

Incident ID	nAB1803749983
District RP	
Facility ID	
Application ID	

## Remediation Plan

**Remediation Plan Checklist:** *Each of the following items must be included in the plan.*

- ☐ Detailed description of proposed remediation technique
- ☐ Scaled sitemap with GPS coordinates showing delineation points
- ☐ Estimated volume of material to be remediated
- ☐ Closure criteria is to Table 1 specifications subject to 19.15.29.12(C)(4) NMAC
- ☐ Proposed schedule for remediation (note if remediation plan timeline is more than 90 days OCD approval is required)

**Deferral Requests Only:** *Each of the following items must be confirmed as part of any request for deferral of remediation.*

- ☒ Contamination must be in areas immediately under or around production equipment where remediation could cause a major facility deconstruction.
- ☒ Extents of contamination must be fully delineated.
- ☒ Contamination does not cause an imminent risk to human health, the environment, or groundwater.

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: Dale Woodall Title: Env. Professional

Signature: Dale Woodall Date: 1/14/2023

email: dale.woodall@dvn.com Telephone: 575-748-1838

**OCD Only**

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

☐ Approved ☐ Approved with Attached Conditions of Approval ☐ Denied ☒ Deferral Approved

Signature: B. H. Hall Date: 1/17/2023





PO Box 1120  
Carlsbad, New Mexico 88221  
Phone (575) 236-6600

June 3, 2022

NMOCD District 2  
Mr. Robert Hamlet  
811 S. First Street  
Artesia, New Mexico 88210

Dear Mr. Hamlet:

M&M Excavating, Inc. (MMX) has prepared this Remediation Deferral Request for Devon Energy Production Company that describes the release of liquids at the Cotton Draw Unit 10 Fed 2H site (2RP-4604). The site is in Unit A, Section 10, Township 25S, Range 31E, Latitude 32.151550, Longitude -103.75878, Eddy County, New Mexico, on Federal land. Figure 1 provides the vicinity and site location on an USGS 7.5-minute quadrangle map.

### **Site Information and Closure Criteria**

The Cotton Draw Unit 10 Fed 2H is located approximately thirty-four (34) miles southeast of Carlsbad, New Mexico at an elevation of approximately 3,453 feet above mean sea level (amsl).

Based upon well water data. (Appendix B), depth to groundwater in the area is estimated to be between 390 and 470 feet below grade surface (bgs). There are no known water wells within ½ mile of the location, according to the New Mexico Office of the State Engineer (NMOSE) and United State Geological Survey (USGS). The nearest significant watercourse is a Freshwater Pond located approximately 6150 feet to the west.

The sites applicable NMOCD Closure Criteria is for groundwater greater than fifty (>50) feet bgs. Table 2 demonstrates the Closure Criteria applicable to this location. Pertinent well data and a recent groundwater determination well log is attached in Appendix B.

Release Information and Closure Criteria			
Name	Cotton Draw Unit #10 Fed 2H		
API Number	30-015-39230		
Incident Number	2RP-4604		
Source of Release	Water Tank Overflow		
Released Material	Produced Water	Released Volume	181 bbls
Recovered Volume	180 bbls	Net Release	<1 bbls
NMOCD Closure Criteria	>50 feet to groundwater		



### **Release Information**

On January 21<sup>st</sup>, 2018, Approximate 181 bbls was released the majority of the release occurred inside the lined SPCC secondary containment ring however there was a 0.10 bbl overspray that did go outside the containment area and onto the location. A vacuum truck was dispatched and recovered all the fluids that were released into the lined secondary containment. Once fluids were removed the liner was visually inspected by Devon field staff for any pinholes or punctures and none were found.

Initial response activities were conducted by the operator and included source elimination, site containment and the recovery of approximately 181 bbls of crude oil. The C-141 form is included in Appendix A.

### **Release Characterization and Remediation Activities**

January 31, 2021 MMX mobilized to the location to collect closure soil samples around the areas of concern found in the first sample event associated with 2RP-4604. Figure 3 shows the sample locations georeferenced.

MMX found the effected are to be coved with blow sand or wind blown alluvium that needed to be removed. A total of seven (7) sample locations (L1,L2 and SW1-SW5) were established and ten (10) samples, were collected at the surface and down to four feet for laboratory analysis for total chloride using EPA Method 300.0; benzene, toluene, ethylbenzene and total xylenes (BTEX) using EPA Method 8021B; and motor, diesel and gasoline range organics (MRO, DRO, and GRO) by EPA Method 8015D. Samples were placed into laboratory supplied glassware, labeled, and maintained on ice until delivery to Hall Laboratories in Albuquerque, New Mexico (Appendix C).

Figure 3 shows the point of release and sample locations.

As summarized in Table 3, the results meet the NMOCD Closure Criteria at all sample locations except for SW5. SW5 is adjacent to the SPCC containment, the Produced Water tank load out and several site electrical utilities. Because of the safety concerns associated with a excavation so close to utilities MMX is requesting deferral under 19.15.29.12. The laboratory report is included in Appendix C.

At Devon Energy's request MMX mobilized on January 31, 2022 to excavate any contaminates of concern associated with 2RP-4604 release and conduct a closure sampling in accordance with 19.15.29. An area less than one yard of soil was found excavated and disposed of. On behalf of Devon Energy, MMX is requesting the deferral of the release associated with 2RP-4604 under 19.15.29.12 and 19.15.29.13.

Submitted by:  
M&M Excavating, Inc.

*Parker Kimbley*

Parker Kimbley

Cotton Draw 10 Fed 2H

Devon Energy Production Company

2



## **ATTACHMENTS:**

### **Figures:**

Figure 1: Vicinity and Well Head Protection Map

Figure 2: Surface Water Radius Map

Figure 3: Site and Sample Location Map

### **Tables:**

Table 2: NMOCD Closure Criteria Justification

Table 3: Summary of Sample Results

### **Appendices:**

Appendix A: C141 Forms

Appendix B: Water Well Data

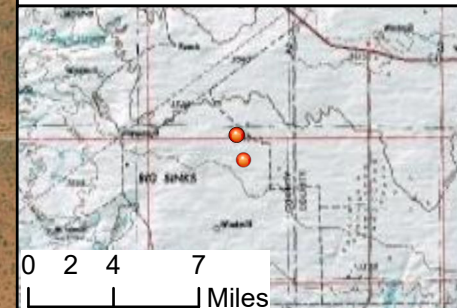
Appendix C: Laboratory Analytical Reports/  
Photos



## Figures



FIGURE 1- *Page 6 of 62*  
Hydrology Setbacks  
2RP-4604 Release



## LEGEND

- Release Point
- Lakes\_Plays
- Springs\_Seeps
- Streams\_Canals
- Flowlines\_SENM
- FEMA\_Flood\_Zones\_2011



0 420 840 1,680  
Scale: 1:10,000 Feet

32.501395,-103.6340084 NAD83

JOB No. mmx\_env\_21

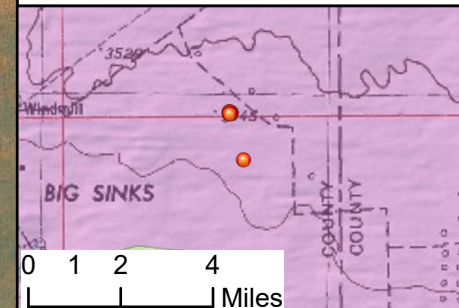
DATE FIELD: 1/31/2022 DRAWN LCM

DATE DRAWN: 6/3/2022 REVIEW JAW

**Atkins**  
ENGINEERING ASSOCIATES



# FIGURE 2- Karst and NMOSE PODs 2RP-4604

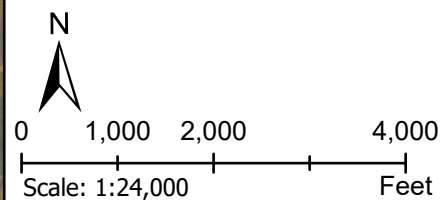


## LEGEND

- Release Point
- ▲ OSE\_PODs

## Potential

- High
- Low
- Medium



32.151550,-103.75878,

JOB No. mmx>env.21

DATE FIELD: 1/31/2022 DRAWN LCM

DATE DRAWN: 6/3/2022 REVIEW JAW

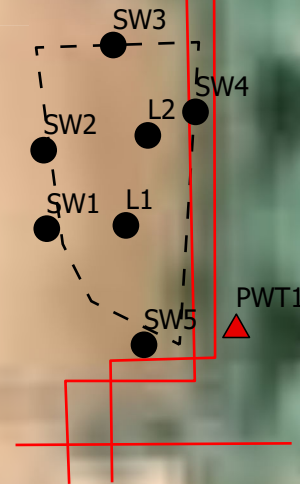
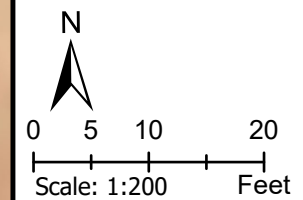


FIGURE 3 Sample Map  
Cotton Draw 10 Fed #2



## LEGEND

- [ - - ] Excavation Area
- ▲ Release Point
- Closure Sample Location
- Pipeline



JOB No. CD10\_env\_21

DATE FIELD: 1/31/22 DRAWN JAW

DATE DRAWN: 6/2/2022 REVIEW LCM



## Tables



Site Information (19.15.29.11.A(2, 3, and 4) NMAC)		Source/Notes
Depth to Groundwater (feet bgs)	51' to 100'	NMOSE Well Log
Horizontal Distance From All Water Sources Within 1/2 Mile (ft)	>300	USGS
Horizontal Distance to Nearest Significant Watercourse (ft)	>1000	USGS

Closure Criteria (19.15.29.12.B(4) and Table 1 NMAC)						
Depth to Groundwater		Closure Criteria (units in mg/kg)				
		Chloride *numerical limit or background, whichever is greater	TPH	GRO + DRO	BTEX	Benzene
< 50' BGS		600	100		50	10
51' to 100'		10000	2500	1000	50	10
>100'		20000	2500	1000	50	10
Surface Water	yes or no	if yes, then				
<300' from continuously flowing watercourse or other significant watercourse?	NO	600	100		50	10
<200' from lakebed, sinkhole or playa lake?	NO					
Water Well or Water Source						
<500 feet from spring or a private, domestic fresh water well used by less than 5 households for domestic or stock watering purposes?	NO					
<1000' from fresh water well or spring?	NO					
Human and Other Areas						
<300' from an occupied permanent residence, school, hospital, institution or church?	NO					
within incorporated municipal boundaries or within a defined municipal fresh water well field?	NO					
<100' from wetland?	NO					
within area overlying a subsurface mine	NO					
within an unstable area?	NO					
within a 100-year floodplain?	NO					

AEA #



Table 3:  
Summary of Sample Results

MMX  
2RP-4604

Sample ID	Sample Date	Depth (feet bgs)	Proposed Action/ Action Taken	GRO mg/Kg	DRO mg/Kg	MRO mg/Kg	Total TPH mg/Kg	Cl- mg/Kg
NMOCD Closure Criteria							2500	1000
SW1	1/31/2022	1	insitu	<20.0	<25.0	<50.0	<95.0	67.6
SW2	1/31/2022	1	insitu	<20.0	<25.0	<50.0	<95.0	66.1
SW3	1/31/2022	0.5	insitu	<20.0	<25.0	<50.0	<95.0	<20.0
SW4	1/31/2022	1	insitu	<20.0	<25.0	<50.0	<95.0	101
SW5	1/31/2022	1	insitu	<20.0	4760	2100	6860	371
L1-1	1/31/2022	1	excavated	<20.0	1520	1060	2580	157
L1-2	1/31/2022	2	excavated	<20.0	1610	1090	2700	64.8
L1-4	1/31/2022	4	insitu	<20.0	<25.0	<50.0	<95.0	<20
L2-1	1/31/2022	1	insitu	<20.0	<25.0	<50.0	<95.0	37.1
L2-2	1/31/2022	2	insitu	<20.0	<25.0	<50.0	<95.0	87.2

"--" = Not Analyzed

MMX #



## **Appendix A: C141 Forms**



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

## NM OIL CONSERVATION

ARTESIA DISTRICT

FEB 05 2018

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

RECEIVED

Form C-141  
Revised April 3, 2017

## Release Notification and Corrective Action

NAB1803749983

## OPERATOR

☒ Initial Report ☐ Final Report

Name of Company	Devon Energy Production Company	Contact	Wes Ryan, Production Foreman
Address	6488 Seven Rivers Hwy Artesia, NM 88210	Telephone No.	575-390-5436
Facility Name	Cotton Draw 10 Federal Com 2H	Facility Type	Oil

Surface Owner	Federal	Mineral Owner	Federal	API No.	30-015-39230
---------------	---------	---------------	---------	---------	--------------

## LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
A	10	25S	31E					Eddy

Latitude\_32.15150\_ Longitude\_103.75878\_ NAD83

## NATURE OF RELEASE

Type of Release	Produced Water	Volume of Release	181bbbs	Volume Recovered	180.90 bbbs
Source of Release	Produced water tank	Date and Hour of Occurrence	January 21, 2018 @ 4:30 PM MST	Date and Hour of Discovery	January 21, 2018 @ 4:30 PM MST
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Mike Bratcher/Crystal Weaver, OCD Shelly Tucker, BLM		
By Whom?	Mike Shoemaker, EHS Representative	Date and Hour	January 22, 2018 @ 1:11 PM MST		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	N/A		

If a Watercourse was Impacted, Describe Fully.\*  
N/A

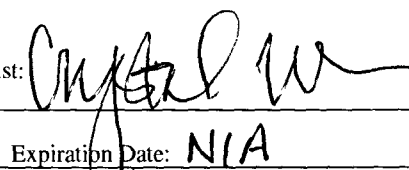

Describe Cause of Problem and Remedial Action Taken.\*

Water tank ran over causing an approximate 181 bbl release. The wells producing to the battery were immediately shut in to stop the release.

Describe Area Affected and Cleanup Action Taken.\*

Approximate 181 bbbs was released the majority of the release occurred inside the lined SPCC secondary containment ring however there was a 0.10 bbl overspray that did go outside the containment area and onto the location. A vacuum truck was dispatched and recovered all the fluids that were released into the lined secondary containment. Once fluids were removed the liner was visually inspected by Devon field staff for any pinholes or punctures and none were found. Based on this inspection there is no evidence that the spill fluids left containment.

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: Michael Shoemaker		OIL CONSERVATION DIVISION	
Printed Name: Michael Shoemaker		Approved by Environmental Specialist: 	
Title: Environmental Professional		Approval Date: 2/6/18	Expiration Date: N/A
E-mail Address: mike.shoemaker@devon.com		Conditions of Approval: see attached	
Date: 02/01/18	Phone: 575.748.3371	Attached 	

\* Attach Additional Sheets If Necessary



Operator/Responsible Party,

The OCD has received the form C-141 you provided on **2/5/18** regarding an unauthorized release. The information contained on that form has been entered into our incident database and remediation case number 2RP-41004 has been assigned. **Please refer to this case number in all future correspondence.**

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

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

Release characterization is the first phase of corrective action unless the release is ongoing or is of limited volume and all impacts can be immediately addressed. Proper and cost-effective remediation typically cannot occur without adequate characterization of the impacts of any release. Furthermore, the Division has the ability to impose reasonable conditions upon the efforts it oversees. **As such, the Division is requiring a workplan for the characterization of impacts associated with this release be submitted to the OCD District II office in Artesia on or before 3/5/18. If and when the release characterization workplan is approved, there will be an associated deadline for submittal of the resultant investigation report. Modest extensions of time to these deadlines may be granted, but only with acceptable justification.**

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

- Horizontal delineation of soil impacts in each of the four cardinal compass directions. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. This is not an exclusive list of potential contaminants. Analyzed parameters should be modified based on the nature of the released substance(s). Soil sampling must be both within the impacted area and beyond.
- Vertical delineation of soil impacts. Adsorbed soil contamination must be characterized for the following constituents using the associated laboratory methods: benzene, toluene, ethylbenzene, and total xylenes by either Method 8260 or 8021, total petroleum hydrocarbons by Method 8015 extended range (GRO+DRO+MRO; C<sub>6</sub> thru C<sub>36</sub>), and for chloride by Method 300. As above, this is not an exclusive list of potential contaminants and can be modified. Vertical characterization samples should be taken at depth intervals no greater than five feet apart. Lithologic description of encountered soils must also be provided. At least ten vertical feet of soils with contaminant concentrations at or below these values must be demonstrated as existing above the water table.
- Nominal detection limits for field and laboratory analyses must be provided.
- Composite sampling is not generally allowed.
- Field screening and assessment techniques are acceptable (headspace, titration, EC [include algorithm for validation purposes], EM, etc.), but the sampling and assay procedures must be clearly defined. Copies of field notes are highly desirable. A statistically significant set of split samples must be submitted for confirmatory laboratory analysis, including the laterally farthest and vertically deepest sets of soil samples. Make sure there are at least two soil samples submitted



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

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

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

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

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

**Jim Griswold**

OCD Environmental Bureau Chief

1220 South St. Francis Drive

Santa Fe, New Mexico 87505

505-476-3465

jim.griswold@state.nm.us



## Weaver, Crystal, EMNRD

---

**From:** Shoemaker, Mike <Mike.Shoemaker@dvn.com>  
**Sent:** Friday, February 2, 2018 4:57 PM  
**To:** Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; Shelly Tucker (stucker@blm.gov)  
**Cc:** Fulks, Brett; Fisher, Sheila  
**Subject:** Cotton Draw 10 Fed Com 2H\_181bbl produced water\_1.21.18  
**Attachments:** Cotton Draw 10 Fed Com 2H\_181bbls produced water\_Initial C-141\_1.21.18.doc; Cotton Draw 10 Fed Com 2H\_181bbls produced water\_GIS Image\_1.21.18.pdf

Good Afternoon,

Attached please find the Initial C-141 and GIS Image for the 181 bbl produced water release at the Cotton Draw 10 Federal Com 2H on 1.21.18.

If you have any questions please feel free to contact me.

Thank you,

**Mike Shoemaker**  
EHS Representative

**Devon Energy Corporation**  
6488 Seven Rivers Highway  
Artesia, New Mexico 88210  
575-746-5566 Office  
575-513-5035 Mobile



Confidentiality Warning: This message and any attachments are intended only for the use of the intended recipient(s), are confidential, and may be privileged. If you are not the intended recipient, you are hereby notified that any review, retransmission, conversion to hard copy, copying, circulation or other use of all or any portion of this message and any attachments is strictly prohibited. If you are not the intended recipient, please notify the sender immediately by return e-mail, and delete this message and any attachments from your system.



## Weaver, Crystal, EMNRD

---

**From:** Shoemaker, Mike <Mike.Shoemaker@dvn.com>  
**Sent:** Monday, January 22, 2018 1:11 PM  
**To:** Bratcher, Mike, EMNRD; Weaver, Crystal, EMNRD; Shelly Tucker (stucker@blm.gov)  
**Cc:** Fulks, Brett  
**Subject:** RE: Cotton Draw Fed Com 2H (API #30-015-39230)

I apologize I did not get the full well name on the description it is the Cotton Draw 10 Federal Com 2H (API #30-015-39230).

Thanks,

**Mike Shoemaker**  
EHS Representative

**Devon Energy Corporation**  
6488 Seven Rivers Highway  
Artesia, New Mexico 88210  
575-746-5566 Office  
575-513-5035 Mobile



**From:** Shoemaker, Mike  
**Sent:** Monday, January 22, 2018 1:01 PM  
**To:** 'Bratcher, Mike, EMNRD' <mike.bratcher@state.nm.us>; Weaver, Crystal, EMNRD <Crystal.Weaver@state.nm.us>; Shelly Tucker (stucker@blm.gov) <stucker@blm.gov>  
**Cc:** Fulks, Brett (Brett.Fulks@dvn.com) <Brett.Fulks@dvn.com>  
**Subject:** Cotton Draw Fed Com 2H (API #30-015-39230)

Good Afternoon,

Devon had the following release occur at 4:30 PM MST on 01/21/18. The incident is described below.

1. Cotton Draw Fed Com 2H (API #30-015-39230)
  - a. Water tank ran over causing an approximate 181 bbl release. The majority of the release occurred inside the lined SPCC secondary containment ring however there was a 0.10 bbl overspray that did go outside the containment area. All fluid that was released into the lined secondary containment was recovered.

A C-141 will be prepared and submitted with GPS coordinates of the area affected.

Thanks,

**Mike Shoemaker**  
EHS Representative

**Devon Energy Corporation**



## **Appendix B: Water Well Data**





2904 W 2nd St.  
Roswell, NM 88201  
voice: 575.624.2420  
fax: 575.624.2421  
www.atkinseng.com

04/1/2022

DII-NMOSE  
1900 W 2<sup>nd</sup> Street  
Roswell, NM 88201

*Hand Delivered to the DII Office of the State Engineer*

Re: Well Record C-4593 Pod1

To whom it may concern:

Attached please find a well log & record and a plugging record, in duplicate, for a one (1) soil borings, C-4593 Pod1.

If you have any questions, please contact me at 575.499.9244 or [lucas@atkinseng.com](mailto:lucas@atkinseng.com).

Sincerely,

A handwritten signature in black ink, appearing to read "Lucas Middleton".

Lucas Middleton

Enclosures: as noted above

15C 05 APR 2022 14:02





# WELL RECORD & LOG

OFFICE OF THE STATE ENGINEER

[www.ose.state.nm.us](http://www.ose.state.nm.us)

1. GENERAL AND WELL LOCATION	OSE POD NO. (WELL NO.) POD 1 (TW-1)		WELL TAG ID NO.		OSE FILE NO(S). C-4593			
	WELL OWNER NAME(S) Devon Energy				PHONE (OPTIONAL) 575-748-1838			
	WELL OWNER MAILING ADDRESS 6488 7 Rivers Hwy				CITY Artesia	STATE NM	ZIP 88210	
	WELL LOCATION (FROM GPS)	DEGREES LATITUDE 32	MINUTES 10	SECONDS 2.97 N	* ACCURACY REQUIRED: ONE TENTH OF A SECOND			
		LONGITUDE 103	45	36.48 W	* DATUM REQUIRED: WGS 84			
DESCRIPTION RELATING WELL LOCATION TO STREET ADDRESS AND COMMON LANDMARKS - PLSS (SECTION, TOWNSHIP, RANGE) WHERE AVAILABLE SW L4 Sec 34 T24S R31E, NMPM								
2. DRILLING & CASING INFORMATION	LICENSE NO. 1249		NAME OF LICENSED DRILLER Jackie D. Atkins			NAME OF WELL DRILLING COMPANY Atkins Engineering Associates, Inc.		
	DRILLING STARTED 03/09/2022	DRILLING ENDED 03/10/2022	DEPTH OF COMPLETED WELL (FT) temporary well casing		BORE HOLE DEPTH (FT) ±55	DEPTH WATER FIRST ENCOUNTERED (FT) n/a		
	COMPLETED WELL IS: <input type="checkbox"/> ARTESIAN <input checked="" type="checkbox"/> DRY HOLE <input type="checkbox"/> SHALLOW (UNCONFINED)				STATIC WATER LEVEL IN COMPLETED WELL (FT) dry	DATE STATIC MEASURED 03/10/22, 03/15/22		
	DRILLING FLUID: <input type="checkbox"/> AIR <input type="checkbox"/> MUD ADDITIVES - SPECIFY:							
	DRILLING METHOD: <input type="checkbox"/> ROTARY <input type="checkbox"/> HAMMER <input type="checkbox"/> CABLE TOOL <input checked="" type="checkbox"/> OTHER - SPECIFY: Hollow Stem Auger					CHECK HERE IF PITLESS ADAPTER IS INSTALLED <input type="checkbox"/>		
	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	CASING MATERIAL AND/OR GRADE (include each casing string, and note sections of screen)	CASING CONNECTION TYPE (add coupling diameter)	CASING INSIDE DIAM. (inches)	CASING WALL THICKNESS (inches)	SLOT SIZE (inches)
	FROM	TO						
	0	55	±6.5	Boring	--	--	--	--
3. ANNULAR MATERIAL	DEPTH (feet bgl)		BORE HOLE DIAM. (inches)	LIST ANNULAR SEAL MATERIAL AND GRAVEL PACK SIZE-RANGE BY INTERVAL	AMOUNT (cubic feet)	METHOD OF PLACEMENT		
	FROM	TO						

FOR OSE INTERNAL USE

WR-20 WELL RECORD & LOG (Version 01/28/2022)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 1 OF 2




4. HYDROGEOLOGIC LOG OF WELL	DEPTH (feet bgl)		THICKNESS (feet)	COLOR AND TYPE OF MATERIAL ENCOUNTERED - INCLUDE WATER-BEARING CAVITIES OR FRACTURE ZONES (attach supplemental sheets to fully describe all units)	WATER BEARING? (YES / NO)	ESTIMATED YIELD FOR WATER- BEARING ZONES (gpm)
	FROM	TO				
	0	4	4	Caliche, with medium to fine grained sand, white and Red	Y    ✓ N	
	4	24	20	Sand, medium/ fine grained, poorly graded, with caliche gravel, Tan	Y    ✓ N	
	24	55	31	Sand, medium/ fine grained, poorly graded, Reddish Brown	Y    ✓ N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
					Y    N	
METHOD USED TO ESTIMATE YIELD OF WATER-BEARING STRATA: <input type="checkbox"/> PUMP <input type="checkbox"/> AIR LIFT <input type="checkbox"/> BAILER <input type="checkbox"/> OTHER - SPECIFY:					TOTAL ESTIMATED WELL YIELD (gpm):    0.00	

5. TEST; RIG SUPERVISION	WELL TEST	TEST RESULTS - ATTACH A COPY OF DATA COLLECTED DURING WELL TESTING, INCLUDING DISCHARGE METHOD, START TIME, END TIME, AND A TABLE SHOWING DISCHARGE AND DRAWDOWN OVER THE TESTING PERIOD.
	MISCELLANEOUS INFORMATION: Temporary well material removed and soil boring backfilled using drill cuttings from total depth to ten feet below ground surface(bgs), then hydrated bentonite chips ten feet bgs to surface.	
	PRINT NAME(S) OF DRILL RIG SUPERVISOR(S) THAT PROVIDED ONSITE SUPERVISION OF WELL CONSTRUCTION OTHER THAN LICENSEE: Shane Eldridge, Cameron Pruitt	

6. SIGNATURE	THE UNDERSIGNED HEREBY CERTIFIES THAT, TO THE BEST OF HIS OR HER KNOWLEDGE AND BELIEF, THE FOREGOING IS A TRUE AND CORRECT RECORD OF THE ABOVE DESCRIBED HOLE AND THAT HE OR SHE WILL FILE THIS WELL RECORD WITH THE STATE ENGINEER AND THE PERMIT HOLDER WITHIN 30 DAYS AFTER COMPLETION OF WELL DRILLING:	
	 Jackie D. Atkins _____ SIGNATURE OF DRILLER / PRINT SIGNEE NAME	03/31/2022 _____ DATE

FOR OSE INTERNAL USE

WR-20 WELL RECORD &amp; LOG (Version 01/28/2022)

FILE NO.	POD NO.	TRN NO.
LOCATION	WELL TAG ID NO.	PAGE 2 OF 2





# PLUGGING RECORD



**NOTE: A Well Plugging Plan of Operations shall be approved by the State Engineer prior to plugging - 19.27.4 NMAC**

## I. GENERAL / WELL OWNERSHIP:

State Engineer Well Number: C-4593-POD1

Well owner: Devon Energy

Phone No.: 575-748-1838

Mailing address: 6488 7 Rivers Hwy

City: Artesia State: New Mexico Zip code: 88210

## II. WELL PLUGGING INFORMATION:

- 1) Name of well drilling company that plugged well: Jackie D. Atkins ( Atkins Engineering Associates Inc.)
- 2) New Mexico Well Driller License No.: 1249 Expiration Date: 04/30/23
- 3) Well plugging activities were supervised by the following well driller(s)/rig supervisor(s):  
Shane Eldridge, Cameron Pruitt
- 4) Date well plugging began: 3/15/2022 Date well plugging concluded: 3/15/2022
- 5) GPS Well Location: Latitude: 32 deg, 10 min, 2.97 sec  
Longitude: 103 deg, 45 min, 36.48 sec, WGS 84
- 6) Depth of well confirmed at initiation of plugging as: 55 ft below ground level (bgl),  
by the following manner: weighted tape
- 7) Static water level measured at initiation of plugging: n/a ft bgl
- 8) Date well plugging plan of operations was approved by the State Engineer: 2/7/2022
- 9) Were all plugging activities consistent with an approved plugging plan? Yes If not, please describe differences between the approved plugging plan and the well as it was plugged (attach additional pages as needed):

OCD 07 APR 2022 09:02



- For each interval plugged, describe within the following columns:**

QCE 011 APR 4 2022 PM 2:02

I, Jackie D. Atkins, say that I am familiar with the rules of the Office of the State Engineer pertaining to the plugging of wells and that each and all of the statements in this Plugging Record and attachments are true to the best of my knowledge and belief.

3/31/2022

Date \_\_\_\_\_








# WR-20 Well Record and Log\_2022-forsign

Final Audit Report

2022-03-31

Created:	2022-03-31
By:	Lucas Middleton (lucas@atkinseng.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAArF94EavZCTfALpRuFVOVGnZ-Yc0wb7Yi

## "WR-20 Well Record and Log\_2022-forsign" History

-  Document created by Lucas Middleton (lucas@atkinseng.com)  
2022-03-31 - 7:57:39 PM GMT - IP address: 69.21.254.158
-  Document emailed to Jack Atkins (jack@atkinseng.com) for signature  
2022-03-31 - 7:58:16 PM GMT
-  Email viewed by Jack Atkins (jack@atkinseng.com)  
2022-03-31 - 9:14:45 PM GMT - IP address: 64.90.153.232
-  Document e-signed by Jack Atkins (jack@atkinseng.com)  
Signature Date: 2022-03-31 - 9:27:44 PM GMT - Time Source: server- IP address: 64.90.153.232
-  Agreement completed.  
2022-03-31 - 9:27:44 PM GMT

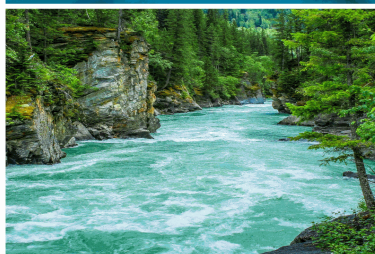
USE OF APR 4 2022 10:02



## **Appendix C: Laboratory Analytical Reports**



Report to:  
Austin Weyant



5796 U.S. Hwy 64  
Farmington, NM 87401

Phone: (505) 632-1881  
Envirotech-inc.com



# envirotech

*Practical Solutions for a Better Tomorrow*

## Analytical Report

Atkins Engineering Associates Inc.

Project Name: COTTON DRAW10 #2

Work Order: E202049

Job Number: 20071-0001

Received: 2/9/2022

Revision: 1

Report Reviewed By:

Walter Hinchman  
Laboratory Director  
2/16/22

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise.  
Statement of Data Authenticity: Envirotech Inc. attests the data reported has not been altered in any way.  
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc.  
Envirotech Inc. holds the Utah TNI certification NM00979 for data reported.  
Envirotech Inc. holds the Texas TNI certification T104704557 for data reported.  
Envirotech Inc. holds the NM SDWA certification for data reported. (Lab #NM00979)



Date Reported: 2/16/22

Austin Weyant  
2904 W. 2nd  
Roswell, NM 88201



Project Name: COTTON DRAW10 #2  
Workorder: E202049  
Date Received: 2/9/2022 10:30:00AM

Austin Weyant,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 2/9/2022 10:30:00AM, under the Project Name: COTTON DRAW10 #2.

The analytical test results summarized in this report with the Project Name: COTTON DRAW10 #2 apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues regarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

**Walter Hinchman**  
Laboratory Director  
Office: 505-632-1881  
Cell: 775-287-1762  
[whinchman@envirotech-inc.com](mailto:whinchman@envirotech-inc.com)

**Raina Schwanz**  
Laboratory Administrator  
Office: 505-632-1881  
[rainaschwanz@envirotech-inc.com](mailto:rainaschwanz@envirotech-inc.com)

**Alexa Michaels**  
Sample Custody Officer  
Office: 505-632-1881  
[labadmin@envirotech-inc.com](mailto:labadmin@envirotech-inc.com)

Field Offices:

**Southern New Mexico Area**  
**Lynn Jarboe**  
Technical Representative/Client Services  
Office: 505-421-LABS(5227)  
Cell: 505-320-4759  
[ljjarboe@envirotech-inc.com](mailto:ljjarboe@envirotech-inc.com)

**West Texas Midland/Odessa Area**  
**Rayny Hagan**  
Technical Representative  
Office: 505-421-LABS(5227)

Envirotech Web Address: [www.envirotech-inc.com](http://www.envirotech-inc.com)



## Table of Contents

Title Page	1
Cover Page	2
Table of Contents	3
Sample Summary	4
Sample Data	5
SW1-1	5
SW2-1	6
L1-1	7
L1-2	8
SW4-1	9
L2-1	10
L2-2	11
SW2	12
SW3	13
SW5-1	14
QC Summary Data	15
QC - Volatile Organics by EPA 8021B	15
QC - Nonhalogenated Organics by EPA 8015D - GRO	17
QC - Nonhalogenated Organics by EPA 8015D - DRO/ORO	19
QC - Anions by EPA 300.0/9056A	21
Definitions and Notes	23
Chain of Custody etc.	24



## Sample Summary

Atkins Engineering Associates Inc. 2904 W. 2nd Roswell NM, 88201	Project Name: COTTON DRAW10 #2 Project Number: 20071-0001 Project Manager: Austin Weyant	Reported: 02/16/22 16:36
--	--	-----------------------------

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
SW1-1	E202049-01A	Soil	01/31/22	02/09/22	Glass Jar, 4 oz.
SW2-1	E202049-02A	Soil	01/31/22	02/09/22	Glass Jar, 4 oz.
L1-1	E202049-03A	Soil	01/31/22	02/09/22	Glass Jar, 4 oz.
L1-2	E202049-04A	Soil	01/31/22	02/09/22	Glass Jar, 4 oz.
SW4-1	E202049-05A	Soil	01/31/22	02/09/22	Glass Jar, 4 oz.
L2-1	E202049-06A	Soil	01/31/22	02/09/22	Glass Jar, 4 oz.
L2-2	E202049-07A	Soil	01/31/22	02/09/22	Glass Jar, 4 oz.
SW2	E202049-08A	Soil	01/31/22	02/09/22	Glass Jar, 4 oz.
SW3	E202049-09A	Soil	01/31/22	02/09/22	Glass Jar, 4 oz.
SW5-1	E202049-10A	Soil	01/31/22	02/09/22	Glass Jar, 4 oz.





## Sample Data

Atkins Engineering Associates Inc. 2904 W. 2nd Roswell NM, 88201	Project Name: COTTON DRAW10 #2 Project Number: 20071-0001 Project Manager: Austin Weyant	<b>Reported:</b> 2/16/2022 4:36:04PM
--	--	---

## SW1-1

## E202049-01

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2207046	
Benzene	ND	0.0250	1	02/10/22	02/11/22	
Ethylbenzene	ND	0.0250	1	02/10/22	02/11/22	
Toluene	ND	0.0250	1	02/10/22	02/11/22	
o-Xylene	ND	0.0250	1	02/10/22	02/11/22	
p,m-Xylene	ND	0.0500	1	02/10/22	02/11/22	
Total Xylenes	ND	0.0250	1	02/10/22	02/11/22	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>	98.2 %	70-130		02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2207046	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/10/22	02/11/22	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>	108 %	70-130		02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: JL		Batch: 2208008	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/14/22	02/15/22	
Oil Range Organics (C28-C36)	ND	50.0	1	02/14/22	02/15/22	
<i>Surrogate: n-Nonane</i>	106 %	50-200		02/14/22	02/15/22	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2207056	
Chloride	67.6	20.0	1	02/11/22	02/12/22	





## Sample Data

Atkins Engineering Associates Inc.  
2904 W. 2nd  
Roswell NM, 88201

Project Name: COTTON DRAW10 #2  
Project Number: 20071-0001  
Project Manager: Austin Weyant

**Reported:**  
2/16/2022 4:36:04PM

## SW2-1

## E202049-02

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2208021
Benzene	ND	0.0250	1	02/15/22	02/15/22	H2
Ethylbenzene	ND	0.0250	1	02/15/22	02/15/22	H2
Toluene	ND	0.0250	1	02/15/22	02/15/22	H2
o-Xylene	ND	0.0250	1	02/15/22	02/15/22	H2
p,m-Xylene	ND	0.0500	1	02/15/22	02/15/22	H2
Total Xylenes	ND	0.0250	1	02/15/22	02/15/22	H2
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.2 %	70-130		02/15/22	02/15/22	H2
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2208021
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/15/22	02/15/22	H2
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	119 %	70-130		02/15/22	02/15/22	H2
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2208029
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/22	02/16/22	H2
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/22	02/16/22	H2
<i>Surrogate: n-Nonane</i>						
	99.3 %	50-200		02/15/22	02/16/22	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2208022
Chloride	37.6	20.0	1	02/14/22	02/16/22	





## Sample Data

Atkins Engineering Associates Inc.  
2904 W. 2nd  
Roswell NM, 88201

Project Name: COTTON DRAW10 #2  
Project Number: 20071-0001  
Project Manager: Austin Weyant

**Reported:**  
2/16/2022 4:36:04PM

## L1-1

## E202049-03

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Benzene	ND	0.0250	1	02/10/22	02/11/22	
Ethylbenzene	ND	0.0250	1	02/10/22	02/11/22	
Toluene	ND	0.0250	1	02/10/22	02/11/22	
o-Xylene	ND	0.0250	1	02/10/22	02/11/22	
p,m-Xylene	ND	0.0500	1	02/10/22	02/11/22	
Total Xylenes	ND	0.0250	1	02/10/22	02/11/22	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	98.1 %	70-130		02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/10/22	02/11/22	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	109 %	70-130		02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2208008
Diesel Range Organics (C10-C28)	1520	250	10	02/14/22	02/16/22	
Oil Range Organics (C28-C36)	1060	500	10	02/14/22	02/16/22	
<i>Surrogate: n-Nonane</i>						
	123 %	50-200		02/14/22	02/16/22	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2207056
Chloride	157	20.0	1	02/11/22	02/12/22	





## Sample Data

Atkins Engineering Associates Inc.  
2904 W. 2nd  
Roswell NM, 88201

Project Name: COTTON DRAW10 #2  
Project Number: 20071-0001  
Project Manager: Austin Weyant

**Reported:**  
2/16/2022 4:36:04PM

## L1-2

## E202049-04

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Benzene	ND	0.0250	1	02/10/22	02/11/22	
Ethylbenzene	ND	0.0250	1	02/10/22	02/11/22	
Toluene	ND	0.0250	1	02/10/22	02/11/22	
o-Xylene	ND	0.0250	1	02/10/22	02/11/22	
p,m-Xylene	ND	0.0500	1	02/10/22	02/11/22	
Total Xylenes	ND	0.0250	1	02/10/22	02/11/22	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	97.9 %	70-130		02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/10/22	02/11/22	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	110 %	70-130		02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2208008
Diesel Range Organics (C10-C28)	1610	25.0	1	02/14/22	02/15/22	
Oil Range Organics (C28-C36)	1090	50.0	1	02/14/22	02/15/22	
<i>Surrogate: n-Nonane</i>						
	145 %	50-200		02/14/22	02/15/22	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2207056
Chloride	64.8	20.0	1	02/11/22	02/12/22	





## Sample Data

Atkins Engineering Associates Inc.  
2904 W. 2nd  
Roswell NM, 88201

Project Name: COTTON DRAW10 #2  
Project Number: 20071-0001  
Project Manager: Austin Weyant

**Reported:**  
2/16/2022 4:36:04PM

## SW4-1

## E202049-05

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Benzene	ND	0.0250	1	02/10/22	02/11/22	
Ethylbenzene	ND	0.0250	1	02/10/22	02/11/22	
Toluene	ND	0.0250	1	02/10/22	02/11/22	
o-Xylene	ND	0.0250	1	02/10/22	02/11/22	
p,m-Xylene	ND	0.0500	1	02/10/22	02/11/22	
Total Xylenes	ND	0.0250	1	02/10/22	02/11/22	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	96.5 %	70-130		02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/10/22	02/11/22	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	109 %	70-130		02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2208008
Diesel Range Organics (C10-C28)	ND	25.0	1	02/14/22	02/15/22	
Oil Range Organics (C28-C36)	ND	50.0	1	02/14/22	02/15/22	
<i>Surrogate: n-Nonane</i>						
	111 %	50-200		02/14/22	02/15/22	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2207056
Chloride	101	20.0	1	02/11/22	02/12/22	





## Sample Data

Atkins Engineering Associates Inc.  
2904 W. 2nd  
Roswell NM, 88201

Project Name: COTTON DRAW10 #2  
Project Number: 20071-0001  
Project Manager: Austin Weyant

**Reported:**  
2/16/2022 4:36:04PM

## L2-1

## E202049-06

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2207046	
Benzene	ND	0.0250	1	02/10/22	02/11/22	
Ethylbenzene	ND	0.0250	1	02/10/22	02/11/22	
Toluene	ND	0.0250	1	02/10/22	02/11/22	
o-Xylene	ND	0.0250	1	02/10/22	02/11/22	
p,m-Xylene	ND	0.0500	1	02/10/22	02/11/22	
Total Xylenes	ND	0.0250	1	02/10/22	02/11/22	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>		99.1 %	70-130	02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>	mg/kg	mg/kg	Analyst: IY		Batch: 2207046	
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/10/22	02/11/22	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>		110 %	70-130	02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>	mg/kg	mg/kg	Analyst: JL		Batch: 2208008	
Diesel Range Organics (C10-C28)	ND	25.0	1	02/14/22	02/15/22	
Oil Range Organics (C28-C36)	ND	50.0	1	02/14/22	02/15/22	
<i>Surrogate: n-Nonane</i>		108 %	50-200	02/14/22	02/15/22	
<b>Anions by EPA 300.0/9056A</b>	mg/kg	mg/kg	Analyst: RAS		Batch: 2207056	
Chloride	37.1	20.0	1	02/11/22	02/12/22	





## Sample Data

Atkins Engineering Associates Inc.  
2904 W. 2nd  
Roswell NM, 88201

Project Name: COTTON DRAW10 #2  
Project Number: 20071-0001  
Project Manager: Austin Weyant

**Reported:**  
2/16/2022 4:36:04PM

## L2-2

## E202049-07

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Benzene	ND	0.0250	1	02/10/22	02/11/22	
Ethylbenzene	ND	0.0250	1	02/10/22	02/11/22	
Toluene	ND	0.0250	1	02/10/22	02/11/22	
o-Xylene	ND	0.0250	1	02/10/22	02/11/22	
p,m-Xylene	ND	0.0500	1	02/10/22	02/11/22	
Total Xylenes	ND	0.0250	1	02/10/22	02/11/22	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	99.5 %	70-130		02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/10/22	02/11/22	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	110 %	70-130		02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2208008
Diesel Range Organics (C10-C28)	ND	25.0	1	02/14/22	02/15/22	
Oil Range Organics (C28-C36)	ND	50.0	1	02/14/22	02/15/22	
<i>Surrogate: n-Nonane</i>						
	107 %	50-200		02/14/22	02/15/22	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2207056
Chloride	87.2	20.0	1	02/11/22	02/12/22	





## Sample Data

Atkins Engineering Associates Inc.  
2904 W. 2nd  
Roswell NM, 88201

Project Name: COTTON DRAW10 #2  
Project Number: 20071-0001  
Project Manager: Austin Weyant

**Reported:**  
2/16/2022 4:36:04PM

## SW2

E202049-08

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Benzene	ND	0.0250	1	02/10/22	02/11/22	
Ethylbenzene	ND	0.0250	1	02/10/22	02/11/22	
Toluene	ND	0.0250	1	02/10/22	02/11/22	
o-Xylene	ND	0.0250	1	02/10/22	02/11/22	
p,m-Xylene	ND	0.0500	1	02/10/22	02/11/22	
Total Xylenes	ND	0.0250	1	02/10/22	02/11/22	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		99.1 %	70-130	02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/10/22	02/11/22	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		110 %	70-130	02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2208008
Diesel Range Organics (C10-C28)	ND	25.0	1	02/14/22	02/15/22	
Oil Range Organics (C28-C36)	ND	50.0	1	02/14/22	02/15/22	
<i>Surrogate: n-Nonane</i>						
		107 %	50-200	02/14/22	02/15/22	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2207056
Chloride	66.1	20.0	1	02/11/22	02/12/22	





## Sample Data

Atkins Engineering Associates Inc.  
2904 W. 2nd  
Roswell NM, 88201

Project Name: Thistle, Cotton Draw3807 & 3398  
Project Number: 20071-0001  
Project Manager: Austin Weyant

**Reported:**  
2/16/2022 5:45:08PM

## L1-4 #2

## E202031-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Wet Chemistry by 9050A/2510B</b>						
	uS/cm	uS/cm		Analyst: JL		Batch: 2207016
Specific Conductance (@ 25 C)	146	10.0	1	02/08/22	02/08/22	
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2208017
Benzene	ND	0.0250	1	02/14/22	02/14/22	
Ethylbenzene	ND	0.0250	1	02/14/22	02/14/22	
Toluene	ND	0.0250	1	02/14/22	02/14/22	
o-Xylene	ND	0.0250	1	02/14/22	02/14/22	
p,m-Xylene	ND	0.0500	1	02/14/22	02/14/22	
Total Xylenes	ND	0.0250	1	02/14/22	02/14/22	
Surrogate: 4-Bromochlorobenzene-PID	99.4 %	70-130		02/14/22	02/14/22	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: RKS		Batch: 2208017
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/14/22	02/14/22	
Surrogate: 1-Chloro-4-fluorobenzene-FID	110 %	70-130		02/14/22	02/14/22	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2208016
Diesel Range Organics (C10-C28)	ND	25.0	1	02/14/22	02/14/22	
Oil Range Organics (C28-C36)	ND	50.0	1	02/14/22	02/14/22	
Surrogate: n-Nonane	98.2 %	50-200		02/14/22	02/14/22	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2208019
Chloride	ND	20.0	1	02/14/22	02/14/22	





## Sample Data

Atkins Engineering Associates Inc.  
2904 W. 2nd  
Roswell NM, 88201

Project Name: COTTON DRAW10 #2  
Project Number: 20071-0001  
Project Manager: Austin Weyant

**Reported:**  
2/16/2022 4:36:04PM

## SW3

E202049-09

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2208021
Benzene	ND	0.0250	1	02/15/22	02/15/22	H2
Ethylbenzene	ND	0.0250	1	02/15/22	02/15/22	H2
Toluene	ND	0.0250	1	02/15/22	02/15/22	H2
o-Xylene	ND	0.0250	1	02/15/22	02/15/22	H2
p,m-Xylene	ND	0.0500	1	02/15/22	02/15/22	H2
Total Xylenes	ND	0.0250	1	02/15/22	02/15/22	H2
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
	95.6 %	70-130		02/15/22	02/15/22	H2
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2208021
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/15/22	02/15/22	H2
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
	119 %	70-130		02/15/22	02/15/22	H2
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2208029
Diesel Range Organics (C10-C28)	ND	25.0	1	02/15/22	02/16/22	H2
Oil Range Organics (C28-C36)	ND	50.0	1	02/15/22	02/16/22	H2
<i>Surrogate: n-Nonane</i>						
	98.0 %	50-200		02/15/22	02/16/22	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2208022
Chloride	ND	20.0	1	02/14/22	02/16/22	





## Sample Data

Atkins Engineering Associates Inc.  
2904 W. 2nd  
Roswell NM, 88201

Project Name: COTTON DRAW10 #2  
Project Number: 20071-0001  
Project Manager: Austin Weyant

**Reported:**  
2/16/2022 4:36:04PM

## SW5-1

## E202049-10

Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
<b>Volatile Organics by EPA 8021B</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Benzene	ND	0.0250	1	02/10/22	02/11/22	
Ethylbenzene	ND	0.0250	1	02/10/22	02/11/22	
Toluene	ND	0.0250	1	02/10/22	02/11/22	
o-Xylene	ND	0.0250	1	02/10/22	02/11/22	
p,m-Xylene	ND	0.0500	1	02/10/22	02/11/22	
Total Xylenes	ND	0.0250	1	02/10/22	02/11/22	
<i>Surrogate: 4-Bromochlorobenzene-PID</i>						
		101 %	70-130	02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - GRO</b>						
	mg/kg	mg/kg		Analyst: IY		Batch: 2207046
Gasoline Range Organics (C6-C10)	ND	20.0	1	02/10/22	02/11/22	
<i>Surrogate: 1-Chloro-4-fluorobenzene-FID</i>						
		109 %	70-130	02/10/22	02/11/22	
<b>Nonhalogenated Organics by EPA 8015D - DRO/ORO</b>						
	mg/kg	mg/kg		Analyst: JL		Batch: 2208008
Diesel Range Organics (C10-C28)	4760	250	10	02/14/22	02/16/22	
Oil Range Organics (C28-C36)	2100	500	10	02/14/22	02/16/22	
<i>Surrogate: n-Nonane</i>						
		125 %	50-200	02/14/22	02/16/22	
<b>Anions by EPA 300.0/9056A</b>						
	mg/kg	mg/kg		Analyst: RAS		Batch: 2207056
Chloride	371	20.0	1	02/11/22	02/12/22	





## QC Summary Data

Atkins Engineering Associates Inc.	Project Name:	COTTON DRAW10 #2	Reported:
2904 W. 2nd	Project Number:	20071-0001	
Roswell NM, 88201	Project Manager:	Austin Weyant	2/16/2022 4:36:04PM

## Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

## Blank (2207046-BLK1)

Prepared: 02/10/22 Analyzed: 02/11/22

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.54		8.00		94.3	70-130			

## LCS (2207046-BS1)

Prepared: 02/10/22 Analyzed: 02/11/22

Benzene	4.64	0.0250	5.00		92.8	70-130			
Ethylbenzene	4.79	0.0250	5.00		95.8	70-130			
Toluene	4.99	0.0250	5.00		99.9	70-130			
o-Xylene	4.72	0.0250	5.00		94.5	70-130			
p,m-Xylene	9.73	0.0500	10.0		97.3	70-130			
Total Xylenes	14.5	0.0250	15.0		96.4	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.56		8.00		94.5	70-130			

## Matrix Spike (2207046-MS1)

Source: E202040-02

Prepared: 02/10/22 Analyzed: 02/11/22

Benzene	4.59	0.0250	5.00	ND	91.9	54-133			
Ethylbenzene	4.74	0.0250	5.00	ND	94.8	61-133			
Toluene	4.92	0.0250	5.00	ND	98.3	61-130			
o-Xylene	4.66	0.0250	5.00	ND	93.2	63-131			
p,m-Xylene	9.62	0.0500	10.0	ND	96.2	63-131			
Total Xylenes	14.3	0.0250	15.0	ND	95.2	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.52		8.00		94.0	70-130			

## Matrix Spike Dup (2207046-MSD1)

Source: E202040-02

Prepared: 02/10/22 Analyzed: 02/11/22

Benzene	4.71	0.0250	5.00	ND	94.2	54-133	2.55	20	
Ethylbenzene	4.84	0.0250	5.00	ND	96.9	61-133	2.19	20	
Toluene	5.03	0.0250	5.00	ND	101	61-130	2.34	20	
o-Xylene	4.77	0.0250	5.00	ND	95.4	63-131	2.30	20	
p,m-Xylene	9.83	0.0500	10.0	ND	98.3	63-131	2.16	20	
Total Xylenes	14.6	0.0250	15.0	ND	97.4	63-131	2.21	20	
Surrogate: 4-Bromochlorobenzene-PID	7.53		8.00		94.1	70-130			





## QC Summary Data

Atkins Engineering Associates Inc.	Project Name:	COTTON DRAW10 #2	Reported:
2904 W. 2nd	Project Number:	20071-0001	
Roswell NM, 88201	Project Manager:	Austin Weyant	2/16/2022 4:36:04PM

## Volatile Organics by EPA 8021B

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

## Blank (2208021-BLK1)

Prepared: 02/14/22 Analyzed: 02/15/22

Benzene	ND	0.0250							
Ethylbenzene	ND	0.0250							
Toluene	ND	0.0250							
o-Xylene	ND	0.0250							
p,m-Xylene	ND	0.0500							
Total Xylenes	ND	0.0250							
Surrogate: 4-Bromochlorobenzene-PID	7.71		8.00		96.4	70-130			

## LCS (2208021-BS1)

Prepared: 02/14/22 Analyzed: 02/15/22

Benzene	4.16	0.0250	5.00		83.2	70-130			
Ethylbenzene	4.20	0.0250	5.00		84.1	70-130			
Toluene	4.31	0.0250	5.00		86.2	70-130			
o-Xylene	4.29	0.0250	5.00		85.9	70-130			
p,m-Xylene	8.55	0.0500	10.0		85.5	70-130			
Total Xylenes	12.8	0.0250	15.0		85.7	70-130			
Surrogate: 4-Bromochlorobenzene-PID	7.91		8.00		98.8	70-130			

## Matrix Spike (2208021-MS1)

Source: E202078-03

Prepared: 02/14/22 Analyzed: 02/15/22

Benzene	4.28	0.0250	5.00	ND	85.5	54-133			
Ethylbenzene	4.31	0.0250	5.00	ND	86.1	61-133			
Toluene	4.42	0.0250	5.00	ND	88.4	61-130			
o-Xylene	4.39	0.0250	5.00	ND	87.9	63-131			
p,m-Xylene	8.75	0.0500	10.0	ND	87.5	63-131			
Total Xylenes	13.1	0.0250	15.0	ND	87.6	63-131			
Surrogate: 4-Bromochlorobenzene-PID	7.98		8.00		99.8	70-130			

## Matrix Spike Dup (2208021-MSD1)

Source: E202078-03

Prepared: 02/14/22 Analyzed: 02/15/22

Benzene	4.36	0.0250	5.00	ND	87.3	54-133	2.02	20	
Ethylbenzene	4.41	0.0250	5.00	ND	88.2	61-133	2.34	20	
Toluene	4.52	0.0250	5.00	ND	90.3	61-130	2.12	20	
o-Xylene	4.50	0.0250	5.00	ND	90.0	63-131	2.38	20	
p,m-Xylene	8.97	0.0500	10.0	ND	89.7	63-131	2.47	20	
Total Xylenes	13.5	0.0250	15.0	ND	89.8	63-131	2.44	20	
Surrogate: 4-Bromochlorobenzene-PID	7.96		8.00		99.5	70-130			





## QC Summary Data

Atkins Engineering Associates Inc.	Project Name:	COTTON DRAW10 #2	Reported:
2904 W. 2nd	Project Number:	20071-0001	
Roswell NM, 88201	Project Manager:	Austin Weyant	2/16/2022 4:36:04PM

## Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

## Blank (2207046-BLK1)

Prepared: 02/10/22 Analyzed: 02/11/22

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	9.38		8.00		117	70-130			

## LCS (2207046-BS2)

Prepared: 02/10/22 Analyzed: 02/11/22

Gasoline Range Organics (C6-C10)	53.9	20.0	50.0		108	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	9.46		8.00		118	70-130			

## Matrix Spike (2207046-MS2)

Source: E202040-02

Prepared: 02/10/22 Analyzed: 02/11/22

Gasoline Range Organics (C6-C10)	56.5	20.0	50.0	ND	113	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	9.42		8.00		118	70-130			

## Matrix Spike Dup (2207046-MSD2)

Source: E202040-02

Prepared: 02/10/22 Analyzed: 02/11/22

Gasoline Range Organics (C6-C10)	55.7	20.0	50.0	ND	111	70-130	1.48	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	9.43		8.00		118	70-130			





## QC Summary Data

Atkins Engineering Associates Inc.	Project Name:	COTTON DRAW10 #2	<b>Reported:</b>
2904 W. 2nd	Project Number:	20071-0001	
Roswell NM, 88201	Project Manager:	Austin Weyant	2/16/2022 4:36:04PM

## Nonhalogenated Organics by EPA 8015D - GRO

Analyst: IY

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

## Blank (2208021-BLK1)

Prepared: 02/14/22 Analyzed: 02/15/22

Gasoline Range Organics (C6-C10)	ND	20.0							
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.91		8.00		111	70-130			

## LCS (2208021-BS2)

Prepared: 02/14/22 Analyzed: 02/15/22

Gasoline Range Organics (C6-C10)	52.1	20.0	50.0		104	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.93		8.00		112	70-130			

## Matrix Spike (2208021-MS2)

Source: E202078-03

Prepared: 02/14/22 Analyzed: 02/15/22

Gasoline Range Organics (C6-C10)	56.4	20.0	50.0	ND	113	70-130			
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.93		8.00		112	70-130			

## Matrix Spike Dup (2208021-MSD2)

Source: E202078-03

Prepared: 02/14/22 Analyzed: 02/15/22

Gasoline Range Organics (C6-C10)	56.0	20.0	50.0	ND	112	70-130	0.664	20	
Surrogate: 1-Chloro-4-fluorobenzene-FID	8.97		8.00		112	70-130			





## QC Summary Data

Atkins Engineering Associates Inc.	Project Name:	COTTON DRAW10 #2	<b>Reported:</b>
2904 W. 2nd	Project Number:	20071-0001	
Roswell NM, 88201	Project Manager:	Austin Weyant	2/16/2022 4:36:04PM

## Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

## Blank (2208008-BLK1)

Prepared: 02/14/22 Analyzed: 02/15/22

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	58.8		50.0		118	50-200			

## LCS (2208008-BS1)

Prepared: 02/14/22 Analyzed: 02/15/22

Diesel Range Organics (C10-C28)	542	25.0	500		108	38-132			
Surrogate: n-Nonane	47.3		50.0		94.5	50-200			

## Matrix Spike (2208008-MS1)

Source: E202049-06

Prepared: 02/14/22 Analyzed: 02/15/22

Diesel Range Organics (C10-C28)	542	25.0	500	ND	108	38-132			
Surrogate: n-Nonane	46.0		50.0		92.0	50-200			

## Matrix Spike Dup (2208008-MSD1)

Source: E202049-06

Prepared: 02/14/22 Analyzed: 02/15/22

Diesel Range Organics (C10-C28)	532	25.0	500	ND	106	38-132	1.98	20	
Surrogate: n-Nonane	45.4		50.0		90.9	50-200			





## QC Summary Data

Atkins Engineering Associates Inc.	Project Name:	COTTON DRAW10 #2	<b>Reported:</b>
2904 W. 2nd	Project Number:	20071-0001	
Roswell NM, 88201	Project Manager:	Austin Weyant	2/16/2022 4:36:04PM

## Nonhalogenated Organics by EPA 8015D - DRO/ORO

Analyst: JL

Analyte	Result mg/kg	Reporting Limit mg/kg	Spike Level mg/kg	Source Result mg/kg	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
---------	-----------------	-----------------------------	-------------------------	---------------------------	----------	--------------------	----------	-------------------	-------

## Blank (2208029-BLK1)

Prepared: 02/15/22 Analyzed: 02/15/22

Diesel Range Organics (C10-C28)	ND	25.0							
Oil Range Organics (C28-C36)	ND	50.0							
Surrogate: n-Nonane	51.2		50.0		102	50-200			

## LCS (2208029-BS1)

Prepared: 02/15/22 Analyzed: 02/15/22

Diesel Range Organics (C10-C28)	544	25.0	500		109	38-132			
Surrogate: n-Nonane	49.6		50.0		99.1	50-200			

## Matrix Spike (2208029-MS1)

Source: E202078-08

Prepared: 02/15/22 Analyzed: 02/15/22

Diesel Range Organics (C10-C28)	653	25.0	500	ND	131	38-132			
Surrogate: n-Nonane	60.1		50.0		120	50-200			

## Matrix Spike Dup (2208029-MSD1)

Source: E202078-08

Prepared: 02/15/22 Analyzed: 02/15/22

Diesel Range Organics (C10-C28)	665	25.0	500	ND	133	38-132	1.87	20	M2
Surrogate: n-Nonane	61.2		50.0		122	50-200			





QC Summary Data

Atkins Engineering Associates Inc.	Project Name:	COTTON DRAW10 #2	Reported:
2904 W. 2nd	Project Number:	20071-0001	
Roswell NM, 88201	Project Manager:	Austin Weyant	2/16/2022 4:36:04PM

Anions by EPA 300.0/9056A

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2207056-BLK1)					Prepared: 02/11/22 Analyzed: 02/11/22				
Chloride	ND	20.0							
LCS (2207056-BS1)					Prepared: 02/11/22 Analyzed: 02/12/22				
Chloride	254	20.0	250		101	90-110			
Matrix Spike (2207056-MS1)					Source: E202039-01		Prepared: 02/11/22 Analyzed: 02/12/22		
Chloride	251	20.0	250	ND	100	80-120			
Matrix Spike Dup (2207056-MSD1)					Source: E202039-01		Prepared: 02/11/22 Analyzed: 02/12/22		
Chloride	253	20.0	250	ND	101	80-120	0.952	20	





QC Summary Data

Atkins Engineering Associates Inc.	Project Name:	COTTON DRAW10 #2	Reported:
2904 W. 2nd	Project Number:	20071-0001	
Roswell NM, 88201	Project Manager:	Austin Weyant	2/16/2022 4:36:04PM

Anions by EPA 300.0/9056A

Analyst: RAS

Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD Limit	Notes
	mg/kg	mg/kg	mg/kg	mg/kg	%	%	%	%	

Blank (2208022-BLK1)					Prepared: 02/14/22 Analyzed: 02/15/22				
Chloride	ND	20.0							
LCS (2208022-BS1)					Prepared: 02/14/22 Analyzed: 02/15/22				
Chloride	276	20.0	250		110	90-110			
Matrix Spike (2208022-MS1)					Source: E202078-01		Prepared: 02/14/22 Analyzed: 02/15/22		
Chloride	358	20.0	250	88.2	108	80-120			
Matrix Spike Dup (2208022-MSD1)					Source: E202078-01		Prepared: 02/14/22 Analyzed: 02/15/22		
Chloride	334	20.0	250	88.2	98.2	80-120	7.09	20	

QC Summary Report Comment:  
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures.  
Therefore, hand calculated values may differ slightly.





Definitions and Notes

Atkins Engineering Associates Inc.	Project Name:	COTTON DRAW10 #2	
2904 W. 2nd	Project Number:	20071-0001	Reported:
Roswell NM, 88201	Project Manager:	Austin Weyant	02/16/22 16:36

- H2 Sample was receive with an insufficient amount of time to prepare and analyze the sample within the method prescribed holding time. The analysis was performed as quickly as possible per client request.
- M2 Matrix spike recovery was outside quality control limits. The associated LCS spike recovery was acceptable.
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- RPD Relative Percent Difference
- DNI Did Not Ignite

Note (1): Methods marked with \*\* are non-accredited methods.

Note (2): Soil data is reported on an "as received" weight basis, unless reported otherwise.



Client: Atkins Eng  
 Project: COTTON DRAW10 #2  
 Sampler: JAW  
 Phone: 575 626 3993  
 Email(s): austin@atkinseng.com  
 Project Manager:

RUSH?

☐ 1d  
☐ 3d

Lab Use Only		Analysis and Method										Lab Only	
Lab WO#		GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0							Lab Number	N/A (s) Y/N
Job Number													
PE202049													
20071-0001													
Page 1 of 2													
Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative	GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0					
SW1-1	1/31/22	1020	S		X	X		X					1
SW2-1	1/31/22	1022	S		X	X		X					2
L1-1	1/31/22	1019	S		X	X		X					3
L1-2	1/31/22	1024	S		X	X		X					4
SW4-1	1/31/22	1026	S		X	X		X					5
L2-1	1/31/22	1030	S		X	X		X					6
L2-2	1/31/22	1035	S		X	X		X					7
SW2	1/31/22	1040	S		X	X		X					8
SW3	1/31/22	1042	S		X	X		X					9
SW5-1	1/31/22	1021	S		X	X		X					10
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	Lab Use Only							
						**Received on Ice Y/N							
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time	T1 T2 T3							
				2/9/22	10:30	AVG Temp °C 4							
Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other					Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA								
**Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.													
Sample(s) dropped off after hours to a secure drop off area.					Chain of Custody					Notes/Billing info:			



5796 US Highway 64, Farmington, NM 87401  
 Three Springs • 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865  
 Ph (970) 259-0615 Fx (800) 362-1879

envirotech inc.com  
 laboratory@envirotech-inc.com



## Envirotech Analytical Laboratory

Printed: 2/16/2022 11:52:52AM

## Sample Receipt Checklist (SRC)

Instructions: Please take note of any NO checkmarks.

If we receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.

Client:	Atkins Engineering Associates Inc.	Date Received:	02/09/22 10:30	Work Order ID:	E202049
Phone:	(575) 626-3993	Date Logged In:	02/09/22 15:17	Logged In By:	Caitlin Christian
Email:	austin@atkinseng.com	Due Date:	02/15/22 17:00 (4 day TAT)		

Chain of Custody (COC)

1. Does the sample ID match the COC? Yes
2. Does the number of samples per sampling site location match the COC? Yes
3. Were samples dropped off by client or carrier? Yes
4. Was the COC complete, i.e., signatures, dates/times, requested analyses? No
5. Were all samples received within holding time? Yes

Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.

Carrier: UPSComments/Resolution

No signature date and time provided on COC, No ORO analysis or Project Manager on COC.  
The 2 missing samples were received out of HT.

Sample Turn Around Time (TAT)

6. Did the COC indicate standard TAT, or Expedited TAT? Yes

Sample Cooler

7. Was a sample cooler received? Yes
8. If yes, was cooler received in good condition? Yes
9. Was the sample(s) received intact, i.e., not broken? Yes
10. Were custody/security seals present? No
11. If yes, were custody/security seals intact? NA
12. Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C? Yes

Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling

13. If no visible ice, record the temperature. Actual sample temperature: 4°C

Sample Container

14. Are aqueous VOC samples present? No
15. Are VOC samples collected in VOA Vials? NA
16. Is the head space less than 6-8 mm (pea sized or less)? NA
17. Was a trip blank (TB) included for VOC analyses? NA
18. Are non-VOC samples collected in the correct containers? Yes
19. Is the appropriate volume/weight or number of sample containers collected? Yes

Field Label

20. Were field sample labels filled out with the minimum information:
 

Sample ID?	Yes
Date/Time Collected?	No
Collectors name?	No

Sample Preservation

21. Does the COC or field labels indicate the samples were preserved? No
22. Are sample(s) correctly preserved? NA
24. Is lab filtration required and/or requested for dissolved metals? No

Multiphase Sample Matrix

26. Does the sample have more than one phase, i.e., multiphase? No
27. If yes, does the COC specify which phase(s) is to be analyzed? NA

Subcontract Laboratory

28. Are samples required to get sent to a subcontract laboratory? No
29. Was a subcontract laboratory specified by the client and if so who? NA Subcontract Lab: na

Client Instruction

Signature of client authorizing changes to the COC or sample disposition.

Date



envirotech Inc.



Client: Atkins Eng  
 Project: COTTON DRAW10 #2  
 Sampler: JAW  
 Phone: 575 626 3993  
 Email(s): austin@atkinseng.com  
 Project Manager:

RUSH?

☐ 1d  
☐ 3d

Lab Use Only		Analysis and Method								Lab Only	
Lab WO#										Lab Number	
Job Number										Correct Cont./Prsiv (s)	
PE202049											
20071-0001											
GRO/DRO by 8015	BTEX by 8021	TPH by 418.1	Chloride by 300.0								
X	X		X								1
X	X		X								2
X	X		X								3
X	X		X								4
X	X		X								5
X	X		X								6
X	X		X								7
X	X		X								8
X	X		X								9
X	X		X								10

Sample ID	Sample Date	Sample Time	Matrix	Containers QTY - Vol/TYPE/Preservative
SW1-1	1/31/22	1020	S	
SW2-1	1/31/22	1022	S	
L1-1	1/31/22	1019	S	
L1-2	1/31/22	1024	S	
SW4-1	1/31/22	1026	S	
L2-1	1/31/22	1030	S	
L2-2	1/31/22	1035	S	
SW2	1/31/22	1040	S	
SW3	1/31/22	1042	S	
SW5-1	1/31/22	1021	S	

Relinquished by: (Signature)			Received by: (Signature)			Lab Use Only		
Date	Time		Date	Time		**Received on Ice <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		
Date	Time		Date	Time		T1	T2	T3
						AVG Temp. °C 4		

Sample Matrix: S - Soil, Sd - Solid, Sg - Sludge, A - Aqueous, O - Other \_\_\_\_\_ Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

\*\*Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Sample(s) dropped off after hours to a secure drop off area.	Chain of Custody	Notes/Billing Info:
		Samples 2 + 9 received 2/14/22 Carthy Chinton 2/14/22 2/12/00



5796 US Highway 64, Farmington, NM 87401  
 Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301

Ph (505) 632-0615 Fx (505) 632-1865  
 Ph (970) 259-0615 Fr (800) 362-1879

envirotech.com  
 laboratory@envirotech.com



W

270

NW

300

N

0

330

☀ 314°NW (T) ● 32°9'4"N, 103°45'33"W ±32ft ▲ 3446ft



**devon**  
COTTON DRAW 10 FED COM #02H  
30-015-39230 SL: NMNM 42626 BL: NM 0503  
SL: SEC.10-T25S-R31E 330' FNL & 660' FEL  
BL: SEC.10-T25S-R31E 330' FSL & 660' FEL  
EDDY COUNTY, NEW MEXICO  
LAT. N 32° 09' 04.8996" LONG. W 103° 45' 33.7068"  
DEVON CORPORATE CONTACT: 800-361-3377

Cotton Draw 10 #2  
31 Jan 2022, 10:58:52



☀ 91°E (T) ● 32°9'5"N, 103°45'31"W ±32ft ▲ 3421ft



Source

Cotton Draw 10 #2  
31 Jan 2022 10:47:39









SE

S

SW

W

150

180

210

240

270

☀ 197°S (T) ● 32°9'5"N, 103°45'31"W ±32ft ▲ 3433ft



Liner

Cotton Draw 10 #2  
31 Jan 2022, 10:49:00





W

NW

N

240

270

300

330

0

☀ 304°NW (T) ● 32°9'5"N, 103°45'31"W ±32ft ▲ 3433ft

Liner

Cotton Draw 10 #2  
31 Jan 2022, 10:49:13





Excavated

Cotton Draw 10 #2  
31 Jan 2022, 10:47:04















**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 173434

CONDITIONS

Operator: DEVON ENERGY PRODUCTION COMPANY, LP 333 West Sheridan Ave. Oklahoma City, OK 73102	OGRID: 6137
	Action Number: 173434
	Action Type: [C-141] Release Corrective Action (C-141)

CONDITIONS

Created By	Condition	Condition Date
bhall	Deferral approved. Incident will remain in "Closure not approved" status until remediation occurs at time of plugging and abandonment or during retrofit of the battery, whichever comes first.	1/17/2023