Baseline Radiological Characterization of the Section 11/12 Mine – Phase 1

January 2017

prepared for:

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Section 1.0 - Introduction

Environmental Restoration Group, Inc. (ERG), on behalf of Permits West, Inc., conducted the first phase of a baseline characterization of radiological conditions at the Section 11/12 Mine (formerly known as the Section 12 Mine [McLemore and Chenoweth, 1991]) on June 13, 2016. The second phase will be comprised of sampling and analysis of surface and subsurface soils.

The location of the mine, which is owned by Southwest Resources, Inc. (SRI) is in the southwest quarter of Section 12, TI4N, R10W, McKinley County, New Mexico, of the Ambrosia Lake Mining District (see Figure 1-1). The mine was operated by Cobb Resources, the predecessor operator to SRI from 1974 to 1982. Current features at the site include mine buildings, a shaft and headframe, and waste piles. The footprint of the site (site) is approximately 58 acres, corresponding to an area identified in 2011 by the U.S. Environmental Protection Agency (EPA) in an Aerial Spectrophotometric Environmental Collection Technology (ASPECT) survey as exhibiting levels of gamma radiation exceeding background (EPA, 2011). The 58-acre site encompasses the mine permit area.

The characterization was performed to obtain a current assessment of exposure rates and concentrations of radium-226 in surface soils. By extension, we determined a "site-specific value of gamma radiation that correlates to 5 [picocuries per gram] (pCi/g) Ra-226 above background at the 95th percentile value" (Energy, Minerals and Natural Resources Department/New Mexico Environment Department [EMNRD/NMED], 2016). The work was performed in accordance with "Radiological Survey Plan for the Section 11/12 Mine" (ERG, 2015) and consisted of:

- a walkover gamma radiation (gamma) surveys over the site and a 4-acre background reference area (BRA) located on land managed by the U.S. Bureau of Land Management in the northeast quarter of the southwest quarter of Section 12;

- co-located gamma count and exposure rate measurements to compare gamma count rates to exposure rates; and

- additional gamma surveys coupled with the sampling and analysis of soil samples to compare gamma count rates to concentrations of radium-226 in surface soils:

- beginning to establish a site-specific value of gamma radiation that corresponds to 5 pCi/g of radium-226 in soil plus background.

The gamma survey of the BRA was performed to provide measurements of reference, to which the gamma count rates - and by extension - exposure rates and concentrations of radium-226 in surface soils observed at the site could be compared.

This report first describes the collection and analysis of radiological measurements. The report ends with conclusions and recommendations regarding radiological conditions at the site.

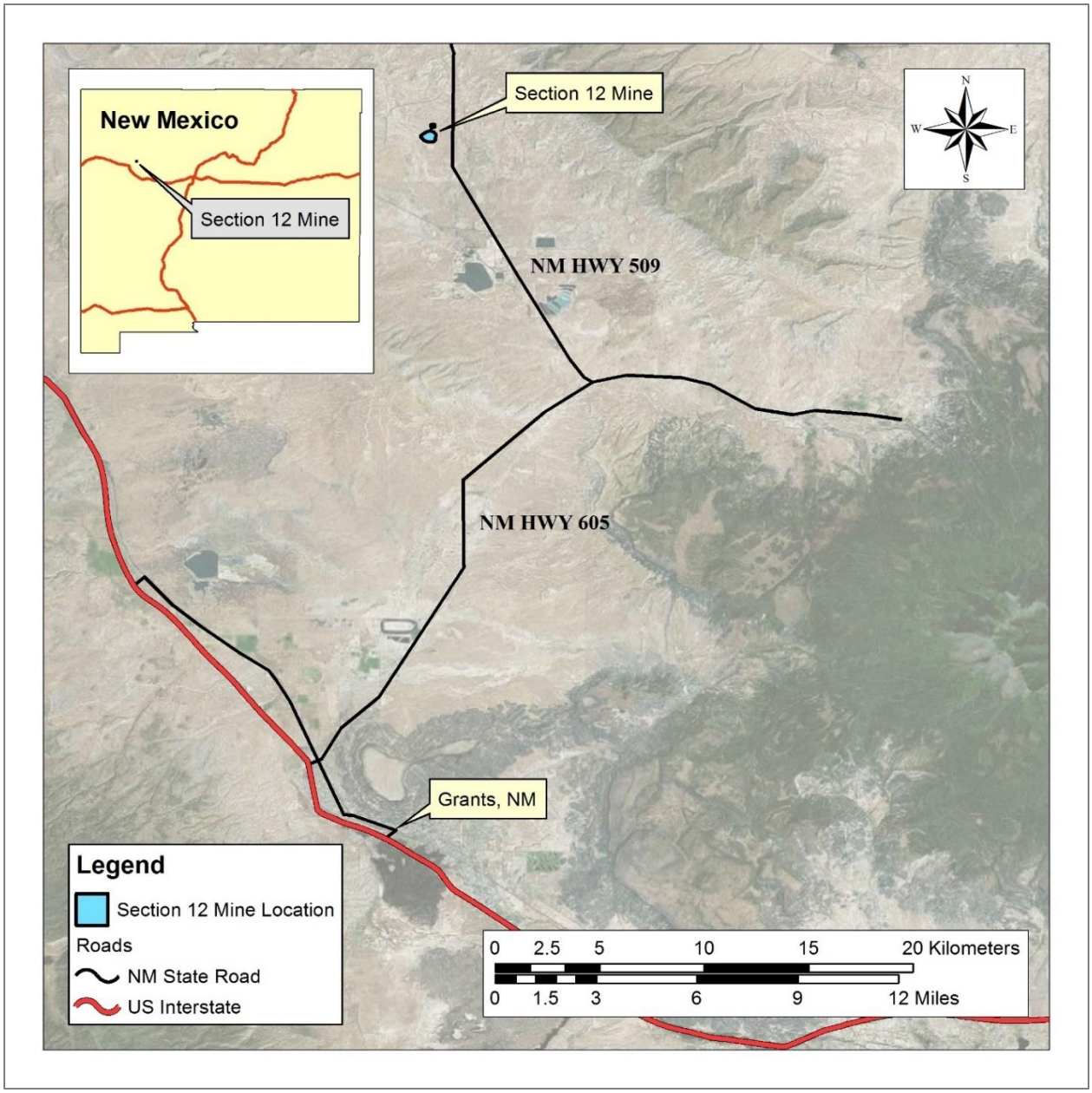


Figure 1-1. Site Location

Section 2.0 - Gamma Radiation Survey

The following subsections provide descriptions of the method and results of the gamma surveys.

2.1 Method

Two field personnel performed the gamma surveys of the site and BRA on foot, each using a Ludlum Model 44-10 2-inch by 2-inch sodium iodide high energy gamma detector coupled to a Ludlum Model 2221 ratemeter/scaler. Each of the ratemeter/scalers was paired to a Trimble sub-meter grade Global Positioning System with datalogger. The detectors were held at approximately 18 inches above ground surface (ags) as field personal walked at about 1 meter per second (m/s) along transects spaced at approximately 10 m. Gamma count rates and associated geopositions were recorded every second in the dataloggers. The gamma count rate measurements were downloaded to a laptop computer upon completion of the survey and reviewed in ArcMap version 10.4. Additional gamma surveys were conducted at each of eight, 100 square meter (m^2) soil sample locations, as described in Section 4.1. The survey locations were selected to represent the range of observed gamma count rates in the background and project areas for conducting the correlation studies described in Sections 3.0 and 4.0.

Table 2-1 lists the serial numbers of each of the radiological instruments, which were function-checked before and after each day of use and calibrated on January 20, 2016; i.e., within calibration in accordance with American National Standards Institute (ANSI) Standard N232A (ANSI, 1997). Appendix A presents the completed function check forms and calibration certificates for the instruments.

Table 2-1. Instruments used in the Gamma Survey

	Serial Numbers	
System	Ludlum Model 44-10	Ludlum Model 2221
1	PR288465	190206
2	PR303727	254772

2.2 Results

Table 2-2 presents summary statistics of the gamma count rate measurements made in the BRA. Table 2-3 presents summary statistics of the gamma count rate measurements made at the site. Appendix B presents the statistical outputs of the gamma count rate measurements, using JMP Version 11.2.1. Appendix B also includes the statistical output for the 1) predicted exposure rates addressed in Section 3.0 - and 2) predicted concentrations of radium-226 described in Section 4.0 - .

The range of gamma count rates in the BRA is 9,751 to 16,571, with a mean and median of 12,506 and 12,489 counts per minute (cpm), respectively. The range of gamma count rates at the site is 10,305 to 339,244, with a mean and median of 38,115 and 20,963 cpm, respectively.

The distributions of both sets of gamma count rates are different, based on a comparison of their respective means and medians. This observation indicates that the site is impacted radiologically from historic activities. The distributions are described in detail both numerically and spatially in Section 3.2, where the gamma count rates are converted to predicted exposure rates, given that it is 1) a simple

conversion by a linear relationship and 2) the latter are more suited as a common unit to which future radiological conditions can be compared.

Table 2-2. Gamma Count Rate Measurements in the Background Reference Area

Parameter	Gamma Count Rate (cpm)
Number	2,057
Minimum	9,751
Maximum	16,571
Mean	12,506
Median	12,489

Notes:
cpm = counts per minute

Table 2-3. Gamma Count Rate Measurements at the Site

Parameter	Gamma Count Rate (cpm)
Number	19,612
Minimum	10,305
Maximum	339,244
Mean	38,115
Median	20,963

Notes:
cpm = counts per minute

Section 3.0 - Comparison of Exposure and Gamma Count Rate Measurements

The following subsections provide descriptions of the method and results of the comparison of gamma count rate and exposure rate measurements.

3.1 Method

ERG made ten co-located (measurements made at the same location) exposure (using the HPIC) and static (integrated) gamma count rate measurements at 8 locations at the site and two locations in the BRA (one co-located measurement at each location). The locations were chosen such that the radiological measurements made as described in this section and Section 4.0 would represent the range of those observed during the gamma survey.

Figure 3-1 presents the locations of the 1) BRA and site; and 2) locations of the measurements used to develop the comparisons described here and in Section 4.0. The exposure rate measurements were made every second for 5 to 10 minutes at each location using a GE RSS-131 high pressure ionization chamber (HPIC), Serial Number 070J00KM1. The gamma count rate measurements were made for one minute, using Detection System 2 listed in Table 2-1, with the detector held approximately 18 inches ags.

3.2 Results

Table 3-1 presents the results for the two types of measurements made at each of the 8 locations. Appendix C presents the individual (one second) exposure rate measurements.

The Pearson's Correlation Coefficient (R^2) is a measure of the linear dependence between two variables, and is expressed as a value between -1 and +1 where +1 is a positive linear correlation, 0 is no linear correlation, and -1 is a negative linear correlation. The best predictive relationship between the measurements is linear with a R^2 of 0.9961 strongly indicating a positive linear correlation. The following equation is the linear regression (shown in Figure 3-2) between the average exposure rate and gamma count rate results in Table 3-1 that was generated using MS Excel:

$$\text{Exposure Rate } (\mu R/h) = 0.0006 \times \text{Gamma Count Rate (cpm)} + 7.4$$

This equation was used to convert the gamma count rate measurements observed in the survey to predicted exposure rates. Table 3-2 and Table 3-3 present summary statistics for the predicted exposure rates at the BRA and site, respectively.

The range of predicted exposure rate measurements at the BRA is 13.3 to 17.4, with a mean and median of 14.9 microRoentgens per hour (μR/h). The range of predicted exposure rate measurements at the site is 13.6 to 211.0, with an average and median of 30.3 and 20.0 μR/h, respectively.

Figure 3-3 presents isocontours of the exposure rates predicted from the gamma count rate measurements. Radiological impacts are limited to the area around the existing mine shaft and buildings; and extend along the road leading southwest off the permit area and along an L-shaped berm off the southern edge of the mine. The horizontal extent of radiological contamination appears to go beyond the southwest edge of

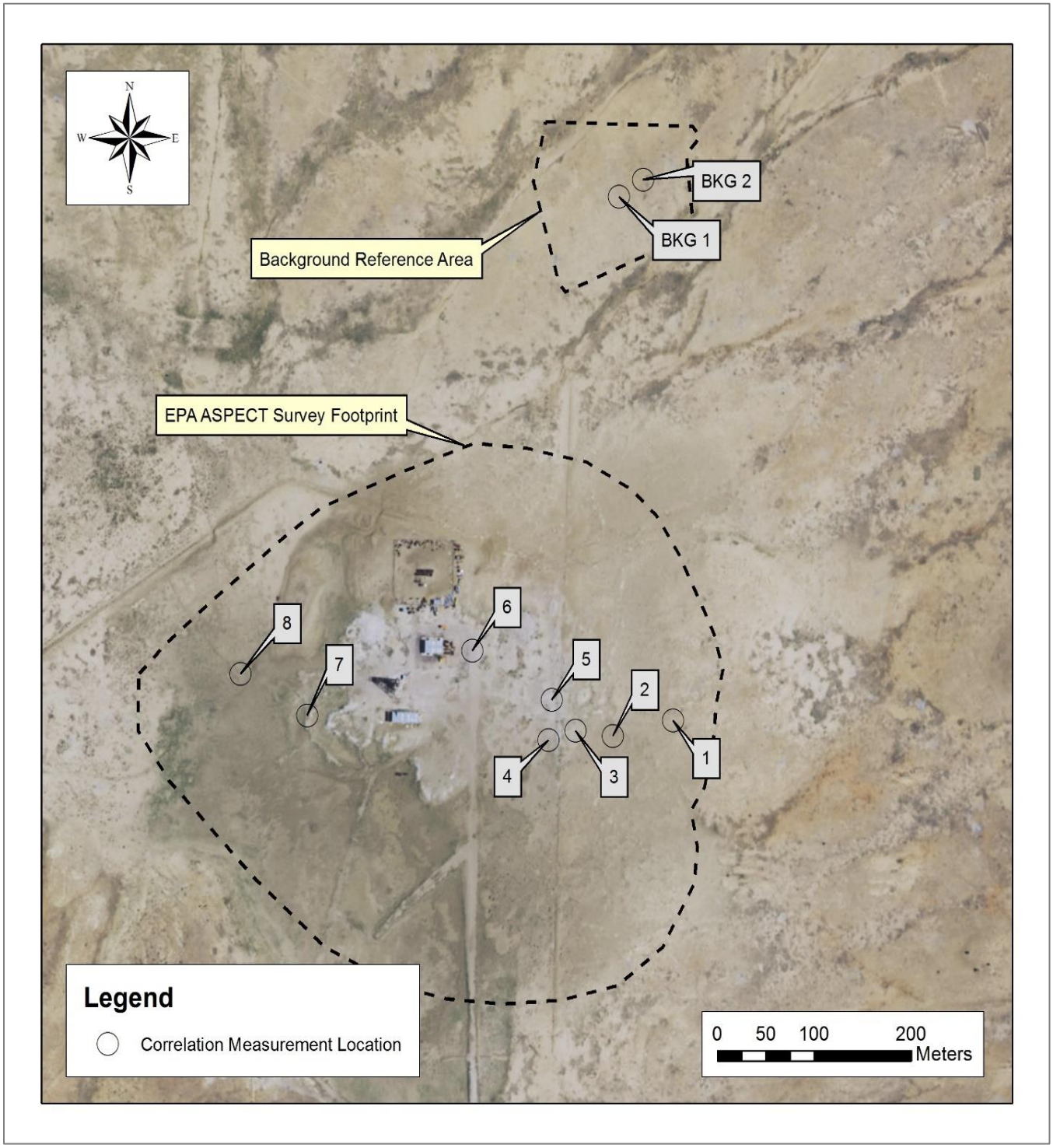


Figure 3-1. Locations of Radiological Measurements and Surface Soil Samples

Table 3-1. Co-located Gamma Count and Exposure Rate Measurements

Location	Exposure Rate Measurements			Gamma Count Rate (cpm)	cpm/µR/h
	Records	Duration of Measurement Period (minutes)	Average Exposure Rate (µR/h)		
BRA-1	485	8.1	15.6	12,374	795
BRA-1	598	10.0	15.7	12,865	819
1	375	6.3	15.7	14,733	938
2	367	6.1	23.5	29,203	1244
3	287	4.8	53.6	86,664	1617
4	403	6.7	92.2	148,554	1611
5	284	4.7	81.1	122,145	1507
6	551	9.2	33.9	46,192	1362
7	318	5.3	22.8	27,624	1214
8	406	6.8	18.9	19,236	1020

Notes:
cpm = count per minute
µR/h = microRoentgens per hour

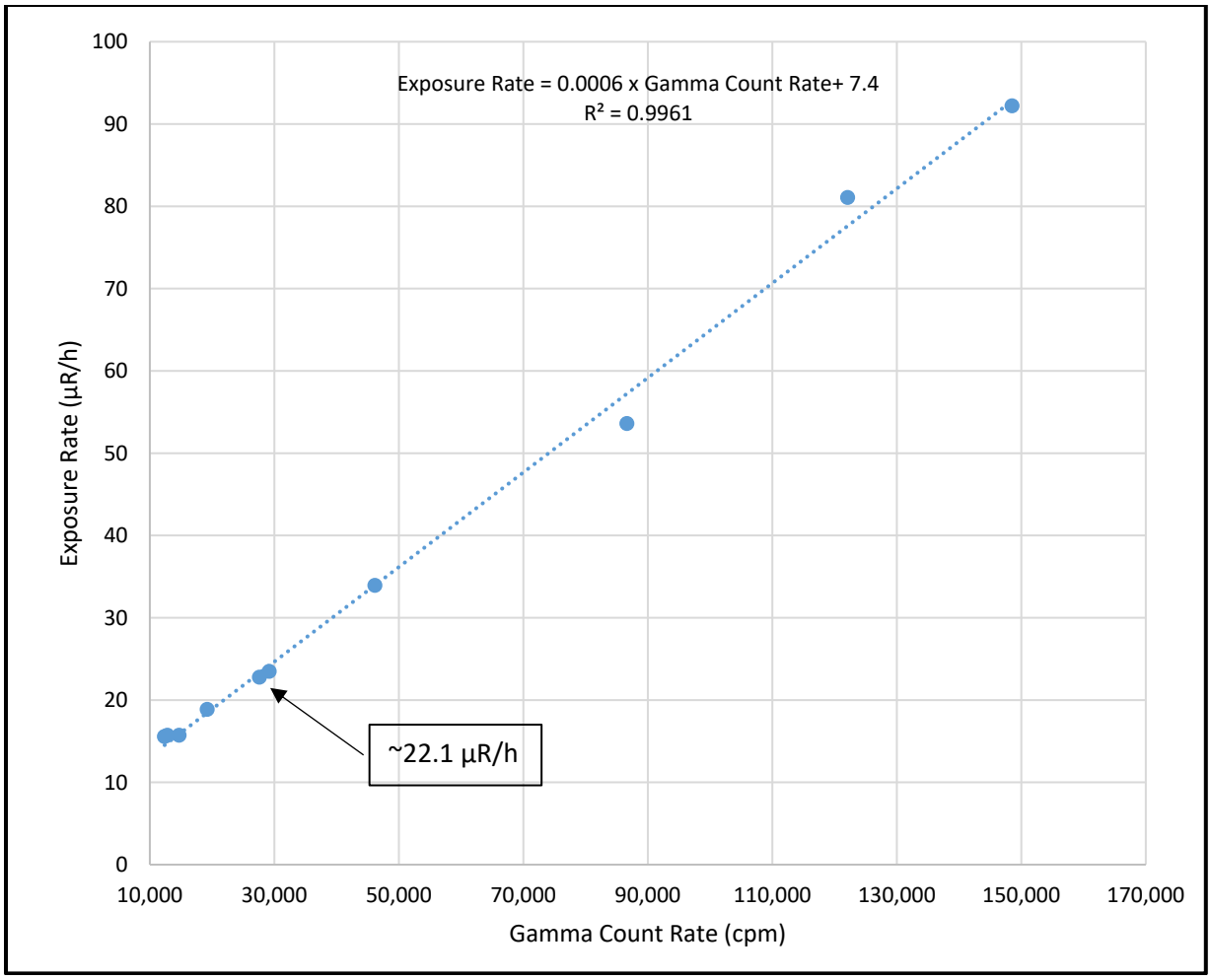


Figure 3-2. Correlation of Gamma Count and Exposure Rates

Table 3-2. Predicted Exposure Rates in the Background Reference Area

Parameter	Exposure Rate (µR/h)
Number	2,057
Minimum	13.3
Maximum	17.4
Mean	14.9
Median	14.9

Notes:
µR/h = microRoentgens per hour

Table 3-3. Predicted Exposure Rates at the Site

Parameter	Exposure Rate (µR/h)
Number	19,612
Minimum	13.6
Maximum	211.0
Mean	30.3
Median	20.0

Notes:
µR/h = microRoentgens per hour

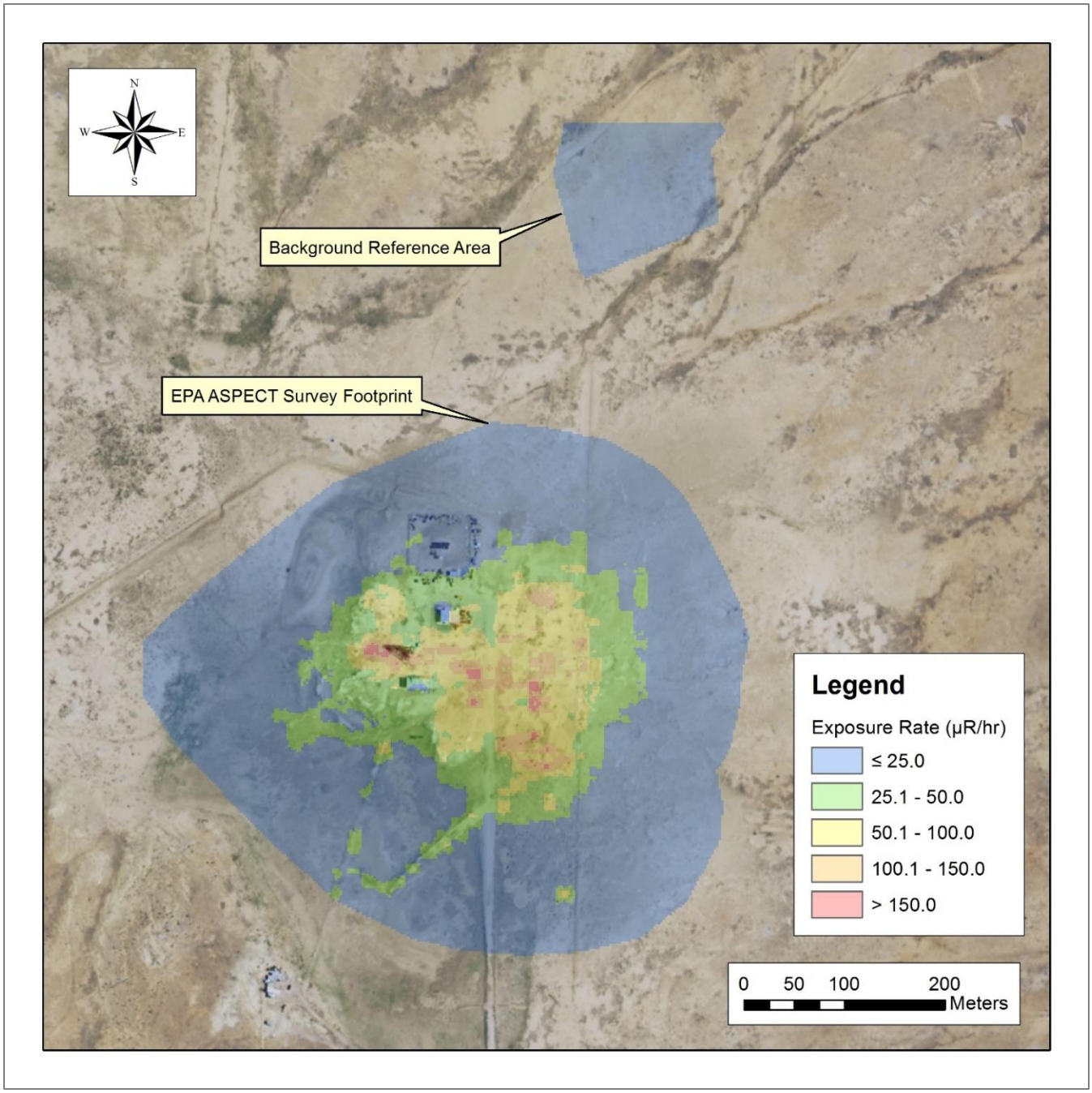


Figure 3-3. Isocontours of Predicted Exposure Rates

the permit boundary along the road. The predicted exposure rates are highest in the center of the permit area around the mine shaft and decrease with increasing distance outward to levels that are comparable to those in the BRA.

Figure 3-4 presents the distributions as histograms and box plots for each of the sets of predicted exposure rates, made using JMP version 11.2.1. Theoretical normal and lognormal distributions also are plotted in Figure 3-4 such that the theoretical and actual distributions can be compared visually. The predicted exposure rates appear to approach a normal distribution. However, the distribution is not normal according to a Kolmogorov-Smirnov Lilliefors test, as performed using JMP. The distribution of predicted exposure rates at the site is not lognormal, as determined both visually and according to a Kolmogorov's D test, as performed using JMP.

To assist the reader, box plots represent cutoffs within distributions. The median and 25^{th} and 75^{th} percentiles are represented as the inside and outside vertical lines of the central box, respectively. The remaining vertical lines represent the 0, 0.5, 2.5, 10, 90, 97.5, 99.5, and 100^{th} percentiles of the sets of predicted exposure rates.

The box plot for the BRA shows that 50 percent (the values between the 25^{th} and 75^{th} percentiles) of the predicted exposure rates are between 14.6 and 15.2 μR/h. Similarly, the box plot for the site shows that 50 percent of the predicted exposure rates are between 18.0 and 28.4 μR/h. The 95^{th} percentile exposure rate that corresponds to a radium-226 concentration of 5 pCi/g plus background (5 plus 1.4, or 6.4 pCi/g) is approximately 22.1 μR/h (see derivation of this value in Section 4.2).

Not shown in the box plots is that 83.6 percent of the predicted exposure rates at the site exceed the highest value predicted in the BRA (17.4 μR/h). Figure 3-5 is a side-by-side comparison of the box plots of predicted exposure rates at the site and BRA. The difference in the relative ranges of the magnitudes of predicted exposure rates clearly indicates impacts at the site.

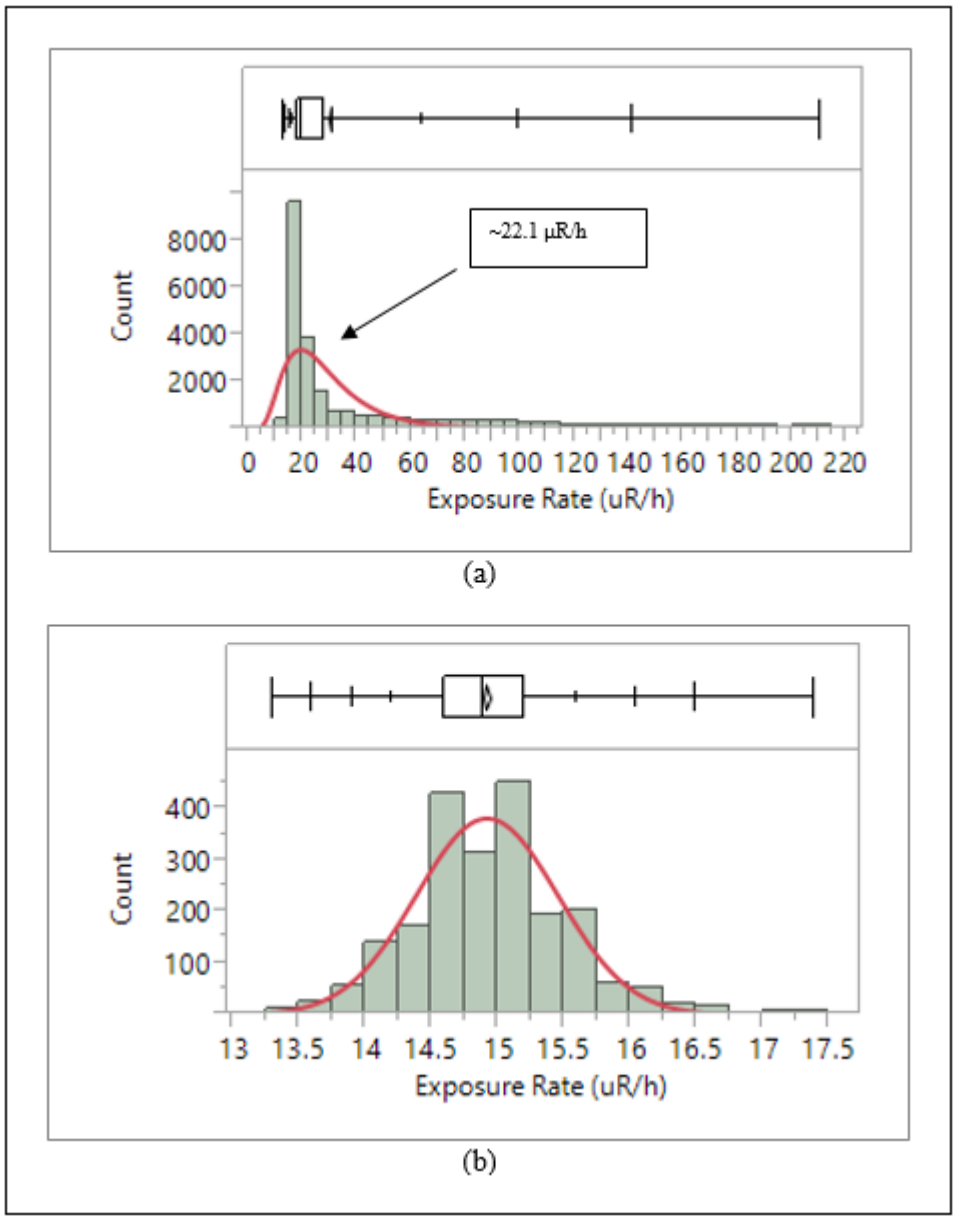


Figure 3-4. Distributions of Predicted Exposure Rates at the (a) BRA and (b) Site

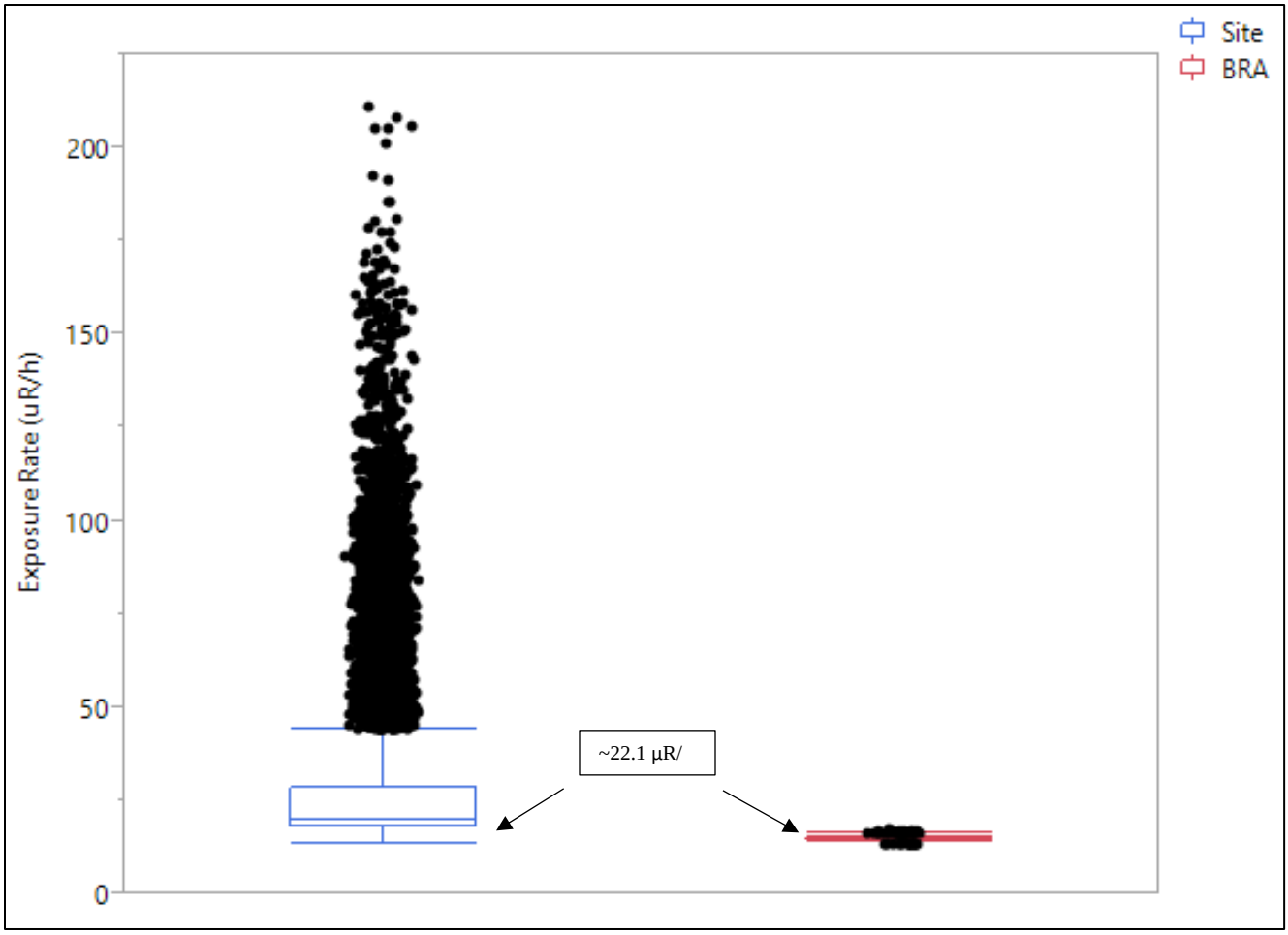


Figure 3-5. Box Plots of Predicted Exposure Rates

Section 4.0 - Comparison of Gamma Count Rates and Radium-226 Concentrations in Soil

The following subsections provide descriptions of the method and results of the comparison of gamma count rates to radium-226 concentrations in soil.

4.1 Method

The method to compare gamma count rates and radium-226 concentrations in soil was performed in 100 m^2 areas, established at the 8 locations on site and at two locations in the BRA shown in Figure 3-1. ERG performed additional gamma surveys and collected soil samples in each of the 100 m^2 areas.

The gamma surveys were conducted as described in Section 2.1, except that the transect spacing was reduced to approximately 0.5 m. Field personnel also collected a 5-point composite sample of surface soils from each area, at 0 to 15 centimeters below ground surface. The 5-point composite was comprised of grab samples collected at the center and the midpoints between the center and the corners of each area.

The soil samples were collected using a hand auger and shipped to ALS Laboratories in Fort Collins CO, where they were analyzed by gamma spectroscopy after period of 21 days to allow radium-226 decay products to reach equilibrium.

4.2 Results

Table 4-1 lists the average gamma count rate at each location and the associated concentration, error and minimum detectable concentration of radium-226. Appendix D presents the laboratory analytical results. The average concentrations of radium-226 in the samples of surface soil collected at the site and BRA are 31.0 and 1.41 pCi/g, respectively.

Table 4-1. Co-located Gamma Count Rates and Predicted Concentrations of Radium-226 in Soil

		Radium-226 (pCi/g)		
Sample Number	Gamma Count Rate (cpm)	Result	Error	MDC
BRA-1	12,333.3	1.27	0.32	0.47
BRA-1	12,752.4	1.55	0.32	0.44
1	15,329.3	1.56	0.36	0.53
2	30,007.8	9.2	1.3	0.7
3	77,778.6	58.1	6.9	1.1
4	130,007.8	93	11	1
5	128,955.8	62.9	1.4	1
6	54,113.6	15.5	1.9	0.6
7	27,312.9	2.38	0.51	0.79
8	19,118.0	5.01	0.48	1

Notes:
MDC = minimum detectable concentration ; pCi/g = picocuries per gram

The best predictive relationship between the measurements, shown in Figure 4-1 with upper and lower 95 percent confidence curves, is a power function with a Pearson's Correlation Coefficient (R^2) of 0.9376, as expressed in the equation:

$$\text{Radium-226 concentration (pCi/g)} = 8 \times 10^{-8} \times \text{Gamma Count Rate (cpm)}^{1.7717}$$

This equation was used to convert the gamma count rate measurements observed in the survey to predicted concentrations of radium-226. This was done by first log transforming both the gamma count rate and the radium-226 concentrations in soil (the X and Y variables), then performing a linear regression on the transformed data. The linear equation of the log transformed data was then solved algebraically to express the relationship between the non-transformed variables. Figure 4-2 shows the predicted concentrations of radium-226 as isocontours, the spatial and numerical distribution of which parallel those depicted in Figure 3-3. Table 4-2 and Table 4-3 present summary statistics for the predicted concentrations of radium-226 at the BRA and the site, respectively. Appendix B presents statistical outputs of the linear regression of the transformed data.

The range of the predicted concentrations of radium-226 at the BRA is 0.9 to 2.4 pCi/g, with an average and median of 1.5 and 1.4 pCi/g, respectively. The range of predicted concentrations of radium-226 at the site is 1.0 to 502.9, with an average and median of 17.3 and 3.6 pCi/g, respectively.

The 95th percentile gamma count rate corresponding by interpretation of Figure 4-1 to a radium-226 concentration of 5 pCi/g plus background (5 plus 1.4, or 6.4 pCi/g) is approximately 24,520 cpm. This value correlates to a predicted exposure rate of 22.1 µR/h, using the equation given in Section 3.2.

Table 4-2. Predicted Concentrations of Radium-226 in the BRA

Parameter	Ra-226 (pCi/g)
Number	2,057
Minimum	0.9
Maximum	2.4
Mean	1.5
Median	1.4

Notes:
pCi/g = picocuries per gram

Table 4-3. Predicted Concentrations of Radium-226 at the Site

Parameter	Ra-226 (pCi/g)
Number	19,612
Minimum	1.0
Maximum	502.9
Mean	17.3
Median	3.6

Notes:
pCi/g = picocuries per gram

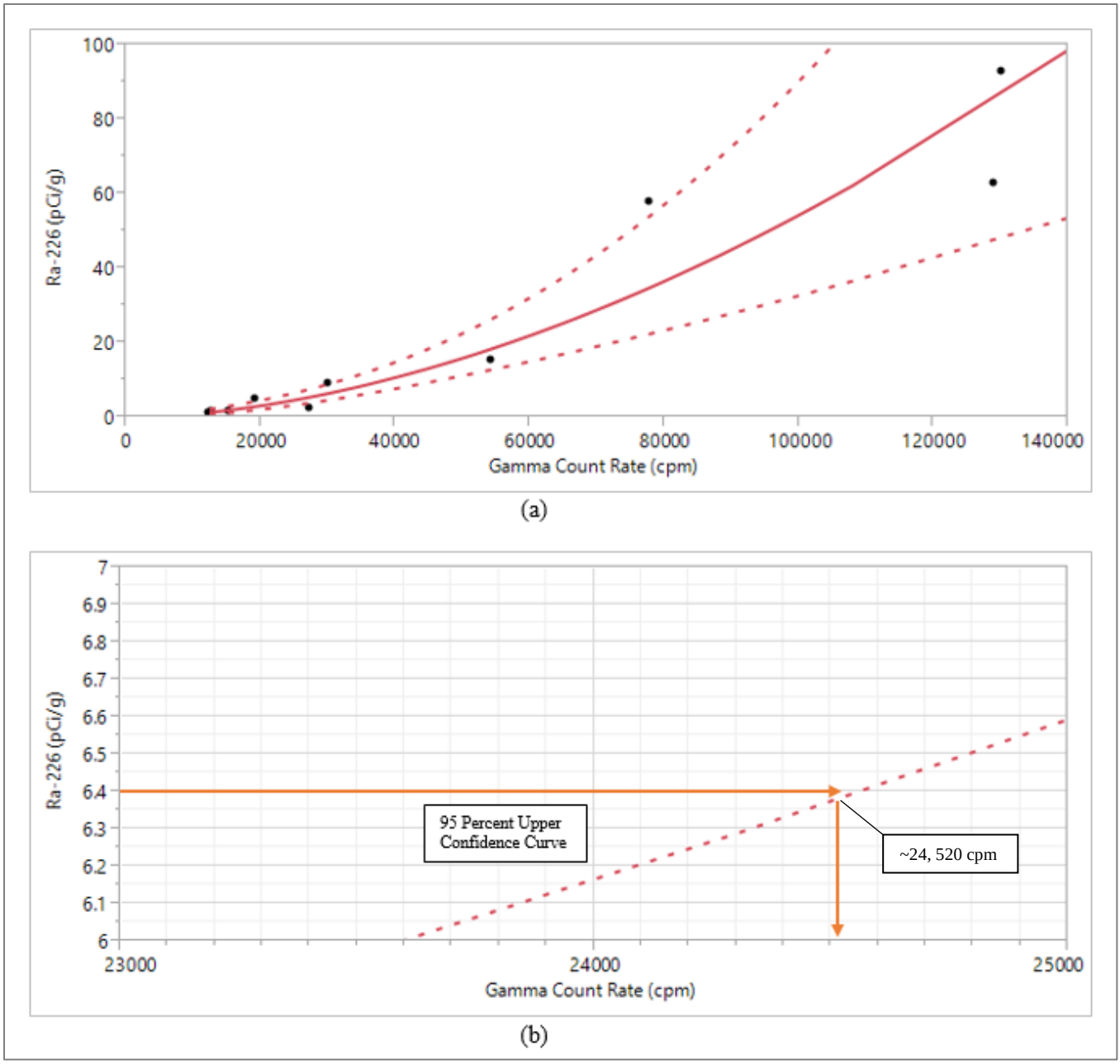


Figure 4-1. Correlation of Gamma Count Rates and Radium-226 Concentrations in Surface Soils: (a) All Data (b) Data used for Interpretation of Site-Specific Predicted Exposure Rate Corresponding to 5 pCi/g Ra-226 Plus Background

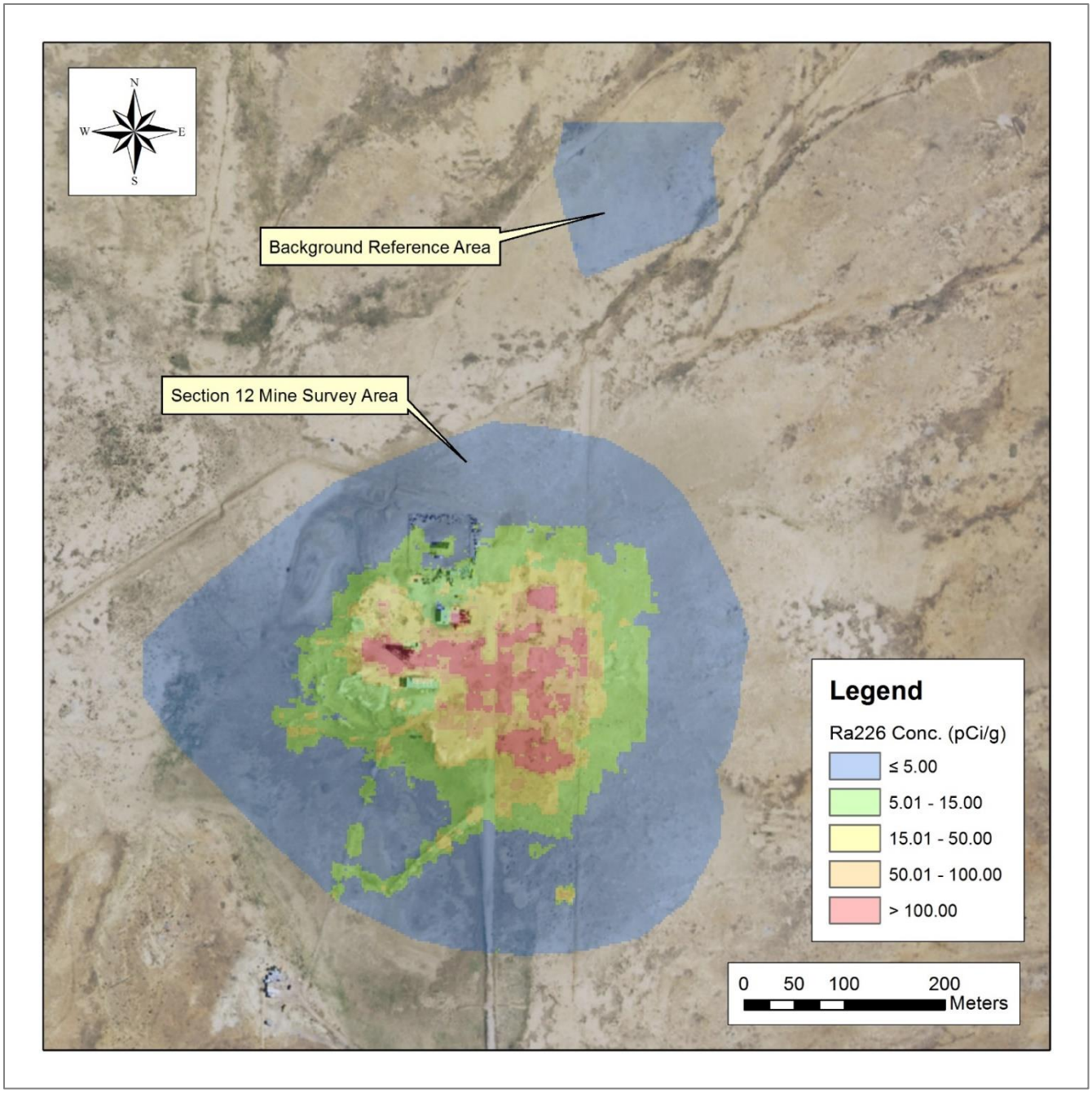


Figure 4-2. Isocontours of Predicted Concentrations of Radium-226

Section 5.0 - Conclusions

The following conclusions and recommendations are presented based on the results of the gamma survey and correlations between gamma count rates and exposure rates and concentrations of radium-226 in soil:

- Gamma count rate measurements correlate strongly to both exposure rates and the concentrations of radium-226 in surface soils at the site. Gamma count rates are related linearly to exposure rates and non-linearly to radium-226 concentrations in soil.

- Radiological impacts are limited to the area around the existing mine shaft and buildings; and extend along a road leading southwest off the permit area and on an L-shaped berm off the southern edge of the mine. The predicted exposure rates and concentrations of radium-226 in soil are highest in the center of the permit area and decrease with increasing distance outward to levels that are comparable to those in the BRA.

- The range of gamma count rates in the BRA is 9,751 to 16,571, with an average and median of 12,506 and 12,489 cpm, respectively. The range of gamma count rates at the site is 10,305 to 339,244, with an average and median of 38,115 and 20,963 cpm, respectively.

- The range of predicted exposure rate measurements at the BRA is 13.3 to 17.4, with an average and median of 14.9 μR/h. The range of predicted exposure rate measurements at the site is 13.6 to 211.0, with a mean and median of 30.3 and 20.0 μR/h, respectively.

- The range of the predicted concentrations of radium-226 in surface soils at the BRA is 0.9 to 2.4 pCi/g, with an average and median of 1.5 and 1.4 pCi/g, respectively. The range of predicted concentrations of radium-226 in surface soils at the site is 1.0 to 502.9, with an average and median of 17.3 and 3.6 pCi/g, respectively.

- The horizontal extent of radiological contamination appears to go beyond the southwest edge of the permit boundary along the road. If practicable, the road should be surveyed in the next phase of work.

- The 95th percentile exposure rate that corresponds to a radium-226 concentration of 5 pCi/g plus background is approximately 22.1 μR/h.

Section 6.0 - Future Site Investigations

This document presents the gamma radiation data collected pursuant to the "Radiological Survey Plan for the Section 11/12 Mine" (ERG, 2015). This data is intended to meet the gamma radiation emission survey recommendations contained in "Joint Guidance for the Cleanup and Reclamation of Existing Uranium Mining Operations in New Mexico" (EMNRD/NMED, 2016). The second characterization component recommended in this guidance, to perform horizontal and vertical profiling of the site with soil sampling, has not been conducted. Similarly, the recommendations contained in Section 3.2 and 3.3 of "Guidance for Meeting Radiation Criteria Levels and Reclamation at New Uranium Mining Operations" (EMNRD, 2016) have not been implemented, although selection of the BRA follows these guidelines. Additional soil sampling at the site and the BRA to meet the recommendations in these guidance documents may be implemented following discussions with the New Mexico Mining and Minerals Division.

Section 7.0 - References

ANSI, 1997. Radiation Protection Instrumentation Test and Calibration, Portable Survey Instruments, ANSI N323A, December 31, 1997.

EMNRD, 2016. Guidance for Meeting Radiation Criteria Levels and Reclamation at New Uranium Mining Operations. Issued March 2016.

EMNRD/NMED, 2016. Joint Guidance for the Cleanup and Reclamation of Existing Uranium Mining Operations in Mexico. Issued March 2016.

EPA, 2011. Region 6, Airborne Spectral Photometric Environmental Collection Technology (ASPECT) Survey.

ERG, 2015. Radiological Survey Plan for the Section 11/12 Mine, June 2015.

McLemore, V.T. and W.L. Chenoweth, 1991. Uranium Mines and Deposits in the Grants District, Cibola and McKinley Counties, New Mexico. New Mexico Bureau of Mines and Mineral Resources, Open-file Report 353.

Appendix A. Completed Instrument Function Check Forms and Calibration Certificates

Single-Channel Function Check Log

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

METER	
Manufacturer:	LUDLUM
Model:	2221
Serial No.:	190206
Cal. Due Date:	1/20/17

DETECTOR	
Manufacturer:	LUDLUM
Model:	44-10
Serial No.:	PR288465
Cal. Due Date:	1/20/17

Comments:
ERG JIG IN OFFICE

Source: $Cs-137$ Activity: 5.0 uCi Source Date: 8/7/03 Distance to Source: ≈ 5" IN JIG

Serial No.: 1698-03 Emission Rate: N/A cpm/emissions

Date	Time	Battery	High Voltage	Threshhold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6/13/16	06:50	5.7	997	100	63165	10863	52302	CF	
6/13/16	14:25	5.6	995	100	61904	10920	50984	CF	

Reviewed by: [signature] Review Date: 6/28/16

SECTION 11/12 MINE

Single-Channel Function Check Log

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

METER	
Manufacturer:	LUDLUM
Model:	2221
Serial No.:	254772
Cal. Due Date:	1/20/17

DETECTOR	
Manufacturer:	LUDLUM
Model:	44-10
Serial No.:	PR303727
Cal. Due Date:	1/20/17

Comments:
ERG JIG IN OFFICE.

Source: Cs-137 Activity: 5.0 uCi Source Date: 8/7/03 Distance to Source: ≈ 5" IN JIG

Serial No.: 1698-03 Emission Rate: N/A cpm/emissions

Date	Time	Battery	High Voltage	Threshhold	Source Counts	BKG Counts	Net Counts	Initials	Note(s):
6/13/16	06:45	5.7	998	100	62341	11565	50776	CF	
6/13/16	19:25	5.5	996	59	60853	11081	49772	cf	

Reviewed by: CF Review Date: 6/28/16

Certificate of Calibration

Calibration and Voltage Plateau

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

Meter: Manufacturer: Ludlum Model Number: 2221r Serial Number: 190206

Detector: Manufacturer: Ludlum Model Number: 44-10 Serial Number: PR288465

- [x] Mechanical Check
- [x] F/S Response Check
- [x] Geotropism
- [x] Meter Zeroed
- [x] TIR/WIN Operation
- [x] Reset Check
- [x] Audio Check
- [x] Battery Check (Min 4.4 VDC)

HV Check (+/- 2.5%): [x] 500 V [x] 1000 V [x] 1500 V

Cable Length: [ ] 39-inch [x] 72-inch [ ] Other:

Source Distance: [ ] Contact [x] 6 inches [ ] Other:

Source Geometry [x] Side [ ] Below [ ] Other:

Threshold: 10 mV

Window:

Barometric Pressure: 24.54 inches Hg

Temperature: 71 °F

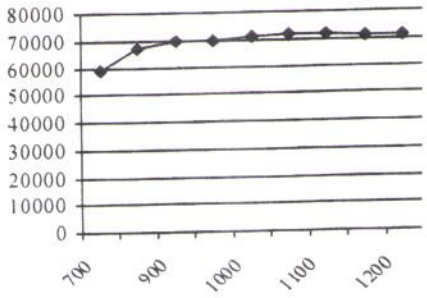
Relative Humidity: 20 %

Instrument found within tolerance: [x] Yes [ ] No

Range/Multiplier	Reference Setting	"As Found Reading"	Meter Reading	Integrated 1-Min. Count	Log Scale Cou
x 1000	400	400	400	399414	400
x 1000	100	100	100		100
x 100	400	400	400	39954	400
x 100	100	100	100		100
x 10	400	400	400	3996	400
x 10	100	100	100		100
x 1	400	400	400	400	400
x 1	100	100	100		100

High Voltage	Source Counts	Background
700	59266	
800	67330	
900	69690	
950	69728	
1000	71188	10070
1050	71562	
1100	72192	
1150	71326	
1200	71316	

Voltage Plateau



Comments: HV Plateau Scaler Count Time = 1-min. Recommended HV = 1000

Reference Instruments and/or Sources:

Ludlum pulser serial number: [ ] 97743 [x] 201932

[ ] Alpha Source: Th-230 @ 12,800 dpm (1/4/12) sn: 4098-03

[ ] Beta Source: Tc-99 @ 17,700 dpm (1/4/12) sn: 4099-03

Fluke multimeter serial number: [ ] 8749012

[x] Gamma Source Cs-137 @ 5.2 uCi (1/4/12) sn: 4097-03

[ ] Other Source:

Calibrated By:

Reviewed By:

Calibration Date: 1-20-16 Calibration Due 1-20-17

Date: 1/20/16

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

Certificate of Calibration

Calibration and Voltage Plateau

Meter: Manufacturer: Ludlum Model Number: 2221r Serial Number: 254772

Detector: Manufacturer: Ludlum Model Number: 44-10 Serial Number: PR303727

- ☑ Mechanical Check
- ☑ F/S Response Check
- ☑ Geotropism
- ☑ Meter Zeroed
- ☑ THR/WIN Operation
- ☑ Reset Check
- ☑ Audio Check
- ☑ Battery Check (Min 4.4 VDC)

HV Check (+/- 2.5%): ☑ 500 V ☑ 1000 V ☑ 1500 V

Cable Length: 39-inch ☑ 72-inch ☐ Other:

Source Distance: ☐ Contact ☑ 6 inches ☐ Other:

Source Geometry ☑ Side ☐ Below ☐ Other:

Threshold: 10 mV

Window:

Barometric Pressure: 24.6 inches Hg

Temperature: 73 °F

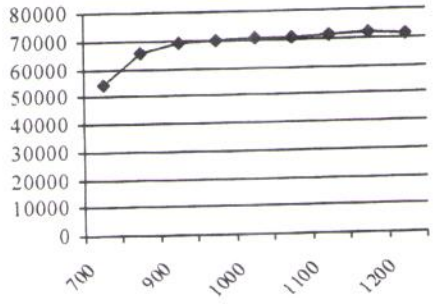
Relative Humidity: 20 %

Instrument found within tolerance: ☑ Yes ☐ No

Range/Multiplier	Reference Setting	"As Found Reading"	Meter Reading	Integrated 1-Min. Count	Log Scale Count
x 1000	400	400	400	398773	400
x 1000	100	100	100		100
x 100	400	400	400	39887	400
x 100	100	100	100		100
x 10	400	400	400	3988	400
x 10	100	100	100		100
x 1	400	400	400	399	400
x 1	100	100	100		100

High Voltage	Source Counts	Background
700	53957	
800	65946	
900	69049	
950	69687	
1000	70240	9925
1050	70288	
1100	71224	
1150	71563	
1200	71161	

Voltage Plateau



Comments: HV Plateau Scaler Count Time = 1-min. Recommended HV = 1000

Reference Instruments and/or Sources:

Ludlum pulser serial number: ☐ 97743 ☑ 201932

☐ Alpha Source: Th-230 @ 12,800 dpm (1/4/12) sn: 4098-03

☐ Beta Source: Tc-99 @ 17,700 dpm (1/4/12) sn: 4099-03

Fluke multimeter serial number: ☐ 8749012

☑ Gamma Source Cs-137 @ 5.2 uCi (1/4/12) sn: 4097-03

☐ Other Source:

Calibrated By:

Reviewed By:

Calibration Date: 1-20-16

Date: 1/20/16

Calibration Due 1-20-17

This calibration conforms to the requirements and acceptable calibration conditions of ANSI N323A - 1997

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: 7/27/2015

Sensitivity: 10.02 mV/μR/h

Authorized Signature

*Calibration Procedure: RS-SOP 238.1

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.

*Calibration Procedure: RS-SOP 238.1

Sensor Type:	100 R/Hr	Source (CS-137):	BB-400
Serial Number:	07J00KM1	Date of Certification:	12/1/1994
Sensitivity (Ra-226):	10.02 mV/μR/h	Exposure Rate at 1 meter:	4.226 mR/h

Customer Name: ENVIRONMENTAL RESTORATION GROUP

Distance		Exposure Rate	P+S+A	S+A	P	k(CS-137)
Feet	cm	μR/h	V	V	V	mV/μR/h
12	366	192.471	2.490	0.536	1.953	10.15
14	427	140.822	1.900	0.473	1.426	10.13
16	488	107.371	1.513	0.427	1.086	10.12
18	549	84.486	1.248	0.393	0.855	10.12

k(CS-137) = 10.13 mv/μR/h

k(Ra-226) = 0.9892 k(CS-137)

k(Ra-226) = 10.02 mv/μR/h

$\bar{k}$ = 10.13 mv/μR/h

σ = .013 mv/μR/h

$V = \frac{\sigma}{k} =$ 0.131%

Date: 8-3-15

Reuter-Stokes

RSS-131 FIRMWARE PARAMETERS

S/N 07J00KM1

RAC	2.169E-08
ZLN	0.000E+00
ZMN	3.520E-01
ZHN	2.000E-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	2.093E+04
RHV	-1.548E-02

By: _____
Level 2 Nuclear / Electrical Inspector

Date: 5-3-15

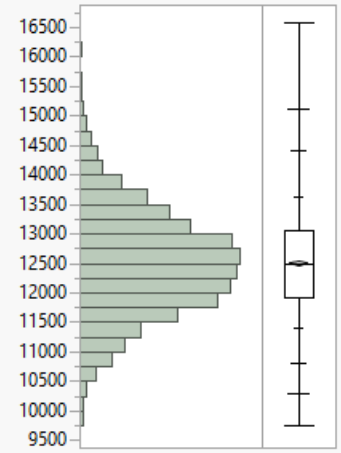
Reviewed By: _____
Product Engineer

Appendix B. JMP Version 11.2.1 Statistical Output

JMP Version 11.2.1 Output: Statistical Analysis Gamma Count Rates, Predicted Radium-226 Concentrations in Surface Soils, and Predicted Exposure Rates in the Background Reference Area

Distributions

Gamma Count Rate (cpm)



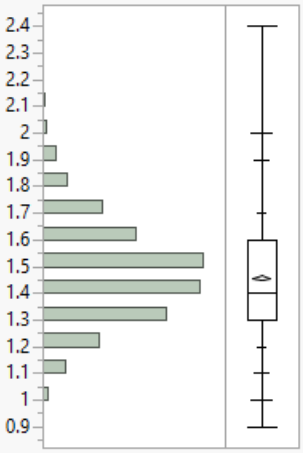
Quantiles

100.0%	maximum	16571
99.5%		15114.9
97.5%		14400.3
90.0%		13620.8
75.0%	quartile	13056.5
50.0%	median	12489
25.0%	quartile	11921.5
10.0%		11390.8
2.5%		10813.1
0.5%		10288.1
0.0%	minimum	9751

Summary Statistics

Mean	12505.641
Std Dev	891.78064
Std Err Mean	19.662598
Upper 95% Mean	12544.201
Lower 95% Mean	12467.08
N	2057
CV	7.1310272
Minimum	9751
Maximum	16571
Geometric Mean	12473.997

Radium-226 (pCi/g)



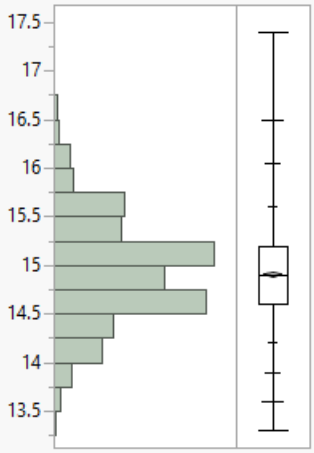
Quantiles

100.0%	maximum	2.4
99.5%		2
97.5%		1.9
90.0%		1.7
75.0%	quartile	1.6
50.0%	median	1.4
25.0%	quartile	1.3
10.0%		1.2
2.5%		1.1
0.5%		1
0.0%	minimum	0.9

Summary Statistics

Mean	1.4564414
Std Dev	0.1871312
Std Err Mean	0.004126
Upper 95% Mean	1.464533
Lower 95% Mean	1.4483498
N	2057
CV	12.848519
Minimum	0.9
Maximum	2.4
Geometric Mean	1.4446021

Exposure Rate (uR/h)



Quantiles

100.0%	maximum	17.4
99.5%		16.5
97.5%		16.055
90.0%		15.6
75.0%	quartile	15.2
50.0%	median	14.9
25.0%	quartile	14.6
10.0%		14.2
2.5%		13.9
0.5%		13.6
0.0%	minimum	13.3

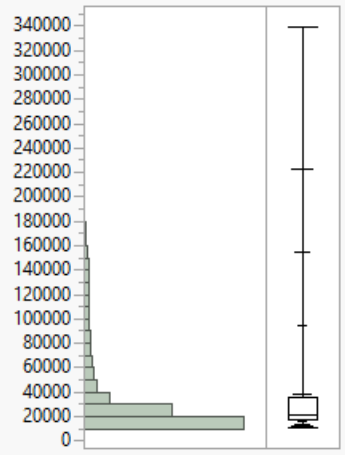
Summary Statistics

Mean	14.912834
Std Dev	0.5369885
Std Err Mean	0.0118399
Upper 95% Mean	14.936054
Lower 95% Mean	14.889615
N	2057
CV	3.6008478
Minimum	13.3
Maximum	17.4
Geometric Mean	14.90321

JMP Version 11.2.1 Output: Statistical Analysis Gamma Count Rates, Predicted Radium-226 Concentrations in Surface Soils, and Predicted Exposure Rates in the Footprint of the EPA ASPECT Survey

Distributions

Gamma Count Rate (cpm)



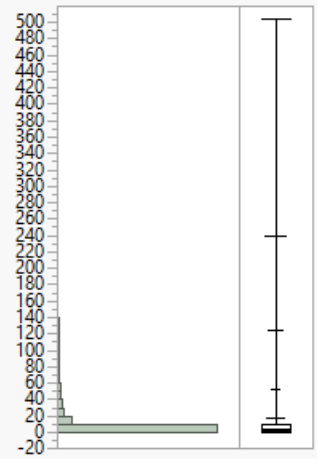
Quantiles

100.0%	maximum	339244
99.5%		223367
97.5%		154420
90.0%		94261.9
75.0%	quartile	35044
50.0%	median	20962.5
25.0%	quartile	17693.3
10.0%		15586.8
2.5%		13252.7
0.5%		11783.3
0.0%	minimum	10305

Summary Statistics

Mean	38115.275
Std Dev	39509.066
Std Err Mean	282.12126
Upper 95% Mean	38668.257
Lower 95% Mean	37562.293
N	19612
CV	103.65678
Minimum	10305
Maximum	339244
Geometric Mean	28054.663

Radium-226 (pCi/g)



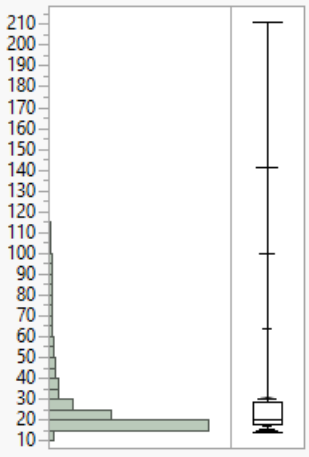
Quantiles

100.0%	maximum	502.9
99.5%		239.829
97.5%		124.7
90.0%		52
75.0%	quartile	9
50.0%	median	3.6
25.0%	quartile	2.7
10.0%		2.1
2.5%		1.6
0.5%		1.3
0.0%	minimum	1

Summary Statistics

Mean	17.33298
Std Dev	37.515399
Std Err Mean	0.2678851
Upper 95% Mean	17.858057
Lower 95% Mean	16.807902
N	19612
CV	216.43941
Minimum	1
Maximum	502.9
Geometric Mean	6.0757548

Exposure Rate (uR/h)



Quantiles

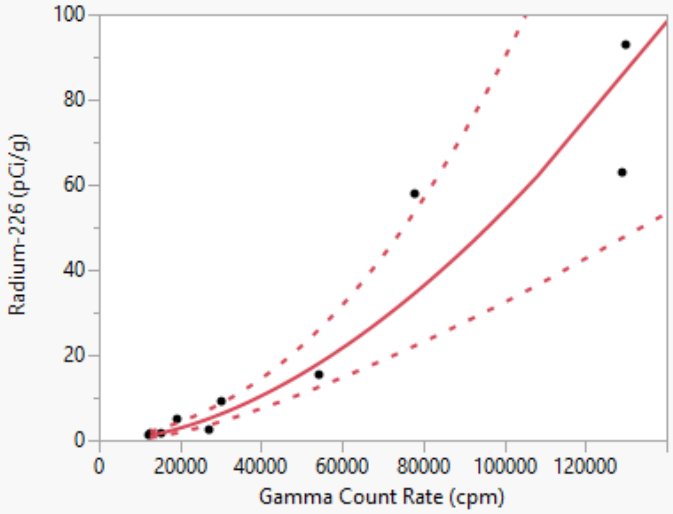
100.0%	maximum	211
99.5%		141.474
97.5%		100.1
90.0%		63.97
75.0%	quartile	28.4
50.0%	median	20
25.0%	quartile	18
10.0%		16.8
2.5%		15.4
0.5%		14.5
0.0%	minimum	13.6

Summary Statistics

Mean	30.279543
Std Dev	23.7058
Std Err Mean	0.1692753
Upper 95% Mean	30.611337
Lower 95% Mean	29.947749
N	19612
CV	78.289822
Minimum	13.6
Maximum	211
Geometric Mean	25.323861

JMP Version 11.2.1 Output: Regression Analysis of Co-Located Gamma Count Rates and Radium-226 Concentrations in Surface Soils (Laboratory Analytical Results)

Bivariate Fit of Radium-226 (pCi/g) By Gamma Count Rate (cpm)



Transformed Fit Log to Log

Transformed Fit Log to Log

Log(Radium-226 (pCi/g)) = -16.40199 + 1.7717248*Log(Gamma Count Rate (cpm))

Summary of Fit

RSquare	0.937612
RSquare Adj	0.929814
Root Mean Square Error	0.442207
Mean of Response	2.129685
Observations (or Sum Wgts)	10

Analysis of Variance

Source	DF	Sum of Squares	Mean Square	F Ratio
Model	1	23.510701	23.5107	120.2306
Error	8	1.564373	0.1955	Prob > F
C. Total	9	25.075074		<.0001*

Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob>|t|
Intercept	-16.40199	1.695855	-9.67	<.0001*
Log(Gamma Count Rate (cpm))	1.7717248	0.16158	10.96	<.0001*

Fit Measured on Original Scale

Sum of Squared Error	1114.9244
Root Mean Square Error	11.805319
RSquare	0.8892782
Sum of Residuals	5.9609393

Appendix C. Exposure Rate Measurements

Location: BRA-1

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 13:57	0.0153	06/13/2016 13:58	0.017	06/13/2016 13:59	0.0153
06/13/2016 13:57	0.0153	06/13/2016 13:58	0.017	06/13/2016 13:59	0.0153
06/13/2016 13:57	0.0155	06/13/2016 13:58	0.017	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0156	06/13/2016 13:58	0.017	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0156	06/13/2016 13:58	0.0168	06/13/2016 13:59	0.0155
06/13/2016 13:57	0.0156	06/13/2016 13:58	0.0167	06/13/2016 13:59	0.0155
06/13/2016 13:57	0.0156	06/13/2016 13:58	0.0165	06/13/2016 13:59	0.0155
06/13/2016 13:57	0.0156	06/13/2016 13:58	0.0163	06/13/2016 13:59	0.0155
06/13/2016 13:57	0.0156	06/13/2016 13:58	0.0161	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0156	06/13/2016 13:58	0.0161	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0158	06/13/2016 13:58	0.016	06/13/2016 13:59	0.0153
06/13/2016 13:57	0.0158	06/13/2016 13:58	0.016	06/13/2016 13:59	0.0152
06/13/2016 13:57	0.016	06/13/2016 13:58	0.016	06/13/2016 13:59	0.0152
06/13/2016 13:57	0.0161	06/13/2016 13:58	0.0158	06/13/2016 13:59	0.0152
06/13/2016 13:57	0.0161	06/13/2016 13:58	0.0158	06/13/2016 13:59	0.0152
06/13/2016 13:57	0.0162	06/13/2016 13:58	0.0158	06/13/2016 13:59	0.0153
06/13/2016 13:57	0.0161	06/13/2016 13:58	0.0158	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.016	06/13/2016 13:58	0.0158	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0158	06/13/2016 13:58	0.0156	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0158	06/13/2016 13:58	0.0156	06/13/2016 13:59	0.0155
06/13/2016 13:57	0.0158	06/13/2016 13:58	0.0156	06/13/2016 13:59	0.0155
06/13/2016 13:57	0.0161	06/13/2016 13:58	0.0156	06/13/2016 13:59	0.0155
06/13/2016 13:57	0.0161	06/13/2016 13:58	0.0155	06/13/2016 13:59	0.0155
06/13/2016 13:57	0.0161	06/13/2016 13:58	0.0154	06/13/2016 13:59	0.0155
06/13/2016 13:57	0.016	06/13/2016 13:58	0.0153	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.016	06/13/2016 13:58	0.0152	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0158	06/13/2016 13:58	0.0151	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0158	06/13/2016 13:58	0.015	06/13/2016 13:59	0.0155
06/13/2016 13:57	0.016	06/13/2016 13:58	0.0149	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0162	06/13/2016 13:58	0.0149	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0163	06/13/2016 13:58	0.0148	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0164	06/13/2016 13:58	0.0148	06/13/2016 13:59	0.0154
06/13/2016 13:57	0.0165	06/13/2016 13:58	0.0147	06/13/2016 13:59	0.0154
06/13/2016 13:58	0.0166	06/13/2016 13:58	0.0148	06/13/2016 13:59	0.0153
06/13/2016 13:58	0.0167	06/13/2016 13:58	0.0149	06/13/2016 13:59	0.0153
06/13/2016 13:58	0.0168	06/13/2016 13:58	0.0149	06/13/2016 13:59	0.0152
06/13/2016 13:58	0.0169	06/13/2016 13:58	0.015	06/13/2016 13:59	0.0151
06/13/2016 13:58	0.017	06/13/2016 13:58	0.015	06/13/2016 13:59	0.0151
06/13/2016 13:58	0.017	06/13/2016 13:58	0.015	06/13/2016 13:59	0.0151
06/13/2016 13:58	0.017	06/13/2016 13:58	0.015	06/13/2016 13:59	0.0151
06/13/2016 13:58	0.0172	06/13/2016 13:58	0.015	06/13/2016 13:59	0.0151
06/13/2016 13:58	0.0172	06/13/2016 13:58	0.015	06/13/2016 13:59	0.0152
06/13/2016 13:58	0.0172	06/13/2016 13:58	0.0151	06/13/2016 13:59	0.0153
06/13/2016 13:58	0.0172	06/13/2016 13:58	0.015	06/13/2016 13:59	0.0153
06/13/2016 13:58	0.017	06/13/2016 13:59	0.015	06/13/2016 13:59	0.0152
06/13/2016 13:58	0.017	06/13/2016 13:59	0.0151	06/13/2016 13:59	0.0152
06/13/2016 13:58	0.017	06/13/2016 13:59	0.0152	06/13/2016 13:59	0.0151
06/13/2016 13:58	0.017	06/13/2016 13:59	0.0152	06/13/2016 13:59	0.015
06/13/2016 13:58	0.017	06/13/2016 13:59	0.0152	06/13/2016 13:59	0.0149

Note:
mR/h = microRoentgens per hour

Location: BRA-1

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 13:59	0.0148	06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0154
06/13/2016 13:59	0.0147	06/13/2016 14:00	0.0154	06/13/2016 14:01	0.0154
06/13/2016 13:59	0.0145	06/13/2016 14:00	0.0153	06/13/2016 14:01	0.0155
06/13/2016 13:59	0.0144	06/13/2016 14:00	0.0153	06/13/2016 14:01	0.0155
06/13/2016 13:59	0.0143	06/13/2016 14:00	0.0152	06/13/2016 14:01	0.0155
06/13/2016 13:59	0.0143	06/13/2016 14:00	0.0151	06/13/2016 14:01	0.0155
06/13/2016 14:00	0.0143	06/13/2016 14:00	0.0151	06/13/2016 14:01	0.0155
06/13/2016 14:00	0.0143	06/13/2016 14:00	0.0152	06/13/2016 14:01	0.0155
06/13/2016 14:00	0.0144	06/13/2016 14:00	0.0152	06/13/2016 14:01	0.0155
06/13/2016 14:00	0.0144	06/13/2016 14:00	0.0153	06/13/2016 14:01	0.0156
06/13/2016 14:00	0.0145	06/13/2016 14:00	0.0155	06/13/2016 14:01	0.0156
06/13/2016 14:00	0.0146	06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0158
06/13/2016 14:00	0.0147	06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0158
06/13/2016 14:00	0.0148	06/13/2016 14:00	0.0158	06/13/2016 14:01	0.016
06/13/2016 14:00	0.0149	06/13/2016 14:01	0.0158	06/13/2016 14:01	0.016
06/13/2016 14:00	0.0152	06/13/2016 14:01	0.0158	06/13/2016 14:01	0.016
06/13/2016 14:00	0.0154	06/13/2016 14:01	0.0156	06/13/2016 14:01	0.0158
06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0156	06/13/2016 14:01	0.0158
06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0155	06/13/2016 14:01	0.0158
06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0155	06/13/2016 14:01	0.0158
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0154	06/13/2016 14:01	0.0158
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0155	06/13/2016 14:01	0.016
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0155	06/13/2016 14:02	0.0161
06/13/2016 14:00	0.016	06/13/2016 14:01	0.0155	06/13/2016 14:02	0.0161
06/13/2016 14:00	0.016	06/13/2016 14:01	0.0155	06/13/2016 14:02	0.016
06/13/2016 14:00	0.016	06/13/2016 14:01	0.0155	06/13/2016 14:02	0.0158
06/13/2016 14:00	0.0161	06/13/2016 14:01	0.0154	06/13/2016 14:02	0.0158
06/13/2016 14:00	0.0161	06/13/2016 14:01	0.0153	06/13/2016 14:02	0.0158
06/13/2016 14:00	0.0161	06/13/2016 14:01	0.0152	06/13/2016 14:02	0.0156
06/13/2016 14:00	0.0161	06/13/2016 14:01	0.0152	06/13/2016 14:02	0.0156
06/13/2016 14:00	0.0161	06/13/2016 14:01	0.0151	06/13/2016 14:02	0.0156
06/13/2016 14:00	0.016	06/13/2016 14:01	0.015	06/13/2016 14:02	0.0155
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.015	06/13/2016 14:02	0.0155
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0149	06/13/2016 14:02	0.0155
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0149	06/13/2016 14:02	0.0155
06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0148	06/13/2016 14:02	0.0155
06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0148	06/13/2016 14:02	0.0155
06/13/2016 14:00	0.0155	06/13/2016 14:01	0.0147	06/13/2016 14:02	0.0154
06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0148	06/13/2016 14:02	0.0154
06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0149	06/13/2016 14:02	0.0153
06/13/2016 14:00	0.0156	06/13/2016 14:01	0.015	06/13/2016 14:02	0.0154
06/13/2016 14:00	0.0156	06/13/2016 14:01	0.0151	06/13/2016 14:02	0.0154
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0151	06/13/2016 14:02	0.0154
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0153	06/13/2016 14:02	0.0154
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0155	06/13/2016 14:02	0.0155
06/13/2016 14:00	0.016	06/13/2016 14:01	0.0156	06/13/2016 14:02	0.0155
06/13/2016 14:00	0.016	06/13/2016 14:01	0.0156	06/13/2016 14:02	0.0156
06/13/2016 14:00	0.016	06/13/2016 14:01	0.0156	06/13/2016 14:02	0.0156
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0156	06/13/2016 14:02	0.0156
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0156	06/13/2016 14:02	0.0156
06/13/2016 14:00	0.0158	06/13/2016 14:01	0.0156	06/13/2016 14:02	0.0156

Note:
mR/h = microRoentgens per hour

Location: BRA-1

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:02	0.0155	06/13/2016 14:03	0.0153	06/13/2016 14:04	0.0153
06/13/2016 14:02	0.0155	06/13/2016 14:03	0.0155	06/13/2016 14:04	0.0152
06/13/2016 14:02	0.0154	06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0151
06/13/2016 14:02	0.0154	06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0151
06/13/2016 14:02	0.0154	06/13/2016 14:03	0.0158	06/13/2016 14:04	0.015
06/13/2016 14:02	0.0154	06/13/2016 14:03	0.0158	06/13/2016 14:04	0.015
06/13/2016 14:02	0.0154	06/13/2016 14:03	0.0158	06/13/2016 14:04	0.015
06/13/2016 14:02	0.0154	06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0151
06/13/2016 14:02	0.0155	06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0151
06/13/2016 14:02	0.0156	06/13/2016 14:03	0.0155	06/13/2016 14:04	0.0152
06/13/2016 14:02	0.0156	06/13/2016 14:03	0.0155	06/13/2016 14:04	0.0152
06/13/2016 14:02	0.0158	06/13/2016 14:03	0.0154	06/13/2016 14:04	0.0151
06/13/2016 14:02	0.0156	06/13/2016 14:03	0.0153	06/13/2016 14:04	0.0151
06/13/2016 14:02	0.0156	06/13/2016 14:03	0.0153	06/13/2016 14:04	0.015
06/13/2016 14:02	0.0156	06/13/2016 14:03	0.0152	06/13/2016 14:04	0.0149
06/13/2016 14:02	0.0156	06/13/2016 14:03	0.0152	06/13/2016 14:04	0.0149
06/13/2016 14:02	0.0158	06/13/2016 14:03	0.0152	06/13/2016 14:04	0.0148
06/13/2016 14:02	0.0158	06/13/2016 14:03	0.0152	06/13/2016 14:04	0.0149
06/13/2016 14:02	0.0158	06/13/2016 14:03	0.0153	06/13/2016 14:04	0.0149
06/13/2016 14:02	0.0161	06/13/2016 14:03	0.0154	06/13/2016 14:04	0.0149
06/13/2016 14:02	0.0162	06/13/2016 14:03	0.0155	06/13/2016 14:04	0.0149
06/13/2016 14:02	0.0163	06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0149
06/13/2016 14:02	0.0163	06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0149
06/13/2016 14:02	0.0164	06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0149
06/13/2016 14:02	0.0164	06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0149
06/13/2016 14:02	0.0164	06/13/2016 14:03	0.0158	06/13/2016 14:04	0.015
06/13/2016 14:02	0.0163	06/13/2016 14:03	0.0158	06/13/2016 14:04	0.015
06/13/2016 14:02	0.0162	06/13/2016 14:03	0.016	06/13/2016 14:04	0.015
06/13/2016 14:02	0.0161	06/13/2016 14:03	0.016	06/13/2016 14:04	0.015
06/13/2016 14:02	0.016	06/13/2016 14:03	0.016	06/13/2016 14:04	0.015
06/13/2016 14:03	0.0158	06/13/2016 14:03	0.0158	06/13/2016 14:04	0.015
06/13/2016 14:03	0.0156	06/13/2016 14:03	0.0158	06/13/2016 14:04	0.015
06/13/2016 14:03	0.0156	06/13/2016 14:03	0.0158	06/13/2016 14:04	0.015
06/13/2016 14:03	0.0155	06/13/2016 14:03	0.0158	06/13/2016 14:04	0.015
06/13/2016 14:03	0.0155	06/13/2016 14:03	0.0158	06/13/2016 14:04	0.015
06/13/2016 14:03	0.0155	06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0149
06/13/2016 14:03	0.0154	06/13/2016 14:04	0.0155	06/13/2016 14:04	0.0149
06/13/2016 14:03	0.0155	06/13/2016 14:04	0.0154	06/13/2016 14:04	0.0148
06/13/2016 14:03	0.0155	06/13/2016 14:04	0.0153	06/13/2016 14:04	0.0148
06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0152	06/13/2016 14:04	0.0148
06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0151	06/13/2016 14:04	0.0148
06/13/2016 14:03	0.0156	06/13/2016 14:04	0.0151	06/13/2016 14:04	0.0148
06/13/2016 14:03	0.0155	06/13/2016 14:04	0.0151	06/13/2016 14:04	0.015
06/13/2016 14:03	0.0155	06/13/2016 14:04	0.0151	06/13/2016 14:05	0.0152
06/13/2016 14:03	0.0154	06/13/2016 14:04	0.0151	06/13/2016 14:05	0.0155
06/13/2016 14:03	0.0153	06/13/2016 14:04	0.0152	06/13/2016 14:05	0.0156
06/13/2016 14:03	0.0152	06/13/2016 14:04	0.0153	06/13/2016 14:05	0.0158
06/13/2016 14:03	0.0152	06/13/2016 14:04	0.0153	06/13/2016 14:05	0.0165
06/13/2016 14:03	0.0152	06/13/2016 14:04	0.0154	06/13/2016 14:05	0.0166
06/13/2016 14:03	0.0153	06/13/2016 14:04	0.0154	06/13/2016 14:05	0.0167
06/13/2016 14:03	0.0154	06/13/2016 14:04	0.0153	06/13/2016 14:05	0.0167

Note:
mR/h = microRoentgens per hour

Location: BRA-1

Date / Time	Exposure Rate (mR/h)
06/13/2016 14:05	0.0167
06/13/2016 14:05	0.0166
06/13/2016 14:05	0.0165
06/13/2016 14:05	0.0164
06/13/2016 14:05	0.0163
06/13/2016 14:05	0.0162
06/13/2016 14:05	0.0161
06/13/2016 14:05	0.0161
06/13/2016 14:05	0.0161
06/13/2016 14:05	0.0161
06/13/2016 14:05	0.0161
06/13/2016 14:05	0.0162
06/13/2016 14:05	0.0162
06/13/2016 14:05	0.0161
06/13/2016 14:05	0.0161
06/13/2016 14:05	0.0161
06/13/2016 14:05	0.016
06/13/2016 14:05	0.016
06/13/2016 14:05	0.0158
06/13/2016 14:05	0.0158
06/13/2016 14:05	0.0158
06/13/2016 14:04	0.0154
06/13/2016 14:05	0.0162
06/13/2016 14:05	0.0163

Note:
mR/h = microRoentgens per hour

Location: BRA-2

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:07	0.0149	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.0163
06/13/2016 14:07	0.0149	06/13/2016 14:08	0.015	06/13/2016 14:09	0.0163
06/13/2016 14:07	0.0149	06/13/2016 14:08	0.015	06/13/2016 14:09	0.0162
06/13/2016 14:07	0.0149	06/13/2016 14:08	0.0149	06/13/2016 14:09	0.0162
06/13/2016 14:07	0.0149	06/13/2016 14:08	0.0149	06/13/2016 14:09	0.0161
06/13/2016 14:07	0.0149	06/13/2016 14:08	0.015	06/13/2016 14:09	0.0162
06/13/2016 14:07	0.0148	06/13/2016 14:08	0.015	06/13/2016 14:09	0.0161
06/13/2016 14:07	0.0147	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.0161
06/13/2016 14:07	0.0147	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.016
06/13/2016 14:07	0.0147	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0147	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0147	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0149	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0151	06/13/2016 14:08	0.015	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0152	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0153	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0154	06/13/2016 14:08	0.015	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0155	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0155	06/13/2016 14:08	0.0151	06/13/2016 14:09	0.0156
06/13/2016 14:07	0.0154	06/13/2016 14:08	0.0152	06/13/2016 14:09	0.0156
06/13/2016 14:07	0.0154	06/13/2016 14:08	0.0153	06/13/2016 14:09	0.0156
06/13/2016 14:07	0.0155	06/13/2016 14:08	0.0154	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0155	06/13/2016 14:08	0.0154	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0156	06/13/2016 14:08	0.0155	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0155	06/13/2016 14:08	0.0156	06/13/2016 14:09	0.0158
06/13/2016 14:07	0.0155	06/13/2016 14:08	0.0158	06/13/2016 14:09	0.0158
06/13/2016 14:08	0.0154	06/13/2016 14:08	0.0158	06/13/2016 14:09	0.0158
06/13/2016 14:08	0.0153	06/13/2016 14:08	0.0158	06/13/2016 14:09	0.0158
06/13/2016 14:08	0.0153	06/13/2016 14:08	0.0158	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0153	06/13/2016 14:08	0.016	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0152	06/13/2016 14:08	0.016	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0152	06/13/2016 14:08	0.0158	06/13/2016 14:09	0.0155
06/13/2016 14:08	0.0153	06/13/2016 14:08	0.0158	06/13/2016 14:09	0.0154
06/13/2016 14:08	0.0154	06/13/2016 14:08	0.0158	06/13/2016 14:09	0.0154
06/13/2016 14:08	0.0154	06/13/2016 14:08	0.0158	06/13/2016 14:09	0.0154
06/13/2016 14:08	0.0155	06/13/2016 14:08	0.0158	06/13/2016 14:09	0.0153
06/13/2016 14:08	0.0155	06/13/2016 14:08	0.0158	06/13/2016 14:09	0.0153
06/13/2016 14:08	0.0155	06/13/2016 14:09	0.016	06/13/2016 14:09	0.0153
06/13/2016 14:08	0.0154	06/13/2016 14:09	0.0161	06/13/2016 14:09	0.0153
06/13/2016 14:08	0.0154	06/13/2016 14:09	0.0162	06/13/2016 14:09	0.0155
06/13/2016 14:08	0.0154	06/13/2016 14:09	0.0162	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0155	06/13/2016 14:09	0.0163	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0154	06/13/2016 14:09	0.0163	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0153	06/13/2016 14:09	0.0164	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0153	06/13/2016 14:09	0.0164	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0152	06/13/2016 14:09	0.0163	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0152	06/13/2016 14:09	0.0164	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0152	06/13/2016 14:09	0.0163	06/13/2016 14:09	0.0156
06/13/2016 14:08	0.0152	06/13/2016 14:09	0.0163	06/13/2016 14:10	0.0156

Note:
mR/h = microRoentgens per hour

Location: BRA-2

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:10	0.0156	06/13/2016 14:10	0.0163	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.0158	06/13/2016 14:10	0.0163	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.016	06/13/2016 14:10	0.0164	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.0161	06/13/2016 14:10	0.0164	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.0163	06/13/2016 14:10	0.0163	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.0164	06/13/2016 14:10	0.0162	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.0165	06/13/2016 14:10	0.016	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.0166	06/13/2016 14:10	0.0158	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.0166	06/13/2016 14:11	0.0158	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.0166	06/13/2016 14:11	0.0156	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.0167	06/13/2016 14:11	0.0156	06/13/2016 14:11	0.0158
06/13/2016 14:10	0.0167	06/13/2016 14:11	0.0156	06/13/2016 14:11	0.0156
06/13/2016 14:10	0.0167	06/13/2016 14:11	0.0156	06/13/2016 14:11	0.0156
06/13/2016 14:10	0.0167	06/13/2016 14:11	0.0156	06/13/2016 14:11	0.0156
06/13/2016 14:10	0.0167	06/13/2016 14:11	0.0156	06/13/2016 14:11	0.0155
06/13/2016 14:10	0.0166	06/13/2016 14:11	0.0156	06/13/2016 14:11	0.0155
06/13/2016 14:10	0.0166	06/13/2016 14:11	0.0158	06/13/2016 14:11	0.0154
06/13/2016 14:10	0.0166	06/13/2016 14:11	0.0158	06/13/2016 14:12	0.0153
06/13/2016 14:10	0.0166	06/13/2016 14:11	0.0161	06/13/2016 14:12	0.0153
06/13/2016 14:10	0.0166	06/13/2016 14:11	0.0162	06/13/2016 14:12	0.0153
06/13/2016 14:10	0.0165	06/13/2016 14:11	0.0163	06/13/2016 14:12	0.0153
06/13/2016 14:10	0.0165	06/13/2016 14:11	0.0163	06/13/2016 14:12	0.0152
06/13/2016 14:10	0.0165	06/13/2016 14:11	0.0163	06/13/2016 14:12	0.0151
06/13/2016 14:10	0.0167	06/13/2016 14:11	0.0162	06/13/2016 14:12	0.015
06/13/2016 14:10	0.0167	06/13/2016 14:11	0.0161	06/13/2016 14:12	0.015
06/13/2016 14:10	0.0168	06/13/2016 14:11	0.0158	06/13/2016 14:12	0.0151
06/13/2016 14:10	0.017	06/13/2016 14:11	0.0158	06/13/2016 14:12	0.0151
06/13/2016 14:10	0.017	06/13/2016 14:11	0.0158	06/13/2016 14:12	0.0153
06/13/2016 14:10	0.017	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.0156
06/13/2016 14:10	0.0172	06/13/2016 14:11	0.0158	06/13/2016 14:12	0.0158
06/13/2016 14:10	0.0172	06/13/2016 14:11	0.0158	06/13/2016 14:12	0.0158
06/13/2016 14:10	0.017	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.016
06/13/2016 14:10	0.017	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.016
06/13/2016 14:10	0.017	06/13/2016 14:11	0.0155	06/13/2016 14:12	0.0158
06/13/2016 14:10	0.017	06/13/2016 14:11	0.0154	06/13/2016 14:12	0.0158
06/13/2016 14:10	0.017	06/13/2016 14:11	0.0154	06/13/2016 14:12	0.0156
06/13/2016 14:10	0.017	06/13/2016 14:11	0.0155	06/13/2016 14:12	0.0156
06/13/2016 14:10	0.017	06/13/2016 14:11	0.0155	06/13/2016 14:12	0.0155
06/13/2016 14:10	0.0169	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.0154
06/13/2016 14:10	0.0168	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.0154
06/13/2016 14:10	0.0167	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.0153
06/13/2016 14:10	0.0166	06/13/2016 14:11	0.0158	06/13/2016 14:12	0.0153
06/13/2016 14:10	0.0165	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.0152
06/13/2016 14:10	0.0164	06/13/2016 14:11	0.0158	06/13/2016 14:12	0.0153
06/13/2016 14:10	0.0164	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.0155
06/13/2016 14:10	0.0163	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.0156
06/13/2016 14:10	0.0162	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.0158
06/13/2016 14:10	0.0161	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.016
06/13/2016 14:10	0.016	06/13/2016 14:11	0.0156	06/13/2016 14:12	0.0162
06/13/2016 14:10	0.0161	06/13/2016 14:11	0.0158	06/13/2016 14:12	0.0162
06/13/2016 14:10	0.0162	06/13/2016 14:11	0.0158	06/13/2016 14:12	0.0163

Note:
mR/h = microRoentgens per hour

Location: BRA-2

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:12	0.0163	06/13/2016 14:13	0.0153	06/13/2016 14:14	0.016
06/13/2016 14:12	0.0163	06/13/2016 14:13	0.0153	06/13/2016 14:14	0.016
06/13/2016 14:12	0.0163	06/13/2016 14:13	0.0153	06/13/2016 14:14	0.016
06/13/2016 14:12	0.0163	06/13/2016 14:13	0.0153	06/13/2016 14:14	0.0158
06/13/2016 14:12	0.0162	06/13/2016 14:13	0.0153	06/13/2016 14:14	0.0158
06/13/2016 14:12	0.0161	06/13/2016 14:13	0.0152	06/13/2016 14:14	0.0158
06/13/2016 14:12	0.016	06/13/2016 14:13	0.0152	06/13/2016 14:14	0.0158
06/13/2016 14:12	0.016	06/13/2016 14:13	0.0152	06/13/2016 14:14	0.0158
06/13/2016 14:12	0.016	06/13/2016 14:13	0.0152	06/13/2016 14:14	0.0156
06/13/2016 14:12	0.016	06/13/2016 14:13	0.0152	06/13/2016 14:14	0.0156
06/13/2016 14:12	0.0161	06/13/2016 14:13	0.0153	06/13/2016 14:14	0.0155
06/13/2016 14:12	0.0162	06/13/2016 14:13	0.0153	06/13/2016 14:14	0.0155
06/13/2016 14:12	0.0162	06/13/2016 14:13	0.0154	06/13/2016 14:14	0.0154
06/13/2016 14:12	0.0163	06/13/2016 14:13	0.0154	06/13/2016 14:14	0.0154
06/13/2016 14:12	0.0164	06/13/2016 14:13	0.0155	06/13/2016 14:14	0.0153
06/13/2016 14:12	0.0163	06/13/2016 14:13	0.0154	06/13/2016 14:14	0.0153
06/13/2016 14:12	0.0163	06/13/2016 14:13	0.0155	06/13/2016 14:14	0.0154
06/13/2016 14:12	0.0164	06/13/2016 14:13	0.0155	06/13/2016 14:14	0.0154
06/13/2016 14:12	0.0163	06/13/2016 14:13	0.0156	06/13/2016 14:14	0.0154
06/13/2016 14:12	0.0164	06/13/2016 14:13	0.0156	06/13/2016 14:14	0.0154
06/13/2016 14:12	0.0165	06/13/2016 14:13	0.0156	06/13/2016 14:14	0.0154
06/13/2016 14:12	0.0165	06/13/2016 14:13	0.0158	06/13/2016 14:14	0.0153
06/13/2016 14:12	0.0166	06/13/2016 14:13	0.0156	06/13/2016 14:14	0.0153
06/13/2016 14:12	0.0167	06/13/2016 14:13	0.0158	06/13/2016 14:14	0.0153
06/13/2016 14:12	0.0167	06/13/2016 14:13	0.0158	06/13/2016 14:14	0.0153
06/13/2016 14:12	0.0167	06/13/2016 14:13	0.0158	06/13/2016 14:14	0.0153
06/13/2016 14:13	0.0166	06/13/2016 14:13	0.0158	06/13/2016 14:14	0.0154
06/13/2016 14:13	0.0165	06/13/2016 14:13	0.0158	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.0163	06/13/2016 14:13	0.0158	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.0161	06/13/2016 14:13	0.0156	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.016	06/13/2016 14:13	0.0156	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.0158	06/13/2016 14:13	0.0155	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.0158	06/13/2016 14:13	0.0154	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.0158	06/13/2016 14:14	0.0154	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.016	06/13/2016 14:14	0.0153	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.0161	06/13/2016 14:14	0.0153	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.0162	06/13/2016 14:14	0.0153	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.0161	06/13/2016 14:14	0.0153	06/13/2016 14:14	0.0154
06/13/2016 14:13	0.0162	06/13/2016 14:14	0.0153	06/13/2016 14:14	0.0155
06/13/2016 14:13	0.0161	06/13/2016 14:14	0.0153	06/13/2016 14:14	0.0156
06/13/2016 14:13	0.0161	06/13/2016 14:14	0.0153	06/13/2016 14:15	0.0156
06/13/2016 14:13	0.016	06/13/2016 14:14	0.0154	06/13/2016 14:15	0.0158
06/13/2016 14:13	0.016	06/13/2016 14:14	0.0154	06/13/2016 14:15	0.0158
06/13/2016 14:13	0.016	06/13/2016 14:14	0.0155	06/13/2016 14:15	0.0158
06/13/2016 14:13	0.0158	06/13/2016 14:14	0.0156	06/13/2016 14:15	0.0158
06/13/2016 14:13	0.0158	06/13/2016 14:14	0.0156	06/13/2016 14:15	0.0158
06/13/2016 14:13	0.0156	06/13/2016 14:14	0.0156	06/13/2016 14:15	0.0158
06/13/2016 14:13	0.0155	06/13/2016 14:14	0.0156	06/13/2016 14:15	0.016
06/13/2016 14:13	0.0154	06/13/2016 14:14	0.0156	06/13/2016 14:15	0.0158
06/13/2016 14:13	0.0153	06/13/2016 14:14	0.0158	06/13/2016 14:15	0.0156
06/13/2016 14:13	0.0154	06/13/2016 14:14	0.0158	06/13/2016 14:15	0.0156
06/13/2016 14:13	0.0153	06/13/2016 14:14	0.016	06/13/2016 14:15	0.0155

Note:
mR/h = microRoentgens per hour

Location: BRA-2

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:15	0.0154	06/13/2016 14:16	0.0154	06/13/2016 14:17	0.0164
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0154	06/13/2016 14:17	0.0164
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0154	06/13/2016 14:17	0.0165
06/13/2016 14:15	0.0152	06/13/2016 14:16	0.0155	06/13/2016 14:17	0.0164
06/13/2016 14:15	0.0152	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0165
06/13/2016 14:15	0.0152	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0166
06/13/2016 14:15	0.0151	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0166
06/13/2016 14:15	0.0149	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0165
06/13/2016 14:15	0.0148	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0166
06/13/2016 14:15	0.0147	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0167
06/13/2016 14:15	0.0146	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0168
06/13/2016 14:15	0.0145	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0167
06/13/2016 14:15	0.0144	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0167
06/13/2016 14:15	0.0144	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0166
06/13/2016 14:15	0.0143	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0166
06/13/2016 14:15	0.0142	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0165
06/13/2016 14:15	0.0142	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0163
06/13/2016 14:15	0.0143	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0162
06/13/2016 14:15	0.0144	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0161
06/13/2016 14:15	0.0144	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.016
06/13/2016 14:15	0.0145	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0158
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0158
06/13/2016 14:16	0.0165	06/13/2016 14:16	0.0158	06/13/2016 14:17	0.0158
06/13/2016 14:15	0.015	06/13/2016 14:16	0.0158	06/13/2016 14:17	0.0156
06/13/2016 14:15	0.0151	06/13/2016 14:16	0.0158	06/13/2016 14:17	0.0156
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0156
06/13/2016 14:15	0.0154	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0158
06/13/2016 14:15	0.0155	06/13/2016 14:16	0.0156	06/13/2016 14:17	0.0158
06/13/2016 14:15	0.0156	06/13/2016 14:16	0.0155	06/13/2016 14:17	0.0158
06/13/2016 14:15	0.0156	06/13/2016 14:16	0.0154	06/13/2016 14:17	0.0156
06/13/2016 14:15	0.0156	06/13/2016 14:16	0.0153	06/13/2016 14:17	0.0156
06/13/2016 14:15	0.0156	06/13/2016 14:16	0.0152		
06/13/2016 14:15	0.0156	06/13/2016 14:16	0.0151		
06/13/2016 14:15	0.0155	06/13/2016 14:16	0.0151		
06/13/2016 14:15	0.0154	06/13/2016 14:16	0.0151		
06/13/2016 14:15	0.0154	06/13/2016 14:16	0.0152		
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0152		
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0155		
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0158		
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0162		
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0164		
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0166		
06/13/2016 14:15	0.0153	06/13/2016 14:15	0.0158		
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0165		
06/13/2016 14:15	0.0153	06/13/2016 14:16	0.0164		
06/13/2016 14:16	0.0154	06/13/2016 14:16	0.0164		
06/13/2016 14:16	0.0154	06/13/2016 14:16	0.0163		
06/13/2016 14:16	0.0155	06/13/2016 14:16	0.0163		
06/13/2016 14:16	0.0155	06/13/2016 14:16	0.0164		
06/13/2016 14:16	0.0155	06/13/2016 14:16	0.0164		
06/13/2016 14:16	0.0155	06/13/2016 14:16	0.0164		
06/13/2016 14:16	0.0155	06/13/2016 14:17	0.0164		

Note:
mR/h = microRoentgens per hour

Location: Sample 1

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:35	0.0152	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.015
06/13/2016 14:35	0.0152	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.015
06/13/2016 14:35	0.015	06/13/2016 14:36	0.0156	06/13/2016 14:37	0.0149
06/13/2016 14:35	0.015	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.015
06/13/2016 14:35	0.015	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.0149
06/13/2016 14:35	0.015	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.0148
06/13/2016 14:35	0.015	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.0147
06/13/2016 14:35	0.0149	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.0146
06/13/2016 14:35	0.0149	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.0146
06/13/2016 14:35	0.0149	06/13/2016 14:36	0.016	06/13/2016 14:37	0.0146
06/13/2016 14:35	0.0148	06/13/2016 14:36	0.0161	06/13/2016 14:37	0.0145
06/13/2016 14:35	0.015	06/13/2016 14:36	0.0161	06/13/2016 14:37	0.0145
06/13/2016 14:35	0.0152	06/13/2016 14:36	0.0161	06/13/2016 14:37	0.0145
06/13/2016 14:35	0.0154	06/13/2016 14:36	0.0161	06/13/2016 14:37	0.0145
06/13/2016 14:35	0.0155	06/13/2016 14:36	0.0162	06/13/2016 14:37	0.0145
06/13/2016 14:35	0.0156	06/13/2016 14:36	0.0162	06/13/2016 14:37	0.0145
06/13/2016 14:36	0.016	06/13/2016 14:36	0.0163	06/13/2016 14:37	0.0146
06/13/2016 14:36	0.0161	06/13/2016 14:36	0.0163	06/13/2016 14:37	0.0147
06/13/2016 14:36	0.0162	06/13/2016 14:36	0.0162	06/13/2016 14:37	0.0147
06/13/2016 14:36	0.0162	06/13/2016 14:36	0.0162	06/13/2016 14:37	0.0149
06/13/2016 14:36	0.0163	06/13/2016 14:36	0.0161	06/13/2016 14:37	0.0149
06/13/2016 14:36	0.0163	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.015
06/13/2016 14:36	0.0164	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.015
06/13/2016 14:36	0.0166	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.0151
06/13/2016 14:36	0.0167	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.015
06/13/2016 14:36	0.0167	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.0151
06/13/2016 14:36	0.0167	06/13/2016 14:36	0.0158	06/13/2016 14:37	0.0152
06/13/2016 14:36	0.0168	06/13/2016 14:37	0.0158	06/13/2016 14:37	0.0154
06/13/2016 14:36	0.0168	06/13/2016 14:37	0.0158	06/13/2016 14:37	0.0155
06/13/2016 14:36	0.0168	06/13/2016 14:37	0.0161	06/13/2016 14:37	0.0156
06/13/2016 14:36	0.0167	06/13/2016 14:37	0.0161	06/13/2016 14:37	0.0156
06/13/2016 14:36	0.0166	06/13/2016 14:37	0.0162	06/13/2016 14:37	0.0156
06/13/2016 14:36	0.0166	06/13/2016 14:37	0.0162	06/13/2016 14:37	0.0158
06/13/2016 14:36	0.0166	06/13/2016 14:37	0.0162	06/13/2016 14:37	0.0158
06/13/2016 14:36	0.0166	06/13/2016 14:37	0.0162	06/13/2016 14:37	0.0158
06/13/2016 14:36	0.0166	06/13/2016 14:37	0.0162	06/13/2016 14:37	0.0158
06/13/2016 14:36	0.0166	06/13/2016 14:37	0.0161	06/13/2016 14:37	0.016
06/13/2016 14:36	0.0166	06/13/2016 14:37	0.016	06/13/2016 14:37	0.0161
06/13/2016 14:36	0.0166	06/13/2016 14:37	0.0158	06/13/2016 14:38	0.0162
06/13/2016 14:36	0.0166	06/13/2016 14:37	0.0156	06/13/2016 14:38	0.0163
06/13/2016 14:36	0.0167	06/13/2016 14:37	0.0154	06/13/2016 14:38	0.0163
06/13/2016 14:36	0.0167	06/13/2016 14:37	0.0153	06/13/2016 14:38	0.0163
06/13/2016 14:36	0.0167	06/13/2016 14:37	0.0153	06/13/2016 14:38	0.0163
06/13/2016 14:36	0.0167	06/13/2016 14:37	0.0152	06/13/2016 14:38	0.0162
06/13/2016 14:36	0.0166	06/13/2016 14:37	0.0152	06/13/2016 14:38	0.0161
06/13/2016 14:36	0.0164	06/13/2016 14:37	0.0151	06/13/2016 14:38	0.0158
06/13/2016 14:36	0.0163	06/13/2016 14:37	0.015	06/13/2016 14:38	0.0158
06/13/2016 14:36	0.0162	06/13/2016 14:37	0.015	06/13/2016 14:38	0.0156
06/13/2016 14:36	0.016	06/13/2016 14:37	0.015	06/13/2016 14:38	0.0156

Note:
mR/h = microRoentgens per hour

Location: Sample 1

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0161	06/13/2016 14:39	0.0153
06/13/2016 14:38	0.0158	06/13/2016 14:39	0.016	06/13/2016 14:39	0.0155
06/13/2016 14:38	0.0158	06/13/2016 14:39	0.0158	06/13/2016 14:39	0.0156
06/13/2016 14:38	0.016	06/13/2016 14:39	0.0158	06/13/2016 14:39	0.0156
06/13/2016 14:38	0.0161	06/13/2016 14:39	0.0158	06/13/2016 14:39	0.0156
06/13/2016 14:38	0.0161	06/13/2016 14:39	0.0156	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0162	06/13/2016 14:39	0.0156	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0163	06/13/2016 14:39	0.0156	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0165	06/13/2016 14:39	0.0156	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0166	06/13/2016 14:39	0.0156	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0166	06/13/2016 14:39	0.0156	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0166	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0155
06/13/2016 14:38	0.0165	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0155
06/13/2016 14:38	0.0165	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0154
06/13/2016 14:38	0.0164	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0153
06/13/2016 14:38	0.0163	06/13/2016 14:39	0.0156	06/13/2016 14:40	0.0152
06/13/2016 14:38	0.0162	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0151
06/13/2016 14:38	0.016	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0151
06/13/2016 14:38	0.0158	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0152
06/13/2016 14:38	0.0158	06/13/2016 14:39	0.016	06/13/2016 14:40	0.0153
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0162	06/13/2016 14:40	0.0153
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0163	06/13/2016 14:40	0.0153
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0164	06/13/2016 14:40	0.0152
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0164	06/13/2016 14:40	0.0153
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0164	06/13/2016 14:40	0.0153
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0165	06/13/2016 14:40	0.0153
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0165	06/13/2016 14:40	0.0153
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0165	06/13/2016 14:40	0.0152
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0165	06/13/2016 14:40	0.0151
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0165	06/13/2016 14:40	0.0151
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0164	06/13/2016 14:40	0.0151
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0164	06/13/2016 14:40	0.015
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0164	06/13/2016 14:40	0.015
06/13/2016 14:38	0.0156	06/13/2016 14:39	0.0163	06/13/2016 14:40	0.0149
06/13/2016 14:38	0.0158	06/13/2016 14:39	0.0161	06/13/2016 14:40	0.0149
06/13/2016 14:38	0.0158	06/13/2016 14:39	0.016	06/13/2016 14:40	0.0149
06/13/2016 14:38	0.0158	06/13/2016 14:39	0.016	06/13/2016 14:40	0.015
06/13/2016 14:38	0.0158	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.015
06/13/2016 14:38	0.0161	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0152
06/13/2016 14:38	0.0163	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0153
06/13/2016 14:38	0.0165	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0154
06/13/2016 14:38	0.0166	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0154
06/13/2016 14:38	0.0166	06/13/2016 14:39	0.0158	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0166	06/13/2016 14:39	0.0156	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0165	06/13/2016 14:39	0.0156	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0165	06/13/2016 14:39	0.0154	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0164	06/13/2016 14:39	0.0153	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0163	06/13/2016 14:39	0.0152	06/13/2016 14:40	0.0156
06/13/2016 14:38	0.0162	06/13/2016 14:39	0.0151	06/13/2016 14:40	0.0156
06/13/2016 14:39	0.0162	06/13/2016 14:39	0.0151	06/13/2016 14:40	0.0156
06/13/2016 14:39	0.0162	06/13/2016 14:39	0.0151	06/13/2016 14:40	0.0156

Note:
mR/h = microRoentgens per hour

Location: Sample 1

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:40	0.0158	06/13/2016 14:41	0.0154
06/13/2016 14:40	0.0158	06/13/2016 14:41	0.0154
06/13/2016 14:40	0.016	06/13/2016 14:41	0.0154
06/13/2016 14:40	0.016	06/13/2016 14:41	0.0155
06/13/2016 14:40	0.016	06/13/2016 14:41	0.0155
06/13/2016 14:40	0.016	06/13/2016 14:41	0.0155
06/13/2016 14:40	0.0161	06/13/2016 14:41	0.0156
06/13/2016 14:40	0.0161	06/13/2016 14:41	0.0156
06/13/2016 14:40	0.016	06/13/2016 14:41	0.0156
06/13/2016 14:40	0.0158	06/13/2016 14:41	0.0158
06/13/2016 14:40	0.0156	06/13/2016 14:41	0.0158
06/13/2016 14:40	0.0155	06/13/2016 14:41	0.016
06/13/2016 14:40	0.0153	06/13/2016 14:41	0.016
06/13/2016 14:41	0.0152	06/13/2016 14:41	0.016
06/13/2016 14:41	0.0151	06/13/2016 14:41	0.016
06/13/2016 14:41	0.015	06/13/2016 14:41	0.016
06/13/2016 14:41	0.0149	06/13/2016 14:41	0.0158
06/13/2016 14:41	0.0149	06/13/2016 14:41	0.0158
06/13/2016 14:41	0.0148	06/13/2016 14:41	0.0158
06/13/2016 14:41	0.0148		
06/13/2016 14:41	0.0149		
06/13/2016 14:41	0.015		
06/13/2016 14:41	0.0151		
06/13/2016 14:41	0.0154		
06/13/2016 14:41	0.0156		
06/13/2016 14:41	0.0156		
06/13/2016 14:41	0.0158		
06/13/2016 14:41	0.0158		
06/13/2016 14:41	0.0158		
06/13/2016 14:41	0.0158		
06/13/2016 14:41	0.0158		
06/13/2016 14:41	0.016		
06/13/2016 14:41	0.016		
06/13/2016 14:41	0.0161		
06/13/2016 14:41	0.016		
06/13/2016 14:41	0.0158		
06/13/2016 14:41	0.0158		
06/13/2016 14:41	0.0158		
06/13/2016 14:41	0.0156		
06/13/2016 14:41	0.0156		
06/13/2016 14:41	0.0156		
06/13/2016 14:41	0.0155		
06/13/2016 14:41	0.0154		
06/13/2016 14:41	0.0154		
06/13/2016 14:41	0.0154		
06/13/2016 14:41	0.0155		
06/13/2016 14:41	0.0155		
06/13/2016 14:41	0.0155		
06/13/2016 14:41	0.0154		
06/13/2016 14:41	0.0154		
06/13/2016 14:41	0.0154		
06/13/2016 14:41	0.0154		

Note:
mR/h = microRoentgens per hour

Location: Sample 2

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:46	0.024	06/13/2016 14:47	0.0227	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.024	06/13/2016 14:47	0.0227	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.024	06/13/2016 14:47	0.0227	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0241	06/13/2016 14:47	0.0225	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0241	06/13/2016 14:47	0.0225	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0241	06/13/2016 14:47	0.0225	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.024	06/13/2016 14:47	0.0223	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.024	06/13/2016 14:47	0.0223	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.024	06/13/2016 14:47	0.0223	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.024	06/13/2016 14:47	0.0223	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0239	06/13/2016 14:47	0.0225	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0237	06/13/2016 14:47	0.0225	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0237	06/13/2016 14:47	0.0225	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0235	06/13/2016 14:47	0.0225	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0235	06/13/2016 14:47	0.0225	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0234	06/13/2016 14:47	0.0227	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0233	06/13/2016 14:47	0.0227	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0232	06/13/2016 14:47	0.0228	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0232	06/13/2016 14:47	0.0228	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0232	06/13/2016 14:47	0.0228	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0232	06/13/2016 14:47	0.0227	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0232	06/13/2016 14:47	0.0228	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0232	06/13/2016 14:47	0.0229	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0232	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0232	06/13/2016 14:47	0.0231	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0233	06/13/2016 14:47	0.0231	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0232	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:46	0.0232	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0231	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.023	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.023	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0229	06/13/2016 14:47	0.0231	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0228	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0229	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0229	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.023	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0231	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0231	06/13/2016 14:47	0.023	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0232	06/13/2016 14:47	0.0229	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0232	06/13/2016 14:48	0.0229	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0232	06/13/2016 14:48	0.0228	06/13/2016 14:48	0.0231
06/13/2016 14:47	0.0232	06/13/2016 14:48	0.0228	06/13/2016 14:48	0.0245
06/13/2016 14:47	0.0231	06/13/2016 14:48	0.0228	06/13/2016 14:48	0.0245
06/13/2016 14:47	0.023	06/13/2016 14:48	0.0229	06/13/2016 14:48	0.0244
06/13/2016 14:47	0.0231	06/13/2016 14:48	0.0229	06/13/2016 14:48	0.0244
06/13/2016 14:47	0.023	06/13/2016 14:48	0.023	06/13/2016 14:48	0.0243
06/13/2016 14:47	0.0229	06/13/2016 14:48	0.023	06/13/2016 14:48	0.0242
06/13/2016 14:47	0.0228	06/13/2016 14:48	0.023	06/13/2016 14:48	0.0241
06/13/2016 14:47	0.0228	06/13/2016 14:48	0.0231	06/13/2016 14:48	0.024

Note:
mR/h = microRoentgens per hour

Location: Sample 2

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:48	0.024	06/13/2016 14:49	0.0232	06/13/2016 14:50	0.0232
06/13/2016 14:49	0.0237	06/13/2016 14:49	0.0232	06/13/2016 14:50	0.0231
06/13/2016 14:49	0.0237	06/13/2016 14:49	0.0232	06/13/2016 14:50	0.0231
06/13/2016 14:49	0.0237	06/13/2016 14:49	0.0233	06/13/2016 14:50	0.023
06/13/2016 14:49	0.0237	06/13/2016 14:49	0.0235	06/13/2016 14:50	0.023
06/13/2016 14:49	0.0237	06/13/2016 14:49	0.0235	06/13/2016 14:50	0.0231
06/13/2016 14:49	0.0237	06/13/2016 14:49	0.0235	06/13/2016 14:50	0.0231
06/13/2016 14:49	0.0237	06/13/2016 14:49	0.0235	06/13/2016 14:50	0.023
06/13/2016 14:49	0.0237	06/13/2016 14:49	0.0235	06/13/2016 14:50	0.023
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0235	06/13/2016 14:50	0.023
06/13/2016 14:49	0.0235	06/13/2016 14:50	0.0234	06/13/2016 14:50	0.0231
06/13/2016 14:49	0.0235	06/13/2016 14:50	0.0234	06/13/2016 14:50	0.0231
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0234	06/13/2016 14:50	0.0231
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0233	06/13/2016 14:50	0.0231
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0233	06/13/2016 14:50	0.0231
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0232	06/13/2016 14:50	0.0232
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0231	06/13/2016 14:50	0.0232
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.023	06/13/2016 14:51	0.0233
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.023	06/13/2016 14:51	0.0233
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.023	06/13/2016 14:51	0.0232
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.023	06/13/2016 14:51	0.0232
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0231	06/13/2016 14:51	0.0232
06/13/2016 14:49	0.0239	06/13/2016 14:50	0.0231	06/13/2016 14:51	0.0231
06/13/2016 14:49	0.0239	06/13/2016 14:50	0.0232	06/13/2016 14:51	0.0231
06/13/2016 14:49	0.0239	06/13/2016 14:50	0.0231	06/13/2016 14:51	0.0231
06/13/2016 14:49	0.0239	06/13/2016 14:50	0.0232	06/13/2016 14:51	0.0231
06/13/2016 14:49	0.0239	06/13/2016 14:50	0.0232	06/13/2016 14:51	0.023
06/13/2016 14:49	0.0239	06/13/2016 14:50	0.0231	06/13/2016 14:51	0.023
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.023	06/13/2016 14:51	0.0229
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0229	06/13/2016 14:51	0.0229
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0228	06/13/2016 14:51	0.023
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0227	06/13/2016 14:51	0.0231
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0227	06/13/2016 14:51	0.0232
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0225	06/13/2016 14:51	0.0233
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0225	06/13/2016 14:51	0.0233
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0225	06/13/2016 14:51	0.0234
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0225	06/13/2016 14:51	0.0235
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0225	06/13/2016 14:51	0.0235
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0225	06/13/2016 14:51	0.0235
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0225	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0239	06/13/2016 14:50	0.0228	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0239	06/13/2016 14:50	0.0228	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0239	06/13/2016 14:50	0.0228	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0239	06/13/2016 14:50	0.0229	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0231	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0237	06/13/2016 14:50	0.0232	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0235	06/13/2016 14:50	0.0232	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0235	06/13/2016 14:50	0.0232	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0235	06/13/2016 14:50	0.0232	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0235	06/13/2016 14:50	0.0232	06/13/2016 14:51	0.0237
06/13/2016 14:49	0.0234	06/13/2016 14:50	0.0232	06/13/2016 14:51	0.0239

Note:
mR/h = microRoentgens per hour

Location: Sample 2

Date / Time	Exposure Rate (mR/h)
06/13/2016 14:51	0.0241
06/13/2016 14:51	0.0242
06/13/2016 14:51	0.0242
06/13/2016 14:51	0.0242
06/13/2016 14:51	0.0242
06/13/2016 14:51	0.0242
06/13/2016 14:51	0.0242
06/13/2016 14:51	0.0242
06/13/2016 14:51	0.0241
06/13/2016 14:51	0.0241
06/13/2016 14:51	0.024
06/13/2016 14:51	0.024
06/13/2016 14:51	0.0239
06/13/2016 14:51	0.024
06/13/2016 14:51	0.024
06/13/2016 14:51	0.024
06/13/2016 14:51	0.0241
06/13/2016 14:51	0.0241
06/13/2016 14:51	0.0241
06/13/2016 14:51	0.0241
06/13/2016 14:51	0.0241
06/13/2016 14:51	0.0242
06/13/2016 14:51	0.0244
06/13/2016 14:51	0.0244
06/13/2016 14:51	0.0245
06/13/2016 14:52	0.0245
06/13/2016 14:52	0.0247
06/13/2016 14:52	0.0247
06/13/2016 14:52	0.0247
06/13/2016 14:52	0.0245
06/13/2016 14:52	0.0245
06/13/2016 14:52	0.0245
06/13/2016 14:52	0.0244
06/13/2016 14:52	0.0243
06/13/2016 14:52	0.0242
06/13/2016 14:52	0.0241
06/13/2016 14:52	0.0241
06/13/2016 14:52	0.0241
06/13/2016 14:52	0.024
06/13/2016 14:52	0.0239
06/13/2016 14:52	0.0239
06/13/2016 14:52	0.024
06/13/2016 14:52	0.024
06/13/2016 14:52	0.024
06/13/2016 14:52	0.024
06/13/2016 14:52	0.0239
06/13/2016 14:52	0.0239
06/13/2016 14:52	0.0239
06/13/2016 14:52	0.0239
06/13/2016 14:52	0.024
06/13/2016 14:52	0.024

Date / Time	Exposure Rate (mR/h)
06/13/2016 14:52	0.024
06/13/2016 14:52	0.024
06/13/2016 14:52	0.0241
06/13/2016 14:52	0.0241
06/13/2016 14:52	0.024
06/13/2016 14:52	0.024
06/13/2016 14:52	0.0239
06/13/2016 14:52	0.0237
06/13/2016 14:52	0.0237
06/13/2016 14:52	0.0235

Note:
mR/h = microRoentgens per hour

Location: Sample 3

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 14:59	0.0542	06/13/2016 15:00	0.0545	06/13/2016 15:01	0.0551
06/13/2016 14:59	0.0542	06/13/2016 15:00	0.0545	06/13/2016 15:01	0.0551
06/13/2016 14:59	0.0542	06/13/2016 15:00	0.0545	06/13/2016 15:01	0.0551
06/13/2016 14:59	0.0542	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0551
06/13/2016 14:59	0.054	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0551
06/13/2016 14:59	0.054	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0549
06/13/2016 14:59	0.054	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0547
06/13/2016 14:59	0.054	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0545
06/13/2016 14:59	0.0542	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0544
06/13/2016 14:59	0.0542	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0542
06/13/2016 14:59	0.0542	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0538
06/13/2016 14:59	0.0544	06/13/2016 15:00	0.0545	06/13/2016 15:01	0.0537
06/13/2016 15:00	0.0547	06/13/2016 15:00	0.0545	06/13/2016 15:01	0.0536
06/13/2016 15:00	0.0548	06/13/2016 15:00	0.0545	06/13/2016 15:01	0.0536
06/13/2016 15:00	0.0551	06/13/2016 15:00	0.0545	06/13/2016 15:01	0.0536
06/13/2016 15:00	0.0551	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0536
06/13/2016 15:00	0.0551	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0537
06/13/2016 15:00	0.0551	06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0538
06/13/2016 15:00	0.0551	06/13/2016 15:00	0.0542	06/13/2016 15:01	0.0538
06/13/2016 15:00	0.0551	06/13/2016 15:00	0.0542	06/13/2016 15:01	0.0538
06/13/2016 15:00	0.0551	06/13/2016 15:00	0.0542	06/13/2016 15:01	0.054
06/13/2016 15:00	0.0551	06/13/2016 15:00	0.054	06/13/2016 15:01	0.0542
06/13/2016 15:00	0.0551	06/13/2016 15:00	0.0542	06/13/2016 15:01	0.0544
06/13/2016 15:00	0.0549	06/13/2016 15:01	0.0542	06/13/2016 15:01	0.0547
06/13/2016 15:00	0.0548	06/13/2016 15:01	0.0542	06/13/2016 15:01	0.0547
06/13/2016 15:00	0.0547	06/13/2016 15:01	0.0542	06/13/2016 15:01	0.0547
06/13/2016 15:00	0.0547	06/13/2016 15:01	0.0544	06/13/2016 15:01	0.0548
06/13/2016 15:00	0.0545	06/13/2016 15:01	0.0544	06/13/2016 15:01	0.0549
06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0544	06/13/2016 15:01	0.0549
06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0544	06/13/2016 15:01	0.0548
06/13/2016 15:00	0.0544	06/13/2016 15:01	0.0544	06/13/2016 15:01	0.0548
06/13/2016 15:00	0.0545	06/13/2016 15:01	0.0544	06/13/2016 15:01	0.0548
06/13/2016 15:00	0.0547	06/13/2016 15:01	0.0544	06/13/2016 15:01	0.0548
06/13/2016 15:00	0.0547	06/13/2016 15:01	0.0544	06/13/2016 15:01	0.0548
06/13/2016 15:00	0.0547	06/13/2016 15:01	0.0544	06/13/2016 15:02	0.0548
06/13/2016 15:00	0.0547	06/13/2016 15:01	0.0544	06/13/2016 15:02	0.0547
06/13/2016 15:00	0.0548	06/13/2016 15:01	0.0544	06/13/2016 15:02	0.0547
06/13/2016 15:00	0.0548	06/13/2016 15:01	0.0544	06/13/2016 15:02	0.0545
06/13/2016 15:00	0.0549	06/13/2016 15:01	0.0544	06/13/2016 15:02	0.0545
06/13/2016 15:00	0.0549	06/13/2016 15:01	0.0547	06/13/2016 15:02	0.0545
06/13/2016 15:00	0.0548	06/13/2016 15:01	0.0548	06/13/2016 15:02	0.0544
06/13/2016 15:00	0.0548	06/13/2016 15:01	0.0551	06/13/2016 15:02	0.0544
06/13/2016 15:00	0.0549	06/13/2016 15:01	0.0551	06/13/2016 15:02	0.0542
06/13/2016 15:00	0.0549	06/13/2016 15:01	0.0551	06/13/2016 15:02	0.0542
06/13/2016 15:00	0.0549	06/13/2016 15:01	0.0551	06/13/2016 15:02	0.0542
06/13/2016 15:00	0.0549	06/13/2016 15:01	0.0551	06/13/2016 15:02	0.0544
06/13/2016 15:00	0.0548	06/13/2016 15:01	0.0551	06/13/2016 15:02	0.0544
06/13/2016 15:00	0.0548	06/13/2016 15:01	0.0551	06/13/2016 15:02	0.0544
06/13/2016 15:00	0.0547	06/13/2016 15:01	0.0551	06/13/2016 15:02	0.0544

Note:
mR/h = microRoentgens per hour

Location: Sample 3

Date / Time	Exposure Rate (mR/h)
06/13/2016 15:02	0.0545
06/13/2016 15:02	0.0545
06/13/2016 15:02	0.0545
06/13/2016 15:02	0.0545
06/13/2016 15:02	0.0547
06/13/2016 15:02	0.0545
06/13/2016 15:02	0.0545
06/13/2016 15:02	0.0545
06/13/2016 15:02	0.0545
06/13/2016 15:02	0.0544
06/13/2016 15:02	0.0544
06/13/2016 15:02	0.0544
06/13/2016 15:02	0.0544
06/13/2016 15:02	0.0542
06/13/2016 15:02	0.0542
06/13/2016 15:02	0.0542
06/13/2016 15:02	0.054
06/13/2016 15:02	0.054
06/13/2016 15:02	0.054
06/13/2016 15:02	0.0538
06/13/2016 15:02	0.0537
06/13/2016 15:02	0.0536
06/13/2016 15:02	0.0534
06/13/2016 15:02	0.0533
06/13/2016 15:02	0.0533
06/13/2016 15:02	0.0532
06/13/2016 15:02	0.0531
06/13/2016 15:02	0.0529
06/13/2016 15:02	0.0528
06/13/2016 15:02	0.0528
06/13/2016 15:02	0.0527
06/13/2016 15:02	0.0527
06/13/2016 15:02	0.0527
06/13/2016 15:02	0.0525
06/13/2016 15:02	0.0524
06/13/2016 15:02	0.0524
06/13/2016 15:02	0.0524
06/13/2016 15:02	0.0525
06/13/2016 15:02	0.0524
06/13/2016 15:02	0.0523
06/13/2016 15:02	0.0523
06/13/2016 15:02	0.052
06/13/2016 15:02	0.052
06/13/2016 15:02	0.0518
06/13/2016 15:02	0.0518
06/13/2016 15:03	0.0516
06/13/2016 15:03	0.0516
06/13/2016 15:03	0.0514
06/13/2016 15:03	0.0512
06/13/2016 15:03	0.0511
06/13/2016 15:03	0.0507

Date / Time	Exposure Rate (mR/h)
06/13/2016 15:03	0.0507
06/13/2016 15:03	0.0507
06/13/2016 15:03	0.0507
06/13/2016 15:03	0.0507
06/13/2016 15:03	0.0507
06/13/2016 15:03	0.0507
06/13/2016 15:03	0.0507
06/13/2016 15:03	0.0508
06/13/2016 15:03	0.0508
06/13/2016 15:03	0.0511
06/13/2016 15:03	0.0512
06/13/2016 15:03	0.0512
06/13/2016 15:03	0.0512
06/13/2016 15:03	0.0511
06/13/2016 15:03	0.0509
06/13/2016 15:03	0.0508
06/13/2016 15:03	0.0507
06/13/2016 15:03	0.0507
06/13/2016 15:03	0.0505
06/13/2016 15:03	0.0504
06/13/2016 15:03	0.0504
06/13/2016 15:03	0.0504
06/13/2016 15:03	0.0503
06/13/2016 15:03	0.0503
06/13/2016 15:03	0.0504
06/13/2016 15:03	0.0504
06/13/2016 15:03	0.0505
06/13/2016 15:03	0.0507
06/13/2016 15:03	0.0508
06/13/2016 15:03	0.0509
06/13/2016 15:03	0.0509
06/13/2016 15:03	0.0511
06/13/2016 15:03	0.0512
06/13/2016 15:03	0.0513
06/13/2016 15:03	0.0514
06/13/2016 15:03	0.0516
06/13/2016 15:03	0.0518
06/13/2016 15:03	0.052
06/13/2016 15:03	0.0522
06/13/2016 15:03	0.0523
06/13/2016 15:03	0.0524
06/13/2016 15:03	0.0527
06/13/2016 15:03	0.0529
06/13/2016 15:03	0.0532
06/13/2016 15:03	0.0532
06/13/2016 15:03	0.0533
06/13/2016 15:03	0.0534
06/13/2016 15:03	0.0534
06/13/2016 15:03	0.0533
06/13/2016 15:03	0.0532
06/13/2016 15:03	0.0531

Date / Time	Exposure Rate (mR/h)
06/13/2016 15:03	0.0529
06/13/2016 15:04	0.0529
06/13/2016 15:04	0.0528
06/13/2016 15:04	0.0527
06/13/2016 15:04	0.0527
06/13/2016 15:04	0.0527
06/13/2016 15:04	0.0528
06/13/2016 15:04	0.0529
06/13/2016 15:04	0.0529
06/13/2016 15:04	0.0529
06/13/2016 15:04	0.0531
06/13/2016 15:04	0.0532
06/13/2016 15:04	0.0533
06/13/2016 15:04	0.0534
06/13/2016 15:04	0.0536
06/13/2016 15:04	0.0536
06/13/2016 15:04	0.0537
06/13/2016 15:04	0.0538
06/13/2016 15:04	0.0538
06/13/2016 15:04	0.0537
06/13/2016 15:04	0.0538
06/13/2016 15:04	0.0538
06/13/2016 15:04	0.054
06/13/2016 15:04	0.054
06/13/2016 15:04	0.054
06/13/2016 15:04	0.054
06/13/2016 15:04	0.0542
06/13/2016 15:04	0.054
06/13/2016 15:04	0.054
06/13/2016 15:04	0.054
06/13/2016 15:04	0.054
06/13/2016 15:04	0.054
06/13/2016 15:04	0.0538
06/13/2016 15:04	0.0537
06/13/2016 15:04	0.0536

Note:
mR/h = microRoentgens per hour

Location: Sample 4

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:12	0.0932	06/13/2016 15:13	0.0886	06/13/2016 15:14	0.0928
06/13/2016 15:12	0.0932	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0929
06/13/2016 15:12	0.0931	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0932
06/13/2016 15:12	0.093	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0934
06/13/2016 15:12	0.0929	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0938
06/13/2016 15:12	0.0929	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.094
06/13/2016 15:12	0.0928	06/13/2016 15:13	0.0884	06/13/2016 15:14	0.0942
06/13/2016 15:12	0.0926	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0945
06/13/2016 15:12	0.0924	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0946
06/13/2016 15:12	0.0921	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0946
06/13/2016 15:12	0.0919	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0945
06/13/2016 15:12	0.0916	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0945
06/13/2016 15:12	0.0912	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0946
06/13/2016 15:12	0.0911	06/13/2016 15:13	0.0885	06/13/2016 15:14	0.0945
06/13/2016 15:12	0.0909	06/13/2016 15:13	0.0886	06/13/2016 15:14	0.0944
06/13/2016 15:12	0.0907	06/13/2016 15:13	0.089	06/13/2016 15:14	0.0942
06/13/2016 15:12	0.0903	06/13/2016 15:13	0.0892	06/13/2016 15:14	0.094
06/13/2016 15:12	0.0902	06/13/2016 15:13	0.0893	06/13/2016 15:14	0.0938
06/13/2016 15:12	0.09	06/13/2016 15:13	0.0895	06/13/2016 15:14	0.0937
06/13/2016 15:12	0.0899	06/13/2016 15:13	0.0897	06/13/2016 15:14	0.0936
06/13/2016 15:12	0.0897	06/13/2016 15:13	0.0898	06/13/2016 15:14	0.0936
06/13/2016 15:12	0.0894	06/13/2016 15:13	0.0899	06/13/2016 15:14	0.0934
06/13/2016 15:12	0.0893	06/13/2016 15:13	0.0901	06/13/2016 15:14	0.0934
06/13/2016 15:12	0.0893	06/13/2016 15:13	0.0902	06/13/2016 15:14	0.0934
06/13/2016 15:12	0.0891	06/13/2016 15:13	0.0902	06/13/2016 15:14	0.0934
06/13/2016 15:12	0.089	06/13/2016 15:13	0.0906	06/13/2016 15:14	0.0934
06/13/2016 15:13	0.0888	06/13/2016 15:13	0.0908	06/13/2016 15:14	0.0934
06/13/2016 15:13	0.0886	06/13/2016 15:13	0.0911	06/13/2016 15:14	0.0933
06/13/2016 15:13	0.0885	06/13/2016 15:13	0.0912	06/13/2016 15:14	0.0933
06/13/2016 15:13	0.0885	06/13/2016 15:13	0.0915	06/13/2016 15:14	0.0932
06/13/2016 15:13	0.0885	06/13/2016 15:13	0.0917	06/13/2016 15:14	0.0933
06/13/2016 15:13	0.0886	06/13/2016 15:13	0.0919	06/13/2016 15:14	0.0934
06/13/2016 15:13	0.0888	06/13/2016 15:13	0.0922	06/13/2016 15:14	0.0934
06/13/2016 15:13	0.089	06/13/2016 15:13	0.0923	06/13/2016 15:14	0.0934
06/13/2016 15:13	0.0892	06/13/2016 15:13	0.0923	06/13/2016 15:14	0.0936
06/13/2016 15:13	0.0893	06/13/2016 15:13	0.0923	06/13/2016 15:14	0.0936
06/13/2016 15:13	0.0894	06/13/2016 15:13	0.0923	06/13/2016 15:14	0.0936
06/13/2016 15:13	0.0894	06/13/2016 15:14	0.0922	06/13/2016 15:14	0.0937
06/13/2016 15:13	0.0895	06/13/2016 15:14	0.0922	06/13/2016 15:14	0.0938
06/13/2016 15:13	0.0897	06/13/2016 15:14	0.0923	06/13/2016 15:14	0.0939
06/13/2016 15:13	0.0897	06/13/2016 15:14	0.0924	06/13/2016 15:14	0.0939
06/13/2016 15:13	0.0895	06/13/2016 15:14	0.0925	06/13/2016 15:14	0.0939
06/13/2016 15:13	0.0895	06/13/2016 15:14	0.0926	06/13/2016 15:14	0.094
06/13/2016 15:13	0.0895	06/13/2016 15:14	0.0928	06/13/2016 15:14	0.0939
06/13/2016 15:13	0.0894	06/13/2016 15:14	0.0929	06/13/2016 15:14	0.0938
06/13/2016 15:13	0.0893	06/13/2016 15:14	0.093	06/13/2016 15:14	0.0937
06/13/2016 15:13	0.0892	06/13/2016 15:14	0.093	06/13/2016 15:14	0.0936
06/13/2016 15:13	0.0891	06/13/2016 15:14	0.0929	06/13/2016 15:14	0.0936
06/13/2016 15:13	0.0889	06/13/2016 15:14	0.0928	06/13/2016 15:15	0.0934

Note:
mR/h = microRoentgens per hour

Location: Sample 4

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:15	0.0937	06/13/2016 15:15	0.0932	06/13/2016 15:16	0.0911
06/13/2016 15:15	0.0938	06/13/2016 15:15	0.093	06/13/2016 15:16	0.0911
06/13/2016 15:15	0.0938	06/13/2016 15:15	0.0929	06/13/2016 15:16	0.0911
06/13/2016 15:15	0.0939	06/13/2016 15:15	0.0927	06/13/2016 15:16	0.091
06/13/2016 15:15	0.0941	06/13/2016 15:15	0.0925	06/13/2016 15:16	0.091
06/13/2016 15:15	0.0942	06/13/2016 15:15	0.0923	06/13/2016 15:16	0.091
06/13/2016 15:15	0.0942	06/13/2016 15:15	0.0923	06/13/2016 15:16	0.0909
06/13/2016 15:15	0.0944	06/13/2016 15:16	0.0924	06/13/2016 15:16	0.091
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0924	06/13/2016 15:16	0.0911
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0923	06/13/2016 15:16	0.0911
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0923	06/13/2016 15:16	0.0912
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0923	06/13/2016 15:16	0.0912
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0922	06/13/2016 15:16	0.0915
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0923	06/13/2016 15:16	0.0917
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0923	06/13/2016 15:16	0.0918
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0923	06/13/2016 15:17	0.092
06/13/2016 15:15	0.0941	06/13/2016 15:16	0.0924	06/13/2016 15:17	0.0921
06/13/2016 15:15	0.094	06/13/2016 15:16	0.0925	06/13/2016 15:17	0.0922
06/13/2016 15:15	0.0941	06/13/2016 15:16	0.0926	06/13/2016 15:17	0.0923
06/13/2016 15:15	0.0941	06/13/2016 15:16	0.0925	06/13/2016 15:17	0.0923
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0925	06/13/2016 15:17	0.0926
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0924	06/13/2016 15:17	0.0927
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0924	06/13/2016 15:17	0.0928
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0924	06/13/2016 15:17	0.0927
06/13/2016 15:15	0.0945	06/13/2016 15:16	0.0924	06/13/2016 15:17	0.0928
06/13/2016 15:15	0.0945	06/13/2016 15:16	0.0923	06/13/2016 15:17	0.0928
06/13/2016 15:15	0.0945	06/13/2016 15:16	0.0921	06/13/2016 15:17	0.0927
06/13/2016 15:15	0.0946	06/13/2016 15:16	0.0918	06/13/2016 15:17	0.0927
06/13/2016 15:15	0.0946	06/13/2016 15:16	0.0918	06/13/2016 15:17	0.0927
06/13/2016 15:15	0.0947	06/13/2016 15:16	0.0917	06/13/2016 15:17	0.0926
06/13/2016 15:15	0.0948	06/13/2016 15:16	0.0917	06/13/2016 15:17	0.0926
06/13/2016 15:15	0.0949	06/13/2016 15:16	0.0917	06/13/2016 15:17	0.0925
06/13/2016 15:15	0.095	06/13/2016 15:16	0.0918	06/13/2016 15:17	0.0925
06/13/2016 15:15	0.0951	06/13/2016 15:16	0.0917	06/13/2016 15:17	0.0924
06/13/2016 15:15	0.0953	06/13/2016 15:16	0.0917	06/13/2016 15:17	0.0924
06/13/2016 15:15	0.0953	06/13/2016 15:16	0.0917	06/13/2016 15:17	0.0924
06/13/2016 15:15	0.0953	06/13/2016 15:16	0.0917	06/13/2016 15:17	0.0924
06/13/2016 15:15	0.0953	06/13/2016 15:16	0.0918	06/13/2016 15:17	0.0925
06/13/2016 15:15	0.095	06/13/2016 15:16	0.0919	06/13/2016 15:17	0.0926
06/13/2016 15:15	0.0949	06/13/2016 15:16	0.092	06/13/2016 15:17	0.0927
06/13/2016 15:15	0.0948	06/13/2016 15:16	0.0921	06/13/2016 15:17	0.0929
06/13/2016 15:15	0.0947	06/13/2016 15:16	0.0921	06/13/2016 15:17	0.0931
06/13/2016 15:15	0.0945	06/13/2016 15:16	0.092	06/13/2016 15:17	0.0932
06/13/2016 15:15	0.0944	06/13/2016 15:16	0.0918	06/13/2016 15:17	0.0932
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0917	06/13/2016 15:17	0.0932
06/13/2016 15:15	0.0942	06/13/2016 15:16	0.0917	06/13/2016 15:17	0.0934
06/13/2016 15:15	0.0941	06/13/2016 15:16	0.0916	06/13/2016 15:17	0.0937
06/13/2016 15:15	0.0939	06/13/2016 15:16	0.0915	06/13/2016 15:17	0.0938
06/13/2016 15:15	0.0937	06/13/2016 15:16	0.0914	06/13/2016 15:17	0.0938
06/13/2016 15:15	0.0934	06/13/2016 15:16	0.0912	06/13/2016 15:17	0.0939
06/13/2016 15:15	0.0933	06/13/2016 15:16	0.0911	06/13/2016 15:17	0.094

Note:
mR/h = microRoentgens per hour

Location: Sample 4

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:17	0.0938	06/13/2016 15:18	0.0949
06/13/2016 15:17	0.0937	06/13/2016 15:18	0.0937
06/13/2016 15:17	0.0936	06/13/2016 15:18	0.0936
06/13/2016 15:17	0.0936	06/13/2016 15:18	0.0936
06/13/2016 15:17	0.0934	06/13/2016 15:18	0.0938
06/13/2016 15:17	0.0932	06/13/2016 15:18	0.094
06/13/2016 15:17	0.0931	06/13/2016 15:18	0.0941
06/13/2016 15:17	0.093	06/13/2016 15:18	0.0941
06/13/2016 15:17	0.093	06/13/2016 15:18	0.094
06/13/2016 15:17	0.0931	06/13/2016 15:18	0.0939
06/13/2016 15:17	0.0933	06/13/2016 15:18	0.0937
06/13/2016 15:17	0.0936	06/13/2016 15:18	0.0934
06/13/2016 15:17	0.0938	06/13/2016 15:18	0.0931
06/13/2016 15:17	0.0941	06/13/2016 15:18	0.0929
06/13/2016 15:17	0.0942	06/13/2016 15:18	0.0928
06/13/2016 15:17	0.0946	06/13/2016 15:18	0.0926
06/13/2016 15:17	0.0948	06/13/2016 15:18	0.0924
06/13/2016 15:17	0.0949	06/13/2016 15:18	0.0919
06/13/2016 15:17	0.0949	06/13/2016 15:18	0.091
06/13/2016 15:17	0.0949	06/13/2016 15:18	0.09
06/13/2016 15:17	0.0949	06/13/2016 15:18	0.0889
06/13/2016 15:17	0.0949	06/13/2016 15:18	0.0876
06/13/2016 15:17	0.0949	06/13/2016 15:18	0.0864
06/13/2016 15:18	0.095	06/13/2016 15:18	0.0854
06/13/2016 15:18	0.095	06/13/2016 15:18	0.0846
06/13/2016 15:18	0.095	06/13/2016 15:18	0.0845
06/13/2016 15:18	0.095	06/13/2016 15:18	0.0847
06/13/2016 15:18	0.095	06/13/2016 15:18	0.0849
06/13/2016 15:18	0.095	06/13/2016 15:18	0.0846
06/13/2016 15:18	0.0949	06/13/2016 15:19	0.0838
06/13/2016 15:18	0.0949	06/13/2016 15:19	0.0827
06/13/2016 15:18	0.095	06/13/2016 15:19	0.0816
06/13/2016 15:18	0.0951	06/13/2016 15:19	0.0811
06/13/2016 15:18	0.0954	06/13/2016 15:19	0.0815
06/13/2016 15:18	0.0956	06/13/2016 15:19	0.0828
06/13/2016 15:18	0.0957	06/13/2016 15:19	0.0842
06/13/2016 15:18	0.0956	06/13/2016 15:19	0.0852
06/13/2016 15:18	0.0956	06/13/2016 15:19	0.0858
06/13/2016 15:18	0.0956	06/13/2016 15:19	0.0864
06/13/2016 15:18	0.0957	06/13/2016 15:19	0.0874
06/13/2016 15:18	0.0957	06/13/2016 15:19	0.0884
06/13/2016 15:18	0.0956	06/13/2016 15:19	0.0893
06/13/2016 15:18	0.0954	06/13/2016 15:19	0.0902
06/13/2016 15:18	0.0953	06/13/2016 15:19	0.0907
06/13/2016 15:18	0.095	06/13/2016 15:19	0.0909
06/13/2016 15:18	0.095	06/13/2016 15:19	0.0909
06/13/2016 15:18	0.0951		
06/13/2016 15:18	0.095		
06/13/2016 15:18	0.095		
06/13/2016 15:18	0.0939		
06/13/2016 15:18	0.0937		

Note:
mR/h = microRoentgens per hour

Location: Sample 5

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:20	0.0803	06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0794
06/13/2016 15:20	0.0805	06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0793
06/13/2016 15:20	0.0805	06/13/2016 15:21	0.0807	06/13/2016 15:22	0.0793
06/13/2016 15:20	0.0805	06/13/2016 15:21	0.0807	06/13/2016 15:22	0.0793
06/13/2016 15:20	0.0805	06/13/2016 15:21	0.0807	06/13/2016 15:22	0.0793
06/13/2016 15:20	0.0805	06/13/2016 15:21	0.0806	06/13/2016 15:22	0.0794
06/13/2016 15:20	0.0805	06/13/2016 15:21	0.0805	06/13/2016 15:22	0.0795
06/13/2016 15:20	0.0805	06/13/2016 15:21	0.0803	06/13/2016 15:22	0.0797
06/13/2016 15:20	0.0805	06/13/2016 15:21	0.0801	06/13/2016 15:22	0.0797
06/13/2016 15:20	0.0805	06/13/2016 15:21	0.08	06/13/2016 15:22	0.0801
06/13/2016 15:20	0.0803	06/13/2016 15:21	0.0798	06/13/2016 15:22	0.0803
06/13/2016 15:20	0.0802	06/13/2016 15:21	0.0797	06/13/2016 15:22	0.0805
06/13/2016 15:20	0.0802	06/13/2016 15:21	0.0797	06/13/2016 15:22	0.0807
06/13/2016 15:21	0.0801	06/13/2016 15:21	0.0797	06/13/2016 15:22	0.0809
06/13/2016 15:21	0.0801	06/13/2016 15:21	0.0798	06/13/2016 15:22	0.0811
06/13/2016 15:21	0.0802	06/13/2016 15:21	0.0797	06/13/2016 15:22	0.0811
06/13/2016 15:21	0.0802	06/13/2016 15:21	0.0797	06/13/2016 15:22	0.0811
06/13/2016 15:21	0.0802	06/13/2016 15:21	0.0797	06/13/2016 15:22	0.0812
06/13/2016 15:21	0.0802	06/13/2016 15:21	0.0798	06/13/2016 15:22	0.0812
06/13/2016 15:21	0.0801	06/13/2016 15:21	0.0798	06/13/2016 15:22	0.0812
06/13/2016 15:21	0.0802	06/13/2016 15:21	0.08	06/13/2016 15:22	0.0812
06/13/2016 15:21	0.0803	06/13/2016 15:21	0.08	06/13/2016 15:22	0.0812
06/13/2016 15:21	0.0803	06/13/2016 15:21	0.08	06/13/2016 15:22	0.0814
06/13/2016 15:21	0.0802	06/13/2016 15:21	0.0798	06/13/2016 15:22	0.0815
06/13/2016 15:21	0.0802	06/13/2016 15:22	0.0797	06/13/2016 15:22	0.0814
06/13/2016 15:21	0.0802	06/13/2016 15:22	0.0795	06/13/2016 15:22	0.0814
06/13/2016 15:21	0.0802	06/13/2016 15:22	0.0794	06/13/2016 15:22	0.0812
06/13/2016 15:21	0.0801	06/13/2016 15:22	0.0793	06/13/2016 15:22	0.0812
06/13/2016 15:21	0.0801	06/13/2016 15:22	0.0791	06/13/2016 15:22	0.0811
06/13/2016 15:21	0.0801	06/13/2016 15:22	0.0789	06/13/2016 15:22	0.0811
06/13/2016 15:21	0.08	06/13/2016 15:22	0.0788	06/13/2016 15:22	0.0811
06/13/2016 15:21	0.08	06/13/2016 15:22	0.0786	06/13/2016 15:22	0.0811
06/13/2016 15:21	0.0802	06/13/2016 15:22	0.0784	06/13/2016 15:22	0.0811
06/13/2016 15:21	0.0802	06/13/2016 15:22	0.0781	06/13/2016 15:22	0.0811
06/13/2016 15:21	0.0803	06/13/2016 15:22	0.078	06/13/2016 15:22	0.0811
06/13/2016 15:21	0.0803	06/13/2016 15:22	0.078	06/13/2016 15:23	0.0811
06/13/2016 15:21	0.0806	06/13/2016 15:22	0.078	06/13/2016 15:23	0.0814
06/13/2016 15:21	0.0807	06/13/2016 15:22	0.0781	06/13/2016 15:23	0.0815
06/13/2016 15:21	0.0807	06/13/2016 15:22	0.0782	06/13/2016 15:23	0.0816
06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0786	06/13/2016 15:23	0.0816
06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0788	06/13/2016 15:23	0.0818
06/13/2016 15:21	0.0809	06/13/2016 15:22	0.079	06/13/2016 15:23	0.0819
06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0793	06/13/2016 15:23	0.082
06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0795	06/13/2016 15:23	0.0822
06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0797	06/13/2016 15:23	0.0824
06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0797	06/13/2016 15:23	0.0826
06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0797	06/13/2016 15:23	0.0828
06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0795	06/13/2016 15:23	0.0828
06/13/2016 15:21	0.0809	06/13/2016 15:22	0.0795	06/13/2016 15:23	0.0829

Note:
mR/h = microRoentgens per hour

Location: Sample 5

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:23	0.0832	06/13/2016 15:24	0.0798	06/13/2016 15:24	0.0833
06/13/2016 15:23	0.0833	06/13/2016 15:24	0.0797	06/13/2016 15:24	0.0834
06/13/2016 15:23	0.0833	06/13/2016 15:24	0.0797	06/13/2016 15:25	0.0835
06/13/2016 15:23	0.0833	06/13/2016 15:24	0.0797	06/13/2016 15:25	0.0836
06/13/2016 15:23	0.0832	06/13/2016 15:24	0.0797	06/13/2016 15:25	0.0835
06/13/2016 15:23	0.0832	06/13/2016 15:24	0.0797	06/13/2016 15:25	0.0835
06/13/2016 15:23	0.0832	06/13/2016 15:24	0.0798	06/13/2016 15:25	0.0835
06/13/2016 15:23	0.0832	06/13/2016 15:24	0.0798	06/13/2016 15:25	0.0834
06/13/2016 15:23	0.0832	06/13/2016 15:24	0.0801	06/13/2016 15:25	0.0834
06/13/2016 15:23	0.0832	06/13/2016 15:24	0.0802	06/13/2016 15:25	0.0833
06/13/2016 15:23	0.0831	06/13/2016 15:24	0.0803	06/13/2016 15:25	0.0834
06/13/2016 15:23	0.0829	06/13/2016 15:24	0.0803	06/13/2016 15:25	0.0833
06/13/2016 15:23	0.0828	06/13/2016 15:24	0.0805	06/13/2016 15:25	0.0832
06/13/2016 15:23	0.0825	06/13/2016 15:24	0.0806	06/13/2016 15:25	0.0832
06/13/2016 15:23	0.0822	06/13/2016 15:24	0.0807	06/13/2016 15:25	0.0832
06/13/2016 15:23	0.082	06/13/2016 15:24	0.0809	06/13/2016 15:25	0.0832
06/13/2016 15:23	0.0819	06/13/2016 15:24	0.081	06/13/2016 15:25	0.0831
06/13/2016 15:23	0.0816	06/13/2016 15:24	0.081	06/13/2016 15:25	0.0832
06/13/2016 15:23	0.0815	06/13/2016 15:24	0.081	06/13/2016 15:25	0.0832
06/13/2016 15:23	0.0814	06/13/2016 15:24	0.081	06/13/2016 15:25	0.0833
06/13/2016 15:23	0.0811	06/13/2016 15:24	0.0811	06/13/2016 15:25	0.0832
06/13/2016 15:23	0.0811	06/13/2016 15:24	0.0812	06/13/2016 15:25	0.0832
06/13/2016 15:23	0.0811	06/13/2016 15:24	0.0814	06/13/2016 15:25	0.0832
06/13/2016 15:23	0.0811	06/13/2016 15:24	0.0816	06/13/2016 15:25	0.0831
06/13/2016 15:23	0.0811	06/13/2016 15:24	0.0816	06/13/2016 15:25	0.0829
06/13/2016 15:23	0.0811	06/13/2016 15:24	0.0819	06/13/2016 15:25	0.0829
06/13/2016 15:23	0.0811	06/13/2016 15:24	0.0819	06/13/2016 15:25	0.0829
06/13/2016 15:23	0.0811	06/13/2016 15:24	0.0819	06/13/2016 15:25	0.0829
06/13/2016 15:23	0.0811	06/13/2016 15:24	0.082	06/13/2016 15:25	0.0831
06/13/2016 15:23	0.0809	06/13/2016 15:24	0.082	06/13/2016 15:25	0.0831
06/13/2016 15:23	0.0807	06/13/2016 15:24	0.082	06/13/2016 15:25	0.0831
06/13/2016 15:23	0.0803	06/13/2016 15:24	0.0822	06/13/2016 15:25	0.0829
06/13/2016 15:23	0.0802	06/13/2016 15:24	0.0823	06/13/2016 15:25	0.0828
06/13/2016 15:23	0.08	06/13/2016 15:24	0.0824		
06/13/2016 15:23	0.0797	06/13/2016 15:24	0.0825		
06/13/2016 15:23	0.0795	06/13/2016 15:24	0.0825		
06/13/2016 15:23	0.0794	06/13/2016 15:24	0.0826		
06/13/2016 15:23	0.0794	06/13/2016 15:24	0.0826		
06/13/2016 15:23	0.0794	06/13/2016 15:24	0.0827		
06/13/2016 15:23	0.0794	06/13/2016 15:24	0.0828		
06/13/2016 15:23	0.0795	06/13/2016 15:24	0.0828		
06/13/2016 15:23	0.0795	06/13/2016 15:24	0.0829		
06/13/2016 15:23	0.0797	06/13/2016 15:24	0.0829		
06/13/2016 15:23	0.0798	06/13/2016 15:24	0.0829		
06/13/2016 15:23	0.08	06/13/2016 15:24	0.0831		
06/13/2016 15:23	0.0798	06/13/2016 15:24	0.0831		
06/13/2016 15:24	0.0801	06/13/2016 15:24	0.0831		
06/13/2016 15:24	0.0802	06/13/2016 15:24	0.0833		
06/13/2016 15:24	0.0803	06/13/2016 15:24	0.0834		
06/13/2016 15:24	0.0803	06/13/2016 15:24	0.0834		
06/13/2016 15:24	0.0802	06/13/2016 15:24	0.0833		

Note:
mR/h = microRoentgens per hour

Location: Sample 6

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:30	0.0346	06/13/2016 15:31	0.033	06/13/2016 15:31	0.034
06/13/2016 15:30	0.035	06/13/2016 15:31	0.033	06/13/2016 15:31	0.034
06/13/2016 15:30	0.0352	06/13/2016 15:31	0.033	06/13/2016 15:31	0.034
06/13/2016 15:30	0.0354	06/13/2016 15:31	0.033	06/13/2016 15:31	0.034
06/13/2016 15:30	0.0355	06/13/2016 15:31	0.033	06/13/2016 15:31	0.0341
06/13/2016 15:30	0.0354	06/13/2016 15:31	0.033	06/13/2016 15:32	0.0341
06/13/2016 15:30	0.0352	06/13/2016 15:31	0.033	06/13/2016 15:32	0.0341
06/13/2016 15:30	0.0351	06/13/2016 15:31	0.0331	06/13/2016 15:32	0.0341
06/13/2016 15:30	0.0348	06/13/2016 15:31	0.0332	06/13/2016 15:32	0.0341
06/13/2016 15:30	0.0346	06/13/2016 15:31	0.0335	06/13/2016 15:32	0.034
06/13/2016 15:30	0.0344	06/13/2016 15:31	0.0336	06/13/2016 15:32	0.0337
06/13/2016 15:30	0.0341	06/13/2016 15:31	0.0336	06/13/2016 15:32	0.0336
06/13/2016 15:30	0.0341	06/13/2016 15:31	0.0337	06/13/2016 15:32	0.0332
06/13/2016 15:30	0.034	06/13/2016 15:31	0.0336	06/13/2016 15:32	0.0332
06/13/2016 15:30	0.0339	06/13/2016 15:31	0.0336	06/13/2016 15:32	0.033
06/13/2016 15:30	0.0337	06/13/2016 15:31	0.0335	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0336	06/13/2016 15:31	0.0335	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0336	06/13/2016 15:31	0.0335	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0335	06/13/2016 15:31	0.0336	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0334	06/13/2016 15:31	0.0336	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0332	06/13/2016 15:31	0.0337	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0332	06/13/2016 15:31	0.0339	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0332	06/13/2016 15:31	0.0339	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0332	06/13/2016 15:31	0.0339	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0332	06/13/2016 15:31	0.0339	06/13/2016 15:32	0.033
06/13/2016 15:30	0.0332	06/13/2016 15:31	0.0339	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0332	06/13/2016 15:31	0.034	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0332	06/13/2016 15:31	0.034	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0331	06/13/2016 15:31	0.0341	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.033	06/13/2016 15:31	0.0341	06/13/2016 15:32	0.0328
06/13/2016 15:30	0.0331	06/13/2016 15:31	0.0343	06/13/2016 15:32	0.0327
06/13/2016 15:30	0.0332	06/13/2016 15:31	0.0343	06/13/2016 15:32	0.0327
06/13/2016 15:30	0.0334	06/13/2016 15:31	0.0344	06/13/2016 15:32	0.0326
06/13/2016 15:30	0.0335	06/13/2016 15:31	0.0345	06/13/2016 15:32	0.0326
06/13/2016 15:30	0.0335	06/13/2016 15:31	0.0345	06/13/2016 15:32	0.0324
06/13/2016 15:30	0.0335	06/13/2016 15:31	0.0345	06/13/2016 15:32	0.0324
06/13/2016 15:30	0.0336	06/13/2016 15:31	0.0344	06/13/2016 15:32	0.0322
06/13/2016 15:30	0.0336	06/13/2016 15:31	0.0344	06/13/2016 15:32	0.0322
06/13/2016 15:30	0.0336	06/13/2016 15:31	0.0344	06/13/2016 15:32	0.0322
06/13/2016 15:30	0.0336	06/13/2016 15:31	0.0343	06/13/2016 15:32	0.0322
06/13/2016 15:30	0.0336	06/13/2016 15:31	0.0343	06/13/2016 15:32	0.0324
06/13/2016 15:30	0.0336	06/13/2016 15:31	0.0341	06/13/2016 15:32	0.0324
06/13/2016 15:31	0.0336	06/13/2016 15:31	0.0341	06/13/2016 15:32	0.0326
06/13/2016 15:31	0.0335	06/13/2016 15:31	0.0341	06/13/2016 15:32	0.0326
06/13/2016 15:31	0.0334	06/13/2016 15:31	0.0341	06/13/2016 15:32	0.0326
06/13/2016 15:31	0.0332	06/13/2016 15:31	0.034	06/13/2016 15:32	0.0327
06/13/2016 15:31	0.0332	06/13/2016 15:31	0.0341	06/13/2016 15:32	0.0327
06/13/2016 15:31	0.0331	06/13/2016 15:31	0.0341	06/13/2016 15:32	0.0327

Note:
mR/h = microRoentgens per hour

Location: Sample 6

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:32	0.0326	06/13/2016 15:33	0.0344	06/13/2016 15:34	0.033
06/13/2016 15:32	0.0326	06/13/2016 15:33	0.0343	06/13/2016 15:34	0.0331
06/13/2016 15:32	0.0326	06/13/2016 15:33	0.0343	06/13/2016 15:34	0.0332
06/13/2016 15:32	0.0326	06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0332
06/13/2016 15:32	0.0328	06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0335
06/13/2016 15:32	0.0328	06/13/2016 15:33	0.034	06/13/2016 15:34	0.0336
06/13/2016 15:32	0.033	06/13/2016 15:33	0.0339	06/13/2016 15:34	0.0336
06/13/2016 15:32	0.033	06/13/2016 15:33	0.0337	06/13/2016 15:34	0.0336
06/13/2016 15:32	0.0331	06/13/2016 15:33	0.0336	06/13/2016 15:34	0.0336
06/13/2016 15:32	0.0331	06/13/2016 15:33	0.0336	06/13/2016 15:34	0.0336
06/13/2016 15:32	0.0332	06/13/2016 15:33	0.0336	06/13/2016 15:34	0.0336
06/13/2016 15:32	0.0332	06/13/2016 15:33	0.0336	06/13/2016 15:34	0.0337
06/13/2016 15:32	0.0332	06/13/2016 15:33	0.0336	06/13/2016 15:34	0.0337
06/13/2016 15:32	0.0334	06/13/2016 15:33	0.0334	06/13/2016 15:34	0.0339
06/13/2016 15:32	0.0334	06/13/2016 15:33	0.0332	06/13/2016 15:34	0.034
06/13/2016 15:32	0.0334	06/13/2016 15:33	0.0332	06/13/2016 15:34	0.0341
06/13/2016 15:33	0.0334	06/13/2016 15:33	0.0332	06/13/2016 15:34	0.0341
06/13/2016 15:33	0.0334	06/13/2016 15:33	0.0334	06/13/2016 15:34	0.0343
06/13/2016 15:33	0.0335	06/13/2016 15:33	0.0335	06/13/2016 15:34	0.0344
06/13/2016 15:33	0.0336	06/13/2016 15:33	0.0336	06/13/2016 15:34	0.0345
06/13/2016 15:33	0.0336	06/13/2016 15:33	0.0336	06/13/2016 15:34	0.0346
06/13/2016 15:33	0.0336	06/13/2016 15:33	0.0337	06/13/2016 15:34	0.0346
06/13/2016 15:33	0.0337	06/13/2016 15:33	0.034	06/13/2016 15:34	0.0346
06/13/2016 15:33	0.0337	06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0346
06/13/2016 15:33	0.0339	06/13/2016 15:34	0.0344	06/13/2016 15:34	0.0346
06/13/2016 15:33	0.0339	06/13/2016 15:34	0.0344	06/13/2016 15:34	0.0345
06/13/2016 15:33	0.0339	06/13/2016 15:34	0.0344	06/13/2016 15:34	0.0345
06/13/2016 15:33	0.034	06/13/2016 15:34	0.0344	06/13/2016 15:34	0.0344
06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0343	06/13/2016 15:34	0.0343
06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0343	06/13/2016 15:34	0.0341
06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0341	06/13/2016 15:34	0.0341
06/13/2016 15:33	0.034	06/13/2016 15:34	0.0343	06/13/2016 15:34	0.0341
06/13/2016 15:33	0.0339	06/13/2016 15:34	0.0341	06/13/2016 15:35	0.034
06/13/2016 15:33	0.0339	06/13/2016 15:34	0.0341	06/13/2016 15:35	0.0339
06/13/2016 15:33	0.0339	06/13/2016 15:34	0.0339	06/13/2016 15:35	0.0337
06/13/2016 15:33	0.0339	06/13/2016 15:34	0.0337	06/13/2016 15:35	0.0337
06/13/2016 15:33	0.0339	06/13/2016 15:34	0.0337	06/13/2016 15:35	0.0337
06/13/2016 15:33	0.0337	06/13/2016 15:34	0.0336	06/13/2016 15:35	0.0337
06/13/2016 15:33	0.0337	06/13/2016 15:34	0.0336	06/13/2016 15:35	0.0339
06/13/2016 15:33	0.0339	06/13/2016 15:34	0.0336	06/13/2016 15:35	0.034
06/13/2016 15:33	0.034	06/13/2016 15:34	0.0336	06/13/2016 15:35	0.0341
06/13/2016 15:33	0.034	06/13/2016 15:34	0.0335	06/13/2016 15:35	0.0341
06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0335	06/13/2016 15:35	0.034
06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0335	06/13/2016 15:35	0.0339
06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0334	06/13/2016 15:35	0.0337
06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0332	06/13/2016 15:35	0.0337
06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0331	06/13/2016 15:35	0.0336
06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0328	06/13/2016 15:35	0.0336
06/13/2016 15:33	0.0341	06/13/2016 15:34	0.0328	06/13/2016 15:35	0.0335
06/13/2016 15:33	0.0343	06/13/2016 15:34	0.0328	06/13/2016 15:35	0.0335
06/13/2016 15:33	0.0344	06/13/2016 15:34	0.0328	06/13/2016 15:35	0.0335

Note:
mR/h = microRoentgens per hour

Location: Sample 6

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:35	0.0335	06/13/2016 15:36	0.0343	06/13/2016 15:37	0.035
06/13/2016 15:35	0.0336	06/13/2016 15:36	0.0345	06/13/2016 15:37	0.0351
06/13/2016 15:35	0.0336	06/13/2016 15:36	0.0345	06/13/2016 15:37	0.0352
06/13/2016 15:35	0.0339	06/13/2016 15:36	0.0343	06/13/2016 15:37	0.0354
06/13/2016 15:35	0.034	06/13/2016 15:36	0.0341	06/13/2016 15:37	0.0354
06/13/2016 15:35	0.0341	06/13/2016 15:36	0.0341	06/13/2016 15:37	0.0355
06/13/2016 15:35	0.0344	06/13/2016 15:36	0.0341	06/13/2016 15:37	0.0354
06/13/2016 15:35	0.0345	06/13/2016 15:36	0.0341	06/13/2016 15:37	0.0354
06/13/2016 15:35	0.0346	06/13/2016 15:36	0.034	06/13/2016 15:37	0.0352
06/13/2016 15:35	0.0346	06/13/2016 15:36	0.034	06/13/2016 15:37	0.0351
06/13/2016 15:35	0.0346	06/13/2016 15:36	0.0339	06/13/2016 15:37	0.0348
06/13/2016 15:35	0.0345	06/13/2016 15:36	0.0339	06/13/2016 15:37	0.0346
06/13/2016 15:35	0.0344	06/13/2016 15:36	0.0337	06/13/2016 15:37	0.0345
06/13/2016 15:35	0.0343	06/13/2016 15:36	0.0336	06/13/2016 15:37	0.0344
06/13/2016 15:35	0.0341	06/13/2016 15:36	0.0336	06/13/2016 15:37	0.0343
06/13/2016 15:35	0.034	06/13/2016 15:36	0.0336	06/13/2016 15:37	0.0343
06/13/2016 15:35	0.0339	06/13/2016 15:36	0.0336	06/13/2016 15:37	0.0344
06/13/2016 15:35	0.0337	06/13/2016 15:36	0.0336	06/13/2016 15:37	0.0344
06/13/2016 15:35	0.0336	06/13/2016 15:36	0.0336	06/13/2016 15:37	0.0344
06/13/2016 15:35	0.0336	06/13/2016 15:36	0.0337	06/13/2016 15:37	0.0345
06/13/2016 15:35	0.0335	06/13/2016 15:36	0.0339	06/13/2016 15:37	0.0346
06/13/2016 15:35	0.0334	06/13/2016 15:36	0.034	06/13/2016 15:37	0.0348
06/13/2016 15:35	0.0334	06/13/2016 15:36	0.034	06/13/2016 15:37	0.0348
06/13/2016 15:35	0.0334	06/13/2016 15:36	0.0341	06/13/2016 15:37	0.035
06/13/2016 15:35	0.0334	06/13/2016 15:36	0.0341	06/13/2016 15:37	0.035
06/13/2016 15:35	0.0334	06/13/2016 15:36	0.0341	06/13/2016 15:37	0.035
06/13/2016 15:35	0.0334	06/13/2016 15:36	0.0341	06/13/2016 15:37	0.0351
06/13/2016 15:35	0.0334	06/13/2016 15:36	0.034	06/13/2016 15:37	0.0351
06/13/2016 15:35	0.0334	06/13/2016 15:36	0.034	06/13/2016 15:37	0.035
06/13/2016 15:35	0.0332	06/13/2016 15:36	0.0339	06/13/2016 15:37	0.035
06/13/2016 15:35	0.0332	06/13/2016 15:36	0.0339	06/13/2016 15:37	0.035
06/13/2016 15:35	0.0332	06/13/2016 15:36	0.034	06/13/2016 15:37	0.0348
06/13/2016 15:35	0.0334	06/13/2016 15:36	0.034	06/13/2016 15:37	0.0348
06/13/2016 15:35	0.0335	06/13/2016 15:36	0.0341	06/13/2016 15:37	0.0348
06/13/2016 15:35	0.0336	06/13/2016 15:36	0.0343	06/13/2016 15:37	0.0348
06/13/2016 15:35	0.0337	06/13/2016 15:36	0.0345	06/13/2016 15:37	0.0348
06/13/2016 15:35	0.0339	06/13/2016 15:36	0.0346	06/13/2016 15:37	0.0348
06/13/2016 15:35	0.034	06/13/2016 15:36	0.0346	06/13/2016 15:37	0.0348
06/13/2016 15:35	0.034	06/13/2016 15:36	0.0348	06/13/2016 15:37	0.0346
06/13/2016 15:35	0.034	06/13/2016 15:36	0.0348	06/13/2016 15:37	0.0346
06/13/2016 15:36	0.0341	06/13/2016 15:36	0.0346	06/13/2016 15:37	0.0345
06/13/2016 15:36	0.0341	06/13/2016 15:36	0.0346	06/13/2016 15:37	0.0344
06/13/2016 15:36	0.0341	06/13/2016 15:36	0.0346	06/13/2016 15:37	0.0344
06/13/2016 15:36	0.0341	06/13/2016 15:36	0.0346	06/13/2016 15:37	0.0344
06/13/2016 15:36	0.0341	06/13/2016 15:36	0.0348	06/13/2016 15:37	0.0344
06/13/2016 15:36	0.0343	06/13/2016 15:36	0.0348	06/13/2016 15:37	0.0345
06/13/2016 15:36	0.0343	06/13/2016 15:37	0.0348	06/13/2016 15:37	0.0348
06/13/2016 15:36	0.0343	06/13/2016 15:37	0.0348	06/13/2016 15:37	0.0348
06/13/2016 15:36	0.0343	06/13/2016 15:37	0.0348	06/13/2016 15:37	0.0348
06/13/2016 15:36	0.0345	06/13/2016 15:37	0.0348	06/13/2016 15:38	0.0348
06/13/2016 15:36	0.0345	06/13/2016 15:37	0.0348	06/13/2016 15:38	0.0348

Note:
mR/h = microRoentgens per hour

Location: Sample 6

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:38	0.0348	06/13/2016 15:38	0.0348
06/13/2016 15:38	0.0348	06/13/2016 15:38	0.0348
06/13/2016 15:38	0.0348	06/13/2016 15:38	0.0348
06/13/2016 15:38	0.0348	06/13/2016 15:38	0.0346
06/13/2016 15:38	0.0346	06/13/2016 15:38	0.0346
06/13/2016 15:38	0.0345	06/13/2016 15:39	0.0346
06/13/2016 15:38	0.0344	06/13/2016 15:39	0.0345
06/13/2016 15:38	0.0343	06/13/2016 15:39	0.0344
06/13/2016 15:38	0.0343	06/13/2016 15:39	0.0343
06/13/2016 15:38	0.0341	06/13/2016 15:39	0.0343
06/13/2016 15:38	0.0341	06/13/2016 15:39	0.0341
06/13/2016 15:38	0.0341	06/13/2016 15:39	0.0341
06/13/2016 15:38	0.034	06/13/2016 15:39	0.0341
06/13/2016 15:38	0.0337	06/13/2016 15:39	0.0343
06/13/2016 15:38	0.0336	06/13/2016 15:39	0.0343
06/13/2016 15:38	0.0336	06/13/2016 15:39	0.0343
06/13/2016 15:38	0.0335	06/13/2016 15:39	0.0341
06/13/2016 15:38	0.0335	06/13/2016 15:39	0.0341
06/13/2016 15:38	0.0334	06/13/2016 15:39	0.034
06/13/2016 15:38	0.0334	06/13/2016 15:39	0.0339
06/13/2016 15:37	0.0348	06/13/2016 15:39	0.0337
06/13/2016 15:37	0.0346	06/13/2016 15:39	0.0336
06/13/2016 15:38	0.0335	06/13/2016 15:39	0.0335
06/13/2016 15:38	0.0336	06/13/2016 15:39	0.0332
06/13/2016 15:38	0.0336	06/13/2016 15:39	0.0332
06/13/2016 15:38	0.0336	06/13/2016 15:39	0.0332
06/13/2016 15:38	0.0336	06/13/2016 15:39	0.0332
06/13/2016 15:38	0.0336	06/13/2016 15:39	0.0334
06/13/2016 15:38	0.0336	06/13/2016 15:39	0.0332
06/13/2016 15:38	0.0336	06/13/2016 15:39	0.0332
06/13/2016 15:38	0.0337	06/13/2016 15:39	0.0334
06/13/2016 15:38	0.0339	06/13/2016 15:39	0.0334
06/13/2016 15:38	0.034	06/13/2016 15:51	0.0352
06/13/2016 15:38	0.0341	06/13/2016 15:37	0.0346
06/13/2016 15:38	0.0341		
06/13/2016 15:38	0.0343		
06/13/2016 15:38	0.0343		
06/13/2016 15:38	0.0343		
06/13/2016 15:38	0.0343		
06/13/2016 15:38	0.0341		
06/13/2016 15:38	0.0341		
06/13/2016 15:38	0.0343		
06/13/2016 15:38	0.0345		
06/13/2016 15:38	0.035		
06/13/2016 15:38	0.0351		
06/13/2016 15:38	0.0351		
06/13/2016 15:38	0.0351		
06/13/2016 15:38	0.035		
06/13/2016 15:38	0.0348		
06/13/2016 15:38	0.0348		
06/13/2016 15:38	0.0346		
06/13/2016 15:38	0.0346		

Note:
mR/h = microRoentgens per hour

Location: Sample 7

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:52	0.0247	06/13/2016 15:53	0.0218	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0245	06/13/2016 15:53	0.0218	06/13/2016 15:54	0.0219
06/13/2016 15:52	0.0245	06/13/2016 15:53	0.0218	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0243	06/13/2016 15:53	0.0219	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0243	06/13/2016 15:53	0.022	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0243	06/13/2016 15:53	0.0221	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0242	06/13/2016 15:53	0.0222	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0242	06/13/2016 15:53	0.0223	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0241	06/13/2016 15:53	0.0223	06/13/2016 15:54	0.022
06/13/2016 15:52	0.024	06/13/2016 15:53	0.0225	06/13/2016 15:54	0.0221
06/13/2016 15:52	0.0239	06/13/2016 15:53	0.0227	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0239	06/13/2016 15:53	0.0228	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0237	06/13/2016 15:53	0.0229	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0237	06/13/2016 15:53	0.023	06/13/2016 15:54	0.0221
06/13/2016 15:52	0.0237	06/13/2016 15:53	0.0231	06/13/2016 15:54	0.0221
06/13/2016 15:52	0.0237	06/13/2016 15:53	0.0231	06/13/2016 15:54	0.0222
06/13/2016 15:52	0.0237	06/13/2016 15:53	0.0232	06/13/2016 15:54	0.0223
06/13/2016 15:52	0.0235	06/13/2016 15:53	0.0231	06/13/2016 15:54	0.0223
06/13/2016 15:52	0.0235	06/13/2016 15:53	0.023	06/13/2016 15:54	0.0223
06/13/2016 15:52	0.0234	06/13/2016 15:53	0.023	06/13/2016 15:54	0.0223
06/13/2016 15:52	0.0233	06/13/2016 15:53	0.0229	06/13/2016 15:54	0.0223
06/13/2016 15:52	0.0232	06/13/2016 15:53	0.0228	06/13/2016 15:54	0.0222
06/13/2016 15:52	0.0232	06/13/2016 15:53	0.0228	06/13/2016 15:54	0.0222
06/13/2016 15:52	0.0232	06/13/2016 15:53	0.0229	06/13/2016 15:54	0.0222
06/13/2016 15:52	0.0232	06/13/2016 15:53	0.0229	06/13/2016 15:54	0.0221
06/13/2016 15:52	0.0231	06/13/2016 15:53	0.0229	06/13/2016 15:54	0.0221
06/13/2016 15:52	0.0231	06/13/2016 15:53	0.0229	06/13/2016 15:54	0.0221
06/13/2016 15:52	0.0229	06/13/2016 15:53	0.023	06/13/2016 15:54	0.0221
06/13/2016 15:52	0.0229	06/13/2016 15:53	0.0231	06/13/2016 15:54	0.0222
06/13/2016 15:52	0.0228	06/13/2016 15:53	0.0231	06/13/2016 15:54	0.0222
06/13/2016 15:52	0.0228	06/13/2016 15:53	0.0231	06/13/2016 15:54	0.0221
06/13/2016 15:52	0.0228	06/13/2016 15:53	0.0231	06/13/2016 15:54	0.0221
06/13/2016 15:52	0.0227	06/13/2016 15:53	0.0231	06/13/2016 15:54	0.0222
06/13/2016 15:52	0.0227	06/13/2016 15:53	0.0231	06/13/2016 15:54	0.0222
06/13/2016 15:52	0.0225	06/13/2016 15:53	0.023	06/13/2016 15:54	0.0221
06/13/2016 15:52	0.0225	06/13/2016 15:53	0.0228	06/13/2016 15:54	0.022
06/13/2016 15:52	0.0225	06/13/2016 15:53	0.0227	06/13/2016 15:54	0.0219
06/13/2016 15:53	0.0223	06/13/2016 15:53	0.0225	06/13/2016 15:54	0.0219
06/13/2016 15:53	0.0223	06/13/2016 15:53	0.0225	06/13/2016 15:54	0.0219
06/13/2016 15:53	0.0223	06/13/2016 15:53	0.0223	06/13/2016 15:54	0.0219
06/13/2016 15:53	0.0223	06/13/2016 15:53	0.0223	06/13/2016 15:54	0.022
06/13/2016 15:53	0.0221	06/13/2016 15:53	0.0222	06/13/2016 15:54	0.0221
06/13/2016 15:53	0.022	06/13/2016 15:53	0.0222	06/13/2016 15:54	0.0222
06/13/2016 15:53	0.0219	06/13/2016 15:53	0.0221	06/13/2016 15:54	0.0223
06/13/2016 15:53	0.0219	06/13/2016 15:53	0.0221	06/13/2016 15:54	0.0223
06/13/2016 15:53	0.0219	06/13/2016 15:53	0.022	06/13/2016 15:54	0.0225
06/13/2016 15:53	0.0219	06/13/2016 15:53	0.022	06/13/2016 15:54	0.0225
06/13/2016 15:53	0.0219	06/13/2016 15:53	0.022	06/13/2016 15:54	0.0228
06/13/2016 15:53	0.0218	06/13/2016 15:54	0.022	06/13/2016 15:54	0.0229

Note:
mR/h = microRoentgens per hour

Location: Sample 7

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 15:54	0.023	06/13/2016 15:55	0.0234	06/13/2016 15:56	0.0231
06/13/2016 15:54	0.023	06/13/2016 15:55	0.0234	06/13/2016 15:56	0.0231
06/13/2016 15:54	0.023	06/13/2016 15:55	0.0235	06/13/2016 15:56	0.0231
06/13/2016 15:54	0.0231	06/13/2016 15:55	0.0237	06/13/2016 15:56	0.0231
06/13/2016 15:54	0.0232	06/13/2016 15:55	0.0239	06/13/2016 15:56	0.023
06/13/2016 15:54	0.0233	06/13/2016 15:55	0.0239	06/13/2016 15:56	0.0228
06/13/2016 15:54	0.0234	06/13/2016 15:55	0.0239	06/13/2016 15:56	0.0227
06/13/2016 15:54	0.0235	06/13/2016 15:55	0.0239	06/13/2016 15:56	0.0227
06/13/2016 15:54	0.0235	06/13/2016 15:55	0.0239	06/13/2016 15:56	0.0225
06/13/2016 15:54	0.0235	06/13/2016 15:55	0.0239	06/13/2016 15:56	0.0225
06/13/2016 15:55	0.0234	06/13/2016 15:55	0.0237	06/13/2016 15:56	0.0223
06/13/2016 15:55	0.0234	06/13/2016 15:55	0.0237	06/13/2016 15:56	0.0222
06/13/2016 15:55	0.0233	06/13/2016 15:55	0.0235	06/13/2016 15:56	0.0222
06/13/2016 15:55	0.0232	06/13/2016 15:55	0.0235	06/13/2016 15:56	0.0221
06/13/2016 15:55	0.0231	06/13/2016 15:55	0.0235	06/13/2016 15:56	0.022
06/13/2016 15:55	0.023	06/13/2016 15:55	0.0233	06/13/2016 15:56	0.022
06/13/2016 15:55	0.0229	06/13/2016 15:55	0.0233	06/13/2016 15:56	0.0219
06/13/2016 15:55	0.0228	06/13/2016 15:55	0.0233	06/13/2016 15:56	0.0217
06/13/2016 15:55	0.0227	06/13/2016 15:56	0.0234	06/13/2016 15:56	0.0216
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0235	06/13/2016 15:56	0.0215
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:56	0.0213
06/13/2016 15:55	0.0223	06/13/2016 15:56	0.0237	06/13/2016 15:56	0.0213
06/13/2016 15:55	0.0223	06/13/2016 15:56	0.0237	06/13/2016 15:56	0.0213
06/13/2016 15:55	0.0223	06/13/2016 15:56	0.0239	06/13/2016 15:56	0.0213
06/13/2016 15:55	0.0223	06/13/2016 15:56	0.0239	06/13/2016 15:56	0.0213
06/13/2016 15:55	0.0223	06/13/2016 15:56	0.0239	06/13/2016 15:56	0.0213
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0213
06/13/2016 15:55	0.0227	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0213
06/13/2016 15:55	0.0228	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0213
06/13/2016 15:55	0.0228	06/13/2016 15:56	0.0235	06/13/2016 15:57	0.0213
06/13/2016 15:55	0.0228	06/13/2016 15:56	0.0234	06/13/2016 15:57	0.0213
06/13/2016 15:55	0.0228	06/13/2016 15:56	0.0234	06/13/2016 15:57	0.0215
06/13/2016 15:55	0.0227	06/13/2016 15:56	0.0235	06/13/2016 15:57	0.0219
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0235	06/13/2016 15:57	0.0222
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0225
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0228
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0229
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0231
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0231
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0231
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0231
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.023
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0239	06/13/2016 15:57	0.023
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0237	06/13/2016 15:57	0.0229
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0235	06/13/2016 15:57	0.0228
06/13/2016 15:55	0.0227	06/13/2016 15:56	0.0234	06/13/2016 15:57	0.0229
06/13/2016 15:55	0.0225	06/13/2016 15:56	0.0233	06/13/2016 15:57	0.023
06/13/2016 15:55	0.0228	06/13/2016 15:56	0.0233	06/13/2016 15:57	0.0231
06/13/2016 15:55	0.0229	06/13/2016 15:56	0.0232	06/13/2016 15:57	0.023
06/13/2016 15:55	0.0231	06/13/2016 15:56	0.0231	06/13/2016 15:57	0.0232
06/13/2016 15:55	0.0232	06/13/2016 15:56	0.0232	06/13/2016 15:57	0.0233

Note:
mR/h = microRoentgens per hour

Location: Sample 7

Date / Time	Exposure Rate (mR/h)
06/13/2016 15:57	0.0233
06/13/2016 15:57	0.0232
06/13/2016 15:57	0.0231
06/13/2016 15:57	0.023
06/13/2016 15:57	0.0229
06/13/2016 15:57	0.0228
06/13/2016 15:57	0.0227
06/13/2016 15:57	0.0225
06/13/2016 15:57	0.0225
06/13/2016 15:57	0.0225
06/13/2016 15:57	0.0223
06/13/2016 15:57	0.0223
06/13/2016 15:57	0.0222
06/13/2016 15:57	0.0221
06/13/2016 15:57	0.022
06/13/2016 15:57	0.0219

Note:
mR/h = microRoentgens per hour

Location: Sample 8

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 16:06	0.0189	06/13/2016 16:07	0.019	06/13/2016 16:08	0.019
06/13/2016 16:07	0.0187	06/13/2016 16:07	0.0192	06/13/2016 16:08	0.019
06/13/2016 16:07	0.0185	06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0192
06/13/2016 16:07	0.0184	06/13/2016 16:07	0.0194	06/13/2016 16:08	0.0194
06/13/2016 16:07	0.0184	06/13/2016 16:07	0.0194	06/13/2016 16:08	0.0194
06/13/2016 16:07	0.0185	06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0194
06/13/2016 16:07	0.0186	06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0194
06/13/2016 16:07	0.0187	06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0194
06/13/2016 16:07	0.0188	06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0194
06/13/2016 16:07	0.0188	06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0192
06/13/2016 16:07	0.0188	06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0192
06/13/2016 16:07	0.0189	06/13/2016 16:08	0.019	06/13/2016 16:08	0.0192
06/13/2016 16:07	0.0189	06/13/2016 16:08	0.019	06/13/2016 16:08	0.019
06/13/2016 16:07	0.0189	06/13/2016 16:08	0.0192	06/13/2016 16:08	0.019
06/13/2016 16:07	0.019	06/13/2016 16:08	0.0192	06/13/2016 16:08	0.019
06/13/2016 16:07	0.019	06/13/2016 16:08	0.0192	06/13/2016 16:08	0.0189
06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0192	06/13/2016 16:08	0.0188
06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0194	06/13/2016 16:08	0.0187
06/13/2016 16:07	0.0194	06/13/2016 16:08	0.0192	06/13/2016 16:08	0.0186
06/13/2016 16:07	0.0194	06/13/2016 16:08	0.0192	06/13/2016 16:08	0.0185
06/13/2016 16:07	0.0196	06/13/2016 16:08	0.0192	06/13/2016 16:08	0.0184
06/13/2016 16:07	0.0196	06/13/2016 16:08	0.0192	06/13/2016 16:09	0.0182
06/13/2016 16:07	0.0197	06/13/2016 16:08	0.0192	06/13/2016 16:09	0.0182
06/13/2016 16:07	0.0198	06/13/2016 16:08	0.0192	06/13/2016 16:09	0.0182
06/13/2016 16:07	0.0199	06/13/2016 16:08	0.0194	06/13/2016 16:09	0.0182
06/13/2016 16:07	0.0199	06/13/2016 16:08	0.0194	06/13/2016 16:09	0.0182
06/13/2016 16:07	0.0199	06/13/2016 16:08	0.0194	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0198	06/13/2016 16:08	0.0194	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0198	06/13/2016 16:08	0.0194	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0197	06/13/2016 16:08	0.0192	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0196	06/13/2016 16:08	0.0192	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0196	06/13/2016 16:08	0.0192	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0194	06/13/2016 16:08	0.0192	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0194	06/13/2016 16:08	0.0192	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0192	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0192	06/13/2016 16:08	0.019	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0192	06/13/2016 16:08	0.019	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0189	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0192	06/13/2016 16:08	0.0188	06/13/2016 16:09	0.018
06/13/2016 16:07	0.019	06/13/2016 16:08	0.0188	06/13/2016 16:09	0.018
06/13/2016 16:07	0.019	06/13/2016 16:08	0.0187	06/13/2016 16:09	0.018
06/13/2016 16:07	0.019	06/13/2016 16:08	0.0186	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0189	06/13/2016 16:08	0.0186	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0189	06/13/2016 16:08	0.0186	06/13/2016 16:09	0.0179
06/13/2016 16:07	0.0188	06/13/2016 16:08	0.0186	06/13/2016 16:09	0.0178
06/13/2016 16:07	0.0188	06/13/2016 16:08	0.0188	06/13/2016 16:09	0.0178
06/13/2016 16:07	0.0188	06/13/2016 16:08	0.0189	06/13/2016 16:09	0.0179
06/13/2016 16:07	0.0187	06/13/2016 16:08	0.0189	06/13/2016 16:09	0.018
06/13/2016 16:07	0.0188	06/13/2016 16:08	0.019	06/13/2016 16:09	0.018

Note:
mR/h = microRoentgens per hour

Location: Sample 8

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 16:09	0.0182	06/13/2016 16:10	0.019	06/13/2016 16:11	0.0192
06/13/2016 16:09	0.0182	06/13/2016 16:10	0.0189	06/13/2016 16:11	0.0192
06/13/2016 16:09	0.0182	06/13/2016 16:10	0.0189	06/13/2016 16:11	0.0192
06/13/2016 16:09	0.018	06/13/2016 16:10	0.0188	06/13/2016 16:11	0.019
06/13/2016 16:09	0.018	06/13/2016 16:10	0.0188	06/13/2016 16:11	0.019
06/13/2016 16:09	0.018	06/13/2016 16:10	0.0188	06/13/2016 16:11	0.019
06/13/2016 16:09	0.0182	06/13/2016 16:10	0.0187	06/13/2016 16:11	0.0192
06/13/2016 16:09	0.0184	06/13/2016 16:10	0.0188	06/13/2016 16:11	0.019
06/13/2016 16:09	0.0185	06/13/2016 16:10	0.0188	06/13/2016 16:11	0.0192
06/13/2016 16:09	0.0186	06/13/2016 16:10	0.0188	06/13/2016 16:11	0.0192
06/13/2016 16:09	0.0187	06/13/2016 16:10	0.0188	06/13/2016 16:11	0.0192
06/13/2016 16:09	0.0188	06/13/2016 16:10	0.0189	06/13/2016 16:11	0.0192
06/13/2016 16:09	0.0189	06/13/2016 16:10	0.0189	06/13/2016 16:11	0.0192
06/13/2016 16:09	0.0188	06/13/2016 16:10	0.0189	06/13/2016 16:11	0.0192
06/13/2016 16:09	0.0188	06/13/2016 16:10	0.0189	06/13/2016 16:11	0.019
06/13/2016 16:09	0.0187	06/13/2016 16:10	0.0189	06/13/2016 16:11	0.019
06/13/2016 16:09	0.0187	06/13/2016 16:10	0.0189	06/13/2016 16:11	0.019
06/13/2016 16:09	0.0187	06/13/2016 16:10	0.019	06/13/2016 16:11	0.0188
06/13/2016 16:09	0.0188	06/13/2016 16:10	0.019	06/13/2016 16:11	0.0187
06/13/2016 16:09	0.0188	06/13/2016 16:10	0.019	06/13/2016 16:11	0.0186
06/13/2016 16:09	0.0189	06/13/2016 16:10	0.019	06/13/2016 16:11	0.0186
06/13/2016 16:09	0.019	06/13/2016 16:10	0.019	06/13/2016 16:11	0.0185
06/13/2016 16:09	0.019	06/13/2016 16:10	0.0192	06/13/2016 16:11	0.0186
06/13/2016 16:09	0.019	06/13/2016 16:10	0.019	06/13/2016 16:11	0.0187
06/13/2016 16:09	0.0189	06/13/2016 16:10	0.019	06/13/2016 16:11	0.0188
06/13/2016 16:09	0.0188	06/13/2016 16:10	0.019	06/13/2016 16:11	0.0189
06/13/2016 16:09	0.0188	06/13/2016 16:10	0.0188	06/13/2016 16:11	0.019
06/13/2016 16:09	0.0188	06/13/2016 16:10	0.0187	06/13/2016 16:11	0.019
06/13/2016 16:09	0.0187	06/13/2016 16:10	0.0186	06/13/2016 16:11	0.019
06/13/2016 16:09	0.0187	06/13/2016 16:10	0.0185	06/13/2016 16:11	0.019
06/13/2016 16:09	0.0188	06/13/2016 16:10	0.0184	06/13/2016 16:11	0.019
06/13/2016 16:10	0.0189	06/13/2016 16:10	0.0184	06/13/2016 16:11	0.0189
06/13/2016 16:10	0.019	06/13/2016 16:10	0.0184	06/13/2016 16:11	0.0189
06/13/2016 16:10	0.0192	06/13/2016 16:10	0.0185	06/13/2016 16:11	0.0188
06/13/2016 16:10	0.0194	06/13/2016 16:10	0.0185	06/13/2016 16:11	0.0187
06/13/2016 16:10	0.0194	06/13/2016 16:10	0.0185	06/13/2016 16:11	0.0185
06/13/2016 16:10	0.0194	06/13/2016 16:10	0.0185	06/13/2016 16:11	0.0184
06/13/2016 16:10	0.0194	06/13/2016 16:10	0.0184	06/13/2016 16:11	0.0182
06/13/2016 16:10	0.0196	06/13/2016 16:10	0.0185	06/13/2016 16:11	0.0182
06/13/2016 16:10	0.0198	06/13/2016 16:11	0.0187	06/13/2016 16:11	0.018
06/13/2016 16:10	0.0199	06/13/2016 16:11	0.0188	06/13/2016 16:11	0.018
06/13/2016 16:10	0.02	06/13/2016 16:11	0.0189	06/13/2016 16:11	0.018
06/13/2016 16:10	0.02	06/13/2016 16:11	0.019	06/13/2016 16:11	0.0182
06/13/2016 16:10	0.02	06/13/2016 16:11	0.019	06/13/2016 16:11	0.0182
06/13/2016 16:10	0.02	06/13/2016 16:11	0.019	06/13/2016 16:11	0.0182
06/13/2016 16:10	0.0199	06/13/2016 16:11	0.019	06/13/2016 16:11	0.0182
06/13/2016 16:10	0.0198	06/13/2016 16:11	0.019	06/13/2016 16:11	0.0182
06/13/2016 16:10	0.0197	06/13/2016 16:11	0.0192	06/13/2016 16:12	0.0185
06/13/2016 16:10	0.0196	06/13/2016 16:11	0.0192	06/13/2016 16:12	0.0186
06/13/2016 16:10	0.0194	06/13/2016 16:11	0.0192	06/13/2016 16:12	0.0187
06/13/2016 16:10	0.019	06/13/2016 16:11	0.0192	06/13/2016 16:12	0.0188

Note:
mR/h = microRoentgens per hour

Location: Sample 8

Date / Time	Exposure Rate (mR/h)	Date / Time	Exposure Rate (mR/h)
06/13/2016 16:12	0.019	06/13/2016 16:12	0.0189
06/13/2016 16:12	0.019	06/13/2016 16:12	0.019
06/13/2016 16:12	0.019	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0192	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0192	06/13/2016 16:13	0.019
06/13/2016 16:12	0.019	06/13/2016 16:13	0.019
06/13/2016 16:12	0.019	06/13/2016 16:13	0.0192
06/13/2016 16:12	0.019	06/13/2016 16:13	0.0192
06/13/2016 16:12	0.019	06/13/2016 16:13	0.0192
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0188	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0187	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0186	06/13/2016 16:13	0.0188
06/13/2016 16:12	0.0186	06/13/2016 16:13	0.0187
06/13/2016 16:12	0.0185	06/13/2016 16:13	0.0186
06/13/2016 16:12	0.0184	06/13/2016 16:13	0.0184
06/13/2016 16:12	0.0182	06/13/2016 16:13	0.0184
06/13/2016 16:12	0.0182	06/13/2016 16:13	0.0185
06/13/2016 16:12	0.0182	06/13/2016 16:13	0.0185
06/13/2016 16:12	0.0182	06/13/2016 16:13	0.0184
06/13/2016 16:12	0.0184	06/13/2016 16:13	0.0184
06/13/2016 16:12	0.0185	06/13/2016 16:13	0.0184
06/13/2016 16:12	0.0185	06/13/2016 16:13	0.0182
06/13/2016 16:12	0.0186	06/13/2016 16:13	0.0182
06/13/2016 16:12	0.0188	06/13/2016 16:13	0.0182
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.0182
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.0184
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.0185
06/13/2016 16:12	0.0188	06/13/2016 16:13	0.0185
06/13/2016 16:12	0.0188	06/13/2016 16:13	0.0186
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.0187
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.0189
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.0192
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.0192
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0189	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0188	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0188	06/13/2016 16:13	0.0192
06/13/2016 16:12	0.0187	06/13/2016 16:13	0.0192
06/13/2016 16:12	0.0186	06/13/2016 16:13	0.0192
06/13/2016 16:12	0.0186	06/13/2016 16:13	0.0192
06/13/2016 16:12	0.0186	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0187	06/13/2016 16:13	0.019
06/13/2016 16:12	0.0188	06/13/2016 16:13	0.0188
06/13/2016 16:12	0.0188		
06/13/2016 16:12	0.019		
06/13/2016 16:12	0.019		

Note:
mR/h = microRoentgens per hour

Appendix D. Laboratory Analytical Results

Gamma Spectroscopy

Case Narrative

Environmental Restoration Group, Inc.

Permits West-Section 12 Mine – 0216-01-02

Work Order Number: 1606332

1. This report consists of the analytical results for ten soil samples received by ALS on 6/17/2016.

2. These samples were prepared according to the current revision of SOP 736 and SOP 739. The samples were sealed in steel cans on 6/21/2016 and stored for at least 21 days to allow ^{222}Rn to approach secular equilibrium with its parent, ^{226}Ra. The degree of ingrowth achieved prior to analysis on 7/12/2016 is at least 97.8%. Conservatively assuming a radon emanation efficiency of approximately 50%, the effective radon progeny ingrowth for these samples would be greater than 98.9%.

3. The samples were analyzed for the presence of gamma emitting radionuclides according to the current revision of SOP 713. The analyses were completed on 7/12/2016.

4. The results for these samples are reported on a “Dry Weight” basis in units of pCi/gram.

5. ALS has observed a reproducible low bias in ^{226}Ra results (about -30% for the geometry in question) when using a mixed gamma source for the calibration of HPGe detectors for solid samples. This bias is eliminated by calibration using a NIST traceable ^{226}Ra source in the same geometry and configuration as the samples.

6. The library used for calibration and analysis employs multiple peaks for the ^{226}Ra progeny, ^{214}Pb (352 and 295 keV) and ^{214}Bi (609 and 1120 keV). Using these peaks avoids the use of the problematic ^{226}Ra photopeak at 186 keV, which suffers from poorly resolvable interference from ^{235}U at the same energy. Final activity results for ^{226}Ra are calculated, using the uncertainty-weighted mean of the activities for the four photopeaks, by the Seeker gamma spectroscopy software assuming secular equilibrium.

7. In cases where there are no peaks found in the peak search routine, the software performs a net quantification. This indicates that nuclides are not detected or supported at any level above the reported MDC. Consequently, these nuclides are flagged with an "NQ" qualifier on the final reports. Please refer to the Technical Bulletin Addendum at the end of this report.

8. ALS has found there to be a significant low bias to ^{214}Pb and ^{214}Bi results when using a mixed nuclide gamma source for efficiency calibrations. The magnitude of this bias has been determined to be approximately 32% for ^{214}Bi, and 23% for ^{214}Pb. Therefore, any reported results for ^{214}Pb and ^{214}Bi are flagged with a "J" qualifier, indicating the activity values to be an estimated value. Results are reported without further qualification

9. Activity concentrations above the calculated MDC are reported in some instances where minimum nuclide identification criteria are not met. Such tentative identifications result when the software attempts to calculate net activity concentrations for analytes where either one or both of the following criteria are not satisfied: the 'diagnostic' peak for a nuclide must be identified above the critical level, or the minimum library peak abundance must be attained. Nuclides not meeting these requirements have been flagged with a "TI" qualifier.

10. There are cases where the sample density is less than the associated calibration standard density. Cases that exceed the limit of +/- 15% of the density of the calibration standard are flagged with a 'G', denoting a significant density difference between the sample and calibration standard. Consequently, the results may be biased high for the flagged results in this work order. If requested, ALS can perform a transmission spike in order to estimate a magnitude of this bias. The results are reported without further qualification.

11. Upon review of the raw data for samples 1606332-5 and 6, it was noted that there was observed activity greater than the achieved detection limit for ^{227}Th. However, in the analyst's judgment this quantification is rejected due to mis-identification of one photo-peak and lack of other supporting photo-peaks. In this sample, the software identified a peak at 235.65 keV for sample 1606332-5 and at 235.85 keV for sample 6 as ^{227}Th. The emission of ^{227}Th occurs at 236.00 keV. Although this is within the 2.0 keV search tolerance of the software, it is not believed to be an emission of ^{227}Th based on this sample not showing any evidence of the other supporting peak for ^{227}Th. Thus, in the analyst's judgment, there is no measurable activity greater than the reported detection limit for ^{227}Th in this sample. The result for this nuclide is flagged with an 'SI' qualifier on the final report to indicate that the reported activity for this nuclide is considered to be a 'false-positive' due to peak mis-identification. Results are submitted without further qualification

12. There are cases where the magnitude of negative activity is greater than the 3σ TPU. ALS is currently investigating the possible cause and frequency of this occurrence. Review of the data does not indicate a problem with the instrument or reporting systems and results are reported without further qualification.

13. No further problems were encountered with either the client samples or the associated quality control samples. All remaining quality control criteria were met.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.

Hannah Alt — 7/14/16

Hannah Alt
Radiochemistry Primary Data Reviewer

Date

7/15/16

Radiochemistry Final Data Reviewer

Date

ALS Environmental -- FC

Sample Number(s) Cross-Reference Table

OrderNum: 1606332
Client Name: Environmental Restoration Group, Inc.
Client Project Name: Permits West-Section 12 Mine
Client Project Number: 0216-01-02
Client PO Number: CF-PWest-061616

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
S12BRA-01-06-061316	1606332-1		SOIL	13-Jun-16	13:58
S12BRA-02-06-061316	1606332-2		SOIL	13-Jun-16	14:08
S12-01-06-061316	1606332-3		SOIL	13-Jun-16	14:35
S12-02-06-061316	1606332-4		SOIL	13-Jun-16	14:46
S12-03-06-061316	1606332-5		SOIL	13-Jun-16	15:00
S12-04-06-061316	1606332-6		SOIL	13-Jun-16	15:15
S12-05-06-061316	1606332-7		SOIL	13-Jun-16	15:22
S12-06-06-061316	1606332-8		SOIL	13-Jun-16	15:32
S12-07-06-061316	1606332-9		SOIL	13-Jun-16	15:54
S12-08-06-061316	1606332-10		SOIL	13-Jun-16	16:05

ALS Environmental

225 Commerce Drive, Fort Collins, Colorado 80524
TF: (800) 443-1511 PH: (970) 490-1511 FX: (970) 490-1522

Chain-of-Custody

Turnaround time for samples received after 2 p.m. will be calculated beginning from the next business day.

Turnaround time for samples received Saturday will be calculated beginning from the next business day.

ALS WORKORDER #	
1606332	
PAGE	1 of 1
DISPOSAL	BY LAB or RETURN

TURNAROUND TIME	ASAP	SAMPLER	CFarr

PROJECT NAME	Permits West - Section 12 Mine	SITE ID	Sec12
PROJECT No.	0216-01-02	EDD FORMAT	Electronic
		PURCHASE ORDER	CF-PWest-061616
COMPANY NAME	ERG	BILL TO COMPANY	ERG
SEND REPORT TO	Chuck Farr	INVOICE ATTN TO	Chuck Farr
ADDRESS	8809 Washington St. NE, #150	ADDRESS	8809 Washington St. NE, #150
CITY / STATE / ZIP	Albuquerque, NM 87113	CITY / STATE / ZIP	Albuquerque, NM 87113
PHONE	505-298-4224	PHONE	505-298-4224
FAX	505-797-1404	FAX	505-797-1404
E-MAIL	chuckfarr@ergoffice.com	E-MAIL	chuckfarr@ergoffice.com

PARAMETER/METHOD REQUEST FOR ANALYSIS	
A	Ra-226 & natural emitting gamma radionuclides using Method 901.1M *(reference quote: 160120-1)*
B	
C	
D	
E	
F	
G	
H	
I	
J	

LAB ID	FIELD ID	MATRIX	SAMPLE DATE	SAMPLE TIME	# OF BOTTLES	PRESERVATIVE	QC	A	B	C	D	E	F	G	H	I	J	SEE NOTES SECTION
See Field ID	(1) S12BRA-01-06-061316	S	6/13/16	13:58	1	n/a	See needed lab QC requirements (attached)	×										A
See Field ID	(2) S12BRA-02-06-061316	S	6/13/16	14:08	1	n/a		×										A
See Field ID	(3) S12-01-06-061316 #1	S	6/13/16	14:35	1	n/a		×										A
See Field ID	(4) S12-02-06-061316 #2	S	6/13/16	14:46	1	n/a		×										A
See Field ID	(5) S12-03-06-061316 #3	S	6/13/16	15:00	1	n/a		×										A
See Field ID	(6) S12-04-06-061316 #4	S	6/13/16	15:15	1	n/a		×										A
See Field ID	(7) S12-05-06-061316 #5	S	6/13/16	15:22	1	n/a		×										A
See Field ID	(8) S12-06-06-061316 #6	S	6/13/16	15:32	1	n/a		×										A
See Field ID	(9) S12-07-06-061316 #7	S	6/13/16	15:54	1	n/a		×										A
See Field ID	(10) S12-08-06-061316 #8	S	6/13/16	16:05	1	n/a		×										A
See Field ID																		
See Field ID																		

*Time Zone (Circle): EST CST MST PST Matrix: O = oil S = soil NS = non-soil solid W = water L = liquid E = extract F = filter

NOTES	REPORT LEVEL / QC REQUIRED	
5 of 36		Summary (Standard QC)
		LEVEL II (Standard QC)
		LEVEL III (Std QC + forms)
		LEVEL IV (Std QC + forms + raw data)

PRESERVATION KEY	1-HCl 2-HNO3 3-H2SO4 4-NaOH 5-NaOH/ZnAcetate 6-NaHSO4 7-4°C 8-Other

Form 202r9

	SIGNATURE	PRINTED NAME	DATE	TIME
RELINQUISHED BY		Chuck Farr	6/16/2016	16:30
RECEIVED BY		Scott Melby	6-17-16	1020
RELINQUISHED BY				
RECEIVED BY				
RELINQUISHED BY				
RECEIVED BY				

ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: ERG Workorder No: 1606332

Project Manager: LRS Initials: SDM Date: 6-17-16

1. Does this project require any special handling in addition to standard ALS procedures?		YES	(NO)
2. Are custody seals on shipping containers intact?	(NONE)	YES	NO
3. Are Custody seals on sample containers intact?	(NONE)	YES	NO
4. Is there a COC (Chain-of-Custody) present or other representative documents?		(YES)	NO
5. Are the COC and bottle labels complete and legible?		(YES)	NO
6. Is the COC in agreement with samples received? (IDs, dates, times, no. of samples, no. of containers, matrix, requested analyses, etc.)		(YES)	NO
7. Were airbills / shipping documents present and/or removable?	DROP OFF	(YES)	NO
8. Are all aqueous samples requiring preservation preserved correctly? (excluding volatiles)	(N/A)	YES	NO
9. Are all aqueous non-preserved samples pH 4-9?	(N/A)	YES	NO
10. Is there sufficient sample for the requested analyses?		(YES)	NO
11. Were all samples placed in the proper containers for the requested analyses?		(YES)	NO
12. Are all samples within holding times for the requested analyses?		(YES)	NO
13. Were all sample containers received intact? (not broken or leaking, etc.)		(YES)	NO
14. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, Rx CN/S, radon) headspace free? Size of bubble: ____ < green pea ____ > green pea	(N/A)	YES	NO
15. Do any water samples contain sediment? Amount Amount of sediment: ____ dusting ____ moderate ____ heavy	(N/A)	YES	NO
16. Were the samples shipped on ice?		YES	(NO)
17. Were cooler temperatures measured at 0.1-6.0°C? IR gun used*: #2 #4	(RAD ONLY)	YES	NO

Cooler #:	1							
Temperature (°C):	An6							
No. of custody seals on cooler:	0							
DOT Survey/ Acceptance Information — External µR/hr reading:	15							
Background µR/hr reading:	11							

Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? (YES) / NO / NA (If no, see Form 008.)

Additional Information: PROVIDE DETAILS BELOW FOR A NO RESPONSE TO ANY QUESTION ABOVE, EXCEPT #1 AND #16.

If applicable, was the client contacted? **YES / NO / NA** Contact: _____ Date/Time: _____

Project Manager Signature / Date: 6/17/16

*IR Gun #2: Oakton, SN 29922500201-0066
*IR Gun #4: Oakton, SN 2372220101-0002

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

Gamma Spectroscopy Results

PAI 713 Rev 13

Method Blank Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Lab ID: GS160620-5MB
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 21-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes

Final Aliquot: 215 g
Result Units: pCi/g
File Name: 160692d08

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	0.07 +/- 0.23	0.44	2	NA	U
14913-49-6	Bi-212	-0.19 +/- 0.77	1.64		NA	U
14733-03-0	Bi-214	0.04 +/- 0.15	0.27		NA	U,J
13966-00-2	K-40	-0.65 +/- 0.92	2.07	10	NA	U
15100-28-4	Pa-234m	-3 +/- 11	24		NA	U
15092-94-1	Pb-212	-0.026 +/- 0.094	0.179		NA	U
15067-28-4	Pb-214	0.02 +/- 0.13	0.24		NA	U,J
15623-47-9	Th-227	-0.19 +/- 0.29	0.59		NA	U
15065-10-8	Th-234	0.16 +/- 0.68	1.19		NA	U
14913-50-9	Tl-208	-0.030 +/- 0.078	0.156		NA	U
15117-96-1	U-235	0.07 +/- 0.24	0.42		NA	U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP
U
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.
DL - Decision Level

Abbreviations:
TPU - Total Propagated Uncertainty
MDC - Minimum Detectable Concentration
BDL - Below Detection Limit

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Method Blank Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Lab ID: GS160620-5MB
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 21-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes

Final Aliquot: 215 g
Result Units: pCi/g
File Name: 160692d08A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	0.03 +/- 0.18	0.33	1	NA	U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP
U
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
M - Requested MDC not met.
B - Analyte concentration greater than MDC.
B3 - Analyte concentration greater than MDC but less than Requested MDC.
DL - Decision Level

Abbreviations:
TPU - Total Propagated Uncertainty
MDC - Minimum Detectable Concentration
BDL - Below Detection Limit

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Laboratory Control Sample(s)

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Lab ID: GS160620-5ALCS

Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 21-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes

Final Aliquot: 215 g
Result Units: pCi/g
File Name: 160833d01

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
13982-63-3	Ra-226	462 +/- 54	3	468.7	98.6	85 - 115	P,M3

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.

Abbreviations:

TPU - Total Propagated Uncertainty
MDC - Minimum Detectable Concentration

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Laboratory Control Sample(s)

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Lab ID: GS160620-5LCS

Library: ANALYTICAL

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 21-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes

Final Aliquot: 215 g
Result Units: pCi/g
File Name: 160667d09

CASNO	Target Nuclide	Results +/- 2s TPU	MDC	Spike Added	% Rec	Control Limits	Lab Qualifier
14596-10-2	Am-241	429 +/- 50	3	463.1	92.7	85 - 115	P
10198-40-0	Co-60	209 +/- 25	1	216.4	96.5	85 - 115	P
10045-97-3	Cs-137	175 +/- 21	1	179.1	97.6	85 - 115	P

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP
LT - Result is less than Requested MDC, greater than sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS Recovery within control limits.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.

Abbreviations:

TPU - Total Propagated Uncertainty
MDC - Minimum Detectable Concentration

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Duplicate Sample Results (DER)

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12BRA-01-06-061316
Lab ID: 1606332-1DUP
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 200 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160714d07

CASNO	Analyte	Sample			Duplicate			DER	DER Lim
		Result +/- 2 s TPU	MDC	Flags	Result +/- 2 s TPU	MDC	Flags		
15262-20-1	Ra-228	1.21 +/- 0.48	0.86	LT,G,TI	1.00 +/- 0.51	0.66	LT,TI	0.308	2.13
14913-49-6	Bi-212	1.9 +/- 1.6	2.4	U,G	0.4 +/- 1.3	2.3	U	0.73	2.13
14733-03-0	Bi-214	0.58 +/- 0.33	0.46	G,J	0.74 +/- 0.30	0.38	J	0.364	2.13
13966-00-2	K-40	10.2 +/- 3.2	3.1	G	13.6 +/- 3.1	1.9		0.749	2.13
15100-28-4	Pa-234m	6 +/- 15	27	U,G	20 +/- 17	25	U	0.605	2.13
15092-94-1	Pb-212	0.78 +/- 0.26	0.31	G	0.92 +/- 0.23	0.23		0.408	2.13
15067-28-4	Pb-214	1.01 +/- 0.27	0.31	G,J	1.13 +/- 0.27	0.34	J	0.333	2.13
15623-47-9	Th-227	0.42 +/- 0.96	1.56	U,G	0.08 +/- 0.56	0.97	U	0.31	2.13
15065-10-8	Th-234	0.5 +/- 1.3	2.2	U,G	0.8 +/- 1.4	2.4	U	0.15	2.13
14913-50-9	Tl-208	0.25 +/- 0.15	0.20	G	0.19 +/- 0.11	0.16		0.368	2.13
15117-96-1	U-235	0.24 +/- 0.45	0.77	U,G	0.33 +/- 0.42	0.69	U	0.141	2.13

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:
TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Duplicate Sample Results (DER)

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12BRA-01-06-061316
Lab ID: 1606332-1DUP

Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 200 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160714d07A

CASNO	Analyte	Sample			Duplicate			DER	DER Lim
		Result +/- 2 s TPU	MDC	Flags	Result +/- 2 s TPU	MDC	Flags		
13982-63-3	Ra-226	1.27 +/- 0.32	0.47	G	1.40 +/- 0.31	0.47		0.281	2.13

Comments:

Duplicate Qualifiers/Flags:

U - Result is less than the sample specific MDC.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13
LT - Result is less than Request MDC, greater than sample specific MDC
M - Requested MDC not met.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
L - LCS Recovery below lower control limit.
H - LCS Recovery above upper control limit.
P - LCS, Matrix Spike Recovery within control limits.
N - Matrix Spike Recovery outside control limits
SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:
TPU - Total Propagated Uncertainty
DER - Duplicate Error Ratio
BDL - Below Detection Limit
NR - Not Reported

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12BRA-01-06-061316
Lab ID: 1606332-1
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 182 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160999d03

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	1.21 +/- 0.48	0.86	2	NA	LT,G,TI
14913-49-6	Bi-212	1.9 +/- 1.6	2.4		NA	U,G
14733-03-0	Bi-214	0.58 +/- 0.33	0.46		NA	G,J
13966-00-2	K-40	10.2 +/- 3.2	3.1	10	NA	G
15100-28-4	Pa-234m	6 +/- 15	27		NA	U,G
15092-94-1	Pb-212	0.78 +/- 0.26	0.31		NA	G
15067-28-4	Pb-214	1.01 +/- 0.27	0.31		NA	G,J
15623-47-9	Th-227	0.42 +/- 0.96	1.56		NA	U,G
15065-10-8	Th-234	0.5 +/- 1.3	2.2		NA	U,G
14913-50-9	Tl-208	0.25 +/- 0.15	0.20		NA	G
15117-96-1	U-235	0.24 +/- 0.45	0.77		NA	U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12BRA-01-06-061316
Lab ID: 1606332-1
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 182 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160999d03A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	1.27 +/- 0.32	0.47	1	NA	G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Duplicate Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12BRA-01-06-061316
Lab ID: 1606332-1DUP
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 200 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160714d07

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	1.00 +/- 0.51	0.66	2	NA	LT,TI
14913-49-6	Bi-212	0.4 +/- 1.3	2.3		NA	U
14733-03-0	Bi-214	0.74 +/- 0.30	0.38		NA	J
13966-00-2	K-40	13.6 +/- 3.1	1.9	10	NA	
15100-28-4	Pa-234m	20 +/- 17	25		NA	U
15092-94-1	Pb-212	0.92 +/- 0.23	0.23		NA	
15067-28-4	Pb-214	1.13 +/- 0.27	0.34		NA	J
15623-47-9	Th-227	0.08 +/- 0.56	0.97		NA	U
15065-10-8	Th-234	0.8 +/- 1.4	2.4		NA	U
14913-50-9	Tl-208	0.19 +/- 0.11	0.16		NA	
15117-96-1	U-235	0.33 +/- 0.42	0.69		NA	U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:
TPU - Total Propagated Uncertainty
MDC - Minimum Detectable Concentration
BDL - Below Detection Limit
DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Duplicate Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12BRA-01-06-061316
Lab ID: 1606332-1DUP
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 200 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160714d07A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	1.40 +/- 0.31	0.47	1	NA	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU.
Y1 - Chemical Yield is in control at 100-110%. Quantitative yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
M - The requested MDC was not met.
M3 - The requested MDC was not met, but thereported activity is greater than the reported MDC.
W - DER is greater than Warning Limit of 1.42
D - DER is greater than Control Limit of 2.13

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 halflives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:
TPU - Total Propagated Uncertainty
MDC - Minimum Detectable Concentration
BDL - Below Detection Limit
DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12BRA-02-06-061316
Lab ID: 1606332-2
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 182 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160691d08

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	1.08 +/- 0.41	0.65	2	NA	LT,G
14913-49-6	Bi-212	1.0 +/- 1.4	2.4		NA	U,G
14733-03-0	Bi-214	1.05 +/- 0.33	0.39		NA	G,J
13966-00-2	K-40	13.0 +/- 3.2	2.0	10	NA	G
15100-28-4	Pa-234m	7 +/- 16	28		NA	U,G
15092-94-1	Pb-212	1.16 +/- 0.28	0.27		NA	G
15067-28-4	Pb-214	1.14 +/- 0.28	0.32		NA	G,J
15623-47-9	Th-227	-0.42 +/- 0.63	1.23		NA	U,G
15065-10-8	Th-234	0.75 +/- 0.96	1.58		NA	U,G
14913-50-9	Tl-208	0.36 +/- 0.14	0.16		NA	G
15117-96-1	U-235	0.18 +/- 0.44	0.75		NA	U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12BRA-02-06-061316
Lab ID: 1606332-2
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 182 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160691d08A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	1.55 +/- 0.32	0.44	1	NA	G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-01-06-061316
Lab ID: 1606332-3
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 188 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160666d09

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	0.79 +/- 0.50	0.66	2	NA	LT,TI
14913-49-6	Bi-212	1.0 +/- 1.6	2.7		NA	U
14733-03-0	Bi-214	1.14 +/- 0.38	0.39		NA	J
13966-00-2	K-40	11.0 +/- 3.2	2.3	10	NA	
15100-28-4	Pa-234m	-7 +/- 16	35		NA	U
15092-94-1	Pb-212	0.93 +/- 0.25	0.24		NA	
15067-28-4	Pb-214	1.05 +/- 0.29	0.38		NA	J
15623-47-9	Th-227	-0.37 +/- 0.70	1.34		NA	U
15065-10-8	Th-234	0.80 +/- 0.84	1.88		NA	U
14913-50-9	Tl-208	0.20 +/- 0.14	0.20		NA	
15117-96-1	U-235	0.08 +/- 0.51	0.89		NA	U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-01-06-061316
Lab ID: 1606332-3
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 188 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160666d09A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	1.56 +/- 0.36	0.53	1	NA	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-02-06-061316
Lab ID: 1606332-4
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 156 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160832d01

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	1.04 +/- 0.59	0.92	2	NA	LT,G,TI
14913-49-6	Bi-212	2.6 +/- 2.4	3.7		NA	U,G
14733-03-0	Bi-214	6.0 +/- 1.0	0.6		NA	G,J
13966-00-2	K-40	17.0 +/- 4.5	3.7	10	NA	G
15100-28-4	Pa-234m	-2 +/- 23	45		NA	U,G
15092-94-1	Pb-212	1.29 +/- 0.37	0.42		NA	G
15067-28-4	Pb-214	6.8 +/- 1.0	0.5		NA	G,J
15623-47-9	Th-227	0.74 +/- 0.90	1.47		NA	U,G
15065-10-8	Th-234	3.2 +/- 3.1	4.9		NA	U,G
14913-50-9	Tl-208	0.33 +/- 0.17	0.22		NA	G
15117-96-1	U-235	-0.03 +/- 0.76	1.35		NA	U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-02-06-061316
Lab ID: 1606332-4
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 156 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160832d01A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	9.2 +/- 1.3	0.7	1	NA	G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-03-06-061316
Lab ID: 1606332-5
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 175 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160795d02

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	1.1 +/- 1.2	1.9	2	NA	U,G
14913-49-6	Bi-212	0.3 +/- 2.5	4.4		NA	U,G
14733-03-0	Bi-214	38.4 +/- 4.7	0.7		NA	G,J
13966-00-2	K-40	17.2 +/- 4.2	4.2	10	NA	G
15100-28-4	Pa-234m	0 +/- 41	72		NA	U,G
15092-94-1	Pb-212	1.54 +/- 0.54	0.78		NA	G
15067-28-4	Pb-214	42.6 +/- 5.1	0.9		NA	G,J
15623-47-9	Th-227	3.5 +/- 1.9	3.0		NA	G,SI
15065-10-8	Th-234	27.7 +/- 6.8	9.0		NA	G
14913-50-9	Tl-208	0.40 +/- 0.20	0.29		NA	G
15117-96-1	U-235	1.8 +/- 1.2	2.3		NA	U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-03-06-061316
Lab ID: 1606332-5
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 175 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160795d02A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	58.1 +/- 6.9	1.1	1	NA	M3,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-04-06-061316
Lab ID: 1606332-6
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 235 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 161000d03

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	0.8 +/- 1.2	2.0	2	NA	U,M
14913-49-6	Bi-212	-1.9 +/- 4.0	7.0		NA	U
14733-03-0	Bi-214	62.3 +/- 7.5	0.9		NA	J
13966-00-2	K-40	19.0 +/- 5.2	6.3	10	NA	
15100-28-4	Pa-234m	47 +/- 43	68		NA	U
15092-94-1	Pb-212	1.40 +/- 0.81	1.25		NA	NQ
15067-28-4	Pb-214	62.0 +/- 7.4	0.9		NA	G,J
15623-47-9	Th-227	3.0 +/- 1.6	2.4		NA	SI
15065-10-8	Th-234	29.4 +/- 6.1	7.2		NA	TI
14913-50-9	Tl-208	0.14 +/- 0.29	0.48		NA	U
15117-96-1	U-235	2.7 +/- 2.3	3.7		NA	U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-04-06-061316
Lab ID: 1606332-6
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 235 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 161000d03A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	93 +/- 11	1	1	NA	M3

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-05-06-061316
Lab ID: 1606332-7
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 221 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160988d04

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	1.1 +/- 1.4	2.2	2	NA	U,M
14913-49-6	Bi-212	0.4 +/- 3.6	6.3		NA	U
14733-03-0	Bi-214	43.3 +/- 5.3	1.0		NA	J
13966-00-2	K-40	16.9 +/- 4.6	4.9	10	NA	
15100-28-4	Pa-234m	68 +/- 58	92		NA	U
15092-94-1	Pb-212	-0.39 +/- 0.50	1.20		NA	U
15067-28-4	Pb-214	44.4 +/- 5.3	1.0		NA	J
15623-47-9	Th-227	1.1 +/- 1.7	2.8		NA	U
15065-10-8	Th-234	40.0 +/- 6.7	6.9		NA	
14913-50-9	Tl-208	0.11 +/- 0.30	0.50		NA	U
15117-96-1	U-235	3.0 +/- 2.1	3.3		NA	U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-05-06-061316
Lab ID: 1606332-7
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 221 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160988d04A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	62.9 +/- 7.5	1.4	1	NA	M3

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-06-06-061316
Lab ID: 1606332-8
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 229 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160740d05

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	0.51 +/- 0.45	0.71	2	NA	U
14913-49-6	Bi-212	0.6 +/- 1.4	2.4		NA	U
14733-03-0	Bi-214	10.4 +/- 1.4	0.4		NA	J
13966-00-2	K-40	10.2 +/- 2.6	2.3	10	NA	
15100-28-4	Pa-234m	-2 +/- 19	34		NA	U
15092-94-1	Pb-212	0.37 +/- 0.24	0.36		NA	
15067-28-4	Pb-214	11.1 +/- 1.4	0.4		NA	J
15623-47-9	Th-227	0.3 +/- 1.0	1.7		NA	U
15065-10-8	Th-234	5.5 +/- 3.0	4.6		NA	TI
14913-50-9	Tl-208	0.09 +/- 0.12	0.19		NA	U
15117-96-1	U-235	0.43 +/- 0.71	1.17		NA	U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-06-06-061316
Lab ID: 1606332-8
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 229 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160740d05A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	15.5 +/- 1.9	0.6	1	NA	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-07-06-061316
Lab ID: 1606332-9
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 151 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160663d06

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	1.54 +/- 0.66	1.13	2	NA	G,NQ
14913-49-6	Bi-212	1.8 +/- 2.3	3.8		NA	U,G
14733-03-0	Bi-214	1.16 +/- 0.45	0.56		NA	G,J
13966-00-2	K-40	15.2 +/- 4.6	4.6	10	NA	G
15100-28-4	Pa-234m	3 +/- 24	45		NA	U,G
15092-94-1	Pb-212	1.83 +/- 0.44	0.44		NA	G
15067-28-4	Pb-214	2.04 +/- 0.47	0.57		NA	G,J
15623-47-9	Th-227	-1.0 +/- 1.3	2.5		NA	U,G
15065-10-8	Th-234	2.3 +/- 2.0	3.2		NA	U,G
14913-50-9	Tl-208	0.37 +/- 0.19	0.26		NA	G
15117-96-1	U-235	0.34 +/- 0.68	1.15		NA	U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-07-06-061316
Lab ID: 1606332-9
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 151 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160663d06A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	2.38 +/- 0.51	0.79	1	NA	G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-08-06-061316
Lab ID: 1606332-10
Library: NATURAL(SUB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 215 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160715d07

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
15262-20-1	Ra-228	1.04 +/- 0.47	0.88	2	NA	LT,TI
14913-49-6	Bi-212	1.2 +/- 1.5	2.5		NA	U
14733-03-0	Bi-214	3.30 +/- 0.57	0.36		NA	J
13966-00-2	K-40	16.3 +/- 3.5	2.4	10	NA	
15100-28-4	Pa-234m	13 +/- 19	31		NA	U
15092-94-1	Pb-212	0.82 +/- 0.23	0.27		NA	
15067-28-4	Pb-214	3.67 +/- 0.56	0.35		NA	J
15623-47-9	Th-227	-0.24 +/- 0.72	1.29		NA	U
15065-10-8	Th-234	4.3 +/- 2.0	3.0		NA	TI
14913-50-9	Tl-208	0.16 +/- 0.10	0.14		NA	
15117-96-1	U-235	0.59 +/- 0.53	0.83		NA	U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

Gamma Spectroscopy Results

PAI 713 Rev 13

Sample Results

Lab Name: ALS Environmental -- FC
Work Order Number: 1606332
Client Name: Environmental Restoration Group, Inc.
ClientProject ID: Permits West-Section 12 Mine 0216-01-02

Field ID: S12-08-06-061316
Lab ID: 1606332-10
Library: RA226.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 12
Date Collected: 13-Jun-16
Date Prepared: 21-Jun-16
Date Analyzed: 12-Jul-16

Prep Batch: GS160620-5
QCBatchID: GS160620-5-1
Run ID: GS160620-5A
Count Time: 30 minutes
Report Basis: Dry Weight

Final Aliquot: 215 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 160715d07A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	DL	Lab Qualifier
13982-63-3	Ra-226	5.01 +/- 0.70	0.48	1	NA	

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TP

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 halflives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty

MDC - Minimum Detectable Concentration

BDL - Below Detection Limit

DL - Decision Level

Data Package ID: *GSS1606332-1*

TECHNICAL BULLETIN ADDENDUM

The library used for analysis defines the gamma emission(s) to be used for analysis of each nuclide. If multiple gamma emissions are used for quantification, then a 'NET' quantification emission (or peak) must be defined in the library. This designation provides for the calculation of nuclide activity concentrations and detection limits in the case of non-presence of the nuclide. When the nuclide is not present, or the software is unable to resolve a peak at the library defined 'NET' energy, the software evaluates the 'NET' region of interest ('NET' peak energy +/- 2 keV) by performing a summation of the net counts above the background level. This 'NET' quantification can result in net negative, zero, or positive activity results, and is highly dependent on the spectral distribution in the region of interest of the 'NET' peak. In cases where only the 'NET' peak is found, and the software performs a net quantification, the nuclide result will be flagged with an 'NQ' qualifier on the final reports. This indicates that the nuclide is not detected or supported at any level above the reported MDC. Results are submitted without further qualification.

All nuclides specified in the library of analysis for gamma spectroscopy are evaluated for positive OR tentative identification on the following criteria:

- The individual abundances for the gamma emissions specified for each nuclide are summed to obtain a total nuclide abundance.
- From the total nuclide abundance, a positive identification criterion is set as 75% of this total nuclide abundance.
- For all nuclide peaks that are not net quantified, those peak abundances are summed. The total non-net quantified peak sum is compared to the calculated 75% abundance criterion. If this sum is greater than the 75% criterion, the nuclide is considered to be positively identified at the reported concentration. If the sum is less than the 75% criterion, the nuclide is tentatively identified at the reported concentration. These results will be flagged with a 'TI' qualifier on the final reports to indicate that the 75% abundance criterion was not met.