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 Number	Date	Location (Inches) North Wall	Location (Inches) East Wall	Soil Core Section (Feet)	% Recovery	Sample Number	Sample Depth (Feet)
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		
				5-10	75		
				10-15	63	SB05-017-N-20170531-13-15	13-15
				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 Number	Date	Location (Inches) North Wall	Location (Inches) East Wall	Soil Core Section (Feet)	% Recovery	Sample Number	Sample Depth (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
				10-15	34		
				15-20	63	SB11-038-N-20170601-18-20	18-20
				20-24	63	SB11-039-N-20170601-21-24	21-24

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Santa-Fe, New Mexico

Boring Number	Date	Location (Inches) North Wall	Location (Inches) East Wall	Soil Core Section (Feet)	% Recovery	Sample Number	Sample Depth (Feet)
						SB11-040-D-20170601-21-24	21-24
SB-12	6/1/2017	113	36	0-5	20		
				5-10	43	SB12-041-N-20170601-8-10	8-10
				10-15	5		
SB-13	6/2/2017	78	30	0-5	53		
				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

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Thermo Eberline, LLC
Santa-Fe, New Mexico

Boring Number	Date	Location (Inches) North Wall	Location (Inches) East Wall	Soil Core Section (Feet)	% Recovery	Sample Number	Sample Depth (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	6/3/2017	120	60	0-5	27		
				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
SB-21	6/3/2017	80	60	0-5	34		
				5-10	29	SB21-069-N-20170603-8.5-10	8.5-10
				10-15	20		
				15-20	61	SB21-070-N-20170603-18-20	18-20
				20-24	72	SB21-071-N-20170603-22-24	22-24
				24-26.5	50	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 Number	Date	Location (Inches) North Wall	Location (Inches) East Wall	Soil Core Section (Feet)	% Recovery	Sample Number	Sample Depth (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
	Sample in Drill Casing 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				0-5	15		
				5-10	32	SB27-108-N-20170607-8.5-10	8.5-10
				10-15	78	SB27-109-N-20170607-13-15	13-15
				15-20	58	SB27-110-N-20170607-18-20	18-20
				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 Number	Date	Location (Inches) North Wall	Location (Inches) East Wall	Soil Core Section (Feet)	% Recovery	Sample Number	Sample Depth (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
				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				
		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				
		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				
		SB04-073-N-20170605-8-10	8-10	ND	U
		SB04-013-N-20170531-13-15	13-15	ND	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				
		SB13-042-N-20170602-8-10	8-10	ND	U
		SB13-078-N-20170605-13-15	13-15	ND	NA
		SB13-043-N-20170602-18-20	18-20	ND	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
		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
		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)
		SB28-116-N-20170607-21-23	21-23		2220
		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
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

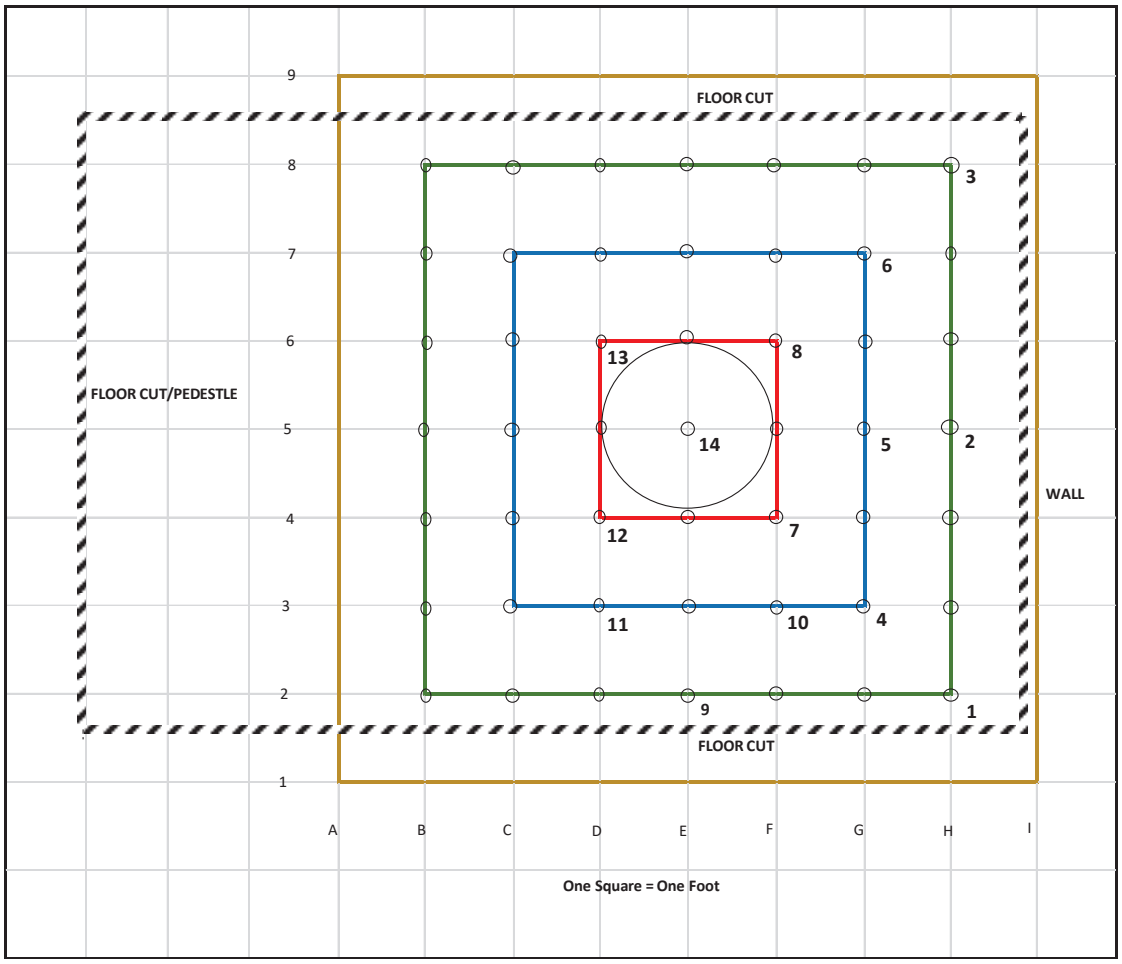

Figure 1 - Proposed Boring Grid
Thermo Eberline, LLC
5981 Airport Road
Santa Fe, New Mexico

N

Legend:

○ Proposed Soil Boring Location

Open Soil / Concrete Slab Cut

0 1 2 4 Feet

CN Associates, Inc.

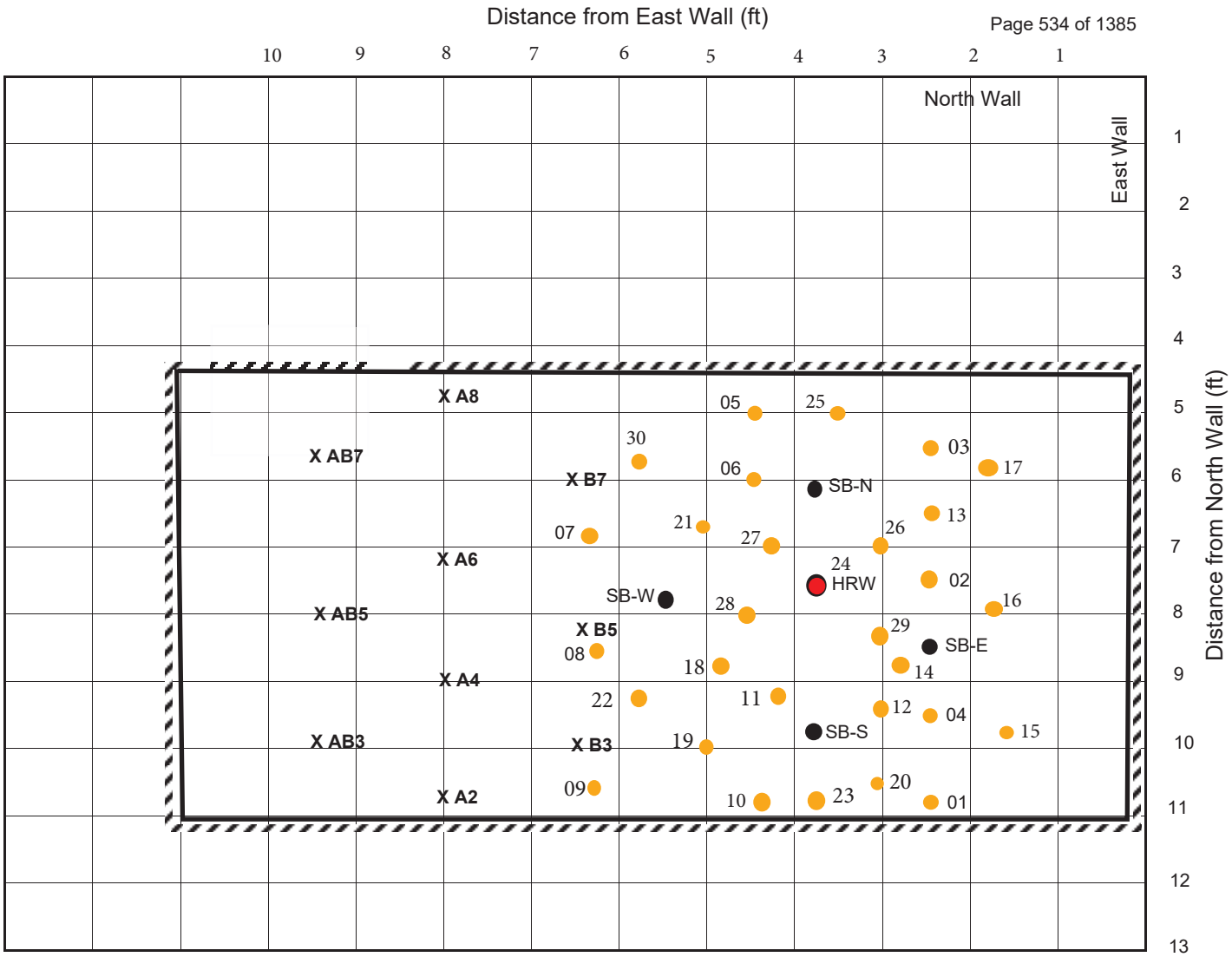

Figure 2 - Actual Sampling Locations

Thermo Eberline, LLC
5981 Airport Road
Santa Fe, New Mexico

Legend:

- Prior Soil Boring Location Soil Boring (2017)
- High Range Well Location
- X Surface Soil Sampling Location
- Boundary of Slab Cut

CN Associates, Inc.

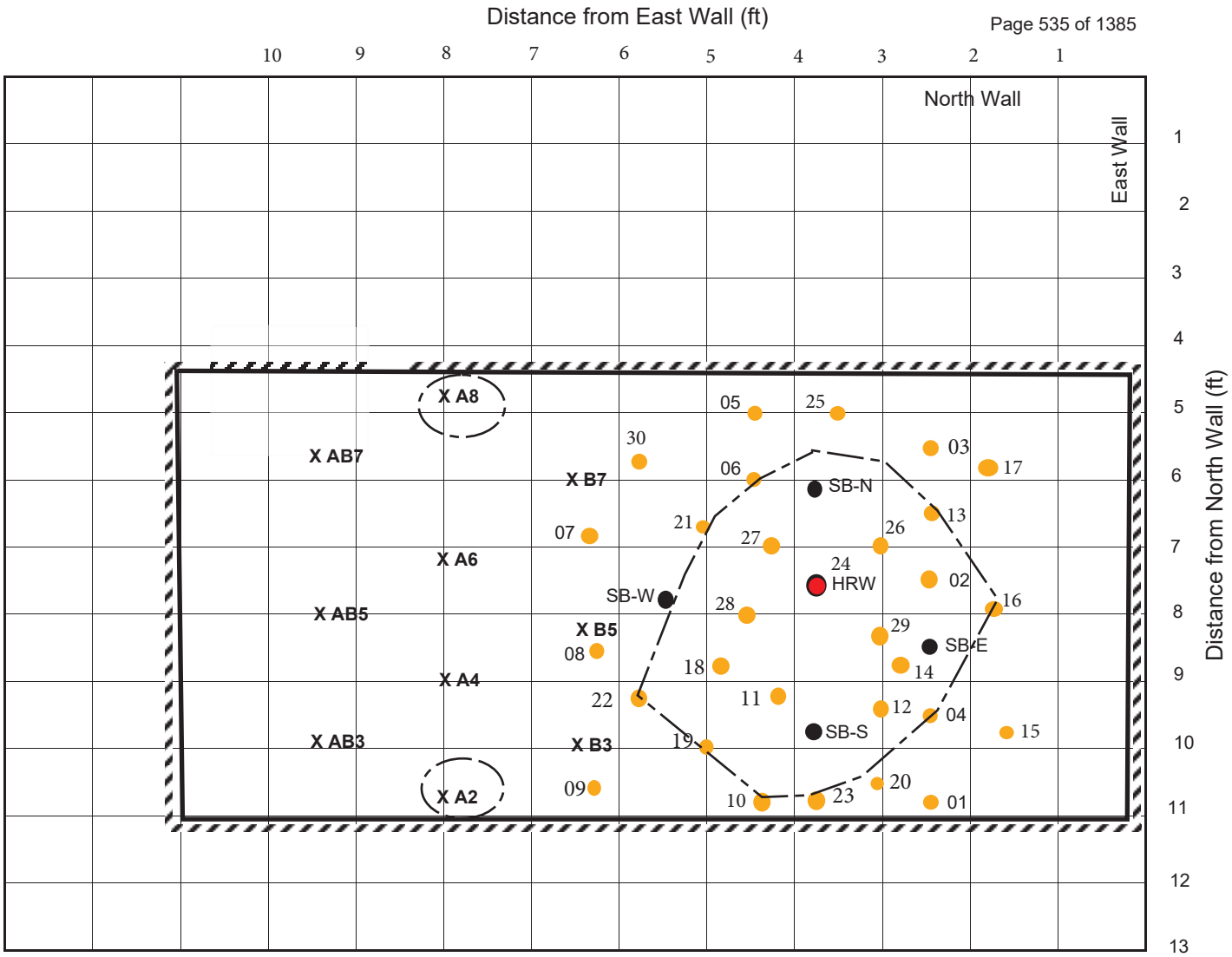

Figure 3 - Estimated Extent of Impacted Areas Requiring Removal

Thermo Eberline, LLC
5981 Airport Road
Santa Fe, New Mexico

Legend:

- Prior Soil Boring Location
- Soil Boring (2017)
- High Range Well Location
- X — Surface Soil Sampling Location
- Boundary of Slab Cut
- Target Soil Excavation Areas

N

0 1 2 4 Feet

CN 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

INSTRUMENTS

MAKE	MODEL	S/N	CAL DUE	BKG CPM
n/a	n/a	n/a	n/a	n/a
LUDLUM	2360	327100	11/21/2017	α 9 / 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 DATE: 25 MAY 17

REVIEWED BY NAME/SIGN DATE: 30 June 2017

No.	Description	Alpha (dpm)	Beta (dpm)	No.	Description	Alpha (dpm)	Beta (dpm)
1	floor	MDA	MDA	21			
2				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				40			

*All smears were taken at 100cm unless otherwise noted

Instruments:

Make/Model	S/N	CAL DUE	MDA (DPM)
Ludlum 30/30	312341	10-Apr-18	α 17.6/β 141.1

Smears Taken By Name/Sign S. BURTON/ Date: 25/MAY/ 17

Smears Counted By Name/Sign S. BURTON/ Date: 25/MAY/ 17

Reviewed by Name/Sign Date: 30 June 2017

ATTACHMENT B

GEL LABORATORY REPORTS OF SOIL ANALYSES

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

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

problem solved

GEL LABORATORIES LLC

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.

Reviewed by 

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-B3-6-12-N-20170526
Sample ID: 425983001
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client
Project: CNAS00117
Client ID: CNAS001

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		0.486	+/-0.0475	0.0305	+/-0.0519	1.10	pCi/g			MXR1	06/30/17	1505	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-B3-0-6-N-20170526
Sample ID: 425983002
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.589	+/-0.0613	0.0356	+/-0.079	1.10	pCi/g			MXR1	06/30/17	1515	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-AB5-6-12-N-20170526
Sample ID: 425983003
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.678	+/-0.0447	0.0229	+/-0.0715	1.10	pCi/g			MXR1	06/30/17	1518	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-AB7-0-6-N-20170526
Sample ID: 425983004
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		1.05	+/-0.0589	0.0298	+/-0.108	1.10	pCi/g			MXR1	06/30/17	1520	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-A2-6-12-N-20170526
Sample ID: 425983005
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		7.67	+/-0.150	0.0346	+/-0.684	1.10	pCi/g			MXR1	06/30/17	1559	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-A6-0-6-N-20170526
Sample ID: 425983006
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.770	+/-0.0609	0.0306	+/-0.0902	1.10	pCi/g			MXR1	06/30/17	1535	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-B5-0-6-N-20170526
Sample ID: 425983007
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.905	+/-0.0513	0.0259	+/-0.0913	1.10	pCi/g			MXR1	06/30/17	1601	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-B7-0-6-N-20170526
Sample ID: 425983008
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		3.60	+/-0.117	0.039	+/-0.363	1.10	pCi/g			MXR1	07/03/17	1040	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-AB7-6-12-N-20170526
Sample ID: 425983009
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.917	+/-0.0759	0.0442	+/-0.109	1.10	pCi/g			MXR1	07/03/17	1043	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-AB5-0-6-N-20170526
Sample ID: 425983010
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.0339	+/-0.0264	0.0282	+/-0.0266	1.10	pCi/g			MXR1	07/03/17	1043	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-A8-6-12-N-20170526
Sample ID: 425983011
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client
Project: CNAS00117
Client ID: CNAS001

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		2.02	+/-0.101	0.032	+/-0.202	1.10	pCi/g			MXR1	07/03/17	1636	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-AB3-6-12-D-20170526
Sample ID: 425983012
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		1.58	+/-0.0922	0.0335	+/-0.173	1.10	pCi/g			MXR1	07/03/17	1636	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-A2-0-6-N-20170526
Sample ID: 425983013
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		31.4	+/-0.433	0.0761	+/-1.42	1.10	pCi/g			MXR1	07/03/17	1637	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-A4-6-12-N-20170526
Sample ID: 425983014
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.137	+/-0.0494	0.0426	+/-0.0508	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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
Sample ID: 425983015
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-B7-6-12-D-20170526
Sample ID: 425983016
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		5.18	+/-0.174	0.0509	+/-0.486	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-B7-6-12-N-20170526
Sample ID: 425983017
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		1.15	+/-0.0817	0.0363	+/-0.129	1.10	pCi/g			MXR1	07/03/17	1807	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-AB3-0-6-N-20170526
Sample ID: 425983018
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0365	+/-0.0246	0.051	+/-0.0297	1.10	pCi/g			MXR1	07/03/17	1807	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-B5-6-12-N-20170526
Sample ID: 425983019
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0265	+/-0.0423	0.0451	+/-0.0423	1.10	pCi/g			MXR1	07/03/17	1808	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-AB3-6-12-N-20170526
Sample ID: 425983020
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		1.65	+/-0.0942	0.040	+/-0.180	1.10	pCi/g			MXR1	07/03/17	1808	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-A4-0-6-N-20170526
Sample ID: 425983021
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client
Project: CNAS00117
Client ID: CNAS001

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		0.154	+/-0.0284	0.0264	+/-0.0315	1.10	pCi/g			MXR1	06/23/17	1532	1676468	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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-A8-0-6-N-20170526
Sample ID: 425983022
Matrix: Soil
Collect Date: 26-MAY-17
Receive Date: 21-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		9.18	+/-0.162	0.0373	+/-0.426	1.10	pCi/g			MXR1	06/23/17	1533	1676468	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
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.

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: 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

425983013	SS-A2-0-6-N-20170526
425983014	SS-A4-6-12-N-20170526
425983015	SS-A6-6-12-N-20170526
425983016	SS-B7-6-12-D-20170526
425983017	SS-B7-6-12-N-20170526
425983018	SS-AB3-0-6-N-20170526
425983019	SS-B5-6-12-N-20170526
425983020	SS-AB3-6-12-N-20170526
1203817063	Method Blank (MB)
1203817064	425983001(SS-B3-6-12-N-20170526) Sample Duplicate (DUP)
1203817065	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 425983004 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 425983008 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 425983013 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 425983018 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 DUP 1203817064 were not achieved: Am-241. 1. 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
425983021	SS-A4-0-6-N-20170526
425983022	SS-A8-0-6-N-20170526
425983023	NP-01-2017-0609
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.

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**
Analytical Method: DOE RESL Fe-1, Modified
Analytical Procedure: 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
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**
Analytical Method: EPA EERF C-01 Modified
Analytical Procedure: 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 Quote #:
COC Number [1]:
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number: ~~425~~ 425983?

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Phone #:
Project/Site Name: Fax #:
Address:
Collected by: Send Results To:

Sample Analysis Requested [5] (Fill in the number of containers for each test)

<-- Preservative Type (6)

Comments
Note: extra sample is required for sample specific QC

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers											Comments
SS-B3-6-12-N-20170526	5·26·17	1358	N	N	SO														
SS-B3-0-6-N-20170526	5·26·17	1355	N	N	SO														
SS-AB5-6-12-N-20170526	5·26·17	1208	N	N	SO														
SS-AB7-0-6-N-20170526	5·26·17	1330	N	N	SO														
SS-A2-6-12-N-20170526	5·26·17	1338	N	N	SO														
SS-A6-0-6-N-20170526	5·26·17	1345	N	N	SO														
SS-B5-0-6-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	SO														
SS-AB5-0-6-N-20170526	5·26·17	1206	N	N	SO														

All CNAS W/O 1

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

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other ______
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time		Received by (signed)	Date	Time
1	Cla 2:	6-10-17	1300	1	Kat Catu	6/12/17	8:15
2				2			
3				3			

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

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
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=Waste Water, W=Water, 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, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: C

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Page: _____ of _____
Project #:
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Phone #:

Project/Site Name: Fax #:

Address:

Collected by: Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	<-- Preservative Type (6)	Comments
SS-A8-6-12-N-20170526	5.26.17	1352	N	N	SO					Note: extra sample is required for sample specific QC
SS-AB3-6-12-D-20170526	5.26.17	1203	N	N	SO					
SS-A2-0-6-N-20170526	5.26.17	1335	N	N	SO					
SS-A4-6-12-N-20170526	5.26.17	1342	N	N	SO					
SS-A6-6-12-N-20170526	5.26.17	1348	N	N	SO					
SS-B7-6-12-[illegible]-20170526	5.26.17	1410	N	N	SO					
SS-B7-6-12-N-20170526	5.26.17	1408	N	N	SO					
SS-AB3-0-6-N-20170526	5.26.17	1200	N	N	SO					
SS-B5-6-12-N-20170526	5.26.17	1402	N	N	SO					
SS-AB3-6-12-N-20170526	5.26.17	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

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other _____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	6-10-17	1300	[signature]	6/21/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

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
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=Waste Water, W=Water, 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, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: *C*

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

GEL Chain of Custody and Analytical Request

Page: ______ of ______
Project #:
GEL Quote #:
COC Number [1]:
PO Number:

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Phone #:
Project/Site Name: Fax #:
Address:
Collected by: Send Results To:

Sample Analysis Requested [5] (Fill in the number of containers for each test)

<-- Preservative Type (6)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	TSCA Regulated	Total number of containers	Comments Note: extra sample is required for sample specific QC
SS-A4-06-N-20170526	5-26-17	1340	N	N	SO				
~~SS-A8-0-6-N-20170526~~	5-26-17	1350	N	N	SO				
HIC-01-2017-0609 *	6-9-17	1600							contact Kenneth Dow

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

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Newton California [illegible] * Metal/[illegible] + wax C-14, [illegible] Fe-55

Sample Collection Time Zone: Eastern / Pacific / Central / Other ____ / Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	6-10-17	1300	[signature] Kat Carter	6/21/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: C

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
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=Waste Water, W=Water, 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, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: CNAS	SDG/AR/COC/Work Order: 425983
Received By: MHT	Date Received: 6/21/17
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7793 5344 5455

	Yes	No	
Suspected Hazard Information			*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?	X		Hazard Class Shipped: UN#: 2910
COC/Samples marked or classified as radioactive?	X		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0 CPM / mR/Hr Classified as: Rad 1 Rad 2 Rad 3
Is package, COC, and/or Samples marked HAZ?		X	If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	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	SHIPPED IN PREVIOUS COOLER
3	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		X		Preservation Method: Wet Ice Ice Packs Dry Ice (None) Other: *all temperatures are recorded in Celsius TEMP: 21 °C
4	Daily check performed and passed on IR temperature gun?	X			Temperature Device Serial #: IR4-16 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?			X	If Yes, Are Encores or Soil Kits present? Yes___ No___ (If yes, take to VOA Freezer) Do VOA vials contain acid preservation? Yes___ Nc___ N/A___ (If unknown, select No) VOA vials free of headspace? Yes___ Nc___ N/A___ Sample ID's and containers affected:
8	Samples received within holding time?	X			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?	X			Sample ID's affected:
11	Number of containers received match number indicated on COC?	X			Sample ID's affected:
12	Are sample containers identifiable as GEL provided?			X	
13	COC form is properly signed in relinquished/received sections?	X			

Comments (Use Continuation Form if needed):

* Rec'd Missing Samples

PM (or PMA) review: Initials MC Date 6/23/17 Page 1 of 1

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

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171
F 843.766.1178

gel.com

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

GEL LABORATORIES LLC

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.

Reviewed by _____

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: SB01-003-N-20170530-23-25
Sample ID: 425274001
Matrix: Soil
Collect Date: 30-MAY-17
Receive Date: 12-JUN-17
Collector: Client
Project: CNAS00117
Client ID: CNAS001

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	-0.0108	+/-0.0224	0.0377	+/-0.023	1.10	pCi/g			MXR1	06/27/17	0912	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB02-004-N-20170530-8-10
Sample ID: 425274002
Matrix: Soil
Collect Date: 30-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0363	+/-0.0214	0.046	+/-0.0271	1.10	pCi/g			MXR1	06/27/17	1128	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB03-009-N-20170531-13-15
Sample ID: 425274003
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0109	+/-0.0196	0.0385	+/-0.0202	1.10	pCi/g			MXR1	06/27/17	1128	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB03-012-N-20170531-23-25
Sample ID: 425274004
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0172	+/-0.0251	0.0475	+/-0.0264	1.10	pCi/g			MXR1	06/27/17	1129	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB04-073-N-20170605-8-10
Sample ID: 425274005
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.00299	+/-0.0202	0.0369	+/-0.0202	1.10	pCi/g			MXR1	06/27/17	1129	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB04-015-N-20170531-21-23
Sample ID: 425274006
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0411	+/-0.0216	0.0454	+/-0.0287	1.10	pCi/g			MXR1	06/28/17	1144	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB04-016-N-20170531-23-25
Sample ID: 425274007
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.00913	+/-0.023	0.0433	+/-0.0234	1.10	pCi/g			MXR1	06/27/17	1132	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB05-019-N-20170531-22.5-24.5
Sample ID: 425274008
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.010	+/-0.0184	0.0336	+/-0.0189	1.10	pCi/g			MXR1	06/27/17	1407	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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
Sample ID: 425274009
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB06-020-N-20170531-13-15
Sample ID: 425274010
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.000334	+/-0.0148	0.0231	+/-0.0148	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

Certificate of Analysis

Company : CN Associates, Inc.
Address : PO Box 1446
18 Pine Street
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Report Date: August 9, 2017
Contact: Mr. Ron Cardarelli
Project: Santa Fe Project

Client Sample ID: SB02-005-N-20170530-14-16
Sample ID: 425274011
Matrix: Soil
Collect Date: 30-MAY-17
Receive Date: 12-JUN-17
Collector: Client
Project: CNAS00117
Client ID: CNAS001

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		250	+/-0.821	0.108	+/-21.8	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
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: SB02-007-N-20170530-21.5-23.5
Sample ID: 425274012
Matrix: Soil
Collect Date: 30-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB02-008-N-20170530-23.5-25
Sample ID: 425274013
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		1.75	+/-0.0746	0.0355	+/-0.106	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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
Sample ID: 425274014
Matrix: Soil
Collect Date: 01-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB11-040-D-20170601-21-24
Sample ID: 425274015
Matrix: Soil
Collect Date: 01-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.480	+/-0.0448	0.0302	+/-0.061	1.10	pCi/g			MXR1	06/27/17	1541	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB12-041-N-20170601-8-10
Sample ID: 425274016
Matrix: Soil
Collect Date: 01-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.794	+/-0.0571	0.0287	+/-0.0894	1.10	pCi/g			MXR1	06/27/17	1542	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB14-079-N-20170605-8-10
Sample ID: 425274017
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		4.90	+/-0.111	0.0279	+/-0.441	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB18-058-N-20170602-7-9
Sample ID: 425274018
Matrix: Soil
Collect Date: 02-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		603	+/-1.17	0.189	+/-53.2	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB18-061-N-20170602-22-24
Sample ID: 425274019
Matrix: Soil
Collect Date: 02-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB19-081-N-20170605-7-9
Sample ID: 425274020
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.257	+/-0.0367	0.0217	+/-0.0423	1.10	pCi/g			MXR1	06/27/17	1827	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB06-023-N-20170531-22-24
Sample ID: 425274021
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client
Project: CNAS00117
Client ID: CNAS001

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	0.00279	+/-0.0134	0.0218	+/-0.0135	1.10	pCi/g			MXR1	06/27/17	1857	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB07-076-N-20170605-7-9
Sample ID: 425274022
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0268	+/-0.0292	0.0572	+/-0.0317	1.10	pCi/g			MXR1	06/28/17	0620	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB07-026-N-20170531-22.5-24.5
Sample ID: 425274023
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0222	+/-0.033	0.0653	+/-0.0345	1.10	pCi/g			MXR1	06/28/17	0621	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB08-027-N-20170531-8-10
Sample ID: 425274024
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0184	+/-0.0257	0.0498	+/-0.027	1.10	pCi/g			MXR1	06/28/17	0628	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB08-030-N-20170531-23.5-24
Sample ID: 425274025
Matrix: Soil
Collect Date: 31-MAY-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0011	+/-0.0279	0.0404	+/-0.0279	1.10	pCi/g			MXR1	06/28/17	0640	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB10-077-N-20170605-8-10
Sample ID: 425274026
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB10-036-N-20170601-13-15
Sample ID: 425274027
Matrix: Soil
Collect Date: 01-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

Certificate of Analysis

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: SB13-042-N-20170602-8-10
Sample ID: 425274028
Matrix: Soil
Collect Date: 02-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB14-045-N-20170602-16-18
Sample ID: 425274029
Matrix: Soil
Collect Date: 02-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0835	+/-0.0539	0.0353	+/-0.0544	1.10	pCi/g			MXR1	06/28/17	0724	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB15-080-N-20170605-8-10
Sample ID: 425274030
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB15-049-N-20170602-22-24
Sample ID: 425274031
Matrix: Soil
Collect Date: 02-JUN-17
Receive Date: 12-JUN-17
Collector: Client
Project: CNAS00117
Client ID: CNAS001

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 Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB16-050-N-20170602-8-10
Sample ID: 425274032
Matrix: Soil
Collect Date: 02-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB16-054-N-20170602-22-24
Sample ID: 425274033
Matrix: Soil
Collect Date: 02-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0321	+/-0.0276	0.0558	+/-0.0313	1.10	pCi/g			MXR1	06/28/17	0736	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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
Sample ID: 425274034
Matrix: Soil
Collect Date: 03-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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
Sample ID: 425274035
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB20-068-N-20170603-22-24
Sample ID: 425274036
Matrix: Soil
Collect Date: 03-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0221	+/-0.0321	0.0323	+/-0.0322	1.10	pCi/g			MXR1	06/28/17	0835	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB21-072-N-20170605-24-25.5
Sample ID: 425274037
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.0079	+/-0.0283	0.0513	+/-0.0285	1.10	pCi/g			MXR1	06/28/17	0835	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB22-084-N-20170605-13-15
Sample ID: 425274038
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	0.00258	+/-0.0198	0.0355	+/-0.0199	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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
Sample ID: 425274039
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB23-088-N-20170605-8-10
Sample ID: 425274040
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB21-069-N-20170603-8.5-10
Sample ID: 425274041
Matrix: Soil
Collect Date: 03-JUN-17
Receive Date: 12-JUN-17
Collector: Client
Project: CNAS00117
Client ID: CNAS001

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		0.0866	+/-0.0426	0.0473	+/-0.0434	1.10	pCi/g			MXR1	06/28/17	0903	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
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: SB22-083-N-20170605-8-10
Sample ID: 425274042
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.313	+/-0.0701	0.0427	+/-0.0753	1.10	pCi/g			MXR1	06/28/17	0903	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB24-096-N-20170605-23.5-25
Sample ID: 425274043
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		697	+/-1.77	0.281	+/-65.0	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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
Sample ID: 425274044
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB25-099-N-20170605-13-15
Sample ID: 425274045
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.559	+/-0.0745	0.0407	+/-0.0887	1.10	pCi/g			MXR1	06/28/17	0905	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB27-110-N-20170607-18-20
Sample ID: 425274046
Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		535	+/-1.52	0.250	+/-46.4	1.10	pCi/g			MXR1	06/28/17	0905	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Company : CN Associates, Inc.
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Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli
Project: Santa Fe Project

Client Sample ID: SB27-112-N-20170607-23-25
Sample ID: 425274047
Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.279	+/-0.0739	0.0562	+/-0.0776	1.10	pCi/g			MXR1	06/28/17	0906	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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Company : CN Associates, Inc.
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Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli
Project: Santa Fe Project

Client Sample ID: SB28-116-N-20170607-21-23
Sample ID: 425274048
Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		2220	+/-4.40	1.56	+/-95.5	1.10	pCi/g			MXR1	06/28/17	0906	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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
Sample ID: 425274049
Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB28-119-N-20170607-6-7.5
Sample ID: 425274050
Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB23-091-N-20170605-23-25
Sample ID: 425274051
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client
Project: CNAS00117
Client ID: CNAS001

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 Factor
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB24-094-N-20170605-16-20
Sample ID: 425274052
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		6.63	+/-0.211	0.0447	+/-0.355	1.10	pCi/g			MXR1	06/28/17	1204	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB25-100-N-20170605-18-20
Sample ID: 425274053
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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	-0.015	+/-0.0228	0.0376	+/-0.0238	1.10	pCi/g			MXR1	06/28/17	1210	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB26-103-N-20170606-8.5-10
Sample ID: 425274054
Matrix: Soil
Collect Date: 06-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		8.71	+/-0.243	0.0537	+/-0.791	1.10	pCi/g			MXR1	06/28/17	1251	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB26-104-N-20170606-13-15
Sample ID: 425274055
Matrix: Soil
Collect Date: 06-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		6.12	+/-0.161	0.0378	+/-0.557	1.10	pCi/g			MXR1	06/28/17	1402	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB26-107-N-20170607-23-25
Sample ID: 425274056
Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.080	+/-0.0435	0.0427	+/-0.0436	1.10	pCi/g			MXR1	06/28/17	1402	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

Certificate of Analysis

Company : CN Associates, Inc.
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18 Pine Street
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Report Date: August 9, 2017

Contact: Mr. Ron Cardarelli
Project: Santa Fe Project

Client Sample ID: SB27-108-N-20170607-8.5-10
Sample ID: 425274057
Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		2.25	+/-0.130	0.0507	+/-0.234	1.10	pCi/g			MXR1	06/28/17	1402	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB28-113-N-20170607-8-10
Sample ID: 425274058
Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		0.303	+/-0.0543	0.0341	+/-0.0605	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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB28-114-N-20170607-13-15
Sample ID: 425274059
Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB28-115-N-20170607-18-20
Sample ID: 425274060
Matrix: Soil
Collect Date: 07-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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
DL: Detection Limit
Lc/LC: Critical Level
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB29-124-N-20170607-21.5-23
Sample ID: 425274061
Matrix: Soil
Collect Date: 03-JUN-17
Receive Date: 12-JUN-17
Collector: Client
Project: CNAS00117
Client ID: CNAS001

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		3510	+/-3.03	0.547	+/-327	1.10	pCi/g			MXR1	06/23/17	1532	1676468	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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: SB29-125-N-20170607-24-24.5
Sample ID: 425274062
Matrix: Soil
Collect Date: 05-JUN-17
Receive Date: 12-JUN-17
Collector: Client

Project: CNAS00117
Client ID: CNAS001

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		5.10	+/-0.296	0.110	+/-0.570	1.10	pCi/g			MXR1	06/23/17	1532	1676468	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
MDA: Minimum Detectable Activity
MDC: Minimum Detectable Concentration
Mtd.: Method
PF: Prep Factor
RL: Reporting Limit
TPU: Total Propagated Uncertainty

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

QC Summary

Report Date: August 9, 2017

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

Workorder: **425274**

Parmname	NOM	Sample	Qual	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

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

QC Summary

Workorder: **425274**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gamma Spec										
Batch 1675821										
QC1203815613 LCS										
Americium-241	67.5			77.8	pCi/g		115	(75%-125%)	MXR1	06/28/17 09:07
Cesium-137	22.4			23.9	pCi/g		107	(75%-125%)		
Cobalt-60	14.8			16.4	pCi/g		110	(75%-125%)		
QC1203815611 MB										
Cesium-137			U	0.0032	pCi/g					06/28/17 14:13
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
Cesium-137	18.8			21.0	pCi/g		111	(75%-125%)		
Cobalt-60	12.5			13.5	pCi/g		108	(75%-125%)		
QC1203817066 MB										
Cesium-137			U	-0.00292	pCi/g					06/26/17 10:48

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

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

QC Summary

Workorder: **425274**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	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
M	REMP Result > MDC/CL and < RDL
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
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 425274018 were not achieved: Am-241. The following RDLs in sample 425274019 were not achieved: Am-241. 1. 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: 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
Project #:
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number: 425274

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: **CN Associates** Phone #: **978-273-7828**

Project/Site Name: **Thermo Eberline - Santa Fe** Fax #:

Address: **5981 Airport Road, Santa Fe, New Mexico**

Collected by: **C. Quinn** Send Results: **ken.dow@cnassociates .net**

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Gamma Spectroscopy	<-- Preservative Type (6)	Comments
SB23-091-N-20170605-23-25	6/5/2017	1525	N	N	SO	X		1	X		Analyze as Received
SB24-094-N-20170605-16-20	6/5/2017	1709	N	N	SO	X		1	X		Analyze as Received
SB25-100-N-20170605-18-20	6/5/2017	1735	N	N	SO	X		1	X		Analyze as Received
SB26-103-N-20170606-8.5-10	6/6/2017	1025	N	N	SO	X		1	X		Analyze as Received
SB26-104-N-20170606-13-15	6/6/2017	1028	N	N	SO	X		1	X		Analyze as Received
SB26-107-N-20170607-23-25	6/7/2017	0954	N	N	SO	X		1	X		Analyze as Received
SB27-108-N-20170607-8.5-10	6/7/2017	0958	N	N	SO	X		1	X		Analyze as Received
SB28-113-N-20170607-8-10	6/7/2017	1025	N	N	SO	X		1	X		Analyze as Received
SB28-114-N-20170607-13-15	6/7/2017	1028	N	N	SO	X		1	X		Analyze as Received
SB28-115-N-20170607-18-20	6/7/2017	1034	N	N	SO	X		1	X		Analyze as Received

TAT Requested: Normal: X Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / 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*

Sample results to Ken Dow at ken.dow@cnassociates.net **Analyze samples as recieved in sample container**

"~~Shipment contains a DOT exempt quantity of radioactive material.~~" CQ 6-10-17

Send Sample Collection Time Zone
Eastern Pacific
Central Other
Mountain X

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	6-10-17	11:30	[signature]	6/12/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM: Jake Crook

Method of Shipment: Date Shipped:

Airbill #:

Airbill #:

For Lab Receiving Use Only

Custody Seal Intact? YES NO

Cooler Temp: C

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

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**=Waste 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, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #:
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: **CN Associates** Phone #: **978-273-7828**

Project/Site Name: **Thermo Eberline - Santa Fe** Fax #:

Address: **5981 Airport Road, Santa Fe, New Mexico**

Collected by: **C. Quinn** Send Results: **ken.dow@cnassociates .net**

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Gamma Spectroscopy									<-- Preservative Type (6)	Comments Note: extra sample is required for sample specific QC
SB06-023-N-20170531-22-24	5/31/2017	1912	N	N	SO	X		1	X										Analyze as Received
SB07-076-N-20170605-7-9	6/5/2017	1030	N	N	SO	X		1	X										Analyze as Received
SB07-026-N-20170531-22.5-24.5	5/31/2017	1926	N	N	SO	X		1	X										Analyze as Received
SB08-027-N-20170531-8-10	5/31/2017	1830	N	N	SO	X		1	X										Analyze as Received
SB08-030-N-20170531-23.5-24	5/31/2017	1820	N	N	SO	X		1	X										Analyze as Received
SB10-077-N-20170605-8-10	6/5/2017	1105	N	N	SO	X		1	X										Analyze as Received
SB10-036-N-20170601-13-15	6/1/2017	1713	N	N	SO	X		1	X										Analyze as Received
SB13-042-N-20170602-8-10	6/2/2017	1657	N	N	SO	X		1	X										Analyze as Received
SB14-045-N-20170602-16-18	6/2/2017	1716	N	N	SO	X		1	X										Analyze as Received
SB15-080-N-20170605-8-10	6/5/2017	1350	N	N	SO	X		1	X										Analyze as Received

TAT Requested: Normal: X Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / 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*

Sample results to Ken Dow at ken.dow@cnassociates.net **Analyze samples as recieved in sample container**

~~"Shipment contains a DOT exempt quantity of radioactive material."~~ CQ 6-10-17

Send Sample Collection Time Zone
Eastern Pacific
Central Other
Mountain X

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	6-10-17	11:30	[signature]	6/6/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM: Jake Crook

Method of Shipment: Date Shipped:

Airbill #:

Airbill #:

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

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**=Waste 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, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact? *YES* *NO*

Cooler Temp: C

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #:
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: **CN Associates** Phone #: **978-273-7828**

Project/Site Name: **Thermo Eberline - Santa Fe** Fax #:

Address: **5981 Airport Road, Santa Fe, New Mexico**

Collected by: **C. Quinn** Send Results: **ken.dow@cnassociates .net**

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Gamma Spectroscopy									<-- Preservative Type (6)	Comments
SB02-005-N-20170530-14-16	5/30/2017	1967	N	N	SO	X		1	X										Analyze as Received
SB02-007-N-20170530-21.5-23.5	5/30/2017	1715	N	N	SO	X		1	X										Analyze as Received
SB02-008-N-20170530-23.5-25	5/31/2017	1700	N	N	SO	X		1	X										Analyze as Received
SB11-037-N-20170601-8-10	6/1/2017	1718	N	N	SO	X		1	X										Analyze as Received
SB11-040-D-20170601-21-24	6/1/2017	1733	N	N	SO	X		1	X										Analyze as Received
SB12-041-N-20170601-8-10	6/1/2017	1737	N	N	SO	X		1	X										Analyze as Received
SB14-079-N-20170605-8-10	6/5/2017	1340	N	N	SO	X		1	X										Analyze as Received
SB18-058-N-20170602-7-9	6/2/2017	1816	N	N	SO	X		1	X										Analyze as Received
SB18-061-N-20170602-22-24	6/2/2017	1832	N	N	SO	X		1	X										Analyze as Received
SB19-081-N-20170605-7-9	6/52017	1355	N	N	SO	X		1	X										Analyze as Received

Comments: Note: extra sample is required for sample specific QC

TAT Requested: Normal: X Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / 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*

Sample results to Ken Dow at ken.dow@cnassociates.net **Analyze samples as recieved in sample container**

Send Sample Collection Time Zone: Eastern / Central / Mountain X / Pacific / Other

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	6-10-17	11:30	[signature]	6/12/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM: Jake Crook

Method of Shipment: Date Shipped:

Airbill #:

Airbill #:

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

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**=Waste 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, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact? *YES* *NO*

Cooler Temp: *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #:
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: **CN Associates** Phone #: **978-273-7828**

Project/Site Name: **Thermo Eberline - Santa Fe** Fax #:

Address: **5981 Airport Road, Santa Fe, New Mexico**

Collected by: **C. Quinn** Send Results: **ken.dow@cnassociates .net**

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Gamma Spectroscopy									<-- Preservative Type (6)	Comments
SB01-003-N-20170530-23-25	5/30/2017	1950	N	N	SO	X		1	X										Analyze as Received
SB02-004-N-20170530-8-10	5/30/2017	1900	N	N	SO	X		1	X										Analyze as Received
SB03-009-N-20170531-13-15	5/31/2017	1709	N	N	SO	X		1	X										Analyze as Received
SB03-012-N-20170531-23-25	5/31/2017	1718	N	N	SO	X		1	X										Analyze as Received
SB04-073-N-20170605-8-10	6/5/2017	1065	N	N	SO	X		1	X										Analyze as Received
SB04-015-N-20170531-21-23	5/31/2017	1736	N	N	SO	X		1	X										Analyze as Received
SB04-016-N-20170531-23-25	5/31/2017	1738	N	N	SO	X		1	X										Analyze as Received
SB05-019-N-20170531-22.5-24.5	5/31/2017	1749	N	N	SO	X		1	X										Analyze as Received
SB06-074-N-20170605-8-10	6/5/2017	1616	N	N	SO	X		1	X										Analyze as Received
SB06-020-N-20170531-13-15	5/31/2017	1902	N	N	SO	X		1	X										Analyze as Received

TAT Requested: Normal: X Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No Circle Deliverable: C of A / 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*

Sample results to Ken Dow at ken.dow@cnassociates.net **Analyze samples as recieved in sample container**

~~"Shipment contains a DOT exempt quantity of radioactive material."~~ CQ 6-10-17

Send Sample Collection Time Zone: Eastern / Pacific / Central / Other / Mountain X

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	6-10-17	11:30	[signature]	6/12/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM: Jake Crook

Method of Shipment: Date Shipped:

Airbill #:

Airbill #:

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

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**=Waste 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, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact? *YES* *NO*

Cooler Temp: *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #:
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: **CN Associates** Phone #: **978-273-7828**

Project/Site Name: **Thermo Eberline - Santa Fe** Fax #:

Address: **5981 Airport Road, Santa Fe, New Mexico**

Collected by: **C. Quinn** Send Results: **ken.dow@cnassociates .net**

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Gamma Spectroscopy									<-- Preservative Type (6)	Comments
SB15-049-N-20170602-22-24	6/2/2017	1743	N	N	SO	X		1	X										Analyze as Received
SB16-050-N-20170602-8-10	6/2/2017	1745	N	N	SO	X		1	X										Analyze as Received
SB16-054-N-20170602-22-24	6/2/2017	1802	N	N	SO	X		1	X										Analyze as Received
SB19-065-N-20170603-22-24	6/3/2017	1625	N	N	SO	X		1	X										Analyze as Received
SB20-082-N-2017-605-8-10	6/5/2017	1404	N	N	SO	X		1	X										Analyze as Received
SB20-068-N-20170603-22-24	6/3/2017	1643	N	N	SO	X		1	X										Analyze as Received
SB21-072-N-20170605-24-25.5	6/5/2017	0945	N	N	SO	X		1	X										Analyze as Received
SB22-084-N-20170605-13-15	6/5/2017	1430	N	N	SO	X		1	X										Analyze as Received
SB22-087-N-20170605-23-25	6/5/2017	1447	N	N	SO	X		1	X										Analyze as Received
SB23-088-N-20170605-8-10	6/5/2017	1457	N	N	SO	X		1	X										Analyze as Received

TAT Requested: Normal: X Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No Circle Deliverable: C of A / 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*

Sample results to Ken Dow at ken.dow@cnassociates.net **Analyze samples as recieved in sample container**

~~"Shipment contains a DOT exempt quantity of radioactive material."~~ CA 6-10-17

Send Sample Collection Time Zone: Eastern Pacific Central Other _____ Mountain X

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	6-10-17	11:30	[signature]	6/12/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM: Jake Crook

Method of Shipment: Date Shipped:

Airbill #:

Airbill #:

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

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**=Waste 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, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact? *YES* *NO*

Cooler Temp: *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #:
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: **CN Associates** Phone #: **978-273-7828**

Project/Site Name: **Thermo Eberline - Santa Fe** Fax #:

Address: **5981 Airport Road, Santa Fe, New Mexico**

Collected by: **C. Quinn** Send Results: **ken.dow@cnassociates .net**

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	Gamma Spectroscopy									<-- Preservative Type (6)	Comments
SB21-069-N-20170603-8.5-10	6/32017	1650	N	N	SO	X		1	X										Analyze as Received
SB22-083-N-20170605-8-10	6/52017	1417	N	N	SO	X		1	X										Analyze as Received
SB24-096-N-20170605-23.5-25	6/52017	1715	N	N	SO	X		1	X										Analyze as Received
SB24-102-20170605-drill tip	6/52017	1345	N	N	SO	X		1	X										Analyze as Received
SB25-099-N-20170605-13-15	6/52017	1730	N	N	SO	X		1	X										Analyze as Received
SB27-110-N-20170607-18-20	6/72017	1010	N	N	SO	X		1	X										Analyze as Received
SB27-112-N-20170607-23-25	6/72017	1020	N	N	SO	X		1	X										Analyze as Received
SB28-116-N-20170607-21-23	6/72017	1045	N	N	SO	X		1	X										Analyze as Received
SB28-118-N-20170607-26-28	6/72017	1050	N	N	SO	X		1	X										Analyze as Received
SB29-119-N-20170607-6-7.5	6/72017	1055	N	N	SO	X		1	X										Analyze as Received

TAT Requested: Normal: X Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No

Circle Deliverable: C of A / 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*

Sample results to Ken Dow at ken.dow@cnassociates.net **Analyze samples as recieved in sample container**

Send Sample Collection Time Zone: Eastern / Central / Mountain X / Pacific / Other

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1		6-10-17	11:30		6/12/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM: Jake Crook

Method of Shipment: Date Shipped:

Airbill #:

Airbill #:

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

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**=Waste 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, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only

Custody Seal Intact? *YES* *NO*

Cooler Temp: *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: 1 of 1
Project #:
GEL Quote #:
COC Number [1]:
PO Number:

GEL Chain of Custody and Analytical Request

See www.gel.com for GEL's Sample Acceptance SOP

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: **CN Associates** Phone #: **978-273-7828**

Project/Site Name: **Thermo Eberline - Santa Fe** Fax #:

Address: **5981 Airport Road, Santa Fe, New Mexico**

Collected by: **C. Quinn** Send Results: **ken.dow@cnassociates .net**

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID * For composites - indicate start and stop date/time	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	TSCA Regulated	Total number of containers	Gamma Spectroscopy										<-- Preservative Type (6) **Comments** Note: extra sample is required for sample specific QC
SB29-124-N-20170607-21.5-23	6/32017	1130	N	N	SO	X		1	X										Analyze as Received
SB29-125-N-20170607-24-24.5	6/52017	1141	N	N	SO	X		1	X										Analyze as Received
			N	N	SO	X		1	X										Analyze as Received
			N	N	SO	X		1	X										Analyze as Received
			N	N	SO	X		1	X										Analyze as Received
			N	N	SO	X		1	X										Analyze as Received
			N	N	SO	X		1	X										Analyze as Received
			N	N	SO	X		1	X										Analyze as Received
			N	N	SO	X		1	X										Analyze as Received
			N	N	SO	X		1	X										Analyze as Received

TAT Requested: Normal: X Rush: Specify: (Subject to Surcharge) Fax Results: Yes / No Circle Deliverable: C of A / 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*
Sample results to Ken Dow at ken.dow@cnassociates.net Analyze samples as recieved in sample container

Send Sample Collection Time Zone
Eastern Pacific
Central Other ________
Mountain X

Chain of Custody Signatures

Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1 [signature]	6-10-17	11:30	1 [signature]	6/12/17	8:15
2			2		
3			3		

Sample Shipping and Delivery Details

GEL PM: Jake Crook
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

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
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=Waste 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, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact?
YES NO
Cooler Temp:
C

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Page: _____ of _____
Project #:
GEL Quote #:
COC Number (1):
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Phone #:

Project/Site Name: Fax #:

Address:

Collected by: Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers	<-- Preservative Type (6)
SS-A8-6-12-N-20170526	5.26.17	1352	N	N	SO				
SS-AB3-6-12-D-20170526	5.26.17	1203	N	N	SO				
SS-A2-0-6-N-20170526	5.26.17	1335	N	N	SO				
SS-A4-6-12-N-20170526	5.26.17	1342	N	N	SO				
SS-A6-6-12-N-20170526	5.26.17	1348	N	N	SO				
SS-B7-6-12-[illegible]-20170526	5.26.17	1410	N	N	SO				
SS-B7-6-12-N-20170526	5.26.17	1408	N	N	SO				
SS-AB3-0-6-N-20170526	5.26.17	1200	N	N	SO				
SS-B5-6-12-N-20170526	5.26.17	1402	N	N	SO				
SS-AB3-6-12-N-20170526	5.26.17	1202	N	N	SO				

Comments
Note: extra sample is required for sample specific QC

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

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other _____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	[signature]	6-16-17	1300	[signature]	6/12/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

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
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=Waste Water, W=Water, 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, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

Page: _____ of _____
Project #: _____
GEL Quote #: _____
COC Number (1): _____
PO Number:

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Phone #:

Project/Site Name: Fax #:

Address:

Collected by: Send Results To:

Sample Analysis Requested (5) (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code (2)	Field Filtered (3)	Sample Matrix (4)	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers										<-- Preservative Type (6)
SS-B3-6-12-N-20170526	5.26.17	1358	N	N	SO													
SS-B3-0-6-N-20170526	5.26.17	1355	N	N	SO													
SS-AB5-6-12-N-20170526	5.26.17	1208	N	N	SO													
SS-AB7-0-6-N-20170526	5.26.17	1330	N	N	SO													
SS-A2-6-12-N-20170526	5.26.17	1338	N	N	SO													
SS-A6-0-6-N-20170526	5.26.17	1345	N	N	SO													
SS-B5-0-6-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	SO													
SS-AB5-0-6-N-20170526	5.26.17	1206	N	N	SO													

Comments
Note: extra sample is required for sample specific QC

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

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

Sample Collection Time Zone
Eastern Pacific
Central Other _____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	Chris Z	6-10-17	1300	[signature]	6/12/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

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
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=Waste Water, W=Water, 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, AA = Ascorbic Acid, HX = Hexane, ST = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? YES NO
Cooler Temp: C

WHITE = LABORATORY YELLOW = FILE PINK = CLIENT

Page: _____ of _____
Project #: _____
GEL Quote #: _____
COC Number [1]: _____
PO Number: _____

GEL Chain of Custody and Analytical Request

GEL Work Order Number:

GEL Laboratories, LLC
2040 Savage Road
Charleston, SC 29407
Phone: (843) 556-8171
Fax: (843) 766-1178

Client Name: Phone #:

Project/Site Name: Fax #:

Address:

Collected by: Send Results To:

Sample Analysis Requested [5] (Fill in the number of containers for each test)

Sample ID (* For composites - indicate start and stop date/time)	*Date Collected (mm-dd-yy)	*Time Collected (Military) (hhmm)	QC Code [2]	Field Filtered [3]	Sample Matrix [4]	Should this sample be considered: Radioactive	Should this sample be considered: TSCA Regulated	Total number of containers										<-- Preservative Type (6)	Comments
SS-A4-06-N-20170526	5.26.17	1340	N	N	SO														
SS-A8-0-6-N-20170526	5.26.17	1350	N	N	SO														
HIC-01-2017-0609 *	6.9.17	1600																	Contact Kenneth Dow

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

Remarks: *Are there any known hazards applicable to these samples? If so, please list the hazards*

* Mdl/Many, Lwax

Sample Collection Time Zone
Eastern Pacific
Central Other _____
Mountain

Chain of Custody Signatures

	Relinquished By (Signed)	Date	Time	Received by (signed)	Date	Time
1	CL2	6-10-17	1300	[signature]	6/12/17	8:15
2						
3						

Sample Shipping and Delivery Details

GEL PM:
Method of Shipment: Date Shipped:
Airbill #:
Airbill #:

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
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**=Waste Water, **W**=Water, **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, **AA** = Ascorbic Acid, **HX** = Hexane, **ST** = Sodium Thiosulfate, If no preservative is added = leave field blank

For Lab Receiving Use Only
Custody Seal Intact? *YES* *NO*
Cooler Temp: _____ *C*

WHITE = LABORATORY **YELLOW = FILE** **PINK = CLIENT**

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: CWAS	**SDG/AR/COC/Work Order:** 425274
Received By: ZKW/G.McAbee	**Date Received:** 6/12/17
Carrier and Tracking Number	Circle Applicable: FedEx Express FedEx Ground UPS Field Services Courier Other 7793 5343 6452 7793 5344 1017

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
Shipped as a DOT Hazardous?	X		Hazard Class Shipped: UN#:
COC/Samples marked or classified as radioactive?	X		Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 0.3 CPM / mR/hr Classified as: Rad 1 Rad 2 Rad 3
Is package, COC, and/or Samples marked HAZ?		X	If yes, select Hazards below, and contact the GEL Safety Group. PCB's Flammable Foreign Soil RCRA Asbestos Beryllium Other:

	Sample Receipt Criteria	Yes	NA	No	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 ≤ 6 deg. C)?*		X		Preservation Method: Wet Ice Ice Packs Dry ice (None) Other: *all temperatures are recorded in Celsius TEMP: 24c
4	Daily check performed and passed on IR temperature gun?	X			**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?			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?	X			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? ZW 6/12/17	X		X	Sample ID's affected: Collect time for SB08-30 is 1840
11	Number of containers received match number indicated on COC?			X	Sample ID's affected: See Below
12	Are sample containers identifiable as GEL provided?			X	
13	COC form is properly signed in relinquished/received sections?	X			

Comments (Use Continuation Form if needed):

We did not receive SB24-094, SB29-125, All SS-Samples, or HIC-01.
We only rec'd 2 of 3 coolers.

PM (or PMA) review: Initials ZW Date 6/12 Page 1 of 1

GL-CHL-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

BORING ID: SB-01

CN Associates, Inc.

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 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		20 %			Fine sand, dry (light tan)		Bkg
5		50 %			Fine-medium grain sand, some clumping (light –dark tan)		Bkg
10					Small pebbles		
		62 %			Medium grained sand (light brown)		Bkg
15					Small pebbles		
		72 %			Medium-course sand (moist (light brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

(Continued Next Page)

BORING ID: SB-01

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		53 %			Medium-course sand (moist) Clay (dark brown) Refusal encountered		Bkg
25							
30							
35							
40							

BORING ID: SB-02

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		23 %			Fine sand		Bkg
5		52 %			fine -medium grain sand, isolated small stones(1/4 inch) (dark tan)		Bkg
10		25 %			Medium – course grained sand (light brown)		40,687
15		57 %			Medium-course sand (light brown)		Bkg
20							

(Continued Next Page)

BORING ID: SB-02

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		82 %			Medium-course sand		Bkg
					Clay (dark brown)		
25					Refusal encountered		
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

CN Associates, Inc.

BORING ID: SB-03

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 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		50 %			Fine sand (tan / dry) Clumping sand Fine sand (light tan)		Bkg
5		72 %			fine -medium grain sand, clumping (light brown / tan)		Bkg
10		73%			Fine - medium grained sand, dry (light brown)		Bkg
15		93 %			Medium sand - clay, moist (brown)		Bkg
20							

(Continued Next Page)

BORING ID: SB-03

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		60 %			Clay (dark brown)		Bkg
25					Course sand (medium brown) Refusal encountered		
30							
35							
40							

BORING ID: SB-04

CN Associates, Inc.

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 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		25 %			Fine sand, dry (light tan)		Bkg
5		60 %			fine -medium grain sand, clumping (light brown / tan) medium grain sand, clumping (light brown)		Bkg
10		70 %			Medium grained sand, small stones (1/2 inch), clumping (light brown)		Bkg
15		93 %			Medium sand - clay, moist (brown) Clay (brown)		Bkg
20							

(Continued Next Page)

BORING ID: SB-04

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
25		82 %			Clay – Course sand, moist (dark brown) Course grain sand, small gravel (1/4-1/2 inch) Medium grain sand, dry Fine grain sand, dry (white)		Bkg
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-05

CN Associates, Inc.

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 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		60 %			Fine sand, dry (light tan)		Bkg
5		75 %			Fine -medium grain sand, clumping (light brown)		Bkg
					medium grain sand, clumping (light brown)		
10		63 %			Medium grain sand, (light brown)		Bkg
15					Medium grain sand, (brown)		
		90 %			Medium grain sand (brown)		Bkg
20					Medium grain sand - Clay (brown)		

(Continued Next Page)

BORING ID: SB-05

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		65 %			Clay – Course sand, moist (dark brown)		Bkg
					small gravel (1/4-1/2 inch)		
					Medium grain sand, (light brown)		
25					Medium – course sand (light brown)		
					Refusal @ 24.5 ft		
30							
35							
40							

BORING ID: SB-06

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		53 %			Fine sand, dry (light tan - tan)		Bkg
5		77 %			Fine -medium grain sand, clumping, small stones (1/4 inch) (light brown)		Bkg
10		67 %			Medium grain sand, (light brown) Course sand Fine - medium grain sand, (light brown)		Bkg
15		90 %			Fine - medium grain sand, (light brown) Medium grain sand / clay (brown) Clay (brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

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BORING ID: SB-06

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
25		68 %			Clay (dark brown) Course sand, small stones (brown) Medium – course sand (red/tan) Fine grain sand, (light brown) Refusal @ 24 ft		Bkg
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-07

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		40 %			Fine sand, dry (light tan - tan)		Bkg
5		63 %			Fine -medium grain sand (light brown)		Bkg
10		40 %			Medium grain sand, (light brown) Fine grain sand, (tan / white)		Bkg
15		87 %			Medium grain sand / clay (brown) Clay (brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

(Continued Next Page)

BORING ID: SB-07

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
25		72 %			Medium grain sand / clay (brown) Refusal @ 24.5 ft		Bkg
30							
35							
40							

BORING ID: SB-08

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		40 %			Fine sand, dry (tan)		Bkg
5		70 %			Fine grain sand, clumpy (tan) Fine -medium grain sand, clumpy (tan)		Bkg
10		62 %			Fine - medium grain sand, moist (light brown)		Bkg
15		50 %			Fine grain sand, small stones (1/4 – ½ inch) (light brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

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BORING ID: SB-08

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport 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)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		40 %			Course sand / clay (dark brown) Clay, moist (dark brown) Refusal @ 24 ft		Bkg
25							
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-09

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/01/2017 **COMPLETED** 6/01/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		28 %			Fine sand, dry (light tan)		Bkg
5		72 %			Fine -medium grain sand, clumpy, small stones (light brown)		Bkg
10		68 %			Small stones (1/4 – ½ inch) Fine grain sand (light brown)		Bkg
15		85 %			Small stones (1/4 – ½ inches) Fine-medium grain sand (brown) Clay (brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

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BORING ID: SB-09

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/01/2017 **COMPLETED** 6/01/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		93 %			Small stones Clay, moist (dark brown) Refusal @ 24 ft		Bkg
25							
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-10

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/01/2017 **COMPLETED** 6/01/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **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 %					Bkg
5					Fine sand, dry **(light** tan)		
		38 %			Fine -medium grain sand, clumpy (light brown)		Bkg
10							
		67 %			Fine – medium grain sand (light tan - brown)		Bkg
15							
					Hole Abandoned due to refusal		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

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BORING ID: SB-10

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/01/2017 **COMPLETED** 6/01/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
25							Bkg
30							
35							
40							

BORING ID: SB-11

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/01/2017 **COMPLETED** 6/01/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		5 %					Bkg
5					Fine sand, dry (light tan)		
		37 %					79,478
10					Fine grain sand (light brown)		
		34 %					44,931
15					Medium grain sand, small stones (light brown) (drilled through piece of white PVC pipe from previous boring)		
		63 %			Medium-course gravel, small stones (brown) Course gravel, small stones (dark brown) Clay (dark brown)		Bkg
20							

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BORING ID: SB-11

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/01/2017 **COMPLETED** 6/01/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		63 %			Clay, moist (dark brown)		Bkg
					Refusal @ 24 ft		
25							
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-12

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/01/2017 **COMPLETED** 6/01/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **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 %					Bkg
5					Fine sand, dry (light tan)		
		43 %					Bkg
10					Fine-medium grain sand, clumpy (light brown)		
		5 %					Bkg
15					Fine - medium grain sand (light brown)		
					Refusal at 15 ft		
20							

THERMO EBERLINE - SANTA FE, NM

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BORING ID: SB-13

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/01/2017 **COMPLETED** 6/01/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		53 %			Fine sand, dry (light tan)		Bkg
5		80 %			Fine -medium grain sand, clumpy (light brown)		Bkg
10		58 %			Fine-medium grain sand (light brown) Fine grain sand (tan)		Bkg
15		76 %			Medium grain sand - clay (brown) Clay (brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

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BORING ID: SB-13

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/01/2017 **COMPLETED** 6/01/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		82 %			Course sand (light brown) Clay, moist (dark brown) Course grain sand / stones Clay, moist (dark brown) Refusal @ 23 ft		Bkg
25							
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-14

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/02/2017 **COMPLETED** 6/02/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **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 grain sand (light tan)		Bkg
5		53 %			Fine -medium grain sand, clumpy, small stones (1/4 – ½ inch) (tan)		Bkg
10		23 %			Fine grain sand, very dense (tan) (lost tube / recovered tube and re-sampled)		Bkg
15		85 %			Fine - medium grain sand (brown) Clay (dark brown)		Bkg
20							

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BORING ID: SB-14

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/02/2017 **COMPLETED** 6/02/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		59 %			Course sand, small stones (dark brown) Clay, moist (dark brown) Course sand / gravel Refusal @ 23 ft		Bkg
25							
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-15

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/02/2017 **COMPLETED** 6/02/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0					Hand Auger due to close utilities - Fine grain sand (light tan)		Bkg
5		60 %			Medium grain sand, clumpy, small stones (1/4 – ½ inch) (tan)		Bkg
10		75 %			Fine – medium grain sand, small stones (1/4 inch) (dark brown)		Bkg
15		100 %			Fine - medium grain sand (dark brown) Clay (dark brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

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BORING ID: SB-15

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/02/2017 **COMPLETED** 6/02/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		98 %			Small stones Medium grain sand / clay, small stones ¼-1.2 inch) (dark brown) Refusal @ 24 ft		Bkg
25							
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-16

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/02/2017 **COMPLETED** 6/02/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0					Hand Auger due to close utilities		Bkg
5					Medium-course grain sand, small stones (1/4 – ¾ inch) (tan)		
		67 %			Medium-course grain sand, small stones (1/4 – ¾ inch) (tan)		Bkg
10							
		62 %			Fine grain sand (light brown)		Bkg
15							
		88 %			Fine grain sand (brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

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BORING ID: SB-16

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/02/2017 **COMPLETED** 6/02/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
25		37 %			Medium grain sand (gray/black) Clay (brown) Fine grain sand (light tan / red) Clay (brown) Refusal @ 24 ft		Bkg
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-17

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/02/2017 **COMPLETED** 6/02/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		50 %			Fine sand, dry (tan)		Bkg
5		92 %			Fine grain sand (light tan) Fine -medium grain sand, clumpy (light brown)		Bkg
10		68 %			Fine-medium grain sand (light brown) Medium grain sand (brown)		Bkg
15		68 %			Medium grain sand, small stones (1/4 – ½ inch) (light brown) Medium grain sand / clay (dark brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

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BORING ID: SB-17

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/02/2017 **COMPLETED** 6/02/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		60 %			Clay (dark brown) Course sand / clay, moist (light brown – red brown) Refusal @ 23 ft		Bkg
25							
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-18

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/02/2017 **COMPLETED** 6/02/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		36 %			Fine sand, clumping (light tan)		Bkg
5		65 %			Fine -medium grain sand (light brown)		171,00
10		70 %			Fine-medium grain sand (light brown)		Bkg
15		67 %			Fine-medium grain sand (light brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

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BORING ID: SB-18

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/02/2017 **COMPLETED** 6/02/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		37 %			Fine – medium grain sand (light brown)		320,000
					Clay (dark brown)		
					Refusal @ 24 ft		
25							
30							
35							
40							

BORING ID: SB-19

CN Associates, Inc.

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CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/03/2017 **COMPLETED** 6/03/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		27 %			Fine grain sand, small stones (1/4 – ½ inch) (tan)		Bkg
5		55 %			Fine grain sand (tan) Fine grain sand (light brown)		Bkg
10		73 %			Fine-medium grain sand (brown) Medium grain sand (brown)		Bkg
15		85 %			Medium grain sand / clay (brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

(Continued Next Page)

BORING ID: SB-19

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/03/2017 **COMPLETED** 6/03/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		72 %			Clay (dark brown – black)		Bkg
					Clay (brown)		
25					Refusal @ 24 ft		
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-20

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/03/2017 **COMPLETED** 6/03/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		29 %			Fine grain sand (light tan)		Bkg
5		55 %			Medium grain sand, stones (1/4-1/2 inch) (light brown) Fine grain sand (light brown) Fine-medium grain sand, clumping (light brown)		Bkg
10		48 %			Fine-medium grain sand, small stones (1/4-1/2 inch) (light brown) Fine grain sand (light brown) Fine grain sand (light gray – white)		Bkg
15		70 %			Fine grain sand / clay (light gray – white) Fine grain sand / clay (brown) Clay (brown)		Bkg
20							

(Continued Next Page)

BORING ID: SB-20

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/03/2017 **COMPLETED** 6/03/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		87 %			Clay (brown) Small stones (1/2 inch) Clay (brown) Refusal @ 24.5 ft		Bkg
25							
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-21

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/03/2017 **COMPLETED** 6/03/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		34 %			Fine-medium grain sand (light brown)		Bkg
5		29 %			Medium-course grain sand (light brown)		171,00
10					Fine-medium grain sand (light brown)		
		20 %			Course grain sand, clumping (brown)		Bkg
15							
		61 %			Fine-medium grain sand (light brown)		Bkg
					Clay (brown)		
20							

(Continued Next Page)

BORING ID: SB-21

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/03/2017 **COMPLETED** 6/03/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		72 %			Clay (brown)		Bkg
					Course sand / stones cobble (light brown)		
25							
		50 %			Fine grain sand / stones (1/4-1/2 inch)		Bkg
					Refusal @ 26.5 ft		
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-22

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/05/2017 **COMPLETED** 6/05/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		0 %			No Recovery in core tube		Bkg
5		43 %			Fine grain sand (light tan)		Bkg
10					Fine-medium grain sand (light brown)		
		53 %			Fine-medium grain sand (light brown)		Bkg
15		78 %			Fine-medium grain sand (brown)		Bkg
20					Medium grain sand – clay (brown)		

(Continued Next Page)

BORING ID: SB-22

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/05/2017 **COMPLETED** 6/05/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		93 %			Clay (brown)		Bkg
25					Small stones / gravel		
30							
35							
40							

BORING ID: SB-23

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/05/2017 **COMPLETED** 6/05/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		0 %			No Recovery in core tube		Bkg
5		34 %			Fine grain sand (light tan-white) Medium grain sand (light brown)		Bkg
10		48 %			Medium grain sand, clumping (brown) Fine-medium grain sand (light tan)		Bkg
15		70 %			Medium grain sand (light brown) Clay (brown)		Bkg
20							

(Continued Next Page)

BORING ID: SB-23

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/05/2017 **COMPLETED** 6/05/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		81 %			Clay (brown)		Bkg
25					Course sand (brown-red)		
30							
35							
40							

BORING ID: SB-24

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/05/2017 **COMPLETED** 6/05/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		10 %			Fine grain sand (light tan)		Bkg
5		62 %			Fine-medium grain sand (light brown)		Bkg
10		65 %			Fine-medium grain sand (light brown)		Bkg
15		65 %			Fine-medium grain sand (light brown)		Bkg
20							

THERMO EBERLINE - SANTA FE, NM

(Continued Next Page)

BORING ID: SB-24

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/05/2017 **COMPLETED** 6/05/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
25		34 %			Course sand (dark brown) Medium grain sand (light brown) Medium grain sand, small stones (1/4-1/2 inch) (white)		Bkg
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-25

CN Associates, Inc.

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/05/2017 **COMPLETED** 6/05/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		60 %			Fine grain sand, small stones (1/4-1/2 inch) (light tan)		Bkg
5		47 %			Medium grain sand, clumpy (tan- brown)		Bkg
10		55 %			Medium grain sand, chunky (tan-brown) Fine grain sand (tan - light brown)		Bkg
15		50 %			Fine grain sand (tan) Medium grain sand (brown) Clay (brown)		Bkg
20							

(Continued Next Page)

BORING ID: SB-25

CN Associates, Inc.

PAGE 2 OF 2

CLIENT Thermo Eberline, LLC **PROJECT NAME** Former Eberline Instruments Facility

PROJECT NUMBER _____ **PROJECT LOCATION** 5981 Airport Road, Santa Fe, NM

DATE STARTED 6/05/2017 **COMPLETED** 6/05/2017 **GROUND ELEVATION** _____ **BORING DIAMETER** _____

DRILLING CONTRACTOR Enviro-Drill, Inc.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		72 %			Course sand (dark brown) Medium-course grain sand (brown) Clay (brown)		Bkg
25					Medium grain sand (white)		
30							
35							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-26

CN Associates, Inc.

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.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		14 %			Fine grain sand (light tan)		Bkg
5		30 %			Fine - medium grain sand, clumpy (light brown)		Bkg
10		50 %			Fine - medium grain sand (light tan)		Bkg
15		63 %			Fine-medium grain sand (light tan) Fine grain sand / clay (brown)		Bkg
20							

(Continued Next Page)

BORING ID: SB-26

CN Associates, Inc.

PAGE 2 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.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		74 %			Clay (dark brown)		Bkg
					Course sand / gravel / clay, stones (1/4-1/2 inch) (dark brown)		
25					Medium grain sand (brown -red) Refusal @ 25 ft		
30							
35							
40							

BORING ID: SB-27

CN Associates, Inc.

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.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		15 %			Fine grain sand (light tan)		Bkg
5					Medium–course grain sand (light brown)		
		32 %			Medium-course sand (light brown)		Bkg
10					Fine - medium grain sand, clumpy (light brown) Medium grain sand (brown)		
		78 %			Fine grain sand (light brown)		150,000
15					Medium grain sand (brown)		
		58 %			Fine grain sand (light gray)		150,000
					Medium grain sand (brown)		
20					Course sand / clay (brown)		

THERMO EBERLINE - SANTA FE, NM

(Continued Next Page)

BORING ID: SB-27

CN Associates, Inc.

PAGE 2 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.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		76 %			Clay (dark brown)		Bkg
					Course sand / gravel / clay, stones (1/4-1/2 inch) (brown)		
					Clay (brown)		
25					Fine - medium grain sand (gray -red)		
					Refusal @ 25 ft		
30							
35							
40							

BORING ID: SB-28

CN Associates, Inc.

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.

DRILLING METHOD Geoprobe **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 grain sand (light tan)		Bkg
5		65 %			Fine – medium grain sand (light brown)		Bkg
10		72 %			Fine grain sand (light tan) Fine - medium grain sand (brown)		Bkg
15		60 %			Fine - medium grain sand (tan -brown)		48,309
20							

(Continued Next Page)

BORING ID: SB-28

CN Associates, Inc.

PAGE 2 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.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
25		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							
40							

THERMO EBERLINE - SANTA FE, NM

BORING ID: SB-29

CN Associates, Inc.

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.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		43 %			Fine grain sand (light tan)		Bkg
5		79 %			Medium grain sand, small stones (1/4-1/2 inches) (light brown)		382,000
10		100 %			Medium grain sand (light brown)		41,000
15		100 %			Medium grain sand (light brown)		Bkg
20							

(Continued Next Page)

BORING ID: SB-29

CN Associates, Inc.

PAGE 2 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.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		84 %			Medium grain sand (light brown)		374,000
					Medium – course sand (brown)		
					Clay (brown)		
25					Refusal at 24.5 ft		
30							
35							
40							

BORING ID: SB-30

CN Associates, Inc.

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.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
0		27 %			Fine grain sand (light tan)		Bkg
5		92 %			Fine grain sand (light tan)		Bkg
10		100 %			Fine – medium grain sand (light brown)		Bkg
15		100 %			Medium grain sand (brown)		Bkg
					Clay (brown		
20					Clay (brown)		Bkg

THERMO EBERLINE - SANTA FE, NM

(Continued Next Page)

BORING ID: SB-30

CN Associates, Inc.

PAGE 2 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.

DRILLING METHOD Geoprobe **LOGGED BY** K. Dow **CHECKED BY** _____

NOTES _____

NOTES (cont.) _____

DEPTH (ft)	SAMPLE NUMBER	RECOVERY %	NOTES	GRAPHIC	MATERIAL DESCRIPTION	Beta-Gamma	Gross Gamma (cpm)
		100 %			Medium – course sand (dark brown – red)		Bkg
					Clay (brown)		
25					Refusal at 25 ft		
30							
35							
40							

ATTACHMENT D

SOIL CORE FIELD SCREENING SURVEYS

CN Associates, Inc.

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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.
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-03

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

Associates, Inc.

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

BORING ID: SB-04

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-05

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-06

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-07

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-08

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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-09

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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-11

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

Associates, Inc.

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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-13

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

Associates, Inc.

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

BORING ID: SB-14

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-15

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-16

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-17

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

Associates, Inc.

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

BORING ID: SB-19

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-20

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-24

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

Associates, Inc.

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

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-26

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

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**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe

CN Associates, Inc.

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

BORING ID: SB-30

METER	SN	DETECTOR	SN	CAL DUE
2350-1	325260	44-20	PR361752	20 Oct 2017
		BKG	34,000 cpm – 38,000 cpm	**BKG**

BORING DEPTH [FT - FT]	DATE SURVEYED MM/DD/YYY	INSTRUMENT READINGS [All readings are in counts per half minute]			
		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			
-					
-					
-					
-					
-					
-					
-					

LAW= LARGE Area Wipe