



April 8, 2019

Mr. Robert J. Hamlet
New Mexico Oil Conservation Division - District 2
811 South First Street
Artesia, NM 88210

Re: Closure Report
Central Dagger Draw Water Station
2RP-4298
Section 3, T20S-R24E
Eddy County, New Mexico

Dear Mr. Hamlet:

On behalf of EOG Resources, Inc. (EOG Y), Ranger Environmental Services, Inc. (Ranger) has prepared this Closure Report to document soil remediation and cleanup confirmation soil sampling activities conducted at the Central Dagger Draw Water Station ("subject site"). The work was conducted in general accordance with Ranger's April 23, 2018 Remediation Work Plan.

SITE LOCATION

The Central Dagger Draw Water Station is located on Bureau of Land Management (BLM) land (surface and mineral) approximately 15 miles south of Artesia along Rock Daisy Road in Eddy County, New Mexico. The facility is situated in Section 3, T20S-R24E at GPS coordinates 32.60096, -104.56909. A topographic vicinity map is attached which illustrates the location of the subject site.

BACKGROUND

On July 21, 2017, EOG Y submitted to the New Mexico Oil Conservation Division (NMOCD) District 2 office a Form C-141 for the release of 18 barrels (bbls) of produced water with 15 bbls recovered. The release occurred within an unlined and bermed battery. An approximate area of 36' x 16' was affected within the unlined and bermed battery between the production tanks. The release was caused by the failure of a valve to the booster pumps. NMOCD approved the initial Form C-141 on July 24, 2017 and issued remediation permit 2RP-4298. A copy of the approved initial Form C-141 is included in Appendix A.

The facility storage tanks were relocated north of the release location and a new tank battery has been constructed; therefore, the former tank battery location was cleared to conduct proper assessment and remediation activities. Delineation sampling activities were conducted at the subject site on October 11, 2017 and October 18, 2017.

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A Site Characterization Work Plan (dated February 14, 2018) was submitted to the NMOCD District 2 office (NMOCD). Subsequent to the submission of the Site Characterization Work Plan, Ranger personnel met with NMOCD District 2 representatives and was informed that it would be more than 60 days before they would review the Work Plan. They further indicated that as long as the proposed work plan meets NMOCD rules and guidance for delineation, operators and consultants are encouraged to begin site characterization as soon as possible. Therefore, Ranger personnel conducted supplemental delineation soil sampling activities on February 21, 2018 and March 20, 2018.

Subsequent to work associated with site characterization, a Remediation Work Plan (dated April 23, 2018) was prepared and submitted to the NMOCD to address the release (RP-4298) at the subject site. The Remediation Work Plan was ultimately approved by NMOCD via email dated July 23, 2018 with a site ranking score of zero and the following Site Recommended Remedial Action Levels (RRALs); benzene – 10 mg/Kg, BTEX – 50 mg/Kg, TPH – 5,000 mg/Kg, and chloride – 600 mg/Kg.

As summarized in Ranger's February 14, 2018 Site Characterization Work Plan and April 23, 2018 Remediation Work Plan, four phases of soil assessment/delineation activities were conducted at the subject site. The attached soil analytical table summarizes the analytical results for soil samples collected at the subject site during the various soil assessment and delineation activities. The attached Site Map illustrates the locations where these delineation and assessment soil samples were collected. These sample results served as the basis for Ranger's April 23, 2018 Remediation Work Plan.

SOIL REMEDIATION ACTIVITIES

Soil excavation, remediation, and cleanup confirmation soil sampling activities were conducted at the subject site between November 6, 2018 and March 6, 2019. The soil excavation activities were conducted by BDS Enterprises (BDS) under the oversight of Ranger field personnel. Following the completion of each phase of excavation, Ranger conducted cleanup confirmation soil sampling activities.

On November 6, 2018, soil excavation activities were initiated at the subject site in the area associated with the 2RP-4298 release (main excavation). Initially, the perimeter earthen berm firewall material surrounding the former tank battery was staged at the subject site as four stockpiles on visqueen plastic. Subsequent to the removal of the firewall material, soils within the main excavation area were excavated to various depths ranging from 2 feet below ground surface (bgs) to 4 feet bgs according to the approved Remediation Work Plan.

Upon completion of this initial phase of excavation, Ranger collected 17 cleanup confirmation soil samples (SS-1 through SS-17) on January 9, 2019 for laboratory analysis within the main excavation. The soil samples were collected as grab samples per the approved Remediation Work Plan in the designated locations. Additionally, Ranger collected one five-part composite sample (SP-1 through SP-4) from each stockpile (perimeter earthen berm firewall material) for laboratory analysis. All of the cleanup confirmation samples were analyzed for chloride using Method SM4500Cl-B; however, select samples were also analyzed for TPH using Method 8015 and BTEX using Method 8021 per the approved Remediation Work Plan. All the stockpile samples were analyzed for the following constituents; TPH using Method 8015; BTEX using Method 8021; and chloride using Method SM4500Cl-B.

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Upon review of the January 9, 2019 soil sample analytical results, all the confirmation samples (SS-1 through SS-17) collected from the main excavation were documented to have chloride concentrations that exceeded the applicable 600 mg/Kg chloride concentration limit for either horizontal delineation or for reclamation purposes. One of the confirmation samples (SS-10) analyzed for BTEX and TPH was also documented to have TPH concentrations above the approved Site Recommended Remedial Action Levels (RRALs). Additionally, all of the stockpile samples (SP-1 through SP-4) were observed to have chloride concentrations that exceeded the applicable 600 mg/Kg chloride concentration limit for reclamation purposes.

Further excavation activities were conducted from February 12, 2019 through February 14, 2019 to address the areas within the main excavation that exceeded the 600 mg/Kg chloride concentration limit for reclamation. The soil removal activities included the lateral excavation of all of the main excavation sidewalls and the vertical excavation of the entire main excavation base to 4 feet bgs. Additional vertical excavation was completed to a depth of 4.5 feet bgs around sample SS-10. Upon completion of the additional soil removal activities on February 14, 2019, Ranger collected 17 cleanup confirmation soil samples (SS-1A through SS-17A) for laboratory analysis. The soil samples were collected as five-part composite samples from soils either along the representative sidewall or the excavation base. All 17 samples were analyzed for chloride and one of the samples (SS-10A) was also analyzed for TPH utilizing the aforementioned laboratory methods.

Upon review of the February 14, 2019 soil sample analytical results, all excavation sidewall samples were documented to be below the 600 mg/Kg chloride concentration limit for horizontal delineation. The other samples collected at the base of the excavation were collected at a depth of 4 feet bgs and were documented to be below the 19.15.29.12 NMAC Table 1 (>100 feet) limit of 20,000 mg/Kg for chloride. However, the sample (SS-10A) analyzed for TPH was documented to have TPH concentrations above the approved RRALs.

Further excavation activities were conducted on February 20, 2019 to address the area within the main excavation that exceeded the RRALs for TPH around sample SS-10A. The soil removal activities included the vertical excavation of this area to a depth of 6.5 feet bgs. Upon completion of the additional soil removal activities on February 20, 2019, Ranger collected one cleanup confirmation soil sample (SS-10B) for laboratory analysis to confirm the area had attained the target cleanup goal for TPH. The sample was analyzed for TPH utilizing the aforementioned laboratory method. The area that was excavated to a depth of approximately 6.5 feet bgs appeared to be approximately 400 square feet in size; therefore, Ranger re-mobilized to the subject site on March 6, 2019 and collected one additional soil sample (SS-10C) within this area in an effort to verify the in-situ soils were below the TPH RRALs. Both soil samples (SS-10B and SS-10C) were collected as five-part composite samples from soils along the excavation base.

Upon review of the February 20, 2019 and March 6, 2019 soil sample analytical results, the samples were documented to be below the TPH RRAL of 5,000 mg/Kg.

It should be noted, the Remediation Work Plan was approved under the old rules associated with site remediation in New Mexico. Therefore, Ranger and EOG Y managed the site remediation utilizing the approved RRALs. However, as the site remediation activities were completed after the new rules associated with site remediation in New Mexico were adopted and instituted, the site also meets the 19.15.29.13 NMAC Restoration, Reclamation and Re-Vegetation requirements for chloride.

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Soil Sampling Methodologies and QA/QC Procedures

The confirmation soil samples collected on January 9, 2019, February 14, 2019, February 20, 2019, and March 6, 2019 were either grab samples or five-part composite soil samples collected from the excavated areas base and sidewalls in accordance with Ranger's approved Remediation Work Plan or in compliance with 19.15.29 NMAC rules. Before conducting the cleanup confirmation soil sampling activities, Ranger provided adequate notice to NMOCD. Copies of the notification-related correspondence are included in Appendix B.

During the soil excavation process, Ranger utilized an organic vapor monitor (OVM), field chloride titration kits and visual observations to identify areas of stained soils, elevated OVM readings and elevated field chloride readings which required additional excavation. Ranger personnel wore new nitrile gloves during the collection of each soil sample. Each soil sample collected for analysis was immediately placed in a Teflon-capped laboratory-supplied container, sealed in multiple Ziploc® bags, and stored in a sample shuttle containing ice until delivery to the analytical laboratory. A temperature blank sample was included in each sample shuttle for quality control purposes. Upon completion of the sampling activities, each sample shuttle was sealed with a custody seal, and the soil samples were managed under strict chain-of-custody procedures until delivery to Cardinal Laboratories in Hobbs, New Mexico. Tables summarizing the cumulative site soil analytical results are attached.

The attached comprehensive Site Map illustrates the approximate final excavation boundaries, the locations of the pre-excavation assessment/delineation soil sample locations, and the excavation-related cleanup confirmation soil sample locations. Photographs documenting the remediation process are included in Appendix C. Copies of the laboratory analytical reports and chain-of-custody documentation for the excavation-related soil cleanup confirmation samples are included in Appendix D. The laboratory reports and chain-of-custody documentation for the initial assessment/delineation soil samples were provided in Ranger's February 14, 2018 Site Characterization Work Plan and April 23, 2018 Remediation Work Plan.

EXCAVATED SOIL MANAGEMENT

All excavated soils generated from the main excavation were reportedly taken to the Lea Land, Inc. landfill in Carlsbad, New Mexico. Additionally, the stockpiled soils associated with the perimeter earthen berm firewall material were also reportedly taken to the Lea Land, Inc. landfill in Carlsbad, New Mexico.

BACKFILLING & RESEEDING

Following the completion of the excavation and confirmation soil sampling activities, the main excavation at the subject site was backfilled. The area within the main excavation that was excavated to a depth of 6.5 feet bgs was backfilled to a depth of 4 feet bgs then a 20-millimeter plastic liner was installed throughout the entire excavation. Subsequent to the installation of the liner, clean fill material was utilized to backfill the main excavation to approximately one foot bgs. Topsoil was utilized to backfill the remaining portions of the excavation from one foot bgs to surface.

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The subject site area that was excavated will be reseeded with BLM Aplomado Falcon Habitat Mix during the first favorable growing season. Ranger estimates the reseeded activities to occur during the first week of July 2019.

ANALYTICAL RESULTS

The soil TPH and BTEX laboratory analytical results were compared to RRALs listed in the approved April 23, 2018 Remediation Work Plan. As the main excavation at the subject was ultimately excavated to a minimum depth of 4 feet bgs, all confirmation soil samples collected were compared to the 19.15.29.12 NMAC Table 1 (>100 feet) limit of 20,000 mg/Kg for chloride. The stockpile samples were compared to the 19.15.29.13 NMAC Restoration, Reclamation and Re-Vegetation requirement of 600 mg/Kg for chloride. A summary of the referenced regulatory levels is detailed below.

REGULATORY STANDARD	CHLORIDE	TPH	BTEX	BENZENE
RRALs (Ranking Score of 0)	600 (0'-4' Depth Interval Only)	5,000	50	10
19.15.29.12 NMAC Table 1 Closure Criteria for Soils Impacted by a Release (GW > 100')	20,000	---	---	---
19.15.29.13 NMAC Restoration, Reclamation and Re-Vegetation (Soils 0'-4')	600	---	---	---

All Values Presented In Parts Per Million (mg/Kg)

All soil analytical results are presented in the attached cumulative soil analytical tables. The approximate locations of the soil samples collected within the excavated areas are illustrated on the attached Site Map. Within the analytical table, all soil sample locations which were removed and disposed as part of the soil excavation and disposal activities are indicated by the use of a "strikethrough" across these sample results. Those results which do not contain a "strikethrough" are representative of soils remaining in place following the completion of the site excavation activities.

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The analytical test results confirmed appropriate remediation of the affected area. All soils remaining on-site were documented to be in attainment of the RRALs for TPH and BTEX as well as below the 19.15.29.12 NMAC Table 1 (>100 feet) closure criteria for chloride.

CONCLUSIONS AND RECOMMENDATIONS

Based on the confirmation sampling and laboratory analytical results, Ranger concludes that the affected area has been adequately addressed pursuant to regulatory requirements and guidelines, and as such respectfully requests site closure. As Ranger is of the opinion that all remediation activities at the subject site are complete, a copy of the Form C-141 closure certification is included in Appendix A.

Ranger sincerely appreciates your regulatory oversight. If you have any questions or need any additional information, please contact us at 512/335-1785.

Sincerely,

RANGER ENVIRONMENTAL SERVICES, INC.

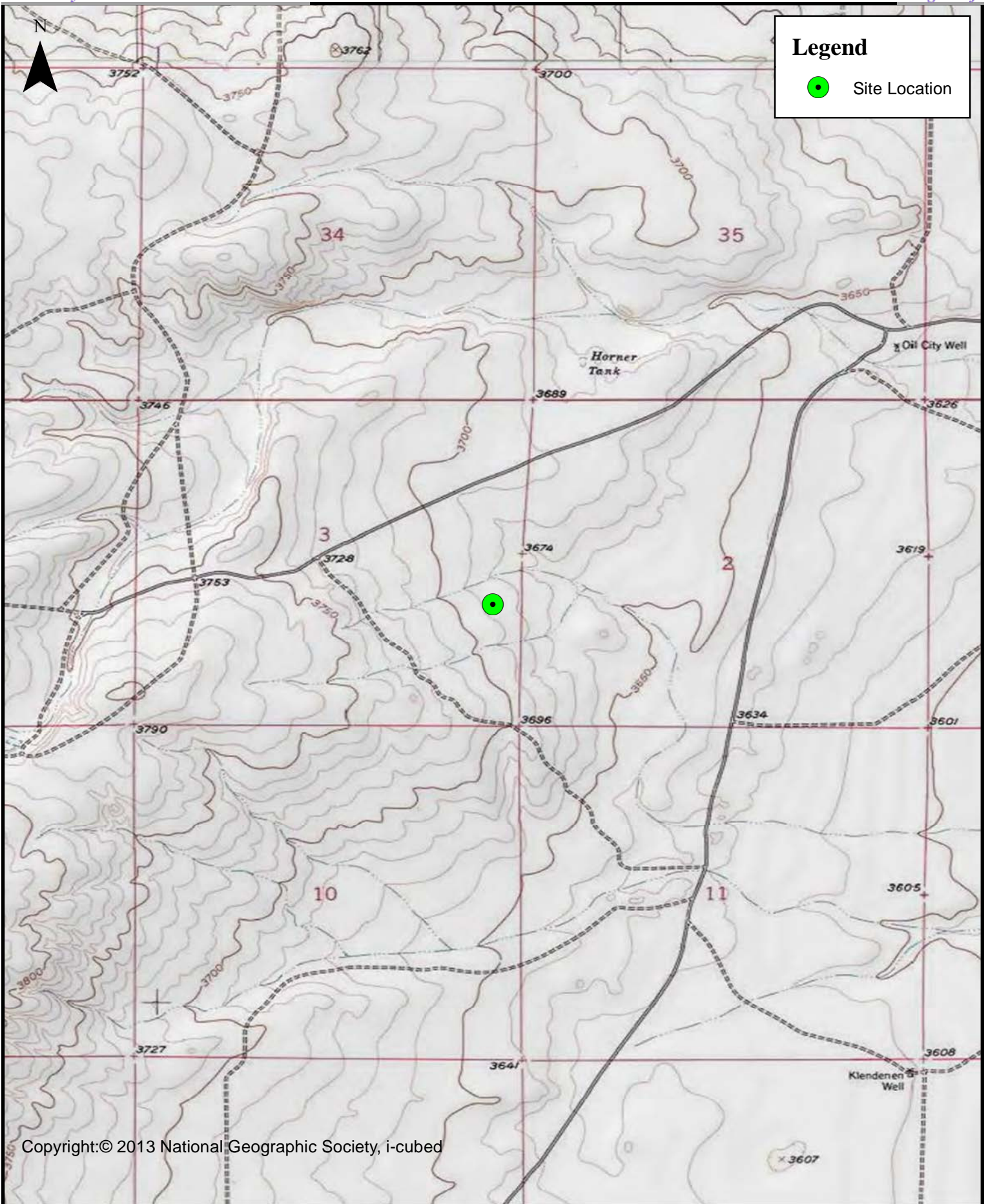


Max Cook
Project Manager

MC/WK

Attachments

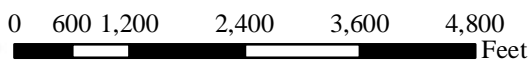
FIGURES



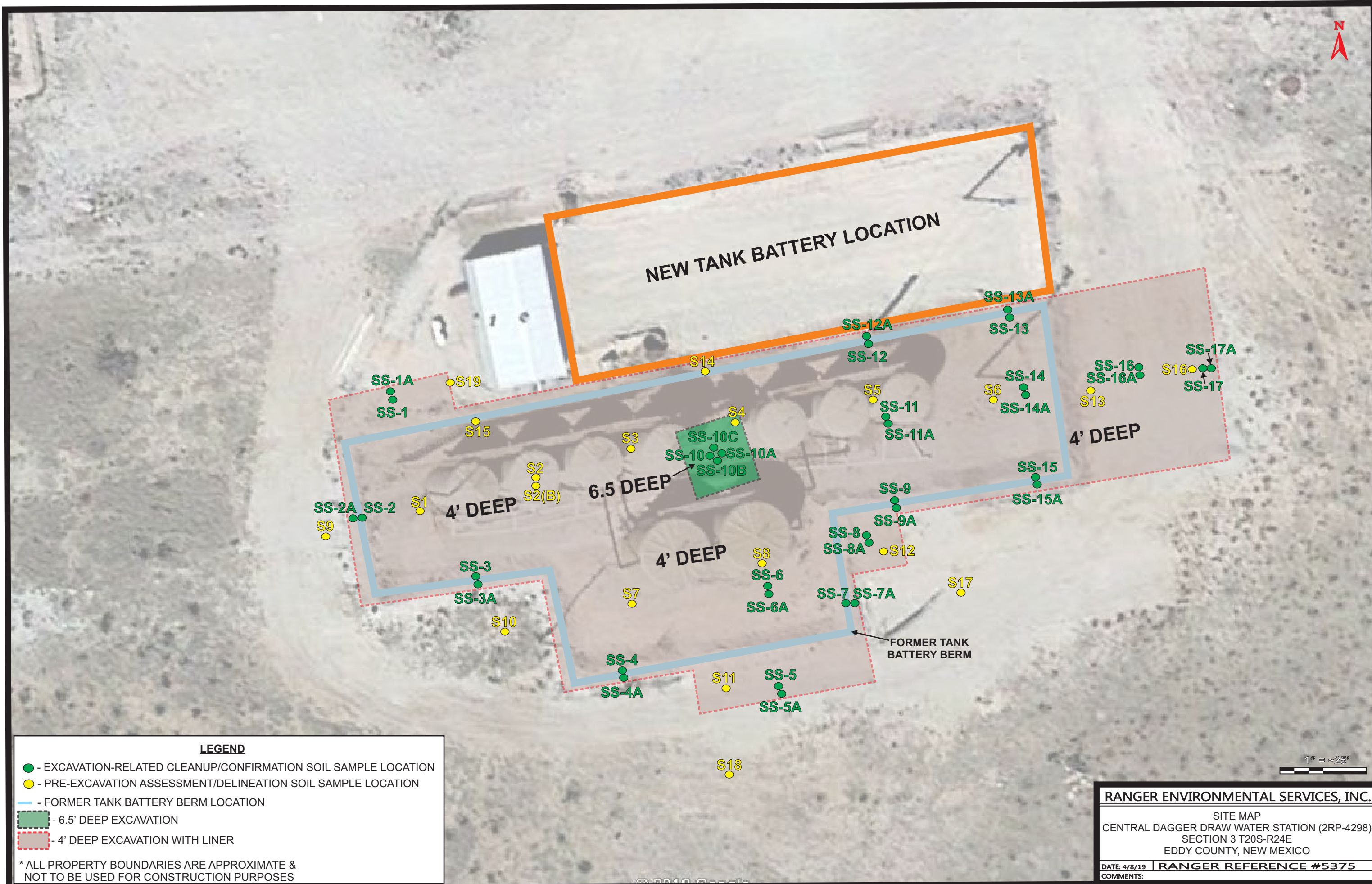
Legend

- Site Location

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TOPOGRAPHIC MAP
 CENTRAL DAGGER DRAW WATER STATION
 EOG RESOURCES, INC.



TABLES

SOIL BTEX, TPH AND CHLORIDE ANALYTICAL DATA													
EOG RESOURCES, INC.													
CENTRAL DAGGER DRAW WATER STATION (2RP-4298)													
All values presented in parts per million (mg/Kg)													
SAMPLE ID	DATE	DEPTH (FT)	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C6-C10	TPH DRO C10-C28	TPH DRO EXT C28-C36	TPH (GRO+DRO)	TPH (GRO+DRO+MRO)	CHLORIDE
S10-2'	2/21/2018	2'	---	---	---	---	---	---	---	---	---	---	336
S10-3'	2/21/2018	3'	---	---	---	---	---	---	---	---	---	---	160
S10-4'	2/21/2018	4'	---	---	---	---	---	---	---	---	---	---	128
S11-1'	2/21/2018	1'	---	---	---	---	---	---	---	---	---	---	560
S11-2'	2/21/2018	2'	---	---	---	---	---	---	---	---	---	---	448
S11-3'	2/21/2018	3'	---	---	---	---	---	---	---	---	---	---	832
S11-4'	2/21/2018	4'	---	---	---	---	---	---	---	---	---	---	96.0
S12-1'	2/21/2018	1'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	624
S12-2'	2/21/2018	2'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	560
S12-3'	2/21/2018	3'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	480
S12-4'	2/21/2018	4'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	176
S13-1'	2/21/2018	1'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	25.9	<10.0	25.9	25.9	624
S13-2'	2/21/2018	2'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	432
S13-3'	2/21/2018	3'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	944
S13-4'	2/21/2018	4'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	416
S14-1'	2/21/2018	1'	---	---	---	---	---	---	---	---	---	---	64.0
S14-2'	2/21/2018	2'	---	---	---	---	---	---	---	---	---	---	112
S14-3'	2/21/2018	3'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
S14-4'	2/21/2018	4'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
S15-1'	2/21/2018	1'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	475	177	475	652	2,380
S15-2'	2/21/2018	2'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	387	140	387	527	2,900
S15-3'	2/21/2018	3'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	539	182	539	721	3,000
S15-4'	2/21/2018	4'	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	211	85.7	211	296.7	3,480
S16 - 1'	3/20/2018	1	---	---	---	---	---	---	---	---	---	---	64.0
S16 - 2'	3/20/2018	2	---	---	---	---	---	---	---	---	---	---	688
S16 - 3'	3/20/2018	3	---	---	---	---	---	---	---	---	---	---	448
S16 - 4'	3/20/2018	4	---	---	---	---	---	---	---	---	---	---	112
S17 - 1'	3/20/2018	1	---	---	---	---	---	---	---	---	---	---	32.0
S17 - 2'	3/20/2018	2	---	---	---	---	---	---	---	---	---	---	112
S17 - 3'	3/20/2018	3	---	---	---	---	---	---	---	---	---	---	288
S17 - 4'	3/20/2018	4	---	---	---	---	---	---	---	---	---	---	176
S18 - 1'	3/20/2018	1	---	---	---	---	---	---	---	---	---	---	80.0
S18 - 2'	3/20/2018	2	---	---	---	---	---	---	---	---	---	---	144
S18 - 3'	3/20/2018	3	---	---	---	---	---	---	---	---	---	---	80.0
S18 - 4'	3/20/2018	4	---	---	---	---	---	---	---	---	---	---	48.0
S19 - 1'	3/20/2018	1	---	---	---	---	---	---	---	---	---	---	<16
S19 - 2'	3/20/2018	2	---	---	---	---	---	---	---	---	---	---	48.0
S19 - 3'	3/20/2018	3	---	---	---	---	---	---	---	---	---	---	48.0
S19 - 4'	3/20/2018	4	---	---	---	---	---	---	---	---	---	---	32.0
Soil Excavation - Cleanup Confirmation Soil Samples													
SS-1	1/9/2019	4	---	---	---	---	---	---	---	---	---	---	1,960
SS-2	1/9/2019	4	---	---	---	---	---	---	---	---	---	---	1,110
SS-3	1/9/2019	4	---	---	---	---	---	---	---	---	---	---	1,740
SS-4	1/9/2019	4	---	---	---	---	---	---	---	---	---	---	1,760
SS-5	1/9/2019	3	---	---	---	---	---	---	---	---	---	---	4,520
SS-6	1/9/2019	3	---	---	---	---	---	---	---	---	---	---	768
SS-7	1/9/2019	3	---	---	---	---	---	---	---	---	---	---	944
SS-8	1/9/2019	1	---	---	---	---	---	---	---	---	---	---	3,040
SS-9	1/9/2019	1	---	---	---	---	---	---	---	---	---	---	3,160
SS-10	1/9/2019	4	<0.050	<0.050	<0.050	<0.150	<0.300	118	7,420	1,540	7,538	9,078	8,000
SS-11	1/9/2019	2	---	---	---	---	---	---	---	---	---	---	2,600
SS-12	1/9/2019	2	---	---	---	---	---	---	---	---	---	---	2,800
SS-13	1/9/2019	3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	52.1	31.4	52.1	83.5	4,120
SS-14	1/9/2019	3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	2,840
SS-15	1/9/2019	3	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	4,410
SS-16	1/9/2019	2	---	---	---	---	---	---	---	---	---	---	608
SS-17	1/9/2019	2	---	---	---	---	---	---	---	---	---	---	2,720
SS-1A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	176
SS-2A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	112
SS-3A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	288
SS-4A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	80.0
SS-5A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	80.0
SS-6A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	416
SS-7A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	64.0
SS-8A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	1060
SS-9A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	256
SS-10A	2/14/2019	4.5	---	---	---	---	---	<10.0	6,330	1,430	6,330	7,760	3,760
SS-11A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	1,200
SS-12A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	560

SOIL BTEX, TPH AND CHLORIDE ANALYTICAL DATA EOG RESOURCES, INC. CENTRAL DAGGER DRAW WATER STATION (2RP-4298)														
All values presented in parts per million (mg/Kg)														
SAMPLE ID	DATE	DEPTH (FT)	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C6-C10	TPH DRO C10-C28	TPH DRO EXT C28-C36	TPH (GRO+DRO)	TPH (GRO+DRO+MRO)	CHLORIDE	
SS-13A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	480	
SS-14A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	416	
SS-15A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	208	
SS-16A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	1,580	
SS-17A	2/14/2019	4	---	---	---	---	---	---	---	---	---	---	400	
SS-10B	2/20/2019	6.5'	---	---	---	---	---	<10.0	10.9	<10.0	10.9	10.9	---	
SS-10C	3/6/2019	6.5'	---	---	---	---	---	<10.0	146	25.4	146	171.4	---	
Recommended Remedial Action Levels (RRALs)			10					50					5,000	600 (0'-4')
Notes:														
1. Results exceeding the listed RRALs are presented in bold type with yellow highlighting. The chloride RRAL is only applicable to the 0'-4' depth interval.														
2. Strikethrough indicates sample area was overexcavated and disposed off-site.														

SOIL STOCKPILE BTEX, TPH AND CHLORIDE ANALYTICAL DATA
EOG RESOURCES, INC.
CENTRAL DAGGER DRAW WATER STATION (2RP-4298)

All values presented in parts per million (mg/Kg)

SAMPLE ID	DATE	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	TOTAL BTEX	TPH GRO C6-C10	TPH DRO C10-C28	TPH DRO EXT C28-C36	TPH TOTAL	CHLORIDE
SP-1	01/09/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	204	72.6	276.6	3,200
SP-2	01/09/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	48.4	<10.0	48.4	2,560
SP-3	01/09/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	0	1,600
SP-4	01/09/19	<0.050	<0.050	<0.050	<0.150	<0.300	<10.0	<10.0	<10.0	0	2,000

TPH = Total Petroleum Hydrocarbons
mg/Kg = Milligrams per Kilogram
J = Analyte detected below quantitation limit

APPENDIX A

FORM C-141 CLOSURE CERTIFICATION AND INITIAL FORM C-141

Incident ID	
District RP	
Facility ID	
Application ID	


Closure

The responsible party must attach information demonstrating they have complied with all applicable closure requirements and any conditions or directives of the OCD. This demonstration should be in the form of a comprehensive report (electronic submittals in .pdf format are preferred) including a scaled site map, sampling diagrams, relevant field notes, photographs of any excavation prior to backfilling, laboratory data including chain of custody documents of final sampling, and a narrative of the remedial activities. Refer to 19.15.29.12 NMAC.

Closure Report Attachment Checklist: *Each of the following items must be included in the closure report.*

- A scaled site and sampling diagram as described in 19.15.29.11 NMAC
- Photographs of the remediated site prior to backfill or photos of the liner integrity if applicable (Note: appropriate OCD District office must be notified 2 days prior to liner inspection)
- Laboratory analyses of final sampling (Note: appropriate ODC District office must be notified 2 days prior to final sampling)
- Description of remediation activities


I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to OCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the OCD does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to groundwater, surface water, human health or the environment. In addition, OCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations. The responsible party acknowledges they must substantially restore, reclaim, and re-vegetate the impacted surface area to the conditions that existed prior to the release or their final land use in accordance with 19.15.29.13 NMAC including notification to the OCD when reclamation and re-vegetation are complete.

Printed Name: Chase Settle Title: Rep Safety & Environmental II
 Signature:  Date: 04-08-2019
 email: Chase_Settle@eogresources.com Telephone: 575-748-1471

OCD Only

Received by: _____ Date: _____

Closure approval by the OCD does not relieve the responsible party of liability should their operations have failed to adequately investigate and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment nor does not relieve the responsible party of compliance with any other federal, state, or local laws and/or regulations.

Closure Approved by:  Date: 2/22/2023
 Printed Name: Brittany Hall Title: Environmental Specialist

NM OIL CONSERVATION

NM OIL CONSERVATION

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

ARTESIA DISTRICT
State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

ARTESIA DISTRICT
Form C-141
Revised August 8, 2011
Submit 1 Copy to appropriate District Office in accordance with 19.15.29 NMAC.

RECEIVED

RECEIVED

FAB1720532799
NAB1720532956

Release Notification and Corrective Action

OPERATOR

Initial Report Final Report

Name of Company EOG Y Resources, Inc.	Contact Chase Settle
Address 104 S. 4 th Street	Telephone No. 575-748-1471
Facility Name Central Dagger Draw Water Station	Facility Type Water Transfer Station

Surface Owner Federal	Mineral Owner Federal	API No. N/A
--------------------------	--------------------------	----------------

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
I	3	20S	24E	2080	South	660	East	Eddy

Latitude 32.60096 Longitude -104.56909

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 18 B/PW	Volume Recovered 15 B/PW
Source of Release Valve failure on booster pump	Date and Hour of Occurrence 7/10/2017; 2:30 PM	Date and Hour of Discovery 7/11/2017; 1:20 PM
Was Immediate Notice Given? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	
By Whom? N/A	Date and Hour N/A	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

There was a failure of a valve to the booster pumps which caused a release of produced water.

Describe Area Affected and Cleanup Action Taken.*

An approximate area of 36 x 16 feet was affected within the bermed battery, between the production tanks. Vacuum trucks were called to recover any standing fluid. Excavated soils will be hauled to a NMOCD approved facility. Vertical and horizontal delineation samples will be taken and analysis ran for TPH & BTEX (chlorides for documentation). If initial analytical results for TPH & BTEX are under RRAL's (site ranking is 0) a Final Report, C-141 will be submitted to the OCD requesting closure. **Depth to Ground Water: >100' (approximately 228', Section 3, T20S-R24E, per Trend Map), Wellhead Protection Area: No, Distance to Surface Water Body: >1000', SITE RANKING IS ZERO (0).**

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name: Chase Settle	Approved by Environmental Specialist	
Title: Rep Safety & Environmental II	Approval Date: 7/24/17	Expiration Date: N/A
E-mail Address: chase.settle@egoresources.com	Conditions of Approval: see attached	Attached <input checked="" type="checkbox"/>
Date: July 20, 2017	Phone: 575-748-4171	

Please refer to the New Mexico Oil Conservation Division Website for updated form(s) at:

<http://www.emnrd.state.nm.us/OCD/forms.html>

Thank you

2RP-4298

Operator/Responsible Party,

The OCD has received the form C-141 you provided on **7/21/17** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-4298 has been assigned. **Please refer to this case number in all future correspondence.**

It is the Division's obligation under both the Oil & Gas Act and Water Quality Act to provide for the protection of public health and the environment. Our regulations (19.15.29.11 NMAC) state the following,

The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC. [emphasis added]

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 8/21/17. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

The goals of a characterization effort are: 1) determination of the lateral and vertical extents along with the magnitude of soil contamination. 2) determine if groundwater or surface waters have been impacted. 3) If groundwater or surface waters have been impacted, what are the extents and magnitude of that impact. 4) The characterization of any other adverse impacts that may have occurred (examples: impacts on vegetation, impacts on wildlife, air quality, loss of use of property, etc.). To meet these goals as quickly as possible, the following items must, at a minimum, be addressed in the release characterization workplan and subsequent reporting:

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C₆ thru C₃₆), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted

for laboratory analysis from each borehole or test pit (highest observed contamination and deepest depth investigated). Copies of the actual laboratory results must be provided including chain of custody documentation.

- Probable depth to shallowest protectable groundwater and lateral distance to nearest surface water. If there is an estimate of groundwater depth, the information used to arrive at that estimate must be provided. If there is a reasonable assumption that the depth to protectable water is 50 feet or less, the responsible party should anticipate the need for at least one groundwater monitoring well to be installed in the area of likely maximum contamination.

- If groundwater contamination is encountered, an additional investigation workplan may be required to determine the extents of that contamination. Groundwater and/or surface water samples, if any, must be analyzed by a competent laboratory for volatile organic hydrocarbons (typically Method 8260 full list), total dissolved solids, pH, major anions and cations including chloride and sulfate, dissolved iron, and dissolved manganese. The investigation workplan must provide the groundwater sampling method(s) and sample handling protocols. To the fullest extent possible, aqueous analyses must be undertaken using nominal method detection limits. As with the soil analyses, copies of the actual laboratory results must be provided including chain of custody documentation.

- Accurately scaled and well-drafted site maps must be provided providing the location of borings, test pits, monitoring wells, potentially impacted areas, and significant surface features including roads and site infrastructure that might limit either the release characterization or remedial efforts. Field sketches may be included in subsequent reporting, but should not be considered stand-alone documentation of the site's layout. Digital photographic documentation of the location and fieldwork is recommended, especially if unusual circumstances are encountered.

Nothing herein should be interpreted to preclude emergency response actions or to imply immediate remediation by removal cannot proceed as warranted. Nonetheless, characterization of impacts and confirmation of the effectiveness of remedial efforts must still be provided to the OCD before any release incident will be closed.

Jim Griswold

OCD Environmental Bureau Chief
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505-476-3465
jim.griswold@state.nm.us

Weaver, Crystal, EMNRD

From: Darlene Chavarria <Darlene_Chavarria@eogresources.com>
Sent: Friday, July 21, 2017 2:05 PM
To: Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; jamos@blm.gov; stucker@blm.gov
Cc: Chase Settle; Bob Asher; Katie Parker; Yvette Moore
Subject: Central Dagger Draw Water Station
Attachments: Central Dagger Draw Water Station.pdf

Good Afternoon,

Please find attached the C-141 Initial for the below listed location. The release occurred between the 2 rows of storage tanks within the berm of the battery facility. The proximity of the two rows of tanks, the electrical lines between the tanks, and the underground production lines do not allow for any mechanical sampling to occur safely, therefore all work will be delayed until the tanks have been removed during the relocation procedure of this transfer facility which is already underway and will be completed in the next month or two.

Central Dagger Draw Water Station

Thank you.



Darlene Chavarria
Safety & Environmental
Office 575-748-4368
Extension 54368
Darlene_chavarria@eogresources.com

APPENDIX B
CORRESPONDENCE



max cook <maxcook4@gmail.com>

Central Dagger Draw Water Station :: 2RP-4298 Work Plan

Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>

Thu, Apr 12, 2018 at 3:53 PM

To: max cook <max@rangerenv.com>, "Weaver, Crystal, EMNRD" <Crystal.Weaver@state.nm.us>

Cc: Chase Settle <Chase_Settle@eogresources.com>

RE: EOG Y * Central Dagger Draw Water Station * 2RP-4298

The proposal for delineation/remediation of the above referenced release is approved. Delineation goal for chloride impact is 600 mg/kg. The proposed 10' additional investigation is not required. Since this approval is so late, please advise if the proposal is no longer valid, or has commenced/been completed.

Thank you,

Mike Bratcher

NMOCD District 2

[811 South First Street](#)

[Artesia, NM 88210](#)

575-748-1283 Ext 108

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: maxcook4@gmail.com <maxcook4@gmail.com> **On Behalf Of** max cook

Sent: Wednesday, February 14, 2018 1:04 PM

To: Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>

Cc: Chase Settle <Chase_Settle@eogresources.com>

Subject: Central Dagger Draw Water Station :: 2RP-4298 Work Plan

[Quoted text hidden]



Fwd: Remediation Work Plan :: Central Dagger Draw (2RP-4298)

From: **Bratcher, Mike, EMNRD** <mike.bratcher@state.nm.us>
Date: Mon, Jul 23, 2018 at 12:08 PM
Subject: RE: Remediation Work Plan :: Central Dagger Draw (2RP-4298)
To: max cook <max@rangerenv.com>
Cc: Chase Settle <Chase_Settle@eogresources.com>, "Pruett, Maria, EMNRD" <Maria.Pruett@state.nm.us>, "Tucker, Shelly" <stucker@blm.gov>

RE: EOG Y Resources * Central Dagger Draw Water Station * **2RP-4298** * DOR: 7/10/17

Max,

Your proposal for remediation of the above referenced release is approved. Please advise once remedial activities have been scheduled. Federal sites will require like approval from BLM.

Thank you,

Mike Bratcher

NMOCD District 2

[811 South First Street](#)

Artesia, NM 88210

575-748-1283 Ext 108

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to ground water, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

From: maxcook4@gmail.com <maxcook4@gmail.com> **On Behalf Of** max cook
Sent: Wednesday, July 11, 2018 9:27 AM
To: Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>
Cc: Chase Settle <Chase_Settle@eogresources.com>
Subject: Remediation Work Plan :: Central Dagger Draw (2RP-4298)

Mike,

Thanks for taking the time to chat with me today. Please find attached a remediation work plan for the aforementioned site.

Max Cook, CAPM

Senior Program Manager
Ranger Environmental Services, Inc.
P.O. Box 201179

Austin, TX 78720
www.rangerenv.com

512.335.1785 ext. 28 (o)
512.497.1556 (c)

--

Max Cook, CAPM
Senior Program Manager
Ranger Environmental Services, Inc.
P.O. Box 201179
Austin, TX 78720
www.rangerenv.com

512.335.1785 ext. 28 (o)
512.497.1556 (c)



Will Kierdorf <will@rangerenv.com>

Notification for Confirmation Sampling

max cook <max@rangerenv.com>

Fri, Jan 4, 2019 at 2:24 PM

To: Robert.Hamlet@state.nm.us, "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>

Cc: Chase Settle <Chase_Settle@eogresources.com>, Bob Asher <Bob_Asher@eogresources.com>, Katie Jamison <Katie_Jamison@eogresources.com>, Will Kierdorf <will@rangerenv.com>

Mr. Hamlet,

EOG Resources has engaged Ranger Environmental Services, Inc. (Ranger) to assist them with assessing and remediating some open RP's.

Please let this email serve as notification (19.15.29.12 D(1)(a)) that Ranger plans to collect confirmation soil samples at the RP's listed below on Wednesday, January 9, 2019. We will begin collecting confirmation samples at the North Dagger Draw location at 730am on the above listed date and then move to the Central Dagger Draw location. Site remediation at both locations has been completed based on either approved Remediation Work Plans and/or 19.15.29 NMAC rules.

2RP-4298 - Central Dagger Draw

2RP3651 & 2RP-4649 - North Dagger Draw

Ranger field personnel collecting the samples will be Will Kierdorf and his contact number is 512-289-3272.

If you have any questions, please do not hesitate to contact me.

Thanks!

--

Max Cook, CAPM
Senior Program Manager
Ranger Environmental Services, Inc.
P.O. Box 201179
Austin, TX 78720
www.rangerenv.com

512.335.1785 ext. 28 (o)

512.497.1556 (c)



Will Kierdorf <will@rangerenv.com>

Notification for Confirmation Sampling

Will Kierdorf <will@rangerenv.com>

Fri, Feb 8, 2019 at 11:18 AM

To: Robert.Hamlet@state.nm.us

Cc: Max Cook <max@rangerenv.com>, Chase_Settle@eogresources.com, Bob_Asher@eogresources.com,

Katie_Jamison@eogresources.com

Mr. Hamlet,

EOG Resources has engaged Ranger Environmental Services, Inc. (Ranger) to assist them with assessing and remediating some open RP's.

Please let this email serve as notification (19.15.29.12 D(1)(a)) that Ranger plans to collect confirmation soil samples at the RP's listed below on Tuesday, February 12, 2019 and Thursday, February 14, 2019. Additional Site remediation at both locations will be completed based on either approved Remediation Work Plans and/or 19.15.29 NMAC rules and upon completion sampling will be conducted. We anticipate conducting sampling at the North Dagger Draw location at approximately 3 pm on Tuesday, February 12, 2019 and at the Central Dagger Draw location at approximately 3 pm on Thursday, February 14, 2019.

2RP-4298 - Central Dagger Draw

2RP3651 & 2RP-4649 - North Dagger Draw

Ranger field personnel collecting the samples will be Andrew Lester and his contact number is 512-839-3188.

If you have any questions, please do not hesitate to contact me.

Thank you,

--

Will Kierdorf
Project Manager
Ranger Environmental Services, Inc.
P.O. Box 201179
Austin, TX 78720
Phone: 512-335-1785
Fax: 512-335-0527



Virus-free. www.avg.com



Will Kierdorf <will@rangerenv.com>

Notification for Confirmation Sampling

max cook <max@rangerenv.com>

Tue, Feb 19, 2019 at 4:47 PM

To: Robert.Hamlet@state.nm.us, "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>

Cc: Chase Settle <Chase_Settle@eogresources.com>, Bob Asher <Bob_Asher@eogresources.com>, Will Kierdorf <will@rangerenv.com>

Mr. Hamlet,

EOG Resources has engaged Ranger Environmental Services, Inc. (Ranger) to assist them with assessing and remediating some open RP's.

Please let this email serve as notification (19.15.29.12 D(1)(a)) that Ranger plans to collect final confirmation soil samples tomorrow Wednesday, February 20, 2019 at **2RP-4298** (Central Dagger Draw) at approximately 230pm. As discussed on the phone today, you gave approval to collect samples tomorrow versus the required two business days.

Ranger field personnel collecting the samples will be Will Kierdorf and his contact number is 512-289-3272.

If you have any questions, please do not hesitate to contact me.

Thanks!

--

Max Cook, CAPM
Senior Program Manager
Ranger Environmental Services, Inc.
P.O. Box 201179
Austin, TX 78720
www.rangerenv.com

512.335.1785 ext. 28 (o)

512.497.1556 (c)



Will Kierdorf <will@rangerenv.com>

RE: [EXT] Notification for Confirmation Sampling - Central Dagger Draw (2RP-4298)

Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>

Tue, Feb 19, 2019 at 4:50 PM

To: max cook <max@rangerenv.com>

Cc: "Bratcher, Mike, EMNRD" <mike.bratcher@state.nm.us>, "Venegas, Victoria, EMNRD" <Victoria.Venegas@state.nm.us>, Chase Settle <Chase_Settle@eogresources.com>, Bob Asher <Bob_Asher@eogresources.com>, Will Kierdorf <will@rangerenv.com>

Max,

Thank you for the call earlier today advising us of your plan to collect final confirmation soil samples tomorrow. Please proceed, thank you.

Robert J Hamlet

State of New Mexico

Energy, Minerals, and Natural Resources

Oil Conservation Division

811 S. First St., Artesia NM 88210

(575) 840-5963

Robert.Hamlet@state.nm.us

OCD approval does not relieve the operator of liability should their operations fail to adequately investigate and remediate contamination that may pose a threat to groundwater, surface water, human health or the environment. In addition, OCD approval does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

From: max cook <max@rangerenv.com>

Sent: Tuesday, February 19, 2019 3:47 PM

To: Hamlet, Robert, EMNRD <Robert.Hamlet@state.nm.us>; Bratcher, Mike, EMNRD <mike.bratcher@state.nm.us>

Cc: Chase Settle <Chase_Settle@eogresources.com>; Bob Asher <Bob_Asher@eogresources.com>; Will Kierdorf <will@rangerenv.com>

Subject: [EXT] Notification for Confirmation Sampling

Mr. Hamlet,

EOG Resources has engaged Ranger Environmental Services, Inc. (Ranger) to assist them with assessing and remediating some open RP's.

Please let this email serve as notification (19.15.29.12 D(1)(a)) that Ranger plans to collect final confirmation soil samples tomorrow Wednesday, February 20, 2019 at **2RP-4298** (Central Dagger Draw) at approximately 230pm. As discussed on the phone today, you gave approval to collect samples tomorrow versus the required two business days.

Ranger field personnel collecting the samples will be Will Kierdorf and his contact number is 512-289-3272.

If you have any questions, please do not hesitate to contact me.

Thanks!

--

Max Cook, CAPM

Senior Program Manager
Ranger Environmental Services, Inc.
P.O. Box 201179

Austin, TX 78720
www.rangerenv.com

512.335.1785 ext. 28 (o)
512.497.1556 (c)

APPENDIX C
PHOTOGRAPHIC DOCUMENTATION



Photograph documenting initiation of site excavation activities in November 2018. View toward the east.



Typical view of excavated soil stockpile. View toward the south.



View of excavated area on January 9, 2019 prior to collection of soil cleanup confirmation samples. View toward the east.



View of initial stages of excavation of the area with TPH RRAL exceedance (SS-10 area) that was ultimately excavated to approximately 6.5' in depth. View toward the northwest.



Photograph of final excavation prior to emplacement of liner and backfilling. View toward the east.

APPENDIX D

LABORATORY REPORTS AND CHAIN- OF-CUSTODY DOCUMENTATION



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

January 17, 2019

MAX COOK

RANGER ENVIRONMENTAL SERVICES, INC.

PO BOX 201179

AUSTIN, TX 78729

RE: CENTRAL DAGGER DRAW WATER STATION

Enclosed are the results of analyses for samples received by the laboratory on 01/10/19 7:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive, flowing style.

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

RANGER ENVIRONMENTAL SERVICES, INC.
 MAX COOK
 PO BOX 201179
 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 1 (H900070-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1960	16.0	01/11/2019	ND	416	104	400	3.92	

Sample ID: SS - 2 (H900070-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1100	16.0	01/11/2019	ND	416	104	400	3.92	

Sample ID: SS - 3 (H900070-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1740	16.0	01/11/2019	ND	416	104	400	3.92	

Sample ID: SS - 4 (H900070-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1760	16.0	01/11/2019	ND	416	104	400	3.92	

Cardinal Laboratories

*=Accredited Analyte

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of the services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.

Celey D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

RANGER ENVIRONMENTAL SERVICES, INC.
 MAX COOK
 PO BOX 201179
 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 5 (H900070-05)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1520	16.0	01/11/2019	ND	416	104	400	3.92	

Sample ID: SS - 6 (H900070-06)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	768	16.0	01/11/2019	ND	416	104	400	3.92	

Sample ID: SS - 7 (H900070-07)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	944	16.0	01/11/2019	ND	416	104	400	3.92	

Sample ID: SS - 8 (H900070-08)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3040	16.0	01/11/2019	ND	416	104	400	3.92	

Sample ID: SS - 9 (H900070-09)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3160	16.0	01/11/2019	ND	416	104	400	3.92	

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Analytical Results For:

RANGER ENVIRONMENTAL SERVICES, INC.
 MAX COOK
 PO BOX 201179
 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 10 (H900070-10)

BTEX 8021B		mg/kg		Analyzed By: MS				S-04	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2019	ND	2.03	101	2.00	18.3	
Toluene*	<0.050	0.050	01/15/2019	ND	2.18	109	2.00	19.1	
Ethylbenzene*	<0.050	0.050	01/15/2019	ND	2.09	104	2.00	20.2	
Total Xylenes*	<0.150	0.150	01/15/2019	ND	6.17	103	6.00	21.7	
Total BTEX	<0.300	0.300	01/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 159 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	8000	16.0	01/11/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS				S-06	
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	118	50.0	01/11/2019	ND	220	110	200	8.49	
DRO >C10-C28*	7420	50.0	01/11/2019	ND	208	104	200	9.94	
EXT DRO >C28-C36	1540	50.0	01/11/2019	ND					

Surrogate: 1-Chlorooctane 94.4 % 41-142

Surrogate: 1-Chlorooctadecane 249 % 37.6-147

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RANGER ENVIRONMENTAL SERVICES, INC.
 MAX COOK
 PO BOX 201179
 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 11 (H900070-11)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2600	16.0	01/11/2019	ND	416	104	400	3.92	

Sample ID: SS - 12 (H900070-12)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2800	16.0	01/11/2019	ND	416	104	400	3.92	

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Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 13 (H900070-13)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2019	ND	2.03	101	2.00	18.3	
Toluene*	<0.050	0.050	01/15/2019	ND	2.18	109	2.00	19.1	
Ethylbenzene*	<0.050	0.050	01/15/2019	ND	2.09	104	2.00	20.2	
Total Xylenes*	<0.150	0.150	01/15/2019	ND	6.17	103	6.00	21.7	
Total BTEX	<0.300	0.300	01/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 96.8 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	4120	16.0	01/11/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2019	ND	220	110	200	8.49	
DRO >C10-C28*	52.1	10.0	01/11/2019	ND	208	104	200	9.94	
EXT DRO >C28-C36	31.4	10.0	01/11/2019	ND					

Surrogate: 1-Chlorooctane 80.4 % 41-142

Surrogate: 1-Chlorooctadecane 77.1 % 37.6-147

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 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 14 (H900070-14)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2019	ND	2.03	101	2.00	18.3	
Toluene*	<0.050	0.050	01/15/2019	ND	2.18	109	2.00	19.1	
Ethylbenzene*	<0.050	0.050	01/15/2019	ND	2.09	104	2.00	20.2	
Total Xylenes*	<0.150	0.150	01/15/2019	ND	6.17	103	6.00	21.7	
Total BTEX	<0.300	0.300	01/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.7 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2840	16.0	01/11/2019	ND	416	104	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/11/2019	ND	220	110	200	8.49	
DRO >C10-C28*	<10.0	10.0	01/11/2019	ND	208	104	200	9.94	
EXT DRO >C28-C36	<10.0	10.0	01/11/2019	ND					

Surrogate: 1-Chlorooctane 90.3 % 41-142

Surrogate: 1-Chlorooctadecane 87.4 % 37.6-147

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 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 15 (H900070-15)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2019	ND	2.03	101	2.00	18.3	
Toluene*	<0.050	0.050	01/15/2019	ND	2.18	109	2.00	19.1	
Ethylbenzene*	<0.050	0.050	01/15/2019	ND	2.09	104	2.00	20.2	
Total Xylenes*	<0.150	0.150	01/15/2019	ND	6.17	103	6.00	21.7	
Total BTEX	<0.300	0.300	01/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 102 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1410	16.0	01/11/2019	ND	400	100	400	3.92	QM-07

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/10/2019	ND	193	96.7	200	1.06	
DRO >C10-C28*	<10.0	10.0	01/10/2019	ND	228	114	200	6.74	
EXT DRO >C28-C36	<10.0	10.0	01/10/2019	ND					

Surrogate: 1-Chlorooctane 72.2 % 41-142

Surrogate: 1-Chlorooctadecane 70.6 % 37.6-147

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 MAX COOK
 PO BOX 201179
 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 16 (H900070-16)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	608	16.0	01/11/2019	ND	400	100	400	3.92	

Sample ID: SS - 17 (H900070-17)

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2720	16.0	01/11/2019	ND	400	100	400	3.92	

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 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SP - 1 (H900070-18)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2019	ND	2.03	101	2.00	18.3	
Toluene*	<0.050	0.050	01/15/2019	ND	2.18	109	2.00	19.1	
Ethylbenzene*	<0.050	0.050	01/15/2019	ND	2.09	104	2.00	20.2	
Total Xylenes*	<0.150	0.150	01/15/2019	ND	6.17	103	6.00	21.7	
Total BTEX	<0.300	0.300	01/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.6 % 73.3-129

Chloride, SM4500Cl-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3200	16.0	01/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/10/2019	ND	193	96.7	200	1.06	
DRO >C10-C28*	204	10.0	01/10/2019	ND	228	114	200	6.74	
EXT DRO >C28-C36	72.6	10.0	01/10/2019	ND					

Surrogate: 1-Chlorooctane 81.0 % 41-142

Surrogate: 1-Chlorooctadecane 90.5 % 37.6-147

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Analytical Results For:

RANGER ENVIRONMENTAL SERVICES, INC.
 MAX COOK
 PO BOX 201179
 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SP - 2 (H900070-19)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2019	ND	2.03	101	2.00	18.3	
Toluene*	<0.050	0.050	01/15/2019	ND	2.18	109	2.00	19.1	
Ethylbenzene*	<0.050	0.050	01/15/2019	ND	2.09	104	2.00	20.2	
Total Xylenes*	<0.150	0.150	01/15/2019	ND	6.17	103	6.00	21.7	
Total BTEX	<0.300	0.300	01/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 95.5 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2560	16.0	01/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/10/2019	ND	193	96.7	200	1.06	
DRO >C10-C28*	48.4	10.0	01/10/2019	ND	228	114	200	6.74	
EXT DRO >C28-C36	<10.0	10.0	01/10/2019	ND					

Surrogate: 1-Chlorooctane 74.8 % 41-142

Surrogate: 1-Chlorooctadecane 77.1 % 37.6-147

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 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SP - 3 (H900070-20)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2019	ND	2.03	101	2.00	18.3	
Toluene*	<0.050	0.050	01/15/2019	ND	2.18	109	2.00	19.1	
Ethylbenzene*	<0.050	0.050	01/15/2019	ND	2.09	104	2.00	20.2	
Total Xylenes*	<0.150	0.150	01/15/2019	ND	6.17	103	6.00	21.7	
Total BTEX	<0.300	0.300	01/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 104 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1600	16.0	01/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/10/2019	ND	193	96.7	200	1.06	
DRO >C10-C28*	<10.0	10.0	01/10/2019	ND	228	114	200	6.74	
EXT DRO >C28-C36	<10.0	10.0	01/10/2019	ND					

Surrogate: 1-Chlorooctane 75.3 % 41-142

Surrogate: 1-Chlorooctadecane 71.9 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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Analytical Results For:

RANGER ENVIRONMENTAL SERVICES, INC.
 MAX COOK
 PO BOX 201179
 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	01/10/2019	Sampling Date:	01/09/2019
Reported:	01/17/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SP - 4 (H900070-21)

BTEX 8021B		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	01/15/2019	ND	2.03	101	2.00	18.3	
Toluene*	<0.050	0.050	01/15/2019	ND	2.18	109	2.00	19.1	
Ethylbenzene*	<0.050	0.050	01/15/2019	ND	2.09	104	2.00	20.2	
Total Xylenes*	<0.150	0.150	01/15/2019	ND	6.17	103	6.00	21.7	
Total BTEX	<0.300	0.300	01/15/2019	ND					

Surrogate: 4-Bromofluorobenzene (PID) 98.8 % 73.3-129

Chloride, SM4500CI-B		mg/kg		Analyzed By: AC					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2000	16.0	01/11/2019	ND	400	100	400	3.92	

TPH 8015M		mg/kg		Analyzed By: MS					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	01/10/2019	ND	193	96.7	200	1.06	
DRO >C10-C28*	<10.0	10.0	01/10/2019	ND	228	114	200	6.74	
EXT DRO >C28-C36	<10.0	10.0	01/10/2019	ND					

Surrogate: 1-Chlorooctane 76.2 % 41-142

Surrogate: 1-Chlorooctadecane 76.2 % 37.6-147

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Notes and Definitions

- S-06 The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- QR-02 The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

91 jo 51 ebgd



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

1 of 2

Company Name: Ranger Environmental Services, Inc.
 Project Manager: Max Cook
 Address: PO Box 201179
 City: Austin State: TX Zip: 78720
 Phone #: 512-497-1556 Fax #: 512-335-0527
 Project #: 5375 Project Owner:
 Project Name: Central Dagger Draw
 Project Location: Central Dagger Draw Water Station
 Sampler Name: W. Kierdorf

P.O. #: **BILL TO**
 Company: EOG Y Resources
 Attn: Chase Settle
 Address: 104 S. 4th Street
 City: Artesia State: NM Zip: 88210
 Phone #: 575-748-1471
 Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						DATE	TIME	TPH: 8015 EXT	BTEX 8021B/6030 or BTEX 8260	Chloride (300 or 4500)
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:					
1	SS-1	G	1	X						1/9/2019	1432	X		
2	SS-2	G	1	X						1/9/2019	1434	X		
3	SS-3	G	1	X						1/9/2019	1437	X		
4	SS-4	G	1	X						1/9/2019	1447	X		
5	SS-5	G	1	X						1/9/2019	1450	X		
6	SS-6	G	1	X						1/9/2019	1453	X		
7	SS-7	G	1	X						1/9/2019	1455	X		
8	SS-8	G	1	X						1/9/2019	1505	X		
9	SS-9	G	1	X						1/9/2019	1507	X		
10	SS-10	G	1	X						1/9/2019	1510	X		

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Relinquished By: _____ Date: 1/20/19
 Time: 6:50
 Received By: *Sumera Siddiq*
 Date: _____ Time: _____
 Delivered By: (Circle One) _____
 Sampler - UPS - Bus - Other: *O.I.C #97*

Sample Condition: Cool Intact
 Checked By: (Initials) *SP*
 Phone Result: Yes No No Add'l Phone #: _____
 Fax Result: Yes No No Add'l Fax #: _____
 REMARKS: _____
 Please hold the following samples pending initial results: _____

FORM-006 R 2.0

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476



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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2 of 2

BILL TO

ANALYSIS REQUEST

Company Name: Ranger Environmental Services, Inc.	P.O. #:	
Project Manager: Max Cook	Company: EOG Y Resources	
Address: PO Box 201179	Attn: Chase Settle	
City: Austin	Address: 104 S. 4th Street	
State: TX	City: Artesia	
Zip: 78720	State: NM	
Phone #: 512-497-1556	Zip: 88210	
Fax #: 512-335-0527	Phone #: 575-748-1471	
Project #: 5375	Fax #:	
Project Owner:		
Project Name: Central Dagger Draw		
Project Location: Central Dagger Draw Water Station		
Sampler Name: W. Kierdorf		

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		DATE	TIME	TPH: 8015 EXT	BTEX 8021B/5030 or BTEX 8260	Chloride (300 or 4500)
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL					
H90007D																
11	SS-11	G	1	X							1/9/2019					
12	SS-12	G	1	X							1/9/2019					
13	SS-13	G	1	X							1/9/2019					
14	SS-14	G	1	X							1/9/2019					
15	SS-15	G	1	X							1/9/2019					
16	SS-16	G	1	X							1/9/2019					
17	SS-17	G	1	X							1/9/2019					
18	SP-1	C	1	X							1/9/2019					
19	SP-2	C	1	X							1/9/2019					
20	SP-3	C	1	X							1/9/2019					
21	SP-4	C	1	X							1/9/2019					

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Relinquished By:	Date:	Received By:	Date:
		<i>[Signature]</i>	
Relinquished By:	Time:	Received By:	Time:
		<i>[Signature]</i>	
Relinquished By:	Date:	Received By:	Date:
		<i>[Signature]</i>	
Relinquished By:	Time:	Received By:	Time:
		<i>[Signature]</i>	

Delivered By: (Circle One)	Sample Condition	CHECKED BY:
Sampler - UPS - Bus - Other: <i>D.L.C. #97</i> Form-666-R-20	Cool <input type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	<i>[Signature]</i>

† Cardinal cannot accept verbal changes. Please fax written changes to 575-393-2476



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 19, 2019

CHASE SETTLE
EOG Y RESOURCES, INC
105 SOUTH 4TH STREET
ARTESIA, NM 88210

RE: CENTRAL DAGGER DRAW WATER STATION

Enclosed are the results of analyses for samples received by the laboratory on 02/15/19 8:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, flowing "C" and "K".

Celey D. Keene
Lab Director/Quality Manager



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Analytical Results For:

EOG Y RESOURCES, INC
 CHASE SETTLE
 105 SOUTH 4TH STREET
 ARTESIA NM, 88210
 Fax To: (575) 748-4131

Received:	02/15/2019	Sampling Date:	02/14/2019
Reported:	02/19/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 1 A (H900610-01)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	176	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 2 A (H900610-02)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	112	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 3 A (H900610-03)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	288	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 4 A (H900610-04)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	02/18/2019	ND	416	104	400	3.92	

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Analytical Results For:

EOG Y RESOURCES, INC
 CHASE SETTLE
 105 SOUTH 4TH STREET
 ARTESIA NM, 88210
 Fax To: (575) 748-4131

Received:	02/15/2019	Sampling Date:	02/14/2019
Reported:	02/19/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 5 A (H900610-05)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	80.0	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 6 A (H900610-06)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 7 A (H900610-07)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 8 A (H900610-08)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1060	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 9 A (H900610-09)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	256	16.0	02/18/2019	ND	416	104	400	3.92	

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Analytical Results For:

EOG Y RESOURCES, INC
 CHASE SETTLE
 105 SOUTH 4TH STREET
 ARTESIA NM, 88210
 Fax To: (575) 748-4131

Received:	02/15/2019	Sampling Date:	02/14/2019
Reported:	02/19/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 10 A (H900610-10)

Chloride, SM4500CI-B **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	3760	16.0	02/18/2019	ND	416	104	400	3.92	

TPH 8015M **Analyzed By: MS** **S-04**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/16/2019	ND	162	81.2	200	4.49	
DRO >C10-C28*	6330	10.0	02/16/2019	ND	164	82.0	200	0.823	
EXT DRO >C28-C36	1430	10.0	02/16/2019	ND					

Surrogate: 1-Chlorooctane 82.3 % 41-142
 Surrogate: 1-Chlorooctadecane 308 % 37.6-147

Sample ID: SS - 11 A (H900610-11)

Chloride, SM4500CI-B **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1200	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 12 A (H900610-12)

Chloride, SM4500CI-B **Analyzed By: JH**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	560	16.0	02/18/2019	ND	416	104	400	3.92	

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Analytical Results For:

EOG Y RESOURCES, INC
 CHASE SETTLE
 105 SOUTH 4TH STREET
 ARTESIA NM, 88210
 Fax To: (575) 748-4131

Received:	02/15/2019	Sampling Date:	02/14/2019
Reported:	02/19/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 13 A (H900610-13)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	480	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 14 A (H900610-14)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	416	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 15 A (H900610-15)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	208	16.0	02/18/2019	ND	416	104	400	3.92	

Sample ID: SS - 16 A (H900610-16)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	1580	16.0	02/18/2019	ND	416	104	400	0.00	QM-07

Sample ID: SS - 17 A (H900610-17)

Chloride, SM4500CI-B		mg/kg		Analyzed By: JH					
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	02/18/2019	ND	416	104	400	0.00	

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
QR-03 The RPD value for the sample duplicate or MS/MSD was outside of QC acceptance limits due to matrix interference. QC batch accepted based on LCS and/or LCSD recovery and/or RPD values.
QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
ND Analyte NOT DETECTED at or above the reporting limit
RPD Relative Percent Difference
** Samples not received at proper temperature of 6°C or below.
*** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO

ANALYSIS REQUEST

Company Name: Ranger Environmental Services, Inc.
 Project Manager: Max Cook
 Address: PO Box 201179
 City: Austin State: TX Zip: 78720
 Phone #: 512-497-1556 Fax #: 512-335-0527
 Project #: 5375 Project Owner:
 Project Name: Garza Dabek Deaw Station
 Project Location: Artesia, NM
 Sampler Name: Andrew Lester
 P.O. #: Company: EOG Y Resources
 Attn: Chase Settle
 Address: 104 S. 4th Street
 City: Artesia State: NM Zip: 88210
 Phone #: 575-748-1471 Fax #:

Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX						PRESERV.		DATE	TIME	TPH: 8015 EXT	BTEX 8021B/5030 or BTEX 8260	Chloride (300 or 4500)	ANALYSIS REQUEST				
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:	ICE / COOL						OTHER :				
<u>A960610</u>	1	SS-1A	1	X	X	X	X	X	X	X	2/14/19	1642	X								
	2	SS-2A	1	X	X	X	X	X	X	X	2/14/19	1650	X								
	3	SS-3A	1	X	X	X	X	X	X	X	2/14/19	1629	X								
	4	SS-4A	1	X	X	X	X	X	X	X	2/14/19	1712	X								
	5	SS-5A	1	X	X	X	X	X	X	X	2/14/19	1701	X								
	6	SS-6A	1	X	X	X	X	X	X	X	2/14/19	1608	X								
	7	SS-7A	1	X	X	X	X	X	X	X	2/14/19	1600	X								
	8	SS-8A	1	X	X	X	X	X	X	X	2/14/19	1520	X								
	9	SS-9A	1	X	X	X	X	X	X	X	2/14/19	1746	X								
	10	SS-10A	1	X	X	X	X	X	X	X	2/14/19	1510	X								

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Relinquished By: [Signature] Date: 2-15-19
 Relinquished By: [Signature] Time: 0815
 Received By: Jawana [Signature]
 Received By: [Signature] Date: _____ Time: _____

Delivered By: (Circle One)
 Sampler - UPS - Bus - Other: 4.66 #497
 Sample Condition: Cool Intact
 CHECKED BY: [Signature] (Initials)
 Phone Result: Yes No Add'l Phone #: _____
 Fax Result: Yes No Add'l Fax #: _____
 REMARKS: Email may look
 Please hold the following samples pending initial results:

8 jo 8 abed



101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

2 of 2

Company Name: Ranger Environmental Services, Inc. Project Manager: Max Cook Address: PO Box 201179 City: Austin State: TX Zip: 78720 Phone #: 512-497-1556 Fax #: 512-335-0527 Project #: 5375 Project Owner: Project Name: <u>Cerear Dancer Dean STATION</u> Project Location: <u>Artesia, NM</u> Sampler Name: <u>ANGEL LEITER</u>		P.O. #: BILL TO Company: EOG Y Resources Attn: Chase Settle Address: 104 S. 4th Street City: Artesia State: NM Zip: 88210 Phone #: 575-748-1471 Fax #:	
PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within 30 days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above stated reasons or otherwise.		ANALYSIS REQUEST	
Relinquished By: Date: 2-15-19 Time: 8:15 Relinquished By:		Received By: Date:	
Delivered By: <u>Circle One</u> Sampler - UPS - Bus - Other:		Sample Condition Cool <input checked="" type="checkbox"/> Intact <input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/>	
460 #97 CHECKED BY: <u>TS</u>		REMARKS: Please hold the following samples pending initial results: <u>Email Max Cook</u>	
Lab I.D. <u>H96610</u>	Sample I.D. 11 55-11A 12 55-12A 13 55-13A 14 55-14A 15 55-15A 17 55-17A	(G)RAB OR (C)OMP. # CONTAINERS GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER : ACID/BASE: ICE / COOL OTHER :	MATRIX PRESERV SAMPLING DATE TIME
			TPH: 8015 EXT BTEX 8021B/5030 or BTEX 8260 Chloride (300 or 4500)



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

February 25, 2019

MAX COOK

RANGER ENVIRONMENTAL SERVICES, INC.

PO BOX 201179

AUSTIN, TX 78729

RE: CENTRAL DAGGER DRAW WATER STATION

Enclosed are the results of analyses for samples received by the laboratory on 02/21/19 8:20.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

RANGER ENVIRONMENTAL SERVICES, INC.
 MAX COOK
 PO BOX 201179
 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	02/21/2019	Sampling Date:	02/20/2019
Reported:	02/25/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW WATER STATI	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	CENTRAL DAGGER DRAW WATER STATI		

Sample ID: SS - 10 B (H900676-01)

TPH 8015M	mg/kg		Analyzed By: MS						
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	02/23/2019	ND	191	95.3	200	1.12	
DRO >C10-C28*	10.9	10.0	02/23/2019	ND	228	114	200	13.6	
EXT DRO >C28-C36	<10.0	10.0	02/23/2019	ND					
<hr/>									
Surrogate: 1-Chlorooctane	105 %	41-142							
Surrogate: 1-Chlorooctadecane	110 %	37.6-147							

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

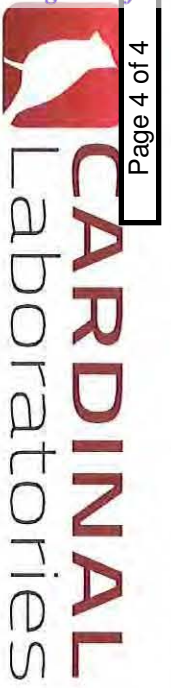
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

Company Name: RANGER ENVIRONMENTAL SERVICES, INC. Project Manager: MAX COOK		BILL TO	
Address: PO BOX 201179 City: ARTEWA State: TX Zip: 78720		P.O. #: _____ Company: EOGY RESOURCES	
Phone #: 512-335-1785 Fax #: 512-335-0527		Attn: CHASE SETTLE Address: 104 S. 4TH STREET	
Project #: 5375 Project Owner: _____		City: ARTEWA State: NM Zip: 88210	
Project Name: CENTRAL RANGER OILAW STATION		Phone #: 575-748-1471 Fax #: _____	
Project Location: ARTEWA, NM		Sample Name: W. KIERRORRE	
Sampler Name: W. KIERRORRE		FOR LAB USE ONLY	
Lab I.D. H900676 Sample I.D. SS-10 B	(G)RAB OR (C)OMP. <input type="checkbox"/> # CONTAINERS 1	MATRIX	
		GROUNDWATER <input type="checkbox"/> WASTEWATER <input type="checkbox"/> SOIL <input checked="" type="checkbox"/> OIL <input type="checkbox"/> SLUDGE <input type="checkbox"/> OTHER: _____	PRESERV. <input type="checkbox"/> ACID/BASE: _____ ICE / COOL <input checked="" type="checkbox"/> OTHER: _____
		DATE 2/20/19	SAMPLING TIME 1555
			TPH: 8015 EXT

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Relinquished By: _____ Date: **2/21/19** Time: **0820**

Received By: **Jawara** Date: _____ Time: _____

Delivered By: (Circle One) **UPS** - Bus - Other: _____

Sample Condition: Cool Intact Yes No Yes No

CHECKED BY: (Initials) **TC**

REMARKS: **PLEASE EMAIL REPORT TO MAX COOK - MAX@RANGERENV.COM**

+ Cardinal cannot accept verbal changes. Please fax written changes to (575) 393-2326



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

March 07, 2019

MAX COOK

RANGER ENVIRONMENTAL SERVICES, INC.

PO BOX 201179

AUSTIN, TX 78729

RE: CENTRAL DAGGER DRAW

Enclosed are the results of analyses for samples received by the laboratory on 03/06/19 11:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-18-11. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Celey D. Keene". The signature is written in a cursive style with a large, flowing "C" and "K".

Celey D. Keene

Lab Director/Quality Manager



PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

RANGER ENVIRONMENTAL SERVICES, INC.
 MAX COOK
 PO BOX 201179
 AUSTIN TX, 78729
 Fax To: (512) 335-0527

Received:	03/06/2019	Sampling Date:	03/06/2019
Reported:	03/07/2019	Sampling Type:	Soil
Project Name:	CENTRAL DAGGER DRAW	Sampling Condition:	Cool & Intact
Project Number:	5375	Sample Received By:	Tamara Oldaker
Project Location:	EOG Y - ARTESIA, NM		

Sample ID: SS - 10 C (H900914-01)

TPH 8015M	mg/kg	Analyzed By: MS							
Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10*	<10.0	10.0	03/06/2019	ND	209	104	200	3.10	
DRO >C10-C28*	146	10.0	03/06/2019	ND	211	106	200	5.19	
EXT DRO >C28-C36	25.4	10.0	03/06/2019	ND					
<i>Surrogate: 1-Chlorooctane</i>	<i>96.1 %</i>	<i>41-142</i>							
<i>Surrogate: 1-Chlorooctadecane</i>	<i>108 %</i>	<i>37.6-147</i>							

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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Notes and Definitions

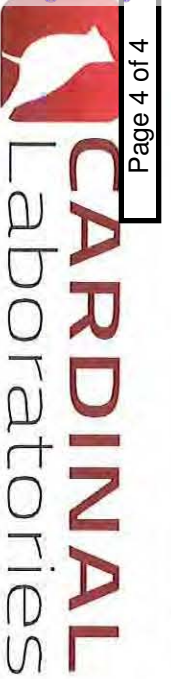
- ND Analyte NOT DETECTED at or above the reporting limit
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 6°C or below.
- *** Insufficient time to reach temperature.
- Chloride by SM4500Cl-B does not require samples be received at or below 6°C
Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240
 (575) 393-2326 FAX (575) 393-2476

Company Name: RANGER ENVIRONMENTAL SERVICES, INC.		P.O. #:		BILL TO		ANALYSIS REQUEST							
Project Manager: MAX COOK		Address: PO BOX 201179		Company: EOG-Y RESOURCES									
City: AMSTEN		State: TX Zip: 78740		Attn: CHASE SETTLE									
Phone #: 512-335-1795		Fax #: 512-335-0527		Address: 104 S. 4TH ST									
Project #: 5375		Project Owner:		City: ARTEZIA									
Project Name: CENTRAL DAGEEN OILW		State: NM Zip: 88210		Phone #: 575-748-1471									
Project Location: ARTEZIA NM		Fax #:											
Sampler Name: W. KIERDORE													
FOR LAB USE ONLY													
Lab I.D. HA008114		Sample I.D. 55-10 C		(G)RAB OR (C)OMP.		# CONTAINERS		MATRIX		PRESERV.		SAMPLING	
				✓		1		GROUNDWATER		ICE / COOL		DATE	
								WASTEWATER		OTHER :		TIME	
								SOIL		✓		3/5/19	
								OIL				0848	
								SLUDGE					
								OTHER :					
								ACID/BASE:					
								✓					
								ICE / COOL					
								OTHER :					

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Relinquished By: _____ Date: 3/6/19 Time: _____
 Received By: _____ Date: 3/6/19 Time: _____

Relinquished By: _____
 Received By: *Jamara Clark*

Delivered By: (Circle One) _____
 Sampler - UPS - Bus - Other: **2. 3e #97**

Sample Condition: Cool Intact
 Yes No
 CHECKED BY: *JD*

REMARKS: **PLEASE EMAIL RESULTS TO MAX@RAWSEC ENV.COM
 TEMP BLANK IN COLER
 * BY HOME RUSH ANALYSIS ***

* Cardinal cannot accept verbal change. Please fax written change to (575) 393-2326

District I
 1625 N. French Dr., Hobbs, NM 88240
 Phone:(575) 393-6161 Fax:(575) 393-0720

District II
 811 S. First St., Artesia, NM 88210
 Phone:(575) 748-1283 Fax:(575) 748-9720

District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 Phone:(505) 334-6178 Fax:(505) 334-6170

District IV
 1220 S. St Francis Dr., Santa Fe, NM 87505
 Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 187572

CONDITIONS

Operator: EOG Y RESOURCES, INC. 104 S 4th St Artesia, NM 88210	OGRID: 25575
	Action Number: 187572
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	2/22/2023