth (cm)	1-minute Gamma-Ray Count Rate (cpm)	U-nat (µCi/g)	Pb-210 (µCi/g)	Pb-210 Error (µCi/g)	Th-230 (µCi/g)	Th-230 Error (µCi/g)	Ra-226 (µCi/g)	Ra-226 Error (µCi/g)
AMS-1	9/27/2007	0-5	-	9.6E-07	2.0E-06	3.0E-07	4.0E-07	1.0E-07	1.4E-06	2.0E-07
AMS-2	9/27/2007	0-5	-	9.5E-07	3.0E-06	3.0E-07	5.0E-07	1.0E-07	1.1E-06	2.0E-07
AMS-3	9/27/2007	0-5	-	8.2E-07	2.0E-06	2.0E-07	4.0E-07	1.0E-07	1.5E-06	2.0E-07
AMS-4	9/27/2007	0-5	-	1.4E-06	2.0E-06	2.0E-07	8.0E-07	2.0E-07	1.5E-06	3.0E-07
AMS-5	9/27/2007	0-5	-	6.8E-07	2.0E-06	2.0E-07	6.0E-07	1.0E-07	1.3E-06	3.0E-07
AMS-6	9/27/2007	0-5	-	5.5E-07	1.0E-06	2.0E-07	4.0E-07	1.0E-07	8.0E-07	2.0E-07
AMS-7	9/27/2007	0-5	-	5.8E-07	2.0E-06	2.0E-07	3.0E-07	8.0E-08	1.1E-06	2.0E-07
AMS-BKG	9/27/2007	0-5	-	1.9E-06	2.0E-06	2.0E-07	9.0E-07	1.0E-07	2.4E-06	4.0E-07
MPA-B01	9/25/2007	0-15	13824	-	-	-	-	-	1.4E-06	3.0E-07
MPA-B02	9/25/2007	0-15	14176	-	-	-	-	-	1.1E-06	2.0E-07
MPA-B03	9/25/2007	0-15	13006	-	-	-	-	-	1.3E-06	3.0E-07
MPA-R01	9/24/2007	0-15	13749	-	-	-	-	-	1.4E-06	2.0E-07
MPA-R02	9/24/2007	0-15	16059	-	-	-	-	-	2.6E-06	3.0E-07
MPA-R03	9/24/2007	0-15	10796	7.5E-07	7.0E-07	1.0E-07	4.0E-07	1.0E-07	1.1E-06	2.0E-07
MPA-R04	9/24/2007	0-15	10810	-	-	-	-	-	9.0E-07	2.0E-07
MPA-R04-Dup	9/24/2007	0-15	-	-	-	-	-	-	8.0E-07	2.0E-07
MPA-R05	9/24/2007	0-15	11850	-	-	-	-	-	1.2E-06	2.0E-07
NEA-R01	9/24/2007	0-15	12302	9.1E-07	7.0E-07	2.0E-07	6.0E-07	1.0E-07	1.1E-06	2.0E-07
NEA-R02	9/24/2007	0-15	13176	-	-	-	-	-	1.3E-06	2.0E-07
NEA-R03	9/24/2007	0-15	16393	-	-	-	-	-	2.2E-06	3.0E-07
NEA-R04	9/24/2007	0-15	17356	-	-	-	-	-	2.3E-06	3.0E-07
NEA-R04-Dup	9/24/2007	0-15	-	-	-	-	-	-	2.5E-06	3.0E-07
NEA-R05	9/24/2007	0-15	17269	-	-	-	-	-	2.8E-06	3.0E-07
RFA-B01A	9/26/2007	0-15	13115	8.7E-07	1.0E-06	2.0E-07	7.0E-07	1.0E-07	1.2E-06	2.0E-07
RFA-B01A-Dup	9/26/2007	0-15	-	9.0E-07	8.0E-07	1.0E-07	7.0E-07	1.0E-07	1.1E-06	2.0E-07
RFA-B02A	9/26/2007	0-15	13360	-	-	-	-	-	1.1E-06	2.0E-07
RFA-B03	9/25/2007	0-15	14253	-	-	-	-	-	1.1E-06	2.0E-07
RFA-B04	9/25/2007	0-15	13963	-	-	-	-	-	1.5E-06	3.0E-07
RFA-B06	9/25/2007	0-15	13819	-	-	-	-	-	1.1E-06	2.0E-07
RFA-B07	9/25/2007	0-15	12700	-	-	-	-	-	1.7E-06	2.0E-07
RFA-B08	9/25/2007	0-15	13433	-	-	-	-	-	9.0E-07	2.0E-07
RFA-B08-Dup	9/25/2007	0-15	13528	-	-	-	-	-	1.1E-06	2.0E-07
RFA-B09	9/25/2007	0-15	14825	-	-	-	-	-	1.1E-06	2.0E-07
RFA-B10	9/25/2007	0-15	13366	-	-	-	-	-	1.0E-06	2.0E-07
RFA-B11	9/25/2007	0-15	14253	8.8E-07	1.0E-06	2.0E-07	5.0E-07	1.0E-07	1.8E-06	3.0E-07
RFA-B12	9/25/2007	0-15	13135	-	-	-	-	-	1.0E-06	2.0E-07
RFA-B13A	9/26/2007	0-15	13987	-	-	-	-	-	1.8E-06	3.0E-07
RFA-B14	9/25/2007	0-15	13872	-	-	-	-	-	1.7E-06	3.0E-07

Table 4-1. Radionuclide Concentrations in All Soil Samples (Continued)

Sample ID	Date Collected	Depth (cm)	1-minute Gamma-Ray Count Rate (cpm)	U-nat (µCi/g)	Pb-210 (µCi/g)	Pb-210 Error (µCi/g)	Th-230 (µCi/g)	Th-230 Error (µCi/g)	Ra-226 (µCi/g)	Ra-226 Error (µCi/g)
RFA-B15A	9/26/2007	0-15	13535	-	-	-	-	-	1.4E-06	3.0E-07
RFA-B16	9/25/2007	0-15	13675	-	-	-	-	-	9.0E-07	2.0E-07
RFA-B17A	9/26/2007	0-15	16283	-	-	-	-	-	2.0E-06	3.0E-07
RFA-B18	9/25/2007	0-15	13835	-	-	-	-	-	1.7E-06	3.0E-07
RFA-B19	9/25/2007	0-15	13689	-	-	-	-	-	1.2E-06	2.0E-07
RFA-B20	9/25/2007	0-15	13113	8.8E-07	1.0E-06	2.0E-07	5.0E-07	1.0E-07	1.3E-06	3.0E-07
RFA-B21A	9/26/2007	0-15	16641	-	-	-	-	-	5.6E-06	4.0E-07
RFA-B22	9/25/2007	0-15	14087	-	-	-	-	-	1.5E-06	2.0E-07
RFA-B23	9/25/2007	0-15	19674	-	-	-	-	-	3.6E-06	4.0E-07
RFA-B24	9/25/2007	0-15	12766	-	-	-	-	-	1.3E-06	2.0E-07
RFA-B25	9/25/2007	0-15	10300	6.7E-07	1.0E-06	2.0E-07	4.0E-07	1.0E-07	1.2E-06	2.0E-07
RFA-B26	9/25/2007	0-15	11791	-	-	-	-	-	1.1E-06	2.0E-07
RFA-B27	9/25/2007	0-15	13794	-	-	-	-	-	1.5E-06	2.0E-07
RFA-B28	9/25/2007	0-15	15246	-	-	-	-	-	2.4E-06	3.0E-07
RFA-B28-Dup	9/25/2007	0-15	-	-	-	-	-	-	1.8E-06	3.0E-07
RFA-B29	9/25/2007	0-15	14345	-	-	-	-	-	1.7E-06	3.0E-07
RFA-B30A	9/26/2007	0-15	12461	-	-	-	-	-	1.8E-06	2.0E-07
RFA-B31	9/25/2007	0-15	12221	-	-	-	-	-	1.3E-06	2.0E-07
RFA-B33	9/25/2007	0-15	13221	-	-	-	-	-	9.0E-07	2.0E-07
RFA-B34	9/25/2007	0-15	13408	-	-	-	-	-	1.0E-06	2.0E-07
RFA-B35	9/25/2007	0-15	12290	-	-	-	-	-	1.2E-06	2.0E-07
RFA-B36A	9/25/2007	0-15	12465	-	-	-	-	-	1.0E-06	2.0E-07
RFA-B37A	9/26/2007	0-15	11170	-	-	-	-	-	9.0E-07	2.0E-07
RFA-B38	9/25/2007	0-15	11852	-	-	-	-	-	1.0E-06	2.0E-07
RFA-B39	9/25/2007	0-15	11478	-	-	-	-	-	1.1E-06	2.0E-07
RFA-B40	9/25/2007	0-15	12629	5.6E-07	1.0E-06	2.0E-07	3.0E-07	1.0E-07	1.1E-06	2.0E-07
RFA-B41	9/25/2007	0-15	11806	-	-	-	-	-	1.2E-06	2.0E-07
RFA-B43	9/25/2007	0-15	13264	-	-	-	-	-	1.7E-06	3.0E-07
RFA-B44	9/25/2007	0-15	11436	-	-	-	-	-	1.4E-06	2.0E-07
RFA-B45	9/25/2007	0-15	12242	-	-	-	-	-	1.6E-06	3.0E-07
SMA-B01	9/24/2007	0-15	10459	1.2E-06	6.0E-07	1.0E-07	5.0E-07	1.0E-07	9.0E-07	2.0E-07
SMA-B01-Dup	9/24/2007	0-15	-	1.5E-06	2.0E-06	2.0E-07	6.0E-07	1.0E-07	1.4E-06	3.0E-07
SMA-B03	9/24/2007	0-15	22410	-	-	-	-	-	1.5E-06	2.0E-07
SMA-B04	9/24/2007	0-15	15263	-	-	-	-	-	1.0E-06	2.0E-07
SMA-B07	9/24/2007	0-15	22925	-	-	-	-	-	3.2E-06	3.0E-07

Table 4-1. Radionuclide Concentrations in All Soil Samples (Continued)

Sample ID	Date Collected	Depth (cm)	1-minute Gamma-Ray Count Rate (cpm)	U-nat (µCi/g)	Pb-210 (µCi/g)	Pb-210 Error (µCi/g)	Th-230 (µCi/g)	Th-230 Error (µCi/g)	Ra-226 (µCi/g)	Ra-226 Error (µCi/g)
SMA-B09	9/24/2007	0-15	12879	-	-	-	-	-	1.2E-06	2.0E-07
SMA-B09-Dup	9/24/2007	0-15	-	-	-	-	-	-	1.7E-06	2.0E-07
SMA-B10	9/25/2007	0-15	13184	-	-	-	-	-	1.4E-06	2.0E-07
SMA-B11	9/24/2007	0-15	17346	-	-	-	-	-	2.3E-06	3.0E-07
SMA-B13	9/25/2007	0-15	13252	-	-	-	-	-	1.7E-06	3.0E-07
SMA-B14	9/24/2007	0-15	14483	-	-	-	-	-	1.4E-06	3.0E-07
SMA-B14-Dup	9/24/2007	0-15	-	-	-	-	-	-	1.6E-06	2.0E-07
SMA-B15	9/24/2007	0-15	8474	-	-	-	-	-	8.0E-07	2.0E-07
SMA-B16	9/24/2007	0-15	10235	-	-	-	-	-	9.0E-07	2.0E-07
SMA-B17	9/24/2007	0-15	10139	-	-	-	-	-	1.0E-06	2.0E-07
SMA-B18	9/25/2007	0-15	8511	-	-	-	-	-	5.0E-07	1.0E-07
SMA-B18-Dup	9/25/2007	0-15	-	-	-	-	-	-	4.0E-07	1.0E-07
SMA-B19	9/24/2007	0-15	10074	-	-	-	-	-	1.2E-06	2.0E-07
SMA-B20	9/27/2007	0-15	10897	-	-	-	-	-	9.0E-07	2.0E-07
SMA-B21	9/24/2007	0-15	16712	-	-	-	-	-	1.4E-06	2.0E-07
SMA-B22	9/24/2007	0-15	10618	-	-	-	-	-	8.0E-07	2.0E-07
SMA-B23	9/24/2007	0-15	16233	-	-	-	-	-	2.7E-06	3.0E-07
SMA-B23-Dup	9/24/2007	0-15	-	-	-	-	-	-	2.8E-06	3.0E-07
SMA-B24	9/24/2007	0-15	12662	-	-	-	-	-	1.3E-06	2.0E-07
SMA-B25	9/24/2007	0-15	9991	-	-	-	-	-	1.0E-06	2.0E-07
SMA-B26	9/28/2007	0-15	73243	-	-	-	-	-	1.1E-05	5.0E-07
SMA-B27	9/28/2007	0-15	130293	6.7E-05	3.0E-05	8.0E-07	3.0E-05	8.0E-07	4.0E-05	1.1E-06
SMA-B28	9/29/2007	0-15	39061	-	-	-	-	-	6.4E-06	4.0E-07
SMA-B29	9/28/2007	0-15	231041	1.6E-05	2.0E-05	7.0E-07	2.0E-05	6.0E-07	2.9E-05	9.0E-07
SMA-B30	9/28/2007	0-15	89139	-	-	-	-	-	3.4E-05	9.0E-07
LAN 001A	7/18/2008	0-15	-	1.8E-06	2.4E-06	2.3E-06	1.2E-06	6.0E-07	8.0E-07	9.0E-08
LAN 002A	7/18/2008	0-15	-	8.6E-07	3.4E-06	2.3E-06	9.0E-07	5.0E-07	9.0E-07	1.0E-07
LAN 003A	7/18/2008	0-15	-	7.8E-07	8.0E-07	2.2E-06	7.0E-07	6.0E-07	1.2E-06	1.0E-07
LAN 004A	7/18/2008	0-15	-	6.9E-07	1.0E-06	1.4E-06	6.0E-07	6.0E-07	1.9E-06	2.0E-07
LAN 004A-DUP	7/18/2008	0-15	-	7.2E-07	5.0E-07	1.4E-06	4.0E-07	3.0E-07	7.0E-07	1.0E-07
LAN 005A	7/18/2008	0-15	-	8.4E-07	1.2E-06	1.4E-06	9.0E-07	5.0E-07	4.4E-06	3.0E-07
LAN 006A	7/18/2008	0-15	-	7.1E-07	-5.0E-09	1.4E-06	3.0E-07	5.0E-07	1.1E-06	1.0E-07
LAN 007A	7/18/2008	0-15	-	8.1E-07	6.0E-07	1.4E-06	3.0E-07	5.0E-07	7.0E-07	1.0E-07
LAN 008A	7/18/2008	0-15	-	2.1E-06	1.0E-06	1.4E-06	1.0E-06	7.0E-07	9.0E-07	1.0E-07
LAN 009A	7/18/2008	0-15	-	1.1E-06	-4.0E-07	1.4E-06	3.0E-07	6.0E-07	8.0E-07	1.0E-07
LAN 010A	7/18/2008	0-15	-	1.6E-06	1.8E-06	1.2E-06	1.2E-06	6.0E-07	1.2E-06	2.0E-07
LAS 001A	7/19/2008	0-15	-	1.2E-06	1.6E-06	1.2E-06	6.0E-07	5.0E-07	9.0E-07	1.0E-07
LAS 002A	7/19/2008	0-15	-	4.8E-07	1.4E-06	1.2E-06	1.0E-07	5.0E-07	7.0E-07	1.0E-07

Table 4-1. Radionuclide Concentrations in All Soil Samples (Continued)

Sample ID	Date Collected	Depth (cm)	1-minute Gamma-Ray Count Rate (cpm)	U-nat (µCi/g)	Pb-210 (µCi/g)	Pb-210 Error (µCi/g)	Th-230 (µCi/g)	Th-230 Error (µCi/g)	Ra-226 (µCi/g)	Ra-226 Error (µCi/g)
LAS 003A	7/19/2008	0-15	-	5.0E-07	1.4E-06	1.2E-06	3.0E-07	4.0E-07	7.0E-07	1.0E-07
LAS 004A	7/19/2008	0-15	-	1.1E-06	1.2E-06	1.2E-06	6.0E-07	5.0E-07	8.0E-07	1.0E-07
LAS 005A	7/19/2008	0-15	-	1.2E-06	1.6E-06	1.2E-06	4.0E-07	3.0E-07	9.0E-07	1.0E-07
LAS 006A	7/19/2008	0-15	-	3.7E-07	7.0E-07	1.1E-06	6.0E-07	6.0E-07	7.0E-07	1.0E-07
LAS 007A	7/19/2008	0-15	-	4.3E-07	6.0E-07	1.5E-06	6.0E-07	1.0E-07	8.0E-07	1.0E-07
RFA-B01B	9/26/2007	15-30	13115	1.1E-06	2.0E-06	2.0E-07	9.0E-01	2.0E-01	1.7E-06	2.0E-07
RFA-B01B-Dup	9/26/2007	15-30	-	9.9E-07	9.0E-07	2.0E-07	9.0E-01	2.0E-01	1.5E-06	2.0E-07
RFA-B02B	9/26/2007	15-30	-	-	-	-	-	-	9.0E-07	2.0E-07
RFA-B13B	9/26/2007	15-30	-	-	-	-	-	-	1.8E-06	2.0E-07
RFA-B15B	9/26/2007	15-30	-	-	-	-	-	-	1.5E-06	2.0E-07
RFA-B17B	9/26/2007	15-30	-	-	-	-	-	-	2.2E-06	3.0E-07
RFA-B21B	9/26/2007	15-30	-	-	-	-	-	-	1.3E-06	2.0E-07
RFA-B30B	9/26/2007	15-30	-	-	-	-	-	-	2.1E-06	3.0E-07
RFA-B36B	9/26/2007	15-30	-	-	-	-	-	-	1.1E-06	2.0E-07
RFA-B37B	9/26/2007	15-30	-	-	-	-	-	-	7.0E-07	2.0E-07
LAN 001B	7/18/2008	15-30	-	1.9E-06	4.6E-06	2.3E-06	1.4E-06	6.0E-07	8.0E-07	1.0E-07
LAN 002B	7/18/2008	15-30	-	7.5E-07	1.5E-06	2.3E-06	4.0E-07	4.0E-07	1.0E-06	1.0E-07
LAN 003B	7/18/2008	15-30	-	1.1E-06	2.4E-06	2.3E-06	8.0E-07	5.0E-07	1.2E-06	1.0E-07
LAN 004B	7/18/2008	15-30	-	7.9E-07	2.2E-06	1.4E-06	2.0E-07	5.0E-07	1.3E-06	2.0E-07
LAN 004B-DUP	7/18/2008	15-30	-	6.8E-07	-3.0E-07	1.4E-06	5.0E-07	4.0E-07	7.0E-07	1.0E-07
LAN 005B	7/18/2008	15-30	-	7.1E-07	9.0E-07	1.4E-06	6.0E-07	4.0E-07	1.6E-06	2.0E-07
LAN 006B	7/18/2008	15-30	-	7.5E-07	5.0E-07	1.4E-06	6.0E-07	4.0E-07	1.3E-06	1.0E-07
LAN 007B	7/18/2008	15-30	-	1.5E-06	6.0E-07	1.4E-06	4.0E-07	4.0E-07	7.0E-07	1.0E-07
LAN 008B	7/18/2008	15-30	-	3.5E-06	1.0E-07	1.4E-06	9.0E-07	7.0E-07	1.0E-06	1.0E-07
LAN 009B	7/18/2008	15-30	-	1.8E-06	-3.0E-07	1.4E-06	7.0E-07	5.0E-07	4.1E-06	3.0E-07
LAN 010B	7/18/2008	15-30	-	1.5E-06	1.1E-06	1.1E-06	7.9E-06	1.2E-06	1.4E-06	2.0E-07
LAS 001B	7/19/2008	15-30	-	8.6E-07	1.1E-06	1.2E-06	4.0E-07	5.0E-07	8.0E-07	1.0E-07
LAS 002B	7/19/2008	15-30	-	7.1E-07	7.0E-07	1.2E-06	4.0E-07	4.0E-07	7.0E-07	1.0E-07
LAS 003B	7/19/2008	15-30	-	1.2E-06	1.1E-06	1.1E-06	5.0E-07	4.0E-07	9.0E-07	1.0E-07
LAS 004B	7/19/2008	15-30	-	9.5E-07	1.3E-06	1.2E-06	5.0E-07	4.0E-07	8.0E-07	1.0E-07
LAS 005B	7/19/2008	15-30	-	1.6E-06	1.4E-06	1.1E-06	4.0E-07	4.0E-07	1.0E-06	2.0E-07
LAS 006B	7/19/2008	15-30	-	4.8E-07	1.4E-06	1.2E-06	3.0E-07	4.0E-07	7.0E-07	1.0E-07
LAS 007B	7/19/2008	15-30	-	4.5E-07	6.0E-07	1.5E-06	6.0E-07	1.0E-07	7.0E-07	1.0E-07
LAN 008B	7/18/2008	15-30	-	3.5E-06	1.0E-07	1.4E-06	9.0E-07	7.0E-07	1.0E-06	1.0E-07
LAN 009B	7/18/2008	15-30	-	1.8E-06	-3.0E-07	1.4E-06	7.0E-07	5.0E-07	4.1E-06	3.0E-07
LAN 010B	7/18/2008	15-30	-	1.5E-06	1.1E-06	1.1E-06	7.9E-06	1.2E-06	1.4E-06	2.0E-07
LAS 001B	7/19/2008	15-30	-	8.6E-07	1.1E-06	1.2E-06	4.0E-07	5.0E-07	8.0E-07	1.0E-07

Table 4-1. Radionuclide Concentrations in All Soil Samples (Concluded)

Sample ID	Date Collected	Depth (cm)	1-minute Gamma-Ray Count Rate (cpm)	U-nat (µCi/g)	Pb-210 (µCi/g)	Pb-210 Error (µCi/g)	Th-230 (µCi/g)	Th-230 Error (µCi/g)	Ra-226 (µCi/g)	Ra-226 Error (µCi/g)
LAS 002B	7/19/2008	15-30	-	7.1E-07	7.0E-07	1.2E-06	4.0E-07	4.0E-07	7.0E-07	1.0E-07
LAS 003B	7/19/2008	15-30	-	1.2E-06	1.1E-06	1.1E-06	5.0E-07	4.0E-07	9.0E-07	1.0E-07
LAS 004B	7/19/2008	15-30	-	9.5E-07	1.3E-06	1.2E-06	5.0E-07	4.0E-07	8.0E-07	1.0E-07
LAS 005B	7/19/2008	15-30	-	1.6E-06	1.4E-06	1.1E-06	4.0E-07	4.0E-07	1.0E-06	2.0E-07
LAS 006B	7/19/2008	15-30	-	4.8E-07	1.4E-06	1.2E-06	3.0E-07	4.0E-07	7.0E-07	1.0E-07
LAS 007B	7/19/2008	15-30	-	4.5E-07	6.0E-07	1.5E-06	6.0E-07	1.0E-07	7.0E-07	1.0E-07
RFA-B01C	9/26/2007	30-100	-	1.5E-06	6.0E-07	1.0E-07	8.0E-01	1.0E-01	1.2E-06	2.0E-07
RFA-B01C-Dup	9/29/2007	30-100	-	1.3E-06	1.0E-06	2.0E-07	1.0E+00	2.0E-01	1.7E-06	3.0E-07
RFA-B02C	9/26/2007	30-100	-	-	-	-	-	-	9.0E-07	2.0E-07
RFA-B13C	9/26/2007	30-100	-	-	-	-	-	-	1.6E-06	2.0E-07
RFA-B15C	9/26/2007	30-100	-	-	-	-	-	-	1.5E-06	3.0E-07
RFA-B17C	9/26/2007	30-100	-	-	-	-	-	-	2.5E-06	3.0E-07
RFA-B21C	9/26/2007	30-100	-	-	-	-	-	-	1.2E-06	2.0E-07
RFA-B30C	9/26/2007	30-100	-	-	-	-	-	-	1.7E-06	3.0E-07
RFA-B36C	9/26/2007	30-100	-	-	-	-	-	-	1.0E-06	2.0E-07
RFA-B37C	9/26/2007	30-100	-	-	-	-	-	-	1.1E-06	2.0E-07
LAN 001C	7/18/2008	30-100	-	1.9E-06	1.9E-06	2.2E-06	1.6E-06	7.0E-07	9.0E-07	1.0E-07
LAN 002C	7/18/2008	30-100	-	1.5E-06	1.1E-06	2.2E-06	3.0E-07	3.0E-07	1.2E-06	1.0E-07
LAN 003C	7/18/2008	30-100	-	2.0E-06	2.6E-06	2.3E-06	6.0E-07	3.0E-07	1.0E-06	1.0E-07
LAN 004C	7/18/2008	30-100	-	1.5E-06	8.0E-07	1.4E-06	7.0E-07	5.0E-07	1.0E-06	1.0E-07
LAN 004C-DUP	7/18/2008	30-100	-	1.3E-06	1.2E-06	1.4E-06	5.0E-07	4.0E-07	8.0E-07	1.0E-07
LAN 005C	7/18/2008	30-100	-	7.1E-07	6.0E-07	1.4E-06	5.0E-07	4.0E-07	1.5E-06	2.0E-07
LAN 006C	7/18/2008	30-100	-	1.1E-06	7.0E-07	1.4E-06	5.0E-07	3.0E-07	1.4E-06	2.0E-07
LAN 007C	7/18/2008	30-100	-	2.5E-06	1.0E-07	1.4E-06	8.0E-07	6.0E-07	4.0E-07	1.0E-07
LAN 009C	7/18/2008	30-100	-	1.6E-06	5.0E-07	1.4E-06	1.1E-06	6.0E-07	3.9E-06	3.0E-07
LAN 010C	7/18/2008	30-100	-	2.7E-06	1.9E-06	1.2E-06	1.9E-06	8.0E-07	1.5E-06	2.0E-07
LAS 001C	7/19/2008	30-100	-	6.1E-07	9.0E-07	1.1E-06	1.0E-07	3.0E-07	8.0E-07	1.0E-07
LAS 002C	7/19/2008	30-100	-	6.3E-07	4.0E-07	1.1E-06	4.0E-07	4.0E-07	7.0E-07	1.0E-07
LAS 003C	7/19/2008	30-100	-	9.3E-07	7.0E-07	1.2E-06	1.0E-06	5.0E-07	8.0E-07	1.0E-07
LAS 004C	7/19/2008	30-100	-	1.3E-06	1.2E-06	1.1E-06	5.0E-07	3.0E-07	9.0E-07	1.0E-07
LAS 005C	7/19/2008	30-100	-	9.8E-07	1.2E-06	1.1E-06	7.0E-07	5.0E-07	1.1E-06	2.0E-07
LAS 006C	7/19/2008	30-100	-	6.5E-07	-3.0E-07	1.5E-06	3.0E-07	9.0E-08	6.0E-07	1.0E-07
LAS 007C	7/19/2008	30-100	-	7.2E-07	-7.0E-07	1.5E-06	5.0E-07	1.0E-07	7.0E-07	1.0E-07

Notes:
All errors reported are ± 2σ.

Table 4-2. Statistical Summary of Radionuclide Concentrations by Depth Interval

Depth Interval (cm)	Statistic	Radium-226 (pCi/g)	Thorium-230 (pCi/g)	Natural Uranium (pCi/g)	Lead-210 (pCi/g)
0-15	Mean	1.4	0.6	1.0	1.2
	Median	1.0	0.6	0.9	1.1
	No.	26	18	18	18
	σ	1.1	0.3	0.5	0.9
	Range	0.7-5.6	0.1-1.2	0.4-2.1	-0.4-3.4
	Distribution	Non-parametric	Normal	Normal	Normal
15-30	Mean	1.3	1.1	1.2	1.1
	Median	1.0	0.5	1.0	1.1
	No.	36	27	28	28
	σ	0.8	2.0	0.8	0.9
	Range	0.7-4.1	0.3-7.9	0.5-3.5	-0.3-4.6
	Distribution	Non-parametric	Non-parametric	Non-parametric	Non-parametric
30-100	Mean	1.3	0.7	1.3	0.9
	Median	1.1	0.6	1.3	0.8
	No.	25	16	17	17
	σ	0.7	0.5	0.6	0.8
	Range	0.4-3.9	0.1-1.9	0.6-2.7	-0.7-2.6
	Distribution	Lognormal[a]	Normal	Lognormal[b]	Normal

Notes:

a. The geometric mean for radium-226 at 30 to 100 cm is 1.1 pCi/g.

b. The geometric mean for natural uranium at 30 to 100 cm is 1.2 pCi/g.

Table 4-3. Quality Control Summary for Soil Samples

		RPD	Replicate Error Ratio		
Sample ID	**Depth (cm)**	**U-nat**	**Pb-210**	**Th-230**	**Ra-226**
MPA-R04+Duplicate	0-15	-	-	-	0.2
NEA-R04+Duplicate	0-15	-	-	-	0.2
RFA-B01A+Duplicate	0-15	3.4	0.0	0.0	0.2
RFA-B01B+Duplicate	15-30	10.5	**1.8**	0.0	0.3
RFA-B01C+Duplicate	30-100	14.3	**1.0**	0.5	0.8
RFA-B08+Duplicate	0-15	-	-	-	0.0
RFA-B28+Duplicate	0-15	-	-	-	0.7
SMA-B01+Duplicate	0-15	22.2	**2.8**	0.4	0.8
SMA-B09+Duplicate	0-15	-	-	-	0.8
SMA-B14+Duplicate	0-15	-	-	-	0.3
SMA-B18+Duplicate	0-15	-	-	-	0.4
SMA-B23+Duplicate	0-15	-	-	-	0.1
LAN-004A+Duplicate	0-15	-4.3	0.5	0.6	**8.5**
LAN-004B+Duplicate	15-30	15.0	**2.5**	0.9	**4.2**
LAN-004C+Duplicate	30-100	14.3	0.4	0.6	**1.4**

Notes:
The radium-226, lead-210, and thorium-230 LLDs were all $1*10^{-7}$ µCi/g. All results are greater than 5 times their respective MDC, with the exception of radium-226 in Sample Location SMA-B18-Dup.
The natural uranium LLDs ranged from $1.7*10^{-8}$ to $2.0*10^{-8}$ µCi/g.
None of the results were below their respective LLDs.
Bolded values are anomalous QC results.

Table 5-1. Summary of Predicted Radium-226 Concentrations in Grid Blocks

		Predicted Radium-226 Concentration Based on Average of Counts Within Grid Block (pCi/g)					
Data Set	**No. of Grid Blocks**	**Median**	**Minimum**	**Maximum**	**Q1**	**Q3**	**IQR**
All Data	1,015	1.1	0	24.9	0	1.4	1.4
Surface Mine Area	171	1.5	0	24.9	1.1	1.8	0.7
Main Permit Area without Anomalous Area	791	1.0	0	9.0	0	1.3	1.3
Anomalous Area	53	1.4	0	2.3	0	1.8	1.8

Table 6-1. Baseline Radon Flux Measurements

Location	Date	Flux (pCi/m^{2}s)	Std. Dev. (pCi/m^{2}s)	LLD (pCi/m^{2}s)	Average Flux @ Location (pCi/m^{2}s)
RFA-B01	September 2007	1.68	0.06	0.18	1.57
	April 2008	0.64	0.05	0.15	
	July 2008	2.38	0.06	0.15	
RFA-B02	September 2007	0.89	0.05	0.15	0.86
	April 2008	0.76	0.05	0.16	
	July 2008	0.94	0.05	0.15	
RFA-B13	September 2007	1.77	0.06	0.17	1.53
	April 2008	0.56	0.05	0.16	
	July 2008	2.27	0.06	0.15	
RFA-B15	September 2007	1.22	0.05	0.15	1.35
	April 2008	1.12	0.06	0.16	
	July 2008	1.71	0.05	0.15	
RFA-B17	September 2007	1.25	0.06	0.16	1.05
	April 2008	0.61	0.05	0.16	
	July 2008	1.30	0.05	0.15	
RFA-B21	September 2007	0.97	0.05	0.14	0.71
	April 2008	0.28	0.05	0.16	
	July 2008	0.89	0.05	0.14	
RFA-B30	September 2007	1.73	0.06	0.17	1.49
	April 2008	0.70	0.05	0.16	
	July 2008	2.03	0.05	0.15	
RFA-B36	September 2007	0.68	0.05	0.16	0.60
	April 2008	0.64	0.05	0.16	
	July 2008	0.48	0.06	0.15	
RFA-B37	September 2007	0.80	0.05	0.14	1.13
	April 2008	1.33	0.06	0.16	
	July 2008	1.27	0.05	0.14	

Table 7-1. Baseline Radionuclide Concentrations in Vegetation

Location	Date Collected		8/14/2007	4/20/08	7/15/08	Average (µCi/kg)
AMS-01	U-nat (µCi/kg)	Concentration	1.4E-05	2.8E-02D	9.4E-06	1.4E-05
		Error ± 2σ	-	-	-	
		LLD	1.7E-06	2.4E-06	2.0E-07	
	Ra-226 (µCi/kg)	Concentration	5.5E-05	3.3E-05	8.1E-05	5.6E-05
		Error ± 2σ	3.2E-05	5.5E-06	1.2E-05	
		LLD	1.7E-06	3.7E-06	7.4E-06	
	Th-230 (µCi/kg)	Concentration	<1.7E-06	1.2E-05	1.2E-05	8.6E-06
		Error ± 2σ	<1.7E-06	5.2E-06	8.4E-06	
		LLD	1.7E-06	2.0E-07	8.4E-07	
	Pb-210 (µCi/kg)	Concentration	1.8E-03	2.9E-03	3.3E-04	1.7E-03
		Error ± 2σ	5.4E-04	1.1E-04	1.3E-04	
		LLD	8.6E-06	1.0E-06	2.1E-04	
	Po-210 (µCi/kg)	Concentration	1.3E-04	4.7E-04	1.7E-05	2.1E-04
		Error ± 2σ	9.8E-05	7.2E-05	1.5E-05	
		LLD	8.6E-06	1.0E-06	1.0E-06	
AMS-02	Date Collected		8/14/2007	4/20/08	7/14/08	Average (µCi/kg)
	U-nat (µCi/kg)	Concentration	1.0E-05	2.7E-02D	3.2E-06	6.6E-06
		Error ± 2σ	-	-	-	
		LLD	5.5E-07	2.0E-07	2.0E-07	
	Ra-226 (µCi/kg)	Concentration	2.2E-05	3.0E-05	9.3E-06	2.0E-05
		Error ± 2σ	1.1E-05	4.5E-06	3.6E-06	
		LLD	5.5E-07	2.8E-06	4.0E-06	
	Th-230 (µCi/kg)	Concentration	4.7E-06	1.4E-05	-9.5E-07U	5.9E-06
		Error ± 2σ	6.0E-06	4.9E-06	5.0E-06	
		LLD	5.5E-07	2.0E-07	4.7E-07	
	Pb-210 (µCi/kg)	Concentration	3.3E-04	1.3E-03	1.5E-04	5.9E-04
		Error ± 2σ	1.5E-04	6.9E-05	7.3E-05	
		LLD	2.7E-06	1.0E-06	1.2E-04	
	Po-210 (µCi/kg)	Concentration	1.8E-05	2.0E-04	9.1E-06U	7.6E-05
		Error ± 2σ	2.0E-05	4.2E-05	8.5E-06	
		LLD	2.7E-06	1.0E-06	1.0E-06	

Table 7-1. Baseline Radionuclide Concentrations in Vegetation (continued)

Location	Date Collected		8/14/2007	4/20/08	7/14/08	Average (µCi/kg)
AMS-03	U-nat (µCi/kg)	Concentration	9.8E-06	1.5E-01D	7.7E-06	9.8E-06
		Error ± 2σ	-	-	-	
		LLD	6.4E-07	2.4E-06	2.0E-07	
	Ra-226 (µCi/kg)	Concentration	7.4E-05	1.1E-04	7.5E-06	9.2E-05
		Error ± 2σ	2.2E-05	9.7E-06	4.9E-06	
		LLD	6.4E-07	3.7E-06	6.6E-06	
	Th-230 (µCi/kg)	Concentration	2.6E-06	4.1E-05	1.0E-05	2.2E-05
		Error ± 2σ	4.4E-06	1.1E-05	6.6E-06	
		LLD	6.4E-07	2.0E-07	7.7E-07	
	Pb-210 (µCi/kg)	Concentration	9.1E-04	1.4E-03	3.3E-04	8.8E-04
		Error ± 2σ	2.2E-04	8.2E-05	1.2E-04	
		LLD	3.2E-06	1.0E-06	1.9E-04	
	Po-210 (µCi/kg)	Concentration	7.8E-05	2.3E-04	9.6E-06U	1.5E-04
		Error ± 2σ	4.4E-05	4.4E-05	1.1E-05	
		LLD	3.2E-06	1.0E-06	1.0E-06	
AMS-04	Date Collected		8/14/2007	4/20/08	7/14/08	Average (µCi/kg)
	U-nat (µCi/kg)	Concentration	9.3E-06	2.1E-02D	8.4E-06	9.3E-06
		Error ± 2σ	-	-	-	
		LLD	8.1E-07	1.9E-06	2.0E-07	
	Ra-226 (µCi/kg)	Concentration	2.3E-05	3.1E-05	9.3E-06	2.7E-05
		Error ± 2σ	1.4E-05	4.6E-06	5.2E-06	
		LLD	8.0E-07	2.8E-06	6.7E-06	
	Th-230 (µCi/kg)	Concentration	3.6E-06	8.3E-06	-2.7E-06U	6.0E-06
		Error ± 2σ	5.6E-06	4.2E-06	4.2E-06	
		LLD	8.0E-07	2.0E-07	7.7E-07	
	Pb-210 (µCi/kg)	Concentration	1.5E-03	1.2E-03	2.1E-04	1.4E-03
		Error ± 2σ	3.0E-04	6.6E-05	1.2E-04	
		LLD	4.0E-06	1.0E-06	1.9E-04	
	Po-210 (µCi/kg)	Concentration	9.8E-05	1.7E-04	9.0E-06U	1.3E-04
		Error ± 2σ	6.4E-05	3.9E-05	9.6E-06	
		LLD	4.0E-06	1.0E-06	1.0E-06	

Table 7-1. Baseline Radionuclide Concentrations in Vegetation (continued)

Location	Date Collected		8/14/2007	4/20/08	7/14/08	Average (µCi/kg)
AMS-05	U-nat (µCi/kg)	Concentration	3.7E-05	2.3E-01D	1.4E-05	3.7E-05
		Error ± 2σ	-	-		
		LLD	1.3E-06	1.3E-06	2.0E-07	
	Ra-226 (µCi/kg)	Concentration	2.4E-05	7.9E-05	5.9E-06U	5.2E-05
		Error ± 2σ	1.8E-05	5.7E-06	5.3E-06	
		LLD	1.3E-06	1.8E-06	7.7E-06	
	Th-230 (µCi/kg)	Concentration	1.5E-05	4.8E-05	-8.8E-07U	3.2E-05
		Error ± 2σ	1.7E-05	8.1E-06	5.7E-06	
		LLD	1.3E-06	2.0E-07	8.8E-07	
	Pb-210 (µCi/kg)	Concentration	1.7E-03	3.3E-04	3.4E-04	1.0E-03
		Error ± 2σ	4.2E-04	3.0E-05	1.4E-04	
		LLD	6.5E-06	1.0E-06	2.2E-04	
	Po-210 (µCi/kg)	Concentration	6.6E-05	1.6E-04	2.1E-05	1.1E-04
		Error ± 2σ	6.0E-05	3.1E-05	1.6E-05	
		LLD	6.5E-06	1.0E-06	1.0E-06	
AMS-06	Date Collected		8/14/2007	4/20/08	7/14/08	Average (µCi/kg)
	U-nat (µCi/kg)	Concentration	3.8E-05	1.3E-01D	2.2E-05	3.8E-05
		Error ± 2σ	-	-		
		LLD	8.3E-07	3.2E-06	2.0E-07	
	Ra-226 (µCi/kg)	Concentration	3.2E-05	9.2E-05	1.8E-05	6.2E-05
		Error ± 2σ	1.6E-05	9.9E-06	5.0E-06	
		LLD	8.2E-07	4.6E-06	5.0E-06	
	Th-230 (µCi/kg)	Concentration	1.9E-05	3.9E-05	2.1E-05	2.9E-05
		Error ± 2σ	1.3E-05	1.1E-05	7.4E-06	
		LLD	8.2E-07	2.0E-07	5.7E-07	
	Pb-210 (µCi/kg)	Concentration	1.0E-03	1.8E-03	1.4E-04U	1.4E-03
		Error ± 2σ	2.6E-04	1.1E-04	8.7E-05	
		LLD	4.1E-06	1.0E-06	1.4E-04	
	Po-210 (µCi/kg)	Concentration	6.0E-05	4.0E-04	5.7E-06U	2.3E-04
		Error ± 2σ	4.4E-05	7.7E-05	5.7E-06	
		LLD	4.1E-06	1.0E-06	1.0E-06	

Table 7-1. Baseline Radionuclide Concentrations in Vegetation (concluded)

Location	Date Collected		8/14/2007	4/20/08	7/14/08	Average (µCi/kg)
AMS-07	U-nat (µCi/kg)	Concentration	1.8E-05	1.4E-01 D	2.7E-05	1.8E-05
		Error ± 2σ	-	-		
		LLD	9.7E-07	21E-06	2.0E-07	
	Ra-226 (µCi/kg)	Concentration	2.7E-05	7.6E-05	2.4E-05	5.2E-05
		Error ± 2σ	1.6E-05	7.2E-06	7.5E-06	
		LLD	9.7E-07	3.0E-06	7.7E-06	
	Th-230 (µCi/kg)	Concentration	1.6E-05	4.0E-05	2.0E-05	2.8E-05
		Error ± 2σ	1.8E-05	1.2E-05	8.6E-06	
		LLD	9.7E-07	2.0E-07	8.6E-07	
	Pb-210 (µCi/kg)	Concentration	2.1E-03	6.2E-04	-3.2E-05U	1.4E-03
		Error ± 2σ	3.6E-04	5.3E-05	1.3E-04	
		LLD	4.8E-06	1.0E-06	2.1E-04	
	Po-210 (µCi/kg)	Concentration	1.5E-04	2.3E-04	2.0E-05	1.9E-04
		Error ± 2σ	8.2E-05	4.7E-05	1.3E-05	
		LLD	4.8E-06	1.0E-06	1.0E-06	
AMS-BKG	Date Collected		8/14/2007	4/20/08	7/14/08	Average (µCi/kg)
	U-nat (µCi/kg)	Concentration	4.0E-05	9.0E-02D	1.0E-05	2.5E-05
		Error ± 2σ	-	-	-	
		LLD	9.7E-07	3.8E-06	2.0E-07	
	Ra-226 (µCi/kg)	Concentration	4.1E-05	8.3E-05	1.3E-05	6.2E-05
		Error ± 2σ	2.0E-05	1.1E-05	4.6E-06	
		LLD	9.7E-07	6.4E-06	5.1E-06	
	Th-230 (µCi/kg)	Concentration	1.0E-05	3.5E-05	7.3E-06	2.3E-05
		Error ± 2σ	1.3E-05	1.2E-05	4.2E-06	
		LLD	9.7E-07	2.0E-07	5.6E-07	
	Pb-210 (µCi/kg)	Concentration	6.9E-04	1.4E-03	1.3E-04U	1.0E-03
		Error ± 2σ	2.8E-04	1.0E-04	8.6E-05	
		LLD	4.8E-06	1.0E-06		
	Po-210 (µCi/kg)	Concentration	2.5E-05	2.2E-04	9.3E-06	1.2E-04
		Error ± 2σ	3.2E-05	5.1E-05	8.8E-06	
		LLD	4.8E-06	1.0E-06	1.0E-06	

Notes:
D = Lower limit of detection increased due to sample matrix interference. Average concentrations s do not include "D"-qualified results.

Table 8-1. Baseline Radionuclide Concentrations in Air

Location	Monitoring Period[a]	Concentration (µCi/ml)							% of Effluent Concentration				Lower Limit of Detection (µCi/ml)			
		U-nat	Th-230	Th-230 2σ Error	Ra-226	Ra-226 2σ Error	Pb-210	Pb-210 2σ Error	U-nat	Th-230	Ra-226	Pb-210	U-nat	Th-230	Ra-226	Pb-210
AMS-01	1	-1.3E-17	3.4E-18	1.0E-17	1.8E-17	1.7E-17	2.1E-14	2.4E-16	0.00%	0.00%	0.00%	3.54%	1.7E-18	1.7E-18	1.2E-17	2.1E-16
	2	2.4E-17	1.3E-17	9.8E-18	1.4E-17	9.7E-18	2.1E-14	4.9E-16	0.00%	0.00%	0.00%	3.51%	1.5E-18	1.5E-18	8.3E-18	4.2E-16
	3	3.7E-15	1.3E-17	4.2E-17	1.2E-17	5.7E-17	1.9E-14	9.8E-16	0.12%	0.00%	0.00%	3.13%	3.9E-15	2.3E-18	5.7E-17	3.7E-16
	4	0.0E+00	1.6E-18	1.1E-17	7.2E-18	9.1E-18	4.1E-14	6.9E-16	0.00%	0.00%	0.00%	6.78%	1.6E-16	1.6E-18	1.6E-18	7.9E-18
	5	-1.7E-17	6.5E-18	2.5E-17	-3.1E-17	2.7E-17	1.0E-14	6.5E-16	0.00%	0.00%	0.00%	1.74%	4.3E-18	4.3E-18	5.6E-17	6.7E-16
AMS-02	1	-2.0E-17	4.7E-18	1.1E-17	-8.6E-18	1.3E-17	8.9E-15	2.5E-16	0.00%	0.00%	0.00%	1.49%	1.6E-18	1.6E-18	1.1E-17	1.9E-16
	2	4.2E-18	0.0E+00	7.4E-18	-4.2E-18	7.4E-18	8.2E-15	4.2E-16	0.00%	0.00%	0.00%	1.37%	1.4E-18	1.4E-18	7.6E-18	3.9E-16
	3	2.9E-15	1.8E-18	2.5E-17	-2.6E-17	3.3E-17	1.2E-14	7.5E-16	0.10%	0.00%	0.00%	1.96%	3.1E-15	1.8E-18	4.1E-17	3.0E-16
	4	0.0E+00	1.6E-17	1.1E-17	-2.3E-18	7.0E-18	2.0E-14	4.7E-16	0.00%	0.00%	0.00%	3.26%	1.5E-16	1.5E-18	1.5E-18	7.6E-18
	5	-1.3E-17	0.0E+00	8.0E-18	-4.9E-17	2.3E-17	1.5E-14	6.5E-16	0.00%	0.00%	0.01%	2.44%	4.0E-18	4.0E-18	5.3E-17	6.2E-16
AMS-03	1	-3.0E-17	9.3E-18	1.2E-17	-1.4E-17	1.3E-17	9.2E-15	2.5E-16	0.00%	0.00%	0.00%	1.53%	1.5E-18	1.5E-18	1.2E-17	1.9E-16
	2	1.8E-17	8.9E-18	9.0E-18	9.6E-18	9.5E-18	8.0E-15	4.4E-16	0.00%	0.00%	0.00%	1.34%	1.5E-18	1.5E-18	8.9E-18	4.1E-16
	3	2.8E-15	6.9E-18	2.2E-17	-4.8E-18	3.7E-17	1.2E-14	7.5E-16	0.09%	0.00%	0.00%	1.98%	2.9E-15	1.7E-18	3.6E-17	2.8E-16
	4	0.0E+00	9.3E-18	1.0E-17	5.4E-18	8.8E-18	1.3E-14	3.9E-16	0.00%	0.00%	0.00%	2.16%	1.6E-16	1.6E-18	1.6E-18	7.8E-18
	5	-1.6E-17	1.9E-17	9.7E-18	-3.2E-18	3.1E-17	1.2E-14	6.5E-16	0.00%	0.00%	0.00%	1.99%	4.2E-18	4.2E-18	5.0E-17	6.6E-16
AMS-04	1	-2.6E-17	2.5E-18	1.1E-17	-2.8E-17	1.2E-17	8.5E-15	2.6E-16	0.00%	0.00%	0.00%	1.42%	1.7E-18	1.7E-18	9.9E-18	2.0E-16
	2	1.9E-17	6.6E-18	9.0E-18	1.2E-17	9.5E-18	1.0E-14	4.6E-16	0.00%	0.00%	0.00%	1.74%	1.5E-18	1.5E-18	8.1E-18	4.1E-16
	3	3.0E-15	-9.5E-19	3.0E-17	2.5E-17	4.7E-17	-1.1E-16	7.0E-16	0.10%	0.00%	0.00%	0.02%	3.2E-15	1.9E-18	4.4E-17	3.1E-16
	4	0.0E+00	9.4E-18	1.1E-17	2.3E-18	8.3E-18	2.2E-14	5.1E-16	0.00%	0.00%	0.00%	3.66%	1.6E-16	1.6E-18	1.6E-18	7.8E-18
	5	-1.0E-18	2.7E-17	9.7E-18	-5.2E-18	3.3E-17	1.3E-14	6.7E-16	0.00%	0.00%	0.00%	2.23%	4.2E-18	4.2E-18	5.5E-17	6.6E-16

Table 8-1. Radionuclide Concentrations in Air (concluded)

Location	Monitoring Period[a]	Concentration (µCi/ml)							% of Effluent Concentration				Lower Limit of Detection (µCi/ml)			
		U-nat	Th-230	Th-230 2σ Error	Ra-226	Ra-226 2σ Error	Pb-210	Pb-210 2σ Error	U-nat	Th-230	Ra-226	Pb-210	U-nat	Th-230	Ra-226	Pb-210
AMS-05	1	1.0E-18	4.7E-18	1.1E-17	1.1E-17	1.5E-17	1.0E-14	2.3E-16	0.00%	0.00%	0.00%	1.66%	1.6E-18	1.6E-18	1.1E-17	1.9E-16
	2	2.7E-17	1.5E-17	1.0E-17	1.5E-17	9.9E-18	1.1E-14	4.8E-16	0.00%	0.00%	0.00%	1.91%	1.5E-18	1.5E-18	8.5E-18	4.3E-16
	3	2.8E-15	3.6E-17	2.3E-17	-1.3E-17	4.0E-17	1.0E-14	7.2E-16	0.09%	0.00%	0.00%	1.68%	2.9E-15	1.7E-18	4.3E-17	2.8E-16
	4	0.0E+00	2.0E-17	1.4E-17	4.7E-17	1.3E-17	2.5E-14	5.3E-16	0.00%	0.00%	0.01%	4.09%	1.5E-16	1.5E-18	1.5E-18	7.7E-18
	5	2.4E-17	5.6E-17	9.5E-18	2.2E-17	3.4E-17	1.1E-14	6.3E-16	0.00%	0.00%	0.00%	1.85%	4.1E-18	4.1E-18	4.9E-17	6.4E-16
AMS-06	1	-1.4E-17	9.4E-18	1.2E-17	0.0E+00	1.4E-17	6.0E-15	2.2E-16	0.00%	0.00%	0.00%	1.00%	1.6E-18	1.6E-18	1.1E-17	1.9E-16
	2	1.7E-17	5.5E-18	1.0E-17	-5.5E-18	8.4E-18	1.1E-14	4.9E-16	0.00%	0.00%	0.00%	1.80%	1.6E-18	1.6E-18	9.5E-18	4.4E-16
	3	2.9E-15	1.0E-17	2.4E-17	-2.0E-17	3.9E-17	1.7E-14	8.2E-16	0.10%	0.00%	0.00%	2.89%	3.1E-15	1.8E-18	4.2E-17	2.9E-16
	4	0.0E+00	1.4E-17	1.2E-17	2.3E-17	1.0E-17	2.1E-14	4.8E-16	0.00%	0.00%	0.00%	3.56%	1.5E-16	1.5E-18	1.5E-18	7.3E-18
	5	-2.6E-18	2.0E-17	9.1E-18	6.9E-18	3.3E-17	1.9E-14	6.9E-16	0.00%	0.00%	0.00%	3.25%	4.0E-18	4.0E-18	4.9E-17	6.2E-16
AMS-07	1	-1.1E-17	6.4E-18	9.1E-18	-1.3E-17	1.1E-17	7.2E-15	2.2E-16	0.00%	0.00%	0.00%	1.20%	1.4E-18	1.4E-18	9.2E-18	1.7E-16
	2	2.0E-17	7.9E-18	8.1E-18	-6.6E-19	7.5E-18	1.3E-14	4.4E-16	0.00%	0.00%	0.00%	2.13%	1.3E-18	1.3E-18	7.3E-18	3.7E-16
	3	9.1E-15	2.0E-17	2.6E-17	3.9E-18	4.2E-17	1.7E-14	7.8E-16	0.30%	0.00%	0.00%	2.85%	2.9E-15	1.7E-18	4.3E-17	2.8E-16
	4	0.0E+00	1.3E-17	1.2E-17	2.9E-17	1.0E-17	2.8E-14	5.4E-16	0.00%	0.00%	0.00%	4.66%	1.4E-16	1.4E-18	1.4E-18	7.0E-18
	5	-9.2E-19	1.7E-17	8.5E-18	1.4E-17	3.0E-17	1.3E-14	5.9E-16	0.00%	0.00%	0.00%	2.10%	3.7E-18	3.7E-18	4.6E-17	5.8E-16
AMS-BKG	1	1.6E-18	2.0E-17	1.3E-17	-5.6E-18	1.4E-17	8.3E-15	2.5E-16	0.00%	0.00%	0.00%	1.38%	1.6E-18	1.6E-18	1.2E-17	2.2E-16
	2	2.1E-17	2.0E-18	1.2E-17	3.0E-18	1.1E-17	1.8E-14	6.6E-16	0.00%	0.00%	0.00%	3.05%	2.0E-18	2.0E-18	1.2E-17	5.7E-16
	3	3.0E-15	2.8E-17	2.9E-17	-5.1E-18	4.0E-17	1.3E-14	7.7E-16	0.10%	0.00%	0.00%	2.18%	3.2E-15	1.9E-18	4.1E-17	2.5E-16
	4	0.0E+00	-7.8E-19	9.4E-18	1.2E-17	9.5E-18	2.0E-14	4.8E-16	0.00%	0.00%	0.00%	3.29%	1.6E-16	1.6E-18	1.6E-18	7.8E-18
	5	-8.1E-18	2.4E-17	9.3E-18	-1.7E-17	2.4E-17	1.2E-14	6.3E-16	0.00%	0.00%	0.00%	2.00%	4.0E-18	4.0E-18	4.0E-17	5.3E-16

Notes:

a. The laboratory reported no blank assay data for Period 5. Blank assays in the sample concentration calculation were assumed to be 50 percent of the values for blanks reported for the previous period. The assumption is based on the relative, approximate run-time of the air samplers in both periods.

NR = Not reported by the laboratory.

Table 8-2. Baseline Radon Ambient Air Monitoring Measurements

Location	Starting Date	Ending Date	Radon-222 Conc. (µCi/ml)	Error ± (µCi/ml)	LLD (µCi/ml)	Percent Effluent Conc.	Average Rn-222 Conc. (µCi/ml)	Standard Deviation of Average (µCi/ml)	Minimum Rn-222 Conc. (µCi/ml)	Maximum Rn-222 Conc. (µCi/ml)
AMS-1	8/14/07	9/27/07	1.00E-09	-	6.82E-10	1000	7.23E-10	2.09E-10	4.92E-10	1.00E-09
	9/27/07	2/1/08	7.00E-10	-	2.00E-10	700				
	2/1/08	5/17/08	7.00E-10	7.1E-11	2.83E-10	700				
	5/17/08	7/17/08	4.92E-10	-	4.92E-10	492				
AMS-1[a]	8/14/07	9/27/07	1.00E-09	-	6.82E-10	1000	5.73E-10	2.88E-10	4.00E-10	1.00E-09
	9/27/07	2/1/08	4.00E-10	-	2.00E-10	400				
	2/1/08	5/17/08	4.00E-10	5.2E-11	2.83E-10	400				
	5/17/08	7/17/08	4.92E-10	-	4.92E-10	492				
AMS-2	8/15/07	9/27/07	2.20E-09	-	6.98E-10	2200	1.70E-09	7.62E-10	4.92E-10	2.20E-09
	9/27/07	2/1/08	1.20E-09	-	2.00E-10	1200				
	2/1/08	5/17/08	7.00E-10	7.0E-11	2.83E-10	700				
	5/17/08	7/17/08	4.92E-10	-	4.92E-10	492				
AMS-3	8/14/07[b]	9/27/07[b]	1.20E-09	-	6.82E-10	1200	1.20E-09	9.30E-10	4.92E-10	2.70E-09
	9/27/07	2/4/08	1.20E-09	-	2.00E-10	1200				
	2/4/08	5/17/08	2.70E-09	7.9E-11	2.91E-10	2700				
	5/17/08	7/17/08	4.92E-10	-	4.92E-10	492				
AMS-4	8/14/07	9/24/07	1.20E-09	-	7.32E-10	1200	1.20E-09	9.98E-10	5.75E-10	2.90E-09
	9/27/07	2/4/08	1.20E-09	-	2.00E-10	1200				
	2/4/08	5/17/08	2.90E-09	7.8E-11	2.91E-10	2900				
	5/17/08	7/17/08	5.75E-10	-	4.92E-10	575				
AMS-5	8/15/07	9/27/07	2.20E-09	-	6.98E-10	2200	1.60E-09	7.16E-10	4.92E-10	2.20E-09
	9/27/07	2/1/08	1.00E-09	-	2.00E-10	1000				
	2/1/08	5/17/08	1.20E-09	7.9E-11	2.83E-10	1200				
	5/17/08	7/17/08	4.92E-10	-	4.92E-10	492				

Table 8-2. Baseline Radon Ambient Air Monitoring Measurements (concluded)

Location	Starting Date	Ending Date	Radon-222 Conc. (µCi/ml)	Error ± (µCi/ml)	LLD (µCi/ml)	Percent Effluent Conc.	Average Rn-222 Conc. (µCi/ml)	Standard Deviation of Average (µCi/ml)	Minimum Rn-222 Conc. (µCi/ml)	Maximum Rn-222 Conc. (µCi/ml)
AMS-6	8/17/07	9/27/07	2.60E-09	-	7.32E-10	2600	1.80E-09	8.40E-10	6.89E-10	2.60E-09
	9/27/07	2/1/08	1.00E-09	-	2.00E-10	1000				
	2/11/08	5/17/08	1.30E-09	7.6E-11	2.83E-10	1300				
	5/17/08	7/17/08	6.89E-10	-	4.92E-10	689				
AMS-7	8/14/07	9/27/07	1.10E-09	-	6.82E-10	1100	1.30E-09	4.15E-10	4.92E-10	1.50E-09
	9/27/07	2/1/08	1.50E-09	-	2.00E-10	1500				
	2/1/08	5/17/08	1.00E-09	7.2E-11	2.83E-10	1000				
	5/17/08	7/17/08	4.92E-10	-	4.92E-10	492				
AMS-BKG	8/14/07	9/24/07	2.00E-09	-	7.32E-10	2000	1.80E-09	6.58E-10	4.95E-10	2.00E-09
	9/27/07	2/1/08	1.60E-09	-	2.00E-10	1600				
	2/1/08	5/17/08	1.70E-09	8.1E-11	2.83E-10	1700				
	5/17/08	7/17/08	4.95E-10	-	4.92E-10	495				
AMS-BKG[a]	8/14/07	9/27/07	2.70E-09	-	6.82E-10	2700	2.10E-09	9.03E-10	4.92E-10	2.70E-09
	9/27/07	2/1/08	1.50E-09	-	2.00E-10	1500				
	2/1/08	5/17/08	1.50E-09	8.1E-11	2.83E-10	1500				
	5/17/08	7/17/08	4.92E-10	-	4.92E-10	492				
Rn 01	8/14/07	9/23/07	2.00E-09	-	7.50E-10	2000	1.65E-09	8.35E-10	5.00E-10	2.40E-09
	9/23/07	2/11/08	1.30E-09	-	2.00E-10	1300				
	2/11/08	5/17/08	2.40E-09	8.5E-11	3.13E-10	2400				
	5/17/08	7/17/08	5.00E-10	-	4.76E-10	500				
Rn 02	8/14/07	9/23/07	9.80E-09	-	7.50E-10	9800	3.86E-09	5.15E-09	5.75E-10	9.80E-09
	9/23/07	2/11/08	1.20E-09	-	2.00E-10	1200				
	no data	-	-	-	-	-				
	5/17/08	7/17/08	5.75E-10	1.5E-10	4.92E-10	575				

Table 8-2. Baseline Radon Ambient Air Monitoring Measurements (concluded)

Location	Starting Date	Ending Date	Radon-222 Conc. (µCi/ml)	Error ± (µCi/ml)	LLD (µCi/ml)	Percent Effluent Conc.	Average Rn-222 Conc. (µCi/ml)	Standard Deviation of Average (µCi/ml)	Minimum Rn-222 Conc. (µCi/ml)	Maximum Rn-222 Conc. (µCi/ml)
Rn 03	8/14/07	9/23/07	1.20E-09	-	7.50E-10	1200	1.05E-09	9.63E-10	4.92E-10	2.70E-09
	9/23/07	2/11/08	9.00E-10	-	2.00E-10	900				
	2/11/08	5/17/08	2.70E-09	8.6E-11	3.13E-10	2700				
	5/17/08	7/17/08	4.92E-10	-	4.92E-10	492				
Rn 04	8/14/07	9/23/07	2.00E-09	-	7.50E-10	2000	1.70E-09	6.34E-10	5.00E-10	2.00E-09
	9/23/07	2/1/08	1.40E-09	-	2.00E-10	1400				
	2/11/08	5/17/08	1.00E-09	7.7E-11	2.83E-10	1000				
	5/17/08	7/17/08	5.00E-10	-	4.92E-10	500				
Rn 05	8/14/07	9/23/07	1.50E-09	-	7.50E-10	1500	1.30E-09	7.82E-10	8.18E-10	2.60E-09
	9/23/07	2/12/08	1.10E-09	-	2.00E-10	1100				
	2/11/08	5/17/08	2.60E-09	8.6E-11	3.16E-10	2600				
	5/17/08	7/17/08	8.18E-10	-	4.92E-10	818				
Rn 06	8/19/07	9/23/07	3.30E-09	-	8.57E-10	3300	2.30E-09	1.35E-09	4.92E-10	3.30E-09
	9/23/07	2/11/08	1.30E-09	-	2.00E-10	1300				
	2/11/08	5/17/08	3.00E-09	8.5E-11	3.13E-10	3000				
	5/17/08	7/17/08	4.92E-10	-	4.92E-10	492				
Rn 07	8/15/07	9/23/07	3.00E-09	-	7.69E-10	3000	2.40E-09	1.18E-09	7.21E-10	3.30E-09
	9/23/07	2/12/08	1.80E-09	-	2.00E-10	1800				
	2/12/08	5/17/08	3.30E-09	8.3E-11	3.16E-10	3300				
	5/17/08	7/17/08	7.21E-10	-	4.92E-10	721				
Rn 08	8/14/07	9/23/07	1.50E-09	-	7.50E-10	1500	1.40E-09	4.39E-10	4.92E-10	1.50E-09
	9/23/07	2/1/08	1.30E-09	-	2.00E-10	1300				
	9/23/07	2/1/08	1.00E-09	7.2E-11	2.83E-10	1000				
	5/17/08	7/17/08	4.92E-10	-	4.92E-10	492				

Notes:
a. Duplicate track etch detector
b. Seal potentially compromised

Table 9-1. Ambient Gamma Dose Rates using TLDs

Location	Starting Date	End Date	Dose (mrem)	Projected Annual Dose (mrem)
AMS-01	9/18/07	2/4/08	-	114
	2/4/08	5/17/08	37.2[a]	
	5/17/08	7/17/08	57.7[a]	
AMS-02	9/18/07	2/4/08	-	323
	2/4/08	5/17/08	-	
	5/17/08	7/17/08	54.0	
AMS-03	9/18/07	2/4/08	-	137
	2/4/08	5/17/08	38.6	
	5/17/08	7/17/08		
AMS-04	9/18/07	2/4/08	62.4	184
	2/4/08	5/17/08	36.1	
	5/17/08	7/17/08	54.3	
AMS-05	9/18/07	2/4/08	50.6	149
	2/4/08	5/17/08	36.7	
	5/17/08	7/17/08	36.4	
AMS-06	9/18/07	2/4/08	-	196
	2/4/08	5/17/08	36.9	
	5/17/08	7/17/08	51.1	
AMS-07	9/18/07	2/4/08	73.7	175
	2/4/08	5/17/08	35.5	
	5/17/08	7/17/08	36.1	
AMS-BKG	9/18/07	2/4/08	68.8[a]	202
	2/4/08	5/17/08	40.5[a]	
	5/17/08	7/17/08	58.5[a]	

Notes:
a. Result is average of measurement plus duplicate.

Table 10-1. Baseline Radionuclide Concentrations in Local Food

Sample ID	Radionuclide	Parameter	Result
DBAT-01	U-nat (µCi/kg)	Concentration	<7.0E-06
		Error ± 2σ	-
		LLD	7.0E-06
	Ra-226 (µCi/kg)	Concentration	3.0E-06
		Error ± 2σ	2.0E-06
		LLD	3.0E-06
	Th-230 (µCi/kg)	Concentration	0.0
		Error ± 2σ	2.0E-05
		LLD	8.0E-06
	Pb-210 (µCi/kg)	Concentration	-7.0E-06
		Error ± 2σ	4.0E-05
		LLD	7.0E-06
	Po-210 (µCi/kg)	Concentration	8.0E-06
		Error ± 2σ	1.0E-04
		LLD	8.0E-06
DBAT-02	U-nat (µCi/kg)	Concentration	<7.0E-06
		Error ± 2σ	-
		LLD	7.0E-06
	Ra-226 (µCi/kg)	Concentration	6.0E-05
		Error ± 2σ	3.0E-05
		LLD	4.0E-05
	Th-230 (µCi/kg)	Concentration	0.0
		Error ± 2σ	1.4E-03
		LLD	1.0E-04
	Pb-210 (µCi/kg)	Concentration	2.0E-04
		Error ± 2σ	7.0E-04
		LLD	1.2E-03
	Po-210 (µCi/kg)	Concentration	0.0
		Error ± 2σ	1.2E-03
		LLD	1.0E-04
DBAT-03	U-nat (µCi/kg)	Concentration	<7.0E-06
		Error ± 2σ	-
		LLD	7.0E-06
	Ra-226 (µCi/kg)	Concentration	3.0E-06
		Error ± 2σ	1.0E-06
		LLD	2.0E-06
	Th-230 (µCi/kg)	Concentration	0.0
		Error ± 2σ	1.0E-04
		LLD	6.0E-06
	Pb-210 (µCi/kg)	Concentration	-7.0E-06
		Error ± 2σ	4.0E-05
		LLD	6.0E-05
	Po-210 (µCi/kg)	Concentration	2.0E-05
		Error ± 2σ	2.0E-04
		LLD	6.0E-06

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Figures

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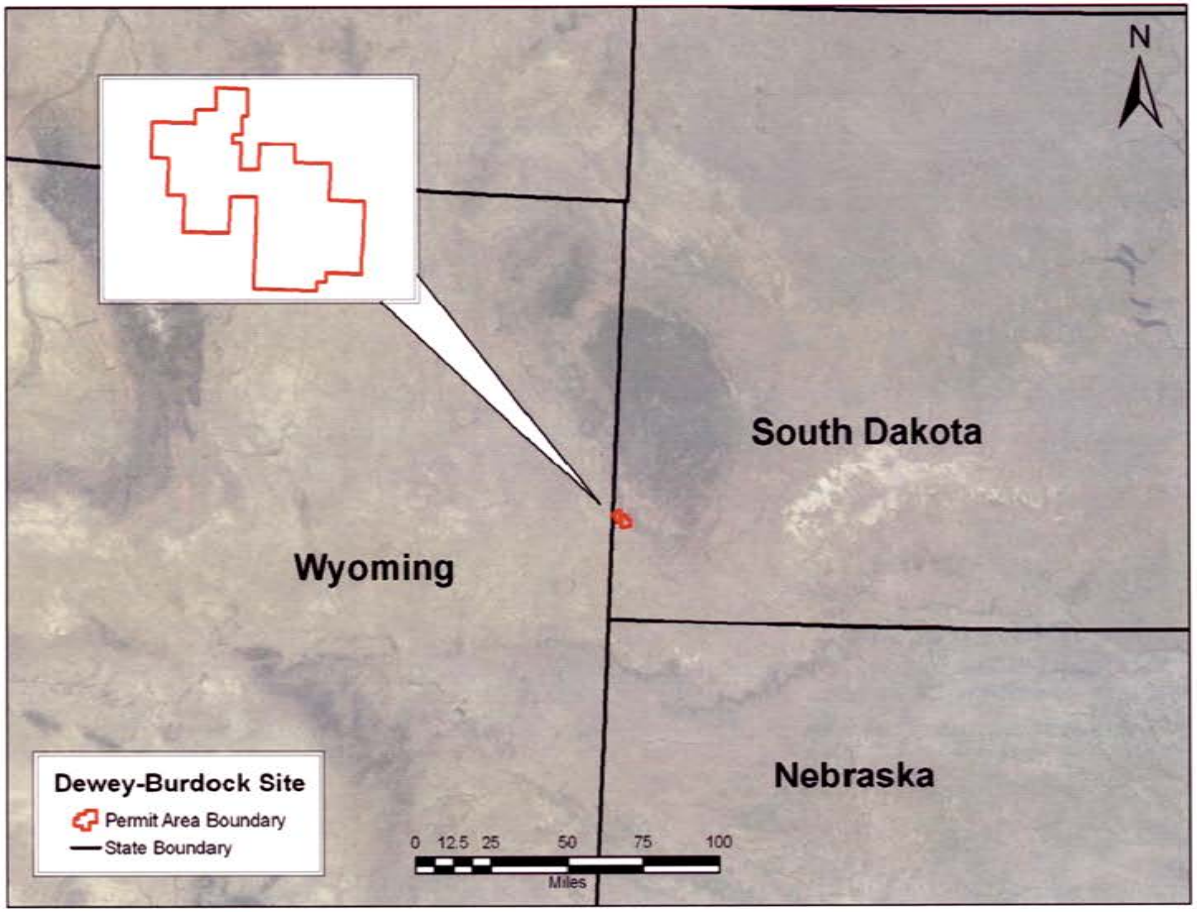

Figure 1-1. Dewey-Burdock Site Location

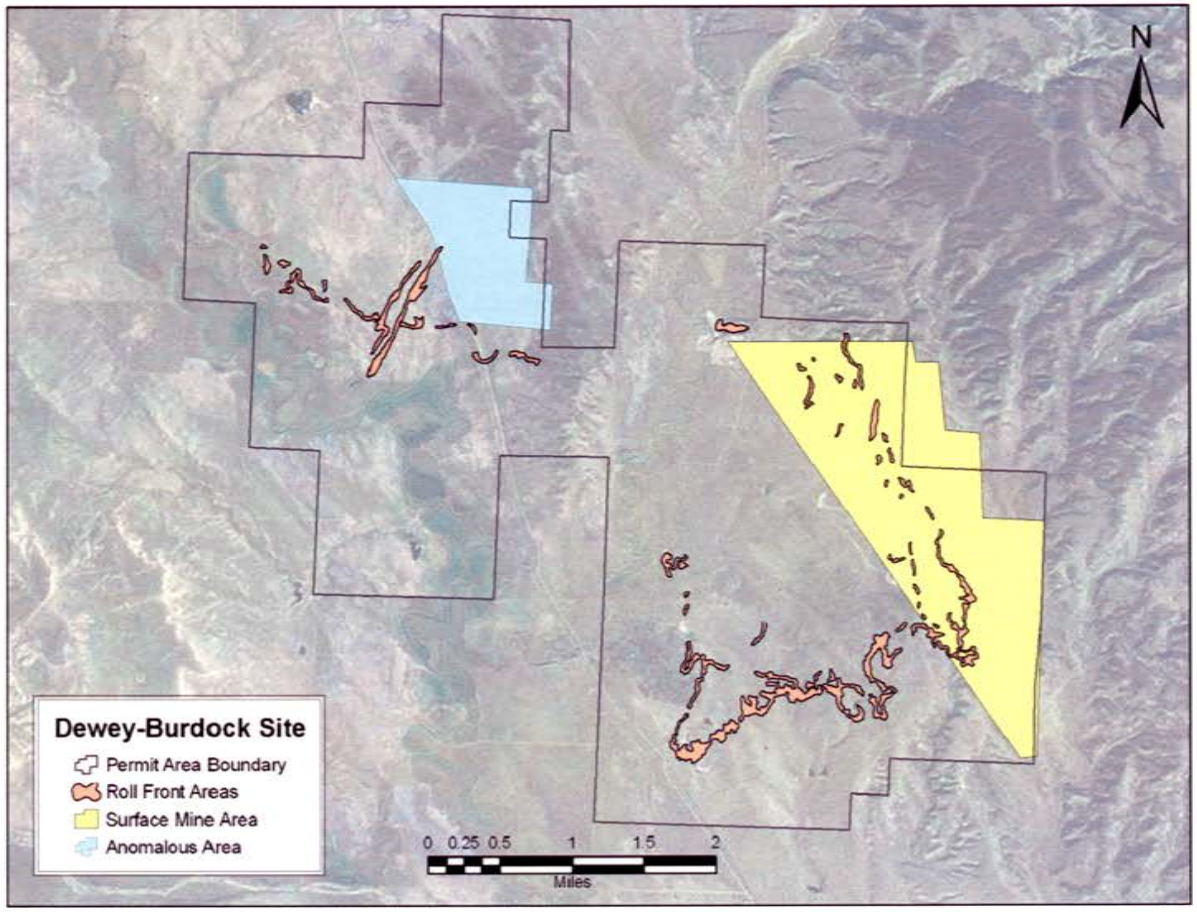

Figure 1-2. Salient Areas of Dewey-Burdock Site

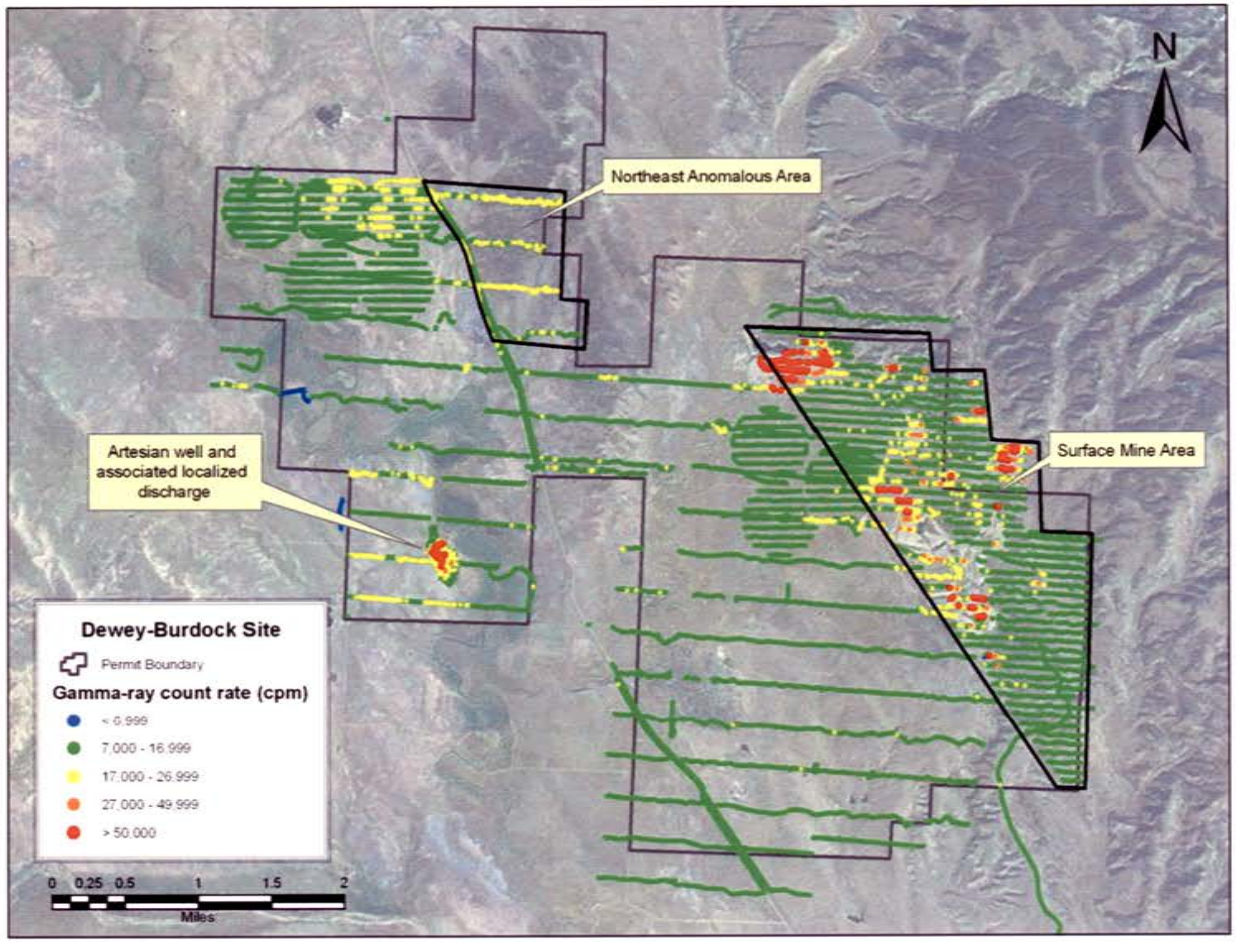

Figure 3-1. Baseline GPS-Based Gamma-Ray Count Rates

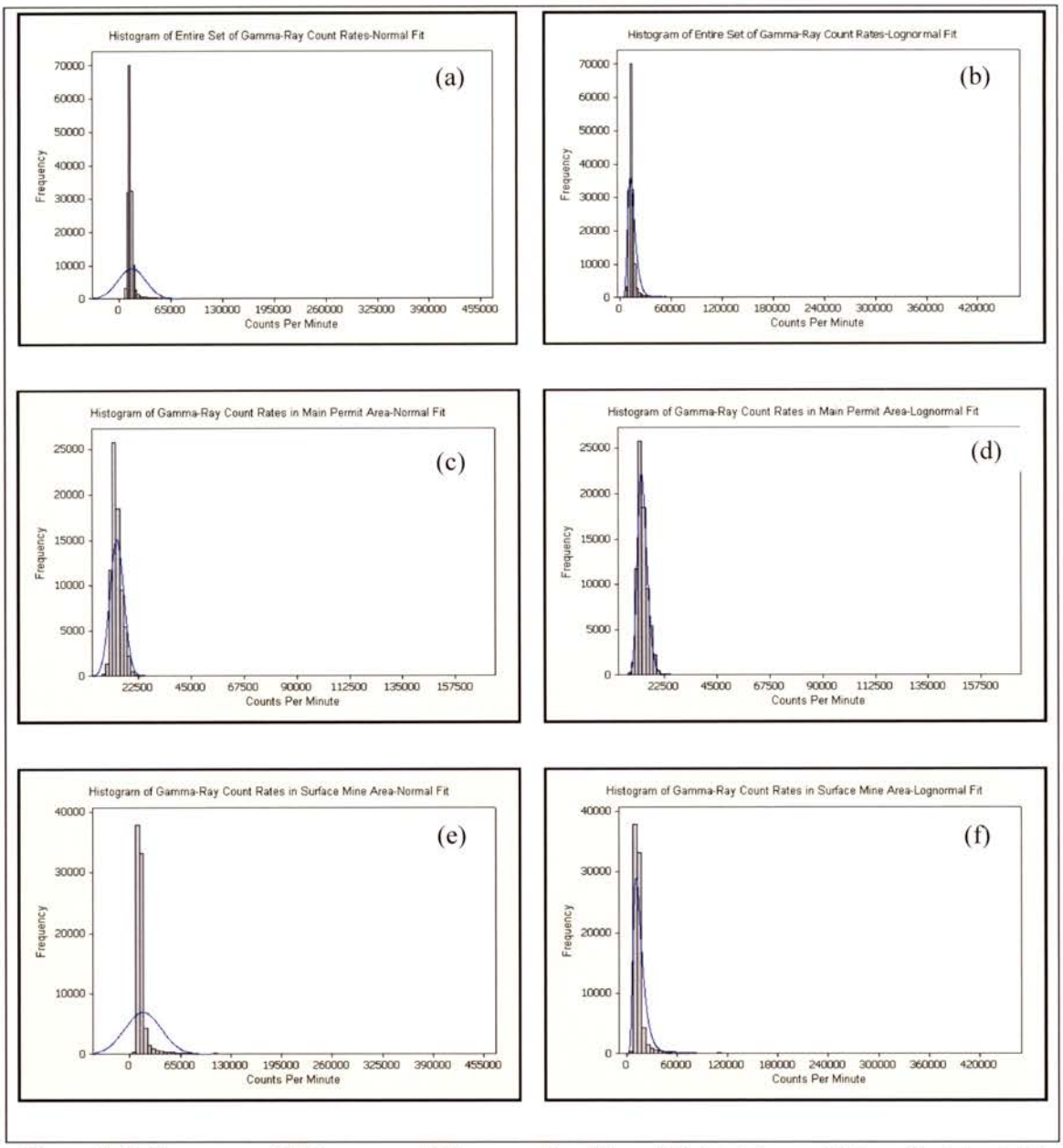

Figure 3-2. Frequency Histograms of Gamma-Ray Count Rates (a) normal fit in entire data set, (b) lognormal fit in entire data set, (c) normal fit in main permit area, (d) lognormal fit in main permit area, (e) normal fit in surface mine area, (f) lognormal fit in surface mine area.

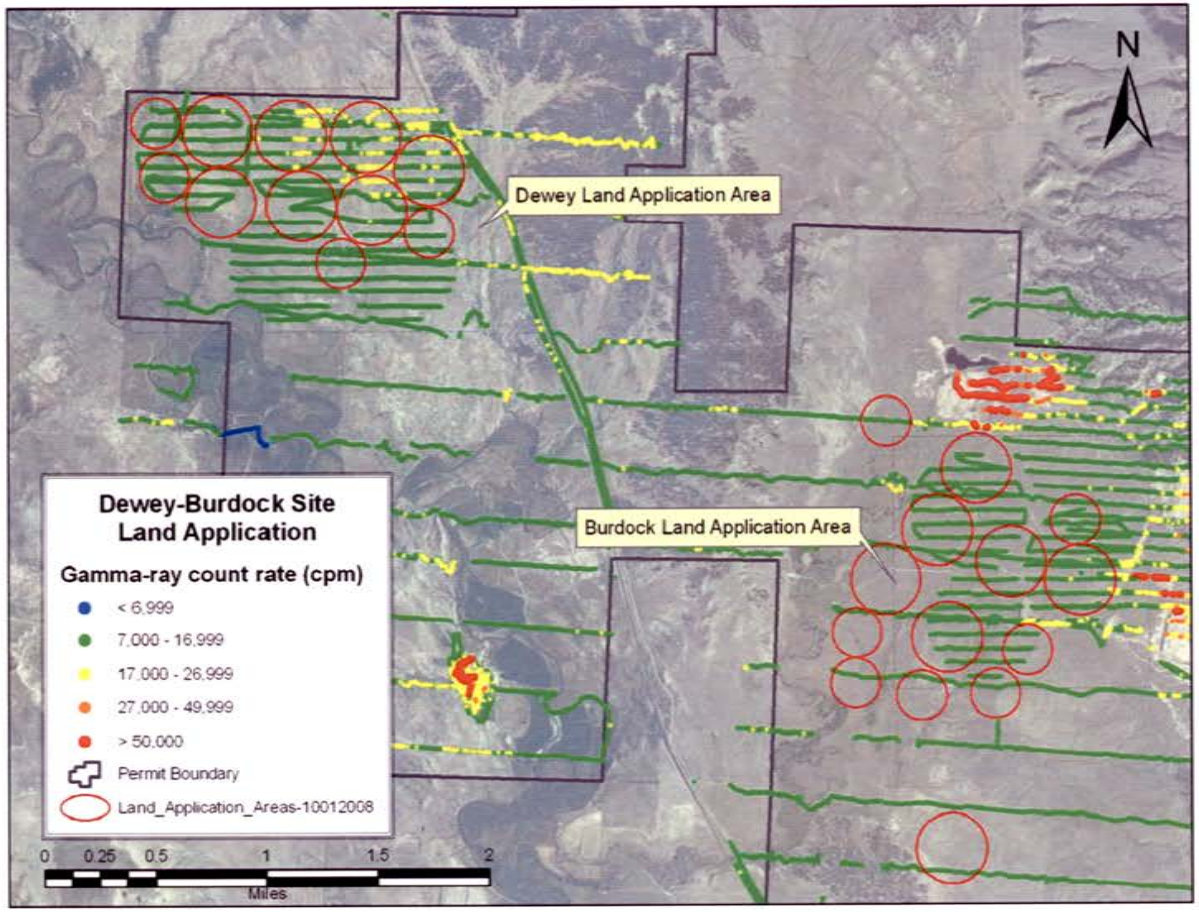

Figure 3-3. GPS-Based Gamma-Ray Count Rates in the Land Application Areas

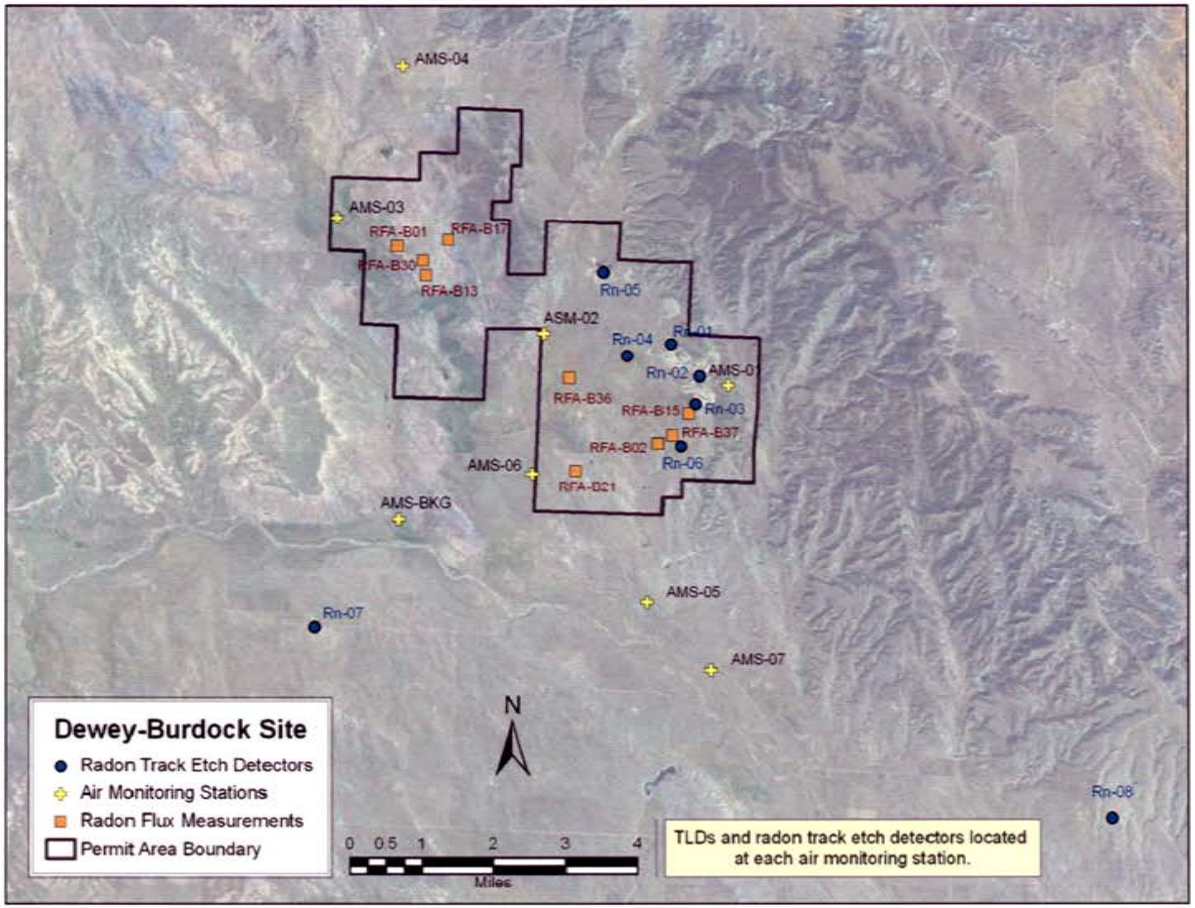

Figure 4-1. Air Monitoring Station, Ambient Radon, and Radon Flux Measurement Locations

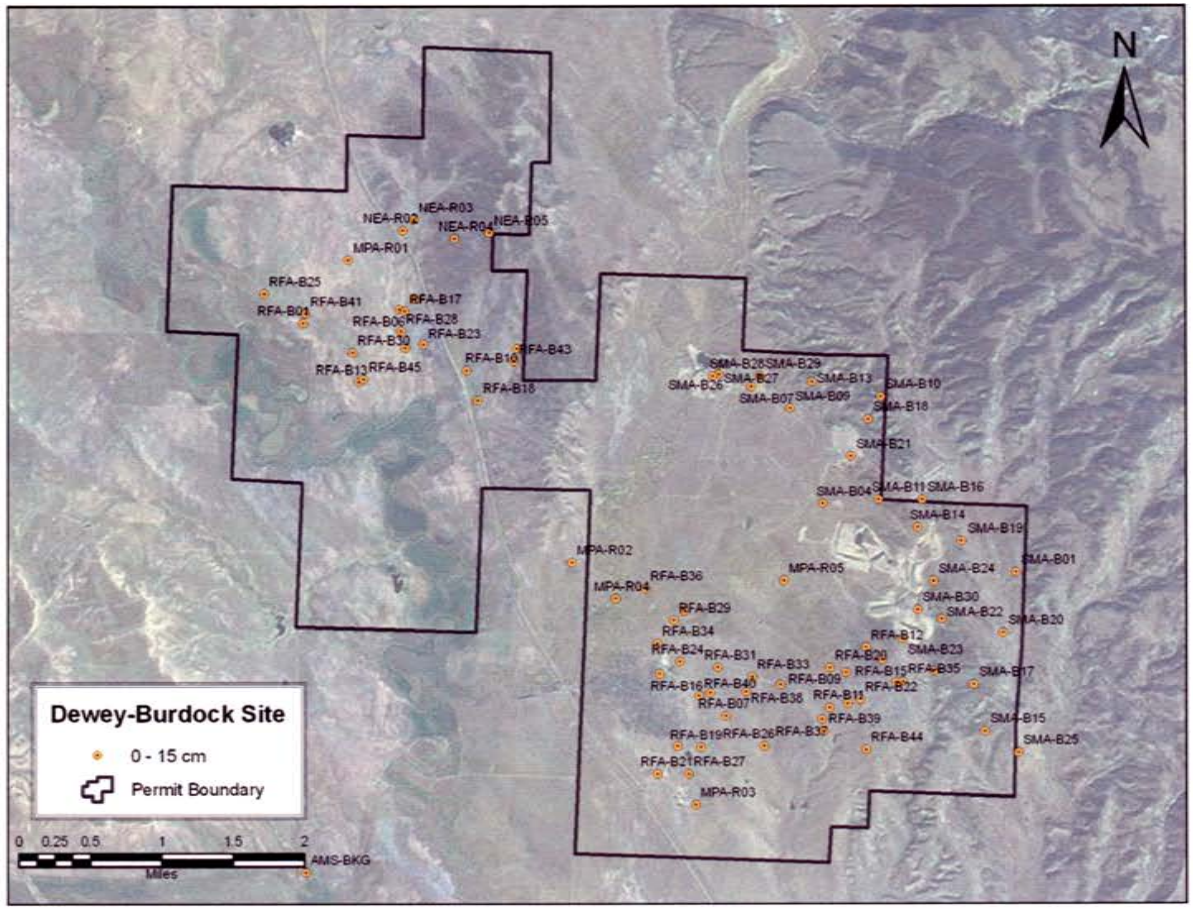

Figure 4-2. Soil Sample Locations (does not include samples collected at AMS locations and land application areas)

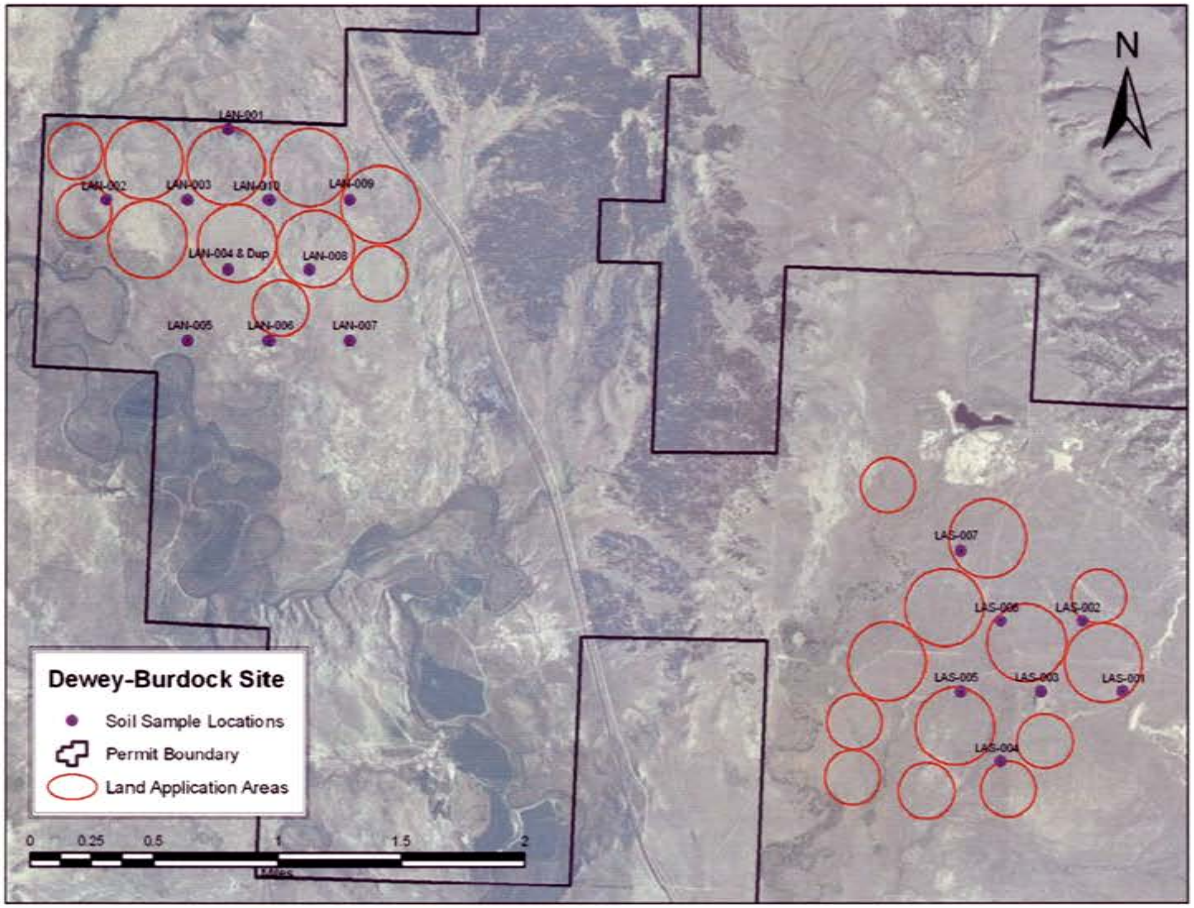

Figure 4-3. Soil Sample Locations in Land Application Areas

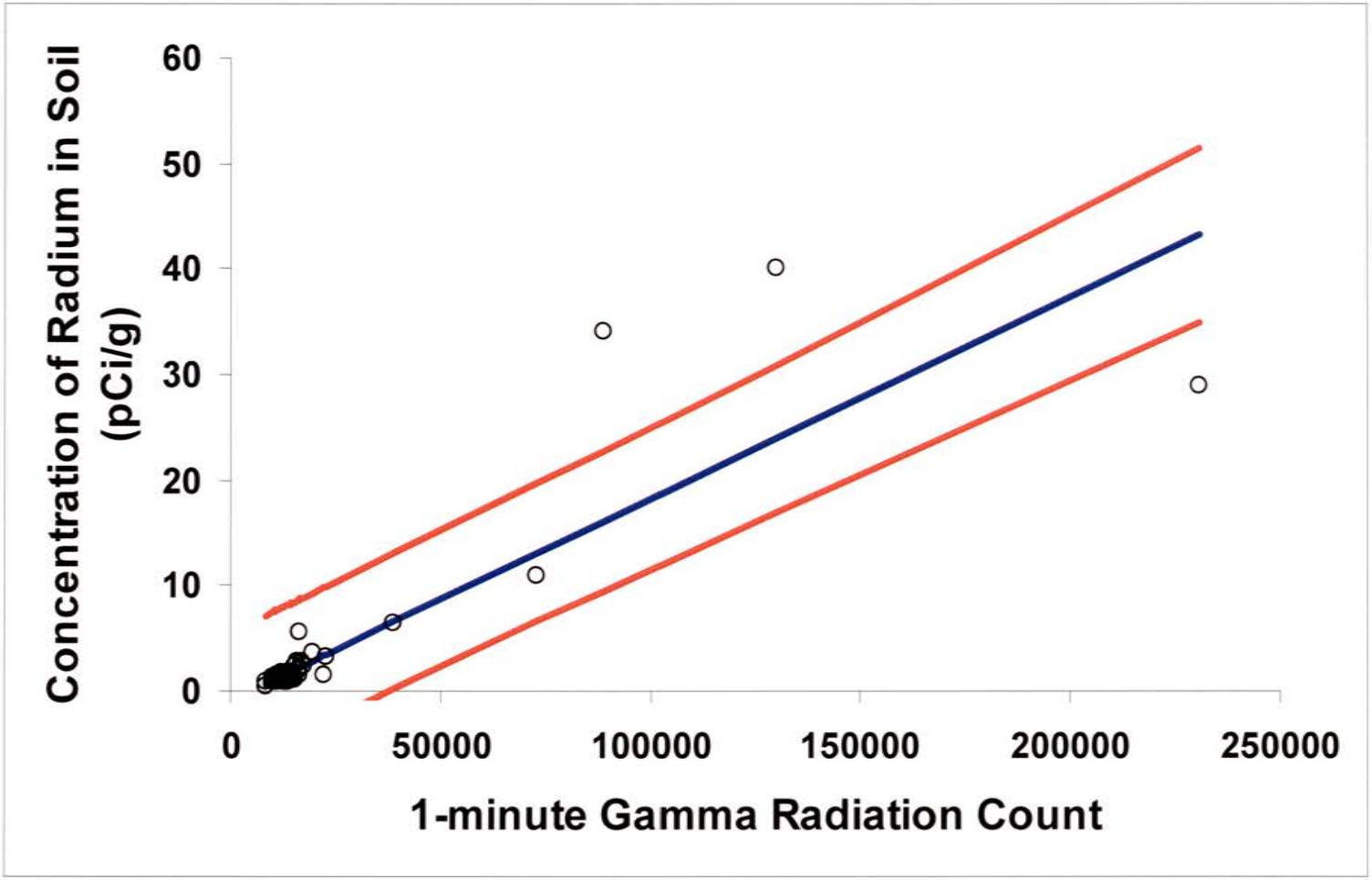

Figure 5-1. Correlation of concentrations of radium in soil and 1-minute integrated gamma-ray counts, using all 80 pairs of measurements. The red lines are predicted 95 percent confidence lines.

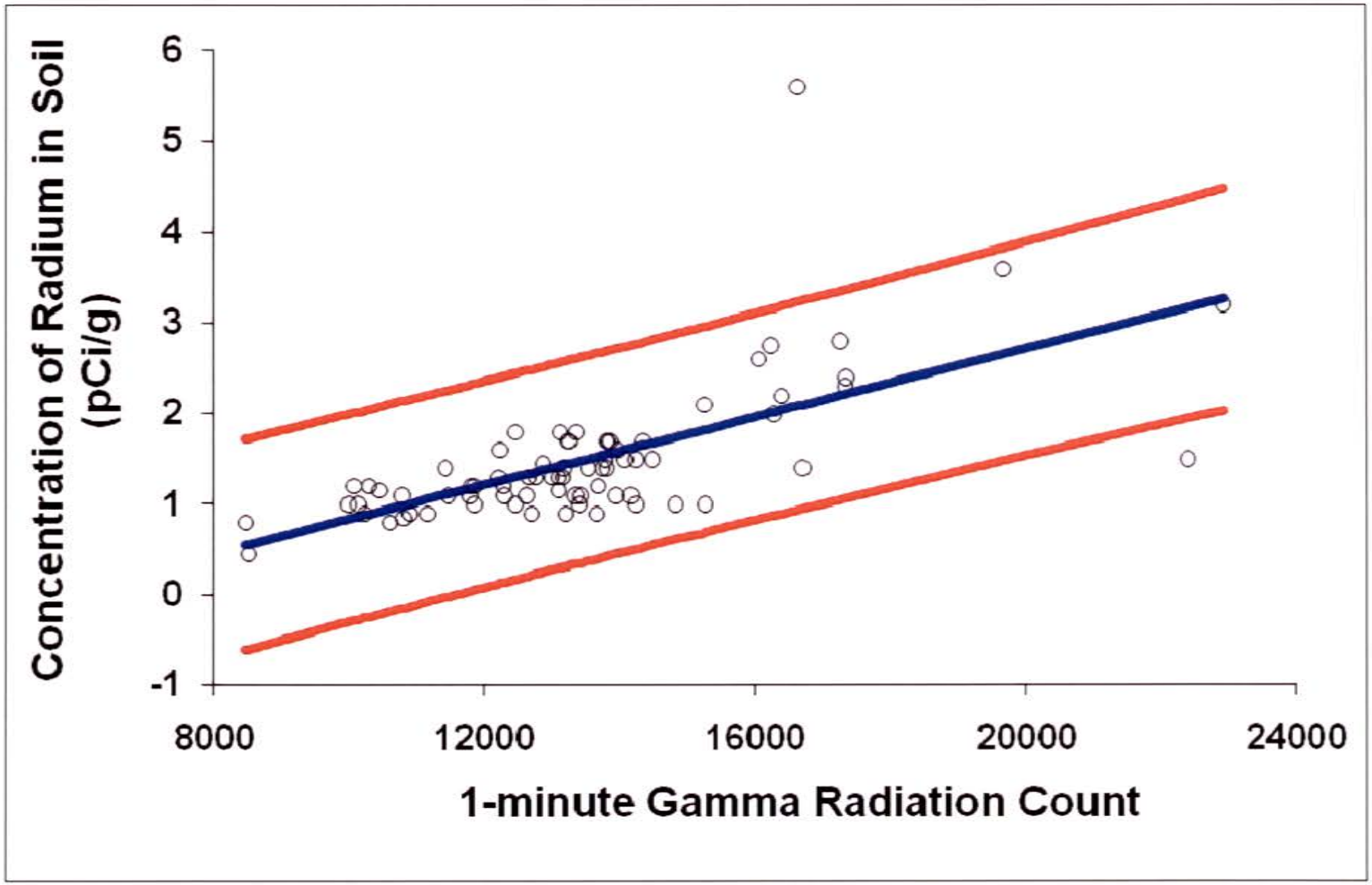

Figure 5-2. Correlation of concentrations of radium in soil and 1-minute integrated gamma-ray counts, with five outliers removed. The red lines are predicted 95 percent confidence lines.

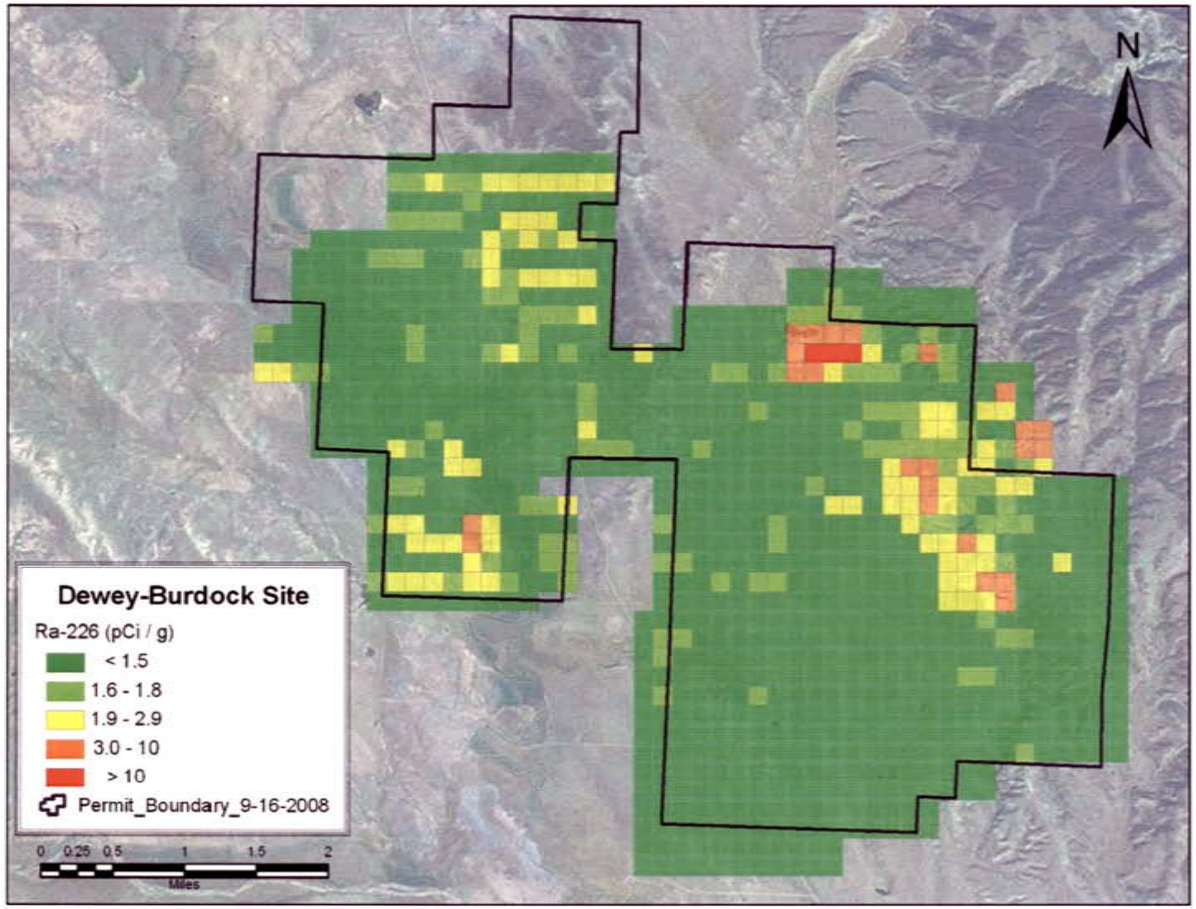

Figure 5-3. Grid block averages of radium-226 concentrations predicted from correlation between radium-226 concentrations in soil and gamma-ray count rates

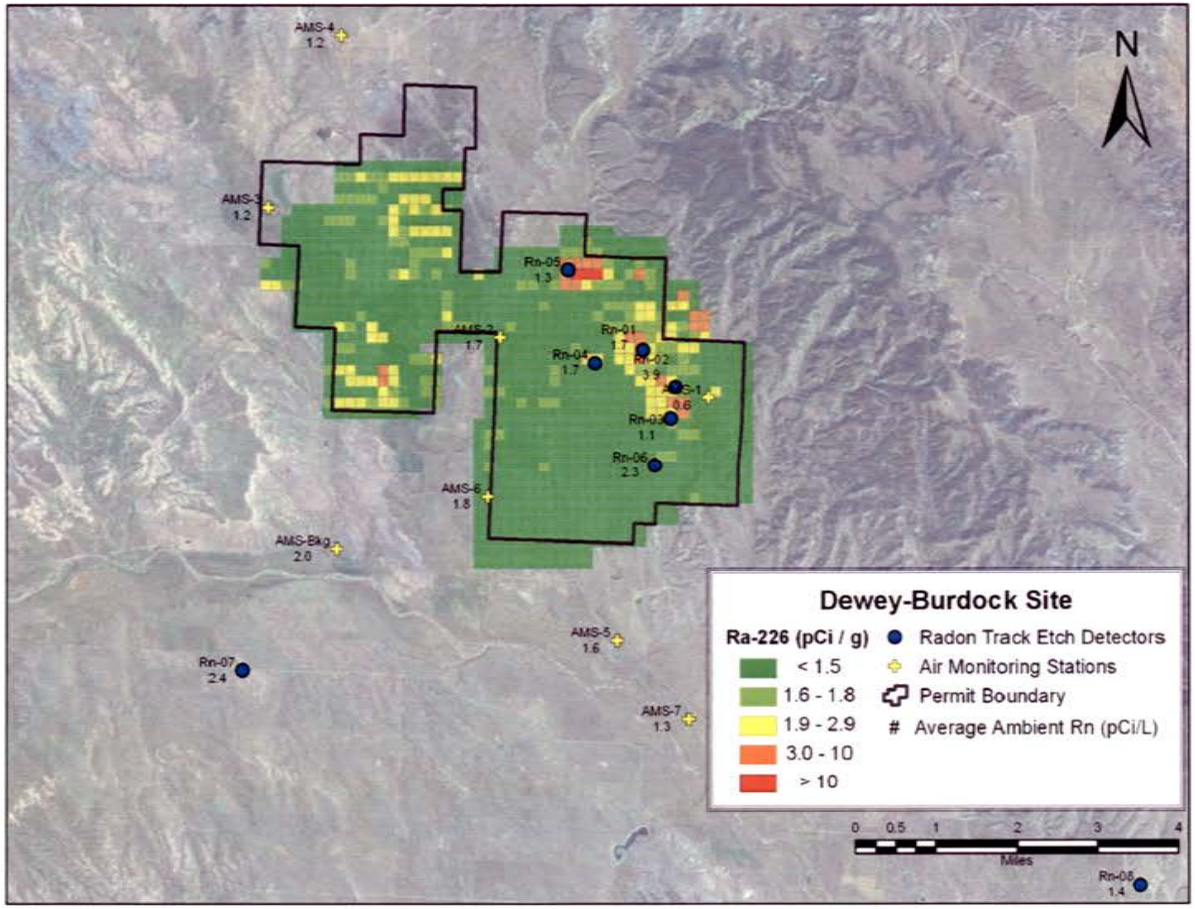

Figure 8-1. Ambient Radon Concentrations Superimposed on Predicted Radium-226 Concentrations

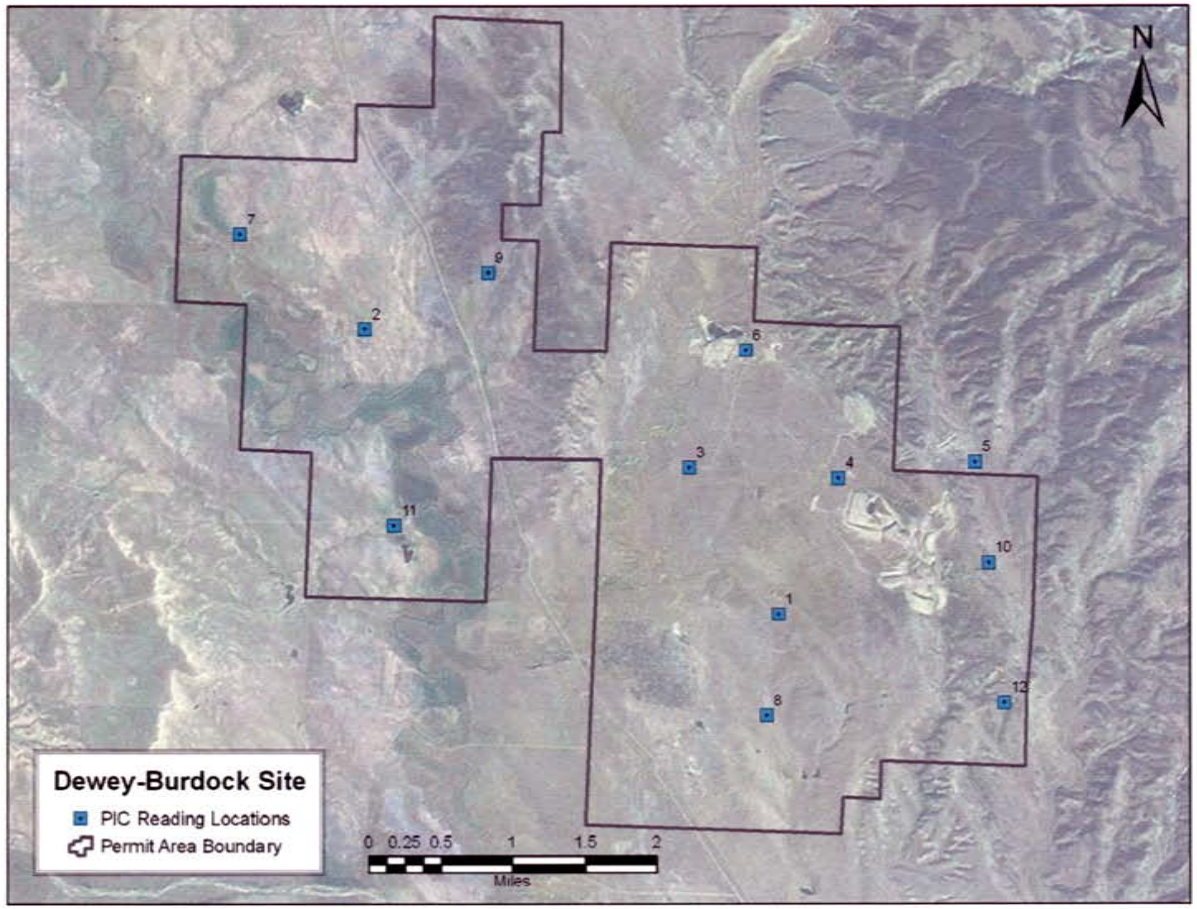

Figure 9-1. Locations of PIC-Sodium Iodide Correlation Measurements

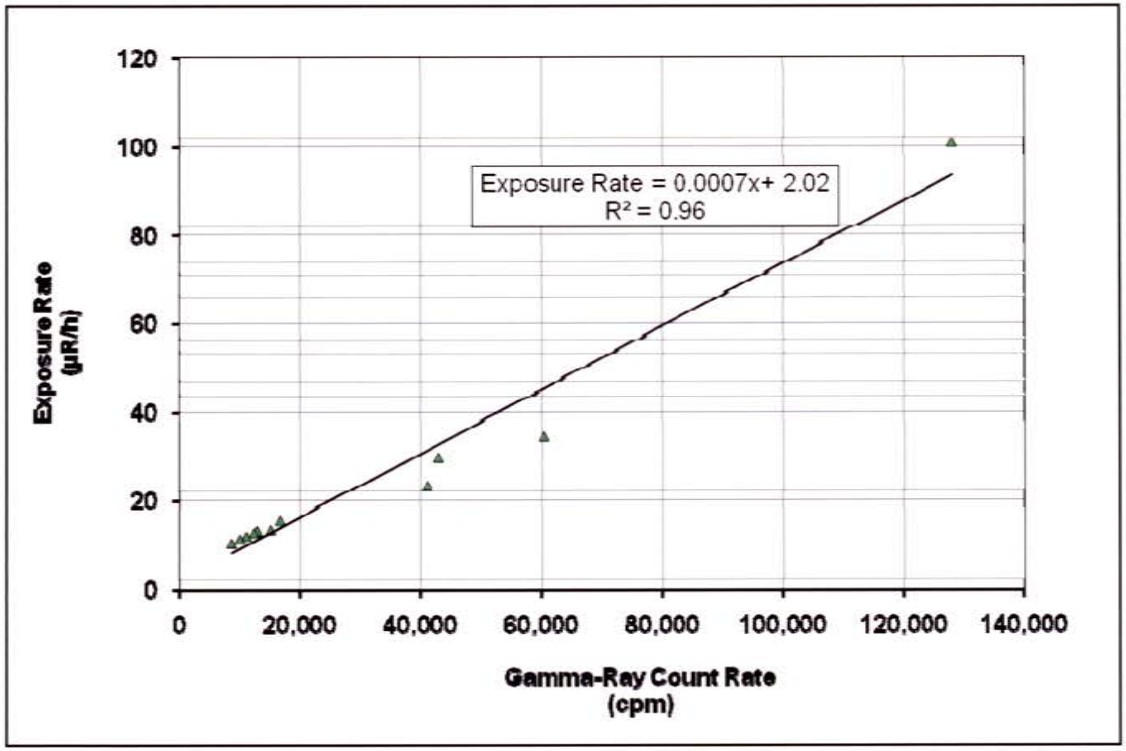

Figure 9-2. Linear Regression Model: Exposure Rates Correlated to Gamma-Ray Count Rates

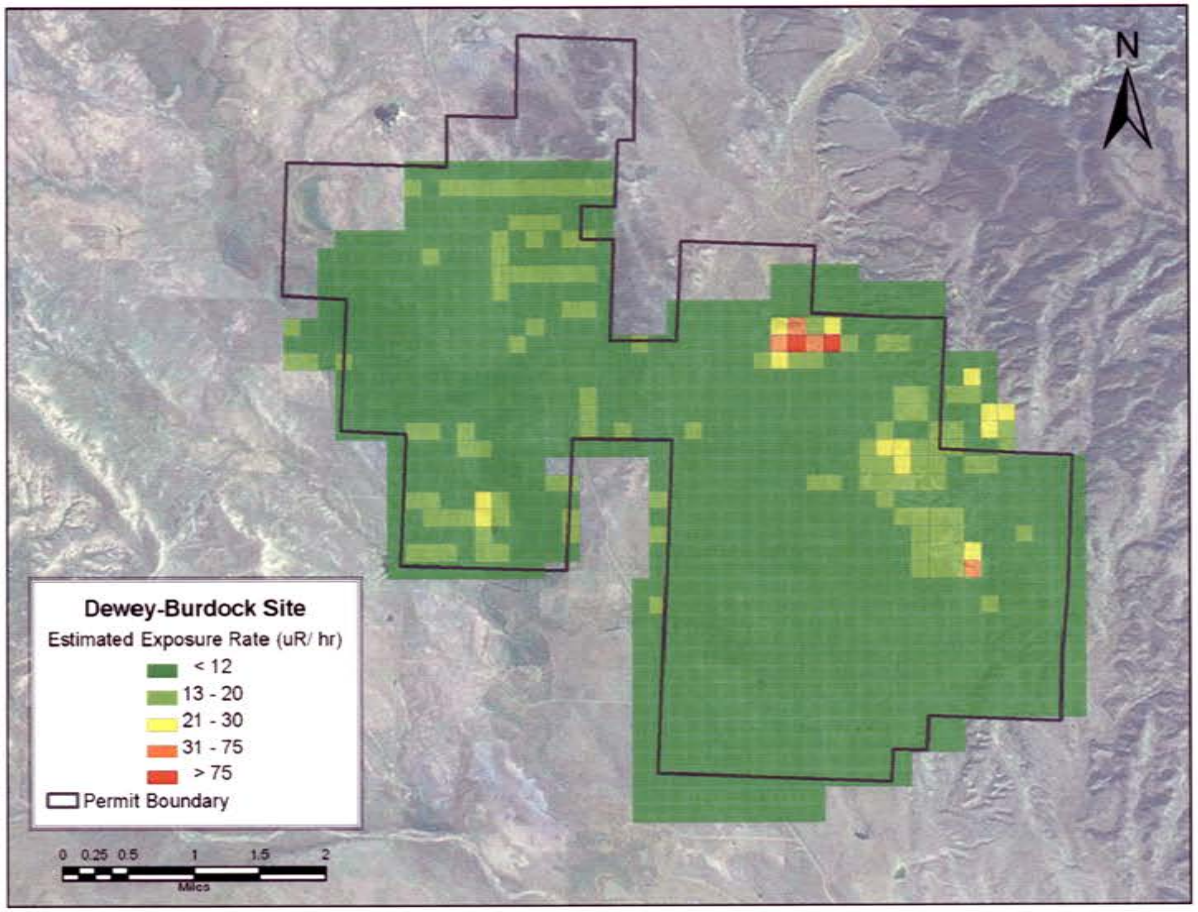

Figure 9-3. Predicted Site-Wide Exposure Rates, Grid Block Averages

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Appendix A

GPS-Based Gamma-Ray Survey Calibration Sheets and Function Check Data

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Reuter-Stokes

Calibration Certificate

Reuter-Stokes certifies that the Environmental Radiation Monitor, identified below, has been calibrated for output using the shadow shield technique*, and calibrated with radiation sources traceable to the National Institute of Standards and Technology.

Sensor Type: 100 R/Hr

Serial Number: 07J00KM1

Calibration Date: 6/19/08

Sensitivity: 10.21 mV/μR/h

Brandon Brady 6/23/08

Authorized Signature

*Calibration Procedure: RS-SOP 238.1

Reuter-Stokes

Calibration Data

Sensor Type:	100 R/Hr	Source (CS-137):	BB-400
Serial Number:	07J00KM1	Date of Certification:	12/1/94
Calibration Date:	6/19/08	Exposure Rate at 1 meter:	4.226 mR/h

Customer Name: ENVIRONMENTAL RESTORATION

Sensitivity (Ra-226): 10.21 mV/μR/h

Distance		Exposure Rate	P+S+A	S+A	P	k(CS-137)
Feet	cm	μR/h	V	V	V	mV/μR/h
11.8	359	235.064	3.692	1.264	2.428	10.33
13.8	420	171.114	3.202	1.435	1.768	10.33
15.8	481	129.972	3.173	1.832	1.341	10.31
17.8	542	101.968	3.335	2.283	1.052	10.32

k(CS-137) = 10.32 mv/μR/h

k(Ra-226) = .9892 k(CS-137)

k(Ra-226) = 10.21 mv/μR/h

$\bar{k}$ = 10.32 mv/μR/h

σ = .008 mv/μR/h

$V = \frac{\sigma}{k} =$ 0.074%

By: [illegible]

Date: 6/19/08

Reuter-Stokes

RSS-131 FIRMWARE PARAMETERS

S/N 07J00KM1

RAC	2.210E-08
ZLN	0.000E-00
ZMN	4.324E-01
ZHN	-2.127E-03
ZLD	0.000E-00
ZMD	-2.414E-04
ZHD	-6.174E-07
RLN	4.619E+11
RMN	2.231E+09
RHN	1.001E+07
RLV	-1.524E+08
RMV	2.094E+04
RHV	-1.548E+02

Only change in constants is
In the RAC from 2.228E-08

By: _____
Level 2 Nuclear / Electrical Inspector

Date: 4/19/08

Reviewed By: Brandon Bradly 4/23/08
Product Engineer

[redacted]

EBERLINE SERVICES

CERTIFICATE OF CALIBRATION

Gamma Standard

S.O.# 3951
P.O.# N/A

Description of Standard:

Model No. CS-7AS Serial No. 4054-02 Isotope Cs-137

The source of gamma radiation is mounted on a 2.54 cm diameter PLASTIC disc, 3 mm thick and sealed in a PLASTIC RESIN.

Measurement Method:

The gamma ray emission rate was compared with a similar standard, which was calibrated by NIST S/N 2752-91. The comparison of relative gama ray emission rates was accomplished using a high resolution gamma-ray detector (nominal active volume 100 cm³) and a multichannel pulse height analyzer.

Measurement Result:

The gamma ray activity of the standard on 10-03-2002 was 8.5 uCi.

The uncertainty of the measurement is 5 %, which is the sum of the uncertainty assigned to the NIST reference (2.2 %), random counting error at the 99% confidence level, and the estimated upper limit of systematic errors.

Calibrated by: ART REUST Reviewed by:

Calibration Technician: Q.A. Representative: Anthony W. Toth

Calibration Date: 10-03-2002 Reviewed Date: 10-4-02

Analytical Services
7021 Pan American Freeway NE
Albuquerque, New Mexico 87109-4238
(505) 345-3461 Fax (505) 761-5416
Toll Free (866) RAD-LABS (723-5227)
www.eberlineservices.com

Certificate of Calibration

Ratemeter / Scaler Certificate of Calibration

ERG
Environmental Restoration Group, Inc
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2221r Serial No.: 190171

All Ranges Calibrated Electronically: Ludlum Pulser Generator Serial No.: ☐ 97743 ☑ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No. 481-3 • Calibration of Radiation Detection Instruments & Devices

☑ Mechanical ck. ☑ Meter Zeroed ☑ Geotropism ck. ☑ F/S Response ck. ☑ Audio ck.

☑ THR/WIN ck. High Voltage ck.: ☑ 500v ☑ 1000v ☑ 1500v ☑ Battery ck. (min 4.4 vdc)

Threshold Setting: 10 mV

Instrument found within tolerance (+/- 10%) ☑ Yes ☐ No

Reference Calibration Point	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	+/- 10%	400 Kcpm
100 Kcpm	+/- 10%	100 Kcpm
40 Kcpm	+/- 10%	40 Kcpm
10 Kcpm	+/- 10%	10 Kcpm
4 Kcpm	+/- 10%	4 Kcpm
1 Kcpm	+/- 10%	1 Kcpm
400 cpm	+/- 10%	400 cpm
100 cpm	+/- 10%	100 cpm

Reference Calibration Point	Instrument "As Found Reading"	Log Scale Count Rate	Integrated Counts (1-minute count)
400 Kcpm	+/- 10%	400 Kcpm	3998866
40 Kcpm	+/- 10%	40 Kcpm	39888
4 Kcpm	+/- 10%	4 Kcpm	3988
400 cpm	+/- 10%	400 cpm	398

Calibrated By: [signature] Calibration Date: 10-9-07

Calibration Due: 10-9-08

Reviewed By: [signature] Date: 10/9/07

ERG Form 1 02B

Certificate of Calibration

Ratemeter / Scaler Certificate of Calibration

ERG
Environmental Restoration Group, Inc
8809 Washington St NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2221 Serial No.: 117634

All Ranges Calibrated Electronically; Ludlum Pulser Generator Serial No.: ☐ 97743 ☑ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No 481-3 • Calibration of Radiation Detection Instruments & Devices

☑ Mechanical ck. ☑ Meter Zeroed ☑ Geotropism ck. ☑ F/S Response ck. ☑ Audio ck.

☑ THR/WIN ck. High Voltage ck.: ☑ 500v ☑ 1000v ☑ 1500v ☑ Battery ck. (min 4.4 vdc)

Threshold Setting: 10 mV

Instrument found within tolerance (+/- 10%) ☑ Yes ☐ No

Reference Calibration Point	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	+/- 10%	400 Kcpm
100 Kcpm	+/- 10%	100 Kcpm
40 Kcpm	+/- 10%	40 Kcpm
10 Kcpm	+/- 10%	10 Kcpm
4 Kcpm	+/- 10%	4 Kcpm
1 Kcpm	+/- 10%	1 Kcpm
400 cpm	+/- 10%	400 cpm
100 cpm	+/- 10%	100 cpm

Reference Calibration Point	Instrument "As Found Reading"	Log Scale Count Rate	Integrated Counts (1-minute count)
400 Kcpm	+/- 10%	400 Kcpm	398978
40 Kcpm	+/- 10%	40 Kcpm	39900
4 Kcpm	+/- 10%	4 Kcpm	3990
400 cpm	+/- 10%	400 cpm	399

Calibrated By: [signature] Calibration Date: 9-6-07

Calibration Due: 9-6-08

Reviewed By: [signature] Date: 9-6-07

ERG Form 1 02B

Certificate of Calibration

Ratemeter / Scaler Certificate of Calibration

ERG
Environmental Restoration Group, Inc
8809 Washington St NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2221 Serial No.: 117648

All Ranges Calibrated Electronically: Ludlum Pulser Generator Serial No.: ☐ 97743 ☑ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No. 48[illegible] • Calibration of Radiation Detection Instruments & Devices

☑ Mechanical ck. ☑ Meter Zeroed ☑ Geotropism ck. ☑ F/S Response ck. ☑ Audio ck.

☑ THR/WIN ck. High Voltage ck.: ☑ 500v ☑ 1000v ☑ 1500v ☑ Battery ck. (min 4.4 vdc)

Threshold Setting: 10 mV

Instrument found within tolerance (+/- 10%) ☑ Yes ☐ No

Reference Calibration Point	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	+/- 10%	400 Kcpm
100 Kcpm	+/- 10%	100 Kcpm
40 Kcpm	+/- 10%	40 Kcpm
10 Kcpm	+/- 10%	10 Kcpm
4 Kcpm	+/- 10%	4 Kcpm
1 Kcpm	+/- 10%	1 Kcpm
400 cpm	+/- 10%	400 cpm
100 cpm	+/- 10%	100 cpm

Reference Calibration Point	Instrument "As Found Reading"	Log Scale Count Rate	Integrated Counts (1-minute count)
400 Kcpm	+/- 10%	400 Kcpm	399233
40 Kcpm	+/- 10%	40 Kcpm	39924
4 Kcpm	+/- 10%	4 Kcpm	3992
400 cpm	+/- 10%	400 cpm	399

Calibrated By: [signature] Calibration Date: 9-5-07

Calibration Due: 9-5-08

Reviewed By: [signature] Date: 9-6-07

ERG Form 1.02B

Certificate of Calibration

Ratemeter / Scaler Certificate of Calibration

ERG
Environmental Restoration Group, Inc
8809 Washington St NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2221r Serial No.: 138377

All Ranges Calibrated Electronically: Ludlum Pulser Generator Serial No.: ☐ 97743 ☑ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No 481-3 • Calibration of Radiation Detection Instruments & Devices

☑ Mechanical ck. ☑ Meter Zeroed ☑ Geotropism ck. ☑ F/S Response ck. ☑ Audio ck.

☑ THR/WIN ck. High Voltage ck.: ☑ 500v ☑ 1000v ☑ 1500v ☑ Battery ck. (min 4.4 vdc)

Threshold Setting: 10 mV

Instrument found within tolerance (+/- 10%) ☑ Yes ☐ No

Reference Calibration Point	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	400 Kcpm	400 Kcpm
100 Kcpm	100 Kcpm	100 Kcpm
40 Kcpm	40 Kcpm	40 Kcpm
10 Kcpm	10 Kcpm	10 Kcpm
4 Kcpm	4 Kcpm	4 Kcpm
1 Kcpm	1 Kcpm	1 Kcpm
400 cpm	400 cpm	400 cpm
100 cpm	100 cpm	102 cpm

Reference Calibration Point	Instrument "As Found Reading"	Log Scale Count Rate	Integrated Counts (1-minute count)
400 Kcpm	400 Kcpm	400 Kcpm	398495
40 Kcpm	40 Kcpm	40 Kcpm	39859
4 Kcpm	4 Kcpm	4 Kcpm	3987
400 cpm	400 cpm	400 cpm	399

Calibrated By: [signature] Calibration Date: 7-8-08

Calibration Due: 7-8-09

Reviewed By: [signature] Date: 7/9/08

ERG Form 1 02B

Certificate of Calibration

Ratemeter / Scaler Certificate of Calibration

ERG
Environmental Restoration Group, Inc
8809 Washington St NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Manufacturer: Ludlum Model: 2221r Serial No.: 149942

All Ranges Calibrated Electronically: Ludlum Pulser Generator Serial No.: ☐ 97743 ☑ 201932

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No 481-3 • Calibration of Radiation Detection Instruments & Devices

☑ Mechanical ck. ☑ Meter Zeroed ☑ Geotropism ck. ☑ F/S Response ck. ☑ Audio ck.

☑ THR/WIN ck. High Voltage ck.: ☑ 500v ☑ 1000v ☑ 1500v ☑ Battery ck. (min 4.4 vdc)

Threshold Setting: 10 mV

Instrument found within tolerance (+/- 10%) ☑ Yes ☐ No

Reference Calibration Point	Instrument "As Found Reading"	Instrument Meter Reading
400 Kcpm	400 Kcpm	400 Kcpm
100 Kcpm	100 Kcpm	100 Kcpm
40 Kcpm	40 Kcpm	40 Kcpm
10 Kcpm	10 Kcpm	10 Kcpm
4 Kcpm	4 Kcpm	4 Kcpm
1 Kcpm	1 Kcpm	1 Kcpm
400 cpm	400 cpm	400 cpm
100 cpm	100 cpm	102 cpm

Reference Calibration Point	Instrument "As Found Reading"	Log Scale Count Rate	Integrated Counts (1-minute count)
400 Kcpm	400 Kcpm	400 Kcpm	397437
40 Kcpm	40 Kcpm	40 Kcpm	39749
4 Kcpm	4 Kcpm	4 Kcpm	3975
400 cpm	400 cpm	400 cpm	398

Calibrated By: [signature] Calibration Date: 7-8-08

Calibration Due: 7-8-09

Reviewed By: [signature] Date: 7/7/08

ERG Form 1 02B

Certificate of Calibration

Voltage Plateau Form

ERG
Environmental Restoration Group, Inc
8809 Washington St NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-10 Serial No.: PR118372

Counter Mfg.: Ludlum Model: 2221r Serial No.: 149942

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No 481-3 • Calibration of Radiation Detection Instruments & Devices

Counter Threshold Setting: 10 mV Cable Length: ☐ 39 inch, ☐ 5 foot, ☑ Other: Curly

Detector geometry to source: ☐ Face, ☑ Side, ☐ Below, ☐ Other:

Distance to source: ☐ Contact, ☑ 6-Inches, ☐ Other:

Gamma Source : ☑ Cs-137 @ 5.7μCi (2/18/08) sn: 4097-03 ☐ Other:

Count Time: 1 Minute

High Voltage	Gross Source Counts	Background Counts
700	22785	
800	48024	
900	67222	
1000	74072	
1050	75152	
1100	77671	10353
→ 1150	78495	10558
1200	78943	

Comments: Recommended Operating High Voltage: 1150 volts

Calibrated By: [signature] Calibration Date: 7-8-08

Calibration Due: 7-8-09

Reviewed By: [signature] Date: 7/9/08

ERG Form 1 03A1

[redacted]

Certificate of Calibration

Voltage Plateau Form

ERG
Environmental Restoration Group, Inc
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-10 Serial No.: PR198936

Counter Mfg.: Ludlum Model: 2221 Serial No.: 117648

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No 481-3 • Calibration of Radiation Detection Instruments & Devices

Counter Threshold Setting: 10 mV Cable Length: ☐ 39 inch, ☐ 5 foot, ☑ Other: Curly

Detector geometry to source: ☐ Face, ☑ Side, ☐ Below, ☐ Other:

Distance to source: ☐ Contact, ☑ 6-Inches, ☐ Other:

Gamma Source : ☑ Cs-137 @ 5.81µCi (3/07/07) sn: 4097-03 ☐ Other:

Count Time: 1 Minute

High Voltage	Gross Source Counts	Background Counts
700	34348	
800	62611	
900	75761	
1000	80115	
1100	81583	9258
1200	82568	

Comments: Recommended Operating High Voltage: 1100 volts

Calibrated By: [signature] Calibration Date: 9-5-07

Calibration Due: 9-5-08

Reviewed By: [signature] Date: 9·6·07

[redacted]

Certificate of Calibration

Voltage Plateau Form

ERG
Environmental Restoration Group, Inc
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-10 Serial No.: PR118372

Counter Mfg.: Ludlum Model: 2221 Serial No.: 117634

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No. 481-3 • Calibration of Radiation Detection Instruments & Devices

Counter Threshold Setting: 10 mV Cable Length: ☐ 39 inch, ☐ 5 foot, ☑ Other: Curly

Detector geometry to source: ☐ Face, ☑ Side, ☐ Below, ☐ Other:

Distance to source: ☐ Contact, ☑ 6-Inches, ☐ Other:

Gamma Source: ☑ Cs-137 @ 5.81μCi (3/07/07) sn: 4097-03 ☐ Other:

Count Time: 1 Minute

High Voltage	Gross Source Counts	Background Counts
700	33013	
800	61587	
900	76444	
1000	81227	
1100	82653	9657
1200	83660	

Comments: Recommended Operating High Voltage: 1100 volts

Calibrated By: [signature] Calibration Date: 9-6-07

Calibration Due: 9-6-08

Reviewed By: [signature] Date: 9-6-07

Certificate of Calibration

Voltage Plateau Form

ERG
Environmental Restoration Group, Inc
8809 Washington St NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-10 Serial No.: PR198936

Counter Mfg.: Ludlum Model: 2221r Serial No.: 138377

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No 481-3 • Calibration of Radiation Detection Instruments & Devices

Counter Threshold Setting: 10 mV Cable Length: ☐ 39 inch, ☐ 5 foot, ☑ Other: Curly

Detector geometry to source: ☐ Face, ☑ Side, ☐ Below, ☐ Other:

Distance to source: ☐ Contact, ☑ 6-Inches, ☐ Other:

Gamma Source : ☑ Cs-137 @ 5.7μCi (2/18/08) sn: 4097-03 ☐ Other:

Count Time: 1 Minute

High Voltage	Gross Source Counts	Background Counts
700	27018	
800	52935	
900	70350	
1000	75558	
1050	76535	
1100	77714	10137
1150	77995	10243
1200	78417	

Comments: Recommended Operating High Voltage: 1150 volts

Calibrated By: [signature] Calibration Date: 7-8-08

Calibration Due: 7-8-09

Reviewed By: [signature] Date: 7/9/08

ERG Form 1 03A1

Certificate of Calibration

Voltage Plateau Form

ERG
Environmental Restoration Group, Inc
8809 Washington St. NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-10 Serial No.: PR153990

Counter Mfg.: Ludlum Model: 2221 Serial No.: 190171

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No 481-3 • Calibration of Radiation Detection Instruments & Devices

Counter Threshold Setting: 10 mV Cable Length: ☐ 39 inch, ☐ 5 foot, ☑ Other: Curly

Detector geometry to source: ☐ Face, ☑ Side, ☐ Below, ☐ Other:

Distance to source: ☐ Contact, ☑ 6-Inches, ☐ Other:

Gamma Source : ☑ Cs-137 @ 5.81μCi (3/07/07) sn: 4097-03 ☐ Other:

Count Time: 1 Minute

High Voltage	Gross Source Counts	Background Counts
700	1058	
800	24638	
900	47539	
1000	68923	
1100	77419	
1150	79281	9781
1200	80757	

Comments: Recommended Operating High Voltage: 1150 volts

Calibrated By: [signature] Calibration Date: 10-9-07

Calibration Due: 10-9-08

Reviewed By: [signature] Date: 10/9/07

ERG Form 103A1

[redacted]

Certificate of Calibration

Voltage Plateau Form

ERG
Environmental Restoration Group, Inc
8809 Washington St NE, Suite 150
Albuquerque, NM 87113
(505) 298-4224

Detector Mfg.: Ludlum Model: 44-10 Serial No.: PR153990

Counter Mfg.: Ludlum Model: 2221 Serial No.: 190171

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997
NMRCB Registration No 481-3 • Calibration of Radiation Detection Instruments & Devices

Counter Threshold Setting: 10 mV Cable Length: ☐ 39 inch, ☐ 5 foot, ☑ Other: Curly

Detector geometry to source: ☐ Face, ☑ Side, ☐ Below, ☐ Other:

Distance to source: ☐ Contact, ☑ 6-Inches, ☐ Other:

Gamma Source: ☑ Cs-137 @ 5.81μCi (3/07/07) sn: 4097-03 ☐ Other:

Count Time: 1 Minute

High Voltage	Gross Source Counts	Background Counts
700	1058	
800	24638	
900	47539	
1000	68923	
1100	77419	
1150	79281	9781
1200	80757	

Comments: Recommended Operating High Voltage: 1150 volts

Calibrated By: [signature] Calibration Date: 10-9-07

Calibration Due: 10-9-08

Reviewed By: [signature] Date: 10/9/07

ERG Form 1.03A1

(A)

Daily Function Check Form

Site: Rancho Seco, CA

Ratemeter: Ludlum 2221 Serial No: 117634 Cal Due Date: 9-6-08

Detector: Ludlum 44-10 Serial No: PR 118372 Cal Due Date: 9-6-08

Source: Cs-137 Activity: 8.5 μCi on 10-3-02 Serial No: 4059-02 Cs-7AS

Distance to Source: 6-in. see notes

Notes:

Date	Time	Battery	High Voltage	Threshold (mv)	Gross Counts (CPM)	Background (CPM)	Net Counts (CPM)	Error (%)	Initials	Location
9/13/07	0700	5.9	1102	100	97668	7912	89756	0.5%	MW	Barn
9/13/07	1710	5.8	1092	98	84131	7860	76271	0.5%	MW	Barn
9/14/07	6:50am	5.7	1108	100	91644	7968	83676	0.5%	DRF	Barn
9/14/07	8:20pm	5.7	1100	100	55[illegible]*	8100	47581	0.3%	DRF	Barn
9/15/07	6:35am	5.7	1105	100	66837*	8325	58512	0.4%	DRF	Barn
9/15/07	5:00pm	5.5	1083	97	68549*	8210	60339	0.4%	DRF	Barn
9/17/07	~~7:15am~~ 7:20am	5.7	1102	99	363488**	8920**	354268	2%	DRF	Barn
9/17/07	4:20pm	5.5	1090	99	368305**	8838**	359467	2%	DRF	Barn
9/18/07	7:10am	5.6	1101	100	137052***	9060***	127992	0.7%	DRF	Barn
9/18/07	2:30pm	5.4	1100	99	130824***	8542***	122282	0.7%	DRF	Barn
9/19/07	5:45am	5.7	1106	100	134695	~~7805~~*** -8241 DRF 9/19/07	126454	0.7%	DRF	Barn
—	—	—	—	—	—	—	—	—	—	—

Reviewed By: [signature] Date: 12/02/08

* Detector was raised by ~2" due to the mount on the ATV lifting during survey on 9/14/07.

** Function check jig used (source-detector distance of ~2")

*** Detector was placed on the ground (source-detector distance of 6" center-to-center)

Daily Function Check Form

Ratemeter Ludlum 2221 PRU8372 9 6 08
Detector Ludlum 44-10 117654 9 6 08
Source Cs 137 8.5 μCi 6-10-02 40.1-02 Cs 7A5
Distance to Source 6 in. see notes

Notes

Date		Batt								
9/19/07	5:25pm	5.4	1096	98	136365	8394	127971	0.7%	DRF	Barn
9/20/07	6:15am	5.5	1103	100	136370	8382	127988	0.7%	DRF	Barn
9/20/07	5:15pm	5.4	1078	97	131286	8210	123076	0.7%	DRF	Barn
9/21/07	7:10am	5.6	1102	99	136577	8422	128155	0.7%	DRF	Barn
9/21/07	4:20pm	5.3	1091	98	134782	8112	126670	0.7%	DRF	Barn
9/25/07	7:50am	5.5	1107	100	135603	8512	127091	0.7%	DRF	Barn
9/25/07	1745	5.4	1095	99	126887	8282	118605	0.7%	NW	Barn
9/26/07 NW ~~9/25/07~~	0700	5.5	1106	100	133522	8903	124619	0.7%	NW	Barn
9/26/07	4:40pm	5.4	1096	98	135086	8143	127545	0.7%	DRF	Barn
9/27/07	0616	5.5	1107	100	137172	9263	127909	0.7%	NW	Barn
9/27/07	3:15pm	5.3	1089	99	132525	8267	124258	0.7%	DRF	Barn
—	—	—	—	—	—	—	—	—	—	—

Reviewed By 12/08/

Daily Function Check Form

Ratemeter Ludlum 2221 — Serial No. 117648 — Calibration Date 9-6-08

Detector Ludlum 44-10 — Serial No. PR198936 — Calibration Date 9-6-08

Source Cs-137 — Activity 8.5 μCi on 10-3-02 — Serial No. 4054-07 CS-7A1

Distance to Source 6-in. see notes

Notes

Date	Time	Battery	High Voltage	Threshold mV	Counts	Background CPM	Net Counts	Efficiency %	Initials	Location
9/13/07	0700	5.3	1104	102	105016	7486	97530	0.6%	MW	Barn
9/13/07	1710	5.3	1092	101	116576	7627	108949	0.7%		
9/14/07	6:50am	5.3	1108	101	116036	7785	108251	0.7%	DRF	Barn
9/14/07	6:20pm	5.3	1098	101	103725	7742	95983	0.6%	DRF	Barn
9/15/07	6:35am	5.3	1104	101	95925	8086	87839	0.5%	DRF	Barn
9/15/07	5:30pm	5.2	1088	100	102852	7904	94948	0.6%	DRF	Barn
9/17/07	5:15am	5.3	1102	100	292273*	8350*	283923	2%	DRF	Barn
9/17/07	7:30pm	5.2	1092	100	302007*	8154*	293853	2%	DRF	Barn
9/18/07	6:45am	5.8	1101	100	133803**	8418**	125385	0.7%	DRF	Barn
9/18/07	2:30pm	5.6	1102	101	131142**	8147**	122995	0.7%	DRF	Barn
9/19/07	5:45am	5.6	1107	100	~~134697~~**	~~8241~~**	123954	0.7%	DRF	Barn
—	—	—	—	—	131759 DRF 9/19/07	7805 DRF 9/19/07	—	—	—	—

Reviewed By MJ [illegible] 12/01/08

*Check done on function check jig (distance to source = 2%)

**Check done by setting detector on the ground (distance to source = 6" center-to-center)

(F)

Rivertech, LLC

Ratemeter 222 Ludlum 117649 9-6-02
Detector Ludlum 44-10 PR198936 7-6-02
Source Cs-137 8 μCi 10-3-02 4054-02 Cs-7A5
Distance 6 in

Notes

Date										
9/19/07	5:39pm	5.4	1096	100	132023	7841	124174	0.7%	DRF	Barn
9/20/07	6:15am	5.5	1103	100	135383	7844	127489	0.7%	DRF	Barn
9/20/07	5:15pm	5.3	1088	99	131307	7677	123630	0.7%	DRF	Barn
9/21/07	7:10am	5.4	1104	100	132336	8011	129325	0.7%	DRF	Barn
9/21/07	1902	5.2	1097	100	126207	7676	118551	0.7%	NW	Barn
9/25/07	750am	5.4	1110	101	132611	8052	124559	0.7%	DRF	Barn
9/25/07	1736	5.2	1099	100	~~127714~~ 13076 NW	7914	123162	0.7%	NW	Barn
9/25/07	0705	5.3	1107	101	132784	8447	124337	0.7%	NW	Barn
9/27/07	0622	5.3	1107	100	133717	8681	125036	0.7%	NW	Barn
9/27/07	6:16pm	5.2	1098	100	134674	7814	126860	0.7%	DRF	Barn
9/28/07	0755	5.3	1106	101	130787	8242	122545	0.7%	NW	Barn
9/28/07	1027	5.2	1101	100	129316	8110	121206	0.7%	NW	Barn

Reviewed 12/01/08

#1

Daily Function Check Form

Site: Dewey Burdock

Ratemeter: Ludlum 2221
Detector: 44-10
Source: Cs-137
Distance to Source: 6-in (jig)

Serial No. 149942 Cal. Due Date 7-8-09
Serial No. ~~129377~~ AR118372 NW Cal. Due Date 7-8-09
Activity: 8.5 μCi 03-02 Serial No. 4054-02
Acceptance Range 82660 to 84723

Notes:

Date	Time	Battery	High Voltage	Threshold	Gross Counts (CPM)	Background (CPM)	Net Counts (CPM)	Efficiency (CPM/DPM)	Initials	Location
7/14/08	1042	5.5	1142	101	92278	8055	84223	0.005	NW	Elbow Cage
					91566	8154	83412			
					91851	8211	83640			
					91751	8138	83613			
					91792	7882	83910			
					91184	8141	83043			
					91781	8017	83764			
					91595	8161	83434			
					91975	8167	83808			
					92129	8061	84068			
7/14/08	1712	5.3	1083	97	90998	7672	83326			
7/15/08	0753	5.5	1129	100	90010	7955	82055			
7/15/08	1423	5.3	1081	96	91301	7444	83857			
7/16/08	0736	5.7	1162	103	93043	7899	85144			
7/16/08	1524	5.3	1092	98	90511	7781	82730			
7/17/08	1202	5.5	1126	100	93565	7500	86065			
7/17/08	1446	5.4	1115	100	93121	7414	82707			
7/18/08	0838	5.1	1154	102	89584	7084	82500			

Reviewed By: [signature] Date: 12/02/08

ERG Form 2 07A

#1

Daily Function Check Form

Site: Dewey Burdock

Ratemeter: Ludlum 2221
Serial No. 149942 / PR118372 Cal. Due Date 7-8-09

Detector: 44-10
Serial No. ~~130377~~ NW Cal. Due Date 7-8-09

Source: Cs-137
Activity: 8.5 μCi, 10-3-02 Serial No.

Distance to Source: 6-in. (jig)
Acceptance Range 82660 to 84723

Notes:

Date	Time	Battery	High Voltage	Threshold	Gross Counts (CPM)	Background (CPM)	Net Counts (CPM)	Efficiency (CPM/DPM)	Initials	Location
7-19-08	0758	5.5	1153	102	96860	6592	90268	0.005	NW	Elbow Canyon Rd
7-19-08	1441	5.4	1132	100	90159	7287	82872	↓	↓	↓

Reviewed By: [signature]

Date: 12/02/08

ERG Form 2 07A

#2

Daily Function Check Form

Site: Dewey Burdock

Ratemeter: Ludlum 2221
Serial No. 138377 Cal. Due Date 7-8-09

Detector: 44-10
Serial No. PR 198936 Cal. Due Date 7-8-09

Source: Cs-137
Activity: 8.5 μCi, 10-3-02 Serial No. 4054-02

Distance to Source: 6 in (jig)
Acceptance Range 80 190 to 84083

Notes:

Date	Time	Battery	High Voltage	Threshold	Gross Counts (CPM)	Background (CPM)	Net Counts (CPM)	Efficiency (CPM/DPM)	Initials	Location
7/14/08	1035	5.8	1148	100	90596	7106	83490	0.005	NW	ELBOW CANYON RD
					89803	7021	82782			
					90015	7466	82549			
					89675	7456	82219			
					89520	7393	82127			
					89607	7697	81910			
					89010	7488	81522			
					89102	7522	81580			
					89350	7633	81717			
					89152	7685	81467			
	1712	5.7	1140	99	90957	7200	83757			
7/15/08	0751	5.7	1143	98	89384	7394	81990			
7/15/08	1423	5.7	1139	98	89870	7143	82727			
7/16/08	0737	5.7	1145	98	89462	7337	82125			
7/16/08	1526	5.5	1141	98	89532	7386	82146			
7/17/08	1203	5.6	1143	98	90804	6841	83963			
7/17/08	1946	5.4	1142	98	91557	6685	84872			
7/18/08	0841	5.5	1145	98	87936	6384	81552			

Reviewed By: [signature]

Date: 12/02/08

ERG Form 2 07A

(#2)

Daily Function Check Form

Site: Denny Bunlock

Ratemeter: Ludlum 2221
Serial No. 138377 Cal. Due Date 7-8-09

Detector: Ludlum 44-10
Serial No. PR 198 936 Cal. Due Date 7-8-09

Source: Cs-137
Activity: 8.5 μCi, 10-3-02 Serial No. 4054-02

Distance to Source: 6-in. (jig)
Acceptance Range 80190 to 84083

Notes:

Date	Time	Battery	High Voltage	Threshold	Gross Counts (CPM)	Background (CPM)	Net Counts (CPM)	Efficiency (CPM/DPM)	Initials	Location
7/19/08	0758	5.4	1146	99	94840	6360	88480	0.005	NW	ELBOW CANYON RD
7/19/08	1440	5.4	1143	98	90961	6712	84249	0.005	?	

Reviewed By: [signature]

Date: 12/02/08

ERG Form 2 07A

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Appendix B

Laboratory Analytical Data

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ENERGY LABORATORIES, INC. • 2821 Plant Street • Rapid City, SD 57702 • www.energylab.com
Toll Free 888.672.1225 • Voice 605.342.1225 • Fax 605.342.1397 • rapid_city@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08030221-008
Client Sample ID: AMS-07

Report Date: 04/24/08
Collection Date: 10/02/07
Date Received: 03/19/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	1.6	mg/filter		0.5		10	SW6020	04/02/08 17:44/eli-c
RADIONUCLIDES - TOTAL								
Radium 226 MDC	2.4	pCi/Filter				1	E903.0	04/01/08 15:03/eli-c
Lead 210	1300	pCi/Filter		1.0		1	E909.0M	03/25/08 12:00/eli-c
Lead 210 precision (±)	28.9	pCi/Filter				1	E909.0M	03/25/08 12:00/eli-c
Radium 226	1.3	pCi/Filter	U			1	E903.0	04/01/08 15:03/eli-c
Radium 226 precision (±)	1.6	pCi/Filter				1	E903.0	04/01/08 15:03/eli-c
Thorium 230	2.8	pCi/Filter		0.2		1	E907.0	03/26/08 15:15/eli-c
Thorium 230 precision (±)	1.2	pCi/Filter				1	E907.0	03/26/08 15:15/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit
U - Not detected at minimum detectable concentration

ENERGY LABORATORIES, INC. • 2821 Plant Street • Rapid City, SD 57702 • www.energylab.com
Toll Free 888.672.1225 • Voice 605.342.1225 • Fax 605.342.1397 • rapid_city@energylab.com

ANALYTICAL SUMMARY REPORT

April 24, 2008

Michael Schierman
Environmental Restoration Group Inc
8809 Washington St NE
Albuquerque, NM 87113

Workorder No.: R08030221

Project Name: Edgemont (Soils/Air filters)

Energy Laboratories Inc. received the following 8 samples from Environmental Restoration Group Inc on 3/19/2008 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R08030221-001	AMS-BKG	10/02/07 0:00	03/19/08	Filter	Composite Fee Metals, Total Digestion, Total Metals For Radio Chemistry Lead 210 Radium 226 Thorium, Isotopic
R08030221-002	AMS-01	10/02/07 0:00	03/19/08	Filter	Same As Above
R08030221-003	AMS-02	10/02/07 0:00	03/19/08	Filter	Same As Above
R08030221-004	AMS-03	10/02/07 0:00	03/19/08	Filter	Same As Above
R08030221-005	AMS-04	10/02/07 0:00	03/19/08	Filter	Same As Above
R08030221-006	AMS-05	10/02/07 0:00	03/19/08	Filter	Same As Above
R08030221-007	AMS-06	10/02/07 0:00	03/19/08	Filter	Same As Above
R08030221-008	AMS-07	10/02/07 0:00	03/19/08	Filter	Composite Fee Metals, Total Digestion, Total Metals Lead 210 Radium 226 Thorium, Isotopic

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By: Linda L

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08030221-001
Client Sample ID: AMS-BKG

Report Date: 04/24/08
Collection Date: 10/02/07
Date Received: 03/19/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter		0.5		10	SW6020	04/02/08 16:59/eli-c
RADIONUCLIDES - TOTAL								
Radium 226 MDC	2.4	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Lead 210	834	pCi/Filter		1.0		1	E909.0M	03/25/08 12:00/eli-c
Lead 210 precision (±)	23.1	pCi/Filter				1	E909.0M	03/25/08 12:00/eli-c
Radium 226	1.9	pCi/Filter	U			1	E903.0	04/01/08 13:23/eli-c
Radium 226 precision (±)	1.7	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Thorium 230	3.2	pCi/Filter		0.2		1	E907.0	03/26/08 15:15/eli-c
Thorium 230 precision (±)	1.3	pCi/Filter				1	E907.0	03/26/08 15:15/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08030221-002
Client Sample ID: AMS-01

Report Date: 04/24/08
Collection Date: 10/02/07
Date Received: 03/19/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter		0.5		10	SW6020	04/02/08 17:03/eli-c
RADIONUCLIDES - TOTAL								
Radium 226 MDC	2.3	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Lead 210	1160	pCi/Filter		1.0		1	E909.0M	03/25/08 12:00/eli-c
Lead 210 precision (±)	27.3	pCi/Filter				1	E909.0M	03/25/08 12:00/eli-c
Radium 226	4.1	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Radium 226 precision (±)	1.9	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Thorium 230	2.2	pCi/Filter		0.2		1	E907.0	03/26/08 15:15/eli-c
Thorium 230 precision (±)	1.0	pCi/Filter				1	E907.0	03/26/08 15:15/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
MDC - Minimum detectable concentration
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08030221-003
Client Sample ID: AMS-02

Report Date: 04/24/08
Collection Date: 10/02/07
Date Received: 03/19/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter		0.5		10	SW6020	04/02/08 17:07/eli-c
RADIONUCLIDES - TOTAL								
Radium 226 MDC	1.8	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Lead 210	560	pCi/Filter		1.0		1	E909.0M	03/25/08 12:00/eli-c
Lead 210 precision (±)	19.0	pCi/Filter				1	E909.0M	03/25/08 12:00/eli-c
Radium 226	1.2	pCi/Filter	U			1	E903.0	04/01/08 13:23/eli-c
Radium 226 precision (±)	1.2	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Thorium 230	1.6	pCi/Filter		0.2		1	E907.0	03/26/08 15:15/eli-c
Thorium 230 precision (±)	1.0	pCi/Filter				1	E907.0	03/26/08 15:15/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08030221-004
Client Sample ID: AMS-03

Report Date: 04/24/08
Collection Date: 10/02/07
Date Received: 03/19/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter		0.5		10	SW6020	04/02/08 17:12/eli-c
RADIONUCLIDES - TOTAL								
Radium 226 MDC	1.8	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Lead 210	821	pCi/Filter		1.0		1	E909.0M	03/25/08 12:00/eli-c
Lead 210 precision (±)	23.0	pCi/Filter				1	E909.0M	03/25/08 12:00/eli-c
Radium 226	1.2	pCi/Filter	U			1	E903.0	04/01/08 13:23/eli-c
Radium 226 precision (±)	1.2	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Thorium 230	1.3	pCi/Filter		0.2		1	E907.0	03/26/08 15:15/eli-c
Thorium 230 precision (±)	1.0	pCi/Filter				1	E907.0	03/26/08 15:15/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08030221-005
Client Sample ID: AMS-04

Report Date: 04/24/08
Collection Date: 10/02/07
Date Received: 03/19/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter		0.5		10	SW6020	04/02/08 17:16/eli-c
RADIONUCLIDES - TOTAL								
Radium 226 MDC	2.0	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Lead 210	790	pCi/Filter		1.0		1	E909.0M	03/25/08 12:00/eli-c
Lead 210 precision (±)	22.5	pCi/Filter				1	E909.0M	03/25/08 12:00/eli-c
Radium 226	4.7	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Radium 226 precision (±)	1.8	pCi/Filter				1	E903.0	04/01/08 13:23/eli-c
Thorium 230	1.8	pCi/Filter		0.2		1	E907.0	04/10/08 15:00/eli-c
Thorium 230 precision (±)	1.4	pCi/Filter				1	E907.0	04/10/08 15:00/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08030221-006
Client Sample ID: AMS-05

Report Date: 04/24/08
Collection Date: 10/02/07
Date Received: 03/19/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter		0.5		10	SW6020	04/02/08 17:36/eli-c
RADIONUCLIDES - TOTAL								
Radium 226 MDC	2.6	pCi/Filter				1	E903.0	04/01/08 15:03/eli-c
Lead 210	654	pCi/Filter		1.0		1	E909.0M	03/25/08 12:00/eli-c
Lead 210 precision (±)	20.5	pCi/Filter				1	E909.0M	03/25/08 12:00/eli-c
Radium 226	-1	pCi/Filter	U			1	E903.0	04/01/08 15:03/eli-c
Radium 226 precision (±)	1.2	pCi/Filter				1	E903.0	04/01/08 15:03/eli-c
Thorium 230	2.9	pCi/Filter		0.2		1	E907.0	03/26/08 15:15/eli-c
Thorium 230 precision (±)	1.1	pCi/Filter				1	E907.0	03/26/08 15:15/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
MDC - Minimum detectable concentration
MCL - Maximum contaminant level
ND - Not detected at the reporting limit
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08030221-007
Client Sample ID: AMS-06

Report Date: 04/24/08
Collection Date: 10/02/07
Date Received: 03/19/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter		0.5		10	SW6020	04/02/08 17 40/eli-c
RADIONUCLIDES - TOTAL								
Radium 226 MDC	2.1	pCi/Filter				1	E903.0	04/01/08 15 03/eli-c
Lead 210	942	pCi/Filter		1 0		1	E909 0M	03/25/08 12 00/eli-c
Lead 210 precision (±)	24.6	pCi/Filter				1	E909 0M	03/25/08 12 00/eli-c
Radium 226	-1	pCi/Filter	U			1	E903 0	04/01/08 15 03/eli-c
Radium 226 precision (±)	1 0	pCi/Filter				1	E903 0	04/01/08 15.03/eli-c
Thorium 230	1 5	pCi/Filter		0 2		1	E907 0	03/26/08 15 15/eli-c
Thorium 230 precision (±)	1 0	pCi/Filter				1	E907 0	03/26/08 15 15/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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QA/QC Summary Report

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)

Report Date: 04/24/08
Work Order: R08030221

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0								Batch: C_RA226-2688	
Sample ID: C08030621-004AMS	Sample Matrix Spike				Run: SUB-C98992			04/01/08 11:46	
Radium 226	3.8	pCi/g		125	70	130			
Sample ID: C08030621-004AMSD	Sample Matrix Spike Duplicate				Run: SUB-C98992			04/01/08 11:46	
Radium 226	4.1	pCi/g		135	70	130	7.9	26.2	S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the MS/MSD pair are acceptable, the high response is considered to be matrix related. The batch is approved.									
Sample ID: LCS-18083	Laboratory Control Sample				Run: SUB-C98992			04/01/08 15:03	
Radium 226	11	pCi/L		82	70	130			
Sample ID: MB-18083	Method Blank				Run: SUB-C98992			04/01/08 15:03	
Radium 226	-1	pCi/L							
Method: E907.0								Batch: C_18083	
Sample ID: C08030720-001KMS	Sample Matrix Spike				Run: SUB-C99086			03/26/08 15:15	
Thorium 230	23.1	pCi/L	0.20	94	70	130			
Sample ID: C08030720-001KMSD	Sample Matrix Spike Duplicate				Run: SUB-C99086			03/26/08 15:15	
Thorium 230	23.8	pCi/L	0.20	97	70	130	2.8	30	
Sample ID: LCS-18083	Laboratory Control Sample				Run: SUB-C99086			03/26/08 15:15	
Thorium 230	46.1	pCi/g-dry	0.10	98	70	130			
Sample ID: MB-18083	Method Blank				Run: SUB-C99086			03/26/08 15:15	
Thorium 230	ND	pCi/g-dry							
Method: E907.0								Batch: C_R99819	
Sample ID: C08040278-005DMS	Sample Matrix Spike				Run: SUB-C99819			04/10/08 15:00	
Thorium 228	13.4	pCi/L	0.20	115	70	130			
Sample ID: C08040278-005DMSD	Sample Matrix Spike Duplicate				Run: SUB-C99819			04/10/08 15:00	
Thorium 228	13.8	pCi/L	0.20	117	70	130	2.9	30	
Sample ID: MB-R99819	Method Blank				Run: SUB-C99819			04/10/08 15:00	
Thorium 230	0.1	pCi/L							
Sample ID: LCS-R99819	Laboratory Control Sample				Run: SUB-C99819			04/10/08 15:00	
Thorium 228	10.0	pCi/L	0.20	123	70	130			

Qualifiers:

RL - Analyte reporting limit.
ND - Not detected at the reporting limit.
S - Spike recovery outside of advisory limits.

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QA/QC Summary Report

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)

Report Date: 04/24/08
Work Order: R08030221

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0M									Batch C_18083
Sample ID: R08030221-004A	Sample Matrix Spike				Run: SUB-C98854				03/25/08 12:00
Lead 210	1540	pCi/Filter	1.0	121	70	130			
Sample ID: R08030221-004A	Sample Matrix Spike Duplicate				Run: SUB-C98854				03/25/08 12:00
Lead 210	1300	pCi/Filter	1.0	81	70	130	17	30	
Sample ID: MB-R98854	Method Blank				Run: SUB-C98854				03/25/08 12:00
Lead 210	5	pCi/Filter							
Sample ID: LCS-R98854	Laboratory Control Sample				Run: SUB-C98854				03/25/08 12:00
Lead 210	94.1	pCi/Filter	1.0	75	70	130			
Method: SW6020									Batch C_18083
Sample ID: MB-18083	Method Blank				Run: SUB-C99006				04/02/08 16:51
Uranium	0.0001	mg/kg	6E-05						
Sample ID: LCS1-18083	Laboratory Control Sample				Run: SUB-C99006				04/02/08 16:55
Uranium	0.0470	mg/kg	0.015	89	75	125			
Sample ID: C08030621-004AMS	Sample Matrix Spike				Run: SUB-C99175				04/03/08 20:44
Uranium	24.4	mg/kg	0.028	102	75	125			
Sample ID: C08030621-004AMSD	Sample Matrix Spike Duplicate				Run: SUB-C99175				04/03/08 20:50
Uranium	24.1	mg/kg	0.029	100	75	125	1.6	20	

Qualifiers:
RL - Analyte reporting limit
ND - Not detected at the reporting limit

Chain of Custody and Analytical Request Record

Page 1 of 1

PLEASE PRINT- Provide as much information as possible.

Company Name: Environmental Restoration Group	Project Name, PWS, Permit, Etc.: Dewey - Burdock	Sample Origin: State: South Dakota	EPA/State Compliance: Yes ☐ No ☒
Report Mail Address: 8809 Washington St NE Suite 150 Albuquerque NM 87113	Contact Name: Michael Schierman; Phone/Fax: 505-298-4224	Email: mikeschierman@cfgoffice.com	Sampler: (Please Print) NA
Invoice Address: Same as above	Invoice Contact & Phone: Michael Schierman	Purchase Order:	Quote/Bottle Order: NA

Special Report/Formats – ELI must be notified prior to sample submittal for the following:
Please Send EDD to Cory Foreman @ RESPEC

☐ DW ☐ A2LA
☐ GSA ☑ EDD/EDT (Electronic Data)
☐ POTW/WWTP Format: _____
☐ State: _____ ☐ LEVEL IV
☐ Other: _____ ☐ NELAC

ANALYSIS REQUESTED

RUSH

Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: MJS
Cooler ID(s):
Receipt Temp: ____ °C
On Ice: Yes No
Custody Seal Y N
Intact Y N
Signature Match Y N

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O; Air Water Soils/Solids Vegetation Bioassay Other)	Natural Uranium	Ra-226	Th-230	Pb-210							SEE ATTACHED	Normal Turnaround (TAT)			
1 AMS-Bkg	9/28/07 10/02/07	NA	O	X	X	X	X								X		Please composite all filters	0703030221-001A
2 AMS-01																		002A
3 AMS-02																		003A
4 AMS-03																		004A
5 AMS-04																		005A
6 AMS-05																		006A
7 AMS-06																		007A
8 AMS-07																		008A
9																		
10																		

LABORATORY USE ONLY

Custody Record MUST be Signed

Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
Michael Schierman	3/18/08	Michael Schierman	Steve Fonland	3-19-08 1300	Steve Fonland
Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
			Received by Laboratory	Date/Time	Signature

Sample Disposal: Return to Client _____ Lab Disposal _____

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

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ANALYTICAL SUMMARY REPORT

February 12, 2008

Michael Schierman
Environmental Restoration Group Inc
8809 Washington St NE
Albuquerque, NM 87113

Workorder No.: R08010193 Quote ID: R279

Project Name: Edgemont (Soils/Air filters)

Energy Laboratories Inc. received the following 9 samples from Environmental Restoration Group Inc on 1/17/2008 for analysis

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R08010193-001	BKG	10/09/07 0:00	01/17/08	Filter	Composite Fee Metals, Total Digestion, Total Metals For Radio Chemistry Lead 210 Radium 226 Thorium, Isotopic
R08010193-002	AMS-01	10/09/07 0:00	01/17/08	Filter	Same As Above
R08010193-003	AMS-02	10/09/07 0:00	01/17/08	Filter	Same As Above
R08010193-004	AMS-03	10/09/07 0:00	01/17/08	Filter	Same As Above
R08010193-005	AMS-04	10/09/07 0:00	01/17/08	Filter	Same As Above
R08010193-006	AMS-05	10/09/07 0:00	01/17/08	Filter	Same As Above
R08010193-007	AMS-06	10/09/07 0:00	01/17/08	Filter	Same As Above
R08010193-008	AMS-07	10/09/07 0:00	01/17/08	Filter	Same As Above
R08010193-009	AMS-08	10/09/07 0:00	01/17/08	Filter	Same As Above

Thank you for submitting your samples to Energy Laboratories, Inc. - Rapid City. The following pages contain the results of the sample tests listed above and applicable analytical notes.

The samples were analyzed in accordance with the methods specified on the analytical reports. All analyses were accompanied by appropriate quality control samples throughout the test. Where applicable, the results of these quality control samples will be included, following your analytical data.

If you have any questions regarding the analyses performed or the results of these analyses, please contact Energy Laboratories Inc. - Rapid City at (605) 342-1225, (888) 672-1225 or Rapid_City@energylab.com

Report Approved By: Linda Larson

Linda Larson
Rapid City - Project Manager

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils Air filters)
Lab ID: R08010193-002
Client Sample ID: AMS-01

Report Date: 02 12 08
Collection Date: 10 09 07
Date Received: 01 17 08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter	D	0.03		10	SW6020	02/05/08 20 59/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	5140	pCi/Filter		1 0		1	E909 0M	02/01/08 08 30/eli-c
Lead 210 precision (±)	86 1	pCi/Filter				1	E909 0M	02/01/08 08 30/eli-c
Radium 226	2 5	pCi/Filter		0 2		1	E903 0	02/06/08 11 08/eli-c
Radium 226 precision (±)	0 9	pCi/Filter				1	E903 0	02/06/08 11 08/eli-c
Thorium 230	1 6	pCi/Filter		0 2		1	E907 0	01/28/08 15 30/eli-c
Thorium 230 precision (±)	1 0	pCi/Filter				1	E907 0	01/28/08 15 30/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
D - RL increased due to sample matrix interference
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils Air filters)
Lab ID: R08010193-003
Client Sample ID: AMS-02

Report Date: 02 12 08
Collection Date: 10 09 07
Date Received: 01 17 08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter	D	0 03		10	SW6020	02/05/08 21.05/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	2610	pCi/Filter		1 0		1	E909 0M	02/01/08 08 30/eli-c
Lead 210 precision (±)	61 4	pCi/Filter				1	E909 0M	02/01/08 08 30/eli-c
Radium 226	1 3	pCi/Filter		0 2		1	E903 0	02/06/08 11 08/eli-c
Radium 226 precision (±)	0 6	pCi/Filter				1	E903 0	02/06/08 11 08/eli-c
Thorium 230	3 5	pCi/Filter		0 2		1	E907 0	01/28/08 15 30/eli-c
Thorium 230 precision (±)	1 2	pCi/Filter				1	E907 0	01/28/08 15 30/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
D - RL increased due to sample matrix interference
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08010193-004
Client Sample ID: AMS-03

Report Date: 02/12/08
Collection Date: 10/09/07
Date Received: 01/17/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter	D	0.03		10	SW6020	02/05/08 21:12/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1690	pCi/Filter		1.0		1	E909.0M	02/01/08 08:30/eli-c
Lead 210 precision (±)	49.4	pCi/Filter				1	E909.0M	02/01/08 08:30/eli-c
Radium 226	2.3	pCi/Filter		0.2		1	E903.0	02/06/08 11:08/eli-c
Radium 226 precision (±)	0.9	pCi/Filter				1	E903.0	02/06/08 11:08/eli-c
Thorium 230	2.6	pCi/Filter		0.2		1	E907.0	01/28/08 15:30/eli-c
Thorium 230 precision (±)	1.0	pCi/Filter				1	E907.0	01/28/08 15:30/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
D - RL increased due to sample matrix interference
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils Air filters)
Lab ID: R08010193-005
Client Sample ID: AMS-04

Report Date: 02 12 08
Collection Date: 10 09 07
Date Received: 01 17 08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter	D	0 03		10	SW6020	02/05/08 21 18/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	2830	pCi/Filter		1 0		1	E909 0M	02/01/08 08 30/eli-c
Lead 210 precision (±)	63 8	pCi/Filter				1	E909 0M	02/01/08 08 30/eli-c
Radium 226	1 9	pCi/Filter		0 2		1	E903 0	02/06/08 11 08/eli-c
Radium 226 precision (±)	0 8	pCi/Filter				1	E903 0	02/06/08 11 08/eli-c
Thorium 230	2 6	pCi/Filter		0 2		1	E907 0	01/28/08 15 30/eli-c
Thorium 230 precision (±)	1 1	pCi/Filter				1	E907 0	01/28/08 15 30/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
D - RL increased due to sample matrix interference
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils Air filters)
Lab ID: R08010193-006
Client Sample ID: AMS-05

Report Date: 02/12/08
Collection Date: 10/09/07
Date Received: 01/17/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter	D	0.03		10	SW6020	02/01/08 21:14/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	3200	pCi/Filter		1.0		1	E909.0M	02/01/08 08:30/eli-c
Lead 210 precision (±)	67.9	pCi/Filter				1	E909.0M	02/01/08 08:30/eli-c
Radium 226	7.7	pCi/Filter		0.2		1	E903.0	02/06/08 11:08/eli-c
Radium 226 precision (±)	1.5	pCi/Filter				1	E903.0	02/06/08 11:08/eli-c
Thorium 230	4.0	pCi/Filter		0.2		1	E907.0	01/28/08 15:30/eli-c
Thorium 230 precision (±)	1.5	pCi/Filter				1	E907.0	01/28/08 15:30/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
D - RL increased due to sample matrix interference
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils Air filters)
Lab ID: R08010193-007
Client Sample ID: AMS-06

Report Date: 02/12/08
Collection Date: 10/09/07
Date Received: 01/17/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter	D	0 03		10	SW6020	02/05/08 21 25/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	2940	pCi/Filter		1 0		1	E909 0M	02/01/08 08 30/eli-c
Lead 210 precision (±)	65 1	pCi/Filter				1	E909 0M	02/01/08 08 30/eli-c
Radium 226	4 8	pCi/Filter		0 2		1	E903 0	02/06/08 11 08/eli-c
Radium 226 precision (±)	1 2	pCi/Filter				1	E903 0	02/06/08 11 08/eli-c
Thorium 230	3 3	pCi/Filter		0 2		1	E907 0	01/28/08 15 30/eli-c
Thorium 230 precision (±)	1 4	pCi/Filter				1	E907 0	01/28/08 15 30/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
D - RL increased due to sample matrix interference
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08010193-008
Client Sample ID: AMS-07

Report Date: 02/12/08
Collection Date: 10/09/07
Date Received: 01/17/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter	D	0.03		10	SW6020	02/05/08 21:32/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	4010	pCi/Filter		1.0		1	E909.0M	02/01/08 08:30/eli-c
Lead 210 precision (±)	76.0	pCi/Filter				1	E909.0M	02/01/08 08:30/eli-c
Radium 226	5.8	pCi/Filter		0.2		1	E903.0	02/06/08 11:08/eli-c
Radium 226 precision (±)	1.3	pCi/Filter				1	E903.0	02/06/08 11:08/eli-c
Thorium 230	3.3	pCi/Filter		0.2		1	E907.0	01/28/08 15:30/eli-c
Thorium 230 precision (±)	1.5	pCi/Filter				1	E907.0	01/28/08 15:30/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
D - RL increased due to sample matrix interference
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils Air filters)
Lab ID: R08010193-009
Client Sample ID: AMS-08

Report Date: 02 12 08
Collection Date: 10 09 07
Date Received: 01 17 08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter	D	0 03		10	SW6020	02/05/08 21 38/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	21 9	pCi/Filter		1 0		1	E909 0M	02/01/08 08 30/eli-c
Lead 210 precision (±)	10 4	pCi/Filter				1	E909 0M	02/01/08 08 30/eli-c
Radium 226	1 6	pCi/Filter		0 2		1	E903 0	02/06/08 12 12/eli-c
Radium 226 precision (±)	0 7	pCi/Filter				1	E903 0	02/06/08 12 12/eli-c
Thonum 230	1 4	pCi/Filter		0 2		1	E907 0	01/28/08 15 30/eli-c
Thorium 230 precision (±)	0 9	pCi/Filter				1	E907 0	01/28/08 15 30/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
D - RL increased due to sample matrix interference
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils Air filters)
Lab ID: R08010193-001
Client Sample ID: BKG

Report Date: 02/12/08
Collection Date: 10/09/07
Date Received: 01/17/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/filter	D	0.03		10	SW6020	02/05/08 20:52/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	2550	pCi/Filter		1.0		1	E909.0M	02/01/08 08:30/eli-c
Lead 210 precision (±)	60.6	pCi/Filter				1	E909.0M	02/01/08 08:30/eli-c
Radium 226	3.2	pCi/Filter		0.2		1	E903.0	02/06/08 11:08/eli-c
Radium 226 precision (±)	1.0	pCi/Filter				1	E903.0	02/06/08 11:08/eli-c
Thorium 230	1.3	pCi/Filter		0.2		1	E907.0	01/28/08 15:30/eli-c
Thorium 230 precision (±)	0.8	pCi/Filter				1	E907.0	01/28/08 15:30/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
D - RL increased due to sample matrix interference
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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QA/QC Summary Report

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)

Report Date: 02/12/08
Work Order: R08010193

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E200.8									Batch: C_17568
Sample ID: MB-17568	Method Blank				Run: SUB-C96493				02/01/08 15:45
Uranium	2E-05	mg/L	1E-05						
Sample ID: LCS1-17568	Laboratory Control Sample				Run: SUB-C96493				02/01/08 15:49
Uranium	0.0487	mg/L	0.00030	97	80	120			
Sample ID: C08010900-005BMS4	Post Digestion Spike				Run: SUB-C96493				02/01/08 16:59
Uranium	0.0583	mg/L	0.00030	107	70	130			
Sample ID: C08010900-005BMSD4	Post Digestion Spike Duplicate				Run: SUB-C96493				02/01/08 17:03
Uranium	0.0582	mg/L	0.00030	107	70	130	0.2	20	
Method: E903.0									Batch: C_17568
Sample ID: R08010193-001A	Sample Duplicate				Run: SUB-C96642				02/06/08 11:08
Radium 226	1.66	pCi/Filter	0.20				65	78.7	
Sample ID: R08010193-008A	Sample Matrix Spike				Run: SUB-C96642				02/06/08 12:12
Radium 226	31.5	pCi/Filter	0.20	41	70	130			S
- Spike response is outside of the acceptance range for this analysis. Since the LCS and the RPD for the Duplicate are acceptable, the low response is considered to be matrix related. The batch is approved.									
Sample ID: LCS-17568	Laboratory Control Sample				Run: SUB-C96642				02/06/08 12:12
Radium 226	14.5	pCi/Filter	0.20	114	70	130			
Sample ID: MB-17568	Method Blank				Run: SUB-C96642				02/06/08 12:12
Radium 226	ND	pCi/Filter	0.2						
Method: E907.0									Batch: C_17568
Sample ID: R08010193-009A	Sample Matrix Spike				Run: SUB-C96487				01/28/08 15:30
Thorium 230	42.6	pCi/Filter	0.20	88	70	130			
Sample ID: R08010193-009A	Sample Matrix Spike Duplicate				Run: SUB-C96487				01/28/08 15:30
Thorium 230	44.7	pCi/Filter	0.20	93	70	130	4.8	30	
Sample ID: LCS-17568	Laboratory Control Sample				Run: SUB-C96487				01/28/08 15:30
Thorium 230	4.60	pCi/Filter	0.20	94	70	130			
Sample ID: MB-17568	Method Blank				Run: SUB-C96487				01/28/08 15:30
Thorium 230	ND	pCi/Filter	0.2						

Qualifiers:

RL - Analyte reporting limit
S - Spike recovery outside of advisory limits
ND - Not detected at the reporting limit

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QA/QC Summary Report

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)

Report Date: 02/12/08
Work Order: R08010193

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0M									Batch C_R96680
Sample ID: R08010193-003A	Sample Matrix Spike				Run SUB-C96680				02/01/08 08 30
Lead 210	3540	pCi/Filter	1 0	78	70	130			
Sample ID: R08010193-003A	Sample Matrix Spike Duplicate				Run SUB-C96680				02/01/08 08 30
Lead 210	3490	pCi/Filter	1 0	74	70	130	1 3	30	
Sample ID: MB-R96680	Method Blank				Run SUB-C96680				02/01/08 08 30
Lead 210	ND	pCi/Filter	1						
Sample ID: LCS-R96680	Laboratory Control Sample				Run SUB-C96680				02/01/08 08 30
Lead 210	112	pCi/Filter	1 0	94	70	130			
Method: SW6020									Batch C_17568
Sample ID: MB-17568	Method Blank				Run SUB-C96602				02/05/08 19 17
Uranium	ND	mg/filter	0 003						
Sample ID: LCS1-17568	Laboratory Control Sample				Run SUB-C96602				02/05/08 20 39
Uranium	0 0509	mg/kg	0 015	102	75	125			
Sample ID: R08010193-009A	Sample Matrix Spike				Run SUB-C96602				02/05/08 22 05
Uranium	0 545	mg/filter	0 030	109	75	125			
Sample ID: R08010193-009A	Sample Matrix Spike Duplicate				Run SUB-C96602				02/05/08 22 12
Uranium	0 558	mg/filter	0 030	112	75	125	2 4	20	

Qualifiers:
RL - Analyte reporting limit

ND - Not detected at the reporting limit

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ANALYTICAL SUMMARY REPORT

August 14, 2008

Michael Schierman
Environmental Restoration Group Inc
8809 Washington St NE
Albuquerque, NM 87113

Workorder No.: R08060209

Project Name: Edgemont (Soils/Air filters)

Energy Laboratories Inc. received the following 9 samples from Environmental Restoration Group Inc on 6/11/2008 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R08060209-001	AMS-01	03/08/08 0:00	06/11/08	Filter	Composite Fee Metals, Total Digestion, Total Metals For Radio Chemistry Lead 210 Radium 226 Thorium, Isotopic
R08060209-002	AMS-02	03/08/08 0:00	06/11/08	Filter	Same As Above
R08060209-003	AMS-03	03/08/08 0:00	06/11/08	Filter	Same As Above
R08060209-004	AMS-04	03/08/08 0:00	06/11/08	Filter	Same As Above
R08060209-005	AMS-05	03/08/08 0:00	06/11/08	Filter	Same As Above
R08060209-006	AMS-06	03/08/08 0:00	06/11/08	Filter	Same As Above
R08060209-007	AMS-07	03/08/08 0:00	06/11/08	Filter	Same As Above
R08060209-008	AMS-08	03/08/08 0:00	06/11/08	Filter	Same As Above
R08060209-009	AMS-BKG	03/08/08 0:00	06/11/08	Filter	Same As Above

As appropriate, any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these tests results, please call.

Report Approved By: Linda Ha

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08060209-008
Client Sample ID: AMS-08

Report Date: 08/14/08
Collection Date: 03/08/08
Date Received: 06/11/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0094	mg/filter		0.00030		5	SW6020	06/28/08 19:59/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	11.6	pCi/Filter	U			1	E909.0M	06/30/08 09:40/eli-c
Lead 210 MDC	24.6	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 precision (±)	14.8	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Thorium 230	0.5	pCi/Filter		0.2		1	E907.0	07/01/08 13:03/eli-c
Thorium 230 precision (±)	0.8	pCi/Filter				1	E907.0	07/01/08 13:03/eli-c
Radium 226	2.5	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 precision (±)	1.3	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 MDC	1.5	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08060209-001
Client Sample ID: AMS-01

Report Date: 08/14/08
Collection Date: 03/08/08
Date Received: 06/11/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0072	mg/filter		0.00030		5	SW6020	06/28/08 19:31/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	2510	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 MDC	24.6	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 precision (±)	38.2	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Thorium 230	0.9	pCi/Filter		0.2		1	E907.0	06/30/08 21:30/eli-c
Thorium 230 precision (±)	0.9	pCi/Filter				1	E907.0	06/30/08 21:30/eli-c
Radium 226	4.6	pCi/Filter				1	E903.0	06/26/08 09:11/eli-c
Radium 226 precision (±)	1.5	pCi/Filter				1	E903.0	06/26/08 09:11/eli-c
Radium 226 MDC	1.4	pCi/Filter				1	E903.0	06/26/08 09:11/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08060209-002
Client Sample ID: AMS-02

Report Date: 08/14/08
Collection Date: 03/08/08
Date Received: 06/11/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0057	mg/filter		0.00030		5	SW6020	06/28/08 19:35/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1160	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 MDC	24.6	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 precision (±)	28.1	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Thorium 230	1.1	pCi/Filter		0.2		1	E907.0	07/01/08 13:03/eli-c
Thorium 230 precision (±)	1.2	pCi/Filter				1	E907.0	07/01/08 13:03/eli-c
Radium 226	1.4	pCi/Filter				1	E903.0	06/26/08 09:11/eli-c
Radium 226 precision (±)	1.0	pCi/Filter				1	E903.0	06/26/08 09:11/eli-c
Radium 226 MDC	1.4	pCi/Filter				1	E903.0	06/26/08 09:11/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08060209-003
Client Sample ID: AMS-03

Report Date: 08/14/08
Collection Date: 03/08/08
Date Received: 06/11/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0036	mg/filter		0.00030		5	SW6020	06/28/08 19:39/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1200	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 MDC	24.6	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 precision (±)	28.4	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Thorium 230	1.7	pCi/Filter		0.2		1	E907.0	07/01/08 13:03/eli-c
Thorium 230 precision (±)	1.3	pCi/Filter				1	E907.0	07/01/08 13:03/eli-c
Radium 226	0.7	pCi/Filter	U			1	E903.0	06/26/08 11:15/eli-c
Radium 226 precision (±)	1	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 MDC	1.5	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08060209-004
Client Sample ID: AMS-04

Report Date: 08/14/08
Collection Date: 03/08/08
Date Received: 06/11/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0048	mg/filter		0.00030		5	SW6020	06/28/08 19:43/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1040	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 MDC	24.6	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 precision (±)	27.1	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Thorium 230	0.8	pCi/Filter		0.2		1	E907.0	07/01/08 13:03/eli-c
Thorium 230 precision (±)	1.0	pCi/Filter				1	E907.0	07/01/08 13:03/eli-c
Radium 226	-0.9	pCi/Filter	U			1	E903.0	06/26/08 11:15/eli-c
Radium 226 precision (±)	0.6	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 MDC	1.2	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08060209-005
Client Sample ID: AMS-05

Report Date: 08/14/08
Collection Date: 03/08/08
Date Received: 06/11/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0096	mg/filter		0.00030		5	SW6020	06/28/08 19:47/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1270	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 MDC	24.6	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 precision (±)	29.1	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Thorium 230	1.1	pCi/Filter		0.2		1	E907.0	07/01/08 13:03/eli-c
Thorium 230 precision (±)	1.1	pCi/Filter				1	E907.0	07/01/08 13:03/eli-c
Radium 226	3.9	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 precision (±)	1.4	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 MDC	1.4	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08060209-006
Client Sample ID: AMS-06

Report Date: 08/14/08
Collection Date: 03/08/08
Date Received: 06/11/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0067	mg/filter		0.00030		5	SW6020	06/28/08 19:51/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	775	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 MDC	24.6	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 precision (±)	24.5	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Thorium 230	1.7	pCi/Filter		0.2		1	E907.0	07/01/08 13:03/eli-c
Thorium 230 precision (±)	1.3	pCi/Filter				1	E907.0	07/01/08 13:03/eli-c
Radium 226	2.5	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 precision (±)	1.2	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 MDC	1.4	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08060209-007
Client Sample ID: AMS-07

Report Date: 08/14/08
Collection Date: 03/08/08
Date Received: 06/11/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0071	mg/filter		0.00030		5	SW6020	06/28/08 19:55/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1030	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 MDC	24.6	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 precision (±)	26.9	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Thorium 230	1.4	pCi/Filter		0.2		1	E907.0	07/01/08 13:03/eli-c
Thorium 230 precision (±)	1.0	pCi/Filter				1	E907.0	07/01/08 13:03/eli-c
Radium 226	0.6	pCi/Filter	U			1	E903.0	06/26/08 11:15/eli-c
Radium 226 precision (±)	0.8	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 MDC	1.3	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08060209-009
Client Sample ID: AMS-BKG

Report Date: 08/14/08
Collection Date: 03/08/08
Date Received: 06/11/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0097	mg/filter		0.00030		5	SW6020	06/28/08 20:03/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1040	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 MDC	24.6	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Lead 210 precision (±)	27.1	pCi/Filter				1	E909.0M	06/30/08 09:40/eli-c
Thorium 230	3.0	pCi/Filter		0.2		1	E907.0	07/01/08 13:03/eli-c
Thorium 230 precision (±)	1.4	pCi/Filter				1	E907.0	07/01/08 13:03/eli-c
Radium 226	1.8	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 precision (±)	1.1	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c
Radium 226 MDC	1.5	pCi/Filter				1	E903.0	06/26/08 11:15/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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Chain of Custody and Analytical Request Record

Page 1 of 1

PLEASE PRINT- Provide as much information as possible.

Company Name: Environmental Restoration Group	Project Name, PWS, Permit, Etc.: Dewey-Burdock	Sample Origin State: S. Dakota	EPA/State Compliance Yes ☐ No ☒
Report Mail Address: 8809 Washington St NE, Suite 150	Contact Name: Michael Schierman Phone/Fax: 505-298-4224	Email: mikeschierman@energylab.com	Sampler: (Please Print) Mike Schierman
Invoice Address: Albuquerque NM 87113	Invoice Contact & Phone: Same as above	Purchase Order: NA	Quote/Bottle Order: NA

Special Report/Formats – ELI must be notified prior to sample submittal for the following:

- ☐ DW
- ☐ GSA
- ☐ POTW/WWTP
- ☐ State: _____
- ☐ Other: _____
- ☐ A2LA
- ☒ EDD/EDT (Electronic Data) Format: Excel
- ☐ LEVEL IV
- ☐ NELAC

RUSH: Contact ELI prior to RUSH sample submittal for charges and scheduling – See Instruction Page

Comments:

Shipped by: MJS
Cooler ID(s): N/A
Receipt Temp: Filters °C
On Ice: Yes No
Custody Seal Y N
Intact Y N
Signature Match Y N

ANALYSIS REQUESTED

SAMPLE IDENTIFICATION (Name, Location, Interval, etc.)	Collection Date	Collection Time	MATRIX (Number of Containers; Sample Type: A W S V B O; Air Water Soils/Solids Vegetation Biosolids Other)	Natural Uranium	Radium-226	Th-230	Lead-210						SEE ATTACHED	Normal Turnaround (TAT)		LABORATORY USE ONLY
1 AMS-01	1/08 - 7/08	NA	O	↓	↓	↓	↓							X		1080602090001A
2 AMS-02																002A
3 AMS-03																003A
4 AMS-04																004A
5 AMS-05																005A
6 AMS-06																006A
7 AMS-07																007A
8 AMS-08																008A
9 AMS-BKG																009A
10																

Please use entire filter composite

Custody Record MUST be Signed

Relinquished by (print)	Date/Time	Signature	Received by (print)	Date/Time	Signature
Michael Schierman	6/10/08	Michael Schierman			
Relinquished by Laboratory: Steve Fairland	Date/Time: 6-11-08 1100	Signature: Steve Fairland			

Sample Disposal: Return to Client: _____ Lab Disposal: _____

In certain circumstances, samples submitted to Energy Laboratories, Inc. may be subcontracted to other certified laboratories in order to complete the analysis requested. This serves as notice of this possibility. All sub-contract data will be clearly notated on your analytical report. Visit our web site at www.energylab.com for additional information, downloadable fee schedule, forms, and links.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08080024-001
Client Sample ID: AMS-BKG

Report Date: 09/30/08
Collection Date: 07/09/08
Date Received: 08/04/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0065	mg/filter		0.00030		1	SW6020	08/13/08 01:25/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1840	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 MDC	56.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 precision (±)	56.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Thorium 230	1.2	pCi/Filter		0.2		1	E907.0	08/22/08 10:30/eli-c
Thorium 230 precision (±)	1.0	pCi/Filter				1	E907.0	08/22/08 10:30/eli-c
Radium 226	1.2	pCi/Filter				1	E903.0	08/26/08 16:58/eli-c
Radium 226 precision (±)	0.8	pCi/Filter				1	E903.0	08/26/08 16:58/eli-c
Radium 226 MDC	1.2	pCi/Filter				1	E903.0	08/26/08 16:58/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08080024-002
Client Sample ID: AMS-01

Report Date: 09/30/08
Collection Date: 07/09/08
Date Received: 08/04/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0081	mg/filter		0.00030		1	SW6020	08/13/08 01:29/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	2820	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 MDC	56.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 precision (±)	65.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Thorium 230	2.7	pCi/Filter		0.2		1	E907.0	08/22/08 10:30/eli-c
Thorium 230 precision (±)	1.1	pCi/Filter				1	E907.0	08/22/08 10:30/eli-c
Radium 226	2.8	pCi/Filter				1	E903.0	08/26/08 16:58/eli-c
Radium 226 precision (±)	1.0	pCi/Filter				1	E903.0	08/26/08 16:58/eli-c
Radium 226 MDC	1.1	pCi/Filter				1	E903.0	08/26/08 16:58/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08080024-003
Client Sample ID: AMS-02

Report Date: 09/30/08
Collection Date: 07/09/08
Date Received: 08/04/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0043	mg/filter		0.00030		1	SW6020	08/13/08 01:33/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1210	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 MDC	56.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 precision (±)	49.5	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Thorium 230	1.0	pCi/Filter		0.2		1	E907.0	08/22/08 10:30/eli-c
Thorium 230 precision (±)	0.8	pCi/Filter				1	E907.0	08/22/08 10:30/eli-c
Radium 226	0.3	pCi/Filter	U			1	E903.0	08/27/08 09:21/eli-c
Radium 226 precision (±)	0.7	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c
Radium 226 MDC	1.1	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08080024-004
Client Sample ID: AMS-03

Report Date: 09/30/08
Collection Date: 07/09/08
Date Received: 08/04/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0071	mg/filter		0.00030		1	SW6020	08/13/08 01:53/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1110	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 MDC	56.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 precision (±)	48.4	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Thorium 230	2.2	pCi/Filter		0.2		1	E907.0	08/22/08 10:30/eli-c
Thorium 230 precision (±)	1.0	pCi/Filter				1	E907.0	08/22/08 10:30/eli-c
Radium 226	2.2	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c
Radium 226 precision (±)	1	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c
Radium 226 MDC	1.2	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08080024-005
Client Sample ID: AMS-04

Report Date: 09/30/08
Collection Date: 07/09/08
Date Received: 08/04/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0073	mg/filter		0.00030		5	SW6020	08/13/08 01:57/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1440	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 MDC	56.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 precision (±)	52.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Thorium 230	1.9	pCi/Filter		0.2		1	E907.0	08/22/08 10:30/eli-c
Thorium 230 precision (±)	1.0	pCi/Filter				1	E907.0	08/22/08 10:30/eli-c
Radium 226	2.5	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c
Radium 226 precision (±)	1	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c
Radium 226 MDC	1.1	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08080024-006
Client Sample ID: AMS-05

Report Date: 09/30/08
Collection Date: 07/09/08
Date Received: 08/04/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0086	mg/filter		0.00030		5	SW6020	08/13/08 02:02/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1510	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 MDC	56.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 precision (±)	52.7	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Thorium 230	2.9	pCi/Filter		0.2		1	E907.0	08/22/08 10:30/eli-c
Thorium 230 precision (±)	1.1	pCi/Filter				1	E907.0	08/22/08 10:30/eli-c
Radium 226	2.8	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c
Radium 226 precision (±)	1.0	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c
Radium 226 MDC	1.1	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. * 2821 Plant St * Rapid City, SD 57702
Toll Free 888.672.1225 * 605.342.1225 * FAX 605.342.1397 * rapid_city@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08080024-007
Client Sample ID: AMS-06

Report Date: 09/30/08
Collection Date: 07/09/08
Date Received: 08/04/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0067	mg/filter		0.00030		5	SW6020	08/13/08 02:06/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1390	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 MDC	56.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 precision (±)	51.5	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Thorium 230	1.7	pCi/Filter		0.2		1	E907.0	08/22/08 10:30/eli-c
Thorium 230 precision (±)	1.1	pCi/Filter				1	E907.0	08/22/08 10:30/eli-c
Radium 226	0.2	pCi/Filter	U			1	E903.0	08/27/08 09:21/eli-c
Radium 226 precision (±)	0.7	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c
Radium 226 MDC	1.2	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08080024-008
Client Sample ID: AMS-07

Report Date: 09/30/08
Collection Date: 07/09/08
Date Received: 08/04/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0080	mg/filter		0.00030		5	SW6020	08/13/08 02:10/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	1960	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 MDC	56.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 precision (±)	57.3	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Thorium 230	2.2	pCi/Filter		0.2		1	E907.0	08/22/08 10:30/eli-c
Thorium 230 precision (±)	1.0	pCi/Filter				1	E907.0	08/22/08 10:30/eli-c
Radium 226	0.8	pCi/Filter	U			1	E903.0	08/27/08 09:21/eli-c
Radium 226 precision (±)	0.8	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c
Radium 226 MDC	1.1	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08080024-009
Client Sample ID: AMS-08

Report Date: 09/30/08
Collection Date: 07/09/08
Date Received: 08/04/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0034	mg/filter		0.00030		1	SW6020	08/13/08 02:14/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	23.9	pCi/Filter	U			1	E909.0M	08/22/08 10:14/eli-c
Lead 210 MDC	56.1	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Lead 210 precision (±)	33.8	pCi/Filter				1	E909.0M	08/22/08 10:14/eli-c
Thorium 230	1.0	pCi/Filter		0.2		1	E907.0	08/22/08 10:30/eli-c
Thorium 230 precision (±)	0.7	pCi/Filter				1	E907.0	08/22/08 10:30/eli-c
Radium 226	0.9	pCi/Filter	U			1	E903.0	08/27/08 09:21/eli-c
Radium 226 precision (±)	0.8	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c
Radium 226 MDC	1.1	pCi/Filter				1	E903.0	08/27/08 09:21/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08090099-001
Client Sample ID: AMS-1

Report Date: 10/16/08
Collection Date: 08/13/08
Date Received: 09/08/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.00056	mg/filter		0.00030		1	SW6020	09/30/08 20:13/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	497	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 MDC	31.3	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 precision (±)	25.2	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Thorium 230	0.8	pCi/Filter	U	0.2		1	E907.0	10/12/08 13:45/eli-c
Thorium 230 precision (±)	1.1	pCi/Filter				1	E907.0	10/12/08 13:45/eli-c
Radium 226	-1	pCi/Filter	U			1	E903.0	10/07/08 17:20/eli-c
Radium 226 precision (±)	1.2	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c
Radium 226 MDC	2.6	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08090099-002
Client Sample ID: AMS-2

Report Date: 10/16/08
Collection Date: 08/13/08
Date Received: 09/08/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.00078	mg/filter		0.00030		1	SW6020	09/30/08 20:17/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	752	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 MDC	31.3	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 precision (±)	27.9	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Thorium 230	0.5	pCi/Filter		0.2		1	E907.0	09/30/08 16:00/eli-c
Thorium 230 precision (±)	0.2	pCi/Filter				1	E907.0	09/30/08 16:00/eli-c
Radium 226	-2	pCi/Filter	U			1	E903.0	10/07/08 17:20/eli-c
Radium 226 precision (±)	1.1	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c
Radium 226 MDC	2.7	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08090099-003
Client Sample ID: AMS-3

Report Date: 10/16/08
Collection Date: 08/13/08
Date Received: 09/08/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.00056	mg/filter		0.00030		1	SW6020	09/30/08 20:21/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	579	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 MDC	31.3	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 precision (±)	26.1	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Thorium 230	1.4	pCi/Filter		0.2		1	E907.0	09/30/08 16:00/eli-c
Thorium 230 precision (±)	0.3	pCi/Filter				1	E907.0	09/30/08 16:00/eli-c
Radium 226	0.3	pCi/Filter	U			1	E903.0	10/07/08 17:20/eli-c
Radium 226 precision (±)	1.4	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c
Radium 226 MDC	2.4	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08090099-004
Client Sample ID: AMS-4

Report Date: 10/16/08
Collection Date: 08/13/08
Date Received: 09/08/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0016	mg/filter		0.00030		1	SW6020	09/30/08 20:25/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	650	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 MDC	31.3	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 precision (±)	26.9	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Thorium 230	1.8	pCi/Filter		0.2		1	E907.0	09/30/08 16:00/eli-c
Thorium 230 precision (±)	0.3	pCi/Filter				1	E907.0	09/30/08 16:00/eli-c
Radium 226	0.2	pCi/Filter	U			1	E903.0	10/07/08 17:20/eli-c
Radium 226 precision (±)	1.5	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c
Radium 226 MDC	2.6	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08090099-005
Client Sample ID: AMS-5

Report Date: 10/16/08
Collection Date: 08/13/08
Date Received: 09/08/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0034	mg/filter		0.00030		1	SW6020	09/30/08 20:29/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	552	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 MDC	31.3	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 precision (±)	25.7	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Thorium 230	3.2	pCi/Filter		0.2		1	E907.0	09/30/08 16:00/eli-c
Thorium 230 precision (±)	0.3	pCi/Filter				1	E907.0	09/30/08 16:00/eli-c
Radium 226	1.5	pCi/Filter	U			1	E903.0	10/07/08 17:20/eli-c
Radium 226 precision (±)	1.6	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c
Radium 226 MDC	2.4	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08090099-006
Client Sample ID: AMS-6

Report Date: 10/16/08
Collection Date: 08/13/08
Date Received: 09/08/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0015	mg/filter		0.00030		1	SW6020	09/30/08 20:33/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	998	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 MDC	31.3	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 precision (±)	30.4	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Thorium 230	1.5	pCi/Filter		0.2		1	E907.0	09/30/08 16:00/eli-c
Thorium 230 precision (±)	0.3	pCi/Filter				1	E907.0	09/30/08 16:00/eli-c
Radium 226	0.8	pCi/Filter	U			1	E903.0	10/07/08 17:20/eli-c
Radium 226 precision (±)	1.6	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c
Radium 226 MDC	2.5	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08090099-007
Client Sample ID: AMS-7

Report Date: 10/16/08
Collection Date: 08/13/08
Date Received: 09/08/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0016	mg/filter		0.00030		1	SW6020	09/30/08 20:37/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	696	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 MDC	31.3	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 precision (±)	27.4	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Thorium 230	1.4	pCi/Filter		0.2		1	E907.0	09/30/08 16:00/eli-c
Thorium 230 precision (±)	0.3	pCi/Filter				1	E907.0	09/30/08 16:00/eli-c
Radium 226	1.2	pCi/Filter	U			1	E903.0	10/07/08 17:20/eli-c
Radium 226 precision (±)	1.6	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c
Radium 226 MDC	2.5	pCi/Filter				1	E903.0	10/07/08 17:20/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08090099-008
Client Sample ID: AMS-BKG

Report Date: 10/16/08
Collection Date: 08/13/08
Date Received: 09/08/08
Matrix: FILTER

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
Uranium	0.0011	mg/filter		0.00030		1	SW6020	09/30/08 20:41/eli-c
RADIONUCLIDES - TOTAL								
Lead 210	606	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 MDC	31.3	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Lead 210 precision (±)	26.4	pCi/Filter				1	E909.0M	10/01/08 08:40/eli-c
Thorium 230	1.7	pCi/Filter		0.2		1	E907.0	09/30/08 16:00/eli-c
Thorium 230 precision (±)	0.3	pCi/Filter				1	E907.0	09/30/08 16:00/eli-c
Radium 226	-0.4	pCi/Filter	U			1	E903.0	10/07/08 18:55/eli-c
Radium 226 precision (±)	1.1	pCi/Filter				1	E903.0	10/07/08 18:55/eli-c
Radium 226 MDC	2.0	pCi/Filter				1	E903.0	10/07/08 18:55/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

ANALYTICAL SUMMARY REPORT

December 14, 2007

Michael Schierrman
Environmental Restoration Group Inc
8809 Washington St NE
Albuquerque, NM 87113

Workorder No.. R07100004

Project Name: Dewey Burdock Baseline Soil Sampling

Energy Laboratories Inc. received the following 118 samples from Environmental Restoration Group Inc on 9/29/2007 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
R07100004-001	SMA-B01	09/24/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-002	SMA-B01Dup	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-003	SMA-B03	09/24/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-004	SMA-B04	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-005	SMA-B07	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-006	SMA-B09	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-007	SMA-B09Dup	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-008	SMA-B10	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-009	SMA-B11	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-010	SMA-B13	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-011	SMA-B14	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-012	SMA-B14Dup	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-013	SMA-B15	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-014	SMA-B16	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-015	SMA-B17	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-016	SMA-B18	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-017	SMA-B18Dup	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-018	SMA-B19	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-019	SMA-B20	09/27/07 0:00	09/29/07	Soil	Same As Above
R07100004-020	SMA-B21	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-021	SMA-B22	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-022	SMA-B23	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-023	SMA-B23Dup	09/24/07 0:00	09/29/07	Soil	Same As Above

R07100004-024	SMA-B24	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-025	SMA-B25	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-026	SMA-B26	09/28/07 0:00	09/29/07	Soil	Same As Above
R07100004-027	SMA-B27	09/28/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-028	SMA-B28	09/28/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-029	SMA-B29	09/28/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-030	SMA-B30	09/28/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-031	MPA-R01	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-032	MPA-R02	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-033	MPA-R03	09/24/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-034	MPA-R04	09/24/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-035	MPA-R04Dup	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-036	MPA-R05	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-037	NEA-R01	09/24/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-038	NEA-R02	09/24/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-039	NEA-R03	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-040	NEA-R04	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-041	NEA-R04Dup	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-042	NEA-R05	09/24/07 0:00	09/29/07	Soil	Same As Above
R07100004-043	AMS-1	09/27/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-044	AMS-2	09/27/07 0:00	09/29/07	Soil	Same As Above
R07100004-045	AMS-3	09/27/07 0:00	09/29/07	Soil	Same As Above
R07100004-046	AMS-4	09/27/07 0:00	09/29/07	Soil	Same As Above

R07100004-047	AMS-5	09/27/07 0:00	09/29/07	Soil	Same As Above
R07100004-048	AMS-6	09/27/07 0:00	09/29/07	Soil	Same As Above
R07100004-049	AMS-7	09/27/07 0:00	09/29/07	Soil	Same As Above
R07100004-050	AMS-BKG	09/27/07 0:00	09/29/07	Soil	Same As Above
R07100004-051	MPA-B01	09/25/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-052	MPA-B02	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-053	MPA-B03	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-054	RFA-B01A	09/26/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-055	RFA-B01B	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-056	RFA-B01C	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-057	RFA-B01ADup	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-058	RFA-B01BDup	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-059	RFA-B01CDup	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-060	RFA-B02A	09/26/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-061	RFA-B02B	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-062	RFA-B02C	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-063	RFA-B03	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-064	RFA-B04	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-065	RFA-B06	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-066	RFA-B07	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-067	RFA-B08	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-068	RFA-B08Dup	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-069	RFA-B09	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-070	RFA-B10	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-071	RFA-B11	09/25/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-072	RFA-B12	09/25/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-073	RFA-B13A	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-074	RFA-B13B	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-075	RFA-B13C	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-076	RFA-B14	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-077	RFA-B15A	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-078	RFA-B15B	09/26/07 0:00	09/29/07	Soil	Same As Above

R07100004-079	RFA-B15C	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-080	RFA-B16	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-081	RFA-B17A	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-082	RFA-B17B	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-083	RFA-B17C	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-084	RFA-B18	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-085	RFA-B19	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-086	RFA-B20	09/25/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-087	RFA-B21A	09/26/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-088	RFA-B21B	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-089	RFA-B21C	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-090	RFA-B22	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-091	RFA-B23	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-092	RFA-B24	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-093	RFA-B25	09/25/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-094	RFA-B26	09/25/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-095	RFA-B27	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-096	RFA-B28	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-097	RFA-B28Dup	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-098	RFA-B29	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-099	RFA-B30A	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-100	RFA-B30B	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-101	RFA-B30C	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-102	RFA-B31	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-103	RFA-B33	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-104	RFA-B34	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-105	RFA-B35	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-106	RFA-B36A	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-107	RFA-B36B	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-108	RFA-B36C	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-109	RFA-B37A	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-110	RFA-B37B	09/26/07 0:00	09/29/07	Soil	Same As Above

R07100004-111	RFA-B37C	09/26/07 0:00	09/29/07	Soil	Same As Above
R07100004-112	RFA-B38	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-113	RFA-B39	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-114	RFA-B40	09/25/07 0:00	09/29/07	Soil	Metals, Total Digestion, Total Metals For Radio Chemistry Gross Gamma Lead 210 Radium 226 Thorium, Isotopic
R07100004-115	RFA-B41	09/25/07 0:00	09/29/07	Soil	Gross Gamma
R07100004-116	RFA-B43	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-117	RFA-B44	09/25/07 0:00	09/29/07	Soil	Same As Above
R07100004-118	RFA-B45	09/25/07 0:00	09/29/07	Soil	Same As Above

Thank you for submitting your samples to Energy Laboratories, Inc. - Rapid City. The following pages contain the results of the sample tests listed above and applicable analytical notes.

The samples were analyzed in accordance with the methods specified on the analytical reports. All analyses were accompanied by appropriate quality control samples throughout the test. Where applicable, the results of these quality control samples will be included, following your analytical data.

If you have any questions regarding the analyses performed or the results of these analyses, please contact Energy Laboratories Inc. - Rapid City at (605) 342-1225, (888) 672-1225 or Rapid_City@energylab.com.

Report Approved By:_____

Linda Larson

Rapid City - Project Manager

LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline Soil Sampling
Workorder: R07100004

Report Date: 12/14/07
Date Received: 09/29/07

	Analysis	Uranium, Activity	Pb210	Pb210 ±	Ra226 Chemical	Ra226 ± Chemical	Th230	Th230 ±	Ra226 Gamma	Ra226 ± Gamma
	Units	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry
Sample ID	Client Sample ID	Results	Results	Results	Results	Results	Results	Results	Results	Results
R07100004-001	SMA-B01	1.2E-06	6.0E-07	1.0E-07	9.0E-07	2.0E-07	5.0E-07	1.0E-07	9.0E-07	2.0E-07
R07100004-002	SMA-B01Dup	1.5E-06	2.0E-06	2.0E-07	1.0E-06	2.0E-07	6.0E-07	1.0E-07	1.4E-06	3.0E-07
R07100004-003	SMA-B03								1.5E-06	2.0E-07
R07100004-004	SMA-B04								1.0E-06	2.0E-07
R07100004-005	SMA-B07								3.2E-06	3.0E-07
R07100004-006	SMA-B09								1.2E-06	2.0E-07
R07100004-007	SMA-B09Dup								1.7E-06	2.0E-07
R07100004-008	SMA-B10								1.4E-06	2.0E-07
R07100004-009	SMA-B11								2.3E-06	3.0E-07
R07100004-010	SMA-B13								1.7E-06	3.0E-07
R07100004-011	SMA-B14								1.4E-06	3.0E-07
R07100004-012	SMA-B14Dup								1.6E-06	2.0E-07
R07100004-013	SMA-B15								8.0E-07	2.0E-07
R07100004-014	SMA-B16								9.0E-07	2.0E-07
R07100004-015	SMA-B17								1.0E-06	2.0E-07
R07100004-016	SMA-B18								5.0E-07	1.0E-07
R07100004-017	SMA-B18Dup								4.0E-07	1.0E-07
R07100004-018	SMA-B19								1.2E-06	2.0E-07
R07100004-019	SMA-B20								9.0E-07	2.0E-07
R07100004-020	SMA-B21								1.4E-06	2.0E-07
R07100004-021	SMA-B22								8.0E-07	2.0E-07
R07100004-022	SMA-B23								2.7E-06	3.0E-07
R07100004-023	SMA-B23Dup								2.8E-06	3.0E-07
R07100004-024	SMA-B24								1.3E-06	2.0E-07
R07100004-025	SMA-B25								1.0E-06	2.0E-07
R07100004-026	SMA-B26								1.1E-05	5.0E-07
R07100004-027	SMA-B27	6.7E-05	3.0E-05	8.0E-07	3.0E-05	1.0E-06	3.0E-05	8.0E-07	4.0E-05	1.1E-06
R07100004-028	SMA-B28								6.4E-06	4.0E-07
R07100004-029	SMA-B29	1.6E-05	2.0E-05	7.0E-07	2.0E-05	8.0E-07	2.0E-05	6.0E-07	2.9E-05	9.0E-07
R07100004-030	SMA-B30								3.4E-05	9.0E-07
R07100004-031	MPA-R01								1.4E-06	2.0E-07
R07100004-032	MPA-R02								2.6E-06	3.0E-07
R07100004-033	MPA-R03	7.5E-07	7.0E-07	1.0E-07	8.0E-07	2.0E-07	4.0E-07	1.0E-07	1.1E-06	2.0E-07
R07100004-034	MPA-R04								9.0E-07	2.0E-07
R07100004-035	MPA-R04Dup								8.0E-07	2.0E-07
R07100004-036	MPA-R05								1.2E-06	2.0E-07
R07100004-037	NEA-R01	9.1E-07	7.0E-07	2.0E-07	9.0E-07	2.0E-07	6.0E-07	1.0E-07	1.1E-06	2.0E-07
R07100004-038	NEA-R02								1.3E-06	2.0E-07
R07100004-039	NEA-R03								2.2E-06	3.0E-07
R07100004-040	NEA-R04								2.3E-06	3.0E-07
R07100004-041	NEA-R04Dup								2.5E-06	3.0E-07

LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline Soil Sampling
Workorder: R07100004

Report Date: 12/14/07
Date Received: 09/29/07

	Analysis	Uranium, Activity	Pb210	Pb210 ±	Ra226 Chemical	Ra226 ± Chemical	Th230	Th230 ±	Ra226 Gamma	Ra226 ± Gamma
	Units	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry
Sample ID	Client Sample ID	Results	Results	Results	Results	Results	Results	Results	Results	Results
R07100004-042	NEA-R05								2.8E-06	3.0E-07
R07100004-043	AMS-1	9.6E-07	2.0E-06	3.0E-07	7.0E-07	2.0E-07	4.0E-07	1.0E-07	1.4E-06	2.0E-07
R07100004-044	AMS-2	9.5E-07	3.0E-06	3.0E-07	1.0E-06	2.0E-07	5.0E-07	1.0E-07	1.1E-06	2.0E-07
R07100004-045	AMS-3	8.2E-07	2.0E-06	2.0E-07	1.0E-06	2.0E-07	4.0E-07	1.0E-07	1.5E-06	2.0E-07
R07100004-046	AMS-4	1.4E-06	2.0E-06	2.0E-07	7.0E-07	1.0E-07	8.0E-07	2.0E-07	1.5E-06	3.0E-07
R07100004-047	AMS-5	6.8E-07	2.0E-06	2.0E-07	8.0E-07	2.0E-07	6.0E-07	1.0E-07	1.3E-06	3.0E-07
R07100004-048	AMS-6	5.5E-07	1.0E-06	2.0E-07	3.0E-07	1.0E-07	4.0E-07	1.0E-07	8.0E-07	2.0E-07
R07100004-049	AMS-7	5.8E-07	2.0E-06	2.0E-07	3.0E-07	1.0E-07	3.0E-07	8.0E-08	1.1E-06	2.0E-07
R07100004-050	AMS-BKG	1.9E-06	2.0E-06	2.0E-07	1.0E-06	2.0E-07	9.0E-07	1.0E-07	2.4E-06	4.0E-07
R07100004-051	MPA-B01								1.4E-06	3.0E-07
R07100004-052	MPA-B02								1.1E-06	2.0E-07
R07100004-053	MPA-B03								1.3E-06	3.0E-07
R07100004-054	RFA-B01A	8.7E-07	1.0E-06	2.0E-07	7.0E-07	1.0E-07	7.0E-07	1.0E-07	1.2E-06	2.0E-07
R07100004-055	RFA-B01B	1.1E-06	2.0E-06	2.0E-07	1.0E-06	2.0E-07	9.0E-07	2.0E-07	1.7E-06	2.0E-07
R07100004-056	RFA-B01C	1.5E-06	6.0E-07	1.0E-07	1.0E-06	2.0E-07	8.0E-07	1.0E-07	1.2E-06	2.0E-07
R07100004-057	RFA-B01ADup	9.0E-07	8.0E-07	1.0E-07	1.0E-06	2.0E-07	7.0E-07	1.0E-07	1.1E-06	2.0E-07
R07100004-058	RFA-B01BDup	9.9E-07	9.0E-07	2.0E-07	1.0E-06	2.0E-07	9.0E-07	2.0E-07	1.5E-06	2.0E-07
R07100004-059	RFA-B01CDup	1.3E-06	1.0E-06	2.0E-07	1.0E-06	2.0E-07	1.0E-06	2.0E-07	1.7E-06	3.0E-07
R07100004-060	RFA-B02A								1.1E-06	2.0E-07
R07100004-061	RFA-B02B								9.0E-07	2.0E-07
R07100004-062	RFA-B02C								9.0E-07	2.0E-07
R07100004-063	RFA-B03								1.5E-06	3.0E-07
R07100004-064	RFA-B04								1.1E-06	2.0E-07
R07100004-065	RFA-B06								1.7E-06	2.0E-07
R07100004-066	RFA-B07								9.0E-07	2.0E-07
R07100004-067	RFA-B08								1.1E-06	2.0E-07
R07100004-068	RFA-B08Dup								1.1E-06	2.0E-07
R07100004-069	RFA-B09								1.0E-06	2.0E-07
R07100004-070	RFA-B10								1.8E-06	3.0E-07
R07100004-071	RFA-B11	8.8E-07	1.0E-06	2.0E-07	9.0E-07	2.0E-07	5.0E-07	1.0E-07	1.0E-06	2.0E-07
R07100004-072	RFA-B12								1.8E-06	3.0E-07
R07100004-073	RFA-B13A								1.6E-06	2.0E-07
R07100004-074	RFA-B13B								1.8E-06	2.0E-07
R07100004-075	RFA-B13C								1.6E-06	2.0E-07
R07100004-076	RFA-B14								1.7E-06	3.0E-07
R07100004-077	RFA-B15A								1.4E-06	3.0E-07
R07100004-078	RFA-B15B								1.5E-06	2.0E-07
R07100004-079	RFA-B15C								1.5E-06	3.0E-07
R07100004-080	RFA-B16								9.0E-07	2.0E-07
R07100004-081	RFA-B17A								2.0E-06	3.0E-07
R07100004-082	RFA-B17B								2.2E-06	3.0E-07

LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline Soil Sampling
Workorder: R07100004

Report Date: 12/14/07
Date Received: 09/29/07

		Analysis	Uranium, Activity	Pb210	Pb210 ±	Ra226 Chemical	Ra226 ± Chemical	Th230	Th230 ±	Ra226 Gamma	Ra226 ± Gamma
		Units	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry	uCi/g-dry
Sample ID	Client Sample ID		Results	Results	Results	Results	Results	Results	Results	Results	Results
R07100004-083	RFA-B17C									2.5E-06	3.0E-07
R07100004-084	RFA-B18									1.7E-06	3.0E-07
R07100004-085	RFA-B19									1.2E-06	2.0E-07
R07100004-086	RFA-B20		8.8E-07	1.0E-06	2.0E-07	6.0E-07	1.0E-07	5.0E-07	1.0E-07	1.3E-06	3.0E-07
R07100004-087	RFA-B21A									5.3E-06	4.0E-07
R07100004-088	RFA-B21B									1.3E-06	2.0E-07
R07100004-089	RFA-B21C									1.2E-06	2.0E-07
R07100004-090	RFA-B22									1.5E-06	2.0E-07
R07100004-091	RFA-B23									3.6E-06	4.0E-07
R07100004-092	RFA-B24									1.3E-06	2.0E-07
R07100004-093	RFA-B25		6.7E-07	1.0E-06	2.0E-07	6.0E-07	1.0E-07	4.0E-07	1.0E-07	1.2E-06	2.0E-07
R07100004-094	RFA-B26									1.1E-06	2.0E-07
R07100004-095	RFA-B27									1.5E-06	2.0E-07
R07100004-096	RFA-B28									2.4E-06	3.0E-07
R07100004-097	RFA-B28Dup									1.8E-06	3.0E-07
R07100004-098	RFA-B29									1.7E-06	3.0E-07
R07100004-099	RFA-B30A									1.8E-06	2.0E-07
R07100004-100	RFA-B30B									2.1E-06	3.0E-07
R07100004-101	RFA-B30C									1.7E-06	3.0E-07
R07100004-102	RFA-B31									1.3E-06	2.0E-07
R07100004-103	RFA-B33									9.0E-07	2.0E-07
R07100004-104	RFA-B34									1.0E-06	2.0E-07
R07100004-105	RFA-B35									1.2E-06	2.0E-07
R07100004-106	RFA-B36A									1.0E-06	2.0E-07
R07100004-107	RFA-B36B									1.1E-06	2.0E-07
R07100004-108	RFA-B36C									1.0E-06	2.0E-07
R07100004-109	RFA-B37A									9.0E-07	2.0E-07
R07100004-110	RFA-B37B									7.0E-07	2.0E-07
R07100004-111	RFA-B37C									1.1E-06	2.0E-07
R07100004-112	RFA-B38									1.0E-06	2.0E-07
R07100004-113	RFA-B39									1.1E-06	2.0E-07
R07100004-114	RFA-B40		5.6E-07	1.0E-06	2.0E-07	6.0E-07	1.0E-07	3.0E-07	1.0E-07	1.1E-06	2.0E-07
R07100004-115	RFA-B41									1.2E-06	2.0E-07
R07100004-116	RFA-B43									1.7E-06	3.0E-07
R07100004-117	RFA-B44									1.4E-06	2.0E-07
R07100004-118	RFA-B45									1.6E-06	3.0E-07

QA/QC Summary Report

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline Soil Sampling

Report Date: 12/14/07
Work Order: R07100004

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E901.1								Batch: C_16378	
Sample ID: MB-R92021	Method Blank				Run: SUB-C92021			10/22/07 12:00	
Bismuth 214	ND	pCi/g-dry	0.05						
Radium 226	ND	pCi/g-dry	0.05						
Sample ID: LCS-R92021	Laboratory Control Sample				Run: SUB-C92021			10/22/07 12:00	
Bismuth 214	50.3	pCi/g-dry	0.10	106	70	130			
Sample ID: R07100004-103A	Sample Duplicate				Run: SUB-C94009			11/30/07 12:35	
Radium 226	1.00	pCi/g-dry	0.10				11	30	
Radium 226 precision (±)	0.200	pCi/g-dry							
Sample ID: R07100004-105A	Sample Duplicate				Run: SUB-C94009			11/30/07 12:35	
Radium 226	1.40	pCi/g-dry	0.10				15	30	
Radium 226 precision (±)	0.200	pCi/g-dry							
Sample ID: R07100004-107A	Sample Duplicate				Run: SUB-C94009			11/30/07 12:35	
Radium 226	0.900	pCi/g-dry	0 10				20	30	
Radium 226 precision (±)	0.200	pCi/g-dry							
Sample ID: R07100004-109A	Sample Duplicate				Run: SUB-C94009			11/30/07 12:35	
Radium 226	0.800	pCi/g-dry	0.10				12	30	
Radium 226 precision (±)	0.200	pCi/g-dry							
Sample ID: R07100004-111A	Sample Duplicate				Run: SUB-C94009			11/30/07 12:35	
Radium 226	1 00	pCi/g-dry	0 10				9.5	30	
Radium 226 precision (±)	0.200	pCi/g-dry							
Sample ID: R07100004-113A	Sample Duplicate				Run: SUB-C94009			11/30/07 12:35	
Radium 226	1 10	pCi/g-dry	0.10				0.0	30	
Radium 226 precision (±)	0.200	pCi/g-dry							
Sample ID: R07100004-115A	Sample Duplicate				Run: SUB-C94009			11/30/07 12:35	
Radium 226	1.20	pCi/g-dry	0.10				0.0	30	
Radium 226 precision (±)	0.300	pCi/g-dry							
Sample ID: R07100004-117A	Sample Duplicate				Run: SUB-C94009			11/30/07 12:35	
Radium 226	1.30	pCi/g-dry	0.10				7.4	30	
Radium 226 precision (±)	0.200	pCi/g-dry							

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline Soil Sampling

Report Date: 12/14/07
Work Order: R07100004

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0									Batch: C_16379
Sample ID: R07100004-047A	Sample Matrix Spike				Run: SUB-C91456				10/18/07 12:11
Radium 226	3.2	pCi/g-dry	0 10	75	70	130			
MSD failed and was not imported to Omega.									
Sample ID: LCS-16379	Laboratory Control Sample				Run: SUB-C91456				10/18/07 12:11
Radium 226	0.059	pCi/g-dry	0.10	92	70	130			
Sample ID: MB-16379	Method Blank				Run: SUB-C91456				10/18/07 12:11
Radium 226	ND	pCi/g-dry	0.0002						
Method: E903.0									Batch: C_16398
Sample ID: LCS-16398	Laboratory Control Sample				Run: SUB-C91630				10/22/07 12:54
Radium 226	34	pCi/g-dry	0.10	108	70	130			
Sample ID: R07100004-086A	Sample Matrix Spike				Run: SUB-C91980				10/29/07 13:32
Radium 226	3.7	pCi/g-dry	0.50	101	70	130			
Sample ID: R07100004-086A	Sample Matrix Spike Duplicate				Run: SUB-C91980				10/29/07 13:32
Radium 226	3.7	pCi/g-dry	0.50	98	70	130	1.6	27.5	
Method: E907.0									Batch: C_16379
Sample ID: R07100004-047A	Sample Matrix Spike				Run: SUB-C91536				10/09/07 15:00
Thorium 230	2.97	pCi/g-dry	0.10	103	70	130			
Sample ID: LCS-16379	Laboratory Control Sample				Run: SUB-C91536				10/09/07 15:00
Thorium 230	5.20	pCi/g-dry	0.10	106	70	130			
Sample ID: MB-16379	Method Blank				Run: SUB-C91536				10/09/07 15:00
Thorium 230	ND	pCi/g-dry	0.0002						
Method: E907.0									Batch: C_16398
Sample ID: R07100004-048A	Sample Matrix Spike				Run: SUB-C91708				10/18/07 00:00
Thorium 230	3.19	pCi/g-dry	0 10	98	70	130			
Sample ID: R07100004-048A	Sample Matrix Spike Duplicate				Run: SUB-C91708				10/18/07 00:00
Thorium 230	3.22	pCi/g-dry	0 10	100	70	130	1.1	30	
Sample ID: LCS-R91708	Laboratory Control Sample				Run: SUB-C91708				10/18/07 00:00
Thorium 230	5.50	pCi/g-dry	0.10	93	70	130			
Sample ID: MB-R91708	Method Blank				Run: SUB-C91708				10/18/07 00:00
Thorium 230	ND	pCi/g-dry	0.01						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline Soil Sampling

Report Date: 12/14/07
Work Order: R07100004

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E907.0								Batch: C_R91728	
Sample ID: C07061601-002AMSD	Sample Matrix Spike Duplicate				Run: SUB-C91728			10/17/07 15:00	
Thorium 230	58.5	pCi/L	1.0	100	70	130	3.0	30	
Sample ID: C07070262-015AMS	Sample Matrix Spike				Run: SUB-C91728			10/17/07 15:00	
Thorium 230	63.7	pCi/L	0.20	101	70	130			
Sample ID: LCS-15162	Laboratory Control Sample				Run: SUB-C91728			10/17/07 15:00	
Thorium 230	5.40	pCi/L	0.20	92	70	130			
Sample ID: MB-R91728	Method Blank				Run: SUB-C91728			10/17/07 15:00	
Thorium 230	ND	pCi/L	0.2						
Method: E909.0M								Batch: C_16379	
Sample ID: R07100004-047A	Sample Matrix Spike Duplicate				Run: SUB-C92688			11/06/07 08:10	
Lead 210	497	pCi/g-dry	0.10	123	70	130	88	30	R
Sample ID: MB-R92688	Method Blank				Run: SUB-C92688			11/06/07 08:10	
Lead 210	ND	pCi/g-dry	0.05						
Sample ID: LCS-R92688	Laboratory Control Sample				Run: SUB-C92688			11/06/07 08:10	
Lead 210	90.0	pCi/g-dry	0.10	112	70	130			
Method: E909.0M								Batch: C_16398	
Sample ID: R07100004-114A	Sample Matrix Spike				Run: SUB-C92976			11/08/07 09:20	
Lead 210	485	pCi/g-dry	0.10	120	70	130			
Sample ID: R07100004-114A	Sample Matrix Spike Duplicate				Run: SUB-C92976			11/08/07 09:20	
Lead 210	458	pCi/g-dry	0.10	114	70	130	5.8	30	

Qualifiers:

RL - Analyte reporting limit.
R - RPD exceeds advisory limit.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline Soil Sampling

Report Date: 12/14/07
Work Order: R07100004

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Batch: C_16405
Sample ID: MB-16405	Method Blank				Run: SUB-C91124				10/11/07 23:38
Uranium	9E-05	mg/kg-dry	6E-05						
Uranium, Activity	6E-05	pCi/g-dry	4E-05						
Sample ID: LCS1-16405	Laboratory Control Sample				Run: SUB-C91124				10/11/07 23:50
Uranium	0.0203	mg/kg-dry	0.015	101	75	125			
Uranium, Activity	0.0137	pCi/g-dry	0.010	101	75	125			
Sample ID: LCS-16405	Laboratory Control Sample				Run: SUB-C91124				10/11/07 23:54
Uranium	1.02	mg/kg-dry	0.015	101	75	125			
Uranium, Activity	0.687	pCi/g-dry	0.010	101000	75	125			S
Sample ID: R07100004-033A	Sample Matrix Spike				Run: SUB-C91124				10/12/07 00:23
Uranium	26.1	mg/kg-dry	0.029	104	75	125			
Uranium, Activity	17.7	pCi/g-dry	0.019	104	75	125			
Sample ID: R07100004-033A	Sample Matrix Spike Duplicate				Run: SUB-C91124				10/12/07 00:27
Uranium	25.8	mg/kg-dry	0.029	103	75	125	1 1	20	
Uranium, Activity	17.5	pCi/g-dry	0.019	5140	75	125	1 1	20	S
Method: SW6020									Batch: C_16406
Sample ID: MB-16406	Method Blank				Run: SUB-C91124				10/12/07 00:52
Uranium	ND	mg/kg-dry	6E-05						
Uranium, Activity	ND	pCi/g-dry	4E-05						
Sample ID: LCS1-16406	Laboratory Control Sample				Run: SUB-C91124				10/12/07 00:56
Uranium	0.0212	mg/kg-dry	0.015	106	75	125			
Uranium, Activity	0.0144	pCi/g-dry	0.010	106	75	125			
Sample ID: LCS-16406	Laboratory Control Sample				Run: SUB-C91124				10/12/07 01:00
Uranium	1 00	mg/kg-dry	0.015	100	75	125			
Uranium, Activity	0.679	pCi/g-dry	0.010	100000	75	125			S
Sample ID: R07100004-114A	Sample Matrix Spike				Run: SUB-C91124				10/12/07 02:39
Uranium	22.7	mg/kg-dry	0.026	101	75	125			
Uranium, Activity	15.4	pCi/g-dry	0.017	101	75	125			
Sample ID: R07100004-114A	Sample Matrix Spike Duplicate				Run: SUB-C91124				10/12/07 02:43
Uranium	23.1	mg/kg-dry	0.026	103	75	125	1.7	20	
Uranium, Activity	15.6	pCi/g-dry	0.017	5160	75	125	1.7	20	S

Qualifiers:

RL - Analyte reporting limit.
S - Spike recovery outside of advisory limits.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-001
Client Sample ID: LAN 001A

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	2.4	pCi/g-dry	U			1	E909.0M	08/14/08 09:53/eli-c
Lead 210 precision (±)	2.3	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Lead 210 MDC	3.8	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Radium 226	0.8	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Radium 226 precision (±)	0.09	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Radium 226 MDC	0.04	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Thorium 230	1.2	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.6	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	2.7	mg/kg-dry		0.01		10	SW6020	08/14/08 03:14/eli-c
Uranium, Activity	1.8	pCi/g-dry		0.007		10	SW6020	08/14/08 03:14/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-002
Client Sample ID: LAN 001B

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	4.6	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Lead 210 precision (±)	2.3	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Lead 210 MDC	3.8	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Radium 226	0.8	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Radium 226 MDC	0.04	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Thorium 230	1.4	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.6	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	2.8	mg/kg-dry		0.01		10	SW6020	08/14/08 03:22/eli-c
Uranium, Activity	1.9	pCi/g-dry		0.007		10	SW6020	08/14/08 03:22/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-003
Client Sample ID: LAN 001C

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.9	pCi/g-dry	U			1	E909.0M	08/14/08 09:53/eli-c
Lead 210 precision (±)	2.2	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Lead 210 MDC	3.7	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Radium 226	0.9	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Radium 226 MDC	0.04	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Thorium 230	1.6	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.7	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	2.8	mg/kg-dry		0.01		10	SW6020	08/14/08 03:26/eli-c
Uranium, Activity	1.9	pCi/g-dry		0.007		10	SW6020	08/14/08 03:26/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-004
Client Sample ID: LAN 002A

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	3.4	pCi/g-dry	U			1	E909.0M	08/14/08 09:53/eli-c
Lead 210 precision (±)	2.3	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Lead 210 MDC	3.7	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Radium 226	0.9	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Radium 226 MDC	0.05	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Thorium 230	0.9	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.3	mg/kg-dry		0.01		10	SW6020	08/14/08 03:46/eli-c
Uranium, Activity	0.86	pCi/g-dry		0.007		10	SW6020	08/14/08 03:46/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-005
Client Sample ID: LAN 002B

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.5	pCi/g-dry	U			1	E909.0M	08/14/08 09:53/eli-c
Lead 210 precision (±)	2.3	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Lead 210 MDC	3.8	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Radium 226	1.0	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Radium 226 MDC	0.06	pCi/g-dry				1	E903.0	08/28/08 17:12/eli-c
Thorium 230	0.4	pCi/g-dry	U	0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.1	mg/kg-dry		0.01		10	SW6020	08/14/08 03:50/eli-c
Uranium, Activity	0.75	pCi/g-dry		0.007		10	SW6020	08/14/08 03:50/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-006
Client Sample ID: LAN 002C

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.1	pCi/g-dry	U			1	E909.0M	08/14/08 09:53/eli-c
Lead 210 precision (±)	2.2	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Lead 210 MDC	3.6	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Radium 226	1.2	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Radium 226 MDC	0.06	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Thorium 230	0.3	pCi/g-dry	U	0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.3	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	2.2	mg/kg-dry		0.01		10	SW6020	08/14/08 03:55/eli-c
Uranium, Activity	1.5	pCi/g-dry		0.007		10	SW6020	08/14/08 03:55/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-007
Client Sample ID: LAN 003A

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.8	pCi/g-dry	U			1	E909.0M	08/14/08 09:53/eli-c
Lead 210 precision (±)	2.2	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Lead 210 MDC	3.6	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Radium 226	1.2	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Radium 226 MDC	0.05	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Thorium 230	0.7	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.6	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.2	mg/kg-dry		0.01		10	SW6020	08/14/08 03:59/eli-c
Uranium, Activity	0.78	pCi/g-dry		0.007		10	SW6020	08/14/08 03:59/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-008
Client Sample ID: LAN 003B

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	2.4	pCi/g-dry	U			1	E909.0M	08/14/08 09:53/eli-c
Lead 210 precision (±)	2.3	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Lead 210 MDC	3.8	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Radium 226	1.2	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Radium 226 MDC	0.05	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Thorium 230	0.8	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.7	mg/kg-dry		0.01		10	SW6020	08/14/08 04:03/eli-c
Uranium, Activity	1.1	pCi/g-dry		0.007		10	SW6020	08/14/08 04:03/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-009
Client Sample ID: LAN 003C

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	2.6	pCi/g-dry	U			1	E909.0M	08/14/08 09:53/eli-c
Lead 210 precision (±)	2.3	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Lead 210 MDC	3.7	pCi/g-dry				1	E909.0M	08/14/08 09:53/eli-c
Radium 226	1	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Radium 226 MDC	0.05	pCi/g-dry				1	E903.0	08/27/08 17:52/eli-c
Thorium 230	0.6	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.3	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	2.9	mg/kg-dry		0.01		10	SW6020	08/14/08 04:07/eli-c
Uranium, Activity	2.0	pCi/g-dry		0.007		10	SW6020	08/14/08 04:07/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-010
Client Sample ID: LAN 004A

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	1.9	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 precision (±)	0.2	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Thorium 230	0.6	pCi/g-dry	U	0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.6	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.0	mg/kg-dry		0.01		10	SW6020	08/14/08 04:11/eli-c
Uranium, Activity	0.69	pCi/g-dry		0.007		10	SW6020	08/14/08 04:11/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-011
Client Sample ID: LAN 004B

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	2.2	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	1.3	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 precision (±)	0.2	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Thorium 230	0.2	pCi/g-dry	U	0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.2	mg/kg-dry		0.01		10	SW6020	08/14/08 04:15/eli-c
Uranium, Activity	0.79	pCi/g-dry		0.007		10	SW6020	08/14/08 04:15/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-012
Client Sample ID: LAN 004C

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.8	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	1.0	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Thorium 230	0.7	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	2.2	mg/kg-dry		0.01		10	SW6020	08/14/08 04:19/eli-c
Uranium, Activity	1.5	pCi/g-dry		0.007		10	SW6020	08/14/08 04:19/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-013
Client Sample ID: LAN 005A

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.2	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	4.4	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 precision (±)	0.3	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Thorium 230	0.9	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.2	mg/kg-dry		0.01		10	SW6020	08/14/08 04:39/eli-c
Uranium, Activity	0.84	pCi/g-dry		0.007		10	SW6020	08/14/08 04:39/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-014
Client Sample ID: LAN 005B

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.9	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	1.6	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 precision (±)	0.2	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Thorium 230	0.6	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.0	mg/kg-dry		0.01		10	SW6020	08/14/08 04:43/eli-c
Uranium, Activity	0.71	pCi/g-dry		0.007		10	SW6020	08/14/08 04:43/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-015
Client Sample ID: LAN 005C

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.6	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	1.5	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 precision (±)	0.2	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Thorium 230	0.5	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.0	mg/kg-dry		0.01		10	SW6020	08/14/08 04:47/eli-c
Uranium, Activity	0.71	pCi/g-dry		0.007		10	SW6020	08/14/08 04:47/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-016
Client Sample ID: LAN 004A Dup

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.5	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Thorium 230	0.4	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.3	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.1	mg/kg-dry		0.01		10	SW6020	08/14/08 04:51/eli-c
Uranium, Activity	0.72	pCi/g-dry		0.007		10	SW6020	08/14/08 04:51/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-017
Client Sample ID: LAN 004B Dup

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	-0.3	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Thorium 230	0.5	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.0	mg/kg-dry		0.01		10	SW6020	08/14/08 04:55/eli-c
Uranium, Activity	0.68	pCi/g-dry		0.007		10	SW6020	08/14/08 04:55/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-018
Client Sample ID: LAN 004C Dup

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.2	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	0.8	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 11:46/eli-c
Thorium 230	0.5	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	2.0	mg/kg-dry		0.01		10	SW6020	08/14/08 04:59/eli-c
Uranium, Activity	1.3	pCi/g-dry		0.007		10	SW6020	08/14/08 04:59/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-019
Client Sample ID: LAN 006A

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	-0.005	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	1.1	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Thorium 230	0.3	pCi/g-dry	U	0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.0	mg/kg-dry		0.01		10	SW6020	08/14/08 05:03/eli-c
Uranium, Activity	0.71	pCi/g-dry		0.007		10	SW6020	08/14/08 05:03/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-020
Client Sample ID: LAN 006B

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.5	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	1.3	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Thorium 230	0.6	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.1	mg/kg-dry		0.01		10	SW6020	08/14/08 05:07/eli-c
Uranium, Activity	0.75	pCi/g-dry		0.007		10	SW6020	08/14/08 05:07/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-021
Client Sample ID: LAN 006C

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.7	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	1.4	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 precision (±)	0.2	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Thorium 230	0.5	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.3	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.7	mg/kg-dry		0.01		10	SW6020	08/14/08 05:43/eli-c
Uranium, Activity	1.1	pCi/g-dry		0.007		10	SW6020	08/14/08 05:43/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-022
Client Sample ID: LAN 007A

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.6	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Thorium 230	0.3	pCi/g-dry	U	0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.2	mg/kg-dry		0.01		10	SW6020	08/14/08 05:51/eli-c
Uranium, Activity	0.81	pCi/g-dry		0.007		10	SW6020	08/14/08 05:51/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-023
Client Sample ID: LAN 007B

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.6	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Thorium 230	0.4	pCi/g-dry	U	0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	2.2	mg/kg-dry		0.01		10	SW6020	08/14/08 05:55/eli-c
Uranium, Activity	1.5	pCi/g-dry		0.007		10	SW6020	08/14/08 05:55/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-024
Client Sample ID: LAN 007C

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.1	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	0.4	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Thorium 230	0.8	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.6	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	3.6	mg/kg-dry		0.01		10	SW6020	08/14/08 05:59/eli-c
Uranium, Activity	2.5	pCi/g-dry		0.007		10	SW6020	08/14/08 05:59/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-025
Client Sample ID: LAN 008A

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.0	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	0.9	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 MDC	0.09	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Thorium 230	1	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.7	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	3.1	mg/kg-dry		0.01		10	SW6020	08/14/08 07:15/eli-c
Uranium, Activity	2.1	pCi/g-dry		0.007		10	SW6020	08/14/08 07:15/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-026
Client Sample ID: LAN 008B

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.1	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	1.0	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Thorium 230	0.9	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.7	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	5.1	mg/kg-dry		0.01		10	SW6020	08/14/08 07:19/eli-c
Uranium, Activity	3.5	pCi/g-dry		0.007		10	SW6020	08/14/08 07:19/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-027
Client Sample ID: LAN 009A

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	-0.4	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	0.8	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Thorium 230	0.3	pCi/g-dry	U	0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.6	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	1.6	mg/kg-dry		0.01		10	SW6020	08/14/08 07:23/eli-c
Uranium, Activity	1.1	pCi/g-dry		0.007		10	SW6020	08/14/08 07:23/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-028
Client Sample ID: LAN 009B

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	-0.3	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	4.1	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 precision (±)	0.3	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 13:55/eli-c
Thorium 230	0.7	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	2.6	mg/kg-dry		0.01		10	SW6020	08/14/08 07:27/eli-c
Uranium, Activity	1.8	pCi/g-dry		0.007		10	SW6020	08/14/08 07:27/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-029
Client Sample ID: LAN 009C

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.5	pCi/g-dry	U			1	E909.0M	08/18/08 09:32/eli-c
Lead 210 precision (±)	1.4	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Lead 210 MDC	2.3	pCi/g-dry				1	E909.0M	08/18/08 09:32/eli-c
Radium 226	3.9	pCi/g-dry				1	E903.0	08/21/08 15:29/eli-c
Radium 226 precision (±)	0.3	pCi/g-dry				1	E903.0	08/21/08 15:29/eli-c
Radium 226 MDC	0.08	pCi/g-dry				1	E903.0	08/21/08 15:29/eli-c
Thorium 230	1.1	pCi/g-dry		0.1		1	E907.0	09/05/08 13:00/eli-c
Thorium 230 precision (±)	0.6	pCi/g-dry				1	E907.0	09/05/08 13:00/eli-c
TOTAL METALS ANALYSES								
Uranium	2.4	mg/kg-dry		0.01		10	SW6020	08/14/08 07:31/eli-c
Uranium, Activity	1.6	pCi/g-dry		0.007		10	SW6020	08/14/08 07:31/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-030
Client Sample ID: LAN 010A

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.8	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	2.0	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	1.2	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 precision (±)	0.2	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Thorium 230	1.2	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.6	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	2.3	mg/kg-dry		0.01		10	SW6020	08/14/08 07:35/eli-c
Uranium, Activity	1.6	pCi/g-dry		0.007		10	SW6020	08/14/08 07:35/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-031
Client Sample ID: LAN 010B

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.1	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.1	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	1.4	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 precision (±)	0.2	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Thorium 230	7.9	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	1.2	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	2.2	mg/kg-dry		0.01		10	SW6020	08/14/08 07:39/eli-c
Uranium, Activity	1.5	pCi/g-dry		0.007		10	SW6020	08/14/08 07:39/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-032
Client Sample ID: LAN 010C

Report Date: 09/30/08
Collection Date: 07/18/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.9	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	2.0	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	1.5	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 precision (±)	0.2	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Thorium 230	1.9	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.8	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	4.0	mg/kg-dry		0.01		10	SW6020	08/14/08 07:44/eli-c
Uranium, Activity	2.7	pCi/g-dry		0.007		10	SW6020	08/14/08 07:44/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-033
Client Sample ID: LAS 001A

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.6	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.9	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Thorium 230	0.6	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.8	mg/kg-dry		0.01		10	SW6020	08/14/08 07:48/eli-c
Uranium, Activity	1.2	pCi/g-dry		0.007		10	SW6020	08/14/08 07:48/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-034
Client Sample ID: LAS 001B

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.1	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	2.0	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.8	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Thorium 230	0.4	pCi/g-dry	U	0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.3	mg/kg-dry		0.01		10	SW6020	08/14/08 08:08/eli-c
Uranium, Activity	0.86	pCi/g-dry		0.007		10	SW6020	08/14/08 08:08/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

ENERGY LABORATORIES, INC. * 2821 Plant St * Rapid City, SD 57702
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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-035
Client Sample ID: LAS 001C

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.9	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.1	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.8	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Thorium 230	0.1	pCi/g-dry	U	0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.3	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	0.91	mg/kg-dry		0.01		10	SW6020	08/15/08 16:46/eli-c
Uranium, Activity	0.61	pCi/g-dry		0.007		10	SW6020	08/15/08 16:46/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-036
Client Sample ID: LAS 002A

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.4	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Thorium 230	0.1	pCi/g-dry	U	0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	0.71	mg/kg-dry		0.01		10	SW6020	08/15/08 16:50/eli-c
Uranium, Activity	0.48	pCi/g-dry		0.007		10	SW6020	08/15/08 16:50/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-037
Client Sample ID: LAS 002B

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.7	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Thorium 230	0.4	pCi/g-dry	U	0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.0	mg/kg-dry		0.01		10	SW6020	08/15/08 16:54/eli-c
Uranium, Activity	0.71	pCi/g-dry		0.007		10	SW6020	08/15/08 16:54/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-038
Client Sample ID: LAS 003C

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.4	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.1	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 15:15/eli-c
Thorium 230	0.4	pCi/g-dry	U	0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	0.93	mg/kg-dry		0.01		10	SW6020	08/15/08 16:58/eli-c
Uranium, Activity	0.63	pCi/g-dry		0.007		10	SW6020	08/15/08 16:58/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-039
Client Sample ID: LAS 003A

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.4	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Thorium 230	0.3	pCi/g-dry	U	0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	0.74	mg/kg-dry		0.01		10	SW6020	08/15/08 17:03/eli-c
Uranium, Activity	0.50	pCi/g-dry		0.007		10	SW6020	08/15/08 17:03/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-040
Client Sample ID: LAS 003B

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.1	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.1	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.9	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Thorium 230	0.5	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.8	mg/kg-dry		0.01		10	SW6020	08/14/08 08:12/eli-c
Uranium, Activity	1.2	pCi/g-dry		0.007		10	SW6020	08/14/08 08:12/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-041
Client Sample ID: LAS 003C

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.7	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.8	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Thorium 230	1	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.4	mg/kg-dry		0.01		10	SW6020	08/15/08 17:15/eli-c
Uranium, Activity	0.93	pCi/g-dry		0.007		10	SW6020	08/15/08 17:15/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-042
Client Sample ID: LAS 004A

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.2	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.8	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Thorium 230	0.6	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.6	mg/kg-dry		0.01		10	SW6020	08/26/08 01:02/eli-c
Uranium, Activity	1.1	pCi/g-dry		0.007		10	SW6020	08/26/08 01:02/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-043
Client Sample ID: LAS 004B

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.3	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	2.0	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.8	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Thorium 230	0.5	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.4	mg/kg-dry		0.01		10	SW6020	08/15/08 17:43/eli-c
Uranium, Activity	0.95	pCi/g-dry		0.007		10	SW6020	08/15/08 17:43/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

ENERGY LABORATORIES, INC. * 2821 Plant St * Rapid City, SD 57702
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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-044
Client Sample ID: LAS 004C

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.2	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.1	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.9	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Thorium 230	0.5	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.3	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.9	mg/kg-dry		0.01		10	SW6020	08/26/08 01:28/eli-c
Uranium, Activity	1.3	pCi/g-dry		0.007		10	SW6020	08/26/08 01:28/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-045
Client Sample ID: LAS 005A

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.6	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.9	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Thorium 230	0.4	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.3	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.7	mg/kg-dry		0.02		10	SW6020	08/29/08 23:20/eli-c
Uranium, Activity	1.2	pCi/g-dry		0.01		10	SW6020	08/29/08 23:20/eli-c

Report Definitions:
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MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-046
Client Sample ID: LAS 005B

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.4	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.1	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 precision (±)	0.2	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Thorium 230	0.4	pCi/g-dry	U	0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	2.4	mg/kg-dry		0.01		10	SW6020	08/26/08 01:32/eli-c
Uranium, Activity	1.6	pCi/g-dry		0.007		10	SW6020	08/26/08 01:32/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-047
Client Sample ID: LAS 005C

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.2	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.1	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	1.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 precision (±)	0.2	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Thorium 230	0.7	pCi/g-dry		0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.5	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.4	mg/kg-dry		0.01		10	SW6020	08/15/08 18:00/eli-c
Uranium, Activity	0.98	pCi/g-dry		0.007		10	SW6020	08/15/08 18:00/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-048
Client Sample ID: LAS 006A

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.7	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.1	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 17:42/eli-c
Thorium 230	0.6	pCi/g-dry	U	0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.6	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	0.55	mg/kg-dry		0.01		10	SW6020	08/15/08 18:04/eli-c
Uranium, Activity	0.37	pCi/g-dry		0.007		10	SW6020	08/15/08 18:04/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-049
Client Sample ID: LAS 006B

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	1.4	pCi/g-dry	U			1	E909.0M	08/19/08 10:35/eli-c
Lead 210 precision (±)	1.2	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Lead 210 MDC	1.9	pCi/g-dry				1	E909.0M	08/19/08 10:35/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/18/08 22:13/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/18/08 22:13/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/18/08 22:13/eli-c
Thorium 230	0.3	pCi/g-dry	U	0.1		1	E907.0	09/12/08 12:30/eli-c
Thorium 230 precision (±)	0.4	pCi/g-dry				1	E907.0	09/12/08 12:30/eli-c
TOTAL METALS ANALYSES								
Uranium	0.71	mg/kg-dry		0.01		10	SW6020	08/15/08 18:08/eli-c
Uranium, Activity	0.48	pCi/g-dry		0.007		10	SW6020	08/15/08 18:08/eli-c

Report Definitions:
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QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-050
Client Sample ID: LAS 006C

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	-0.3	pCi/g-dry	U			1	E909.0M	08/21/08 10:15/eli-c
Lead 210 precision (±)	1.5	pCi/g-dry				1	E909.0M	08/21/08 10:15/eli-c
Lead 210 MDC	2.6	pCi/g-dry				1	E909.0M	08/21/08 10:15/eli-c
Radium 226	0.6	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Thorium 230	0.3	pCi/g-dry		0.1		1	E907.0	09/04/08 15:30/eli-c
Thorium 230 precision (±)	0.09	pCi/g-dry				1	E907.0	09/04/08 15:30/eli-c
TOTAL METALS ANALYSES								
Uranium	0.96	mg/kg-dry		0.01		10	SW6020	08/15/08 18:28/eli-c
Uranium, Activity	0.65	pCi/g-dry		0.007		10	SW6020	08/15/08 18:28/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

ENERGY LABORATORIES, INC. * 2821 Plant St * Rapid City, SD 57702
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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-051
Client Sample ID: LAS 007A

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.6	pCi/g-dry	U			1	E909.0M	08/21/08 10:15/eli-c
Lead 210 precision (±)	1.5	pCi/g-dry				1	E909.0M	08/21/08 10:15/eli-c
Lead 210 MDC	2.5	pCi/g-dry				1	E909.0M	08/21/08 10:15/eli-c
Radium 226	0.8	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Radium 226 MDC	0.09	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Thorium 230	0.6	pCi/g-dry		0.1		1	E907.0	09/04/08 15:30/eli-c
Thorium 230 precision (±)	0.1	pCi/g-dry				1	E907.0	09/04/08 15:30/eli-c
TOTAL METALS ANALYSES								
Uranium	0.64	mg/kg-dry		0.01		10	SW6020	08/15/08 18:32/eli-c
Uranium, Activity	0.43	pCi/g-dry		0.007		10	SW6020	08/15/08 18:32/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-052
Client Sample ID: LAS 007B

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	0.6	pCi/g-dry	U			1	E909.0M	08/21/08 10:15/eli-c
Lead 210 precision (±)	1.5	pCi/g-dry				1	E909.0M	08/21/08 10:15/eli-c
Lead 210 MDC	2.5	pCi/g-dry				1	E909.0M	08/21/08 10:15/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Thorium 230	0.6	pCi/g-dry		0.1		1	E907.0	09/04/08 15:30/eli-c
Thorium 230 precision (±)	0.1	pCi/g-dry				1	E907.0	09/04/08 15:30/eli-c
TOTAL METALS ANALYSES								
Uranium	0.67	mg/kg-dry		0.01		10	SW6020	08/15/08 18:36/eli-c
Uranium, Activity	0.45	pCi/g-dry		0.007		10	SW6020	08/15/08 18:36/eli-c

Report Definitions:
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QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Dewey Burdock Baseline
Lab ID: R08070420-053
Client Sample ID: LAS 007C

Report Date: 09/30/08
Collection Date: 07/19/08
Date Received: 07/23/08
Matrix: SOIL

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES - TOTAL								
Lead 210	-0.7	pCi/g-dry	U			1	E909.0M	08/21/08 10:15/eli-c
Lead 210 precision (±)	1.5	pCi/g-dry				1	E909.0M	08/21/08 10:15/eli-c
Lead 210 MDC	2.6	pCi/g-dry				1	E909.0M	08/21/08 10:15/eli-c
Radium 226	0.7	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Radium 226 precision (±)	0.1	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Radium 226 MDC	0.1	pCi/g-dry				1	E903.0	08/20/08 09:10/eli-c
Thorium 230	0.5	pCi/g-dry		0.1		1	E907.0	09/04/08 15:30/eli-c
Thorium 230 precision (±)	0.1	pCi/g-dry				1	E907.0	09/04/08 15:30/eli-c
TOTAL METALS ANALYSES								
Uranium	1.1	mg/kg-dry		0.01		10	SW6020	08/15/08 18:40/eli-c
Uranium, Activity	0.72	pCi/g-dry		0.007		10	SW6020	08/15/08 18:40/eli-c

Report Definitions:
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QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
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ANALYTICAL SUMMARY REPORT

October 08, 2007

Environmental Restoration Group Inc
8809 Washington St NE
Albuquerque, NM 87113

Workorder No C07081328

Project Name DB Vegetation Sampling

Energy Laboratories, Inc received the following 8 samples from Environmental Restoration Group Inc on 8/23/2007 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C07081328-001	AMS-05	08/14/07 00:00	08/23/07	Vegetation	Uranium, Total Digestion, Radiochemistry Lead 210 Polonium 210 Radium 226 Thorium, Isotopic
C07081328-002	AMS-02	08/14/07 00:00	08/23/07	Vegetation	Same As Above
C07081328-003	AMS-BKG	08/14/07 00:00	08/23/07	Vegetation	Same As Above
C07081328-004	AMS-06	08/14/07 00:00	08/23/07	Vegetation	Same As Above
C07081328-005	AMS-01	08/14/07 00:00	08/23/07	Vegetation	Same As Above
C07081328-006	AMS-07	08/14/07 00:00	08/23/07	Vegetation	Same As Above
C07081328-007	AMS-04	08/14/07 00:00	08/23/07	Vegetation	Same As Above
C07081328-008	AMS-03		08/23/07	Vegetation	Same As Above

There were no problems with the analyses and all data for associated QC met EPA or laboratory specifications except where noted in the Case Narrative or Report.

If you have any questions regarding these tests results, please call

Report Approved By:

ENERGY LABORATORIES, INC. • 2393 Salt Creek Highway (82601) • P.O. Box 3258 • Casper, WY 82602
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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: C07081328-001
Client Sample ID: AMS-05

Report Date: 10/08/07
Collection Date: 08/14/07
DateReceived: 08/23/07
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Lead 210	1.7E-03	uCi/kg		6.5E-06		E909.0M	09/04/07 12:50 / dm
Lead 210 precision (±)	2.1E-04	uCi/kg				E909.0M	09/04/07 12:50 / dm
Polonium 210	6.6E-05	uCi/kg		6.5E-06		RMO-3008	09/06/07 22:00 / res
Polonium 210 precision (±)	3.0E-05	uCi/kg				RMO-3008	09/06/07 22:00 / res
Radium 226	2.4E-05	uCi/kg		1.3E-06		E903.0	09/04/07 11:27 / crw
Radium 226 precision (±)	9.1E-06	uCi/kg				E903.0	09/04/07 11:27 / crw
Thorium 230	1.5E-05	uCi/kg		1.3E-06		E907.0	09/04/07 15:00 / dmf
Thorium 230 precision (±)	8.5E-06	uCi/kg				E907.0	09/04/07 15:00 / dmf
Uranium, Activity	3.7E-05	uCi/kg		1.3E-06		SW6020	09/08/07 07:16 / bws

* ± σ = precision estimate

Report Definitions: RL - Analyte reporting limit
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: C07081328-002
Client Sample ID: AMS-02

Report Date: 10/08/07
Collection Date: 08/14/07
DateReceived: 08/23/07
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Lead 210	3.3E-04	uCi/kg		2.7E-06		E909.0M	09/04/07 12:50 / dm
Lead 210 precision (±)	7.5E-05	uCi/kg				E909.0M	09/04/07 12:50 / dm
Polonium 210	1.8E-05	uCi/kg		2.7E-06		RMO-3008	09/06/07 22:00 / res
Polonium 210 precision (±)	9.9E-06	uCi/kg				RMO-3008	09/06/07 22:00 / res
Radium 226	2.2E-05	uCi/kg		5.5E-07		E903.0	09/04/07 11:27 / crw
Radium 226 precision (±)	5.6E-06	uCi/kg				E903.0	09/04/07 11:27 / crw
Thorium 230	4.7E-06	uCi/kg		5.5E-07		E907.0	09/04/07 15:00 / dmf
Thorium 230 precision (±)	3.0E-06	uCi/kg				E907.0	09/04/07 15:00 / dmf
Uranium, Activity	1.0E-05	uCi/kg		5.5E-07		SW6020	09/08/07 07:20 / bws

Report Definitions: RL - Analyte reporting limit
QCL - Quality control limit
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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TRACK# C07081328

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: C07081328-003
Client Sample ID: AMS-BKG

Report Date: 10/08/07
Collection Date: 08/14/07
DateReceived: 08/23/07
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Lead 210	6.9E-04	uCi/kg		4.8E-06		E909.0M	09/04/07 12:50 / dm
Lead 210 precision (±)	1.4E-04	uCi/kg				E909.0M	09/04/07 12:50 / dm
Polonium 210	2.5E-05	uCi/kg		4.8E-06		RMO-3008	09/06/07 22:00 / res
Polonium 210 precision (±)	1.6E-05	uCi/kg				RMO-3008	09/06/07 22:00 / res
Radium 226	4.1E-05	uCi/kg		9.7E-07		E903.0	09/04/07 11:27 / crw
Radium 226 precision (±)	9.9E-06	uCi/kg				E903.0	09/04/07 11:27 / crw
Thorium 230	1.0E-05	uCi/kg		9.7E-07		E907.0	09/04/07 15:00 / dmf
Thorium 230 precision (±)	6.3E-06	uCi/kg				E907.0	09/04/07 15:00 / dmf
Uranium, Activity	4.0E-05	uCi/kg		9.7E-07		SW6020	09/08/07 07:24 / bws

Report Definitions:
RL - Analyte reporting limit
QCL - Quality control limit
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit

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TRACK# C07081328

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: C07081328-004
Client Sample ID: AMS-06

Report Date: 10/08/07
Collection Date: 08/14/07
DateReceived: 08/23/07
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Lead 210	1.0E-03	uCi/kg		4.1E-06		E909.0M	09/04/07 12:50 / dm
Lead 210 precision (±)	1.3E-04	uCi/kg				E909.0M	09/04/07 12:50 / dm
Polonium 210	6.0E-05	uCi/kg		4.1E-06		RMO-3008	09/06/07 22:00 / res
Polonium 210 precision (±)	2.2E-05	uCi/kg				RMO-3008	09/06/07 22:00 / res
Radium 226	3.2E-05	uCi/kg		8.2E-07		E903.0	09/04/07 11:27 / crw
Radium 226 precision (±)	8.1E-06	uCi/kg				E903.0	09/04/07 11:27 / crw
Thorium 230	1.9E-05	uCi/kg		8.2E-07		E907.0	09/04/07 15:00 / dmf
Thorium 230 precision (±)	6.6E-06	uCi/kg				E907.0	09/04/07 15:00 / dmf
Uranium, Activity	3.8E-05	uCi/kg		8.3E-07		SW6020	09/08/07 07:28 / bws

Report Definitions: RL - Analyte reporting limit
QCL - Quality control limit
MCL - Maximum contaminant level
ND - Not detected at the reporting limit.

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TRACK# C07081328

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: C07081328-005
Client Sample ID: AMS-01

Report Date: 10/08/07
Collection Date: 08/14/07
DateReceived: 08/23/07
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Lead 210	1 8E-03	uCi/kg		8 6E-06		E909 0M	09/04/07 12 50 / dm
Lead 210 precision (±)	2 7E-04	uCi/kg				E909 0M	09/04/07 12.50 / dm
Polonium 210	1 3E-04	uCi/kg		8 6E-06		RMO-3008	09/06/07 22 00 / res
Polonium 210 precision (±)	4 9E-05	uCi/kg				RMO-3008	09/06/07 22 00 / res
Radium 226	5 5E-05	uCi/kg		1 7E-06		E903 0	09/04/07 11 27 / crw
Radium 226 precision (±)	1 6E-05	uCi/kg				E903 0	09/04/07 11 27 / crw
Thorium 230	ND	uCi/kg		1 7E-06		E907 0	09/04/07 15 00 / dmf
Uranium Activity	1 3E-05	uCi/kg		1 7E-06		SW6020	09/08/07 07 33 / bws

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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TRACK# C07081328

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: C07081328-006
Client Sample ID: AMS-07

Report Date: 10/08/07
Collection Date: 08/14/07
DateReceived: 08/23/07
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Lead 210	2.1E-03	uCi/kg		4.8E-06		E909.0M	09/04/07 12:50 / dm
Lead 210 precision (±)	1.8E-04	uCi/kg				E909.0M	09/04/07 12:50 / dm
Polonium 210	1.5E-04	uCi/kg		4.8E-06		RMO-3008	09/06/07 22:00 / res
Polonium 210 precision (±)	4.1E-05	uCi/kg				RMO-3008	09/06/07 22:00 / res
Radium 226	2.7E-05	uCi/kg		9.7E-07		E903.0	09/04/07 12:30 / crw
Radium 226 precision (±)	8.1E-06	uCi/kg				E903.0	09/04/07 12:30 / crw
Thorium 230	1.6E-05	uCi/kg		9.7E-07		E907.0	09/04/07 15:00 / dmf
Thorium 230 precision (±)	9.2E-06	uCi/kg				E907.0	09/04/07 15:00 / dmf
Uranium Activity	1.8E-05	uCi/kg		9.7E-07		SW6020	09/08/07 07:37 / bws

Report Definitions: RL - Analyte reporting limit
QCL - Quality control limit.
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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TRACK# C07081328

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: C07081328-007
Client Sample ID: AMS-04

Report Date: 10/08/07
Collection Date: 08/14/07
DateReceived: 08/23/07
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Lead 210	1.5E-03	uCi/kg		4.0E-06		E909.0M	09/04/07 12:50 / dm
Lead 210 precision (±)	1.5E-04	uCi/kg				E909.0M	09/04/07 12:50 / dm
Polonium 210	9.8E-05	uCi/kg		4.0E-06		RMO-3008	09/06/07 22:00 / res
Polonium 210 precision (±)	3.2E-05	uCi/kg				RMO-3008	09/06/07 22:00 / res
Radium 226	2.3E-05	uCi/kg		8.0E-07		E903.0	09/04/07 12:30 / crw
Radium 226 precision (±)	6.8E-06	uCi/kg				E903.0	09/04/07 12:30 / crw
Thorium 230	3.6E-06	uCi/kg		8.0E-07		E907.0	09/04/07 15:00 / dmf
Thorium 230 precision (±)	2.8E-06	uCi/kg				E907.0	09/04/07 15:00 / dmf
Uranium, Activity	9.3E-06	uCi/kg		8.1E-07		SW6020	09/08/07 07:53 / bws

Report Definitions: RL - Analyte reporting limit
QCL - Quality control limit
MCL - Maximum contaminant level
ND - Not detected at the reporting limit

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TRACK# C07081328

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: C07081328-008
Client Sample ID: AMS-03

Report Date: 10/08/07
Collection Date: Not Provided
DateReceived: 08/23/07
Matrix: Vegetation

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
RADIONUCLIDES - TOTAL							
Lead 210	9.1E-04	uCi/kg		3.2E-06		E909.0M	09/04/07 12:50 / dm
Lead 210 precision (±)	1.1E-04	uCi/kg				E909.0M	09/04/07 12:50 / dm
Polonium 210	7.8E-05	uCi/kg		3.2E-06		RMO-3008	09/06/07 22:00 / res
Polonium 210 precision (±)	2.2E-05	uCi/kg				RMO-3008	09/06/07 22:00 / res
Radium 226	7.4E-05	uCi/kg		6.4E-07		E903.0	09/04/07 12:30 / crw
Radium 226 precision (±)	1.1E-05	uCi/kg				E903.0	09/04/07 12:30 / crw
Thorium 230	2.6E-06	uCi/kg		6.4E-07		E907.0	09/04/07 15:00 / dmf
Thorium 230 precision (±)	2.2E-06	uCi/kg				E907.0	09/04/07 15:00 / dmf
Uranium, Activity	9.8E-06	uCi/kg		6.4E-07		SW6020	09/08/07 07:57 / bws

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

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TRACK# C07081328

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08040284-001
Client Sample ID: AMS-BKG

Report Date: 06/16/08
Collection Date: 04/20/08
Date Received: 04/21/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	3.5E-05	uCi/kg		2.0E-07		1	E907.0	05/12/08 11:30/eli-c
Thorium 230 precision (±)	0.000012	uCi/kg				1	E907.0	05/12/08 11:30/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	2.2E-04	uCi/kg		1.0E-06		1	RMO-3008	06/02/08 11:15/eli-c
Polonium 210 precision (±)	5.1E-05	uCi/kg				1	RMO-3008	06/02/08 11:15/eli-c
Lead 210	1.4E-03	uCi/kg		1.0E-06		1	E909.0M	05/19/08 07:15/eli-c
Lead 210 precision (±)	1.0E-04	uCi/kg				1	E909.0M	05/19/08 07:15/eli-c
Uranium, Activity	9.0E-02	uCi/kg	D	3.8E-06		25	SW6020	06/11/08 21:36/eli-c
RADIUM 226								
Radium 226 MDC	6.4E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226	0.000083	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226 precision (±)	0.000011	uCi/kg				1	E903.0	05/16/08 09:56/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix interference.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08040284-002
Client Sample ID: AMS-01

Report Date: 06/16/08
Collection Date: 04/20/08
Date Received: 04/21/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	1.2E-05	uCi/kg		2.0E-07		1	E907.0	05/12/08 11:30/eli-c
Thorium 230 precision (±)	5.2E-06	uCi/kg				1	E907.0	05/12/08 11:30/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	4.7E-04	uCi/kg		1.0E-06		1	RMO-3008	06/02/08 11:15/eli-c
Polonium 210 precision (±)	7.2E-05	uCi/kg				1	RMO-3008	06/02/08 11:15/eli-c
Lead 210	2.9E-03	uCi/kg		1.0E-06		1	E909.0M	05/19/08 07:15/eli-c
Lead 210 precision (±)	1.1E-04	uCi/kg				1	E909.0M	05/19/08 07:15/eli-c
Uranium, Activity	2.8E-02	uCi/kg	D	2.4E-06		25	SW6020	06/11/08 21:44/eli-c
RADIUM 226								
Radium 226 MDC	3.7E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226	0.000033	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226 precision (±)	5.5E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix interference.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08040284-003
Client Sample ID: AMS-02

Report Date: 06/16/08
Collection Date: 04/20/08
Date Received: 04/21/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	1.4E-05	uCi/kg		2.0E-07		1	E907.0	05/12/08 11:30/eli-c
Thorium 230 precision (±)	4.9E-06	uCi/kg				1	E907.0	05/12/08 11:30/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	2.0E-04	uCi/kg		1.0E-06		1	RMO-3008	06/02/08 11:15/eli-c
Polonium 210 precision (±)	4.2E-05	uCi/kg				1	RMO-3008	06/02/08 11:15/eli-c
Lead 210	1.3E-03	uCi/kg		1.0E-06		1	E909.0M	05/19/08 07:15/eli-c
Lead 210 precision (±)	6.9E-05	uCi/kg				1	E909.0M	05/19/08 07:15/eli-c
Uranium, Activity	2.7E-02	uCi/kg	D	1.9E-06		25	SW6020	06/11/08 21:49/eli-c
RADIUM 226								
Radium 226 MDC	2.8E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226	0.000030	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226 precision (±)	4.5E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix interference.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08040284-004
Client Sample ID: AMS-03

Report Date: 06/16/08
Collection Date: 04/20/08
Date Received: 04/21/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	4.1E-05	uCi/kg		2.0E-07		1	E907.0	05/12/08 11:30/eli-c
Thorium 230 precision (±)	0.000011	uCi/kg				1	E907.0	05/12/08 11:30/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	2.3E-04	uCi/kg		1.0E-06		1	RMO-3008	06/02/08 11:15/eli-c
Polonium 210 precision (±)	4.4E-05	uCi/kg				1	RMO-3008	06/02/08 11:15/eli-c
Lead 210	1.4E-03	uCi/kg		1.0E-06		1	E909.0M	05/19/08 07:15/eli-c
Lead 210 precision (±)	8.2E-05	uCi/kg				1	E909.0M	05/19/08 07:15/eli-c
Uranium, Activity	1.5E-01	uCi/kg	D	2.4E-06		25	SW6020	06/11/08 21:53/eli-c
RADIUM 226								
Radium 226 MDC	3.7E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226	0.00011	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226 precision (±)	9.7E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix interference.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08040284-005
Client Sample ID: AMS-04

Report Date: 06/16/08
Collection Date: 04/20/08
Date Received: 04/21/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	8.3E-06	uCi/kg		2.0E-07		1	E907.0	05/12/08 11:30/eli-c
Thorium 230 precision (±)	4.2E-06	uCi/kg				1	E907.0	05/12/08 11:30/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	1.7E-04	uCi/kg		1.0E-06		1	RMO-3008	06/02/08 11:15/eli-c
Polonium 210 precision (±)	3.9E-05	uCi/kg				1	RMO-3008	06/02/08 11:15/eli-c
Lead 210	1.2E-03	uCi/kg		1.0E-06		1	E909.0M	05/19/08 07:15/eli-c
Lead 210 precision (±)	6.6E-05	uCi/kg				1	E909.0M	05/19/08 07:15/eli-c
Uranium, Activity	2.1E-02	uCi/kg	D	1.9E-06		25	SW6020	06/11/08 21:57/eli-c
RADIUM 226								
Radium 226 MDC	2.8E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226	0.000031	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226 precision (±)	4.6E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix interference.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08040284-006
Client Sample ID: AMS-06

Report Date: 06/16/08
Collection Date: 04/20/08
Date Received: 04/21/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	3.9E-05	uCi/kg		2.0E-07		1	E907.0	05/12/08 11:30/eli-c
Thorium 230 precision (±)	0.000011	uCi/kg				1	E907.0	05/12/08 11:30/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	4.0E-04	uCi/kg		1.0E-06		1	RMO-3008	06/02/08 11:15/eli-c
Polonium 210 precision (±)	7.7E-05	uCi/kg				1	RMO-3008	06/02/08 11:15/eli-c
Lead 210	1.8E-03	uCi/kg		1.0E-06		1	E909.0M	05/19/08 07:15/eli-c
Lead 210 precision (±)	1.1E-04	uCi/kg				1	E909.0M	05/19/08 07:15/eli-c
Uranium, Activity	1.3E-01	uCi/kg	D	3.2E-06		25	SW6020	06/11/08 22:13/eli-c
RADIUM 226								
Radium 226 MDC	4.6E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226	0.000092	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226 precision (±)	9.9E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix interference.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08040284-007
Client Sample ID: AMS-05

Report Date: 06/16/08
Collection Date: 04/21/08
Date Received: 04/21/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	4.8E-05	uCi/kg		2.0E-07		1	E907.0	05/12/08 11:30/eli-c
Thorium 230 precision (±)	8.1E-06	uCi/kg				1	E907.0	05/12/08 11:30/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	1.6E-04	uCi/kg		1.0E-06		1	RMO-3008	06/02/08 11:15/eli-c
Polonium 210 precision (±)	3.1E-05	uCi/kg				1	RMO-3008	06/02/08 11:15/eli-c
Lead 210	3.3E-04	uCi/kg		1.0E-06		1	E909.0M	05/19/08 07:15/eli-c
Lead 210 precision (±)	3.0E-05	uCi/kg				1	E909.0M	05/19/08 07:15/eli-c
Uranium, Activity	2.3E-01	uCi/kg	D	1.3E-06		25	SW6020	06/11/08 22:17/eli-c
RADIUM 226								
Radium 226 MDC	1.8E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226	0.000079	uCi/kg				1	E903.0	05/16/08 09:56/eli-c
Radium 226 precision (±)	5.7E-06	uCi/kg				1	E903.0	05/16/08 09:56/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix interference.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08040284-008
Client Sample ID: AMS-07

Report Date: 06/16/08
Collection Date: 04/21/08
Date Received: 04/21/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	4.0E-05	uCi/kg		2.0E-07		1	E907.0	05/12/08 11:30/eli-c
Thorium 230 precision (±)	0.000012	uCi/kg				1	E907.0	05/12/08 11:30/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	2.3E-04	uCi/kg		1.0E-06		1	RMO-3008	06/02/08 11:15/eli-c
Polonium 210 precision (±)	4.7E-05	uCi/kg				1	RMO-3008	06/02/08 11:15/eli-c
Lead 210	6.2E-04	uCi/kg		1.0E-06		1	E909.0M	05/19/08 07:15/eli-c
Lead 210 precision (±)	5.3E-05	uCi/kg				1	E909.0M	05/19/08 07:15/eli-c
Uranium, Activity	1.4E-01	uCi/kg	D	2.1E-06		25	SW6020	06/11/08 22:22/eli-c
RADIUM 226								
Radium 226 MDC	3.0E-06	uCi/kg				1	E903.0	05/16/08 11:45/eli-c
Radium 226	0.000076	uCi/kg				1	E903.0	05/16/08 11:45/eli-c
Radium 226 precision (±)	7.2E-06	uCi/kg				1	E903.0	05/16/08 11:45/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix interference.

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08070287-001
Client Sample ID: AMS-02

Report Date: 09/30/08
Collection Date: 07/14/08
Date Received: 07/15/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	-9.5E-07	uCi/kg	U	4.7E-07		1	E907.0	08/06/08 11:00/eli-c
Thorium 230 precision (±)	5.0E-06	uCi/kg				1	E907.0	08/06/08 11:00/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	9.1E-06	uCi/kg	U	1.0E-06		1	RMO-3008	08/08/08 16:34/eli-c
Polonium 210 precision (±)	8.5E-06	uCi/kg				1	RMO-3008	08/08/08 16:34/eli-c
Lead 210	1.5E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 precision (±)	7.3E-05	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 MDC	1.2E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Uranium, Activity	3.2E-06	uCi/kg		2.0E-07		10	SW6020	08/06/08 01:53/eli-c
RADIUM 226								
Radium 226	9.3E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 precision (±)	3.6E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 MDC	4.0E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08070287-002
Client Sample ID: AMS-03

Report Date: 09/30/08
Collection Date: 07/14/08
Date Received: 07/15/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	1.0E-05	uCi/kg		7.7E-07		1	E907.0	08/06/08 11:00/eli-c
Thorium 230 precision (±)	6.6E-06	uCi/kg				1	E907.0	08/06/08 11:00/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	9.6E-06	uCi/kg	U	1.0E-06		1	RMO-3008	08/08/08 16:34/eli-c
Polonium 210 precision (±)	1.1E-05	uCi/kg				1	RMO-3008	08/08/08 16:34/eli-c
Lead 210	3.3E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 precision (±)	1.2E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 MDC	1.9E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Uranium, Activity	7.7E-06	uCi/kg		2.0E-07		10	SW6020	08/06/08 01:57/eli-c
RADIUM 226								
Radium 226	7.5E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 precision (±)	4.9E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 MDC	6.6E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08070287-003
Client Sample ID: AMS-04

Report Date: 09/30/08
Collection Date: 07/14/08
Date Received: 07/15/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	-2.7E-06	uCi/kg	U	7.7E-07		1	E907.0	08/06/08 11:00/eli-c
Thorium 230 precision (±)	4.2E-06	uCi/kg				1	E907.0	08/06/08 11:00/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	9.0E-06	uCi/kg	U	1.0E-06		1	RMO-3008	08/08/08 16:34/eli-c
Polonium 210 precision (±)	9.6E-06	uCi/kg				1	RMO-3008	08/08/08 16:34/eli-c
Lead 210	2.1E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 precision (±)	1.2E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 MDC	1.9E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Uranium, Activity	8.4E-06	uCi/kg		2.0E-07		10	SW6020	08/06/08 02:01/eli-c
RADIUM 226								
Radium 226	9.3E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 precision (±)	5.2E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 MDC	6.7E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08070287-004
Client Sample ID: AMS-05

Report Date: 09/30/08
Collection Date: 07/14/08
Date Received: 07/15/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	-8.8E-07	uCi/kg	U	8.8E-07		1	E907.0	08/06/08 11:00/eli-c
Thorium 230 precision (±)	5.7E-06	uCi/kg				1	E907.0	08/06/08 11:00/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	2.1E-05	uCi/kg		1.0E-06		1	RMO-3008	08/08/08 16:34/eli-c
Polonium 210 precision (±)	1.6E-05	uCi/kg				1	RMO-3008	08/08/08 16:34/eli-c
Lead 210	3.4E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 precision (±)	1.4E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 MDC	2.2E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Uranium, Activity	1.4E-05	uCi/kg		2.0E-07		10	SW6020	08/06/08 02:05/eli-c
RADIUM 226								
Radium 226	5.9E-06	uCi/kg	U			1	E903.0	08/11/08 09:35/eli-c
Radium 226 precision (±)	5.3E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 MDC	7.7E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08070287-005
Client Sample ID: AMS-06

Report Date: 09/30/08
Collection Date: 07/14/08
Date Received: 07/15/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	2.1E-05	uCi/kg		5.7E-07		1	E907.0	08/06/08 11:00/eli-c
Thorium 230 precision (±)	7.4E-06	uCi/kg				1	E907.0	08/06/08 11:00/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	5.7E-06	uCi/kg	U	1.0E-06		1	RMO-3008	08/08/08 16:34/eli-c
Polonium 210 precision (±)	5.7E-06	uCi/kg				1	RMO-3008	08/08/08 16:34/eli-c
Lead 210	1.4E-04	uCi/kg	U			1	E909.0M	08/07/08 09:30/eli-c
Lead 210 precision (±)	8.7E-05	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 MDC	1.4E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Uranium, Activity	2.2E-05	uCi/kg		2.0E-07		10	SW6020	08/06/08 02:09/eli-c
RADIUM 226								
Radium 226	1.8E-05	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 precision (±)	5.0E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 MDC	5.0E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08070287-006
Client Sample ID: AMS-07

Report Date: 09/30/08
Collection Date: 07/14/08
Date Received: 07/15/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	2.0E-05	uCi/kg		8.6E-07		1	E907.0	08/06/08 11:00/eli-c
Thorium 230 precision (±)	8.6E-06	uCi/kg				1	E907.0	08/06/08 11:00/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	2.0E-05	uCi/kg		1.0E-06		1	RMO-3008	08/08/08 16:34/eli-c
Polonium 210 precision (±)	1.3E-05	uCi/kg				1	RMO-3008	08/08/08 16:34/eli-c
Lead 210	-3.2E-05	uCi/kg	U			1	E909.0M	08/07/08 09:30/eli-c
Lead 210 precision (±)	1.3E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 MDC	2.1E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Uranium, Activity	2.7E-05	uCi/kg		2.0E-07		10	SW6020	08/06/08 02:13/eli-c
RADIUM 226								
Radium 226	2.4E-05	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 precision (±)	7.5E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 MDC	7.7E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08070287-007
Client Sample ID: AMS-BKG

Report Date: 09/30/08
Collection Date: 07/14/08
Date Received: 07/15/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	7.3E-06	uCi/kg		5.6E-07		1	E907.0	08/06/08 11:00/eli-c
Thorium 230 precision (±)	4.2E-06	uCi/kg				1	E907.0	08/06/08 11:00/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	9.3E-06	uCi/kg		1.0E-06		1	RMO-3008	08/08/08 16:34/eli-c
Polonium 210 precision (±)	8.8E-06	uCi/kg				1	RMO-3008	08/08/08 16:34/eli-c
Lead 210	1.3E-04	uCi/kg	U			1	E909.0M	08/07/08 09:30/eli-c
Lead 210 precision (±)	8.6E-05	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 MDC	1.4E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Uranium, Activity	1.0E-05	uCi/kg		2.0E-07		10	SW6020	08/06/08 02:17/eli-c
RADIUM 226								
Radium 226	1.3E-05	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 precision (±)	4.6E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c
Radium 226 MDC	5.1E-06	uCi/kg				1	E903.0	08/11/08 09:35/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

ENERGY LABORATORIES, INC. * 2821 Plant St * Rapid City, SD 57702
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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: DB Vegetation Sampling
Lab ID: R08070287-008
Client Sample ID: AMS-01

Report Date: 09/30/08
Collection Date: 07/15/08
Date Received: 07/15/08
Matrix: PLANT

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
RADIONUCLIDES								
Thorium 230	1.2E-05	uCi/kg		8.4E-07		1	E907.0	08/06/08 11:00/eli-c
Thorium 230 precision (±)	8.4E-06	uCi/kg				1	E907.0	08/06/08 11:00/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	1.7E-05	uCi/kg		1.0E-06		1	RMO-3008	08/08/08 16:34/eli-c
Polonium 210 precision (±)	1.5E-05	uCi/kg				1	RMO-3008	08/08/08 16:34/eli-c
Lead 210	3.3E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 precision (±)	1.3E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Lead 210 MDC	2.1E-04	uCi/kg				1	E909.0M	08/07/08 09:30/eli-c
Uranium, Activity	9.4E-06	uCi/kg		2.0E-07		10	SW6020	08/06/08 02:37/eli-c
RADIUM 226								
Radium 226	8.1E-05	uCi/kg				1	E903.0	08/11/08 11:26/eli-c
Radium 226 precision (±)	1.2E-05	uCi/kg				1	E903.0	08/11/08 11:26/eli-c
Radium 226 MDC	7.4E-06	uCi/kg				1	E903.0	08/11/08 11:26/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

ENERGY LABORATORIES, INC. * 2821 Plant St * Rapid City, SD 57702
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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08070463-001
Client Sample ID: DBAT-01

Report Date: 09/30/08
Collection Date: 06/25/08
Date Received: 07/28/08
Matrix: SOLID

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/kg-dry		0.01		10	SW6020	08/09/08 04:46/eli-c
Uranium, Activity	ND	pCi/g-dry		0.007		10	SW6020	08/09/08 04:46/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	0.0	pCi/g-dry	U	0.008		1	RMO-3008	09/03/08 17:30/eli-c
Polonium 210 precision (±)	0.1	pCi/g-dry				1	RMO-3008	09/03/08 17:30/eli-c
Lead 210	-0.007	pCi/g-dry	U			1	E909.0M	08/28/08 08:48/eli-c
Lead 210 precision (±)	0.04	pCi/g-dry				1	E909.0M	08/28/08 08:48/eli-c
Lead 210 MDC	0.08	pCi/g-dry				1	E909.0M	08/28/08 08:48/eli-c
Radium 226	0.003	pCi/g-dry	U			1	E903.0	08/20/08 16:28/eli-c
Radium 226 precision (±)	0.002	pCi/g-dry				1	E903.0	08/20/08 16:28/eli-c
Radium 226 MDC	0.003	pCi/g-dry				1	E903.0	08/20/08 16:28/eli-c
Thorium 230	0.0	pCi/g-dry	U	0.008		1	E907.0	09/04/08 15:30/eli-c
Thorium 230 precision (±)	0.02	pCi/g-dry				1	E907.0	09/04/08 15:30/eli-c

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

ENERGY LABORATORIES, INC. * 2821 Plant St * Rapid City, SD 57702
Toll Free 888.672.1225 * 605.342.1225 * FAX 605.342.1397 * rapid_city@energylab.com

LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08070463-002
Client Sample ID: DBAT-02

Report Date: 09/30/08
Collection Date: 06/25/08
Date Received: 07/28/08
Matrix: SOLID

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/kg-dry		0.01		10	SW6020	08/09/08 04:50/eli-c
Uranium, Activity	ND	pCi/g-dry		0.007		10	SW6020	08/09/08 04:50/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	0.0	pCi/g-dry	U	0.1		1	RMO-3008	09/03/08 17:30/eli-c
Polonium 210 precision (±)	1.2	pCi/g-dry				1	RMO-3008	09/03/08 17:30/eli-c
Lead 210	0.2	pCi/g-dry	U			1	E909.0M	08/28/08 08:48/eli-c
Lead 210 precision (±)	0.7	pCi/g-dry				1	E909.0M	08/28/08 08:48/eli-c
Lead 210 MDC	1.2	pCi/g-dry				1	E909.0M	08/28/08 08:48/eli-c
Radium 226	0.06	pCi/g-dry				1	E903.0	08/20/08 16:28/eli-c
Radium 226 precision (±)	0.03	pCi/g-dry				1	E903.0	08/20/08 16:28/eli-c
Radium 226 MDC	0.04	pCi/g-dry				1	E903.0	08/20/08 16:28/eli-c
Thorium 230	0.0	pCi/g-dry	U	0.1		1	E907.0	09/04/08 15:30/eli-c
Thorium 230 precision (±)	1.4	pCi/g-dry				1	E907.0	09/04/08 15:30/eli-c

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U - Not detected at minimum detectable concentration

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LABORATORY ANALYTICAL REPORT

Client: Environmental Restoration Group Inc
Project: Edgemont (Soils/Air filters)
Lab ID: R08070463-003
Client Sample ID: DBAT-03

Report Date: 09/30/08
Collection Date: 06/25/08
Date Received: 07/28/08
Matrix: SOLID

Analyses	Result	Units	Qual	RL	MCL/ QCL	DF	Method	Analysis Date / By
METALS - TOTAL								
Uranium	ND	mg/kg-dry		0.01		10	SW6020	08/09/08 04:54/eli-c
Uranium, Activity	ND	pCi/g-dry		0.007		10	SW6020	08/09/08 04:54/eli-c
RADIONUCLIDES - TOTAL								
Polonium 210	0.02	pCi/g-dry	U	0.006		1	RMO-3008	09/03/08 17:30/eli-c
Polonium 210 precision (±)	0.2	pCi/g-dry				1	RMO-3008	09/03/08 17:30/eli-c
Lead 210	-0.007	pCi/g-dry	U			1	E909.0M	08/28/08 08:48/eli-c
Lead 210 precision (±)	0.04	pCi/g-dry				1	E909.0M	08/28/08 08:48/eli-c
Lead 210 MDC	0.06	pCi/g-dry				1	E909.0M	08/28/08 08:48/eli-c
Radium 226	0.003	pCi/g-dry				1	E903.0	08/20/08 16:28/eli-c
Radium 226 precision (±)	0.001	pCi/g-dry				1	E903.0	08/20/08 16:28/eli-c
Radium 226 MDC	0.002	pCi/g-dry				1	E903.0	08/20/08 16:28/eli-c
Thorium 230	0.0	pCi/g-dry	U	0.006		1	E907.0	09/04/08 15:30/eli-c
Thorium 230 precision (±)	0.1	pCi/g-dry				1	E907.0	09/04/08 15:30/eli-c

Report Definitions:
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ENVIRONMENTAL RESTORATION GRP
ATTN: KEN BAKER
8809 WASHINGTON NE
SUITE 150
ALBUQUERQUE, NM 87113

Radon Monitoring Report

Acct. No. 0410058

LANDAUER
Landauer, Inc. 2 Science Road Glenwood, Illinois 60425-1586
Telephone: (800) 528-8327 Facsimile: (708) 755-7048

Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	AREA GROSS COUNT	AREA COUNTED (SQ MM)	AREA BACK GRND	AREA LOT NO.
4730145	DRNF	01-FEB-08	17-MAY-08	RN-8 1350 CALIB FACT= 37.8 STD DEV= 7.1 DAYS EXPOSED: 106	111.1	1.0	198	37.2 A	2.38	T33605
4730146	DRNF	01-FEB-08	17-MAY-08	HV-1 DANIELS W/TLD 14:28 CALIB FACT= 37.8 STD DEV= 8.0 DAYS EXPOSED: 106	70.3	0.7	158	37.2 A	2.38	T33605
4730148	DRNF	01-FEB-08	17-MAY-08	HV-1 DANIELS W/TLD 14:28 CALIB FACT= 37.8 STD DEV= 8.7 DAYS EXPOSED: 106	44.9	0.4	133	37.2 A	2.38	T33605
4730149	DRNF	01-FEB-08	17-MAY-08	RN-4 1528 CALIB FACT= 37.8 STD DEV= 7.3 DAYS EXPOSED: 106	102.9	1.0	190	37.2 A	2.38	T33605
4730150	DRNF	01-FEB-08	17-MAY-08	HV-2 SPENCER W/TLD 1604 CALIB FACT= 37.8 STD DEV= 7.9 DAYS EXPOSED: 106	71.3	0.7	159	37.2 A	2.38	T33605
4730169	DRNF	04-FEB-08	17-MAY-08	HV-4 DEWEY W/TLD 1630 CALIB FACT= 38.1 STD DEV= 5.1 DAYS EXPOSED: 103	298.8	2.9	381	37.2 A	2.38	T33605
4730170	DRNF	04-FEB-08	17-MAY-08	HV-3 BEAVER CREEK W/TLD 1650 CALIB FACT= 38.0 STD DEV= 5.3 DAYS EXPOSED: 103	279.2	2.7	362	37.2 A	2.38	T33605
1	2	3	4	5	6	7	8			

Q.C. Release	Process No.	Report Date	Date Received
DRB	A21453	23-JUN-08	11-JUN-08

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Radon Monitoring Report

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Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	GROSS COUNT	AREA COUNTED (SQ MM)	BACK GRND	LOT NO.
4730199	DRNF	11-FEB-08	17-MAY-08	RN-3 1440 CALIB FACT= 38.0 STD DEV= 5.4 DAYS EXPOSED: 96	256.6	2.7	340	37.2 A	2.38	T33605
4730200	DRNF	11-FEB-08	17-MAY-08	RN-6 1452 CALIB FACT= 38.1 STD DEV= 5.2 DAYS EXPOSED: 96	283.3	3.0	366	37.2 A	2.38	T33605
4730201	DRNF	11-FEB-08	17-MAY-08	RN-1 1517 CALIB FACT= 38.0 STD DEV= 5.6 DAYS EXPOSED: 96	231.9	2.4	316	37.2 A	2.38	T33605
4730203	DRNF	12-FEB-08	17-MAY-08	RN-7 1810 CALIB FACT= 38.1 STD DEV= 5.0 DAYS EXPOSED: 95	317.4	3.3	399	37.2 A	2.38	T33605
4730204	DRNF	12-FEB-08	17-MAY-08	RN-5 1544 CALIB FACT= 38.0 STD DEV= 5.5 DAYS EXPOSED: 95	248.3	2.6	332	37.2 A	2.38	T33605
4730221	DRNF	01-FEB-08	17-MAY-08	BKGD-ANDERSEN W/TLD 1725 CALIB FACT= 37.9 STD DEV= 6.2 DAYS EXPOSED: 106	175.4	1.7	261	37.2 A	2.38	T33605
4730222	DRNF	01-FEB-08	17-MAY-08	BKGD-ANDERSEN W/TLD 1725 CALIB FACT= 37.9 STD DEV= 6.5 DAYS EXPOSED: 106	153.9	1.5	240	37.2 A	2.38	T33605
1	2	3	4	5	6	7	8			

Q.C. Release	Process No.	Report Date	Date Received
DRB	A21453	23-JUN-08	11-JUN-08

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Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	AREA GROSS COUNT	AREA COUNTED (SQ MM)	AREA BACK GRND	AREA LOT NO.
4730223	DRNF	01-FEB-08	17-MAY-08	HV-6 SCHOOL HOUSE W/TLD 1710 CALIB FACT= 37.9 STD DEV= 6.6 DAYS EXPOSED: 106	140.7	1.3	227	37.2	A 2.38	T33605
4730224	DRNF	01-FEB-08	17-MAY-08	HV-5 ENGLEBERT W/TLD 1311 CALIB FACT= 37.9 STD DEV= 6.9 DAYS EXPOSED: 106	122.3	1.2	209	37.2	A 2.38	T33605
4730225	DRNF	01-FEB-08	17-MAY-08	HV-7 HECK W/TLD 1325 CALIB FACT= 37.8 STD DEV= 7.1 DAYS EXPOSED: 106	109.0	1.0	196	37.2	A 2.38	T33605
1	2	3	4	5	6	7			8	

Q.C. Release	Process No.	Report Date	Date Received
DRB	A21453	23-JUN-08	11-JUN-08

Radon Monitoring Report

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Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	AREA GROSS COUNT	AREA COUNTED (SQ MM)	AREA BACK GRND	AREA LOT NO.
4729620	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE RN-06 CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	71	37.2 A	1.27	T33604
4729621	DRNM	17-MAY-08	17-JUL-08	RN-02 CALIB FACT= 36.6 STD DEV= 11.0 DAYS EXPOSED: 61	35.1	0.6	83	37.2 A	1.27	T33604
4729622	DRNM	17-MAY-08	~~17~~-JUL-08 17, according to radon test detector log. DRF 8/19/08	RN-01 CALIB FACT= 36.6 STD DEV= 11.3 DAYS EXPOSED: 63	31.2	0.5	79	37.2 A	1.27	T33604
4729638	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE AMS-01 DANIELS CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	63	37.2 A	1.27	T33604
4729639	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE AMS-01 DANIELS CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	67	37.2 A	1.27	T33604
4729640	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE RN-03 CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	74	37.2 A	1.27	T33604
1	2	3	4	5	6	7	8			

Q.C. Release	Process No.	Report Date	Date Received
VVG	A21500	11-AUG-08	05-AUG-08

Radon Monitoring Report

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Acct. No. 0410058

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Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	AREA GROSS COUNT	AREA COUNTED (SQ MM)	AREA BACK GRND	AREA LOT NO.
4729647	DRNM	17-MAY-08	17-JUL-08	RN-07 CALIB FACT= 36.7 STD DEV= 10.4 DAYS EXPOSED: 61	44.0	0.7	92	37.2 A	1.27	T33604
4729648	DRNM	17-MAY-08	17-JUL-08	AMS-BKG ANDERSON CALIB FACT= 36.6 STD DEV= 11.3 DAYS EXPOSED: 61	30.2	0.5	78	37.2 A	1.27	T33604
4729649	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE AMS-BKG ANDERSON CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	68	37.2 A	1.27	T33604
4729653	DRNM	17-MAY-08	17-JUL-08	AMS-04 DEWEY CALIB FACT= 36.6 STD DEV= 11.0 DAYS EXPOSED: 61	35.1	0.6	83	37.2 A	1.27	T33604
4729654	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE AMS-03 BEAVER CREEK RANCH CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	67	37.2 A	1.27	T33604
4729655	DRNM	17-MAY-08	17-JUL-08	AMS-06 SCHOOL CALIB FACT= 36.6 STD DEV= 10.5 DAYS EXPOSED: 61	42.0	0.7	90	37.2 A	1.27	T33604
1	2	3	4	5	6	7	8			

Q.C. Release	Process No.	Report Date	Date Received
VVG	A21500	11-AUG-08	05-AUG-08

Radon Monitoring Report

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Acct. No. 0410058

Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	GROSS COUNT	AREA COUNTED (SQ MM)	BACK GRND	LOT NO.
4729667	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE AMS-05 ENGLEBERT CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	65	37.2 A	1.27	T33604
4729668	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE AMS-07 NECK CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	67	37.2 A	1.27	T33604
4729669	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE RN-08 CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	56	37.2 A	1.27	T33604
4729673	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE ~~RN-01~~ RN-04, according to radon test detector log DF 8-18-08 CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	68	37.2 A	1.27	T33604
4729674	DRNM	17-MAY-08	17-JUL-08	RN-05 CALIB FACT= 36.7 STD DEV= 10.1 DAYS EXPOSED: 61	49.9	0.8	98	37.2 A	1.27	T33604
4729675	DRNM	17-MAY-08	17-JUL-08	* - LESS THAN INDICATED VALUE AMS-02 SPENCER CALIB FACT= 36.6 DAYS EXPOSED: 61	* 30.0	* 0.5	68	37.2 A	1.27	T33604
1	2	3	4	5	6	7	8			

Q.C. Release	Process No.	Report Date	Date Received
VVG	A21500	11-AUG-08	05-AUG-08

Radon Monitoring Report

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Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	
4681411	DRNF	14-AUG-07	24-SEP-07	BACKGROUND-KEITH ANDERSON	83.6	2.0	
4681412	DRNF	14-AUG-07	23-SEP-07	RADON 01-BASE WASH PILE, NORTH SIDE	81.0	2.0	
4681414	DRNF	14-AUG-07	23-SEP-07	RADON 02-MIDDLE OF MILE WASTE EDGE OPEN PIT	390.0	9.8	
4681416	DRNF	14-AUG-07	23-SEP-07	RADON 03-SOUTH OF DARROW PIT MINE	48.8	1.2	
4681417	DRNF	14-AUG-07	23-SEP-07	RADON 04-MET STATION	79.0	2.0	
4681418	DRNF	14-AUG-07	23-SEP-07	RADON 05-ABANDONED MINE NEAR N BD	60.0	1.5	
4681419	DRNF	14-AUG-07	24-SEP-07	LOCATION 4 DEWEY	47.5	1.2	
4681421	DRNF	14-AUG-07	27-SEP-07	LOCATION 3 BEAVER CREEK RANCH (NO GOLD COVER)	50.8	1.2	
4681424	DRNF	14-AUG-07	27-SEP-07	LOCATION 1-NW DANIELS RANCH	43.5	1.0	
4681433	DRNF	14-AUG-07	27-SEP-07	LOCATION 1 DULICATE-NW DANIELS RANCH	44.2	1.0	
4681439	DRNF	14-AUG-07	27-SEP-07	LOCATION 7 HECK'S RANCH	47.5	1.1	
4681440	DRNF	14-AUG-07	27-SEP-07	BACKGROUND-KEITH ANDERSON	117.8	2.7	
1	2	3	4	5	6	7	8

Q.C. Release	Process No.	Report Date	Date Received
VVG	A21305	05-OCT-07	01-OCT-07

Radon Monitoring Report

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Acct. No. 0410058

Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure (pCi/l-days)	Avg. Radon Conc. (pCi/l)	
4690837	DRNF	15-AUG-07	27-SEP-07	LOCATION 2-MRS SPENCER'S HOUSE	93.7	2.2	
4690838	DRNF	15-AUG-07	23-SEP-07	RADON 07-WYOMING LINE	118.7	3.0	
4690839	DRNF	16-AUG-07	23-SEP-07	MARC KOLLENBECK'S HOUSE RN-08	113.4	3.0	
4690840	DRNF	19-AUG-07	23-SEP-07	RADON 06-ROLLFRONT AREA	114.8	3.3	
4690841	DRNF	17-AUG-07	27-SEP-07	LOCATION 6-OLD SCHOOLHOUSE	106.7	2.6	
4690842	DRNF	15-AUG-07	27-SEP-07	LOCATION 5-PINK 2-STORY HOUSE	93.2	2.2	
1	2	3	4	5	6	7	8

Q.C. Release	Process No.	Report Date	Date Received
VVG	A21305	05-OCT-07	01-OCT-07

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Radon Monitoring Report

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Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	
4703748	DRNF	27-SEP-07	01-FEB-08	SPENCER-LOC 2	154.8	1.2	
4703749	DRNF	27-SEP-07	01-FEB-08	DANIELS-LOC 1	83.1	0.7	
4703750	DRNF	27-SEP-07	01-FEB-08	DANIELS-LOC 1	44.9	0.4	
4703751	DRNF	27-SEP-07	04-FEB-08	DEWEY- LOC 4	161.6	1.2	
4703752	DRNF	27-SEP-07	04-FEB-08	BEAVER CREEK RANCH-LOC 3	150.5	1.2	
4703765	DRNF	23-SEP-07	11-FEB-08	RN-03	126.3	0.9	
4703766	DRNF	23-SEP-07	11-FEB-08	RN-01	179.6	1.3	
4703768	DRNF	23-SEP-07	01-FEB-08	RN-04	183.3	1.4	
4703769	DRNF	23-SEP-07	12-FEB-08	NO GOLD SEAL RN-05	157.9	1.1	
4703771	DRNF	23-SEP-07	12-FEB-08	RN-07	261.7	1.8	
4703797	DRNF	27-SEP-07	01-FEB-08	MECH RANCH-LOC 7	188.9	1.5	
4703799	DRNF	27-SEP-07	01-FEB-08	ENGLEBERT RANCH-LOC 5	128.2	1.0	
4703800	DRNF	27-SEP-07	01-FEB-08	SCHOOL-LOC 6	122.6	1.0	
4703801	DRNF	27-SEP-07	01-FEB-08	ANDERSON-BKG	198.9	1.6	
1	2	3	4	5	6	7	8

Q.C. Release	Process No.	Report Date	Date Received
VVG	A21380	04-MAR-08	15-FEB-08

Radon Monitoring Report

ENVIRONMENTAL RESTORATION GRP
ATTN: KEN BAKER
8809 WASHINGTON NE
SUITE 150
ALBUQUERQUE, NM 87113

Acct. No. 0410058

LANDAUER
Landauer, Inc. 2 Science Road Glenwood, Illinois 60425-1586
Telephone: (800) 528-8327 Facsimile: (708) 755-7048

Detector Number	Detector Type	Starting Date	Ending Date	Field Data / Comments	Exposure pCi/l-days	Avg. Radon Conc. pCi/l	
4703802	DRNF	27-SEP-07	01-FEB-08	ANDERSON-BKG	196.4	1.5	
4712642	DRNF	23-SEP-07	11-FEB-08	RN-06	190.2	1.3	
4712643	DRNF	23-SEP-07	01-FEB-08	RN-08	171.3	1.3	
4712644	DRNF	23-SEP-07	11-FEB-08	RN-02	173.8	1.2	
1	2	3	4	5	6	7	8

Q.C. Release	Process No.	Report Date	Date Received
VVG	A21380	04-MAR-08	15-FEB-08

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Appendix C

Radon Flux Measurement Documentation

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ERG Radon Flux Canister Data Log

Site: Dewey - Burdock

Page: 1 of A1 NN

Location Number	Canister Number	Deployment Date (mm/dd/yy)	Deployment Time (24:00)	Retrieval Date (mm/dd/yy)	Retrieval Time (24:00)	Notes/Comments
1	22	–	–	–	–	Trip Blank
2	257	07/14/08	09:24	07/15/08	10:06	RFA-B37
3	258		09:27		10:14	RFA-B21
4	8		08:19		08:49	RFA-B17
5	73		08:55		09:29	RFA-B36
6	65		09:13		09:54	RFA-B15
7	95		09:20		10:00	RFA-B02
8	92		08:10		08:43	RFA-B30
9	38		08:05		08:41	RFA-B13
10	59		07:56		08:30	RFA-B01
11						
12						
13						
14						
15						
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17						
18						
19						
20						
21						
22						
23						
24						
25						

Environmental Restoration Group, Inc.
8809 Washington St. NE * Suite 150
Albuquerque, NM 87113

ERG Radon Flux Data Log
(505) 298-4224
www.ERGoffice.com

[redacted]

Site: Dewey - Burdock

ERG Radon Flux Canister Data Log

Page: 1 of 4

Location Number	Canister Number	Deployment Date (mm/dd/yy)	Deployment Time (24:00)	Retrieval Date (mm/dd/yy)	Retrieval Time (24:00)	Notes/Comments
1	91	09/26/07	08:51	09/27/07	10:00	RFA-821
2	55	09/26/07	11:18	09/27/07	09:40	RFA-831
3	72	09/26/07	09:04	09/27/07	10:10	RFA-837
4	73	09/26/07	09:33	09/27/07	10:20	RFA-802
5	23	09/26/07	10:15	09/27/07	10:30	RFA-815
6	63	09/26/07	12:12	09/27/07	10:36	RFA-817
7	105	09/26/07	12:40	09/27/07	10:27	RFA-813
8	102	09/26/07	13:04	09/27/07	10:15	RFA-830
9	45	09/26/07	13:50	09/27/07	10:07	RFA-801
10						
11						
12						
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24						
25						

Environmental Restoration Group, Inc.
8809 Washington St. NE * Suite 150
Albuquerque, NM 87113

ERG Radon Flux Data Log
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[redacted]

Radon – 222 Canister Chain of Custody Record

page 1 of 1

Facility	Dewey Burdock
Pile or Stack Name	N/A
Area of Pile or Stack	N/A
Field Representative	N. WRUBEL

	Deployment	Retrival
Date	4/20/08	4/21/08
Rel. Humid.	$\bar{x}$: 39; 6-71	$\bar{x}$: 29.44; 14-68
Bar. Press	29.50 in.	30.02 in.
Temp. (F)	~71 °F $\bar{x}$: 59; 36-81	~40 °F $\bar{x}$: 38; 25-50

www.wunderground.com CHADRON, NE No frost observed

Deployment/Retrieval Record

Item	Location ID or Description	Coordinates North	Coordinates East	Canister Number	Deployment Time	Deployment By	Retrieval Time	Retrieval By	Comments
101	RFA-B21	428289.77	999249.30	48	0830	NW	0802	NW	
102	RFA-B31	432201.68	1001484.26	7	0832		0825		
103	RFA-B37	430292.49	1005338.17	71	0900		0838		
104	RFA-B22	430887.96	1006307.78	59	0909		0846		
105	RFA-B15	432487.00	1007598.62	80	0918		0854		
106	RFA-B17	445319.19	989955.54	90	1026		0930		
107	RFA-B01	444878.75	986206.90	256	1034		0948		
108	RFA-B13	442713.12	988273.03	38	1035		1001		
109	RFA-B30	443802.77	988057.01	83	1045		1009		
110	Field Blank	–	–	255	–	–	–	–	
111									
112									
113									
114									

Custody Transfer Record

Items Nos.	Reliquished By	Date	Time	Accepted By	Date	Time 10AM
101-110	NW	4/21/08	1400	K Baker	4/22/08	4/22/08

Radon Flux Measurements

Site Dewey · Burdock TOTAL

RFA-B##

Canister Number	Lab Date	Start Count Time	Deploy Date	Deploy Time	Retrieve Date	Retrieve Time	Collection Time (sec)	Count Time (sec)	Peak Counts	Percent Error	Bkg counts	Percent Error	Detector Efficiency	Canister Activity (pCi)	Flux (pCi/m2/s	Flux Error 1.00S.D	LLD (pCi/m2/s	Remarks
257	7/16	1520	7/14	9:24	7/15	10:06		1200	5117						37			
258	"	15:40		9:27		10:14		"	4448						21			
8	"	16:01		8:19		8:49		"	5121						17			
73	"	16:22		8:55		9:29		"	3712						36			
65	"	16:46		9:13		9:54		"	5845						15			
95	"	17:10		9:20		10:00		"	4515						Ø2			
92	"	17:31		8:10		8:43		"	6326						3Ø			
* 92 B	"	17:52		"		"		"	6386						3Ø			
38	"	18:16		8:05		8:41		"	6724						13			
22	"	18:38		—		—		"	3126						—	BLANK		
* 59	"	18:59		7:56		8:30		"	6871					RFA-B	Ø1			
BKG #2		19:42						"	2938									
STD #3	"	20:03						"	42987									
STD #1	"	20:24						"	47880									

ROI 563-647
4/22/08

Radon Flux Measurements

Site Long Brook

Canister Number	Lab Date	Start Count Time	Deploy Date	Deploy Time	Retrieve Date	Retrieve Time	Collection Time (sec)	Count Time (sec)	Peak Counts	Percent Error	Bkg counts	Percent Error	Detector Efficiency	Canister Activity(pCi/l)	Flux pCi/m2s	Flux Error 1.00S D	LLD pCi/m2s	Remarks
STD 1	4/22	1720							~~24888~~ 48042									
STD 3	4/22	1740							39122									
BKG1		1808							2757									
38		1840							3642									
88		1905							3848									
90		1923							3695									
256		1945							3810									
80		2010							4481									
80B		2031							4374									
59		2055							3932									
2		2115							3751									
71		2137							4800									
255		2200							2863									
48		2220							3182									
BKG2		2241							2605									
STD 1		2308							48463									
STD 3		2330							38657									

Kenneth Baker

Data entered 4/23/09 by MJS

LOT - 562 - 680

Radon Flux Measurements

Site Dewey-Burdock, SD

TOTAL

Canister Number	Lab Date	Start Count Time	Deploy Date	Deploy Time	Retrieve Date	Retrieve Time	Collection Time (sec)	Count Time (sec)	Peak Counts	Percent Error	Bkg. counts	Percent Error	Detector Efficiency	Canister Activity (pCi)	Flux pCi/m2s	Flux Error (1 00% 1 D)	LLD pCi/m2s	Remarks
STD 1	9/28/07	1600						1200	31826	1.9				40124				
STD 3	9/28/07	1635							26724	2.2				40807				
BKG 1	9/28/07	1700							-10	482				2594				
91	9/28/07	1722	9/26/07	0851	9/27/07	1000			1220	21				2230				
55	9/28/07	1745	9/26/07	1118	9/27/07	0940			410	31				3627				
72	9/28/07	1805	9/26/07	0925	9/27/07	1010		1200	1137	22				3932				
73	9/28/07	1830	9/26/07	0948	9/27/07	1020			925	28				4064				
23	9/28/07	1853	9/26/07	1015	9/27/07	1030			1744	16				3582				
63	9/28/07	1921	9/26/07	1212	9/27/07	1036			1596	16.1				4478				
105	9/28/07	1946	9/26/07	1240	9/27/07	1022			1742	16				5161				
102	9/28/07	2009	9/26/07	1304	9/27/07	1015			1960	13.3				5049				
45	9/28/07	2030	9/26/07	1350	9/27/07	1007			1672	16.2				3876				
45D	9/28/07	2100	9/26/07	1350	9/27/07	1007			1404	17.9				4824				
46	9/28/07	2121	NA	NA	NA	NA	NA		219	110				3799				FIELD BLANK
BK62	9/28/07	2142							247	82				3601				
STD 3	9/28/07	2204							35961	2.5				40545				
STD 1	9/28/07	2225							31277	19				45440				