APPENDIX D CN 2017 SOIL CHARACTERIZATION REPORT FOR HIGH RANGE WELL

August 11, 2017

Mr. Stefan Hrabosky Project Manager, RSO Thermo Fisher Scientific, Inc. 5981 Airport Road Santa Fe, NM 87507

RE: Soil Characterization Report

Former Thermo Eberline LLC Facility

5981 Airport Road Santa Fe, NM

Dear Mr. Hrabosky:

C.N. Associates, Inc. (CN) is pleased to provide Thermo Eberline LLC (Thermo) with this report summarizing the results of soil characterization conducted adjacent to the former High Range Calibration Well (HRW) at the 5981 Airport Road, Santa Fe, New Mexico property (site).

Purpose & Scope

The purpose of the soil characterization work was to assess the lateral and vertical extent of Cesium 137 (Cs-137) detected in soil adjacent to the former HRW. Previous assessment conducted following removal of soils by excavation and drilling in 2012 indicated residual Cs-137 in shallow soil at up to 18.7 pico-Curies per gram (pCi/g) and in two of four subsurface borings (SB-E and SB-S, Figure 2) ranging from 418 pCi/g to 7,980 pCi/g at depths of 6 to 22 feet below ground surface (bgs). The current work included additional characterization of surface and subsurface soil to define the extent of Cs-137 impact to a default Derived Concentration Guideline Level (DCGL) for Cs-137 of 11 pCi/g.

Methods

CN developed a proposed soil boring, sampling and analysis program designed to assess the nature and extent of Cs-137 in both shallow near surface soil and subsurface soil in the area adjacent to the former HRW. Shallow characterization included a 100 percent coverage field scan of the exposed soil areas and surrounding concrete floor using Ludlum Model 2350 w/3x3 NaI meters. Following scanning surveys, 20 shallow soil samples were collected at 10 random locations on the west side of the former shallow excavation area ("X" locations in Figure 2). At each of the 10 locations one sample was collected from 0 to 6 inches in depth and a second sample was collected from 6 to 12 inches in depth. All samples were submitted for laboratory analysis by gamma spectroscopy for Cs-137.

To assess residual impacts to subsurface soil in the area around the former HRW, a one-foot sampling grid was overlaid on the former removal area (Figure 1). The grid was used to establish reference points for advancement of a series of soil borings beginning on the east side of the removal area and working from suspected unimpacted locations inward toward impacted areas. Actual boring locations were adjusted based on: 1) access limitations (as close to the wall as possible with the drilling equipment); 2) the results of field screening of soil cores using L Model 2350 w/3x3 NaI meter for total gamma relative to background; and 3) quantification of Cs-137 concentrations in soil based on analysis of selected samples using a Canberra In-Situ Gamma Spectroscopy System (ISOCS).

A GeoProbe track mounted drilling rig was deployed to support the advancement of soil borings and collection of continuous soil cores. At each boring location, two-inch diameter soil cores were collected in five-foot intervals within acetate liners continuously from the ground surface to refusal, encountered at 22 to 28 feet bgs (Table 1). All soil cores were collected prior to advancement of the drill casing into the formation. A three-inch casing was advanced to isolate the overlying formation from each core interval. The full length of each soil core was scanned with a L Model 2350 w/3x3 NaI meter to measure total gamma relative to background. Based on soil core screening results, soil samples were collected from potentially impacted and unimpacted intervals to support defining the lateral and vertical extent of Cs-137 in soil. Selected soil samples were analyzed with the ISOCS on-site to quantify Cs-137 concentrations. Based on ISOCS analysis, soil samples were selected from both impacted and non-impacted intervals for laboratory analysis of Cs-137 by gamma spectroscopy at GEL Laboratory.

Results

Field work was completed from May 26, 2017 beginning with surface survey scans and collection of shallow soil samples. Soil borings were completed from May 30th through June 7, 2017. Surface scans of 11-foot by 6.5-foot cut in the floor slab and adjacent concrete floor did not indicate any elevated readings above background with the exception of one spot above the soil area where known contamination exists at depth where the reading was 50uR/hr above background (Attachment A Survey Forms).

A total of 20 surface soil samples were collected from depth ranges of 0 to 6 inches and 6 to 12 inches at the 10 locations (marked "X") displayed in Figure 2. The shallow sampling targeted the western portion of the floor slab cut over an area of 4 feet by 6.5 feet where shallow soil removal had been conducted in 2012. Sampling results from 2012 indicated elevated Cs-137 at 18.7 pCi/g in one of the samples. Laboratory analyses of shallow soil samples are summarized in Table 2. Laboratory reports are included in Attachment B.

Results of shallow soil sampling indicate Cs-137 detected in 19 of 22 analyses (including two duplicates) ranging from 0.03 pCi/g to 31.4 pCi/g. The average concentration of Cs-137 in all shallow samples is 3.73 pCi/g. Sample SS-A2-0-6 indicated the highest level of Cs-137 in shallow soil at 31.4 pCi/g. The deeper sample at this location, sample SS-A2-6-12, indicated Cs-

137 at 7.67 pCi/g. Location A2 is the furthest southern sample collected in the shallow soil area (Figure 2).

One other location of elevated Cs-137 was SS-A8-0-6 located along the north boundary of the slab cut with a reported concentration of 9.18 pCi/g (Figure 2). The deeper sample at location A8, sample SS-A8-6-12 had a reported concentration of Cs-137 at 2.02 pCi/g, below the 11.0 pCi/g screening threshold (Table 2). Therefore, only the shallow soil at locations A2 exceed the default DCGL of 11 pCi/g.

A total of 30 soil borings were advanced within the approximately 6-foot by 6.5-foot eastern portion of the floor slab cut where previous excavation and drilling had been conducted to remove soil impacts at depth in 2012. Boring locations are shown on Figure 2. Boring logs are included in Attachment C. Refusal was encountered at depths of 22 to 28 feet consistent with the presence of a clay layer also encountered in previous borings conducted around the HRW area in 2009 (Table 1).

Soil cores were screened using a L Model 2350 w/3x3 NaI meter to measure total gamma relative to background. Field surveys of each core are included in Attachment D. A total of 129 soil samples were collected at approximately two-foot intervals based on field screening of the soil cores from 30 borings. ISOCS analyses were conducted on 104 soil samples, or just over 80 percent of the samples collected. ISOCS reports are included in Attachment E. Based on ISOCS screening, 62 samples, or about 60 percent of the samples analyzed by ISOCS were submitted to GEL Laboratory for analysis by gamma spectroscopy. Results of ISOCS and laboratory analyses are summarized in Table 3.

Comparison of ISOCS and laboratory analyses show 100 percent agreement with respect to samples showing Cs-137 as non-detect. All samples for which Cs-137 was reported as non-detect by ISOCS were also reported by the laboratory as non-detect. In addition, all samples that had detectable levels of Cs-137 by ISOCS were also shown to have similar levels detected in laboratory analysis. The relative percent difference (RPD) in reported concentrations between ISOCS and laboratory analyses averaged less than 14 percent. Therefore, a very high correlation was established between Cs-137 concentrations in soil obtained from ISOCS and laboratory analyses.

Detected concentrations of Cs-137 ranged from 0.08 pCi/g (SB-26 from 23 to 25 feet) to 3,510 pCi/g (SB-29 from 21.5 to 23 feet). The average concentration of Cs-137 in all samples with detectable levels of Cs-137 was approximately 460 pCi/g. Detections of Cs-137 exceeding the default DCGL of 11 pCi/g were limited to soil samples collected from greater than 6 feet to about 24 feet bgs, and were located within 2 to 3 feet laterally from the former HRW.

Results indicate the vertical limit of Cs-137 impact above the default DCGL of 11 pCi/g is approximately 22 to 24 feet bgs. The vertical extent of Cs-137 impact is based on sample results showing lower concentrations of Cs-137 located beneath samples of higher impact at depth. These trends are apparent in the data presented in Table 3. For example, at boring SB-29, located within 1.5 feet southeast of the former HRW, Cs-137 was detected at 3,510 pCi/g in

sample SB29-124 collected from 21.5 to 23 feet bgs, but the sample directly beneath, SB29-125 collected from 24 to 24.5 feet bgs had a Cs-137 concentration of 5.1 pCi/g. A similar pattern is also apparent at several other borings located within two feet of the former HRW including: SB-02 (directly east), SB-11 (directly southwest), SB-28 (directly west) and SB-27 (directly northwest).

In combining the results of this investigation with those of the previous investigation in 2012 (including results for borings SB-W, SB-N, SB-E and SB-S), the lateral extent of soil impacted by Cs-137 adjacent to the former HRW is delineated by the dashed line in Figure 3. The area of impact is conservatively estimated to extend outward from the former HRW to locations where ISCOS and laboratory analyses from soil borings indicate non-detect levels of Cs-137 in soil. The area of Cs-137 impact to soil is estimated to be contained within an area approximately 4 feet in the east-west direction, 5 feet in the north-south direction. Vertically, Cs-137 impacts above DCGLs extend from 6 to 24 feet bgs. Therefore, the total in-place volume of impacted soil exceeding a DCGL is estimated at 400 cubic feet. Applying a 30 percent expansion factor results in 520 cubic feet, or just under 20 cubic yards of excavated soil.

We greatly appreciate the opportunity to assist Thermo on this assignment. If you have any questions or require clarification on any portion of this proposal, please do not hesitate to contact me at (978) 525-2400.

C.N. ASSOCIATES, INC.

Ron Cardarelli

Ron Cardarelli *Owner/Founder*

Enc: Table 1: Soil Boring Summary

Table 2: Shallow Soil Analytical Results

Table 3: Soil Boring ISOCS & Laboratory Results

Figure 1: Proposed Soil Boring Grid

Figure 2: Actual Shallow Soil Sample & Soil Boring Locations Figure 3: Estimated Extent of Impacted Soil Exceeding a DCGL

Attachment A: Radiation Survey Forms

Attachment B: Laboratory Reports

Attachment C: Boring Logs

Attachment D: Soil Core Field Screening Surveys

Attachment E: ISOCS Data

Table 1 - Soil Boring Summary Thermo Eberline, LLC Santa-Fe, New Mexico

Boring		Location (Inches)		Soil Core Section			Sample Depth
Number	Date	North Wall	East Wall	(Feet)	% Recovery	Sample Number	(Feet)
	- / /				<u> </u>		
SB-01	5/30/2017	129	30	0-5	20		
				5-10	50		
				10-15	62	SB01-001-N-20170530-13-15	13-15
				15-20	77	SB01-002-N-20170530-18-20	18-20
				20-24.5	53	SB01-003-N-20170530-23-25	23-25
SB-02	5/30/2017	90	30	0-5	23		
				5-10	52	SB02-004-N-20170530-8-10	8-10
				10-15	25	SB02-005-N-20170530-14-16	14-16
				15-20	57	SB02-006-N-20170530-18-20	18-20
				20-24.5	82	SB02-007-N-20170530-21.5-23.5	21.5-23.5
						SB02-008-N-20170530-23.5-25	23.5-25
SB-03	5/31/2017	66	30	0-5	50		
				5-10	72		
				10-15	73	SB03-009-N-20170531-13-15	13-15
				15-20	93	SB03-010-N-20170531-16-20	16-20
						SB03-011-D-20170531-16-20	16-20
				20-25	60	SB03-012-N-20170531-23-25	23-25
SB-04	5/31/2017	116	30	0-5	25		
				5-10	60	SB04-073-N-20170605-8-10	8-10
				10-15	70	SB04-013-N-20170531-13-15	13-15
				15-20	93	SB04-014-N-20170531-18-20	18-20
				20-25	82	SB04-015-N-20170531-21-23	21-23
						SB04-016-N-20170531-23-25	23-25
SB-05	5/31/2017	60	54	0-5	60		
30-03	3/31/2017	30	54	5-10	75		
				10-15	63	SB05-017-N-20170531-13-15	13-15
	1			15-20	90	SB05-018-N-20170531-18-20	18-20
				20-24.5	65	SB05-019-N-20170531-22.5-24.5	22.5-24.5
SB-06	5/31/2017	72	54	0-5	53		

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Boring	Data	Location	(Inches)	Soil Core Section	0/ B	Committee Normalism	Sample Dept
Number	Date	North Wall	East Wall	(Feet)	% Recovery	Sample Number	(Feet)
				5-10	77	SB06-074-N-20170605-8-10	8-10
				10-15	67	SB06-020-N-20170531-13-15	13-15
				15-20	90	SB06-021-N-20170531-16-20	16-20
						SB06-022-D-20170531-16-20	16-20
				20-24	68	SB06-023-N-20170531-22-24	22-24
SB-07	5/31/2017	82	77	0-5	40		
				5-10	63	SB07-075-N-20170605-7-9	7-9
						SB07-076-N-20170605-7-9	7-9
				10-15	40	SB07-024-N-20170531-13-15	13-15
				15-20	87	SB07-025-N-20170531-18-20	18-20
				20-24.5	72	SB07-026-N-20170531-22.5-24.5	22.5-24.5
SB-08	5/31/2017	102	75	0-5	40		
				5-10	70	SB08-027-N-20170531-8-10	8-10
				10-15	62	SB08-028-N-20170531-13-15	13-15
				15-20	50	SB08-029-N-20170531-18-20	18-20
				20-24	40	SB08-030-N-20170531-23.5-24	23.5-24
SB-09	6/1/2017	123	73	0-5	28		
			-	5-10	72	SB09-031-N-20170601-8-10	8-10
				10-15	68	SB09-032-N-20170601-13-15	13-15
				15-20	85	SB09-033-N-20170601-16-20	16-20
						SB09-034-D-20170601-16-20	16-20
				20-24	93	SB09-035-N-20170531-22-24	22-24
SB-10	6/1/2017	129	53	0-5	13		
				5-10	38	SB10-077-N-20170605-8-10	8-10
				10-15	67	SB10-036-N-20170601-13-15	13-15
SB-11	6/1/2017	113	49	0-5	5		
	., ,===:		_	5-10	37	SB11-037-N-20170601-8-10	8-10
	1			10-15	34		2 20
				15-20	63	SB11-038-N-20170601-18-20	18-20
-	1			20-24	63	SB11-039-N-20170601-21-24	21-24

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Boring Number	Date	Location North Wall	(Inches) East Wall	Soil Core Section (Feet)	% Recovery	Sample Number	Sample Depth (Feet)
Number		NOITH Wall	Last Wall	(1000)		SB11-040-D-20170601-21-24	21-24
			-		+	3B11-040-D-20170601-21-24	21-24
SB-12	6/1/2017	113	36	0-5	20		
30-12	0/1/2017	113	30	5-10	43	SB12-041-N-20170601-8-10	8-10
				10-15	5	3512-041-14-2017-0001-6-10	0-10
				10 15			
SB-13	6/2/2017	78	30	0-5	53		
	1, 1, 1, 1, 1	1		5-10	80	SB13-042-N-20170602-8-10	8-10
				10-15	58	SB13-078-N-20170605-13-15	13-15
				15-20	76	SB13-043-N-20170602-18-20	18-20
				20-23	82	SB13-044-N-20170602-21-23	21-23
SB-14	6/2/2017	105	34	0-5	20		
				5-10	53	SB14-079-N-20170605-8-10	8-10
				10-15	23		
				15-20	85	SB14-045-N-20170602-16-18	16-18
				20-23	59	SB14-046-N-20170602-21-23	21-23
SB-15	6/2/2017	117	22	0-5	Hand Auger		
				5-10	60	SB15-080-N-20170605-8-10	8-10
				10-15	75	SB15-047-N-20170602-13-15	13-15
				15-20	100	SB15-048-N-20170602-18-20	18-20
				20-24	78	SB15-049-N-20170602-22-24	22-24
SB-16	6/2/2017	94	23	0-5	Hand Auger		
				5-10	67	SB16-050-N-20170602-8-10	8-10
				10-15	62	SB16-051-N-20170602-13-15	13-15
				15-20	88	SB16-052-N-20170602-16-20	16-20
						SB16-053-D-20170602-16-20	16-20
				20-24	37	SB16-054-N-20170602-22-24	22-24
SB-17	6/2/2017	71	25	0-5	50		
				5-10	92		
				10-15	68	SB17-055-N-20170602-13-15	13-15
				15-20	78	SB17-056-N-20170602-18-20	18-20

Table 1 - Soil Boring Summary Thermo Eberline, LLC Santa-Fe, New Mexico

Boring		Location	(Inches)	Soil Core Section	0/ 5		Sample Depth
Number	Date	North Wall	East Wall	(Feet)	% Recovery	Sample Number	(Feet)
				20-23	60	SB17-057-N-20170602-21-23	21-23
SB-18	6/2/2017	106	58	0-5	36		
				5-10	65	SB18-058-N-20170602-7-9	7-9
				10-15	70	SB18-059-N-20170602-13-15	13-15
				15-20	67	SB18-060-N-20170602-18-20	18-20
				20-24	37	SB18-061-N-20170602-22-24	22-24
SB-19	6/2/2017	120	60	0-5	27		
2B-19	6/3/2017	120	60	0-5 5-10	55	SB19-081-N-20170605-7-9	7-9
				10-15	73	SB19-062-N-20170603-13-15	13-15
	+					SB19-063-D-20170603-13-15	13-15
				15-20	85	SB19-064-N-20170603-18-20	18-20
		+		20-24	72	SB19-065-N-20170603-22-24	22-24
SB-20	6/3/2017	126	38	0-5	29		
				5-10	55	SB20-082-N-2017-605-8-10	8-10
				10-15	48	SB20-066-N-20170603-13-15	13-15
				15-20	70	SB20-067-N-20170603-18-20	18-20
				20-24.5	87	SB20-068-N-20170603-22-24	22.5-24.5
CD 24	6/2/2017	00	60	0.5	24		
SB-21	6/3/2017	80	60	0-5 5-10	34 29	SB21-069-N-20170603-8.5-10	8.5-10
		-		10-15	29	SB21-069-N-20170603-8.5-10	8.5-10
				15-20	61	SB21-070-N-20170603-18-20	18-20
	+			20-24	72	SB21-070-N-20170003-18-20	22-24
				24-26.5	50	SB21-071-N-20170003-22-24 SB21-072-N-20170605-24-25.5	24-26.5
SB-22	6/5/2017	110	66	0-5	0		
				5-10	43	SB22-083-N-20170605-8-10	8-10
				10-15	53	SB22-084-N-20170605-13-15	13-15
				15-20	78	SB22-085-N-20170605-16-20	16-20
						SB22-086-D-20170605-16-20	16-20
				20-25	93	SB22-087-N-20170605-23-25	23-25

Table 1 - Soil Boring Summary Thermo Eberline, LLC Santa-Fe, New Mexico

Boring	D-4-	Location	(Inches)	Soil Core Section	0/ D	Committee Normalism	Sample Depth
Number	Date	North Wall	East Wall	(Feet)	% Recovery	Sample Number	(Feet)
SB-23	6/5/2017			0-5	0		
				5-10	34	SB23-088-N-20170605-8-10	8-10
				10-15	48	SB23-089-N-20170605-12.5-14.5	12.5-14.5
				15-20	70	SB23-090-N-20170605-18-20	18-20
				20-25	81	SB23-091-N-20170605-23-25	23-25
SB-24	6/5/2017			0-5	10		
				5-10	62	SB24-092-N-20170605-8-10	8-10
				10-15	65	SB24-093-N-20170605-13-15	13-15
				15-20	65	SB24-094-N-20170605-16-20	16-20
						SB24-095-N-20170605-16-20	16-20
				20-25	35	SB24-096-N-20170605-23.5-25	23.5-25
	Sam	ple in Drill Casir	ng Tip	25-25.5	NA	SB24-102-20170605-drill tip	25 - 25.5
SB-25	6/5/2017			0-5	60	SB25-097-N-20170605-3-5	3-5
				5-10	47	SB25-098-N-20170605-8-10	8-10
				10-15	55	SB25-099-N-20170605-13-15	13-15
				15-20	50	SB25-100-N-20170605-18-20	18-20
				20-25	72	SB25-101-N-20170605-23-25	23-25
SB-26	6/6/2017			0-5	14		
				5-10	30	SB26-103-N-20170606-8.5-10	8.5-10
				10-15	50	SB26-104-N-20170606-13-15	13-15
				15-20	63	SB26-105-N-20170607-17-20	17-20
						SB26-106-D-20170607-17-20	17-20
				20-25	74	SB26-107-N-20170607-23-25	23-25
SB-27	1			0-5	15		
	1	1		5-10	32	SB27-108-N-20170607-8.5-10	8.5-10
	1			10-15	78	SB27-109-N-20170607-13-15	13-15
	1	1		15-20	58	SB27-110-N-20170607-18-20	18-20
	1			20-25	76	SB27-111-N-20170607-21-23	21-23
						SB27-112-N-20170607-23-25	23-25

Table 1 - Soil Boring Summary Thermo Eberline, LLC Santa-Fe, New Mexico

Boring	D-4-	Location (Inches)		Soil Core Section	0/ B	Canada Namban	Sample Depth
Number	Date	North Wall	East Wall	(Feet)	% Recovery	Sample Number	(Feet)
SB-28				0-5	20		
				5-10	65	SB28-113-N-20170607-8-10	8-10
				10-15	72	SB28-114-N-20170607-13-15	13-15
				15-20	60	SB28-115-N-20170607-18-20	18-20
				20-24.5	73	SB28-116-N-20170607-21-23	21-23
						SB28-117-N-20170607-23-24.5	23-24.5
				24.5-30		SB28-118-N-20170607-26-28	26-28
SB-29				0-4	43		
				4-9	79	SB29-119-N-20170607-6-7.5	6-7.5
						SB29-120-N-20170607-7.5-8	7.5-8
				9-14	100	SB29-121-N-20170607-9-14	9-14
						SB29-122-D-20170607-9-14	9-14
				14-19	100	SB29-123-N-20170607-17-19	17-19
				19-24	84	SB29-124-N-20170607-21.5-23	21.5-23
				24-24.5	25	SB29-125-N-20170607-24-24.5	24-24.5
SB-30				0-4	27		
-				4-9	92	SB30-126-N-20170607-7-9	7-9
				9-14	100	SB30-127-N-20170607-12-14	12-14
	İ			14-19	100	SB30-128-N-20170607-17-19	17-19
				19-24	100	SB30-129-N-20170607-22-24	22-24

Table 2 - Surface Soil Data (Cs-137) High Range Well Location Thermo Eberline, LLC Santa-Fe, New Mexico

Sample Number	Collection Date	Isotope	Laboratory Results (pCi/g)	Laboratory Qualifier	Minimum Detection Limit (pCi/g)
SS-A2-0-6-N-20170526	05/26/17	Cesium-137	31.4		0.0761
SS-A2-6-12-N-20170526	05/26/17	Cesium-137	7.67		0.0346
SS-A4-0-6-N-20170526	05/26/17	Cesium-137	0.154		0.0264
SS-A4-6-12-N-20170526	05/26/17	Cesium-137	0.137		0.0426
SS-A6-0-6-N-20170526	05/26/17	Cesium-137	0.770		0.0306
SS-A6-6-12-N-20170526	05/26/17	Cesium-137	2.55		0.0474
SS-A8-0-6-N-20170526	05/26/17	Cesium-137	9.18		0.0373
SS-A8-6-12-N-20170526	05/26/17	Cesium-137	2.02		0.032
SS-AB3-0-6-N-20170526	05/26/17	Cesium-137	0.0365	U	0.051
SS-AB3-6-12-D-20170526	05/26/17	Cesium-137	1.58		0.0335
SS-AB3-6-12-N-20170526	05/26/17	Cesium-137	1.65		0.040
SS-AB5-0-6-N-20170526	05/26/17	Cesium-137	0.0339		0.0282
SS-AB5-6-12-N-20170526	05/26/17	Cesium-137	0.678		0.0229
SS-AB7-0-6-N-20170526	05/26/17	Cesium-137	1.05		0.0298
SS-AB7-6-12-N-20170526	05/26/17	Cesium-137	0.917		0.0442
SS-B3-0-6-N-20170526	05/26/17	Cesium-137	0.589		0.0356
SS-B3-6-12-N-20170526	05/26/17	Cesium-137	0.486		0.0305
SS-B5-0-6-N-20170526	05/26/17	Cesium-137	0.905		0.0259
SS-B5-6-12-N-20170526	05/26/17	Cesium-137	0.0265	U	0.0451
SS-B7-0-6-N-20170526	05/26/17	Cesium-137	3.60		0.039
SS-B7-6-12-D-20170526	05/26/17	Cesium-137	5.18		0.0509
SS-B7-6-12-N-20170526	05/26/17	Cesium-137	1.15		0.0363

U = Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD pCi/g = picoCuries/gram

Table 3 - Analytical Summary - Soil Boring Data High Range Well Location Thermo Eberline, LLC Santa-Fe, New Mexico

Boring No	Date	Sample Number	Sample Depth (Feet)	ISOCS Results Cs-137 (pCi/g)	GEL Result Cs-137 (pCi/g)
SB-01	5/30/2017				
	0,00,000				
		SB01-001-N-20170530-13-15	13-15	ND	NA
		SB01-002-N-20170530-18-20	18-20	ND	NA
		SB01-003-N-20170530-23-25	23-25	ND	U
SB-02	5/30/2017				
3D-UZ	3/30/2017	SB02-004-N-20170530-8-10	8-10	ND	U
		SB02-005-N-20170530-14-16	14-16	250.3	250
		SB02-006-N-20170530-18-20	18-20	2.9	NA
		SB02-007-N-20170530-21.5-23.5	21.5-23.5	3,256.4	3020
		SB02-008-N-20170530-23.5-25	23.5-25	1.6	1.75
SB-03	5/31/2017				
		SB03-009-N-20170531-13-15	13-15	ND	U
		SB03-010-N-20170531-16-20	16-20	ND	NA
		SB03-011-D-20170531-16-20	16-20	ND	NA
		SB03-012-N-20170531-23-25	23-25	ND	U
SB-04	5/31/2017				
36-04	3/31/2017	SB04-073-N-20170605-8-10	8-10	ND	U
		SB04-013-N-20170531-13-15	13-15	ND ND	NA NA
		SB04-014-N-20170531-18-20	18-20	ND	NA
		SB04-015-N-20170531-21-23	21-23	ND	U
		SB04-016-N-20170531-23-25	23-25	ND	U
SB-05	5/31/2017				
		SB05-017-N-20170531-13-15	13-15	ND	NA
		SB05-018-N-20170531-18-20	18-20	ND	NA
		SB05-019-N-20170531-22.5-24.5	22.5-24.5	ND	U
SB-06	5/31/2017				
		SB06-074-N-20170605-8-10	8-10	ND	U

Table 3 - Analytical Summary - Soil Boring Data High Range Well Location Thermo Eberline, LLC Santa-Fe, New Mexico

Boring No	Date	Sample Number	Sample Depth (Feet)	ISOCS Results Cs-137 (pCi/g)	GEL Result Cs-137 (pCi/g)
		SB06-020-N-20170531-13-15	13-15	ND	U
		SB06-021-N-20170531-16-20	16-20	ND	NA
		SB06-022-D-20170531-16-20	16-20	ND	NA
		SB06-023-N-20170531-22-24	22-24	ND	U
SB-07	5/31/2017				
		SB07-075-N-20170605-7-9	7-9	ND	NA
		SB07-076-N-20170605-7-9	7-9	ND	U
		SB07-024-N-20170531-13-15	13-15	ND	NA
		SB07-025-N-20170531-18-20	18-20	ND	NA
		SB07-026-N-20170531-22.5-24.5	22.5-24.5	ND	U
SB-08	5/31/2017				
		SB08-027-N-20170531-8-10	8-10	ND	U
		SB08-028-N-20170531-13-15	13-15	ND	NA
		SB08-029-N-20170531-18-20	18-20	ND	NA
		SB08-030-N-20170531-23.5-24	23.5-24	ND	U
SB-09	6/1/2017				
		SB09-031-N-20170601-8-10	8-10	ND	NA
		SB09-032-N-20170601-13-15	13-15	ND	NA
		SB09-033-N-20170601-16-20	16-20	ND	NA
		SB09-034-D-20170601-16-20	16-20	ND	NA
		SB09-035-N-20170531-22-24	22-24	ND	NA
SB-10	6/1/2017				
		SB10-077-N-20170605-8-10	8-10	ND	U
		SB10-036-N-20170601-13-15	13-15	ND	U
SB-11	6/1/2017				
		SB11-037-N-20170601-8-10	8-10	1,115.4	972
		SB11-038-N-20170601-18-20	18-20	ND	NA
		SB11-039-N-20170601-21-24	21-24	0.3	NA
		SB11-040-D-20170601-21-24	21-24	0.4	0.48

Table 3 - Analytical Summary - Soil Boring Data High Range Well Location Thermo Eberline, LLC Santa-Fe, New Mexico

Boring No	Date	Sample Number	Sample Depth (Feet)	ISOCS Results Cs-137 (pCi/g)	GEL Result Cs-137 (pCi/g)
SB-12	6/1/2017				
		SB12-041-N-20170601-8-10	8-10	0.9	0.794
SB-13	6/2/2017				
3D-13	0/2/2017	SB13-042-N-20170602-8-10	8-10	ND	U
-		SB13-078-N-20170605-13-15	13-15	ND ND	NA NA
		SB13-043-N-20170602-18-20	18-20	ND ND	NA NA
		SB13-044-N-20170602-21-23	21-23	ND	NA
SB-14	6/2/2017				
		SB14-079-N-20170605-8-10	8-10	5.5	4.9
		SB14-045-N-20170602-16-18	16-18	ND	UI
		SB14-046-N-20170602-21-23	21-23	ND	NA
SB-15	6/2/2017				
		SB15-080-N-20170605-8-10	8-10	ND	U
		SB15-047-N-20170602-13-15	13-15	ND	NA
		SB15-048-N-20170602-18-20	18-20	ND	NA
		SB15-049-N-20170602-22-24	22-24	ND	U
SB-16	6/2/2017				
		SB16-050-N-20170602-8-10	8-10	ND	U
		SB16-051-N-20170602-13-15	13-15	ND	NA
		SB16-052-N-20170602-16-20	16-20	ND	NA
		SB16-053-D-20170602-16-20	16-20	ND	NA
		SB16-054-N-20170602-22-24	22-24	ND	U
SB-17	6/2/2017				
		SB17-055-N-20170602-13-15	13-15	ND	NA
İ	İ	SB17-056-N-20170602-18-20	18-20	ND	NA
		SB17-057-N-20170602-21-23	21-23	ND	NA
SB-18	6/2/2017				

Table 3 - Analytical Summary - Soil Boring Data High Range Well Location Thermo Eberline, LLC Santa-Fe, New Mexico

Boring No	Date	Sample Number	Sample Depth (Feet)	ISOCS Results Cs-137 (pCi/g)	GEL Result Cs-137 (pCi/g)
		SB18-058-N-20170602-7-9	7-9	607.1	603
		SB18-059-N-20170602-13-15	13-15	3.0	NA
		SB18-060-N-20170602-18-20	18-20	2.1	NA
		SB18-061-N-20170602-22-24	22-24	820.4	773
SB-19	6/3/2017				
		SB19-081-N-20170605-7-9	7-9	0.2	0.257
		SB19-062-N-20170603-13-15	13-15	ND	NA
		SB19-063-D-20170603-13-15	13-15	ND	NA
		SB19-064-N-20170603-18-20	18-20	ND	NA
		SB19-065-N-20170603-22-24	22-24	ND	U
SB-20	6/3/2017				
		SB20-082-N-2017-605-8-10	8-10	ND	UI
		SB20-066-N-20170603-13-15	13-15	ND	NA
		SB20-067-N-20170603-18-20	18-20	ND	NA
		SB20-068-N-20170603-22-24	22.5-24.5	ND	UI
SB-21	6/3/2017				
		SB21-069-N-20170603-8.5-10	8.5-10	0.09	0.0866
		SB21-070-N-20170603-18-20	18-20	ND	NA
		SB21-071-N-20170603-22-24	22-24	ND	NA
		SB21-072-N-20170605-24-25.5	24-26.5	ND	U
SB-22	6/5/2017				
		SB22-083-N-20170605-8-10	8-10	0.3	0.313
		SB22-084-N-20170605-13-15	13-15	ND	U
		SB22-085-N-20170605-16-20	16-20	ND	NA
		SB22-086-D-20170605-16-20	16-20	ND	NA
		SB22-087-N-20170605-23-25	23-25	ND	U
SB-23	6/5/2017				
	-,-,	SB23-088-N-20170605-8-10	8-10	ND	U
		SB23-089-N-20170605-12.5-14.5	12.5-14.5	ND	NA

Table 3 - Analytical Summary - Soil Boring Data High Range Well Location Thermo Eberline, LLC Santa-Fe, New Mexico

Boring No	Date	Sample Number	Sample Depth (Feet)	ISOCS Results Cs-137 (pCi/g)	GEL Result Cs-137 (pCi/g)
		SB23-090-N-20170605-18-20	18-20	ND	NA
		SB23-091-N-20170605-23-25	23-25	ND	U
SB-24	6/5/2017				
		SB24-092-N-20170605-8-10	8-10		NA
		SB24-093-N-20170605-13-15	13-15		NA
		SB24-094-N-20170605-16-20	16-20		6.63
		SB24-095-N-20170605-16-20	16-20		NA
		SB24-096-N-20170605-23.5-25	23.5-25		697
		SB24-102-20170605-drill tip	25 - 25.5	7.7	7.41
		·		Limited Sample Volume	
SB-25	6/5/2017	SB25-097-N-20170605-3-5	3-5	ND	NA
		SB25-098-N-20170605-8-10	8-10	ND	NA
		SB25-099-N-20170605-13-15	13-15	0.6	0.559
		SB25-100-N-20170605-18-20	18-20	ND	U
		SB25-101-N-20170605-23-25	23-25	ND	NA
SB-26	6/6/2017				
		SB26-103-N-20170606-8.5-10	8.5-10		8.71
		SB26-104-N-20170606-13-15	13-15		6.12
		SB26-105-N-20170607-17-20	17-20		NA
		SB26-106-D-20170607-17-20	17-20		NA
		SB26-107-N-20170607-23-25	23-25	ND	0.08
SB-27					
		SB27-108-N-20170607-8.5-10	8.5-10		2.25
		SB27-109-N-20170607-13-15	13-15		NA
		SB27-110-N-20170607-18-20	18-20		535
İ		SB27-111-N-20170607-21-23	21-23	37.2	NA
		SB27-112-N-20170607-23-25	23-25	0.2	0.279
SB-28					
		SB28-113-N-20170607-8-10	8-10		0.303
		SB28-114-N-20170607-13-15	13-15		0.715
		SB28-115-N-20170607-18-20	18-20		53.3

Table 3 - Analytical Summary - Soil Boring Data High Range Well Location Thermo Eberline, LLC Santa-Fe, New Mexico

Boring No	Date	Sample Number	Sample Depth (Feet)	ISOCS Results Cs-137 (pCi/g)	GEL Result Cs-137 (pCi/g) 2220	
		SB28-116-N-20170607-21-23	21-23			
		SB28-117-N-20170607-23-24.5	23-24.5	242.1	NA	
		SB28-118-N-20170607-26-28	26-28	1.4	1.81	
SB-29						
		SB29-119-N-20170607-6-7.5	6-7.5	2,175.5	2020	
		SB29-120-N-20170607-7.5-8	7.5-8		NA	
		SB29-121-N-20170607-9-14	9-14		NA	
		SB29-122-D-20170607-9-14	9-14		NA	
		SB29-123-N-20170607-17-19	17-19		NA	
		SB29-124-N-20170607-21.5-23	21.5-23		3510	
		SB29-125-N-20170607-24-24.5	24-24.5	6.3	5.1	
				Limited Volume Sample		
SB-30						
		SB30-126-N-20170607-7-9	7-9		NA	
		SB30-127-N-20170607-12-14	12-14		NA	
		SB30-128-N-20170607-17-19	17-19		NA	
		SB30-129-N-20170607-22-24	22-24		NA	
Out of Sail Ann		CC 420 20470C07	Confere Comme "	10	N/A	
Open Soil Area		SS-130-20170607	Surface Composite	4.0	NA	

ND - Not Detected by ISOCs NA - Not Analyzed by GEL

U - Not detected by GEL above the MDL, MDA, MDC or LOD pCi/g = picoCuries/gram

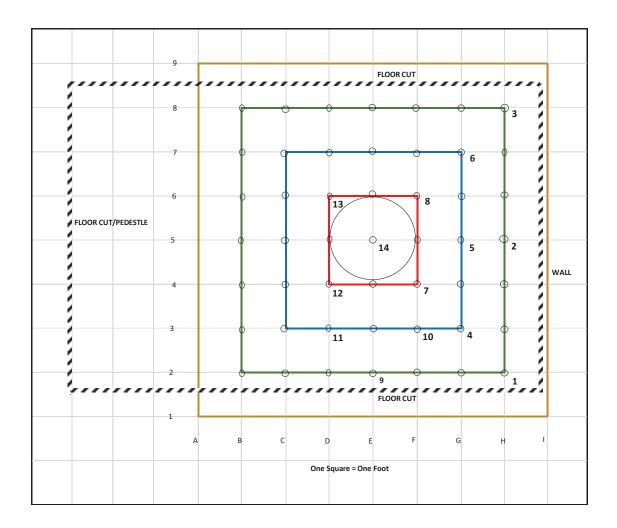




Figure 1 - Proposed Boring Grid Thermo Eberline, LLC 5981 Airport Road Santa Fe, New Mexico

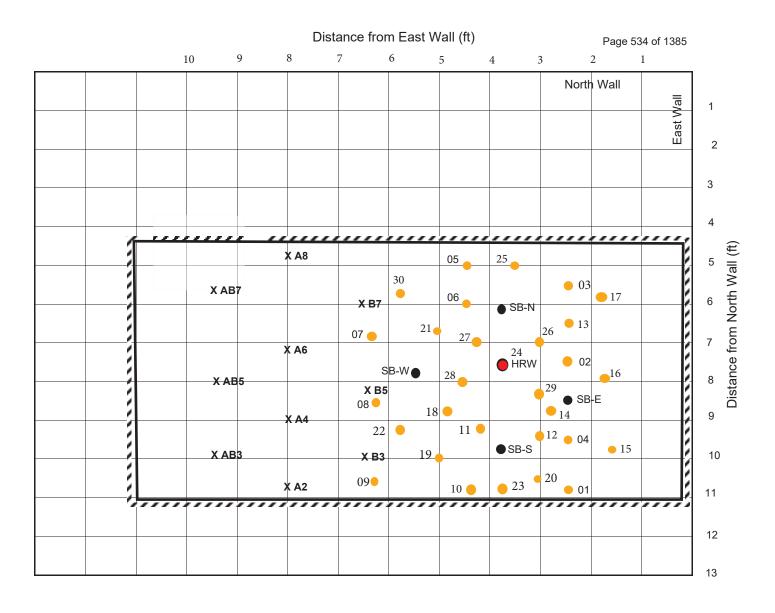
Legend:

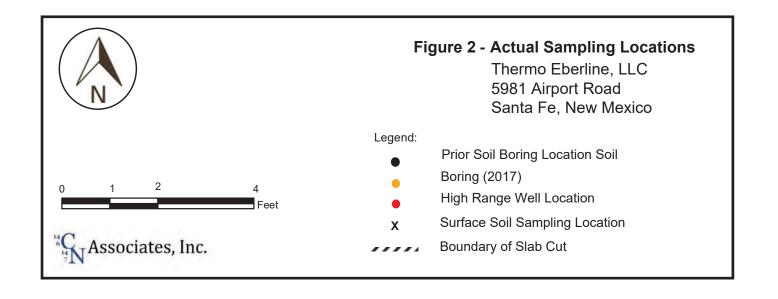
Proposed Soil Boring Location

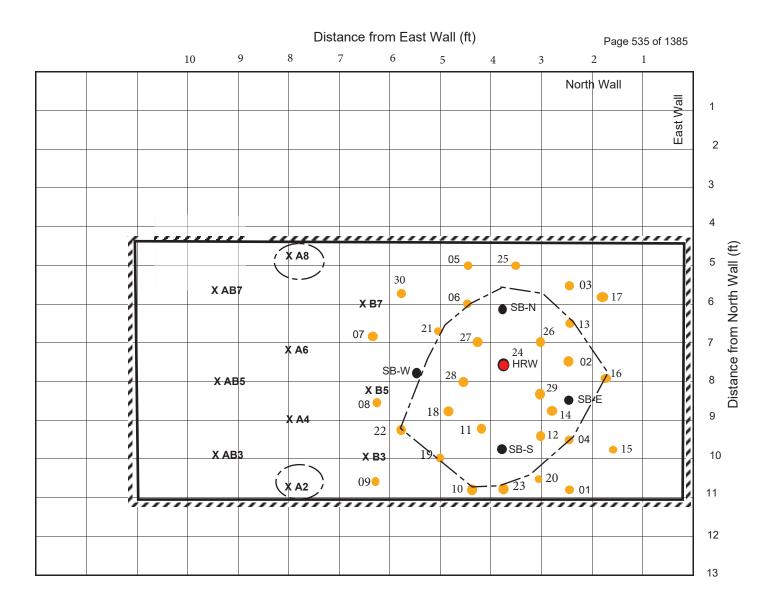
Open Soil / Concrete Slab Cut

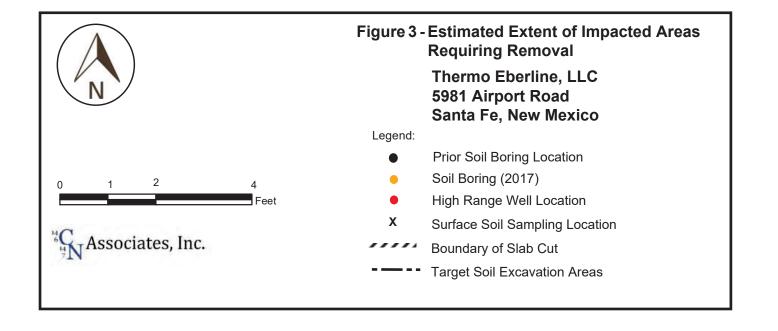


Associates, Inc.









ATTACHMENT A FIELD SURVEY FORMS BUILDING & SOIL AREAS

ADJACENT WELL ROOM

100% survey of all accessible areas 6ft and below No activity detected for alpha,beta gamma



WALLS SURVEYED USING 2360 SN329121/43-93 SNPR364210 FLOOR SURVEYED WITH 2360 SN327710/43-37-1 SNPR356128

20 SMEARS TAKEN 1-20 TAKEN ON FLOOR LAW ON FLOORS / NO DETECTABLE ACTIVITY FOR ALPHA AND BETA GAMMA

SEE ATTACHED FOR SMEAR RESULTS

1	NS	IKL	JM	IFN	115

MAKE	MODEL	S/N	CAL DUE	BKG CPM
n/a	n/a	n/a	n/a	n/a
LUDLUM	2360	327100	11/21/2017	α9/3100βΥ
LUDLUM	2360	329121	05/02/2018	α2/278βΥ
N/A	N/A	N/A	N/A	N/A
HPT NAME/SIGN:	C Quinn/	DATE: 25 MAY 17		
HPT NAME/SIGN:	S. BURTON	Bul	DATE: 25 MAY 1	7
REVIEWED BY NA	ME/SIGN	INDANA "IN.	DATE: By han	e 26/7

No.	Description	Alpha (dpm)	Beta (dpm)	No.	Description	Alpha (dpm)	Beta (dpm)
1	floor	MDA	MDA	21			/
2	1			22			
3				23			
4				24			
5				25			
6				26			
7				27			
8				28	/		
9				29			
10				30	n /		
11				31			
12				32			
13				33			
14				34			
15				35	/ a		
16				36			
17				37			
18				38			
19				39			
20	V	V	Ψ.	40 /			

All smears were taken at 100cm unless otherwise noted

Instruments:

Make/Model Ludlum 30/30

S/N 312341 **CAL DUE**

MDA (DPM)

10-Apr-18

α 17.6/β 141.1

Smears Taken By Name/Sign S. BURTON/

Smears Counted By Name/Sign S. BURTON/

Reviewed by Name/Sign

Date: 25/MAY/ 17

Date: 25/MAY/ 17

Date: 10 1 me 200

ATTACHMENT B GEL LABORATORY REPORTS OF SOIL ANALYSES



a member of The GEL Group INC



gel.com

F 843.766.1178

July 16, 2017

Mr. Ron Cardarelli CN Associates, Inc. PO Box 1446 18 Pine Street Manchester, Massachusetts 01944

Re: Santa Fe Project Work Order: 425983

Dear Mr. Cardarelli:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 21, 2017. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4422.

Sincerely,

Katherine Cates for

Jake Crook Project Manager

Purchase Order: GELP16-0928

Enclosures

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

Certificate of Analysis Report for

CNAS001 CN Associates, Inc.

Client SDG: 425983 GEL Work Order: 425983

The Qualifiers in this report are defined as follows:

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

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

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

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



August 11, 2017

Report Date:

GEL LABORATORIES LLC

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

Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Client Sample ID: SS-B3-6-12-N-20170526 Project: CNAS00117 Client ID: CNAS001

Sample ID: 425983001 Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty** MDC **TPU** Units DF Analyst Date Time Batch Mtd. RL

Rad Gamma Spec Analysis

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

0.486 +/-0.0475 0.0305 Cesium-137 +/-0.0519 1.10 pCi/g MXR1 06/30/17 1505 1676466 1

The following Analytical Methods were performed

Description

DOE HASL 300, 4.5.2.3/Ga-01-R

Batch ID Recovery% Acceptable Limits Surrogate/Tracer Recovery Test

Notes:

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level **RL**: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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

Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-B3-0-6-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983002

Matrix: Soil Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0356 +/-0.079 Cesium-137 1.10 pCi/g MXR1 06/30/17 1515 1676466 1

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-AB5-6-12-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983003 Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0229 +/-0.0715 Cesium-137 1.10 pCi/g MXR1 06/30/17 1518 1676466 1

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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

Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-AB7-0-6-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

425983004 Sample ID: Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0298 +/-0.108 Cesium-137 1.10 pCi/g MXR1 06/30/17 1520 1676466 1

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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

Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-A2-6-12-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983005 Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0346 +/-0.684 Cesium-137 1.10 pCi/g MXR1 06/30/17 1559 1676466 1

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-A6-0-6-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983006

Matrix: Soil Collect Date: 26-MAY-17

Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0306 +/-0.0902 Cesium-137 1.10 pCi/g MXR1 06/30/17 1535 1676466 1

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-B5-0-6-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983007

Matrix: Soil Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0259 +/-0.0913 MXR1 06/30/17 1601 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-B7-0-6-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983008 Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.039 +/-0.363 MXR1 07/03/17 1040 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-AB7-6-12-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983009 Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0442 +/-0.109 MXR1 07/03/17 1043 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: Client Sample ID: SS-AB5-0-6-N-20170526 CNAS00117 Client ID: CNAS001

Sample ID: 425983010

Matrix: Soil Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector:

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Client

0.0339 0.0282 +/-0.0266 MXR1 07/03/17 1043 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Client Sample ID: SS-A8-6-12-N-20170526 Project: CNAS00117 Client ID: CNAS001

Sample ID: 425983011 Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty** MDC **TPU** Units DF Analyst Date Time Batch Mtd. RL

Rad Gamma Spec Analysis

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

2.02 0.032 Cesium-137 +/-0.101 +/-0.202 MXR1 07/03/17 1636 1676466 1 1.10 pCi/g

The following Analytical Methods were performed

Method **Description** DOE HASL 300, 4.5.2.3/Ga-01-R

Batch ID Recovery% Acceptable Limits Test

Surrogate/Tracer Recovery **Notes:**

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level **RL**: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: Client Sample ID: SS-AB3-6-12-D-20170526 CNAS00117 Client ID: CNAS001

Sample ID: 425983012 Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0335 +/-0.173 MXR1 07/03/17 1636 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

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Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-A2-0-6-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983013 Soil

Matrix: Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0761 +/-1.42 MXR1 07/03/17 1637 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-A4-6-12-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983014

Matrix: Soil Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0426 +/-0.0508 MXR1 07/03/17 1806 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

Client Sample ID: SS-A6-6-12-N-20170526 Project: CNAS00117

Sample ID: 425983015 Client ID: CNAS001

Matrîx: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 2.55 +/-0.132 0.0474 +/-0.277 1.10 pCi/g MXR1 07/03/17 1806 1676466 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-B7-6-12-D-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983016

Matrix: Soil Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0509 +/-0.486 MXR1 07/03/17 1806 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-B7-6-12-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983017

Matrix: Soil Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0363 +/-0.129 MXR1 07/03/17 1807 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: Client Sample ID: SS-AB3-0-6-N-20170526 CNAS00117 Client ID: CNAS001

Sample ID: 425983018

Matrix: Soil Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector:

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Client

0.0365 0.051+/-0.0297 MXR1 07/03/17 1807 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-B5-6-12-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983019 Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0265 0.0451 +/-0.0423 MXR1 07/03/17 1808 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 11, 2017

CNAS00117

CNAS001

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-AB3-6-12-N-20170526 Client Sample ID: Client ID:

Sample ID: 425983020

Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.040 +/-0.180 MXR1 07/03/17 1808 1676466 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Client Sample ID: SS-A4-0-6-N-20170526 Project: CNAS00117 Client ID: CNAS001

Sample ID: 425983021 Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty** MDC **TPU** Units DF Analyst Date Time Batch Mtd. RL

Rad Gamma Spec Analysis

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

0.154 +/-0.0284 0.0264 Cesium-137 +/-0.0315 1.10 pCi/g MXR1 06/23/17 1532 1676468 1

The following Analytical Methods were performed

Description

DOE HASL 300, 4.5.2.3/Ga-01-R

Batch ID Recovery% Acceptable Limits Surrogate/Tracer Recovery Test

Notes:

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level **RL**: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 11, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SS-A8-0-6-N-20170526 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425983022 Matrix: Soil

Collect Date: 26-MAY-17 Receive Date: 21-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0373 +/-0.426 MXR1 06/23/17 1533 1676468 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

Radiochemistry Technical Case Narrative CN Associates, Inc. (CNAS) SDG #: 425983

Product: Dry Weight

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 21

Preparation Batch: 1676335

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification

425983023 NP-01-2017-0609

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

The majority of this sample melted in the oven and re-solidified at room temperature.

<u>Product:</u> Gammaspec, Gamma, Solid (Standard List) <u>Analytical Method:</u> DOE HASL 300, 4.5.2.3/Ga-01-R <u>Analytical Procedure:</u> GL-RAD-A-013 REV# 27

Analytical Batch: 1676466

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
425983001	SS-B3-6-12-N-20170526
425983002	SS-B3-0-6-N-20170526
425983003	SS-AB5-6-12-N-20170526
425983004	SS-AB7-0-6-N-20170526
425983005	SS-A2-6-12-N-20170526
425983006	SS-A6-0-6-N-20170526
425983007	SS-B5-0-6-N-20170526
425983008	SS-B7-0-6-N-20170526
425983009	SS-AB7-6-12-N-20170526
425983010	SS-AB5-0-6-N-20170526
425983011	SS-A8-6-12-N-20170526
425983012	SS-AB3-6-12-D-20170526

SS-A2-0-6-N-20170526
SS-A4-6-12-N-20170526
SS-A6-6-12-N-20170526
SS-B7-6-12-D-20170526
SS-B7-6-12-N-20170526
SS-AB3-0-6-N-20170526
SS-B5-6-12-N-20170526
SS-AB3-6-12-N-20170526
Method Blank (MB)
425983001(SS-B3-6-12-N-20170526) Sample Duplicate (DUP)
Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

1. RDL less than MDA due to high sample activity: The following RDLs in sample 425983001 were not achieved: Am-241. The following RDLs in sample 425983006 were not achieved: Am-241. The following RDLs in sample 425983007 were not achieved: Am-241. The following RDLs in sample 425983007 were not achieved: Am-241. The following RDLs in sample 425983009 were not achieved: Am-241. The following RDLs in sample 425983012 were not achieved: Am-241. The following RDLs in sample 425983012 were not achieved: Am-241. The following RDLs in sample 425983014 were not achieved: Am-241. The following RDLs in sample 425983015 were not achieved: Am-241. The following RDLs in sample 425983016 were not achieved: Am-241. The following RDLs in sample 425983019 were not achieved: Am-241. The following RDLs in sample 425983019 were not achieved: Am-241. The following RDLs in sample 425983019 were not achieved: Am-241. The following RDLs in sample 425983019 were not achieved: Am-241. The following RDLs in Sample 425983019 were not achieved: Am-241. The following RDLs in Sample 425983019 were not achieved: Am-241. The following RDLs in Sample 425983019 were not achieved: Am-241. The following RDLs in Sample 425983019 were not achieved: Am-241. The following RDLs in Sample 425983019 were not achieved: Am-241. The following RDLs in Sample 425983019 were not achieved: Am-241. The following RDLs in Sample 425983019 were not achieved: Am-241. The following RDLs in Sample 425983019 were not achieved: Am-241. The following RDLs in Sample 425983019 were not achieved: Am-241. The following RDLs in Sample 425983020 were not achieved: Am-241. The following RDLs in Sample 425983020 were not achieved: Am-241. The following RDLs in Sample 425983020 were not achieved: Am-241. The following RDLs in Sample 425983020 were not achieved: Am-241. The following RDLs in Sample 425983020 were not achieved: Am-241. The following RDLs in Sample 425983020 were not achieved: Am-241. The following RDLs in Sample 425983020 were not achieved: Am-241. The following RD

Product: Gammaspec, Gamma, Solid (Standard List)
Analytical Method: DOE HASL 300, 4.5.2.3/Ga-01-R
Analytical Procedure: GL-RAD-A-013 REV# 27

Analytical Batch: 1676468

The following samples were analyzed using the above methods and analytical procedure(s).

<u>GEL S</u>	<u>ample ID#</u>	Client Sample Identification
425983	3021	SS-A4-0-6-N-20170526
425983	022	SS-A8-0-6-N-20170526
425983	3023	NP-01-2017-0609
120381	7066	Method Blank (MB)
120381	7067	425274061(SB29-124-N-20170607-21.5-23) Sample Duplicate (DUP)
120381	7068	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Technical Information

Recounts

Sample 1203817066 (MB) was recounted due to a suspected blank false positive. The recount is reported.

Miscellaneous Information

Samples 425274061, 062, 425983022, and 1203817067DUP did not meet the Am-241 required detection limit due to high sample activities. Reporting results.

Product: Liquid Scint Fe55, Solid

<u>Analytical Method:</u> DOE RESL Fe-1, Modified <u>Analytical Procedure:</u> GL-RAD-A-040 REV# 13

Analytical Batch: 1679699

Preparation Method: Dry Soil Prep

Preparation Procedure: GL-RAD-A-021 REV# 21

Preparation Batch: 1676335

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID# Client Sample Identification
425983023 NP-01-2017-0609

425983023 NP-01-2017-0609 1203824637 Method Blank (MB)

1203824638 425983023(NP-01-2017-0609) Sample Duplicate (DUP)

1203824639 Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on a "dry weight" basis.

Data Summary:

There are no exceptions, anomalies or deviations from the specified methods. All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable.

Product: Liquid Scint C14, Solid

<u>Analytical Method:</u> EPA EERF C-01 Modified <u>Analytical Procedure:</u> GL-RAD-A-003 REV# 15

Analytical Batch: 1679738

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
425983023	NP-01-2017-0609
1203824775	Method Blank (MB)
1203824776	425983023(NP-01-2017-0609) Sample Duplicate (DUP)
1203824777	425983023(NP-01-2017-0609) Matrix Spike (MS)
1203824778	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Additional Comments

The matrix spike, 1203824777 (NP-01-2017-0609MS), aliquot was reduced to conserve sample volume.

Certification Statement

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

Page: of														
Project #:	GEL Chain of		Custody and Analytical Request	and	An	N	Ca	Red	Lest		2040 S	UEL Laboratories, LLC 2040 Savage Road	ידר	
GOC N1:			•					7) ! !		Charles	Charleston, SC 29407	7	
	GEL Work Order Number:	未		かしるとうな	0	1/2					Phone:	Phone: (843) 556-8171	71	
Client Name:	Phone #:	t:	•	十		San	Inle Ar	Samule Analysis Requested (3)	Pameete		Fax: (8-	Fax: (843) 766-1178	(Fill in the number of continue f	
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SS-B7-0-6-N-20170526	5.26.17 1406	て	\$	0						-				
SS-AB7-6-12-N-20170526	5.26.17 1332	>	N 50	0							ľ			
SS-4BS-0-6-N-20170526	5.26-17 1206	×	N 50	0						-				
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												Central Mountain	Other	
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Custody Seal Intact?
YES NO
Cooler Temp:
C

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B. 6010B/7470A.) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).
6.) Preservative Type: HA = Hydrochloric Acid. SH = Nitric Acid. SH = Sodium Hydroxide, SA = Sulfuric Acid. AA = Ascorbic Acid. HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

YELLOW = FILE

WHITE = LABORATORY

PINK = CLIENT

Page: of			GEL Laboratories, LLC
	CEL Chain of Custody and	Custody and Analytical Request	2040 Savage Road
-		•	Charleston, SC 29407
PO Number:	GEL Work Order Number:		Phone: (843) 556-8171
	Phone #:	Sample Analysis Requested (5) (Fil	(Fill in the number of containers for each test)
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SS- 483-6-12-D-20170526	5.26.17 1203 N N SO		
SS - 42 - 0-6-N-20170526	5.26.17 1335 N N SO		
55- A4-6-12-14-20170526	5.26.17 1342 N N SO		
55-46-6-12-N-20170526	5-26-17 1348 N N SO		
55-137-6-12-19-20170526	5-26-17 (410 N N SO		
55-137-6-12-N-2010526	5.26-17 1408 N N SD		
SS-A83-0-6-N-20170526	5.26.17 1200 N N SO		
55-135-6-12-N-20170526	5.26.17 HOL N N SO		
55-483-6-12-N-20170526	1202 N N		
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	GELW	GEL Work Order Number:	nber:						Phon Fax:	Phone: (843) 556-8171 Fax: (843) 766-1178	171	
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GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: CNAS	SDG/AR/COC/Work Order: U25983
Received By: MI+T	Date Received: (a/2/17
Carrier and Tracking Number	FedEx Express FedEx Ground UPS Field Services Courier Other 1793 5344 5455
Suspected Hazard Information \$\frac{8}{\times} \frac{2}{\times}	"If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further linvestigation.
Shipped as a DOT Hazardous?	Hazard Class Shipped: UN#: 29(17)
COC/Samples marked or classified as radioactive?	Maximum Net Counts Observed* (Observed Counts - Area Background Counts):CPM mP/Hr Classified at: Rad 1 Rad 2 Rad 3
Is package, COC, and/or Samples marked HAZ?	If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:
Sample Receipt Criteria 🐰 💆	S Comments/Qualifiers (Required for Non-Conforming Items)
Shipping containers received intact and sealed?	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2 Chain of custody documents included with shipment?	X SHIPPED IN PREVIOUS COOLER
3 Samples requiring cold preservation within (0 ≤ 6 deg. C)?*	Preservation Method: Wet los los Pecks Dry ice None Other: *all temperatures are recorded in Celsius TEMP: ZICE
4 Daily check performed and passed on IR temperature gun?	Temperature Device Serial #: 1R9-16 Secondary Temperature Device Serial # (II Applicable):
5 Sample containers intact and sealed?	Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
6 Samples requiring chemical preservation at proper pH?	Sample ID's and Containers Affected: If Preservation added, Lot#:
7 Do any samples require Volatile Analysis?	If Yes, Are Encores or Soil Kits present? YesNo (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? YesNc N/A (If unknown, salect No) VOA vials free of headspace? Yes Nc N/A Sample ID's and containers affected:
8 Samples received within holding time?	ID's and tests affected:
g Sample ID's on COC match ID's on bottles?	Sample ID's and containers affected:
Date & time on COC match date & time X on bottles?	Sample ID's effected:
Number of containers received match number indicated on COC?	Sample ID's affected:
Are sample containers identifiable as GEL provided?	X
13 COC form is properly signed in relinquished/received sections?	
Comments (Use Continuation Form if needed):	110000000000000000000000000000000000000
PM (or PMA) review: Initials	The rape of the same of the sa
	GL-CHL-SR-001 Rev 5

List of current GEL Certifications as of 16 July 2017

State	Certification
Alaska	UST-0110
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA170010
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122017-1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania NELAP	68-00485
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-17-12
Utah NELAP	SC000122017-22
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404



a member of The GEL Group INC



gel.com

F 843.766.1178

August 09, 2017

Mr. Ron Cardarelli CN Associates, Inc. PO Box 1446 18 Pine Street Manchester, Massachusetts 01944

Re: Santa Fe Project Work Order: 425274

Dear Mr. Cardarelli:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on June 12, 2017. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4422.

Sincerely,

Katherine Cates for Jake Crook

Project Manager

Purchase Order: GELP16-0928

Enclosures

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

Certificate of Analysis Report for

CNAS001 CN Associates, Inc.

Client SDG: 425274 GEL Work Order: 425274

The Qualifiers in this report are defined as follows:

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

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

The designation ND, if present, appears in the result column when the analyte concentration is not detected above the limit as defined in the 'U' qualifier above.

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



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

Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Client Sample ID: SB01-003-N-20170530-23-25 Project: CNAS00117 Client ID: CNAS001

Sample ID: 425274001

Matrix: Soil

Collect Date: 30-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty** MDC **TPU** Units DF Analyst Date Time Batch Mtd. RL

Rad Gamma Spec Analysis

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

-0.0108 +/-0.0224 Cesium-137 0.0377 +/-0.023 MXR1 06/27/17 0912 1675819 1 1.10 pCi/g

The following Analytical Methods were performed

Method Description

DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% Acceptable Limits Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level **RL**: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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

Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB02-004-N-20170530-8-10 Client Sample ID: CNAS00117 425274002 Client ID: CNAS001

Sample ID: Matrix: Soil

Collect Date: 30-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0363 0.046 +/-0.0271 MXR1 06/27/17 1128 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB03-009-N-20170531-13-15 Project: Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425274003 Matrix: Soil

Collect Date: 31-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0109 0.0385 +/-0.0202 MXR1 06/27/17 1128 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

Batch ID Recovery%

Acceptable Limits

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB03-012-N-20170531-23-25 Project: Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425274004 Matrix: Soil

Collect Date: 31-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0172 0.0475 +/-0.0264 MXR1 06/27/17 1129 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB04-073-N-20170605-8-10 Client Sample ID: CNAS00117 Sample ID: 425274005 Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.00299 0.0369 +/-0.0202 MXR1 06/27/17 1129 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB04-015-N-20170531-21-23 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425274006 Matrix: Soil

Collect Date: 31-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0411 0.0454 +/-0.0287 MXR1 06/28/17 1144 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB04-016-N-20170531-23-25 Project: Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425274007 Matrix: Soil

Collect Date: 31-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.00913 0.0433 +/-0.0234 MXR1 06/27/17 1132 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB05-019-N-20170531-22.5-24.5 Project: Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425274008 Matrix: Soil

Collect Date: 31-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0336 +/-0.0189 MXR1 06/27/17 1407 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB06-074-N-20170605-8-10
 Project:
 CNAS00117

 Sample ID:
 425274009
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U 0.0174 +/-0.0173 0.0307 +/-0.019 1.10 pCi/g MXR1 06/27/17 1408 1675819 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB06-020-N-20170531-13-15 Project: Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425274010

Matrix: Soil Collect Date: 31-MAY-17 Receive Date: 12-JUN-17 Collector:

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Client

0.000334 0.0231 +/-0.0148 MXR1 06/27/17 1408 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Client Sample ID: SB02-005-N-20170530-14-16 Project: CNAS00117 Client ID: CNAS001

Sample ID: 425274011

Matrix: Soil

Collect Date: 30-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty** MDC **TPU** Units DF Analyst Date Time Batch Mtd. RL

Rad Gamma Spec Analysis

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

250 Cesium-137 +/-0.821 0.108 +/-21.8 MXR1 06/27/17 1408 1675819 1 1.10 pCi/g

The following Analytical Methods were performed

Method **Description**

DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% Acceptable Limits Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level **RL**: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

Client Sample ID: SB02-007-N-20170530-21.5-23.5 Project: CNAS00117

Sample ID: 425274012 Client ID: CNAS001

Matrix: Soil
Collect Date: 30-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 3020 +/-2.72 0.471 +/-283 1.10 pCi/g MXR1 06/27/17 1409 1675819 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB02-008-N-20170530-23.5-25 Project: Client Sample ID: CNAS00117 425274013 Sample ID: Client ID: CNAS001

Matrix: Soil

Collect Date: 31-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0355 +/-0.106 MXR1 06/27/17 1409 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB11-037-N-20170601-8-10
 Project:
 CNAS00117

 Sample ID:
 425274014
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 01-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 972 +/-2.04 0.224 +/-82.3 1.10 pCi/g MXR1 06/27/17 1432 1675819 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB11-040-D-20170601-21-24 Client Sample ID: CNAS00117 Sample ID: 425274015 Client ID: CNAS001

Matrix: Soil Collect Date: 01-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0302 +/-0.061 MXR1 06/27/17 1541 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB12-041-N-20170601-8-10 Client Sample ID: CNAS00117 Sample ID: 425274016 Client ID: CNAS001

Matrix: Soil Collect Date: 01-JUN-17 Receive Date: 12-JUN-17

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

Collector:

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

Client

0.0287 +/-0.0894 MXR1 06/27/17 1542 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB14-079-N-20170605-8-10 Client Sample ID: CNAS00117 Sample ID: 425274017 Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

Collector:

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

Client

0.0279 +/-0.441 MXR1 06/27/17 1826 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB18-058-N-20170602-7-9 Client Sample ID: CNAS00117 Sample ID: Client ID: CNAS001 425274018

Matrix: Soil Collect Date: 02-JUN-17 Receive Date: 12-JUN-17 Collector:

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Client

0.189 +/-53.2 MXR1 06/27/17 1826 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

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Manabastar Massachusetts 0104

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB18-061-N-20170602-22-24
 Project:
 CNAS00117

 Sample ID:
 425274019
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 02-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 773 +/-1.39 0.212 +/-66.7 1.10 pCi/g MXR1 06/27/17 1826 1675819 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB19-081-N-20170605-7-9 Client Sample ID: CNAS00117 Sample ID: 425274020 Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17 Collector:

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Client

0.0217 +/-0.0423 MXR1 06/27/17 1827 1675819 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Client Sample ID: SB06-023-N-20170531-22-24 Project: CNAS00117 Client ID: CNAS001

Sample ID: 425274021 Matrix: Soil

Collect Date: 31-MAY-17

Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty** MDC **TPU** Units DF Analyst Date Time Batch Mtd. RL

Rad Gamma Spec Analysis

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

0.00279 +/-0.0134 Cesium-137 0.0218 +/-0.0135 1.10 pCi/g MXR1 06/27/17 1857 1675820 1

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Batch ID Recovery% Acceptable Limits Test

Surrogate/Tracer Recovery **Notes:**

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level **RL**: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB07-076-N-20170605-7-9 Project: Client Sample ID: CNAS00117 Sample ID: 425274022 Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date:

12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0268 0.0572 +/-0.0317 MXR1 06/28/17 0620 1675820 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB07-026-N-20170531-22.5-24.5 Project: Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425274023 Matrix: Soil

Collect Date: 31-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0222 0.0653 +/-0.0345 MXR1 06/28/17 0621 1675820 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB08-027-N-20170531-8-10 Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425274024 Matrix: Soil

Collect Date: 31-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0184 0.0498 +/-0.027 MXR1 06/28/17 0628 1675820 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description

DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB08-030-N-20170531-23.5-24 Project: Client Sample ID: CNAS00117 Client ID: CNAS001

Sample ID: 425274025

Matrix: Soil Collect Date: 31-MAY-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0011 0.0404 +/-0.0279 MXR1 06/28/17 0640 1675820 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

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18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB10-077-N-20170605-8-10
 Project:
 CNAS00117

 Sample ID:
 425274026
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U -0.00488 +/-0.0309 0.0551 +/-0.031 1.10 pCi/g MXR1 06/28/17 0718 1675820 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB10-036-N-20170601-13-15
 Project:
 CNAS00117

 Sample ID:
 425274027
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 01-JUN-17

Receive Date: 01-JUN-17
Collector: 12-JUN-17
Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U 0.00595 +/-0.0162 0.0307 +/-0.0164 1.10 pCi/g MXR1 06/28/17 0723 1675820 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB13-042-N-20170602-8-10
 Project:
 CNAS00117

 Sample ID:
 425274028
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 02-JUN-17
Receive Date: 12-IUN-17

Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U 0.00275 +/-0.0244 0.0449 +/-0.0244 1.10 pCi/g MXR1 06/28/17 0723 1675820 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB14-045-N-20170602-16-18 Client Sample ID: CNAS00117 Sample ID: 425274029 Client ID: CNAS001

Matrix: Soil Collect Date: 02-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0835 0.0353 +/-0.0544 MXR1 06/28/17 0724 1675820 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB15-080-N-20170605-8-10
 Project:
 CNAS00117

 Sample ID:
 425274030
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U 0.0112 +/-0.0225 0.0451 +/-0.0231 1.10 pCi/g MXR1 06/28/17 0730 1675820 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

Client Sample ID: SB15-049-N-20170602-22-24 Project: CNAS00117 Sample ID: 425274031 Client ID: CNAS001

Sample ID: 425274031 Matrix: Soil Collect Date: 02-JUN-17

Receive Date: 02-JUN-17
Rollector: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U -0.00615 +/-0.0223 0.0386 +/-0.0225 1.10 pCi/g MXR1 06/28/17 0730 1675820 1

The following Analytical Methods were performed

Method Description

1 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution FactorMtd.: MethodDL: Detection LimitPF: Prep FactorLc/LC: Critical LevelRL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB16-050-N-20170602-8-10
 Project:
 CNAS00117

 Sample ID:
 425274032
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 02-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U -0.00993 +/-0.0308 0.0545 +/-0.0312 1.10 pCi/g MXR1 06/28/17 0730 1675820 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB16-054-N-20170602-22-24 Project: Client Sample ID: CNAS00117 Sample ID: Client ID: CNAS001 425274033

Matrix: Soil Collect Date: 02-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0321 0.0558 +/-0.0313 MXR1 06/28/17 0736 1675820 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB19-065-N-20170603-22-24
 Project:
 CNAS00117

 Sample ID:
 425274034
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 03-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U 0.00746 +/-0.022 0.0404 +/-0.0223 1.10 pCi/g MXR1 06/28/17 0742 1675820 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB20-082-N-20170605-8-10
 Project:
 CNAS00117

 Sample ID:
 425274035
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-IIIN-17

Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 UI 0.0292 +/-0.0295 0.0291 +/-0.0296 1.10 pCi/g MXR1 06/28/17 0834 1675820 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB20-068-N-20170603-22-24 Client Sample ID: CNAS00117 425274036 Sample ID: Client ID: CNAS001

Matrix: Soil Collect Date: 03-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0221 0.0323 +/-0.0322 MXR1 06/28/17 0835 1675820 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB21-072-N-20170605-24-25.5 Project: Client Sample ID: CNAS00117 Sample ID: 425274037 Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0079 0.0513 +/-0.0285 MXR1 06/28/17 0835 1675820 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB22-084-N-20170605-13-15 Project: Client Sample ID: CNAS00117 Sample ID: 425274038 Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17 Collector:

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Client

0.002580.0355 +/-0.0199 MXR1 06/28/17 0836 1675820 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB22-087-N-20170605-23-25
 Project:
 CNAS00117

 Sample ID:
 425274039
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U 0.00774 +/-0.021 0.0385 +/-0.0213 1.10 pCi/g MXR1 06/28/17 0836 1675820 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB23-088-N-20170605-8-10
 Project:
 CNAS00117

 Sample ID:
 425274040
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12 JUN-17

Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U 0.0404 +/-0.0447 0.0464 +/-0.0447 1.10 pCi/g MXR1 06/29/17 0613 1675820 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Client Sample ID: SB21-069-N-20170603-8.5-10 Project: CNAS00117 Client ID: CNAS001

Sample ID: 425274041 Matrix: Soil Collect Date: 03-JUN-17

Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty** MDC **TPU** Units DF Analyst Date Time Batch Mtd. RL

Rad Gamma Spec Analysis

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

0.0866 +/-0.0426 Cesium-137 0.0473 +/-0.0434 MXR1 06/28/17 0903 1675821 1 1.10 pCi/g

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Batch ID Recovery% Acceptable Limits Test

Surrogate/Tracer Recovery **Notes:**

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level **RL**: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB22-083-N-20170605-8-10 Client Sample ID: CNAS00117 Sample ID: 425274042 Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0427 +/-0.0753 MXR1 06/28/17 0903 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Batch ID Recovery% **Acceptable Limits** Test

Surrogate/Tracer Recovery **Notes:**

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB24-096-N-20170605-23.5-25 Project: Client Sample ID: CNAS00117 Sample ID: 425274043 Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.281 +/-65.0 MXR1 06/28/17 0904 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

Client Sample ID: SB24-102-20170605-drill tip Project: CNAS00117 Sample ID: 425274044 Project: CNAS001

Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17

Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 7.41 +/-0.290 0.0741 +/-0.707 1.10 pCi/g MXR1 06/28/17 0904 1675821 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor

DL: Detection Limit

Lc/LC: Critical Level

Mtd.: Method

PF: Prep Factor

RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB25-099-N-20170605-13-15 Client Sample ID: CNAS00117 425274045 Sample ID: Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0407 +/-0.0887 MXR1 06/28/17 0905 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB27-110-N-20170607-18-20 Client Sample ID: CNAS00117 Sample ID: 425274046 Client ID: CNAS001

Matrix: Soil Collect Date: 07-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.250 +/-46.4 MXR1 06/28/17 0905 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB27-112-N-20170607-23-25 Client Sample ID: CNAS00117 Sample ID: 425274047 Client ID: CNAS001

Matrix: Soil Collect Date: 07-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0562 +/-0.0776 MXR1 06/28/17 0906 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB28-116-N-20170607-21-23 Client Sample ID: CNAS00117 Sample ID: 425274048 Client ID: CNAS001

Matrix: Soil Collect Date: 07-JUN-17 Receive Date: 12-JUN-17

Collector: Client **Parameter** Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

1.56 +/-95.5 MXR1 06/28/17 0906 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB28-118-N-20170607-26-28
 Project:
 CNAS00117

 Sample ID:
 425274049
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-IIIN-17

Receive Date: 07-30N-17
Collector: 12-JUN-17
Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 1.81 +/-0.105 0.051 +/-0.192 1.10 pCi/g MXR1 06/28/17 0912 1675821 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB28-119-N-20170607-6-7.5
 Project:
 CNAS00117

 Sample ID:
 425274050
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17

Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 2020 +/-3.24 0.523 +/-164 1.10 pCi/g MXR1 06/28/17 0912 1675821 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

Client Sample ID: SB23-091-N-20170605-23-25 Project: CNAS00117 Sample ID: 425274051 Client ID: CNAS001

Sample ID: 425274051 Matrix: Soil Collect Date: 05-JUN-17

Receive Date: 05-JUN-17
Collector: 12-JUN-17
Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 U 0.00355 +/-0.0216 0.0358 +/-0.0217 1.10 pCi/g MXR1 06/28/17 0913 1675821 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution FactorMtd.: MethodDL: Detection LimitPF: Prep FactorLc/LC: Critical LevelRL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB24-094-N-20170605-16-20 Client Sample ID: CNAS00117 Sample ID: 425274052 Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17 Collector:

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Client

0.0447 +/-0.355 MXR1 06/28/17 1204 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB25-100-N-20170605-18-20 Project: Client Sample ID: CNAS00117 Sample ID: 425274053 Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

Collector:

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

Client

-0.015 0.0376 +/-0.0238 MXR1 06/28/17 1210 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB26-103-N-20170606-8.5-10 Client Sample ID: CNAS00117 Sample ID: 425274054 Client ID: CNAS001

Matrix: Soil Collect Date: 06-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0537 +/-0.791 Cesium-137 1.10 pCi/g MXR1 06/28/17 1251 1675821 1

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB26-104-N-20170606-13-15 Client Sample ID: CNAS00117 425274055 Sample ID: Client ID: CNAS001

Matrix: Soil Collect Date: 06-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0378 +/-0.557 MXR1 06/28/17 1402 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Company: CN Associates, Inc.

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB26-107-N-20170607-23-25 Client Sample ID: CNAS00117 425274056 Sample ID: Client ID: CNAS001

Matrix: Soil Collect Date: 07-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0427 +/-0.0436 MXR1 06/28/17 1402 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB27-108-N-20170607-8.5-10 Project: Client Sample ID: CNAS00117 425274057 Sample ID: Client ID: CNAS001

Matrix: Soil Collect Date: 07-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0507 +/-0.234 MXR1 06/28/17 1402 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Address: PO Box 1446

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Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Project: SB28-113-N-20170607-8-10 Client Sample ID: CNAS00117 Sample ID: 425274058 Client ID: CNAS001

Matrix: Soil Collect Date: 07-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.0341 +/-0.0605 MXR1 06/28/17 1412 1675821 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

Method

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

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Manahastan Massachusetts 01044

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB28-114-N-20170607-13-15
 Project:
 CNAS00117

 Sample ID:
 425274059
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 07-JUN-17

Receive Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 0.715 +/-0.0702 0.0315 +/-0.0968 1.10 pCi/g MXR1 06/28/17 1412 1675821 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446

18 Pine Street

Manabastar Massachusetts 01044

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli Project: Santa Fe Project

 Client Sample ID:
 SB28-115-N-20170607-18-20
 Project:
 CNAS00117

 Sample ID:
 425274060
 Client ID:
 CNAS001

Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Parameter Qualifier Result Uncertainty MDC TPU RL Units PF DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

Cesium-137 53.3 +/-0.510 0.0798 +/-4.35 1.10 pCi/g MXR1 06/28/17 1412 1675821 1

The following Analytical Methods were performed

 Method
 Description

 1
 DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Test Batch ID Recovery% Acceptable Limits

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method
DL: Detection Limit PF: Prep Factor
Lc/LC: Critical Level RL: Reporting Limit

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944

Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

Client Sample ID: SB29-124-N-20170607-21.5-23 Project: CNAS00117 Sample ID: 425274061 Client ID: CNAS001

Matrix: Soil Collect Date: 03-JUN-17 Receive Date: 12-JUN-17

Collector: Client

Parameter Qualifier **Result Uncertainty** MDC **TPU** Units DF Analyst Date Time Batch Mtd. RL

Rad Gamma Spec Analysis

Method

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

3510 +/-327 Cesium-137 +/-3.03 0.547 MXR1 06/23/17 1532 1676468 1 1.10 pCi/g

The following Analytical Methods were performed

Description DOE HASL 300, 4.5.2.3/Ga-01-R

Batch ID Recovery% Acceptable Limits

Surrogate/Tracer Recovery

Notes: The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor Lc/LC: Critical Level **RL**: Reporting Limit

Test

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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Certificate of Analysis

Company: CN Associates, Inc.

Address: PO Box 1446 18 Pine Street

Manchester, Massachusetts 01944 Report Date: August 9, 2017

Mr. Ron Cardarelli Contact: Project: Santa Fe Project

SB29-125-N-20170607-24-24.5 Project: Client Sample ID: CNAS00117 425274062 Sample ID: Client ID: CNAS001

Matrix: Soil Collect Date: 05-JUN-17 Receive Date: 12-JUN-17 Collector: Client

Parameter Qualifier **Result Uncertainty MDC TPU** RLUnits DF Analyst Date Time Batch Mtd.

Rad Gamma Spec Analysis

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

0.110 +/-0.570 MXR1 06/23/17 1532 1676468 1 Cesium-137 1.10 pCi/g

The following Analytical Methods were performed

Method Description DOE HASL 300, 4.5.2.3/Ga-01-R

Surrogate/Tracer Recovery Batch ID Recovery% **Acceptable Limits** Test

Notes:

The MDC is a sample specific MDC.

TPU and Counting Uncertainty are calculated at the 95% confidence level (1.96-sigma).

Column headers are defined as follows:

DF: Dilution Factor Mtd.: Method DL: Detection Limit PF: Prep Factor RL: Reporting Limit Lc/LC: Critical Level

MDA: Minimum Detectable Activity TPU: Total Propagated Uncertainty

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QC Summary

Report Date: August 9, 2017

Page 1 of 3

CN Associates, Inc. PO Box 1446 18 Pine Street

Manchester, Massachusetts

Contact:

Mr. Ron Cardarelli

Workorder: 425274

Parmname	NOM	Sample Qua	l QC	Units	RPD%	REC%	Range Anlst	Date Time
Rad Gamma Spec Batch 1675819 ———								
QC1203815606 425274001 DUP Cesium-137	U	-0.0108 U	0.00954	pCi/g	N/A		N/A MXR1	06/27/17 18:28
QC1203815607 LCS Americium-241	69.6		74.7	pCi/g		107	(75%-125%)	06/27/17 18:28
Cesium-137	23.1		24.9	pCi/g		108	(75%-125%)	
Cobalt-60	15.3		16.6	pCi/g		108	(75%-125%)	
QC1203815605 MB Cesium-137		U	0.000125	pCi/g				06/27/17 18:28
Batch 1675820 ———								
QC1203815609 425274021 DUP Cesium-137	U	0.00279 U	-0.00503	pCi/g	N/A		N/A MXR1	06/28/17 08:45
QC1203815610 LCS Americium-241	61.5		66.5	pCi/g		108	(75%-125%)	06/28/17 08:46
Cesium-137	20.4		22.0	pCi/g		108	(75%-125%)	
Cobalt-60	13.5		14.6	pCi/g		108	(75%-125%)	
QC1203815608 MB Cesium-137		U	-9.67E-05	pCi/g				06/28/17 15:55
Batch 1675821 ———								
QC1203815612 425274041 DUP Cesium-137		0.0866	0.0828	pCi/g	4.54		(0% - 100%) MXR1	06/28/17 14:17

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QC Summary

Workorder: 425274 Page 2 of 3 QC RPD% **Parmname NOM** Sample Qual Units REC% Range Anlst Date Time Rad Gamma Spec 1675821 Batch QC1203815613 LCS 67.5 77.8 (75%-125%) MXR1 06/28/17 09:07 Americium-241 pCi/g 115 Cesium-137 22.4 23.9 pCi/g 107 (75%-125%) Cobalt-60 14.8 16.4 110 (75%-125%) pCi/g QC1203815611 MB U 0.0032 06/28/17 14:13 Cesium-137 pCi/g Batch 1676468 QC1203817067 425274061 DUP Cesium-137 3510 3710 pCi/g 5.43 (0%-20%) MXR1 06/23/17 17:50 QC1203817068 LCS Americium-241 56.7 62.4 pCi/g 110 (75%-125%) 06/23/17 17:51 18.8 21.0 pCi/g 111 Cesium-137 (75%-125%) Cobalt-60 12.5 13.5 pCi/g 108 (75%-125%) QC1203817066 MB U -0.00292 06/26/17 10:48 Cesium-137 pCi/g

Notes:

The Qualifiers in this report are defined as follows:

- ** Analyte is a Tracer compound
- < Result is less than value reported
- > Result is greater than value reported
- BD Results are either below the MDC or tracer recovery is low
- FA Failed analysis.
- H Analytical holding time was exceeded
- J Value is estimated

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QC Summary

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

- K Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- M M if above MDC and less than LLD

425274

- M REMP Result > MDC/CL and < RDL
- N/A RPD or %Recovery limits do not apply.
- N1 See case narrative

Workorder:

- ND Analyte concentration is not detected above the detection limit
- NJ Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Q One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
- R Sample results are rejected
- U Analyte was analyzed for, but not detected above the MDL, MDA, MDC or LOD.
- UI Gamma Spectroscopy--Uncertain identification
- UJ Gamma Spectroscopy--Uncertain identification
- UL Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
- X Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
- Y Other specific qualifiers were required to properly define the results. Consult case narrative.
- ^ RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
- h Preparation or preservation holding time was exceeded

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

- ^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
- * Indicates that a Quality Control parameter was not within specifications.

For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

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

Radiochemistry Technical Case Narrative CN Associates, Inc. (CNAS) SDG #: 425274

Product: Gammaspec, Gamma, Solid (Standard List) Analytical Method: DOE HASL 300, 4.5.2.3/Ga-01-R Analytical Procedure: GL-RAD-A-013 REV# 27

Analytical Batch: 1675819

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
425274001	SB01-003-N-20170530-23-25
425274002	SB02-004-N-20170530-8-10
425274003	SB03-009-N-20170531-13-15
425274004	SB03-012-N-20170531-23-25
425274005	SB04-073-N-20170605-8-10
425274006	SB04-015-N-20170531-21-23
425274007	SB04-016-N-20170531-23-25
425274008	SB05-019-N-20170531-22.5-24.5
425274009	SB06-074-N-20170605-8-10
425274010	SB06-020-N-20170531-13-15
425274011	SB02-005-N-20170530-14-16
425274012	SB02-007-N-20170530-21.5-23.5
425274013	SB02-008-N-20170530-23.5-25
425274014	SB11-037-N-20170601-8-10
425274015	SB11-040-D-20170601-21-24
425274016	SB12-041-N-20170601-8-10
425274017	SB14-079-N-20170605-8-10
425274018	SB18-058-N-20170602-7-9
425274019	SB18-061-N-20170602-22-24
425274020	SB19-081-N-20170605-7-9
1203815605	Method Blank (MB)
1203815606	425274001(SB01-003-N-20170530-23-25) Sample Duplicate (DUP)
1203815607	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

1. RDL less than MDA due to high sample activity: The following RDLs in sample 425274004 were not achieved: Am-241. The following RDLs in sample 425274006 were not achieved: Am-241. The following RDLs in sample 425274007 were not achieved: Am-241. The following RDLs in sample 425274008 were not achieved: Am-241. The following RDLs in sample 425274011 were not achieved: Am-241. The following RDLs in sample 425274012 were not achieved: Am-241. The following RDLs in sample 425274013 were not achieved: Am-241. The following RDLs in sample 425274014 were not achieved: Am-241. The following RDLs in sample 425274014 were not achieved: Am-241. The following RDLs in sample 425274014 were not achieved: Am-241. The following RDLs in sample 425274014 were not achieved: Am-241. The following RDLs in sample 425274014 were not achieved: Am-241.

in sample 425274018 were not achieved: Am-241. The following RDLs in sample 425274019 were not achieved: Am-241. 1. Reporting Results.

<u>Product:</u> Gammaspec, Gamma, Solid (Standard List) <u>Analytical Method:</u> DOE HASL 300, 4.5.2.3/Ga-01-R <u>Analytical Procedure:</u> GL-RAD-A-013 REV# 27

Analytical Batch: 1675820

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
425274021	SB06-023-N-20170531-22-24
425274022	SB07-076-N-20170605-7-9
425274023	SB07-026-N-20170531-22.5-24.5
425274024	SB08-027-N-20170531-8-10
425274025	SB08-030-N-20170531-23.5-24
425274026	SB10-077-N-20170605-8-10
425274027	SB10-036-N-20170601-13-15
425274028	SB13-042-N-20170602-8-10
425274029	SB14-045-N-20170602-16-18
425274030	SB15-080-N-20170605-8-10
425274031	SB15-049-N-20170602-22-24
425274032	SB16-050-N-20170602-8-10
425274033	SB16-054-N-20170602-22-24
425274034	SB19-065-N-20170603-22-24
425274035	SB20-082-N-20170605-8-10
425274036	SB20-068-N-20170603-22-24
425274037	SB21-072-N-20170605-24-25.5
425274038	SB22-084-N-20170605-13-15
425274039	SB22-087-N-20170605-23-25
425274040	SB23-088-N-20170605-8-10
1203815608	Method Blank (MB)
1203815609	425274021(SB06-023-N-20170531-22-24) Sample Duplicate (DUP)
1203815610	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Quality Control (QC) Information

QC Information

All of the QC samples meet the required acceptance limits with the following exceptions: The sample and the duplicate, 1203815609 (SB06-023-N-20170531-22-24DUP) and 425274021 (SB06-023-N-20170531-22-24), did not meet the Pb-210 relative percent difference requirement (0-100%); however, they do meet the relative error ratio requirement (0-3) with a value of 1.32.

Technical Information

Recounts

Sample 1203815608 (MB) was recounted due to a suspected blank false positive. The recount is reported. Sample 425274040 (SB23-088-N-20170605-8-10) was recounted to verify results. The recount is reported.

Miscellaneous Information

Samples did not meet the Am-241 required detection limit: 425274 022,024,025,026,028,031,033,034,035, 037,038 and 040 Samples counted for an appropriate count time. Reporting results.

Qualifier Information

Qualifier	Reason	Analyte	Sample	Client Sample
UI	Results are considered a false positive due to high counting uncertainty.	Cesium-137	425274035	SB20-082-N-20170605-8-10
UI	Results are considered a false positive due to high peak-width.		425274029	SB14-045-N-20170602-16-18

Product: Gammaspec, Gamma, Solid (Standard List) Analytical Method: DOE HASL 300, 4.5.2.3/Ga-01-R Analytical Procedure: GL-RAD-A-013 REV# 27

Analytical Batch: 1675821

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
425274041	SB21-069-N-20170603-8.5-10
425274042	SB22-083-N-20170605-8-10
425274043	SB24-096-N-20170605-23.5-25
425274044	SB24-102-20170605-drill tip
425274045	SB25-099-N-20170605-13-15
425274046	SB27-110-N-20170607-18-20
425274047	SB27-112-N-20170607-23-25
425274048	SB28-116-N-20170607-21-23
425274049	SB28-118-N-20170607-26-28
425274050	SB28-119-N-20170607-6-7.5
425274051	SB23-091-N-20170605-23-25
425274052	SB24-094-N-20170605-16-20
425274053	SB25-100-N-20170605-18-20
425274054	SB26-103-N-20170606-8.5-10
425274055	SB26-104-N-20170606-13-15
425274056	SB26-107-N-20170607-23-25
425274057	SB27-108-N-20170607-8.5-10
425274058	SB28-113-N-20170607-8-10
425274059	SB28-114-N-20170607-13-15
425274060	SB28-115-N-20170607-18-20
1203815611	Method Blank (MB)
1203815612	425274041(SB21-069-N-20170603-8.5-10) Sample Duplicate (DUP)
1203815613	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Miscellaneous Information

Samples did not meet the Am-241 required detection limit: 425274 041,042,043,044,045,046,048,049,050, 051,052,053,056,058,059,060 QC 1203815612DUP Samples counted an appropriate count time. Reporting results.

Product: Gammaspec, Gamma, Solid (Standard List)
Analytical Method: DOE HASL 300, 4.5.2.3/Ga-01-R
Analytical Procedure: GL-RAD-A-013 REV# 27

Analytical Batch: 1676468

The following samples were analyzed using the above methods and analytical procedure(s).

GEL Sample ID#	Client Sample Identification
425274061	SB29-124-N-20170607-21.5-23
425274062	SB29-125-N-20170607-24-24.5
1203817066	Method Blank (MB)
1203817067	425274061(SB29-124-N-20170607-21.5-23) Sample Duplicate (DUP)
1203817068	Laboratory Control Sample (LCS)

The samples in this SDG were analyzed on an "as received" basis.

Data Summary:

All sample data provided in this report met the acceptance criteria specified in the analytical methods and procedures for initial calibration, continuing calibration, instrument controls and process controls where applicable, with the following exceptions.

Calibration Information

Sample Geometry

Sample were analyzed in the container received per client instruction. The dimensions of the container did match a calibrated geometry, however, the efficiency is based on a specified volume of material in the geometry. The sample as received did not completely match this volume and as a consequence, the results may be biased. 425274062 (SB29-125-N-20170607-24-24.5).

Technical Information

Recounts

Sample 1203817066 (MB) was recounted due to a suspected blank false positive. The recount is reported.

Miscellaneous Information

Samples 425274061, 062, 425983022, and 1203817067DUP did not meet the Am-241 required detection limit

due to high sample activities. Reporting results.

Certification Statement

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

Page: 1 of 1		air of		fodv	2	Am	A	2	Z	Custody and Analytical Request		GEL Laboratories, LLC	stories, LLC		
Project #:	*	**See www.gel.com for GEL's Sample Acceptance SOP**	el.com	for GEI	's Sam	ple Acc	ceptan	ce SO	**			2040 Savage Road Charleston, SC 29407	e Road SC 29407		
(i).	GEL Work Order Number:	ıber:	J	405074	7	I						Phone: (843) 556-8171 Fax: (843) 766-1178) 556-8171		
Client Name: CN Associates		Phone #: 971	8-273-7828	80			San	aple A	nalysi	Sample Analysis Requested (5)		II in the numb	er of cont	(Fill in the number of containers for each test)	(
Project/Site Name: Thermo Eberline - Santa Fe		Fax #:				e pe								< Preservative Type (6)	e Type (6)
Address: 5981 Airport Road, Santa Fe, New Mexico	03					Shouk qmes bienoo		scobà						Comments	onta
Collected by: C. Quinn Send R	Send Results: ken.dow@cnassociates .net	cnassociate	i .net			bəta		одээд						Note: extra sample is	sample is
Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	OC Code	Field (9)	Sample Matrix ⁽⁴⁾	Radioactive TSCA Regul	mun letoT	Camma S						required for sample specific QC	r sample : QC
SB23-091-N-20170605-23-25	6/5/2017	1535	z	Z	SO	×	-1	×						Analyze as Received	Received
SB24-094-N-20170605-16-20	6/5/2017	1769	z	z	20	×	-	×						Analyze as Received	Received
SB25-100-N-20170605-18-20	6/5/2017	1735	z	z	SO	×	-	×						Analyze as Received	Received
SB26-103-N-20170606-8.5-10	6/6/2017	1035	z	z	SO	×		×						Analyze as Received	Received
SB26-104-N-20170606-13-15	6/6/2017	1028	z	z	SO	×	-	×						Analyze as Received	Received
SB26-107-N-20170607-23-25	6/7/2017	0954	z	z	SO	×	-	×						Analyze as Received	Received
SB27-108-N-20170607-8.5-10	6/7/2017	0958	z	z	SO	×	-	×						Analyze as Received	Received
SB28-113-N-20170607-8-10	6/7/2017	1035	z	z	SO	×		×						Analyze as Received	Received
SB28-114-N-20170607-13-15	6/7/2017	1638	z	z	SO	×		×						Analyze as Received	Received
SB28-115-N-20170607-18-20	6/7/2017	1634	z	z	SO	×		×						Analyze as Received	Received
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1.) Chain of Custody Number - Client Determined 1. Chain of Custody Number - Client Determined 2. Chain of Custody Number - Client Determined 3. Chain of Custody Number - Client Determined 4. Chain of Custody Number - Client Determined 5. Chain of Custody Number - Client Determined 5. Chain of Custody Number - Client Determined	Judg terminist of the	MS a Matrix	nika Cama	le Man	Matrix Snil	n Dunlicat	Samule	5	: :	omnosite				For Lab Receiving Use Only	Use Oplo
 QC Codes: N = Normal Sample, IB = 1 (p) Blank, FD = frield Duplicate, BB = Equipment Blank, MS = main's Spike Sample, RNS Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered. 	nple was field filtered or - N	- for sample wa	not field	Titered.	and or company			, ,	, () (1	;	; ;	<u></u>	Custody Seal Intact?	ntact?
4.) Matrix Codes: DW=Drinking Water, GW=Chrundwater, SW=Surface Water, WW=Waste Water, WL-Water, ML-Miso Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Soild Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasa	Water, WW=Waste Water,	W≃Water, ML	Misc Liqu	id, SO=Soil	SD=Sedir	nent, SL=S	Sludge, SS	Solid \	Vaste, O	-Oil, F=Filter, P	≃Wipe, U	*Urine, F**Fecal, N	=Nasal	Cooler Temn.	NC
5.) Sample Analysis Requested: Analytical method requested (1.e. \$250B, 6010B/747BA) and number of containers provided for each (1.e. \$20B - 5, 0010B/747BA - 1.f.	, 6010B//470A) and names Codium Hudsovide SA = Cu	For containers pr	Ovideu vor e Ascorbic	each (i.e. o.	Hexane	T = Sodin	m Thiosu	fate If n	o nresen	mive is added	eave field	Hank		1	á U

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

VELLOW = FILE

WHITE = LABORATORY

VELLOW = FILE

Page: 1 of 1	GEL Chain of	ain of	S	tody	a d	JAn	alv	Ca	N	f Custody and Analytical Request	4	GELL	GEL Laboratories, LLC	TLC	
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(1),	OFI Work Order Number	hom										Phone	Phone: (843) 556-8171	3171	
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Client Name: CN Associates		Phone #: 971	978-273-7828	20			Sal	nple 4	nalys	Sample Analysis Requested (5)		ill in the r	umber of c	(Fill in the number of containers for each test)	ch test)
Project/Site Name: Thermo Eberline - Santa Fe		Fax #:				be be								< Pre	< Preservative Type (6)
Address: 5981 Airport Road, Santa Fe, New Mexico	00					Shoul quiss bisnoo		scobλ							
Collected by: C. Quinn Send R	Send Results: ken.dow@cnassociates .net	nassociates	net.			Liote	r	осцоз						Note:	Comments Note: extra sample is
Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-3y)	*Time Collected (Military) (hhmm)	QC Code	Field Filtered (3)	Sample Matrix (4)	Radioactive	TSCA Regul: Total num	l2 smms S						requir	required for sample specific QC
SB06-023-N-20170531-22-24	5/31/2017	1912	z	z	SO	×	-	×						Analy	Analyze as Received
SB07-076-N-20170605-7-9	6/5/2017	1030	z	z	SO	×		×						Analy	Analyze as Received
SB07-026-N-20170531-22.5-24.5	5/31/2017	1926	z	z	SO	×		×						Anal	Analyze as Received
SB08-027-N-20170531-8-10	5/31/2017	1830	z	z	SO	×	-	×						Analy	Analyze as Received
SB08-030-N-20170531-23.5-24	5/31/2017	1830	z	z	SO	×		×						Anal	Analyze as Received
SB10-077-N-20170605-8-10	6/5/2017	5911	z	z	SO	×		×						Anal	Analyze as Received
SB10-036-N-20170601-13-15	6/1/2017	1713	z	z	SO	×		×						Anal	Analyze as Received
SB13-042-N-20170602-8-10	6/2/2017	1657	z	z	SO	×	1	×						Analy	Analyze as Received
SB14-045-N-20170602-16-18	6/2/2017	1716	z	Z	SO	×	-	×						Analy	Analyze as Received
SB15-080-N-20170605-8-10	6/5/2017	1350	z	z	SO	×	-	×						Analy	Analyze as Received
TAT Requested: Normal: X Rush: Specify:	(Subject to Surcharge) Fax Results:	ge) Fax Res	ults:	Yes	_	Š		ircle I	elivere	Circle Deliverable: C of A / QC Summary) oc	1 1	/ Level 1 /	/ Level 2 / Level 3 / Level 4	el 3 / Level 4
Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards Sample results to Ken Dow at ken.dow@cnassociates.net Analyze samples as recieved in such that the sample is a second in some samples as recieved in some samples.	le to these samples ociates.net Ana	opples? If so, please list the hazards Analyze samples as recieved in sample container	ase list	the haz	ards in sar	nple co	ntaine					S	end Sample C Eastern Central	Send Sample Collection Time Zone Eastern Pacific Central Other	Zone
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1.) Chain of Custody Number = Client Determined 2.) Of Codes: N = Namel Samels TR & Trin Blank - TD = Bield Duntions - TR = Ranjement Blank - ME = Matrix Guide Samels - MSD = Matrix Saits Duntions Samels - C = Comments	ot Ell a Renimment Blank	Mtg in Matrix Co	de Goran	Men =	Antriv Cai	Duniton	i comp	2	, i	, in contract				For Lab Rec	For Lab Receiving Use Obly
3.) Field Filtered. For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.	ple was field filtered or - N -	for sample was	not field fi	ltered.		and a	radian o))	2100				Custody	Custody Seal Intact?
4.) Matrix Codes: DW=Drinking Water, GW=Croundwater, SW=Surface Water, WW=Waste Water, WL=Miso Liquid, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal S). Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B, -3, 6010B/7470A, -1).	Water, WW=Waste Water, N 6010B/7470A) and number of	W=Water, ML=! of containers on	disc Liqui vided for	1, SO~Soil	SD=Sedi	nent, SL=S 0108/7470	ludge, SS	Solid	/aste, O-	Oil, F=Filter,	P=Wipe, [-Urine, F-Fe	oal, N=Nasal	YES	ES NO
6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA	odium Hydroxide, SA = Sulf	uric Acid, AA ==	Ascorbic	Acid, HX	Hexane,	T = Sodiur	m Thiosul	fate, If n	o preserv	intraced for case (no. 1250) 5, 00100 10 1 = 3 Sodium Thiosulfate, If no preservative is added = leave field blank	= leave fiel	d blank			r temp. C

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

VHITE = LABORATORY

YELLOW = FILE

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Page 74 of 84

Page: 1 of 1		<i>d</i>	ζ	P	1	4 10	pa				1		GEL Laboratories, LLC	atories, Ll	27	
1.#:	CEL CEARO			roa	a	I Custody and Analytical Request			Z		<u>⊶</u>		2040 Savage Road	ge Road		
GEL Quote #:	¥ ¥	**See www.gel.com for GEL's Sample Acceptance SOP**	el.com	for GE	L's Sai	nple Ac	ceptan	se SC	** **				Charleston, SC 29407	, SC 2940'	7	
er ⁽¹⁾ .	GEL Work Order Number:	ber:											Phone: (843) 556-8171	3) 556-81'	71	
PO Number:													Fax: (843) 766-1178	766-1178		
Client Name: CN Associates		Phone #: 978	178-273-7828	80			Sa	mple A	analys	Sample Analysis Requested (5)	ested (5)		n the num	ber of cor	(Fill in the number of containers for each test)	test)
Project/Site Name: Thermo Eberline - Santa Fe		Fax #:				ad al									< Preserv	< Preservative Type (6)
Address: 5981 Airport Road, Santa Fe, New Mexico						Shouk qmes bisnoo		coby								
Collected by: C. Quinn Send Results:	lts: ken.dow@cnassociates .net	nassociates	.net				ī	эесцог							Note: ex	Comments Note: extra sample is
Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (bhmm)	QC Code	Pield Filtered (3)	Sample Matrix (4)	Radioactive	TSCA Regula	Gamma S _I							required	required for sample specific QC
SB02-005-N-20170530-14-16	5/30/2017	1961	z	z	SO	×		×							Analyze	Analyze as Received
SB02-007-N-20170530-21.5-23.5	5/30/2017	1715	z	z	SO	×		×							Analyze	Analyze as Received
SB02-008-N-20170530-23.5-25	5/31/2017	1700	z	z	SO	×		×							Analyze	Analyze as Received
SB11-037-N-20170601-8-10	6/1/2017	1718	z	z	SO	×	,	×							Analyze	Analyze as Received
SB11-040-D-20170601-21-24	6/1/2017	1733	Z	z	SO	×		×							Analyze	Analyze as Received
SB12-041-N-20170601-8-10	6/1/2017	1737	z	z	SO	×	-	×							Analyze	Analyze as Received
SB14-079-N-20170605-8-10	6/5/2017	1340	z	z	SO	×		×							Analyze	Analyze as Received
SB18-058-N-20170602-7-9	6/2/2017	1816	z	z	SO	×	1	×							Analyze	Analyze as Received
SB18-061-N-20170602-22-24	6/2/2017	1833	Z	Z	SO	×		×							Analyze	Analyze as Received
SB19-081-N-20170605-7-9	6/52017	1355	z	Z	SO	×	-	×							Analyze	Analyze as Received
TAT Requested: Normal: X Rush: Specify:	(Subject to Surcharge) Fax Results:	ge) Fax Res	ults:	Yes	/	Š		Circle 1	Jelivera	Circle Deliverable: C of A / QC Summary	fA / (OC Sun	mary / L	evel 1 /	/ Level 1 / Level 2 / Level 3	3 / Level 4
Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards Sample results to Ken Dow at ken.dow@cnassociates.net Analyze samples as recieved in s	o these samples	nples? If so, please list the hazards Analyze samples as recieved in sample container	ase list	the har	tards I in sa	nple co	ntain						Senc	Eastern Central	Send Sample Collection Time Zone Eastern Pacific Central Other Mountain X	<u> </u>
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1.) Chain of Custody Number = Client Determined	R to Hamilton and Blank	MS as Matrix G	iles Camp	Men	Matrix Gn	Gails Counts MCD & Matrix Cuibs Dindicate Counts C & Grah C & Councils	Somula	ئ ة	1	a ju					For Lab Receiving Use Ally	ing Use Ogly
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.	as field filtered or - N -	for sample was	not field fi	Itered.	do viimin	and and and and and and and and and and				anticodius					Custody Seal Intact?	il Intact? G
4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Water, ML=Mise Liquid, SU=Sodinent, SL=Studge, SS=Solid Water, G"-Oil, F"-Filter, F=Wipe, U=Urine, F=Fecal, N=Nasal 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).	r, ww=waste water, v B/7470A) and number o	r=Water, ML=1 f containers pro	vise Liqui vided for	d, SO Soil each (i.e. 8)	, SD=Sed 260B - 3,	ment, SL=3 5010B/7470	Sludge, S 0.4 - 1).	DijoS=6	√aste, O:	Jou, Farin	ier, P=Wij	pe, U=Ur	ne, F≃Fecal, I	=Nasal	Cooler Temp:	NO emp:
6.) Preservative Type: HA = Hydrochloric Acid, NI » Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank	n Hydroxide, SA = Sulfi	rric Acid, AA =	Ascorbic	Acid, HX :	- Hexane,	ST = Sodiu	m Thiosu	Ifate, If r	o preserv	ative is add	ed = leave	field bla	착	***************************************		Ü

4.) Matrix Codes: DW-Drinking Water, GW-Groundwater, SW-Surface Water, WW-Water, WL-Misc Liquid, SO-Soil, SD-Sediment, SL-Sludge, SS-Soild Waste, O-Oil, F-Filter, P-Wipe, U-Urine, F-Fecal, N-Nasal S. Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Suffuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosuffite, If no preservative is added = leave field blank

WHITE = LABORATORY

YELLOW = FILE

PINK = CLIENT

Page: 1 of 1	GEL Chain of	ain of		Custody and Analytical Request	an /	d A	na	/tic	TE	ed	lest		GEL Lab	GEL Laboratories, LLC	277	
Project #: GEL Quote #:	*	**See www.gel.com for GEL's Sample Acceptance SOP**		ı for GE	L's Sar	nple A	ccepta	ance S	%40	=			Charlesto	2040 Savage Koad Charleston, SC 29407	107	
(1),	GEL Work Order Number:	ber:											Phone: (8	Phone: (843) 556-8171	1171	
Client Name: CN Associates		Phone #: 97	8-273-7828	28			S	ample	Analy	sis Re	Sample Analysis Requested (5)		in the nur	nber of co	ontainer	(Fill in the number of containers for each test)
Project/Site Name: Thermo Eberline - Santa Fe	averiewajenia referencia entracka de designativa mentenda entracka de designativa de designativa de designativa	Fax #:					:bara	Elletta								< Preservative Type (6)
Address: 5981 Airport Road, Santa Fe, New Mexico						duod2 Iqmes	biznoo									
Collected by: C. Quinn Send Res	Send Results: ken.dow@cnassociates .net	nassociate	s .net									······································				Comments Note: extra sample is
$egin{align*} ext{Sample ID} \ *$ For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (thum)	QC Code	Field Sample Filtered (9) Matrix (4)	Sample Matrix (4)	svitzacibaA	ISCA Regul	Total num ————————————————————————————————————								required for sample specific QC
SB01-003-N-20170530-23-25	5/30/2017	1350	z	z	So	×	-	×								Analyze as Received
SB02-004-N-20170530-8-10	5/30/2017	1900	z	Z	SO	×		×				2				Analyze as Received
SB03-009-N-20170531-13-15	5/31/2017	1709	z	z	SO	×										Analyze as Received
SB03-012-N-20170531-23-25	5/31/2017	4718	z	Z	SO	×										Analyze as Received
SB04-073-N-20170605-8-10	6/5/2017	5901	z	z	SO	×										Analyze as Received
SB04-015-N-20170531-21-23	5/31/2017	1736	z	z	SO	×		1 X								Analyze as Received
SB04-016-N-20170531-23-25	5/31/2017	1738	z	z	SO	×										Analyze as Received
SB05-019-N-20170531-22.5-24.5	5/31/2017	1749	z	z	SO	×										Analyze as Received
SB06-074-N-20170605-8-10	6/5/2017	1616	z	z	SO	×										Analyze as Received
SB06-020-N-20170531-13-15	5/31/2017	1803	z	z	SO	×		×								Analyze as Received
TAT Requested: Normal: X Rush: Specify:	(Subject to Surcharge)	ge) Fax Results:	ults:	Yes	,	No		Circle	Delive	rable:	Circle Deliverable: C of A /	/ QC Summary	ımary /	/ Level 1 /	/ Level 2	/ Level 3 / Level 4
Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards	san	? If so, ple	ase lis	t the ha	ards								Sen	d Sample (Collecti	Send Sample Collection Time Zone Eastern Pacific
Sample results to wen Dow at Ken. 1000 (Octubes octates, net "Shipment contains a DOT exempt quantity of radioactive material."	3		Sies as	necieved in		upie c	ontan	er						Central	¥ .£	Other
Chain of Cust	Chain of Custody Signatures					_					Sample	Shippin	g and D	Sample Shipping and Delivery Details	etails	en en en en en en en en en en en en en e
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1.) Chain of Custody Number = Client Determined 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite	EB = Equipment Blank,	MS = Matrix S	pike Sam	ole, MSD ==	Matrix Spí	ke Duplic	sate Samp	le, G = C	rab, C∞	Compos	ite				For i	For Lab Receiving Use Agly
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yea the sample was field filtered or - N - for sample was not field filtered. 4.) Matrix Codes: DW=Draikin Water, GW=Groundwater, SW=Surface Water, WW=Waster, Water, W=Water, W=Wa	was field filtered or - N -	for sample was	not field Misc Liga	filtered. id. SO=Soil	SD=Sedi	ment. SL	Sludge	SS~Solic	Waste	D=0:1. F	=Filter. P=W	ne. II=Ur	ne Respect	I Se N		Custody Seal Intact?
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4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Water, WW=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Soild Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank
WHITE = LABORATORY
YELLOW = FILE
PINK = CLIENT

	GEL Chain of Custody and Analytical Request	ain of	Ö	tody	an l	An	alg	tica	M	eduest		GEL Laboratories, LLC	ies, LLC		
Project #:	· 安县	**See www.gel.com for GEL's Sample Acceptance SOP**	rel.con	for GE	L's San	ple Ac	ceptar	ce SO	*	si .		Charleston SC 29407	.oad 29407		
(1),	GEL Work Order Number:	iber:				ı						Phone: (843) 556-8171 Fax: (843) 766-1178	56-8171		
Client Name: CN Associates		Phone #: 97	8-273-7828	28			Sa	mple A	nalys	Sample Analysis Requested (5)		I in the number	of contain	(Fill in the number of containers for each test)	I
Project/Site Name: Thermo Eberline - Santa Fe	a descriptions de l'action de l'action de l'action de l'action de la communication de	Fax #;				əq ə	<u> </u>							< Preservative Type (6)	
Address: 5981 Airport Road, Santa Fe, New Mexico						duod2 quase bisaos		есобъ						2000	1
Collected by: C. Quinn Send Result	Send Results: ken.dow@cnassociate	nassociate	s net			ļ,.		ьеспо						Note: extra sample is	
Sample ID * For composites - Indicate start and stap date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	e OC Code	Field Filtered (3)	Sample Matrix (4)	Kadioactive	TSCA Regul	Gamma S						required for sample specific QC	1
SB15-049-N-20170602-22-24	6/2/2017	1743	z	Z	SO	×		×						Analyze as Received	
SB16-050-N-20170602-8-10	6/2/2017	1745	Z	z	SO	×	-	×						Analyze as Received	1
SB16-054-N-20170602-22-24	6/2/2017	1903	z	z	SO	×	-	×						Analyze as Received	1
SB19-065-N-20170603-22-24	6/3/2017	1625	z	z	SO	×	-	×						Analyze as Received	1
SB20-082-N-2017-605-8-10	6/5/2017	1464	z	Z	SO	×	-1	×						Analyze as Received	I
SB20-068-N-20170603-22-24	6/3/2017	1643	z	z	SO	×	1	×						Analyze as Received	1
SB21-072-N-20170605-24-25.5	6/5/2017	0945	z	z	SO	×		×						Analyze as Received	1
SB22-084-N-20170605-13-15	6/5/2017	1430	z	z	SO	×		×						Analyze as Received	1
SB22-087-N-20170605-23-25	6/5/2017	1447	z	Z	SO	×		×						Analyze as Received	1
SB23-088-N-20170605-8-10	6/5/2017	1457	z	Z	SO	×		×						Analyze as Received	I
TAT Requested: Normal: X Rush: Specify:	(Subject to Surcharge) Fax Results:	rge) Fax Res	ults:	Yes	/	No		Circle I	Jeliver	Circle Deliverable: C of A	1	/ QC Summary / Level 1	11 / Leve	/ Level 2 / Level 3 / Level 4	1
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Chain of Custody Signatures	dy Signatures									Sam	ple Ship	Sample Shipping and Delivery Details	ry Details		
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3.) Field Filtered: Por liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.	se field filtered or - N	for sample was	not field	iltered.) [Custody Seal Intact?	¥
4.) Marix Codes: DW-Drinking Water, GW-Groundwater, SW-Surface Water, WW-Waste Water, WE-Water, MI-Misc Liquid, SO-Soil, SD-Sediment, SI-Sludge, SS-Solid Waste, O-Oil, F-Filter, P-Wipe, U-Urine, F-Fecal, N-Nasal	, WW-Waste Water,	W=Water, ML=	Misc Liqu	id, SO=Soi	, SD=Sedi	ment, SL=	Sludge, S	Solid \	Vaste, O	=Oil, F=Filter,	P≕Wipe, U≈	Urine, F=Fecal, N=N	ısal	Coolar Town	1
 Sample Analysis Requested: Analytical method requested (i.e. 6200b, 0000b) / 4/0ch and number of containing p Deservative Tone: Ha = Hordrochloric Acid NI = Nitric Acid SH = Sodium Fordroxide SA = Sulfaric Acid AA 	3//4/04) and number Hydroxide, SA = Sul	or communes or furic Acid, AA	Ascorbic	Acid, HX	Hexane.	T = Sodin	un Thiost	ılfate, If r	o preser	tovided for each (i.e. ozoon - 3, 00100) (14/01 - 1). "Ascorbic Acid, HX = Hexanc, ST = Sodium Thiosulfate. If no preservative is added = leave field blank	= leave field	blank		Cuuter temps	

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A, and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, HX = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

7. **ELLOW = FILE**

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Page: 1 of 1	GEL Chain of	ain of	5	Custody and Analytical Request	an	A	naly	tice		edi	lest		GEL La	GEL Laboratories, LLC	, LLC	
GEL Quote #:	**	**See www.gel.com for GEL's Sample Acceptance SOP**	rel.con	for GE	L's San	ple A	ccepta	nce S(**dC	I			Charlest	Charleston, SC 29407	407	
	GEL Work Order Number:	ıber:											Phone: (Fax: (84	Phone: (843) 556-8171 Fax: (843) 766-1178	-8171	
Client Name: CN Associates		Phone #: 97	8-273-7828	28			Š	ımple	Analy	sis Re	Sample Analysis Requested (5)		Il in the nu	mber of	containe	(Fill in the number of containers for each test)
Project/Site Name: Thermo Eberline - Santa Fe	orientilis performans extrements (the articles to the province	Fax #:				1	-	CYAN				<u> </u>				< Preservative Type (6)
Address: 5981 Airport Road, Santa Fe, New Mexico						duod2 qmes	bienoo	<u></u>								
Collected by: C. Quinn Send Resul	Send Results: ken.dow@cnassociates .net	nassociate	.net									***********		***		Comments Note: extra sample is
Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	OC Code	Field Sample Filtered (9) Matrix (4)	Sample Matrix (4)	Radioactive	TSCA Regul	Gamma S								required for sample specific QC
SB21-069-N-20170603-8.5-10	6/32017	1650	z	z	SO	×	_	×								Analyze as Received
SB22-083-N-20170605-8-10	6/52017	ИĮ	z	Z	SO	×	1	×								Analyze as Received
SB24-096-N-20170605-23.5-25	6/52017	1715	z	Z	SO	×		×								Analyze as Received
SB24-102-20170605-drill tip	6/52017	1345	z	Z	SO	×		×								Analyze as Received
SB25-099-N-20170605-13-15	6/52017	1730	z	Z	SO	×										Analyze as Received
SB27-110-N-20170607-18-20	6/72017	1610	z	Z	SO	×		×								Analyze as Received
SB27-112-N-20170607-23-25	6/72017	વદું ગ	z	z	SO	×		×								Analyze as Received
SB28-116-N-20170607-21-23	6/72017	1645	z	Z	SO	×		×								Analyze as Received
SB28-118-N-20170607-26-28	6/72017	1050	z	Z	SO	×		×								Analyze as Received
SB29-119-N-20170607-6-7.5	6/72017	9991	z	z	SO	×		×								Analyze as Received
TAT Requested: Normal: X Rush: Specify:	(Subject to Surcharge)	ge) Fax Results:	ults:	Yes		ž		Circle	Delive	able:	Circle Deliverable: C of A / QC Summary	S DO	ummary /	/ Level 1	/ Level	/ Level 2 / Level 3 / Level 4
known hazards o ow at ken.dow	o these samples ites.net Ann	aples? If so, please list the hazards Analyze samples as recieved in sample container	ase lis	t the haz recieved	ards in san	nple c	ontain	<u>.</u>					Š	nd Sample C Eastern Central Mountai	iample Collec Eastern Central Mountain X	
	dy Signatures										Sampl	e Ship	Sample Shipping and Delivery Details	elivery	Details	
Relinquished By (Signed) Date Time	Received by (signed)	90000	Date /	Time		9	GEL PM: Jake Crook	f: Jake	Crool							
1 ch Lay 6-10-17 11:30	7	Celes	5	elaliz 8:18		2	Method of Shipment:	Shipme	int:				Date Shipped:	ipped:		P
2	0					<	Airbill #:									age (
3	2					_ V	Airbill#:									650 d
1.) Chain of Custody Number = Client Determined 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite	B = Equipment Blank,	MS = Matrix S	oike Sam	le, MSD = 1	datrix Spil	re Duplic	ate Sampl	e, G = G	rab, C=	Campos	ite				For	For Lab Receiving Use Ogly
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.	as field filtered or - N -	for sample was	not field	filtered.			•									Custody Seal Intact?
4) Marrix Codes: DW-Drinking Water, GW-Groundwater, SW-Surface Water, WW-Water, Water, Water, Water, W-Water, ML-Misc Liquid, SO-Soil, SD-Sediment, SL-Sludge, SS-Solid Waste, O-Oil, F-Filter, P-Wripe, U-Urine, F-Fecal, N-Nasal	r, WW=Waste Water, 1	V=Water, ML=	Misc Liqu	id, SO=Soil	SD~Sedin	nent, SL.	-Sludge,	SS-Solid	Waste, (POIL F	-Filter, P=	Wipe, U≈	Urine, F=Feca	I, N=Nasal		YES NO

ES Cooler Temp: C

4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Water, WL=Wisc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SI = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosuffate, If no preservative is added = leave field blank

WHITE = LABORATORY

YELLOW = FILE

PINK = CLIENT

Page 78 of 84

age:1of	CEI Chain of	ain of		Custody and Analytical Request	and	An	N S	tical	M	one	+	0	EL Labo	GEL Laboratories, LLC	TC		
roject#:	**	**See www.gel.com for GEL's Sample Acceptance SOP**		for GE	L's San	ple Ac	ceptar	ice SOI	**	=		<u> </u>	2040 Savage Road Charleston, SC 294	2040 Savage Road Charleston, SC 29407	7(
(0).	GEL Work Order Number:	nber:										<u> </u>	hone: (84 ax: (843)	Phone: (843) 556-8171 Fax: (843) 766-1178	17 %		
Client Name: CN Associates	American de la companya de la companya de la companya de la companya de la companya de la companya de la compa	Phone #: 97	978-273-7828	80			Sa	Sample Analysis Requested (5)	nalysi	Reque	sted (5)	(Fill in	the nun	ber of co	ntainers f	(Fill in the number of containers for each test)	
roject/Site Name: Thermo Eberline - Santa Fe		Fax #:				le be									Ÿ	< Preservative Type (6)	
Address: 5981 Airport Road, Santa Fe, New Mexico	Vexico					dnod2 qmss bisao3		scobà								Comments	
Collected by: C. Quinn Se	Send Results: ken.dow@cnassociates .net	cnassociate	s .net			bata		ресио			··········					Note: extra sample is	
Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	e OC Code	Field Sample Filtered (9) Matrix (4)	Sample Matrix (4)	Radioactive TSCA Regul	man latoT	S smms S							-	required for sample specific QC	
SB29-124-N-20170607-21.5-23	6/32017	1130	z	z	SO	×		×								Analyze as Received	
SB29-125-N-20170607-24-24.5	6/52017	三	z	z	SO	×		×								Analyze as Received	
			z	z	SO	×	-	×								Analyze as Received	
			z	z	SO	×	_	×								Analyze as Received	
			z	z	SO	×		×								Analyze as Received	
			z	z	SO	×	_	×								Analyze as Received	
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TAT Requested: Normal: X Rush: Specify:	cify: (Subject to Surcharge) Fax Results:	rge) Fax Res	sults:	Yes	_	Š		Circle D	elivera	Circle Deliverable: C of A		/ QC Summary	lary /	Level 1 /	Level 2	/ Level 3 / Level 4	
known hazards ow at ken.dow	licable to these sample nassociates.net And	ples? If so, please list the hazards Analyze samples as recieved in sample container	ase lis	t the ha	zards I in sar	nple co	ntain	ı,					Sen	d Sample Colles Eastern Central Mountain X	Collection n Page al Ot	Send Sample Collection Time Zone Eastern Pacific Central Other Mountain X	
Chain	Chain of Custody Signatures								1	Sa	mple S	hipping	and D	Sample Shipping and Delivery Details	etails		1
Relinquished By (Signed) Date Time	Received by (signed)	I	Date /	Time		ਰ	EL PM	GEL PM: Jake Crook	rook								
1 A R. 1 6-10-17 11.	18 - N	و	whi	78:118	5	Me	thod of	Method of Shipment:					Date Shipped:	ped:		Р	-
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1.) Chain of Custody Number = Client Determined 2.) OC Codes: N = Normal Sample, TB = Trield Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite	Duplicate, EB = Equipment Blank	MS = Matrix S	pike Sam	le, MSD=	Matrix Spi	ke Duplicat	e Sample	, G = Grat	ີ ດະຕິ	omposite					For Lo	ab Receiving Use Ogly	
3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.	the sample was field filtered or - N	- for sample was	not field	iltered.	,	Š	-		ć	100	- 1. The second		Į.		Ö,	ly Seal I	
4.) Matrix Codes: DW-Brinking Water, GW-Groundwater, SW-Surface Water, WW-Water, Wall-Misc Liquid, SO-Noil, 5D-Sediment, SL-Sindge, SS-Solid Waste, O-Uil, K-Filler, F-Wilse, U-Unid, F-Freed, W-Nosain	jurface Water, WW=waste waer,	W=Water, ML*	MISC LIQU	id, 50=301	l, SU=Sear	ment, st-	ingge, a	W 01100 W	aste, O-	OII, F-F111	er, F=wyp	e, U≃∪nıı	, F"Feca,	Navan -	I	res no	

Cooler Temp:

4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Water, W=Water, ML=Misc Liquid, SO=Soil, SD=Sediment, SL=Sludge, SS=Solid Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, HA = Acorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, HA = Acorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

7. FELLOW = FILE

PINK = CLIENT

Page: of	THE ABOUT OF THE CHEST OF THE C	420 me 20 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	GEL Laboratories, LLC	<u> </u>
ØEL Quote #:		Customy and Alialy lical Address	Court School Charleston SC 29407	
st (1);	CEI Work Order Number		Phone: (843) 556-8171	
PO Number:	an Otaci itambel:		Fax: (843) 766-1178	
Client Name:	Phone #:	Sample Analysis Requested (5)	(Fill in the number of containers for each test)	T
Project/Site Name:	Fax #:	<u></u>	< Preservative Type (6)	T
Address:		sample be 'a considered: o		- -
Collected by: Send Results To:	ılts To:	T	Comments Note: extra sample is	~
Sample ID * For composites - indicate start and stop date/time	*Date Collected Collected Collected (Military) (2) Filtered (3) Matrix (4) (hhmm)	Radiosciive Total numl	required for sample specific QC	
SS-A8-6-12-N-20170526	5.26.17 1352 N N SO			Т
55-483-6-12-0-20170526	5.26.17 1203 N N SO			т
SS - 42-0-6-N-20170526	5.26.17 1335 N N SO			T
55-44-6-12-14-20170526	5.26.17 1342 N N SO			т —
SS-46-6-12-N-20170526	S-26-17 1348 N N SO			T-
55-137-6-12-19-20170526	S.26.17 (410 N N SO			T
55-137-6-12-N-2010526	S N N 80H1 17.92.2			т—
55-483-0-6-N-20170526	5.26.17 1200 N N SO			т
55-135-6-12-4-20170526	5.26.17 1402 N N SO			7
55-AB3-6-12-N-20170526	S.26.17 1202 N N SO			
TAT Requested: Normal: Rush: Specify:	(Subject to Surcharge) Fax Results: Yes /	No Circle Deliverable: C of A / (/ QC Summary / Level 1 / Level 2 / Level 3 / Level 4	1
Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards	these samples? If so, please list the hazards		Sample Collection Time Zone	Т
			Central Other	
Chain of Custody Signatures	dy Signatures	Sample	Sample Shipping and Delivery Details	
Relinquished By (Signed) Date Time	Received by (signed) Date Time	GEL PM:		Τ
1 (01) 6-10-1) 1300	1 5 6/12/178:15	Method of Shipment:	Bate Shipped:	
2	\mathcal{L}_{2}	Airbill #:	652	I
3	3	Airbill #:	of 13	
1.) Chain of Custody Number = Client Determined 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite	$_{\rm I}$ = Equipment Blank, MS = Matrix Spike Sample, MSD st Matrix Spike $_{\rm I}$	Duplicate Sample, G = Grab, C = Composite	For Lab Receiving Use Only	

WHITE = LABORATORY

YELLOW = FILE

4.) Matrix Codes; DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Waste Water, W=Water, SO=Soil, SD=Sediment. SL=Sludge, SS=Soild Waste, O=Oil, F=Filter, P=Wipe, U=Urine, F=Fecal, N=Nasal

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

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Custody Seal Intact?
YES NO ES Cooler Temp: C

Pa			
Page: of Project #:	GEL Chain of Custody and	Custody and Analytical Request	GEL Laboratories, LLC 2040 Savage Road
(1).	GEL Work Order Number:		Chaireaton, 3C 2940/ Phone: (843) 556-8171 Fax: (843) 766-1178
Client Name:	Phone #:	Sample Analysis Requested (5)	(Fill in the number of containers for each test)
Project/Site Name:	Fax #;	ST9f	< Preservative Type (6)
Address:		sample be considered:	
Collected by: Send Results To:	ults To:	T	Comments Note: extra sample is
Sample ID * For composites - indicate start and stop date/time	*Date Collected	Radiosective TSCA Regula Total num	required for sample specific QC
SS-13-6-12-N-20170526	05 N N 8381 51.92.5		
55-133-0-6-N-20170526	5.26.17 1355 N N 50		
SS- ABS-6-12-N-20170526	5-26-17 12-08 N N SO		
SS-4B7-0-6-N-20170526	5.26.17 1330 N N SO		
55-42-6-12-N-20170526	5.26.17 1338 N N SO		
SS-46-0-6-N-20170526	S-26-17 1345 N N SO		
SS-BS-0-6-N-20170526	5.26.17 1400 N N SO		
SS-B7-0-6-N-20170526	5.26.17 1406 N N SO		
SS-AB7-6-12-N-20170526	5.26.17 1332 N N SD		
SS-4BS-0-6-N-20170526	5.26.17 1206 N N SO		
TAT Requested: Normal: Specify:	(Subject to Surcharge) Fax Results: Yes /	No Circle Deliverable: C of A / QC S	QC Summary / Level 1 / Level 2 / Level 3 / Level 4
Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards	o these samples? If so, please list the hazards		Sample Collection Time Zone Fastern Pacific
			.≘
Chain of Custody Signatures	ody Signatures	Sample Ship	Sample Shipping and Delivery Details
Relinquished By (Signed) Date Time	e Time	GEL PM:	and the second s
1 Clar L 6-10-17 1300	1 2 Walit 8:15	Method of Shipment:	Date Shipped:
2	² C	Airbill #:	
3	3	Airbill #:	of 13
 Chain of Custody Number = Client Determined OC Codes: N = Normal Sample TB = Trin Blank. FD = Field Dunliente. FR = Equinment Blank. MS = Marrix Snike 		Samole MSD = Matrix Soike Dunifean Samole G = Greb C = Commoneits	For Lab Receiving Use Only G

2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicae, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite

3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.

4.) Matrix Codes: DW=Drinking Water, GW=Groundwater, SW=Surface Water, WW=Water, W=Water, W=Water, SO=Soil. SD=Sediment. SL=Sludge, SS=Solid Waste, O=Oil. F=Filler, P=Wipe, U=Urine, F=Fecal, N=Nasal 5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e., 8260B - 3, 6010B/7470A - 1).

6.) Preservalive Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank YELLOW = FILE WHITE = LABORATORY

PINK = CLIENT

NO Cooler Temp:

Custody Seal Intact?

Pa			
Jo	GEL Chain of Custody and	Custody and Analytical Request	GEL Laboratories, LLC 2040 Savage Road
;;;;	'	TABLES CALCES AND CALCES	Charleston, SC 29407
BO Number '': GEL Wor	GEL Work Order Number:		Phone: (843) 556-8171 Fax: (843) 766-1178
Client Name:	Phone #:	Sample Analysis Requested (5)	(Fill in the number of containers for each test)
Project/Site Name:	Fax #:		< Preservative Type (6)
Address:		sample be	
Collected by: Send Results To:	lts To:	T	Comments Note: extra sample is
Sample ID * For composites - indicate start and stop date/time	*Date Collected *Time Oclected QC Code Field Sample (mm-dd-yy) (Military) (2) Filered (3) Matrix (4)	Fadiosciive TSCA Regula Total numl	required for sample specific QC
SS-A4-06-N-20170526	5.26-17 1340 N N SO		
25-48-0-6-N-20170526	S.26.171350 X N SO		
HIC-01-2017-0669 *			CONTACT DOW
			-
TAT Requested: Normal: Rush: Specify:	(Subject to Surcharge) Fax Results: Yes /	No Circle Deliverable: C of A / QC	QC Summary / Level 1 / Level 2 / Level 3 / Level 4
Remarks: Are there any known hazards applicable to these samples? If so, please list the hazards	these samples? If so, please list the hazards	S. S. S. S. S. S. S. S. S. S. S. S. S. S	Collection Time Zone
	Z	Maril Iterary - Wex	Central Other
Chain of Custody Signatures	dy Signatures	Sample Shi	Sample Shipping and Delivery Details
Relinquished By (Signed) Date Time	Received by (signed) Date Time	GEL PM:	
1 CP 2-6-10-17 1300	1 2 6/2/17 8:15	Method of Shipment:	Date Shipped:
2	2	Airbill #:	
3	3	Airbill #:	of 1
1.) Chain of Custody Number = Client Determined 2.) QC Codes: N = Normal Sample, TB = Trip Blank, FD = Field Duplicate, EB = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike Duplicate Sample, G = Grab, C = Composite	s = Equipment Blank, MS = Matrix Spike Sample, MSD = Matrix Spike L	Duplicate Sample, G = Grab, C = Composite	For Lab Receiving Use Only G

6.) Preservative Type: HA = Hydrochloric Acid, NI = Nitric Acid, SH = Sodium Hydroxide, SA = Sulfuric Acid, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank WHITE = LABORATORY

5.) Sample Analysis Requested: Analytical method requested (i.e. 8260B, 6010B/7470A) and number of containers provided for each (i.e. 8260B - 3, 6010B/7470A - 1).

3.) Field Filtered: For liquid matrices, indicate with a - Y - for yes the sample was field filtered or - N - for sample was not field filtered.

4.) Matrix Codes; DW-Drinking Water, GW-Groundwater, SW-Svurface Water, WW-Waste Water, W-Water, SO-Soil, SD-Sediment, SL-Sludge, SS-Soild Waste, O-Oil F-Filter, P-Wipe, U-Urine, F-Fecal, N-Nasal

YELLOW = FILE

PINK = CLIENT

Custody Seal Intact? YES NO ES Cooler Temp: C

SAMPLE RECEIPT & REVIEW FORM

CI	ent: CNAS.			SD	G/AR/COC/Work Order: 425274				
Re	ceived By: ZKW/G.MeAbe	e_	-		Date Received: 6/12/17				
	Carrier and Tracking Number				Circle Applicable: FeetEx Express FedEx Ground UPS Field Services Courier Other 779353436457 779353441017				
Sus	pected Hazard Information	Yes	No.	*If I	Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further estigation.				
Shi	pped as a DOT Hazardous?	V		Haz	ard Class Shipped: UN#:				
	C/Samples marked or classified as loactive?	X		Clas	kimum Net Counts Observed* (Observed Counts - Area Background Counts): 6-3 CPM / ml/fipsified (Dan) Rad 2 Rad 3				
Is p	ackage, COC, and/or Samples marked HAZ?		×	PCF	es, select Hazards below, and contact the GEL Safety Group. 3's Flammable Foreign Soil RCRA Asbestos Beryllium Other:				
	Sample Receipt Criteria	Yes	NA	å	Comments/Qualifiers (Required for Non-Conforming Items)				
1	Shipping containers received intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)				
2	Chain of custody documents included with shipment?	X							
3	Samples requiring cold preservation within $(0 \le 6 \text{ deg. C})$?*		X		Preservation Method: Wet Ice Ice Packs Dry Ice None Other: 24c *all temperatures are recorded in Celsius TEMP: Z4c				
4	Daily check performed and passed on IR temperature gun?	K			Temperature Device Serial #: IR3-16 Secondary Temperature Device Serial # (If Applicable):				
5	Sample containers intact and sealed?	X			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)				
6	Samples requiring chemical preservation at proper pH?		X		Sample ID's and Containers Affected: If Preservation added, Lot#:				
7	Do any samples require Volatile Analysis?		E	X	If Yes, Are Encores or Soil Kits present? Yes No (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes No N/A (If unknown, select No) VOA vials free of headspace? Yes No N/A Sample ID's and containers affected:				
8	Samples received within holding time?	Ϋ́			ID's and tests affected:				
9	Sample ID's on COC match ID's on bottles?	X			Sample ID's and containers affected:				
10	Date & time on COC match date & time on bottles?	×		χ'	Sample ID's affected: Collection For SBOR-30 is 1840				
11	Number of containers received match number indicated on COC?			X	Sample ID's affected: See Baluru				
12	Are sample containers identifiable as GEL provided?			X	per la constant de la				
13		<							
	ments (Use Continuation Form if needed): Ne Did not receive 5 We only rec' 2 of 3	-	revenues constru	f-(les	594, SB29-125, All SS - Samples, or HIC-01. S. Date 6/12 Page of				
	,			11	GL-CHI-SR-001 Rev 5				

List of current GEL Certifications as of 29 June 2017

State	Certification
Alaska	UST-0110
Arkansas	88-0651
CLIA	42D0904046
California	2940
Colorado	SC00012
Connecticut	PH-0169
Delaware	SC00012
DoD ELAP/ ISO17025 A2LA	2567.01
Florida NELAP	E87156
Foreign Soils Permit	P330-15-00283, P330-15-00253
Georgia	SC00012
Georgia SDWA	967
Hawaii	SC00012
Idaho Chemistry	SC00012
Idaho Radiochemistry	SC00012
Illinois NELAP	200029
Indiana	C-SC-01
Kansas NELAP	E-10332
Kentucky SDWA	90129
Kentucky Wastewater	90129
Louisiana NELAP	03046 (AI33904)
Louisiana SDWA	LA170010
Maryland	270
Massachusetts	M-SC012
Michigan	9976
Mississippi	SC00012
Nebraska	NE-OS-26-13
Nevada	SC000122017-1
New Hampshire NELAP	205415
New Jersey NELAP	SC002
New Mexico	SC00012
New York NELAP	11501
North Carolina	233
North Carolina SDWA	45709
North Dakota	R-158
Oklahoma	9904
Pennsylvania NELAP	68-00485
S.Carolina Radchem	10120002
South Carolina Chemistry	10120001
Tennessee	TN 02934
Texas NELAP	T104704235-17-12
Utah NELAP	SC000122017-22
Vermont	VT87156
Virginia NELAP	460202
Washington	C780
West Virginia	997404

ATTACHMENT C SOIL BORING LOGS

14	
*C Associates	Inc.
711	

Page 658 of 1385

BORING ID: SB-01

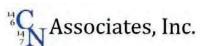
711						P	AGE 1	OF 2
CLIENT The	rmo E	Eberl	ine, L	LC	PROJECT NAME Former Ebe	rline Instruments Facility		
PROJECT NUI	MBER				PROJECT LOCATION 5981 Air	port Road, Santa Fe,NM		
DATE STARTI	ED <u>5/</u>	31/20)17	COMPLETED 5/31/2017	GROUND ELEVATION	BORING DIAMETER		
DRILLING CO	NTRAG	CTOR	Envi	ro-Drill, Inc.				
				oe		CHECKED BY		
NOTES (cont.)								
OEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
 5	20 %			Fine sand, dry (light tan)				Bkg
 10	% 05			Fine-medium grain sand, some Small pebbles	clumping (light –dark tan)			Bkg
 15	62 %			Medium grained sand (light brov				Bkg
20	72 %			Small pebbles Medium-course sand (moist (lig	ht brown)			Bkg

Page 659 of 1385

Associates, Inc.

BORING ID: SB-01

					C PROJECT NAME Former Eberline Instruments Facility	-			
					PROJECT LOCATION 5981 Airport Road, Santa Fe, NM				
DATE S	STARTED	<u>5/3</u>	1/20	17	COMPLETED 5/31/2017 GROUND ELEVATION BORING DIAMETER				
					o-Drill, Inc.				
DRILLII	NG METH	HOD_	Geo	probe	LOGGED BY K. Dow CHECKED BY				
NOTES	<mark>(cont.) _</mark>	1							
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma		
		53 %			Medium-course sand (moist) Clay (dark brown) Refusal encountered		2/0		
-									
35 -									



THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-02

PAGE 1 OF 2

1					•	AGE I	OF 2				
CLIEN	NT Thern	no E	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility	PROJECT NAME Former Eberline Instruments Facility					
	ECT NUM				PROJECT LOCATION 5981 Airport Road, Santa Fe, NM						
DATE	STARTE	D 5/3	31/20)17	COMPLETED 5/31/2017 GROUND ELEVATION BORING DIAMETER						
					ro-Drill, Inc.						
					DE LOGGED BY K. DOW CHECKED BY						
NOTE	S (cont.)										
	SAMPLE NUMBER										
<u> </u>	MOM	% ∖.				ma	nma				
H	LE	VEF	S	呈	MATERIAL DESCRIPTION	Зат	Gar cpm)				
DEPTH (ft)	۸MP	RECOVERY %	NOTES	GRAPHIC		Beta-Gamma	Gross Gamma (cpm)				
0	/S	~	Ž	Ō		ă	Ŋ				
]											
		%					б				
		23					Bkg				
.]											
					Fine sand						
- 5 -					-	_					
- 1											
		%			fine -medium grain sand, isolated small stones(1/4 inch) (dark tan)		Bkg				
		52									
_ 1											
10-			L								
_											
							289				
							40,687				
		25 %									
_ 1		7			Medium – course grained sand (light brown)						
15											
- 1											
- 4		27 %			Medium-course sand (light brown)		Bkg				
		~			Medidin-codise sand (light brown)						
-											
20					(Continued Next Page)						

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BORING ID: SB-02 Associates, Inc.

PAGE 2 OF 2

100	- Th		دناد د دا	- 11	0	DDG ISOT MANE Towns on The	ouline Instruments Facility		
l						PROJECT NAME Former Eberline Instruments Facility PROJECT LOCATION 5981 Airport Road, Santa Fe, NM			
						GROUND ELEVATION			
					o-Drill, Inc.	GROUND ELEVATION			
						LOGGED BY K. Dow	CHECKED BY		
	(cont.)								
ДЕРТН (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
	<i>-</i> &	82 %			Medium-course sand Clay (dark brown)				Bkg
25					Refusal encountered				
30 _									

THERMO EBERLINE - SANTA FE, NM



THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-03

PAGE 1 OF 2

			e, LLC	PROJECT NAME Former Eberline Instruments Facility	PROJECT NAME Former Eberline Instruments Facility				
PROJECT NUM				PROJECT LOCATION 5981 Airport Road, Santa Fe, NM					
DATE STARTE	D <u>5/</u>	31/20	17	COMPLETED 5/31/2017 GROUND ELEVATION BORING DIAMETER					
DRILLING COM	ITRAC	CTOR	Envi	ro-Drill, Inc.					
DRILLING MET	HOD	Ge	oprob	DE LOGGED BY K. Dow CHECKED BY					
NOTES									
NOTES (cont.)									
DEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)			
0	20 %			Fine sand (tan / dry) Clumping sand Fine sand (light tan)		Bkg			
 	72 %			fine -medium grain sand, clumping (light brown / tan)		Bkg			
 15	73%			Fine - medium grained sand, dry (light brown)		Bkg			
 20	93 %			Medium sand - clay, moist (brown)		Bkg			

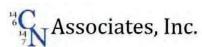
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BORING ID: SB-03

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

100									
l					.C				
l						PROJECT LOCATION 5981 A			
						GROUND ELEVATION	BORING DIAMETER _		
l					o-Drill, Inc.				
					e	LOGGED BY K. Dow	CHECKED BY		
NOTES	S (cont.) _							1	
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
	- (0	% 09			Clay (dark brown) Course sand (medium brown)				Bkg
25					Refusal encountered				
30									

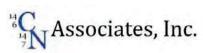


PAGE 1 OF 2

							F.		
CLIE	NT Ther	mo E	berline	e, LLC)	PROJECT NAME Former Eberlin	ne Instruments Facility		
	JECT NUM					PROJECT LOCATION 5981 Airport Road, Santa Fe, NM			
DATE	DATE STARTED 5/31/2017 COMPLETED 5/31/2017					GROUND ELEVATION	BORING DIAMETER		
DRIL	LING CON	ITRAC	CTOR_	Envi	ro-Drill, Inc.				
DRIL	LING MET	HOD	Ge	oprob	oe .	LOGGED BY K. Dow	CHECKED BY		
NOTE	S (cont.)								
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	M	ATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
0		25 %			Fine sand, dry (light tan)				Bkg
		% 09			fine -medium grain sand, clumpino medium grain sand, clumping (ligh	្ស (light brown / tan)			Bkg
		% 0.2			Medium grained sand, small stone	es (1/2 inch), clumping (light brow	m)		Bkg
 		% 86			Medium sand - clay, moist (brown Clay (brown))			Bkg

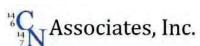
Page 665 of 1385

BORING ID: SB-04



THERMO EBERLINE - SANTA FE, NM

01 15.	r There	C	hor!:		C PROJECT MARKE Former Charling Instruments Facility	.,	
l	CTNUME				C PROJECT NAME Former Eberline Instruments Facilit PROJECT LOCATION 5981 Airport Road, Santa Fe, NI		
l					p-Drill, Inc.		
l					LOGGED BY K. Dow CHECKED BY		
NOTES					<u> </u>		
NOTES						1	_
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
 		82 %			Clay – Course sand, moist (dark brown) Course grain sand, small gravel (1/4-1/2 inch) Medium grain sand, dry		Bkg
25					Fine grain sand, dry (white)		
 30							
 40							



THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-05

PAGE 1 OF 2

1					P	AGE I	OF 2				
CLIEN	NT Thern	no E	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility	PROJECT NAME Former Eberline Instruments Facility					
	ECT NUM				PROJECT LOCATION 5981 Airport Road, Santa Fe, NM						
DATE	STARTE	D <u>5/</u>	31/20)17	COMPLETED 5/31/2017 GROUND ELEVATION BORING DIAMETER						
DRILL	ING CON	TRAG	CTOR	Envii	ro-Drill, Inc.						
DRILL	ING MET	HOD	Ge	oprob	DE LOGGED BY K. Dow CHECKED BY						
NOTE	S (cont.)		1			ı					
	SAMPLE NUMBER	. 0									
Œ	NON.	۷۲ %				ıma	mm (
DEPTH (ft))EI	OVE	S	윤	MATERIAL DESCRIPTION	Gan	s Ga (cpm				
님	AMF	RECOVERY %	NOTES	SRAPHIC		Beta-Gamma	Gross Gamma (cpm)				
0	(n	<u>Ir</u>		0		ш					
_											
		% 09			Fine sand, dry (light tan)		Bkg				
		9			Tille Salid, dry (light tan)		"				
5											
				1		_					
					Fine -medium grain sand, clumping (light brown)						
							D.				
		% 52					Bkg				
		'			medium grain sand, clumping (light brown)						
. 10											
- 10-											
- 1					Medium grain sand, (light brown)						
_							Bkg				
		63 %					"				
		9			Medium grain sand, (brown)						
15											
					Madisus and decomp						
					Medium grain sand (brown)						
_		,,,									
		% 06					Bkg				
					Medium grain sand - Clay (brown)						
20					(Continued Next Page)						

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Associates, Inc.

l					C PROJECT NAME Former Eberline Instruments Facility		
					PROJECT LOCATION 5981 Airport Road, Santa Fe, NM COMPLETED 5/31/2017 GROUND ELEVATION BORING DIAMETER		
					D-Drill, Inc. LOGGED BY K. Dow CHECKED BY		
NOTES	(cont.)	,					
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma
25		65 %			Clay – Course sand, moist (dark brown) small gravel (1/4-1/2 inch) Medium grain sand, (light brown) Medium – course sand (light brown) Refusal @ 24.5 ft — — — — — — — — — — — — — — — — — —		Bka
35							
40							

Associ	atec Inc
HSSUCI	ates, Inc.
7	

THERMO EBERLINE - SANTA FE, NM

7	N						P.	AGE 1	OF 2
CLIE	NT Therr	no E	berlin	e, LLC)	PROJECT NAME Former Eberline Inst	truments Facility		
PRO	JECT NUM	BER				PROJECT LOCATION 5981 Airport Roa	ad, Santa Fe,NM		
DATE	STARTE	D <u>5/</u>	31/20)17	COMPLETED 5/31/2017	GROUND ELEVATION	BORING DIAMETER		
DRIL	LING CON	TRAG	CTOR	Envi	ro-Drill, Inc.				
					oe	LOGGED BY K. Dow	CHECKED BY		
NOTE	ES (cont.)								
, DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MA	TERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
0	- 63	53 %			Fine sand, dry (light tan - tan)				Bkg
		% 22				g, small stones (1/4 inch) (light brown)			Bkg
 15		% 29			Medium grain sand, (light brown) Course sand Fine - medium grain sand, (light brown)	own)			Bkg
 		% 06			Fine - medium grain sand, (light brown) Medium grain sand / clay (brown) Clay (brown)				Bkg

Page 669 of 1385 **BORING ID: SB-06**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

711		17.02 2 01 2					
CLIENT Thermo Eberline, LLC	PROJECT NAME Former Eb	PROJECT NAME Former Eberline Instruments Facility					
PROJECT NUMBER	PROJECT LOCATION 5981 A	virport Road, Santa Fe,NM					
DATE STARTED 5/31/2017 COMPLETED	5/31/2017 GROUND ELEVATION	BORING DIAMETER					
DRILLING CONTRACTOR Enviro-Drill, Inc.							
DRILLING METHOD Geoprobe	LOGGED BY K. Dow	CHECKED BY					
NOTES							
NOTES (cont.)							
DEPTH (ft) (Rt) (RECOVERY % NOTES GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma Gross Gamma (cpm)					
Clay (dark brow Course sand, Medium – cou Fine grain sand Refusal @ 24 ft	small stones (brown) rse sand (red/tan) (light brown)	Bkg					
35							



	hermo F				PROJECT NAME Former Eberl		AGE 1	I OF 2
					PROJECT LOCATION 5981 Airs			
					GROUND ELEVATION			
DRILLING	CONTRA	CTOR	<u>Envi</u>	ro-Drill, Inc.				
DRILLING	METHOD	G	eoprol	pe	LOGGED BY K. Dow	CHECKED BY		
NOTES								
NOTES (co								
	SAMPLE NUMBER RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma
-								
-	40 %							Bkg
5_				Fine sand, dry (light tan - tan))			
- - -	63 %			Fine -medium grain sand (ligh	nt brown)			Bkg
<u>10</u> –								
_								70
-	40 %			Medium grain sand, (light bro	wn)			Bkg
15				Fine grain sand, (tan / white)			-	
-				Medium grain sand / clay (bro	own)			
	% 28							Bkg
1				Clay (brown)				

Page 671 of 1385 **BORING ID: SB-07**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

71	4						1,	OL Z	O. 2
CLIENT_	Therm	o El	berlin	e, LL	С	PROJECT NAME Former Ebe	erline Instruments Facility		
PROJECT	TNUMB	ER _				PROJECT LOCATION 5981 Air	rport Road, Santa Fe, NM		
DATE ST	ARTED	5/3	1/20	17	COMPLETED 5/31/2017	GROUND ELEVATION	BORING DIAMETER _		
DRILLING	CONTI	RAC1	ror_	Enviro	o-Drill, Inc.	<u> </u>			
DRILLING	METH	OD_	Geo	probe	9	LOGGED BY K. Dow	CHECKED BY		
NOTES _									
NOTES (d	cont.)								
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	ŗ	MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
25		72 %			Medium grain sand / clay (brow Refusal @ 24.5 ft	/n)			Bkg
 30									
35									
40									

14C	Associates,	Inc
4	Associates,	IIIC.

					PROJECT NAME Former Eberl			
					PROJECT LOCATION 5981 Airp			
					GROUND ELEVATION	BORING DIAMETER		
				ro-Drill, Inc.		CHECKED BY		
				oe		CHECKED BY		
NOTES (cont.)								
, DEPTH (ft)	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (com)
	40 %							Bkg
5	% 0.2			Fine sand, dry (tan) Fine grain sand, clumpy (tan) Fine -medium grain sand, clum	py (tan)			Bkg
- - - -	62 %			Fine - medium grain sand, mois	st (light brown)			Bkg
-	% 09			Fine grain sand, small stones (1/4 – ½ inch) (light brown)			Bkg

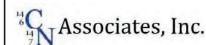
Page 673 of 1385 **BORING ID: SB-08**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

7	N						FA	GE Z (OF Z
CLIEN.	τ Therm	no E	berlin	e, LL	.C	PROJECT NAME Former Ebe	rline Instruments Facility		
PROJE	CT NUMB	ER _				PROJECT LOCATION 5981 Air			
DATE :	STARTED	5/3	1/20	17	COMPLETED 5/31/2017	GROUND ELEVATION	BORING DIAMETER _		
DRILLI	NG CONT	RAC	ror_	Enviro	o-Drill, Inc.	<u> </u>			
DRILLI	NG METH	OD_	Geo	probe	Э	LOGGED BY K. Dow	CHECKED BY		
NOTES									
NOTES	(cont.)		1		T				
(#)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
 	07	40 %	2		Course sand / clay (dark brown Clay, moist (dark brown) Refusal @ 24 ft)			Bkg
- 35 40									

	Dana C74		
Г	age or 4	01 100	5
BORIN	שו או		$D \Lambda$
DURIN	IG ID	. 3	D-U



⁴ N	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-10.0	-0,	****		PAGE 1	1 OF 2
					PROJECT NAME Former Eberlin		
					PROJECT LOCATION 5981 Airpo		
DRILLING CO	NTRA	CTOR_	Envi	ro-Drill, Inc.	GROUND ELEVATION LOGGED BY _ K. Dow		
NOTES (cont.	.)						
DEPTH (ft) SAMPLE NUMBER	RECOVERY 9	NOTES	GRAPHIC		MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0 -							
-	28 %						Bkg
5				Fine sand, dry (light tan)			
10.	72 %			Fine -medium grain sand, clur	mpy, small stones (light brown)		Bkg
- - - 15	% 89			Small stones (1/4 – ½ inch) Fine grain sand (light brown)			Вкд
20	85 %			Small stones (1/4 – ½ inches) Fine-medium grain sand (brown) Clay (brown)	vn)		Bkg

Page 675 of 1385 **BORING ID: SB-09**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

CLIENT Thermo Eberline, LLC PROJECT NAME Former Eberline Instruments Facility									
						PROJECT LOCATION 5981 Airport Road, Santa Fe, NM			
						GROUND ELEVATION			
					o-Drill, Inc.				
)		CHECKED BY		
NOTES							_		
	S (cont.)								
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
 		% 86			Small stones Clay, moist (dark brown) Refusal @ 24 ft				Bkg
- 35 40									

Associates, Inc.	
7	

THERMO EBERLINE - SANTA FE, NM

711				P.	AGE 1	OF 2
CLIENT Therr	no El	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility		
				PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
DATE STARTE	D <u>6/</u> 0	01/20	17	COMPLETED 6/01/2017 GROUND ELEVATION BORING DIAMETER		
DRILLING CON	TRAC	CTOR	Envi	ro-Drill, Inc.		
DRILLING MET	HOD	Ge	oprob	DE LOGGED BY K. Dow CHECKED BY		
NOTES						
NOTES (cont.)						
, DEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0 -	13 %			Fine sand, dry (light tan)		Bkg
10	38 %			Fine -medium grain sand, clumpy (light brown)		Вкд
	67 %			Fine – medium grain sand (light tan - brown)		Bkg
20				Hole Abandoned due to refusal (Continued Next Page)		Bkg

Page 677 of 1385 **BORING ID: SB-10**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

7	LA						1,	OL Z	O. 2		
CLIEN	T Therm	no El	berlin	e, LL	С	PROJECT NAME Former Eberline Instruments Facility					
PROJE	ECT NUME	ER _				PROJECT LOCATION 5981 A	irport Road, Santa Fe, NM				
DATE	STARTED	6/0	1/20	17	COMPLETED 6/01/2017	GROUND ELEVATION	BORING DIAMETER _				
DRILLI	ING CONT	RAC	TOR_	Enviro	o-Drill, Inc.						
DRILLI	ING METH	OD_	Geo	probe)	LOGGED BY K. Dow	CHECKED BY				
NOTES	3										
NOTES	S (cont.) _			I I							
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	N	MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)		
		_							Bkg		
_ 25 _ 											
 - 30 - 											
- 35 40											

BORI 4 Associates, Inc.

BORING ID: SB-11

7	N	3355.10			P.	AGE 1	OF 2
CLIE	NT Therr	no El	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility		
					PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
DATE	STARTE	o 6/0	01/20	17	COMPLETED 6/01/2017 GROUND ELEVATION BORING DIAMETER		
DRIL	LING CON	TRAC	TOR	Envi	ro-Drill, Inc.		
DRIL	LING MET	HOD	Ge	oprob	LOGGED BY K. Dow CHECKED BY		
NOTE	ES						
NOTI	ES (cont.)						
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		2 %			_Fine sand, dry (light tan)		Bkg
		37 %			Fine grain sand (light brown)		79,478
		34 %			Medium grain sand, small stones (light brown) (drilled through piece of white PVC pipe from previous boring)		44,931
20		63 %			Medium-course gravel, small stones (brown) Course gravel, small stones (dark brown) Clay (dark brown)		Bkg

THERMO EBERLINE - SANTA FE, NM

Page 679 of 1385 **BORING ID: SB-11**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

7	L							OL Z	01 2
CLIEN.	T Therm	no E	berlin	ne, LL	.C	PROJECT NAME Former Eb	erline Instruments Facility		
PROJE	CT NUME	ER _				PROJECT LOCATION 5981 A	irport Road, Santa Fe, NM		
DATE :	STARTED	6/0	1/20	17	COMPLETED 6/01/2017	GROUND ELEVATION	BORING DIAMETER _		
					o-Drill, Inc.				
DRILLI	NG METH	OD_	Geo	probe	е	LOGGED BY K. Dow	CHECKED BY		
NOTES	(cont.)		ı	ī					
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
		63 %			Clay, moist (dark brown) Refusal @ 24 ft				Bkg
_ 25 _ -									
- 35 									
40									

BORING ID: SB-12

Associates, Inc.

71				,		PAGE ²	1 OF 1
					PROJECT NAME Former Eberline Instruments Facility		
					PROJECT LOCATION 5981 Airport Road, Santa Fe, NN		
					COMPLETED 6/01/2017 GROUND ELEVATION BORING DIAME	TER	
DRILLING	3 CON	TRAC	CTOR	<u>Envi</u>	o-Drill, Inc.		
					e LOGGED BY K. Dow CHECKED BY		
NOTES (
NOTES	<u> </u>						
	SAMPLE NUMBER	% /				В	ma
DEРТН (ft)	E N	RECOVERY		일	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (com)
EPT	MPL	00	NOTES	GRAPHIC		lta-G) 880
0	SA	뀞	ž	GF		Be	ō
1							
		%					0
+		20					Bkg
5					Fine sand, dry (light tan)		\vdash
1							
1							
		%					Bkg
+		43 9					"
					Fine-medium grain sand, clumpy (light brown)		
10							
+							
							Bkg
1		2 %					[®]
4							
15					Fine - medium grain sand (light brown)		
				22/2/2	Refusal at 15 ft		
4					normal at 10 It		
+							
1							
4							
20							

(Continued Next Page)



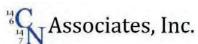
CLIENT Then	mo E	berline	e, LLC	>	PROJECT NAME Former Eberl		PAGE 1	
PROJECT NUM	/IBER				PROJECT LOCATION 5981 Airp	oort Road, Santa Fe,NM		
DATE STARTE	D <u>6/</u>	01/201	17	COMPLETED 6/01/2017	GROUND ELEVATION	BORING DIAMETER		
DRILLING CON	NTRA	CTOR_	Envi	ro-Drill, Inc.				
DRILLING MET	THOD	Ged	oprob	oe	LOGGED BY K. Dow	CHECKED BY		
NOTES								
NOTES (cont.)							1	_
DEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma
0 0	53 % F		0	Fine sand, dry (light tan)				Bkg
10.	% 08			Fine -medium grain sand, clum	apy (light brown)			Bkg
_ _ _ _ 15	58 %			Fine-medium grain sand (light l				Bkg
-	% 92			Medium grain sand - clay (brow	vn)			Bkg

Page 682 of 1385 **BORING ID: SB-13**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

CLIEN		no El	berlin	e, LL	C	PROJECT NAME Former Eb	erline Instruments Facility		
		COURSE SAND COURSE							
							CHECKED BY		
NOTES									
NOTES	(cont.)								_
DEPTH (ft)	SAMPLE NUMBER		NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
 25					Course sand (light brown) Clay, moist (dark brown) Course grain sand / stones Clay, moist (dark brown) Refusal @ 23 ft				Bkg
- 30 - 									
 40									



THERMO EBERLINE - SANTA FE, NM

7	IN				P	AGE 1	OF 2
CLIE	NT Therr	no El	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility		
PRO	JECT NUM	BER			PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
DATE	STARTE	D 6/0	02/20	17	COMPLETED 6/02/2017 GROUND ELEVATION BORING DIAMETER		
DRIL	LING CON	TRAC	CTOR	Envi	ro-Drill, Inc.		
DRIL	LING MET	HOD	Ge	oprob	LOGGED BY K. Dow CHECKED BY		
NOTE							
NOTI	ES (cont.)					1	
, DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0 - 	- 03	20 %			Fine grain sand (light tan)		Bkg
		53 %			Fine -medium grain sand, clumpy, small stones (1/4 – ½ inch) (tan)		Bkg
 		23 %			Fine grain sand, very dense (tan) (lost tube / recovered tube and re-sampled)		Bkg
 		% 58			Fine - medium grain sand (brown) Clay (dark brown)		Bkg

Page 684 of 1385 **BORING ID: SB-14**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

CLIEN		no F	berlin	e. l l	C	PROJECT NAME Former Eb	perline Instruments Facility		
						PROJECT LOCATION 5981 A			
						GROUND ELEVATION			
					o-Drill, Inc.				
						LOGGED BY K. Dow	CHECKED BY		
NOTES									
	6 (cont.) _								
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
		29 %			Course sand, small stones (o Clay, moist (dark brown) Course sand / gravel Refusal @ 23 ft	dark brown)			Bkg
- 30 - 									
 40									



CLIENT The	rmo E	berline.	. LLC		PROJECT NAME Former Eberl		PAGE 1	I OF 2
				COMPLETED 6/02/2017			l	
DRILLING CO	NTRA	CTOR_	Envir	o-Drill, Inc.	_			
DRILLING ME	THOD	Geo	prob	е	LOGGED BY K. Dow	CHECKED BY		
NOTES (cont.	.)							
, DEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	N	MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma
5				Hand Auger due to close utilities	- Fine grain sand (light tan)			Bkg
10	% 09			Medium grain sand, clumpy, sma	II stones (1/4 – ½ inch) (tan)			Bkg
- - - - 15	75 %			Fine – medium grain sand, small	stones (1/4 inch) (dark brown)			Bkg
20	100 %			Fine - medium grain sand (dark b				Bkg

Page 686 of 1385 **BORING ID: SB-15**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

7.	IN						FA	GE Z	OF Z
CLIEN	T Therm	no E	berlin	ne, LL	C	PROJECT NAME Former Ebe	rline Instruments Facility		
PROJE	ECT NUMB	ER _				PROJECT LOCATION 5981 Air	port Road, Santa Fe,NM		
DATE	STARTED	6/0	2/20	17	COMPLETED 6/02/2017	GROUND ELEVATION	BORING DIAMETER _		
					o-Drill, Inc.				
DRILL	ING METH	OD_	Geo	probe	е	LOGGED BY K. Dow	CHECKED BY		
NOTES									
NOTE	S (cont.)			1	T				
(tt) (tt)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
		% 86				stones ½-1.2 inch) (dark brown)			Bkg
_ 25 _					Refusal @ 24 ft				
- - 									
40									



THERMO EBERLINE - SANTA FE, NM

7	IN					PAGE 1	1 OF 2
CLIE	NT Therr	no E	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility		
PRO	JECT NUM	BER			PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
DATE	STARTE	D <u>6/</u>	02/20)17	COMPLETED 6/02/2017 GROUND ELEVATION BORING DIAMETE	R	
					ro-Drill, Inc.		
DRIL	LING MET	HOD	Ge	oprob	DE LOGGED BY K. Dow CHECKED BY		
NOTI	ES (cont.)						Т
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0 5					Hand Auger due to close utilities Medium-course grain sand, small stones (1/4 – ¾ inch) (tan)		Bkg
 		% 29			Medium-course grain sand, small stones (1/4 − ¾ inch) (tan)		Bkg
 15		62 %			Fine grain sand (light brown)		Bkg
- 20		% 88			Fine grain sand (brown)		Bkg

Page 688 of 1385 **BORING ID: SB-16**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

7							.,	.0	0. 2
CLIEN.	τ <u>Therm</u>	no El	berlin	e, LL	.C	PROJECT NAME Former Eb	erline Instruments Facility		
PROJE	CT NUMB	ER _				PROJECT LOCATION 5981 A	irport Road, Santa Fe, NM		
DATE	STARTED	6/0	2/20 ⁻	17	COMPLETED 6/02/2017	GROUND ELEVATION	BORING DIAMETER _		
DRILLI	NG CONT	RAC	TOR_	Enviro	o-Drill, Inc.	<u> </u>			
DRILLI	NG METH	OD_	Geo	probe	е	LOGGED BY K. Dow	CHECKED BY		
NOTES	s								
NOTES	(cont.)				T			1	
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	ı	MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
		37 %							Bkg

140		
14	Associates,	lnc.

PAGE 1 OF 2

				PROJECT NAME Former Eberline Instruments Fac		
				PROJECT LOCATION 5981 Airport Road, Santa Fe,		
				COMPLETED 6/02/2017 GROUND ELEVATION BORING DIA	VIETEK	
DRILLING COI	NIRAG	TOR_	Envir	o-Drill, Inc. CHECKED BY K DOW CHECKED BY	Y	
				e LOGGED BY K. Dow CHECKED BY		
NOTES (cont.)						
DEPTH (ft)	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
IQ 0 1 1 1 1 5 1 5 1	50 % RE	ON	GR	Fine sand, dry (tan)	B	Bkg
-	92 %			Fine grain sand (light tan) Fine -medium grain sand, clumpy (light brown)		Bkg
- - - 15	% 89			Fine-medium grain sand (light brown) Medium grain sand (brown)		Bkg
-	% 89			Medium grain sand, small stones (1/4 – ½ inch) (light brown) Medium grain sand / clay (dark brown)		Bkg

Page 690 of 1385 **BORING ID: SB-17**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

CLIEN		no El	herlin	ا ا م	C PROJECT NAME Former Eberline Instruments Facility		
		PROJECT LOCATION 5981 Airport Road, Santa Fe, NM					
					COMPLETED 6/02/2017 GROUND ELEVATION BORING DIAMETER		
DRILLING CONTRACTOR Enviro-Drill, Inc.							
					LOGGED BY K. Dow CHECKED BY		
NOTES							
	S (cont.)						
DEPTH (ff)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
 		% 09			Clay (dark brown) Course sand / clay, moist (light brown – red brown) Refusal @ 23 ft		Bkg
- 35 40							



7	1.10			,	****			PAGE 1	1 OF 2
						PROJECT NAME Former Eberli			
						PROJECT LOCATION 5981 Airp			
						GROUND ELEVATION	BORING DIAMETER		
DRILLI	ING CON	ITRAC	CTOR	Envi	ro-Drill, Inc.	LOCCED BY K DOW	CHECKED BY		
						LOGGED BY K. Dow	CHECKED BT		
	S (cont.)								
NOTE									
٦ (ft)	SAMPLE NUMBER	RECOVERY %		<u>0</u>		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
DEPTH (ft)	MPLE	COV	NOTES	GRAPHIC		WATENIAL DESCRIPTION		ta-G	D ssc
	SA	R	2 Z	GR				Be	ğ
1									
-									
		% 98							Bkg
]		, e							"
+					Fine sand, clumping (light tan)			
5									
+									
4									0
		%							171,00
1		65			Fine -medium grain sand (ligh	t brown)			
+									
10_			L						
-									
4									
		% 02							Bkg
1					Fine-medium grain sand (light	brown)			
+									
15									
+									
		%							Bkg
1		67			Fine-medium grain sand (light	brown)			Ē
-									
20									

Page 692 of 1385 **BORING ID: SB-18**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

CLIEN.		10 E	herlin	ا ا م	C PROJECT NAME Former Eberline Instruments Facility		
PROJECT NUMBER PROJECT LOCATION 5981 Airport Road, Santa Fe, NM							
					COMPLETED 6/02/2017 GROUND ELEVATION BORING DIAMETER		
DRILLING CONTRACTOR Enviro-Drill, Inc.							
					LOGGED BY K. Dow CHECKED BY		
NOTES					<u> </u>		
	6 (cont.)						
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
 		37 %			Fine – medium grain sand (light brown) Clay (dark brown) Refusal @ 24 ft		320,000
- 35 40							



CLIENT The	ermo E	berline	, LLC	<u> </u>	PROJECT NAME Former Eberli	ne Instruments Facility		
PROJECT NU	JMBER				PROJECT LOCATION 5981 Airport Road, Santa Fe, NN			
DATE START	FED <u>6/</u>	03/201	17	COMPLETED 6/03/2017	GROUND ELEVATION	BORING DIAMETER		
				ro-Drill, Inc.				
				oe		CHECKED BY		
NOTES (cont	t.)						1	Т
, DEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
	27 %			Fine grain sand, small stones (1	/4 – ½ inch) (tạn)			Bkg
-	%			Fine grain sand (tan)				Bkg
10	25 %			Fine grain sand (light brown)				B
- - - 15	73 %			Fine-medium grain sand (brown Medium grain sand (brown))			Bkg
20	85 %			Medium grain sand / clay (brown	n)			Bkg

Page 694 of 1385 **BORING ID: SB-19**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

CLIENT Thermo Eberline, LLC						PROJECT NAME Former Eberline Instruments Facility					
						PROJECT LOCATION 5981					
DATE STARTED 6/03/2017 COMPLETED 6/03/2017											
					o-Drill, Inc.						
DRILLI	ING METH	OD_	Geo	probe	Э	LOGGED BY K. Dow	CHECKED BY				
NOTES	S										
NOTES	S (cont.) _		ı								
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)		
 		72 %			Clay (dark brown – black) Clay (brown)				Bkg		
_ 25 _ 					Refusal @ 24 ft						
 - 30 -											
-35 -											
- - -											
40											

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-20

7	. 4				P7	AGE I	OF 2				
CLIEN	NT Them	no E	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility	PROJECT NAME Former Eberline Instruments Facility					
PROJ	ECT NUM	BER			PROJECT LOCATION 5981 Airport Road, Santa Fe, NM						
DATE	STARTE	D <u>6/</u>	03/20	17	COMPLETED 6/03/2017 GROUND ELEVATION BORING DIAMETER						
DRILL	LING CON	TRAC	CTOR	Envi	ro-Drill, Inc.						
DRILI	ING MET	HOD	Ge	oprob	LOGGED BY K. Dow CHECKED BY						
NOTE	S (cont.)										
	SAMPLE NUMBER	. 0									
£.	MON	۶۲ %				ıma	nma)				
DЕРТН (ft)	LE I	RECOVERY	S	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)				
DEP	AMF	ECC	NOTES	RAF		eta-	iross (
0	Ŋ	<u> </u>		0		ш	0				
		% (Bkg				
- 1		29					B				
					Fine grain sand (light tan)						
5											
_											
		%			Medium grain sand, stones (1/4-1/2 inch) (light brown)		Bkg				
		55					В				
					Fine grain sand (light brown)						
					Fine-medium grain sand, clumping (light brown)						
10											
		48 %			Fire wealth we work and are all above (A/A A/O in als.) (limbs become)		Bkg				
		4			Fine-medium grain sand, small stones (1/4-1/2 inch) (light brown)						
					Fine grain sand (light brown)						
15					Fine grain sand (light gray – white)						
• †					Fine grain sand / clay (light gray – white)						
.					Fine grain sand / clay (brown)						
		% (Bkg				
		70					В				
					Clay (brown)						
20					Clay (brown)						
					(Continued Next Page)						

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Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

71	1							OL Z	0. 2
CLIENT	Therm	o El	oerlin	e, LL	С	PROJECT NAME Former Ebe	erline Instruments Facility		
PROJEC	TNUMB	ER _				PROJECT LOCATION 5981 A	irport Road, Santa Fe,NM		
DATE S	TARTED	6/0	3/20	17	COMPLETED 6/03/2017	GROUND ELEVATION	BORING DIAMETER _		
DRILLIN	G CONT	RAC	ror_	Enviro	o-Drill, Inc.	<u> </u>			
DRILLIN	G METH	OD_	Geo	probe	9	LOGGED BY K. Dow	CHECKED BY		
NOTES									
NOTES ((cont.)		ı						
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	ı	MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
		% 28			Clay (brown) Small stones (1/2 inch) Clay (brown) Refusal @ 24.5 ft				Bkg
- 35 40									

7	113.		Jul	.00,	F	PAGE 1	OF 2
CLIEN	NT Therr	no E	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility		
PROJ	ECT NUM	BER			PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
DATE	STARTE	D <u>6/</u>	03/20	17	COMPLETED 6/03/2017 GROUND ELEVATION BORING DIAMETER		
DRILL	ING CON	TRAC	CTOR	Envi	ro-Drill, Inc.		
DRILL	ING MET	HOD	Ge	oprob	DE LOGGED BY K. Dow CHECKED BY		
NOTE	:s						
NOTE	S (cont.)						
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
	U)	34 % F)	Fine-medium grain sand (light brown)		Bkg
		29 %			Medium-course grain sand (light brown) Fine-medium grain sand (light brown)		171,00
· –		20 %			Course grain sand, clumping (brown)		Bkg
20		61 %			Fine-medium grain sand (light brown) Clay (brown)		Bkg

THERMO EBERLINE - SANTA FE, NM

Page 698 of 1385 **BORING ID: SB-21**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

7	IN					FAG	E 2 (JF Z
CLIEN	T Therm	no E	berlin	e, LL	C PROJECT NAME Forme	r Eberline Instruments Facility		
PROJE	ECT NUMB	ER _			PROJECT LOCATION 59	81 Airport Road, Santa Fe,NM		
DATE	STARTED	6/0	3/20	17	COMPLETED 6/03/2017 GROUND ELEVATION	BORING DIAMETER		
DRILLI	ING CONT	RAC	TOR_	Enviro	-Drill, Inc.			
DRILLI	ING METH	OD_	Geo	probe	LOGGED BY K. Dow	CHECKED BY		
NOTES	S (cont.)							
ОЕРТН (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
 		72 %			Clay (brown) Course sand / stones cobble (light brown)			Bkg
		20 %			Fine grain sand / stones (1/4-1/2 inch) Refusal @ 26.5 ft			Bkg
- 30 - 								
- 35 - - 40								

	Dana COO of 4205
	BORINĞ ID: SB-22
Accordates Inc	

7			,		PAGE '	1 OF 2
1				PROJECT NAME Former Eberline Instruments Facility		
				PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
DRILLING CON' DRILLING METI	TRAC	CTOR Ge	Envi	COMPLETED 6/05/2017 GROUND ELEVATION BORING DIAMET ro-Drill, Inc. De LOGGED BY K. Dow CHECKED BY		
NOTES (cont.)						Τ
, DEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
	% 0			No Recovery in core tube		Bkg
 10	43 %			Fine grain sand (light tan) Fine-medium grain sand (light brown)		Bkg
 	23 %			Fine-medium grain sand (light brown)		Bkg
20	% 82			Fine-medium grain sand (brown)		Bkg
20				Medium grain sand – clay (brown) (Continued Next Page)		

Page 700 of 1385 **BORING ID: SB-22**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

CLIEN		no F	berlin	e. H	С	PROJECT NAME Former Eberline Instruments Facility			
						PROJECT LOCATION 5981 Airport Road, Santa Fe, NM			
						GROUND ELEVATION			
					o-Drill, Inc.				
DRILLING METHOD Geoprobe LOGGED BY K.							CHECKED BY		
NOTES									
NOTES	6 (cont.)								
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
 - 25 -		93 %			Clay (brown) _ SmalLstones / gravel				Bkg
- 35 40									

4N113			,	200		P	AGE 1	OF 2
					PROJECT NAME Former Eberl			
					PROJECT LOCATION 5981 Airg			
DRILLING COM DRILLING MET NOTES	THOD	CTOR_ Geo	Envii oprob	ro-Drill, Inc.	LOGGED BY K. Dow			
NOTES (cont.)								
, DEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
0 -	% 0			No Recovery in core tube				Bkg
10	34 %			Fine grain sand (light tan-white) Medium grain sand (light brown)				Bkg
- - - -	48 %			Medium grain sand, clumping (b				Bkg
15	% 0.2			Medium grain sand (light brown) Clay (brown)	,			Bkg

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Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

100	ENT Thermo Eberline, LLC PROJECT NAME Former Eberline Instruments Facility							
					PROJECT NAME FORMS PROJECT LOCATION 59			
	BORING DIAMETER							
					p-Drill, Inc.			
					LOGGED BY K. Dow	CHECKED BY		
NOTES								
NOTES	S (cont.) _							
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)	
 		81 %			Clay (brown) Course sand (brown-red)		Bkg	
- 35 - 40								

7	N. I.			,	P	AGE 1	OF 2
CLIE	NT Therr	no E	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility		
PROJ	IECT NUM	BER			PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
DATE	STARTE	D <u>6/</u>	05/20)17	COMPLETED 6/05/2017 GROUND ELEVATION BORING DIAMETER		
DRILI	LING CON	TRA	CTOR	Envi	ro-Drill, Inc.		
DRILI	LING MET	HOD	Ge	eoprob	DE LOGGED BY K. Dow CHECKED BY		
	S (cont.)						
DЕРТН (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
	Ø	10 %	2	0	Fine grain sand (light tan)		Bkg
		62 %			Fine-medium grain sand (light brown)		Bkg
 15		% 59	. — —		Fine-medium grain sand (light brown)		Bkg
		% 59			Fine-medium grain sand (light brown)		Bkg

THERMO EBERLINE - SANTA FE, NM

Page 704 of 1385 **BORING ID: SB-24**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

7.	IA						1,		J
CLIEN	τ Therm	no E	berlin	e, LL	C	PROJECT NAME Former Eb	erline Instruments Facility		
PROJE	ECTNUMB	ER _				PROJECT LOCATION 5981 A	irport Road, Santa Fe, NM		
DATE	STARTED	6/0	5/20	17	COMPLETED 6/05/2017	GROUND ELEVATION	BORING DIAMETER _		
DRILL	ING CONT	RAC	TOR_	Enviro	o-Drill, Inc.				
DRILLI	ING METH	OD_	Geo	probe	e	LOGGED BY K. Dow	CHECKED BY		
NOTES	S								
NOTES	S (cont.)								_
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
 		34 %			Course sand (dark brown) Medium grain sand (light browr Medium grain sand, small ston				Bkg
-35 - - 40									

7	N ¹¹³ .	300	Ju	.03,	F.	PAGE 1	OF 2
CLIE	NT Therr	no E	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility		
PRO.	JECT NUM	BER			PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
DATE	STARTE	D <u>6/</u>	05/20	17	COMPLETED 6/05/2017 GROUND ELEVATION BORING DIAMETER		
DRIL	LING CON	TRAC	CTOR	Envi	ro-Drill, Inc.		
DRIL	LING MET	HOD	Ge	oprob	DE LOGGED BY K. Dow CHECKED BY		
NOTE	S						
NOTE	ES (cont.)		ı		_		
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0 -	<u> </u>	80 % R		G	Fine grain sand, small stones (1/4-1/2 inch) (light tan)		Bkg
		47 %			Medium grain sand, clumpy (tan- brown)		Bkg
 15		% 99			Medium grain sand, chunky (tan-brown) Fine grain sand (tan - light brown)		Bkg
20		% 09			Fine grain sand (tan) Medium grain sand (brown) Clay (brown)		Bkg

(Continued Next Page)

THERMO EBERLINE - SANTA FE, NM

Page 706 of 1385 **BORING ID: SB-25**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

711						.,	.02 2	O. 2
CLIENT Th	nermo E	berlir	ne, LL	.C	PROJECT NAME Former Ebe	erline Instruments Facility		
PROJECTN	UMBER				PROJECT LOCATION 5981 A	irport Road, Santa Fe, NM		
DATE STAF	RTED <u>6/0</u>)5/20	17	COMPLETED 6/05/2017	GROUND ELEVATION	BORING DIAMETER _		
				o-Drill, Inc.				
DRILLING N	IETHOD _	Geo	probe	е	LOGGED BY K. Dow	CHECKED BY		
NOTES (coi		1		T .			_	
DEPTH (ft)	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
25	72 %			Course sand (dark brown) Medium-course grain sand (br Clay (brown) Medium grain sand (white)	own)			Bkg
30								
35								

. ~		
6 . 10	sociates	Inc
HITAS	sociates	i, Inc.
7 1		

'HERMO EBERLINE - SANTA FE, NM

BORING ID: SB-26

PAGE 1 OF 2 CLIENT Thermo Eberline, LLC PROJECT NAME Former Eberline Instruments Facility PROJECT NUMBER _ PROJECT LOCATION 5981 Airport Road, Santa Fe, NM DATE STARTED 6/06/2017 COMPLETED 6/06/2017 GROUND ELEVATION BORING DIAMETER DRILLING CONTRACTOR Enviro-Drill, Inc. LOGGED BY K. Dow CHECKED BY DRILLING METHOD Geoprobe NOTES NOTES (cont.) SAMPLE NUMBER Gross Gamma (cpm) Beta-Gamma RECOVERY DEPTH (ft) GRAPHIC MATERIAL DESCRIPTION 4 Fine grain sand (light tan) Bkg 30 Fine - medium grain sand, clumpy (light brown) 10 Bkg 20 Fine - medium grain sand (light tan) 15 Fine-medium grain sand (light tan) 63 Fine grain sand / clay (brown)

(Continued Next Page)

Page 708 of 1385 **BORING ID: SB-26**

14.	
Associates	Inc.
71	

THERMO EBERLINE - SANTA FE, NM

711					NOL 2	01 2
CLIENT Th	ermo E	berlir	ne, LL	.C PROJECT NAME Former Eberline Instruments Facility	/	
PROJECT N	JMBER .			PROJECT LOCATION 5981 Airport Road, Santa Fe, NM	1	
DATE STAR	red <u>6/</u> 0	06/20	17	COMPLETED 6/06/2017 GROUND ELEVATION BORING DIAMETER		
DRILLING C	ONTRAC	TOR_	Envir	o-Drill, Inc.		
DRILLING M	ETHOD_	Geo	probe	E LOGGED BY K. Dow CHECKED BY		
NOTES						
NOTES (con						
DEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
	74 %			Clay (dark brown) Course sand / gravel / clay, stones (1/4-1/2 inch) (dark brown) Medium grain sand (brown -red) Refusal @ 25 ft		Bkg
30						
35						

Associates, Inc.

BORING ID: SB-27

13							۲	AGE 1	OF 2	
CLIE	NT Therr	no E	<u>berlin</u>	e, LLC		PROJECT NAME Former Eberline Instruments Facility				
PRO	JECT NUM	BER				PROJECT LOCATION 5981 Airpo	ort Road, Santa Fe,NM			
DATI	STARTE	D <u>6/</u>	06/20)17	COMPLETED 6/06/2017	GROUND ELEVATION	BORING DIAMETER			
					ro-Drill, Inc.					
DRIL	LING MET	HOD	Ge	oprob	pe	LOGGED BY K. Dow	CHECKED BY			
NOTI	ES (cont.)									
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MA	ATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)	
 - 5_		15 %			Fine grain sand (light tan) _Medium_course grain sand (light b	rown)			Bkg	
		32 %			Medium-course sand (light brown) Fine - medium grain sand, clumpy Medium grain sand (brown)				Bkg	
 		% 82			Fine grain sand (light brown) Medium grain sand (brown)				150,000	
		% 89			Fine grain sand (light gray) Medium grain sand (brown) Course sand / clay (brown)				150,000	

Page 710 of 1385 **BORING ID: SB-27**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

711						17.		O. 2
CLIENT T	hermo l	Eberlir	ne, LL	С	PROJECT NAME Former El	perline Instruments Facility		
PROJECT	NUMBER				_ PROJECT LOCATION 5981 A	Airport Road, Santa Fe, NM		
DATE STA	RTED 6	06/20	17	COMPLETED 6/06/2017	GROUND ELEVATION	BORING DIAMETER _		
DRILLING	CONTRA	CTOR_	Enviro	o-Drill, Inc.	_			
DRILLING	METHOD	Geo	probe	9	LOGGED BY K. Dow	CHECKED BY		
NOTES								
NOTES (co	ont.)							
DEPTH (ft)	SAMPLE NUMBER RECOVERY %	NOTES	GRAPHIC	MA	ATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
25	% 92			Clay (dark brown) Course sand / gravel / clay, stone Clay (brown) Fine - medium grain sand (gray - Refusal @ 25 ft				Bkg
30								
35								

14		
6	Associates	, Inc.

				PROJECT NAME Former Ebel			
				PROJECT LOCATION 5981 Air			
			nviro-Drill, Inc.		BONING DIAMETER		
	THOD	Geon	rohe	LOGGED BY K. Dow	CHECKED BY		
			TODE				
NOTES (con							
DEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GKAPHIC	MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma
- - - 5	20 %		Fine grain sand (light tan)				Bkg
- - - -	% 59		Fine – medium grain sand ((light brown)			Bkg
-	72 %		Fine grain sand (light tan) Fine - medium grain sand (l	brown)			Bkg
- - - - 20	% 09		Fine - medium grain sand (tan -brown)			48,309

Page 712 of 1385 **BORING ID: SB-28**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

CLIEN		<u>no E</u>	<u>berli</u> n	ie, LL	C PROJECT NAME Former Eberline Instruments Facility		
					PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
					COMPLETED 6/06/2017 GROUND ELEVATION BORING DIAMETER		
					o-Drill, Inc.		
					LOGGED BY K. Dow CHECKED BY		
NOTES							
NOTES	S (cont.)	_				1	
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		73 %			Fine – medium grain sand (tan-brown) Clay (brown) Medium grain sand (brown - red)		334,000
 		78 %			Course grain sand (gray – red) Medium grain sand (gray – brown)		Bkg
30							
35							

Associates, Inc.	
7 Nasociaces, inc.	

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-29

¹⁴ / ₇ N 113.	300	Jui	.03,	F	AGE 1	OF 2
CLIENT Therr	no El	<u>berlin</u>	e, LLC	PROJECT NAME Former Eberline Instruments Facility		
PROJECT NUM	BER			PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
DATE STARTE	D 6/0	06/20	17	COMPLETED 6/06/2017 GROUND ELEVATION BORING DIAMETER		
DRILLING CON	TRAC	TOR	Envi	ro-Drill, Inc.		
DRILLING MET	HOD	Ge	oprob	DE LOGGED BY K. Dow CHECKED BY		
NOTES						
NOTES (cont.)			1 1		1	
, DEPTH (ft) SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0 -	43 %			Fine grain sand (light tan)		Bkg
	% 62			Medium grain sand, small stones (1/4-1/2 inches) (light brown)		382,000
	400 %			Medium grain sand (light brown)		41,000
20	400 %			Medium grain sand (light brown) (Continued Next Page)		Bkg

Page 714 of 1385 **BORING ID: SB-29**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

CLIEN		າດ F	herlin	e II	С	PROJECT NAME Former F	berline Instruments Facility		
					COMPLETED 6/06/2017				
					p-Drill, Inc.				
)		CHECKED BY		
NOTES									
NOTES	S (cont.)								
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
		84 %			Medium grain sand (light brown) Medium – course sand (brown) Clay (brown) Refusal at 24.5 ft	•			374,000
 - 30 - 									
40									

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-30

7	N ¹¹³ .	300	Ju	.03,	P.	PAGE 1	OF 2
CLIE	NT Therr	no E	berlin	e, LLC	PROJECT NAME Former Eberline Instruments Facility		
PRO.	JECT NUM	BER			PROJECT LOCATION 5981 Airport Road, Santa Fe, NM		
DATE	STARTE	D 6/	06/20	17	COMPLETED 6/06/2017 GROUND ELEVATION BORING DIAMETER		
DRIL	LING CON	TRAC	CTOR	Envi	ro-Drill, Inc.		
DRIL	LING MET	HOD	Ge	oprob	DE LOGGED BY K. Dow CHECKED BY		
NOTE	S (cont.)			, ,			
DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
	0)	27 % F			Fine grain sand (light tan)		Bkg
		95 %			Fine grain sand (light tan) Fine – medium grain sand (light brown)		Bkg
		400 %			Medium grain sand (brown) Clay (brown		Bkg
20		400 %			Clay (brown)		Bkg

(Continued Next Page)

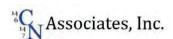
Page 716 of 1385 **BORING ID: SB-30**

Associates, Inc.

THERMO EBERLINE - SANTA FE, NM

7	LA						1,	.52 2	J
CLIEN	T Therm	no El	berlin	ne, LL	.C	PROJECT NAME Former Ebe	rline Instruments Facility		
PROJE	ECT NUMB	ER _				PROJECT LOCATION 5981 Air	rport Road, Santa Fe, NM		
DATE	STARTED	6/0	6/20	17	COMPLETED 6/06/2017	GROUND ELEVATION	BORING DIAMETER _		
					o-Drill, Inc.				
DRILLI	NG METH	OD_	Geo	probe	е	LOGGED BY K. Dow	CHECKED BY		
NOTES	G (cont.)			T	T			1	
(t)) (t)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC		MATERIAL DESCRIPTION		Beta-Gamma	Gross Gamma (cpm)
		100 %			Medium – course sand (dark b	orown – red)			Bkg
_ 25 _					Refusal at 25 ft				
_ 30 _									
- 40									

ATTACHMENT D SOIL CORE FIELD SCREENING SURVEYS



SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

Location: 5981 Airport Road, Santa Fe, NM

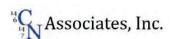
Date: 5/30/2017

Surveyor(s): Chuck Quinn / Steve Burton

BORING ID: SB-01

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	TRUMENT READING	S [All readings are in	counts per half minute]
BORING DEPTH	DATE SURVEYED				
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE
0 - 5	5/30/2017	Bkg			
5 - 10	5/30/2017	Bkg			
10 - 15	5/30/2017	Bkg			
15 - 20	5/30/2017	Bkg			
20 - 24.5	5/30/2017	Bkg			
24.5 - 25	5/30/2017	Bkg			
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

Location: 5981 Airport Road, Santa Fe, NM

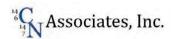
Date: 5/30/2017

Surveyor(s): Chuck Quinn / Steve Burton

, , ,		
BORING ID:	SB-02	
		-

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS.	TRUMENT READING	GS [All readings are in	counts per half minute]
BORING DEPTH	DATE SURVEYED				
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE
0 - 5	5/30/2017	Bkg			
5 - 10	5/30/2017	Bkg			
10 - 15	5/30/2017	40,687 cpm			
15 - 20	5/30/2017	Bkg			
20 - 25	5/30/2017	136,865 cpm			Elevated level at 22.5 ft.
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

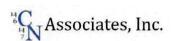
Location: 5981 Airport Road, Santa Fe, NM

Date: 5/31/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	TRUMENT READING	SS [All readings are in	counts per half minute]
BORING DEPTH	DATE SURVEYED				
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE
0 - 5	5/31/2017	Bkg			
5 - 10	5/31/2017	Bkg			
10 - 15	5/31/2017	Bkg			
15 - 20	5/31/2017	Bkg			
20 - 25	5/31/2017	Bkg			
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

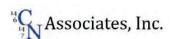
Location: 5981 Airport Road, Santa Fe, NM

Date: 5/31/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	TRUMENT READING	SS [All readings are in	counts per half minute]
BORING DEPTH	DATE SURVEYED				
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE
0 - 5	5/31/2017	Bkg			
5 - 10	5/31/2017	Bkg			
10 - 15	5/31/2017	Bkg			
15 - 20	5/31/2017	Bkg			
20 - 25	5/31/2017	Bkg			
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

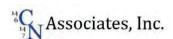
Location: 5981 Airport Road, Santa Fe, NM

Date: 5/31/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]					
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	5/31/2017	Bkg					
5 - 10	5/31/2017	Bkg					
10 - 15	5/31/2017	Bkg					
15 - 20	5/31/2017	Bkg					
20 - 24.5	5/31/2017	Bkg					
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

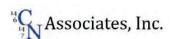
Location: 5981 Airport Road, Santa Fe, NM

Date: 5/31/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	5/31/2017	Bkg					
5 - 10	5/31/2017	Bkg					
10 - 15	5/31/2017	Bkg					
15 - 20	5/31/2017	Bkg					
20 - 24	5/31/2017	Bkg					
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

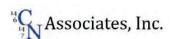
Location: 5981 Airport Road, Santa Fe, NM

Date: 5/31/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS.	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	5/31/2017	Bkg					
5 - 10	5/31/2017	Bkg					
10 - 15	5/31/2017	Bkg					
15 - 20	5/31/2017	Bkg					
20 - 24.5	5/31/2017	Bkg					
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

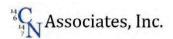
Location: 5981 Airport Road, Santa Fe, NM

Date: 5/31/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	5/31/2017	Bkg					
5 - 10	5/31/2017	Bkg					
10 - 15	5/31/2017	Bkg					
15 - 20	5/31/2017	Bkg					
20 - 24	5/31/2017	Bkg					
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

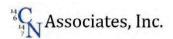
Location: 5981 Airport Road, Santa Fe, NM

Date: 6/01/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	6/01/2017	Bkg					
5 - 10	6/01/2017	Bkg					
10 - 15	6/01/2017	Bkg					
15 - 20	6/01/2017	Bkg					
20 - 24	6/01/2017	Bkg					
-							
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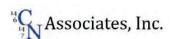


SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC				
Location: 5981 Airport Road, Santa Fe, NM				
Date: 6/01/2017				
Surveyor(s): Chuck Quinn / Steve Burton				
BORING ID: SB-10				
BOT (11 to 15. OB 10				

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]			
BORING DEPTH	DATE SURVEYED				
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE
0 - 5	6/01/2017	Bkg			
5 - 10	6/01/2017	Bkg			
10 - 15	6/01/2017	Bkg			Hole abandoned, tube retrieved
-					
-					
-					
-					
-					
-					
-					



SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

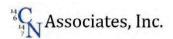
Location: 5981 Airport Road, Santa Fe, NM

Date: 6/01/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]			
BORING DEPTH	DATE SURVEYED				
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE
0 - 5	6/01/2017	Bkg			
5 - 10	6/01/2017	79,478 cpm			Elevated at 8 ft
10 - 15	6/01/2017	44,932 cpm			Elevated level at 14 ft
15 - 20	6/01/2017	Bkg			
20 - 24	6/01/2017	Bkg			
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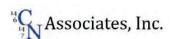


SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC					
Location: 5981 Airport Road, Santa Fe, NM					
Date: 6/01/2017					
Surveyor(s): Chuck Quinn / Steve Burton					
BORING ID: SB-12					

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]			
BORING DEPTH	DATE SURVEYED				
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE
0 - 5	6/01/2017	Bkg			
5 - 10	6/01/2017	Bkg			
10 - 15	6/01/2017	Bkg			Refusal at 15 feet
-					
-					
-					
-					
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-					
-					



SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

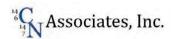
Location: 5981 Airport Road, Santa Fe, NM

Date: 6/01/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]			
BORING DEPTH	DATE SURVEYED				
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE
0 - 5	6/01/2017	Bkg			
5 - 10	6/01/2017	Bkg			
10 - 15	6/01/2017	Bkg			
15 - 20	6/01/2017	Bkg			
20 - 24	6/01/2017	Bkg			
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

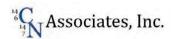
Location: 5981 Airport Road, Santa Fe, NM

Date: 6/02/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	6/02/2017	Bkg					
5 - 10	6/02/2017	Bkg					
10 - 15	6/02/2017	Bkg					
15 - 20	6/02/2017	Bkg					
20 - 23	6/02/2017	Bkg					
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

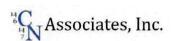
Location: 5981 Airport Road, Santa Fe, NM

Date: 6/02/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	6/02/2017	Bkg					
5 - 10	6/02/2017	Bkg					
10 - 15	6/02/2017	Bkg					
15 - 20	6/02/2017	Bkg					
20 - 24	6/02/2017	Bkg					
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

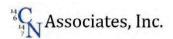
Location: 5981 Airport Road, Santa Fe, NM

Date: 6/02/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]					
BORING DEPTH	DATE SURVEYED							
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE			
0 - 5	6/02/2017	Bkg						
5 - 10	6/02/2017	Bkg						
10 - 15	6/02/2017	Bkg						
15 - 20	6/02/2017	Bkg						
20 - 24	6/02/2017	Bkg						
-								
-								
-								
-								
-								
-								
-								



SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

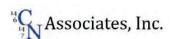
Location: 5981 Airport Road, Santa Fe, NM

Date: 6/02/2017

Surveyor(s): Chuck Quinn / Steve Burton

	METER	SN	DETECTOR	SN	CAL DUE
	2350-1	325260	44-20	PR361752	20 Oct 2017
ſ					
			BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	6/02/2017	Bkg					
5 - 10	6/02/2017	Bkg					
10 - 15	6/02/2017	Bkg					
15 - 20	6/02/2017	Bkg					
20 - 23	6/02/2017	Bkg					
-							
-							
-							
-							
-							
-							
-							



Project Name: <u>Thermo Eberline, LLC</u>

Location: <u>5981 Airport Road, Santa Fe, NM</u>

Date: <u>6/02/2017</u>

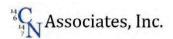
Surveyor(s): Chuck Quinn / Steve Burton

BORING ID: SB-18

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED					
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE	
0 - 5	6/02/2017	Bkg				
5 - 10	6/02/2017	171,000 cpm			Elevated level at 6-7 ft	
10 - 15	6/02/2017	Bkg				
15 - 20	6/02/2017	Bkg				
20 - 24	6/02/2017	320,000 cpm			Elevated at clay boundary @ 23.2 feet	
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-						
-						
-						
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CAL DUE



SOIL SAMPLING SURVEY FORM

SN

DETECTOR

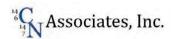
SN

METER

Project Name: Thermo Eberline, LLC Location: 5981 Airport Road, Santa Fe, NM Surve

Location: 5981 Airport Road, Santa Fe, NM	2350-1	325260	44-20	PR361752	20 Oct 2017
Date: 6/03/2017					
Surveyor(s): Chuck Quinn / Steve Burton			BKG	34,000 cpm – 38,000 cpm	вкс
BORING ID: SB-19					

		INS.	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	6/03/2017	Bkg					
5 - 10	6/03/2017	Bkg					
10 - 15	6/03/2017	Bkg					
15 - 20	6/03/2017	Bkg					
20 - 24	6/03/2017	Bkg					
-							
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-							
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

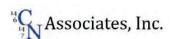
Location: 5981 Airport Road, Santa Fe, NM

Date: 6/03/2017

Surveyor(s): Chuck Quinn / Steve Burton

	METER	SN	DETECTOR	SN	CAL DUE
	2350-1	325260	44-20	PR361752	20 Oct 2017
ſ					
			BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED					
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE	
0 - 5	6/03/2017	Bkg				
5 - 10	6/03/2017	Bkg				
10 - 15	6/03/2017	Bkg				
15 - 20	6/03/2017	Bkg				
20 - 24.5	6/03/2017	Bkg				
-						
-						
-						
-						
-						
-						
-						



Project Name: <u>Thermo Eberline, LLC</u>

Location: <u>5981 Airport Road, Santa Fe, NM</u>

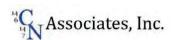
Date: <u>6/03/2017</u>

Surveyor(s): Chuck Quinn / Steve Burton

BORING ID: SB-21

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED					
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE	
0 - 5	6/03/2017	Bkg				
5 - 10	6/03/2017	Bkg				
10 - 15	6/03/2017	Bkg				
15 - 20	6/03/2017	Bkg				
20 - 24	6/03/2017	Bkg				
24.5 – 26.5	6/03/2017	Bkg				
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Project Name: Thermo Eberline, LLC

Location: 5981 Airport Road, Santa Fe, NM

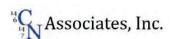
Date: 6/05/2017

Surveyor(s): Chuck Quinn / Steve Burton

oui (0).	Chack Quilli / Clove Builton
BORING ID:	SB-22

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED					
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE	
0 - 5	6/05/2017				No sample recovery	
5 - 10	6/05/2017	Bkg				
10 - 15	6/05/2017	Bkg				
15 - 20	6/05/2017	Bkg				
20 - 25	6/05/2017	Bkg				
-						
-						
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-						
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-						
-						



Project Name: Thermo Eberline, LLC

Location: 5981 Airport Road, Santa Fe, NM

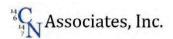
Date: 6/05/2017

Surveyor(s): Chuck Quinn / Steve Burton

BORING ID: SB-23

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]					
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	6/05/2017				No sample recovery		
5 - 10	6/05/2017	Bkg					
10 - 15	6/05/2017	Bkg					
15 - 20	6/05/2017	Bkg					
20 - 25	6/05/2017	Bkg					
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

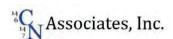
Location: 5981 Airport Road, Santa Fe, NM

Date: 6/05/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INSTRUMENT READINGS [All readings are in counts per half minute]					
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	6/05/2017	Bkg					
5 - 10	6/05/2017	Bkg					
10 - 15	6/05/2017	Bkg					
15 - 20	6/05/2017	Bkg					
20 - 25	6/05/2017	231,000 cpm			Elevated reading at 23.5 – 25 feet		
-							
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-							



Project Name: Thermo Eberline, LLC

Location: 5981 Airport Road, Santa Fe, NM

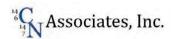
Date: 6/05/2017

Surveyor(s): Chuck Quinn / Steve Burton

BORING ID: SB-25

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	6/05/2017	Bkg					
5 - 10	6/05/2017	Bkg					
10 - 15	6/05/2017	Bkg					
15 - 20	6/05/2017	Bkg					
20 - 25	6/05/2017	Bkg					
-							
-							
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SOIL SAMPLING SURVEY FORM

Project Name: Thermo Eberline, LLC

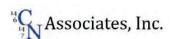
Location: 5981 Airport Road, Santa Fe, NM

Date: 6/06/2017

Surveyor(s): Chuck Quinn / Steve Burton

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	6/06/2017	Bkg					
5 - 10	6/06/2017	Bkg					
10 - 15	6/06/2017	Bkg					
15 - 20	6/06/2017	Bkg					
20 - 25	6/06/2017	Bkg					
-							
-							
-							
-							
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Project Name: <u>Thermo Eberline, LLC</u>

Location: <u>5981 Airport Road, Santa Fe, NM</u>

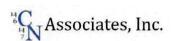
Date: <u>6/06/2017</u>

Surveyor(s): Chuck Quinn / Steve Burton

BORING ID: SB-27

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]					
BORING DEPTH	DATE SURVEYED							
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE			
0 - 5	6/06/2017	Bkg						
5 - 10	6/06/2017	Bkg						
10 - 15	6/06/2017	150,000 cpm			Elevated reading at 14.5 ft			
15 - 20	6/06/2017	150,000 cpm			Elevated reading at 19.5 ft			
20 - 25	6/06/2017	Bkg						
-								
-								
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-								
-								
-								
-								



Project Name: <u>Thermo Eberline, LLC</u>

Location: <u>5981 Airport Road, Santa Fe, NM</u>

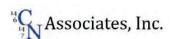
Date: <u>6/06/2017</u>

Surveyor(s): Chuck Quinn / Steve Burton

BORING ID: SB-28

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS.	INSTRUMENT READINGS [All readings are in counts per half minute]					
BORING DEPTH	DATE SURVEYED							
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE			
0 - 5	6/06/2017	Bkg						
5 - 10	6/06/2017	Bkg						
10 - 15	6/06/2017	Bkg						
15 - 20	6/06/2017	48,309 cpm			Elevated reading at 19.5 ft			
20 - 25	6/06/2017	334,000 cpm			Elevated reading at 22 ft			
25 - 30	6/06/2017	Bkg						
-								
-								
-								
-								
-								
-								
-								



Project Name: Thermo Eberline, LLC

Location: 5981 Airport Road, Santa Fe, NM

Date: 6/06/2017

Surveyor(s): Chuck Quinn / Steve Burton

BORING ID: SB-29

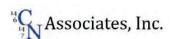
METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	BKG

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]					
BORING DEPTH	DATE SURVEYED							
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE			
0 - 5	6/06/2017	Bkg						
5 - 10	6/06/2017	382,000 cpm			Elevated reading at 7.5 ft			
10 - 15	6/06/2017	41,000 cpm						
15 - 20	6/06/2017	Bkg						
20 - 24.5	6/06/2017	374,000 cpm			Elevated reading at 22.5 ft			
-								
-								
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-								
-								
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CAL DUE

20 Oct 2017

BKG



SOIL SAMPLING SURVEY FORM

SN

325260

DETECTOR

44-20

SN

PR361752

METER

2350-1

Project Name: Thermo Eberline, LLC

Location: 5981 Airport Road, Santa Fe, NM

Date: 6/06/2017

Surveyor(s): Chuck Quinn / Steve Burton

Date. <u>6/06/2017</u>			
Surveyor(s): Chuck Quinn / Steve Burton		BKG	34,000 cpm – 38,000 cpm
BORING ID: SB-30			

		INS	INSTRUMENT READINGS [All readings are in counts per half minute]				
BORING DEPTH	DATE SURVEYED						
[FT - FT]	MM/DD/YYY	GROSS GAMMA	BETA-GAMMA	LAW	NOTE		
0 - 5	6/06/2017	Bkg					
5 - 10	6/06/2017	Bkg					
10 - 15	6/06/2017	Bkg					
15 - 20	6/06/2017	Bkg					
20 - 25	6/06/2017	Bkg					
-							
-							
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