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December 10, 2018

Christina Hernandez  
New Mexico Energy, Minerals and Natural Resources Department  
Oil Conservation Division, District 1  
1625 French Drive  
Hobbs, NM 88240

Ryan Mann  
Hobbs Field Office  
New Mexico State Land Office  
2827 North Dal Paso Street, Suite 117  
Hobbs, NM 88240

**Re: Remediation Summary and Closure Report**  
**White Falcon 16 State #023H**  
**API No. 30-025-43699**  
**GPS: Latitude 32.13689 Longitude -103.377934**  
**UL "D", Sec. 16, T25S, R35E**  
**Lea County, NM**  
**NMOCD Ref. No. 1RP-4881**

TRC Environmental Corporation (TRC), on behalf of COG Operating, LLC (COG), has prepared this Remediation Summary and Closure Report for the Release Site known as the **White Falcon 16 State #023H**. Details of the release are summarized below:

RELEASE DETAILS			
Type of Release:	Produced Water	Volume of Release: 53 bbls	
		Volume Recovered: 15 bbls	
Source of Release:	Flowline	Date of Release: 11/18/17	Date of Discovery: 11/18/17
Was Immediate Notice Given?	Yes	If, YES, to Whom? NMOCD District I/NMSLO	
Was a Watercourse Reached?	No	If YES, Volume Impacting the Watercourse: NA	
Surface Owner:	State	Mineral Owner: State	
Describe Cause of Problem and Remedial Action Taken:			
A third party contractor struck a buried poly flowline coming from the White Falcon 16 State #001 H Battery while digging. The line was repaired and put back in service.			

Topographical and Aerial Maps are provided as Attachments #1 and #2. General Site Photographs are provided as Attachment #8. A Copy of the Initial Release Notification and Corrective Action (NMOCD Form C-141) is provided as Attachment #9.

## REGULATORY FRAMEWORK

Surface impacts from unauthorized releases of crude oil, gases, produced water, condensate or other oil field waste which occur during normal oilfield operations are generally regulated by the New Mexico Oil Conservation Division (NMOCD) in accordance with 19.15.29 of the New Mexico Administrative Code (NMAC). 19.15.29 NMAC establishes reporting, site assessment, remediation and closure procedures based on the type and volume of the release and site characterizations, including proximity to sensitive receptors and depth to groundwater, which may be used to determine a Total Ranking Score as follows:

Site Characteristics		
Approximate Depth to Groundwater	<b>~125 ft - 150 ft</b>	
Within 300 ft. of any continuously flowing or significant watercourse?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Within 200 ft. of any lakebed, sinkhole, or playa lake?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Within 300 ft. of an occupied permanent residence, school, hospital, or institution?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Within 500 ft. of a spring or private, domestic fresh water well?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Within 1,000 ft. of any fresh water well?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Within the incorporated municipal boundaries or within a municipal well field?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Within 300 ft. of a wetland?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Within the area overlying a subsurface mine?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Within an unstable area?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
Within a 100-year floodplain?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

A search of a groundwater database maintained by The New Mexico Office of the State Engineer (NMOSE) was conducted to determine the average depth to groundwater within a 1 Mile radius of the Release Site and identify any registered water wells within a 1/2 Mile of the Release Site. If none were identified, the approximate depth to groundwater was extrapolated from a Depth to Groundwater Map utilized by the NMOCD. Depth to groundwater information is provided as Attachment #4.

Based on the approximate depth to groundwater and site characteristics, the NMOCD Closure Criteria are as follows:

Table I Closure Criteria for Soils Impacted by a Release			
Minimum depth below any point within the horizontal boundary of the release to ground water less than 10,000 mg/l TDS	Constituent	Method*	Limit**
≥ 100 ft	Chloride***	EPA 300.0 or SM4500 Cl B	20,000 mg/kg
	TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
	GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
	BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
	Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

## INITIAL SITE ASSESSMENT

On **June 25, 2018**, an initial site investigation was conducted at the Site. During the initial site investigation, **seven (7) soil samples** were collected from **three (3) locations** (SP-1 through SP-3) within the release margins in an effort to determine the vertical extent of soil impact. In addition, **one (1) soil sample** was collected from the inferred southern edge of the release margins in an effort to determine the horizontal extent of soil impact. The collected soil samples were submitted to an NMOCD-approved laboratory for analysis of chloride concentrations. Laboratory analytical results indicated soil was affected above the NMOCD Closure Criteria at sample point SP-3 at eight (8) ft. bgs. On **August 17, 2018**, a geoprobe was utilized to collect **three (3) additional soil samples** from the area characterized by sample point SP-3. In addition, three (3) soil samples were collected from the remaining inferred edges of the release margins. The collected soil samples were submitted to an NMOCD-approved laboratory for analysis of chloride. A table summarizing laboratory analytical results from soil samples collected during the initial site assessment is provided below:

Concentrations of BTEX, TPH and/or Chloride in Soil											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E 300
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	ORO C <sub>28</sub> -C <sub>35</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>35</sub> (mg/kg)	Chloride (mg/kg)
SP-1 @1'	6/25/2018	1'	In-Situ	-	-	-	-	-	-	-	836
SP-1 @4'	6/25/2018	4'	In-Situ	-	-	-	-	-	-	-	3,060
SP-1 @8'	6/25/2018	8'	In-Situ	-	-	-	-	-	-	-	193
SP-2 @1'	6/25/2018	1'	In-Situ	-	-	-	-	-	-	-	65.3
SP-3 @ 1'	6/25/2018	1'	In-Situ	-	-	-	-	-	-	-	1,550
SP-3 @4'	6/25/2018	4'	In-Situ	-	-	-	-	-	-	-	1,580
SP-3 @8'	6/25/2018	8'	In-Situ	-	-	-	-	-	-	-	11,400
S @ 6"	6/25/2018	6"	In-Situ	-	-	-	-	-	-	-	251
SB-1 @ 8'	8/17/2018	8'	In-Situ	-	-	-	-	-	-	-	6,540
SB-1 @ 10'	8/17/2018	10'	In-Situ	-	-	-	-	-	-	-	314
SB-1 @ 12'	8/17/2018	12'	In-Situ	-	-	-	-	-	-	-	7.14
N @ 6"	8/17/2018	6"	In-Situ	-	-	-	-	-	-	-	5.17
W @ 6"	8/17/2018	6"	In-Situ	-	-	-	-	-	-	-	25.1
E @ 6'	8/17/2018	6"	In-Situ	-	-	-	-	-	-	-	<4.95
Closure Criteria				10	50	-	-	1,000	-	2,500	20,000

A "Site & Sample Location Map" is provided as Attachment #3. Field Data, if applicable, is provided as Attachment #5. Laboratory analytical reports are provided as Attachment #6.

## REMEDIATION PLAN

Based on laboratory analytical results, site characteristics and field observations made during the initial site assessment, COG proposed the following remediation activities designed to advance the Release Site toward an NMOCD approved closure:

- Utilizing mechanical equipment, excavate impacted soil within the release margins in the area characterized by sample points SP-1, SP-3 and SB-1 to a depth of approximately four (4) ft. bgs, or until laboratory analytical results from confirmation soil samples indicate concentrations of chloride are below the applicable NMOCD Closure Criteria.
- Excavate impacted soil within the release margins in the area characterized by sample point SP-2 to a depth of approximately one (1) ft. bgs, or until laboratory analytical results from confirmation soil samples indicated concentrations of chloride are below the applicable NMOCD Closure Criteria.
- Excavated soil will be temporarily stockpiled on-site, atop a poly liner, pending transportation under manifest to a NMOCD-approved disposal facility.
- Upon receiving favorable laboratory analytical results from confirmation soil samples (below the NMOCD Closure Criteria) excavated areas will be backfilled with locally sourced, non-impacted "like" material, at or near original relative positions. The affected area will be contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable.

## SAMPLING PLAN

Upon completion of excavation activities, representative five-point composite excavation confirmation soil samples will be collected from the excavation sidewalls **in each cardinal direction**, representing no more than **50 linear ft**. A minimum of one (1) representative five-point composite excavation confirmation soil sample will be collected from the base of the excavated area representing every **600 square feet**. Additional "discrete" confirmation soil samples will be collected from wet or visibly stained areas inferred to have been affected by the release, as necessary.



## SUMMARY OF FIELD ACTIVITIES

Impacted soil within the release margins was excavated and temporarily stockpiled on-site, atop an impermeable liner, pending final disposition. The floor and sidewalls of the excavation were advanced in accordance with the approved workplan. Upon excavating impacted soil from within the release margins, fifteen (15) confirmation soil samples were collected from the floor and sidewalls of the excavated area representing no more than 600 SqFt. The collected soil samples were submitted to the laboratory for analysis of chloride concentrations. Upon receiving laboratory analytical results exhibiting concentrations below NMOCD RRAL, the impacted soil was transported to a NMOCD-approved facility and the excavated area was backfilled with locally sourced, non-impacted "like" material. Additionally, as per the approved workplan stipulation, one (1) soil bore was collected in the area represented by sample point SP-3 and submitted to the laboratory for analysis of chloride concentrations, in an effort to determine the extent of vertical impact. TRC revisited the Site on 10/24/2018 and collected additional surface samples to determine concentrations of BTEX and TPH. Figure 3 depicts the locations of confirmation soil samples. A table summarizing laboratory analytical results from confirmation soil samples is provided below:

Concentrations of BTEX, TPH and/or Chloride in Soil											
Sample ID	Date	Depth	Soil Status	SW 846 8021B		SW 846 8015M Ext.					E 300
				Benzene (mg/kg)	BTEX (mg/kg)	GRO C <sub>6</sub> -C <sub>10</sub> (mg/kg)	DRO C <sub>10</sub> -C <sub>28</sub> (mg/kg)	GRO + DRO C <sub>6</sub> -C <sub>28</sub> (mg/kg)	EXT DRO C <sub>28</sub> -C <sub>35</sub> (mg/kg)	TPH C <sub>6</sub> -C <sub>35</sub> (mg/kg)	Chloride (mg/kg)
SP-1B @ Surface	10/24/2018	Surf.	Excavated	<0.050	<0.300	<10.0	20.1	20.1	<10.0	20.1	-
SP-2B @ Surface	10/24/2018	Surf.	Excavated	<0.050	<0.300	<10.0	286	286	12.4	298.4	-
SP-3B @ Surface	10/24/2018	Surf.	Excavated	<0.050	<0.300	<10.0	112	112	<10.0	112	-
FL 1	11/13/2018	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
FL 2	11/13/2018	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
FL 3	11/13/2018	1'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	256
FL 4	11/13/2018	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
FL 5	11/13/2018	4'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	32.0
SP-3 NSW	11/13/2018	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	64.0
SP-3 SSW	11/13/2018	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	336
SP-3 ESW	11/13/2018	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	16.0
SP-3 WSW	11/13/2018	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	224
SP-2 NSW	11/13/2018	6"	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
SP-2 SSW	11/13/2018	6"	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	304
SP-1 NSW	11/13/2018	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	96.0
SP-1 SSW	11/13/2018	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	160
SP-1 ESW	11/13/2018	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	192
SP-1 WSW	11/13/2018	2'	In-Situ	<0.050	<0.300	<10.0	<10.0	<10.0	<10.0	<10.0	128
Closure Criteria				10	50	-	-	1,000	-	2,500	20,000

A Photographic Log is provided as Attachment #8

## SITE CLOSURE REQUEST

Based on laboratory analytical results from confirmation soil samples collected during the remediation activities, impacted soil within the release margins was determined below the Table I of 19.15.29.12 NMAC Closure Criteria for Soils Impacted by a Release. TRC on behalf of COG, respectfully requests the NMOCD and New Mexico State Land Office (NMSLO) grant closure approval for the White Falcon 16 State #023H, which occurred on November 17, 2017.

## RESTORATION, RECLAMATION AND RE-VEGETATION

Areas affected by the Release and associated remediation activities will be substantially restored to the condition which existed prior to the Release to the maximum extent practicable. Excavated areas will be backfilled with locally sourced, non-impacted "like" material. The affected area will be contoured and/or compacted to achieve erosion control, stability and preservation of surface water flow to the extent practicable. Affected areas not on production pads and/or lease roads will be reseeded with "Homesteaders" seed mixture during the first favorable growing season, following closure of the site, in accordance with the applicable regulatory agency.

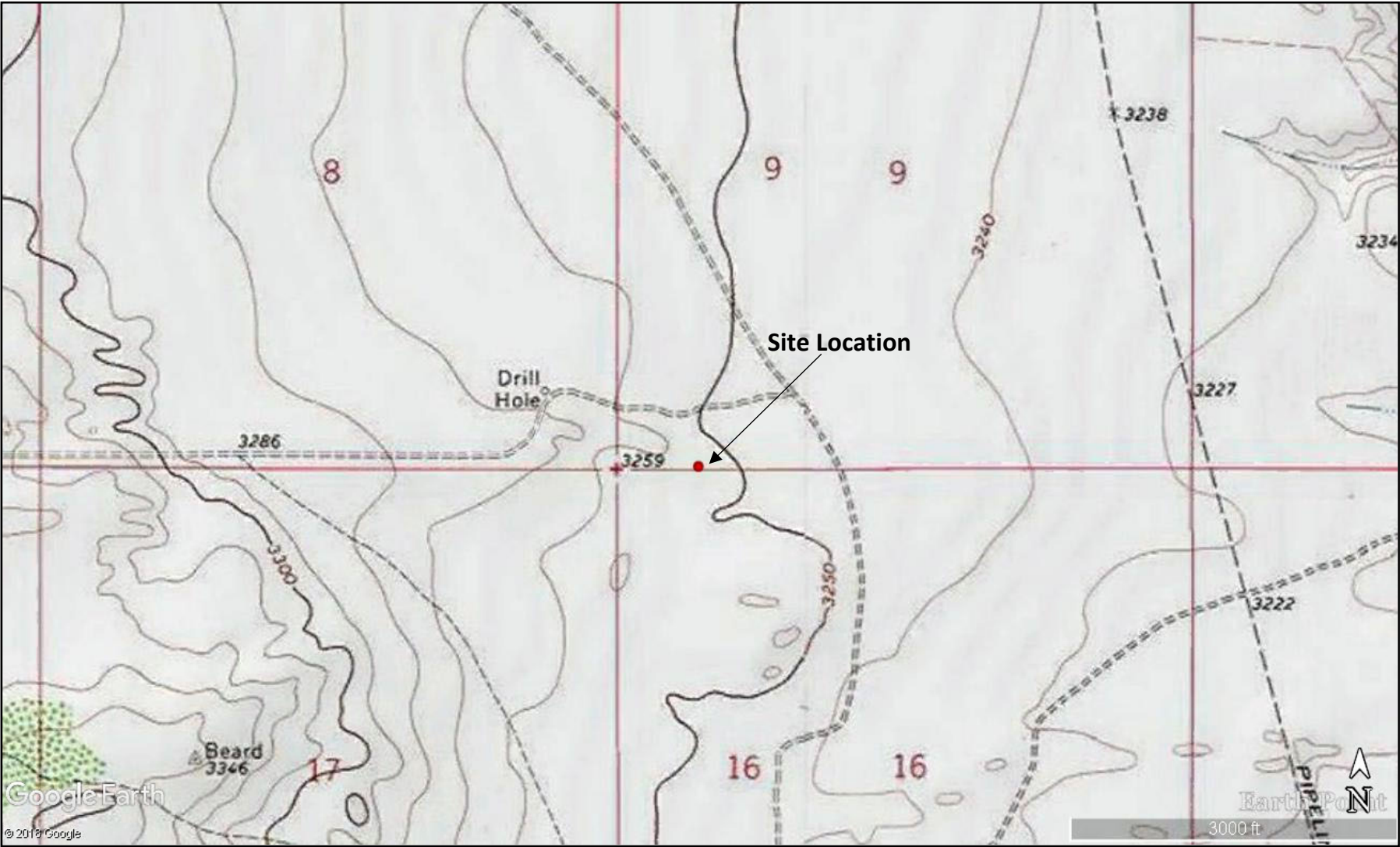
If you have any questions, or if additional information is required, please feel free to contact Becky Haskell or either of the undersigned by phone or email.


Respectfully,

Zachary Conder  
Operations Manager  
[zconder@trcsolutions.com](mailto:zconder@trcsolutions.com)  
(432) 234-5084

Curt Stanley  
Senior Project Manager  
[cdstanley@trcsolutions.com](mailto:cdstanley@trcsolutions.com)  
(432) 559-3296

<b>Attachments:</b>	Attachment #1-	Figure 1 - Topographical Map
	Attachment #2-	Figure 2 - Aerial Map
	Attachment #3-	Figure 3 - Site & Confirmation Sample Location Map
	Attachment #4-	Depth to Groundwater Information
	Attachment #5-	Field Data
	Attachment #6-	Laboratory Analytical Reports
	Attachment #7-	Soil Profile
	Attachment #8-	General Site Photographs
	Attachment #9-	Release Notification and Corrective Action (FORM C-141)



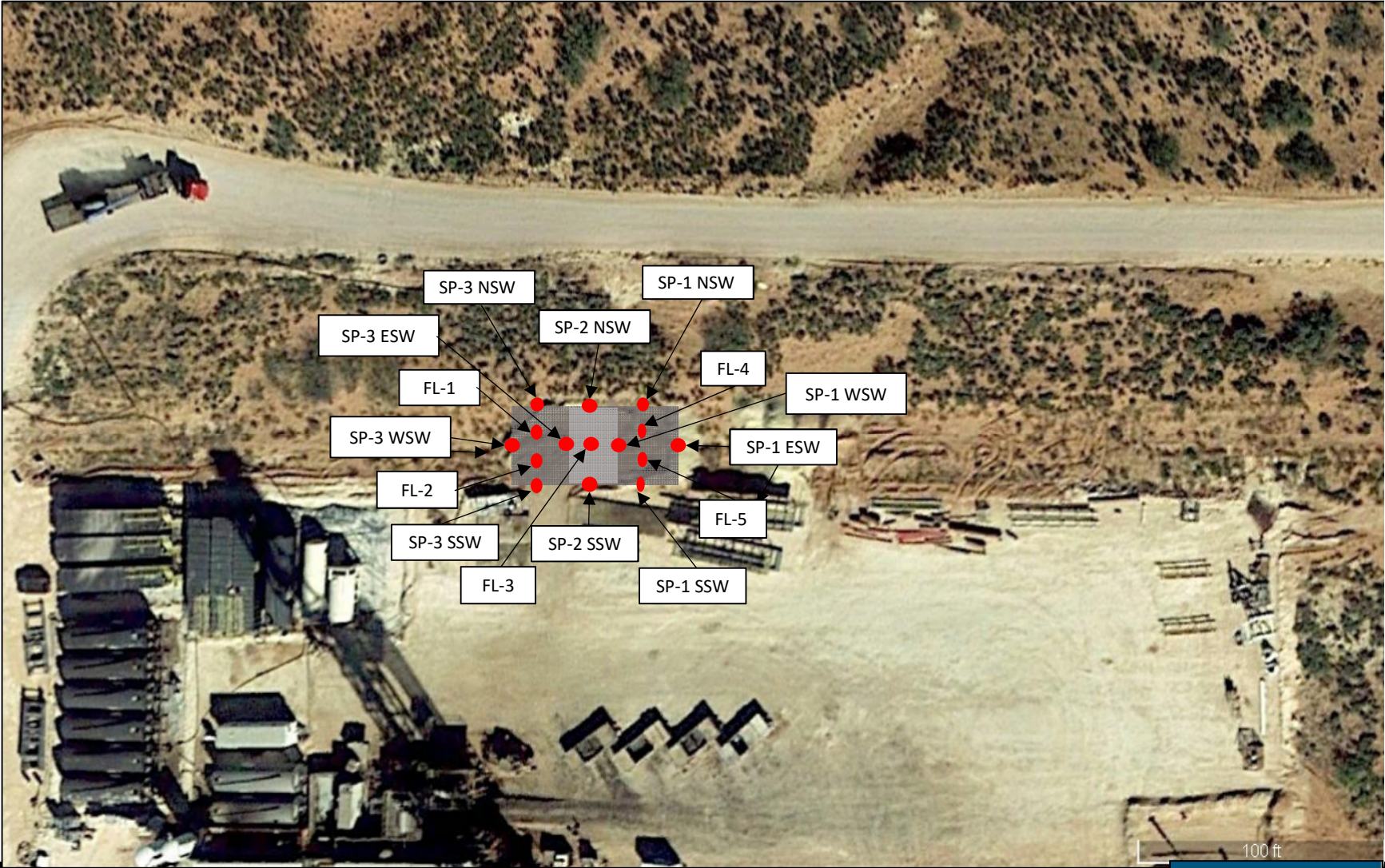
LEGEND:  ● Site Location	<b>Figure 1</b>  Topographical Map COG Operating, LLC White Falcon 16 State #023H Lea County, NM	Scale: 1" = ~1,500'	 Results you can rely on
		Drafted by: ZC   Checked by: JL	
		Draft: September 19, 2018	
		GPS: 32.13689 -103.377934	
		UL "D", Sec. 16, T25S, R35E	
		TRC Proj. No: 293170	








<b>LEGEND:</b>		<b>Figure 2</b>  Aerial Map COG Operating, LLC White Falcon 16 State #023H Lea County, NM	Scale: 1" = ~2,000'		
	Site Location		Drafted by: ZC   Checked by: JL		
	Fresh Water Well		Draft: September 19, 2018		
	100-Year Floodplain		GPS: 32.13689 -103.377934		
	High/Critical Karst		UL "D", Sec. 16, T25S, R35E		
	Non-Industrial Building		TRC Proj. No: 293170		
	Municipal Well Field				
	Subsurface Mine				
	1/2 Mile Radius				





**LEGEND:**

	Excavated Area (4 ft)
	Excavated Area (1 ft)
	Composite Confirmation Samples

**Figure 3**  
Site & Confirmation Sample  
Location Map  
COG Operating, LLC  
White Falcon 16 State #023H  
Lea County, NM

Scale 1" = 65'		
Drafted by: BC   Checked by: ZC		
Draft: December 10, 2018		
GPS:	32.13689	-103.377934
UL "D", Sec. 16, T25S, R35E		
TRC Proj. No:	293170	





New Mexico Office of the State Engineer  
Wells with Well Log Information

No wells found.

UTMAD83 Radius Search (in meters):

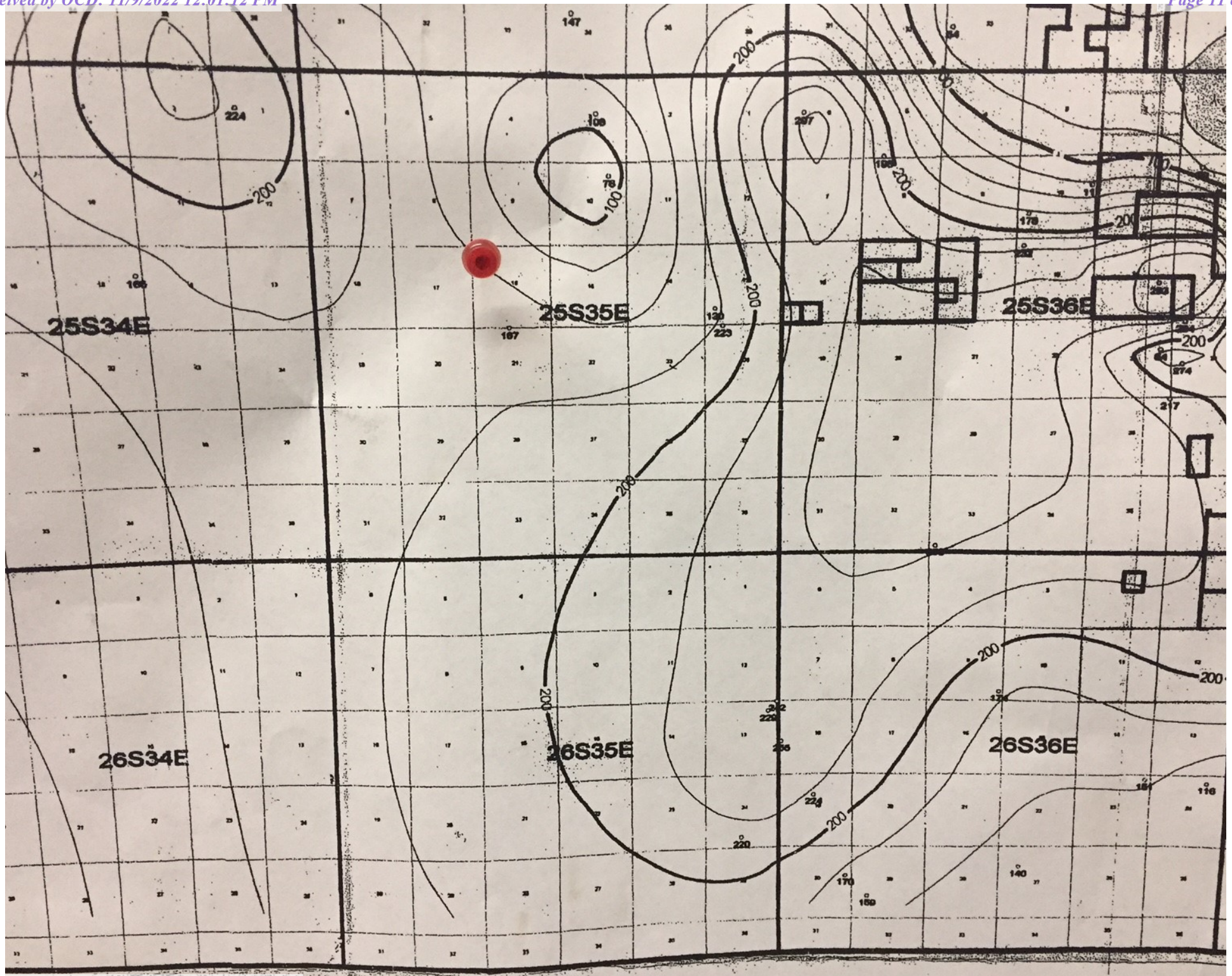
Easting (X): 652993      Northing (Y): 3556758.69      Radius: 1610

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

9/14/18 1:29 PM

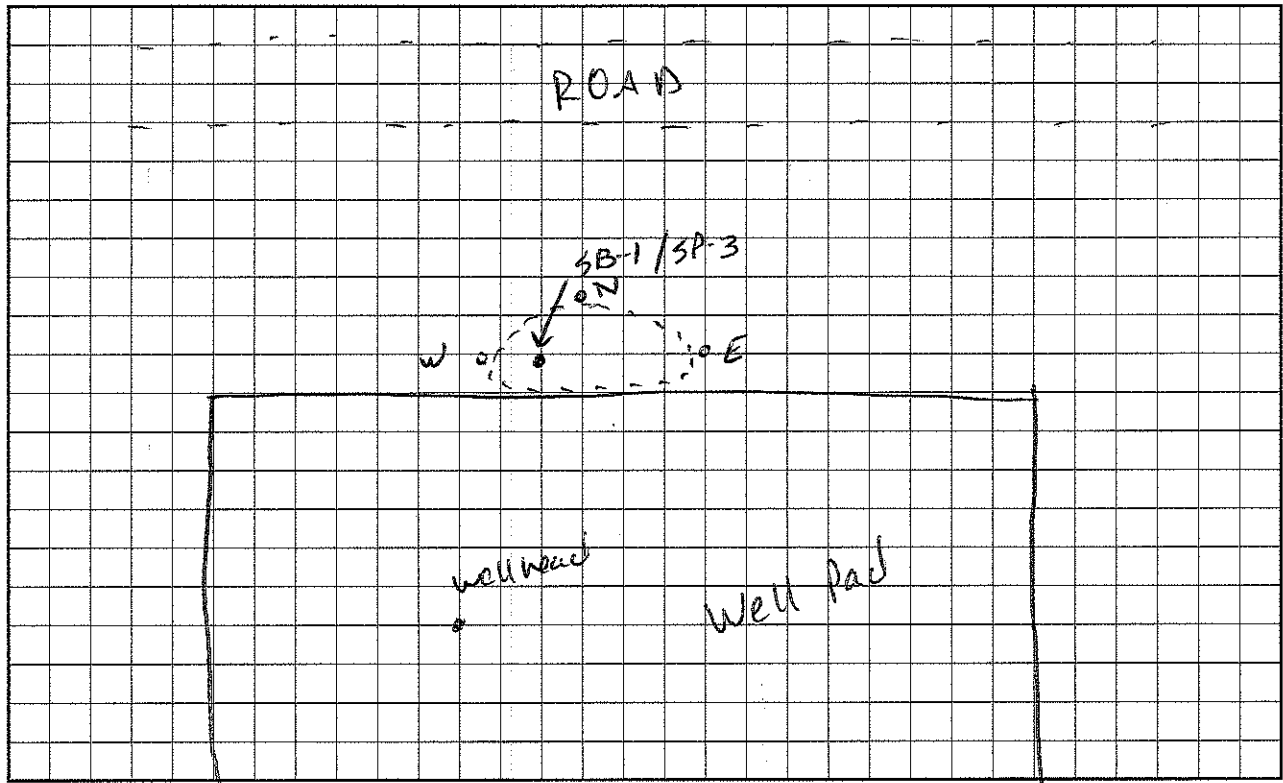
WELLS WITH WELL LOG INFORMATION





Site Name: White Falcon 16 State #02311Date: 8/17/2018

## Field Observation Log



ID	CI-	Odor/PID
SB-106'	72,600	None
SB-108'	72,600	None
SB-1010'	260	None
SB-1012'	2120	None
GPS:		

ID	CI-	Odor/PID
NP6"	2120	None
GPS:		

ID	CI-	Odor/PID
WP6"	2120	None
GPS:		

ID	CI-	Odor/PID
EP6"	2120	None
GPS:		

ID	CI-	Odor/PID
GPS:		

ID	CI-	Odor/PID
GPS:		

ID	CI-	Odor/PID
GPS:		

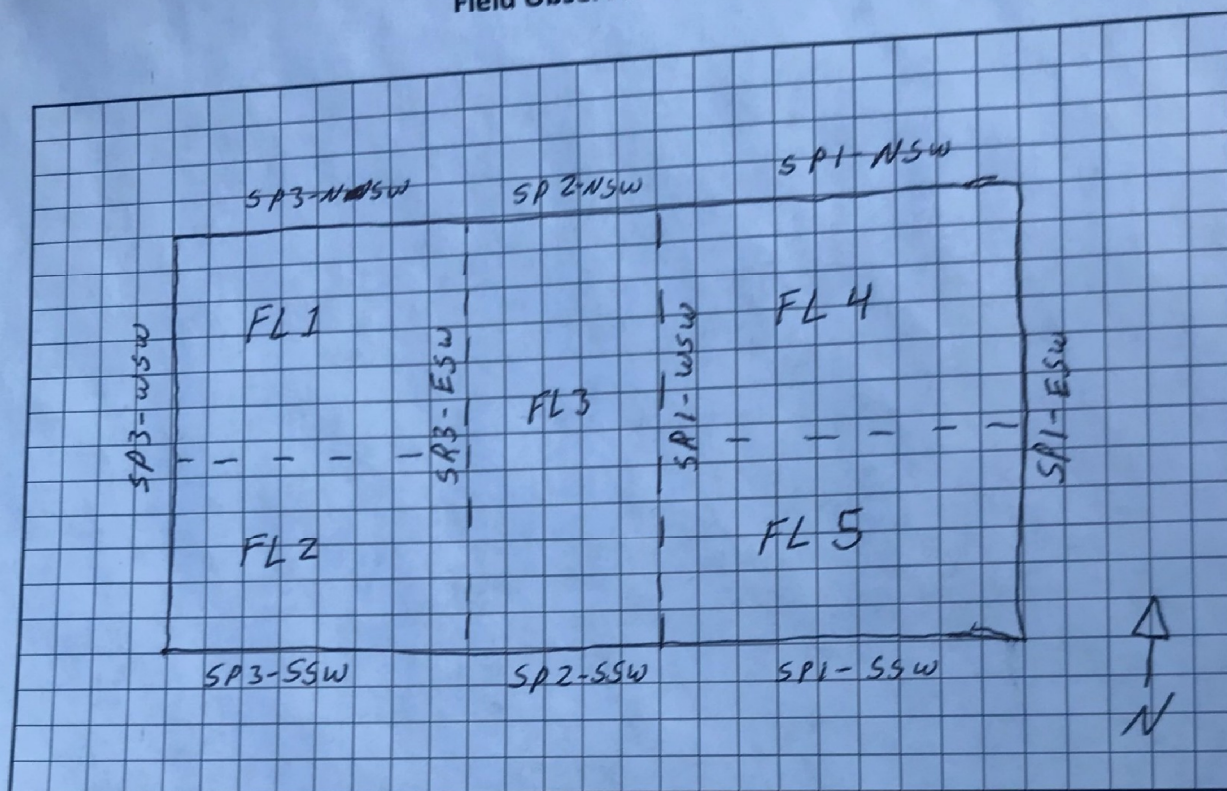
ID	CI-	Odor/PID
GPS:		

ID	CI-	Odor/PID
GPS:		



Site Name: White Falcon 16 State #0234Date: 11-13-18

## Field Observation Log



ID	CI-	Odor/PID
FL1	205	None
FL2	348	None
FL3	335	None
FL4	262	None
GPS:		

ID	CI-	Odor/PID
<del>SP3-NSW</del>	<del>166</del>	<del>None</del>
SP1-NSW	166	None
SP1-SSW	379	None
SP1-ESW	212	None
GPS:		

ID	CI-	Odor/PID
GPS:		

ID	CI-	Odor/PID
FL5	141	None
SP3-NSW	139	None
SP3-SSW	200	None
SP3-ESW	171	None
GPS:		

ID	CI-	Odor/PID
SP1-NSW	259	None
GPS:		

ID	CI-	Odor/PID
GPS:		

ID	CI-	Odor/PID
SP3-WSW	<del>182</del>	None
SP2-NSW	141	None
SP2-SSW	289	None
<del>SP2-ESW</del>		
GPS:		

ID	CI-	Odor/PID
GPS:		

ID	CI-	Odor/PID
GPS:		

# Analytical Report 590553

for  
**TRC Solutions, Inc**

**Project Manager: Joel Lowry**

**White Falcon 16 State 023H**

**02-JUL-18**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-18-26), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (T104704295-17-16), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-17-12)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-17-16)  
Xenco-Odessa (EPA Lab Code: TX00158): Texas (T104704400-18-15)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-17-3)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)  
Xenco-Atlanta (LELAP Lab ID #04176)  
Xenco-Tampa: Florida (E87429)  
Xenco-Lakeland: Florida (E84098)



02-JUL-18

Project Manager: **Joel Lowry**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **590553**  
**White Falcon 16 State 023H**  
Project Address: Lea Co., NM

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 590553. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 590553 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

---

**Julian Martinez**

Odessa Laboratory Director

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

*A Small Business and Minority Status Company that delivers SERVICE and QUALITY*

Houston - Dallas - Midland - San Antonio - Phoenix - Oklahoma - Latin America

**Sample Cross Reference 590553****TRC Solutions, Inc, Midland, TX**

White Falcon 16 State 023H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SP-1 @ 1'	S	06-25-18 15:00	1 ft	590553-001
SP-1 @ 4'	S	06-25-18 15:10	4 ft	590553-002
SP-1 @ 8'	S	06-25-18 15:20	8 ft	590553-003
SP-2 @ 1'	S	06-25-18 15:30	1 ft	590553-004
SP-3 @ 1'	S	06-25-18 15:40	1 ft	590553-005
SP-3 @ 4'	S	06-25-18 15:50	4 ft	590553-006
SP-3 @ 8'	S	06-25-18 16:00	8 ft	590553-007
SP @ 6"	S	06-25-18 16:10	6 ft	590553-008





## CASE NARRATIVE

**Client Name: TRC Solutions, Inc**

**Project Name: White Falcon 16 State 023H**

Project ID:

Work Order Number(s): 590553

Report Date: 02-JUL-18

Date Received: 06/27/2018

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**Sample receipt non conformances and comments:**

None

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**Sample receipt non conformances and comments per sample:**

None

**Analytical non conformances and comments:**

Batch: LBA-3055169 Inorganic Anions by EPA 300

Lab Sample ID 590553-001 was randomly selected for Matrix Spike/Matrix Spike Duplicate (MS/MSD). Chloride recovered below QC limits in the Matrix Spike and Matrix Spike Duplicate. Outlier/s are due to possible matrix interference. Samples in the analytical batch are: 590553-001, -002, -003, -004, -005, -006, -007, -008.

The Laboratory Control Sample for Chloride is within laboratory Control Limits, therefore the data was accepted.



# Certificate of Analysis Summary 590553

TRC Solutions, Inc, Midland, TX

Project Name: White Falcon 16 State 023H



Project Id:

Contact: Joel Lowry

Project Location: Lea Co., NM

Date Received in Lab: Wed Jun-27-18 10:15 am

Report Date: 02-JUL-18

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	590553-001	590553-002	590553-003	590553-004	590553-005	590553-006
	<i>Field Id:</i>	SP-1 @1'	SP-1 @4'	SP-1 @8'	SP-2 @1'	SP-3 @1'	SP-3 @4'
	<i>Depth:</i>	1- ft	4- ft	8- ft	1- ft	1- ft	4- ft
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Jun-25-18 15:00	Jun-25-18 15:10	Jun-25-18 15:20	Jun-25-18 15:30	Jun-25-18 15:40	Jun-25-18 15:50
Chloride by EPA 300	<i>Extracted:</i>	Jun-29-18 10:30	Jun-29-18 10:30	Jun-29-18 10:30	Jun-29-18 10:30	Jun-29-18 10:30	Jun-29-18 10:30
	<i>Analyzed:</i>	Jun-29-18 13:13	Jun-29-18 13:29	Jun-29-18 13:34	Jun-29-18 13:40	Jun-29-18 13:45	Jun-29-18 14:01
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		836 4.99	3060 24.9	193 4.94	65.3 4.97	1550 24.8	1580 24.9

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use.  
The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories.  
XENCO Laboratories assumes no responsibility and makes no warranty to the end use of the data hereby presented.  
Our liability is limited to the amount invoiced for this work order unless otherwise agreed to in writing.

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Julian Martinez  
Odessa Laboratory Director



# Certificate of Analysis Summary 590553

TRC Solutions, Inc, Midland, TX

Project Name: White Falcon 16 State 023H



Project Id:

Contact: Joel Lowry

Project Location: Lea Co., NM

Date Received in Lab: Wed Jun-27-18 10:15 am

Report Date: 02-JUL-18

Project Manager: Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	590553-007	590553-008				
	<i>Field Id:</i>	SP-3 @8'	SP @ 6"				
	<i>Depth:</i>	8- ft	6- ft				
	<i>Matrix:</i>	SOIL	SOIL				
	<i>Sampled:</i>	Jun-25-18 16:00	Jun-25-18 16:10				
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Jun-29-18 10:30	Jun-29-18 10:30				
	<i>Analyzed:</i>	Jun-29-18 14:07	Jun-29-18 14:12				
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL				
Chloride		11400 99.4	251 4.92				

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---

Julian Martinez  
Odessa Laboratory Director



## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
- H** The LCS data for this analytical batch was reported above the laboratory control limits. Supporting QC Data were reviewed by the Department Supervisor and QA Director. Data were determined to be valid for reporting.
- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

**BKS/LCS** Blank Spike/Laboratory Control Sample      **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

**MD/SD** Method Duplicate/Sample Duplicate      **MS** Matrix Spike      **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

\* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation





## BS / BSD Recoveries



Project Name: White Falcon 16 State 023H

Work Order #: 590553

Project ID:

Analyst: SCM

Date Prepared: 06/29/2018

Date Analyzed: 06/29/2018

Lab Batch ID: 3055169

Sample: 7657603-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<4.99	250	250	100	250	246	98	2	90-110	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



Project Name: White Falcon 16 State 023H

Work Order #: 590553

Project ID:

Lab Batch ID: 3055169

QC- Sample ID: 590546-003 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/29/2018

Date Prepared: 06/29/2018

Analyst: SCM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<4.92	246	247	100	246	243	99	2	90-110	20	

Lab Batch ID: 3055169

QC- Sample ID: 590553-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 06/29/2018

Date Prepared: 06/29/2018

Analyst: SCM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	836	250	1020	74	250	1020	74	0	90-110	20	X

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



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**CHAIN OF CUSTODY**

Page 1 of 1

Page 1 Of 1

[illegible]

any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xencro. A minimum charge of \$75 will be applied to each project. Xencro's liability will be limited to the cost of samples. Any samples received by Xencro but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.





# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 06/27/2018 10:15:00 AM

Work Order #: 590553

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

## Sample Receipt Checklist

## Comments

#1 *Temperature of cooler(s)?	.2
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	No
#18 Water VOC samples have zero headspace?	N/A

\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:

Katie Lowe

Date: 06/27/2018

Checklist reviewed by:

Kelsey Brooks

Date: 06/29/2018

# Analytical Report 596453

for  
**TRC Solutions, Inc**

**Project Manager: Joel Lowry**

**White Falcon 16 #23H**

**27-AUG-18**

Collected By: Client



**1211 W. Florida Ave, Midland TX 79701**

Xenco-Houston (EPA Lab Code: TX00122):  
Texas (T104704215-18-27), Arizona (AZ0765), Florida (E871002-24), Louisiana (03054)  
Oklahoma (2017-142)

Xenco-Dallas (EPA Lab Code: TX01468):  
Texas (T104704295-18-17), Arizona (AZ0809), Arkansas (17-063-0)

Xenco-El Paso (EPA Lab Code: TX00127): Texas (T104704221-18-13)  
Xenco-Lubbock (EPA Lab Code: TX00139): Texas (T104704219-18-17)  
Xenco-Midland (EPA Lab Code: TX00158): Texas (T104704400-18-16)  
Xenco-San Antonio (EPA Lab Code: TNI02385): Texas (T104704534-18-4)  
Xenco Phoenix (EPA Lab Code: AZ00901): Arizona (AZ0757)  
Xenco-Phoenix Mobile (EPA Lab Code: AZ00901): Arizona (AZM757)  
Xenco-Atlanta (LELAP Lab ID #04176)  
Xenco-Tampa: Florida (E87429)  
Xenco-Lakeland: Florida (E84098)





27-AUG-18

Project Manager: **Joel Lowry**  
**TRC Solutions, Inc**  
2057 Commerce  
Midland, TX 79703

Reference: XENCO Report No(s): **596453**  
**White Falcon 16 #23H**  
Project Address: Lea Co.,NM

**Joel Lowry:**

We are reporting to you the results of the analyses performed on the samples received under the project name referenced above and identified with the XENCO Report Number(s) 596453. All results being reported under this Report Number apply to the samples analyzed and properly identified with a Laboratory ID number. Subcontracted analyses are identified in this report with either the NELAC certification number of the subcontract lab in the analyst ID field, or the complete subcontracted report attached to this report.

Unless otherwise noted in a Case Narrative, all data reported in this Analytical Report are in compliance with NELAC standards. The uncertainty of measurement associated with the results of analysis reported is available upon request. Should insufficient sample be provided to the laboratory to meet the method and NELAC Matrix Duplicate and Matrix Spike requirements, then the data will be analyzed, evaluated and reported using all other available quality control measures.

The validity and integrity of this report will remain intact as long as it is accompanied by this letter and reproduced in full, unless written approval is granted by XENCO Laboratories. This report will be filed for at least 5 years in our archives after which time it will be destroyed without further notice, unless otherwise arranged with you. The samples received, and described as recorded in Report No. 596453 will be filed for 45 days, and after that time they will be properly disposed without further notice, unless otherwise arranged with you. We reserve the right to return to you any unused samples, extracts or solutions related to them if we consider so necessary (e.g., samples identified as hazardous waste, sample sizes exceeding analytical standard practices, controlled substances under regulated protocols, etc).

We thank you for selecting XENCO Laboratories to serve your analytical needs. If you have any questions concerning this report, please feel free to contact us at any time.

Respectfully,

A handwritten signature in black ink that reads 'Kelsey Brooks'.

**Kelsey Brooks**

Project Manager

***Recipient of the Prestigious Small Business Administration Award of Excellence in 1994.***

*Certified and approved by numerous States and Agencies.*

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**Sample Cross Reference 596453****TRC Solutions, Inc, Midland, TX**

White Falcon 16 #23H

Sample Id	Matrix	Date Collected	Sample Depth	Lab Sample Id
SB-1 @ 8'	S	08-17-18 12:00	8 ft	596453-001
SB-1 @ 10'	S	08-17-18 12:15	10 ft	596453-002
SB-1 @ 12'	S	08-17-18 12:30	12 ft	596453-003
N @ 6"	S	08-17-18 12:45	6 In	596453-004
W @ 6"	S	08-17-18 13:00	6 In	596453-005
E @ 6"	S	08-17-18 13:15	6 In	596453-006





## CASE NARRATIVE

**Client Name:** TRC Solutions, Inc  
**Project Name:** White Falcon 16 #23H

Project ID:  
Work Order Number(s): 596453

Report Date: 27-AUG-18  
Date Received: 08/21/2018

---

**Sample receipt non conformances and comments:**

None

---

**Sample receipt non conformances and comments per sample:**

None



# Certificate of Analysis Summary 596453

TRC Solutions, Inc, Midland, TX

Project Name: White Falcon 16 #23H



**Project Id:**

**Contact:** Joel Lowry

**Project Location:** Lea Co.,NM

**Date Received in Lab:** Tue Aug-21-18 10:35 am

**Report Date:** 27-AUG-18

**Project Manager:** Kelsey Brooks

<i>Analysis Requested</i>	<i>Lab Id:</i>	596453-001	596453-002	596453-003	596453-004	596453-005	596453-006
	<i>Field Id:</i>	SB-1 @8'	SB-1 @ 10'	SB-1 @ 12'	N @ 6"	W @ 6"	E @ 6"
	<i>Depth:</i>	8- ft	10- ft	12- ft	6- In	6- In	6- In
	<i>Matrix:</i>	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	<i>Sampled:</i>	Aug-17-18 12:00	Aug-17-18 12:15	Aug-17-18 12:30	Aug-17-18 12:45	Aug-17-18 13:00	Aug-17-18 13:15
<b>Chloride by EPA 300</b>	<i>Extracted:</i>	Aug-21-18 17:30	Aug-21-18 15:00	Aug-21-18 15:00	Aug-21-18 15:00	Aug-22-18 09:00	Aug-22-18 09:00
	<i>Analyzed:</i>	Aug-21-18 23:13	Aug-21-18 20:02	Aug-21-18 20:07	Aug-21-18 20:13	Aug-22-18 10:38	Aug-22-18 12:05
	<i>Units/RL:</i>	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL	mg/kg RL
Chloride		6540 49.9	314 4.99	7.14 4.97	5.17 4.95	25.1 4.95	<4.95 4.95

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Houston - Dallas - San Antonio - Atlanta - Tampa - Boca Raton - Latin America - Odessa - Corpus Christi

Kelsey Brooks  
Project Manager



## Flagging Criteria



- X** In our quality control review of the data a QC deficiency was observed and flagged as noted. MS/MSD recoveries were found to be outside of the laboratory control limits due to possible matrix /chemical interference, or a concentration of target analyte high enough to affect the recovery of the spike concentration. This condition could also affect the relative percent difference in the MS/MSD.
- B** A target analyte or common laboratory contaminant was identified in the method blank. Its presence indicates possible field or laboratory contamination.
- D** The sample(s) were diluted due to targets detected over the highest point of the calibration curve, or due to matrix interference. Dilution factors are included in the final results. The result is from a diluted sample.
- E** The data exceeds the upper calibration limit; therefore, the concentration is reported as estimated.
- F** RPD exceeded lab control limits.
- J** The target analyte was positively identified below the quantitation limit and above the detection limit.
- U** Analyte was not detected.
- L** The LCS data for this analytical batch was reported below the laboratory control limits for this analyte. The department supervisor and QA Director reviewed data. The samples were either reanalyzed or flagged as estimated concentrations.
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- K** Sample analyzed outside of recommended hold time.
- JN** A combination of the "N" and the "J" qualifier. The analysis indicates that the analyte is "tentatively identified" and the associated numerical value may not be consistent with the amount actually present in the environmental sample.

\*\* Surrogate recovered outside laboratory control limit.

**BRL** Below Reporting Limit.

**RL** Reporting Limit

**MDL** Method Detection Limit      **SDL** Sample Detection Limit      **LOD** Limit of Detection

**PQL** Practical Quantitation Limit      **MQL** Method Quantitation Limit      **LOQ** Limit of Quantitation

**DL** Method Detection Limit

**NC** Non-Calculable

**SMP** Client Sample      **BLK** Method Blank

**BKS/LCS** Blank Spike/Laboratory Control Sample      **BKSD/LCSD** Blank Spike Duplicate/Laboratory Control Sample Duplicate

**MD/SD** Method Duplicate/Sample Duplicate      **MS** Matrix Spike      **MSD:** Matrix Spike Duplicate

+ NELAC certification not offered for this compound.

\* (Next to analyte name or method description) = Outside XENCO's scope of NELAC accreditation



## BS / BSD Recoveries



Project Name: White Falcon 16 #23H

Work Order #: 596453

Project ID:

Analyst: SCM

Date Prepared: 08/21/2018

Date Analyzed: 08/21/2018

Lab Batch ID: 3060815

Sample: 7660845-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	274	110	250	273	109	0	90-110	20	

Analyst: SCM

Date Prepared: 08/21/2018

Date Analyzed: 08/21/2018

Lab Batch ID: 3060822

Sample: 7660857-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	250	100	250	249	100	0	90-110	20	

Analyst: SCM

Date Prepared: 08/22/2018

Date Analyzed: 08/22/2018

Lab Batch ID: 3060861

Sample: 7660892-1-BKS

Batch #: 1

Matrix: Solid

Units: mg/kg

## BLANK /BLANK SPIKE / BLANK SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300	Blank Sample Result [A]	Spike Added [B]	Blank Spike Result [C]	Blank Spike %R [D]	Spike Added [E]	Blank Spike Duplicate Result [F]	Blk. Spk Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Analytes											
Chloride	<5.00	250	247	99	250	247	99	0	90-110	20	

Relative Percent Difference RPD =  $200 * |(C-F)/(C+F)|$ Blank Spike Recovery [D] =  $100 * (C)/[B]$ Blank Spike Duplicate Recovery [G] =  $100 * (F)/[E]$ 

All results are based on MDL and Validated for QC Purposes



## Form 3 - MS / MSD Recoveries



Project Name: White Falcon 16 #23H

Work Order #: 596453

Project ID:

Lab Batch ID: 3060815

QC- Sample ID: 596446-001 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/21/2018

Date Prepared: 08/21/2018

Analyst: SCM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	943	248	1140	79	248	1140	79	0	90-110	20	X

Lab Batch ID: 3060815

QC- Sample ID: 596446-005 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/21/2018

Date Prepared: 08/21/2018

Analyst: SCM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	123	248	368	99	248	370	100	1	90-110	20	

Lab Batch ID: 3060822

QC- Sample ID: 596446-008 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/21/2018

Date Prepared: 08/21/2018

Analyst: SCM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	351	250	584	93	250	586	94	0	90-110	20	

Matrix Spike Percent Recovery  $[D] = 100 \times (C-A)/B$   
 Relative Percent Difference  $RPD = 200 \times |(C-F)/(C+F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 \times (F-A)/E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



## Form 3 - MS / MSD Recoveries



Project Name: White Falcon 16 #23H

Work Order #: 596453

Project ID:

Lab Batch ID: 3060822

QC- Sample ID: 596449-002 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/21/2018

Date Prepared: 08/21/2018

Analyst: SCM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	74.4	248	325	101	248	324	101	0	90-110	20	

Lab Batch ID: 3060861

QC- Sample ID: 596453-005 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/22/2018

Date Prepared: 08/22/2018

Analyst: SCM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	25.1	248	288	106	248	286	105	1	90-110	20	

Lab Batch ID: 3060861

QC- Sample ID: 596453-006 S

Batch #: 1 Matrix: Soil

Date Analyzed: 08/22/2018

Date Prepared: 08/22/2018

Analyst: SCM

Reporting Units: mg/kg

## MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY STUDY

Chloride by EPA 300 Analytes	Parent Sample Result [A]	Spike Added [B]	Spiked Sample Result [C]	Spiked Sample %R [D]	Spike Added [E]	Duplicate Spiked Sample Result [F]	Spiked Dup. %R [G]	RPD %	Control Limits %R	Control Limits %RPD	Flag
Chloride	<4.95	248	250	101	248	250	101	0	90-110	20	

Matrix Spike Percent Recovery  $[D] = 100 * (C - A) / B$   
 Relative Percent Difference  $RPD = 200 * |(C - F) / (C + F)|$

Matrix Spike Duplicate Percent Recovery  $[G] = 100 * (F - A) / E$

ND = Not Detected, J = Present Below Reporting Limit, B = Present in Blank, NR = Not Requested, I = Interference, NA = Not Applicable

N = See Narrative, EQL = Estimated Quantitation Limit, NC = Non Calculable - Sample amount is > 4 times the amount spiked.



**Setting the Standard since 1990**  
**Stafford, Texas (281-240-4200)**  
**Dallas Texas (214-902-0300)**

**San Antonio, Texas (210-509-3334)**  
**Midland, Texas (432-704-5251)**

**Phoenix, Arizona (480-355-0900)**

# CHAIN OF CUSTODY

Page 1 Of 1

Client / Reporting Information						Project Information						Analytical Information						Matrix Codes					
Company Name / Branch: TRC Environmental Corporation						Project Name/Number: White Falcon 16 #23H																	
Company Address: 2057 Commerce Drive Midland, TX 79703						Project Location: Lea Co. NM																	
Email: jlowry@trcsolutions.com						Phone No: 432-486-4450						Invoice To: COG Operating C/O Becky Haskell											
Project Contact: Joel Lowry						Invoice:																	
Sampler's Name Becky Griffin																							
No.	Field ID / Point of Collection					Collection				Number of preserved bottles													
1	SB-1 @ 8'	Sample Depth	Date	Time	Matrix	# of bottles	HCl	NaOH/Zn Acetate	HNO3	H2SO4	NaOH	NaHSO4	MEOH	NONE									
2	SB-1 @ 10'	8ft	8/17/2018	12:00	S	1									X								
3	SB-1 @ 12'	10ft	8/17/2018	12:15	S	1									X								
4	N @ 6"	12ft	8/17/2018	12:30	S	1									X								
5	W @ 6"	6in	8/17/2018	12:45	S	1									X								
6	E @ 6"	6in	8/17/2018	1:00	S	1									X								
7		6in	8/17/2018	1:15	S	1									X								
8																							
9																							
10																							
						Data Deliverable Information										Notes:							
<input type="checkbox"/> Same Day TAT						<input type="checkbox"/> 5 Day TAT		Level II Std QC		<input type="checkbox"/> Level IV (Full Data Pkg /raw data)						jlowry@trcsolutions.com bcooper@trcsolutions.com							
<input type="checkbox"/> Next Day EMERGENCY						<input type="checkbox"/> 7 Day TAT		Level III Std QC + Forms		<input type="checkbox"/> TRRP Level IV						thaskell@concho.com							
<input type="checkbox"/> 2 Day EMERGENCY						<input checked="" type="checkbox"/> Contract TAT		Level 3 (CLP Forms)		<input type="checkbox"/> UST / RG -411						zconder@trcsolutions.com							
<input type="checkbox"/> 3 Day EMERGENCY								TRRP Checklist		<input type="checkbox"/>						dneel2@concho.com							
TAT Starts Day received by Lab, if received by 5:00 pm																							
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																							
Relinquished by Sampler:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:							
3		8-20-18 2:18		Beckyanna Gonzalez		2		2		2		2		2		2							
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:							
3				3		3		4		4		4		4		4							
Relinquished by:		Date Time:		Received By:		Date Time:		Relinquished By:		Date Time:		Received By:		Date Time:		Relinquished By:							
5				5		5		5		5		5		5		5							
FED-EX / UPS: Tracking # 6000439170175																							
Office Cooler Temp. Thermo Corr. Factor 0.3 1085																							

Notice: Notice. Signature of this document and relinquishment of samples constitutes a valid purchase order from client company to Xeno, its affiliates and subcontractors. It assigns standard terms and conditions of service. Xeno will be liable only for the cost of samples and shall not assume any responsibility for any losses or expenses incurred by the Client if such losses are due to circumstances beyond the control of Xeno. A minimum charge of \$75 will be applied to each project. Xeno's liability will be limited to the cost of samples. Any samples received by Xeno but not analyzed will be invoiced at \$5 per sample. These terms will be enforced unless previously negotiated under a fully executed client contract.



SHIP DATE: 20AUG18  
ACTWGT: 13.00 LB MAN  
CAD: 0909328/CAFE3210  
DIMS: 15x11x9 IN  
BILL RECIPIENT

IN ID: H08A (070) 392-1000  
\*\* MAIL SERVICES ETC, LLC  
4008 N GRIMES  
HOBBS, NM 88240  
UNITED STATES US

TO XENCO LABORATORIES  
XENCO LABORATORIES  
1211 W FLORIDA AVE  
MIDLAND TX 79701  
(432) 563-1800 REF: DEPT:

INV: PO:



FedEx Express  
  
J18118042001uv

TRK# 6606 3917 6175  
0201

41 MAFA

TUE - 21 AUG 10:30A  
PRIORITY OVERNIGHT

79701  
TX-US LBB



Part # 156148-434 RRD 09/16

551C1/3309/104C





# XENCO Laboratories

## Prelogin/Nonconformance Report- Sample Log-In



Client: TRC Solutions, Inc

Date/ Time Received: 08/21/2018 10:35:00 AM

Work Order #: 596453

Acceptable Temperature Range: 0 - 6 degC

Air and Metal samples Acceptable Range: Ambient

Temperature Measuring device used : R8

**Sample Receipt Checklist****Comments**

#1 *Temperature of cooler(s)?	.3
#2 *Shipping container in good condition?	Yes
#3 *Samples received on ice?	Yes
#4 *Custody Seals intact on shipping container/ cooler?	N/A
#5 Custody Seals intact on sample bottles?	N/A
#6 *Custody Seals Signed and dated?	N/A
#7 *Chain of Custody present?	Yes
#8 Any missing/extra samples?	No
#9 Chain of Custody signed when relinquished/ received?	Yes
#10 Chain of Custody agrees with sample labels/matrix?	Yes
#11 Container label(s) legible and intact?	Yes
#12 Samples in proper container/ bottle?	Yes
#13 Samples properly preserved?	Yes
#14 Sample container(s) intact?	Yes
#15 Sufficient sample amount for indicated test(s)?	Yes
#16 All samples received within hold time?	Yes
#17 Subcontract of sample(s)?	N/A
#18 Water VOC samples have zero headspace?	N/A

\* Must be completed for after-hours delivery of samples prior to placing in the refrigerator

Analyst:

PH Device/Lot#:

Checklist completed by:

Brianna Teel

Date: 08/21/2018

Checklist reviewed by:

Kelsey Brooks

Date: 08/21/2018



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

---

October 25, 2018

REBECCA HASKELL

COG OPERATING

P. O. BOX 1630

ARTESIA, NM 88210

RE: WHITE FALCON 16 #023H

Enclosed are the results of analyses for samples received by the laboratory on 10/24/18 16:45.

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](http://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:**

COG OPERATING  
REBECCA HASKELL  
P. O. BOX 1630  
ARTESIA NM, 88210  
Fax To: NONE

Received: 10/24/2018  
Reported: 10/25/2018  
Project Name: WHITE FALCON 16 #023H  
Project Number: NONE GIVEN  
Project Location: NOT GIVEN

Sampling Date: 10/24/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP - 1B @ SURFACE (H803056-01)**

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	10/25/2018	ND	2.05	102	2.00	0.757	
Toluene*	<0.050	0.050	10/25/2018	ND	1.95	97.5	2.00	0.0918	
Ethylbenzene*	<0.050	0.050	10/25/2018	ND	1.94	97.0	2.00	0.831	
Total Xylenes*	<0.150	0.150	10/25/2018	ND	5.84	97.3	6.00	0.672	
Total BTEX	<0.300	0.300	10/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 89.2 % 69.8-142

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	10/25/2018	ND	194	96.9	200	1.34	
DRO >C10-C28*	20.1	10.0	10/25/2018	ND	207	103	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2018	ND					

Surrogate: 1-Chlorooctane 84.4 % 41-142

Surrogate: 1-Chlorooctadecane 82.9 % 37.6-147

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:**

COG OPERATING  
 REBECCA HASKELL  
 P. O. BOX 1630  
 ARTESIA NM, 88210  
 Fax To: NONE

Received: 10/24/2018  
 Reported: 10/25/2018  
 Project Name: WHITE FALCON 16 #023H  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 10/24/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP - 2B @ SURFACE (H803056-02)**

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	10/25/2018	ND	2.05	102	2.00	0.757	
Toluene*	<0.050	0.050	10/25/2018	ND	1.95	97.5	2.00	0.0918	
Ethylbenzene*	<0.050	0.050	10/25/2018	ND	1.94	97.0	2.00	0.831	
Total Xylenes*	<0.150	0.150	10/25/2018	ND	5.84	97.3	6.00	0.672	
Total BTEx	<0.300	0.300	10/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 90.7 % 69.8-142

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	10/25/2018	ND	194	96.9	200	1.34	
DRO >C10-C28*	286	10.0	10/25/2018	ND	207	103	200	2.01	
EXT DRO >C28-C36	12.4	10.0	10/25/2018	ND					

Surrogate: 1-Chlorooctane 87.6 % 41-142

Surrogate: 1-Chlorooctadecane 99.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

COG OPERATING  
 REBECCA HASKELL  
 P. O. BOX 1630  
 ARTESIA NM, 88210  
 Fax To: NONE

Received: 10/24/2018  
 Reported: 10/25/2018  
 Project Name: WHITE FALCON 16 #023H  
 Project Number: NONE GIVEN  
 Project Location: NOT GIVEN

Sampling Date: 10/24/2018  
 Sampling Type: Soil  
 Sampling Condition: Cool & Intact  
 Sample Received By: Tamara Oldaker

**Sample ID: SP - 3B @ SURFACE (H803056-03)**

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	10/25/2018	ND	2.05	102	2.00	0.757	
Toluene*	<0.050	0.050	10/25/2018	ND	1.95	97.5	2.00	0.0918	
Ethylbenzene*	<0.050	0.050	10/25/2018	ND	1.94	97.0	2.00	0.831	
Total Xylenes*	<0.150	0.150	10/25/2018	ND	5.84	97.3	6.00	0.672	
Total BTEx	<0.300	0.300	10/25/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 92.4 % 69.8-142

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	10/25/2018	ND	194	96.9	200	1.34	
<b>DRO &gt;C10-C28*</b>	<b>112</b>	10.0	10/25/2018	ND	207	103	200	2.01	
EXT DRO >C28-C36	<10.0	10.0	10/25/2018	ND					

Surrogate: 1-Chlorooctane 92.8 % 41-142

Surrogate: 1-Chlorooctadecane 92.0 % 37.6-147

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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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A handwritten signature in cursive script, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



**CARDINAL**  
Laboratories

Rush

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

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





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

---

November 16, 2018

ZACH CONDER

TRC

10 DESTA DR. SUITE 150 E

MIDLAND, TX 79705

RE: WHITE FALCON 16

Enclosed are the results of analyses for samples received by the laboratory on 11/14/18 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](http://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, stylized 'C' and 'K'.

Celey D. Keene

Lab Director/Quality Manager



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

**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FL 1 (H803305-01)**

BTX 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	11/15/2018	ND	2.34	117	2.00	9.59	
Toluene*	<0.050	0.050	11/15/2018	ND	2.29	114	2.00	12.7	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.20	110	2.00	10.9	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.84	114	6.00	10.5	
Total BTX	<0.300	0.300	11/15/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	160	16.0	11/15/2018	ND	416	104	400	12.2		

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 108 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FL 2 (H803305-02)**

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	11/15/2018	ND	2.34	117	2.00	9.59	
Toluene*	<0.050	0.050	11/15/2018	ND	2.29	114	2.00	12.7	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.20	110	2.00	10.9	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.84	114	6.00	10.5	
Total BTEX	<0.300	0.300	11/15/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 107 % 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	256	16.0	11/15/2018	ND	416	104	400	12.2		

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

Cardinal Laboratories

\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FL 3 (H803305-03)**

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	11/15/2018	ND	2.34	117	2.00	9.59	
Toluene*	<0.050	0.050	11/15/2018	ND	2.29	114	2.00	12.7	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.20	110	2.00	10.9	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.84	114	6.00	10.5	
Total BTEX	<0.300	0.300	11/15/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	256	16.0	11/15/2018	ND	416	104	400	12.2	

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 102 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FL 4 (H803305-04)**

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	11/15/2018	ND	2.35	117	2.00	8.91	
Toluene*	<0.050	0.050	11/15/2018	ND	2.24	112	2.00	7.80	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.17	109	2.00	7.53	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.75	113	6.00	7.33	
Total BTEx	<0.300	0.300	11/15/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	128	16.0	11/15/2018	ND	416	104	400	12.2	

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 103 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: FL 5 (H803305-05)**

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	11/15/2018	ND	2.35	117	2.00	8.91		
Toluene*	<0.050	0.050	11/15/2018	ND	2.24	112	2.00	7.80		
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.17	109	2.00	7.53		
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.75	113	6.00	7.33		
Total BTEx	<0.300	0.300	11/15/2018	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	32.0	16.0	11/15/2018	ND	416	104	400	12.2	

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 110 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP 3 - NSW (H803305-06)**

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	11/15/2018	ND	2.35	117	2.00	8.91	
Toluene*	<0.050	0.050	11/15/2018	ND	2.24	112	2.00	7.80	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.17	109	2.00	7.53	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.75	113	6.00	7.33	
Total BTEx	<0.300	0.300	11/15/2018	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	64.0	16.0	11/15/2018	ND	432	108	400	3.77		

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 99.2 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP 3 - SSW (H803305-07)**

BTX 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	11/15/2018	ND	2.35	117	2.00	8.91		
Toluene*	<0.050	0.050	11/15/2018	ND	2.24	112	2.00	7.80		
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.17	109	2.00	7.53		
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.75	113	6.00	7.33		
Total BTX	<0.300	0.300	11/15/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 106 % 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	336	16.0	11/15/2018	ND	432	108	400	3.77		

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP 3 - ESW (H803305-08)**

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	11/15/2018	ND	2.35	117	2.00	8.91		
Toluene*	<0.050	0.050	11/15/2018	ND	2.24	112	2.00	7.80		
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.17	109	2.00	7.53		
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.75	113	6.00	7.33		
Total BTEx	<0.300	0.300	11/15/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	16.0	16.0	11/15/2018	ND	432	108	400	3.77		

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 103 % 41-142

Surrogate: 1-Chlorooctadecane 99.5 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP 3 - WSW (H803305-09)**

BTX 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	11/15/2018	ND	2.35	117	2.00	8.91	
Toluene*	<0.050	0.050	11/15/2018	ND	2.24	112	2.00	7.80	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.17	109	2.00	7.53	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.75	113	6.00	7.33	
Total BTX	<0.300	0.300	11/15/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	224	16.0	11/15/2018	ND	432	108	400	3.77	

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 106 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP 2 - NSW (H803305-10)**

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	11/15/2018	ND	2.35	117	2.00	8.91	
Toluene*	<0.050	0.050	11/15/2018	ND	2.24	112	2.00	7.80	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.17	109	2.00	7.53	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.75	113	6.00	7.33	
Total BTEx	<0.300	0.300	11/15/2018	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	128	16.0	11/15/2018	ND	432	108	400	3.77		

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 100 % 41-142

Surrogate: 1-Chlorooctadecane 96.3 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP 2 - SSW (H803305-11)**

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	11/15/2018	ND	2.35	117	2.00	8.91		
Toluene*	<0.050	0.050	11/15/2018	ND	2.24	112	2.00	7.80		
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.17	109	2.00	7.53		
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.75	113	6.00	7.33		
Total BTEX	<0.300	0.300	11/15/2018	ND						

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	304	16.0	11/15/2018	ND	432	108	400	3.77		

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 107 % 41-142

Surrogate: 1-Chlorooctadecane 100 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP 1 - NSW (H803305-12)**

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	11/15/2018	ND	2.35	117	2.00	8.91	
Toluene*	<0.050	0.050	11/15/2018	ND	2.24	112	2.00	7.80	
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.17	109	2.00	7.53	
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.75	113	6.00	7.33	
Total BTEx	<0.300	0.300	11/15/2018	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	96.0	16.0	11/15/2018	ND	432	108	400	3.77		

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 96.0 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP 1 - SSW (H803305-13)**

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	11/15/2018	ND	2.35	117	2.00	8.91		
Toluene*	<0.050	0.050	11/15/2018	ND	2.24	112	2.00	7.80		
Ethylbenzene*	<0.050	0.050	11/15/2018	ND	2.17	109	2.00	7.53		
Total Xylenes*	<0.150	0.150	11/15/2018	ND	6.75	113	6.00	7.33		
Total BTEx	<0.300	0.300	11/15/2018	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	160	16.0	11/15/2018	ND	432	108	400	3.77	

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 104 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager



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

**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP 1 - ESW (H803305-14)**

BTX 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	11/16/2018	ND	2.35	117	2.00	8.91	
Toluene*	<0.050	0.050	11/16/2018	ND	2.24	112	2.00	7.80	
Ethylbenzene*	<0.050	0.050	11/16/2018	ND	2.17	109	2.00	7.53	
Total Xylenes*	<0.150	0.150	11/16/2018	ND	6.75	113	6.00	7.33	
Total BTX	<0.300	0.300	11/16/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 103 % 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	192	16.0	11/15/2018	ND	432	108	400	3.77		

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 109 % 41-142

Surrogate: 1-Chlorooctadecane 101 % 37.6-147

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Celey D. Keene, Lab Director/Quality Manager





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

**Analytical Results For:**

TRC  
ZACH CONDER  
10 DESTA DR. SUITE 150 E  
MIDLAND TX, 79705  
Fax To:

Received: 11/14/2018  
Reported: 11/16/2018  
Project Name: WHITE FALCON 16  
Project Number: NONE GIVEN  
Project Location: COG

Sampling Date: 11/13/2018  
Sampling Type: Soil  
Sampling Condition: Cool & Intact  
Sample Received By: Tamara Oldaker

**Sample ID: SP 1 - WSW (H803305-15)**

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	11/16/2018	ND	2.35	117	2.00	8.91	
Toluene*	<0.050	0.050	11/16/2018	ND	2.24	112	2.00	7.80	
Ethylbenzene*	<0.050	0.050	11/16/2018	ND	2.17	109	2.00	7.53	
Total Xylenes*	<0.150	0.150	11/16/2018	ND	6.75	113	6.00	7.33	
Total BTEx	<0.300	0.300	11/16/2018	ND					

Surrogate: 4-Bromofluorobenzene (PID) 105 % 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	128	16.0	11/15/2018	ND	432	108	400	3.77	

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	11/14/2018	ND	199	99.5	200	1.52	
DRO >C10-C28*	<10.0	10.0	11/14/2018	ND	208	104	200	1.23	
EXT DRO >C28-C36	<10.0	10.0	11/14/2018	ND					

Surrogate: 1-Chlorooctane 105 % 41-142

Surrogate: 1-Chlorooctadecane 99.6 % 37.6-147

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\*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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

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### Notes and Definitions

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.
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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A handwritten signature in black ink, appearing to read "Celey D. Keene".

---

Celey D. Keene, Lab Director/Quality Manager



TRC

[illegible]

Released to Imaging: 11/9/2022 12:05:09 PM

1952





CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

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

Company Name: <u>TRC</u>		<b>BILL TO</b>		ANALYSIS REQUEST																					
Project Manager: <u>Jack Conder</u>		P.O. #:																							
Address: <u>16 Poston Dr Suite 150E</u>		Company: <u>COG</u>																							
City: <u>Albany</u> State: <u>TX</u> Zip: <u></u>		Attn:																							
Phone #: <u></u> Fax #: <u></u>		Address:																							
Project #: <u></u> Project Owner: <u></u>		City:																							
Project Name: <u>White Talon 16</u>		State:																							
Project Location: <u></u>		Phone #:																							
Sampler Name: <u>Kyle Schaeidt</u>		Fax #:																							
FOR LAB USE ONLY																									
Lab I.D.  <u>H803308</u>	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX					PRESERV.		DATE	TIME	CI-	TPH	BTEx										
				GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER :	ACID/BASE:						ICE / COOL	OTHER :								

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Relinquished By: <u>[Signature]</u>	Date: <u>11-13-18</u>	Received By: <u>[Signature]</u>	Date: <u>11-14-18</u>
Time: <u></u>	Time: <u>8:20</u>	Time: <u></u>	Time: <u></u>

Delivered By: (Circle One) UPS 1.46 #97

Sampler - UPS - Bus - Other:

Sample Condition: Intact Yes No

CHECKED BY: [Signature] (Initials)

REMARKS:

Phone Result: ☐ Yes ☐ No Add'l Phone #:

Fax Result: ☐ Yes ☐ No Add'l Fax #:

Site Name: White Falcon 16 State #23

Date: 8/17/2018

### Soil Profile

Description	ft. bgs
	0
Caliche / Sand Mix	1
	2
Red Sand	3
"	4
	5
"	6
Red Sand w/ Clay	7
	8
	9
	10
	11
	12
	13
	14
Red / Brown Sand w/ Clay	15
	16 To





**Photo 1** - View of affected area prior to delineation activities, facing Northwest.



**Photo 2** - View of affected area prior to remediation activities, facing West.





**Photo 3** - View of affected area during initial investigation, facing East.



**Photo 4** - View of affected area during Geoprobings activities, facing South.





**Photo 5** - View of affected area after excavation activities, facing East.



**Photo 6** - View of affected area after excavation activities, facing West.





**Photo 7** - View of affected area after backfill activities, facing East.



**Photo 8** - View of affected area after backfill activities, facing North.

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

State of New Mexico  
Energy Minerals and Natural Resources

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-141  
Revised April 3, 2017

Submit 1 Copy to appropriate District Office in  
accordance with 19.15.29 NMAC.

### Release Notification and Corrective Action

#### OPERATOR

☒ Initial Report ☐ Final Report

Name of Company: COG Operating, LLC (OGRID# 229137)	Contact: Robert McNeill
Address: 600 West Illinois Avenue, Midland TX 79701	Telephone No.: 432-683-7443
Facility Name: White Falcon 16 State #023H	Facility Type: Well
Surface Owner: State	Mineral Owner: State
API No.: 30-025-43699	

#### LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	16	25S	35E	226	North	812	West	Lea

Latitude: 32.13689 Longitude: -103.377934 NAD83

#### NATURE OF RELEASE

Type of Release: Produced Water	Volume of Release: 53bbls	Volume Recovered: 15bbls
Source of Release: Flowline	Date and Hour of Occurrence: 11/18/2017 2:00pm	Date and Hour of Discovery: 11/18/2017 2:00pm
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Olivia Yu-NMOCD Amber Groves-NMSLO	
By Whom? Rebecca Haskell	Date and Hour: 11/18/2017 5:19pm	
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.\*

**RECEIVED**

By Olivia Yu at 8:31 am, Nov 28, 2017



Describe Cause of Problem and Remedial Action Taken.\*

A third party contractor struck a buried poly flowline coming from the White Falcon 16 State #001H Battery while digging. The line was repaired and put back into service.

Describe Area Affected and Cleanup Action Taken.\*

The release was contained to a 66' x 30' area on the north edge of the location. A vacuum truck was dispatched to the site to recover freestanding fluids. Concho will have the spill area evaluated for any possible impact from the release and we will present a remediation work plan to the NMOCD for approval prior to any significant 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 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: 		<b>OIL CONSERVATION DIVISION</b>	
Printed Name: Sheldon L. Hitchcock		Approved by Environmental Specialist: 	
Title: HSE Coordinator		Approval Date: 11/28/2017	Expiration Date:
E-mail Address: slhitchcock@concho.com		Conditions of Approval: see attached directive	Attached <input checked="" type="checkbox"/>
Date: 11/20/2017	Phone: 575-746-2010		

\* Attach Additional Sheets If Necessary

1RP-4881

nOY1733228951

pOY1733231352

Form C-141

State of New Mexico  
Oil Conservation Division

Page 3

Incident ID	
District RP	1RP-4881
Facility ID	
Application ID	

## Site Assessment/Characterization

*This information must be provided to the appropriate district office no later than 90 days after the release discover date.*

What is the shallowest depth to groundwater beneath the area affected by the release?	125-150 (ft bgs)
Did this release impact groundwater or surface water?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a continuously flowing watercourse or any other significant watercourse?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 200 feet of any lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of an occupied permanent residence, school, hospital, institution, or church?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 500 horizontal feet of a spring or a private domestic fresh water well used by less than five households for domestic or stock watering purposes?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 1000 feet of any other fresh water well or spring?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within incorporated municipal boundaries or within a defined municipal fresh water well field?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within 300 feet of a wetland?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying a subsurface mine?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release overlying an unstable area such as karst geology?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Are the lateral extents of the release within a 100-year floodplain?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Did the release impact areas not on an exploration, development, production or storage site?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

Attach a comprehensive report (electronic submittals in .pdf format are preferred) demonstrating the lateral and vertical extents of soil contamination associated with the release have been determined. Refer to 19.15.29.11 NMAC for specifics.

### **Characterization Report Checklist:** *Each of the following items must be included in the report*

- ☒ Scaled site map showing impacted area, surface features, subsurface features, delineation points, and monitoring wells.
- ☒ Field data
- ☒ Data table of soil contaminant concentration data
- ☒ Determination of water sources and significant watercourses within 1/2-mile of the lateral extents of the release
- ☒ Boring or excavation logs
- ☒ Photographs including date and GIS information
- ☒ Topographic/Aerial maps
- ☒ Laboratory data including chain of custody

If the site characterization report does not include completed efforts at remediation of the release, the report must include a proposed remediation plan. That plan must include the estimated volumet of material to be remediated, the proposed remediation technique, proposed sampling plan and methods, anticipated timelines for beginning and completing th remediation. The closure criteria for a release are contained in Table 1 of 19.15.29.12 NMAC, however, use of the table is modifies by site- and release-specific parameters.




Form C-141

State of New Mexico  
Oil Conservation Division

Page 4

Incident ID	
District RP	1RP-4881
Facility ID	
Application ID	

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.

Printed Name: Ike Tavaréz Title: Senior HSE Supervisor  
Signature:  Date: 12/28/18  
email: [itavarez@concho.com](mailto:itavarez@concho.com) Telephone: (432) 701-8630

**OCD Only**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_

Form C-141

Page 6

State of New Mexico  
Oil Conservation Division

Incident ID	
District RP	1RP-4881
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 OCD 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: Ike Tavaréz Title: Senior HSE Supervisor  
Signature:  Date: 12/28/18  
email: [itavarez@concho.com](mailto:itavarez@concho.com) Telephone: (432) 701-8630

**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 not does not relieve the responsible party of compliance with any other federal, state or local laws and/or regulations.

Signature:  Date: 11/9/2022

**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 157369

CONDITIONS

Operator: COG OPERATING LLC 600 W Illinois Ave Midland, TX 79701	OGRID: 229137
	Action Number: 157369
	Action Type: [IM-SD] Incident File Support Doc (ENV) (IM-BNF)

CONDITIONS

Created By	Condition	Condition Date
bhall	None	11/9/2022