

Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	05/02/2023	
Media Program:	Water	
Regulatory Program(s)	Clean Water Act-National Pollution Discharge Elimination System (Brine)	
Company Name:	Calgary Energy, LLC	
Facility Name:	Tidal Osage	
Facility Physical Location:	Latitude: 36.529327, Longitude: -96.411303	
(city, state, zip code)	Hominy, OK, 74035	
Mailing address:	4444 E. 146 th St. N	
(city, state, zip code)	Skiatook, OK, 74070	
County/Parish:	Tulsa	
Facility Phone Number	918-798-4510	
Facility Contact:	Blaine Haag	Co-Owner
	bhaag.calgaryenergyllc@gmail.com	
FRS Number:	n/a	
Identification/Permit Number:	OKU002161	
Media Identifier Number:	n/a	
NAICS:	211111	
SIC:	1311	
Personnel participating in inspection:		
Matthew Allen	EPA/Region 6 ECDW	Inspector
EPA Lead Inspector Signature/Date		
	Matthew Allen	Date
Supervisor Signature/Date		
	Damon McElroy (<i>acting</i>)	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 Inspector, Matthew Allen, arrived at the Calgary Energy, LLC, Tidal Osage II Lease (EPA ID No. OKU002161) at 12:00 PM on 05/02/2023 for a spill inspection. This was an inspection in response to a National Response Center Spill Report (NRC No. 1366143) which was received by EPA Region 6. I met with Calgary Energy, LLC representative Duane Easley before beginning the inspection. Mr. Easley declined an invitation to participate during the inspection but planned to meet for a closing conference at the end of the inspection. The inspection was conducted by the authority of the Clean Water Act (CWA) to determine compliance with Environmental Protection Agency (EPA) regulations. There were no other federal, state, or local agency representatives present at the time of the inspection.

FACILITY DESCRIPTION

EPA conducted an initial spill inspection on the Tidal Osage II Lease, where a 3-inch diameter poly flowline ruptured at a “butt weld”, releasing a company reported volume of 300 barrels oilfield brine and 1 barrel of crude oil onto the land which migrated downgradient approximately 35 feet where it entered into a tributary of Little Hominy Creek. The pipeline failure occurred on a main “trunk line” which was carrying produced water and oil to the Tidal Osage II tank battery.

Section II - OBSERVATIONS

I observed a “background” TDS field reading of 1,048 mg/L taken in the main channel of the impacted tributary of Little Hominy Creek, upstream from the Point of Entry (POE). This field reading was taken in a pool of water which had NOT been impacted by the spill. See photo No. 1 of Appendix 1 (photo log) included with this report. GPS location information for each observation is recorded with each photo in the photo log. All TDS field readings observed during the inspection were taken with an EPA cataloged, properly calibrated YSI Pro 30 conductivity meter.

I observed the repaired section of 3-inch poly flowline which had ruptured. This section of repaired flowline was the Release Point of the spill. Oil staining and brine impacts were observed near the release point. See photo No. 2 and 3.

I observed the flowpath from the release point to the POE. Oil and brine staining were observed along the flowpath. The overland flowpath was approximately 35 feet from the release point to the point of entry into the impacted tributary. See photo No. 3.

I observed an elevated TDS field reading of 65,862 mg/L in the main channel of the impacted tributary at the POE. This was the highest observed TDS field reading of the inspection. I also observed the downstream and upstream bed and bank features of the tributary from the POE. See photos No. 4, 5 and 6.

I observed Calgary Energy, LLC employees working with transfer pumps along the impacted tributary to “sweep” or pump impacted waters downstream to awaiting vacuum trucks where the water was being removed and taken for proper disposal. See photo No. 7.

Progressing downstream, I observed an elevated TDS field reading of 3,578 mg/L as well as the bed and bank features of the impacted tributary at the location. These observations and GPS locations are detailed in photos No. 8, 9 and 10 of the photo log.

I observed an additional elevated TDS field reading of 3,940 mg/L as I tracked spill impacts downstream. See photo No. 11. I observed the bed and bank features of the impacted tributary at the same location. The bed and bank observations can be seen in Photos No. 12 and 13 of the photo log.

I observed an elevated TDS field reading of 1,700 mg/L in the pool immediately above (upstream) the lowermost, temporary containment dam which had been placed by the operator to prevent downstream migration of impacted waters. See photo No 14.

I observed the temporary, lowermost containment dam, as well as vacuum trucks removing elevated TDS waters from the impacted tributary. See photo No. 15 for GPS location information. This was also the last point where I observed spill impacts at the time of the inspection.

I continued the inspection downstream, beyond the temporary containment dam, and observed a TDS field reading of 950 mg/L in a deep pool in the main channel of the tributary. This TDS field reading was below the upstream “background” reading observed at the beginning of the inspection and provided evidence that the containment dam had been appropriately placed. This TDS field reading should also be used when assessing background TDS levels for the area. See photos No. 17 and 18.

Throughout the inspection I observed 7 Calgary Energy, LLC employees, 2 transfer pumps, 1 vacuum truck, and 1 vacuum transport working to reduce the spill impacts along the tributary.

Section III – AREAS OF CONCERN

I met with Duane Easley representing Calgary Energy, LLC for a closing conference at the end of the inspection. I conveyed my primary areas of concern were to remove the oil and brine impacts from the tributary of Little Hominy Creek and prevent any additional downstream migration. An additional area of concern discussed with the operator was associated with the flow path from the point of release to the impacted tributary.

With these concerns, I recommend that the operator remediate the overland flowpath from the release point to the point of entry into the impacted tributary. I also recommend that special care should be applied to this spill to ensure impacts are not migrated further downstream by upcoming rainfall events,

especially during the wet/spring season. I also recommend that the operator maintain a constant and ample supply of equipment and manpower to restore and remediate the impacted tributary as soon as possible to prevent further downstream migration of impacts to the tributary of Little Hominy Creek or other downstream waterbodies.

Section IV – FOLLOW UP

Inspector will conduct follow-up phone calls with company representatives as well as follow-up inspections to measure cleanup progress over the coming days and weeks.

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 18 photos taken 05/02/2023

Appendix 1

Photograph Log 18 Photos



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010128

Orientation: N/A

Date of Photo: 05/02/2023

Time of Photo: 12:13 PM

Latitude: 36.529045

Longitude: -96.411707

Photographer: Matthew Allen

Description: TDS field reading of 1048 mg/L taken upstream from the Point of Entry (POE). This reading was taken in an area which was NOT impacted by the spill. This field reading should be used when assessing "background" TDS levels for the area.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010129

Orientation: N

Date of Photo: 05/02/2023

Time of Photo: 12:20 PM

Latitude: 36.529327

Longitude: -96.411303

Photographer: Matthew Allen

Description: This was the repaired section of 3-inch diameter poly flowline where the spill originated (release point). The operator stated there was a poly "butt weld" exposed, which developed a crack, causing the oil and brine to be released.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010130

Orientation: S

Date of Photo: 05/02/2023

Time of Photo: 12:22 PM

Latitude: 36.529327

Longitude: -96.411303

Photographer: Matthew Allen

Description: This was a photo standing at the release point, with a view to the south toward the POE into the tributary of Little Hominy Creek. The spill traveled downgrade approximately 35 feet from the release point to the POE.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma

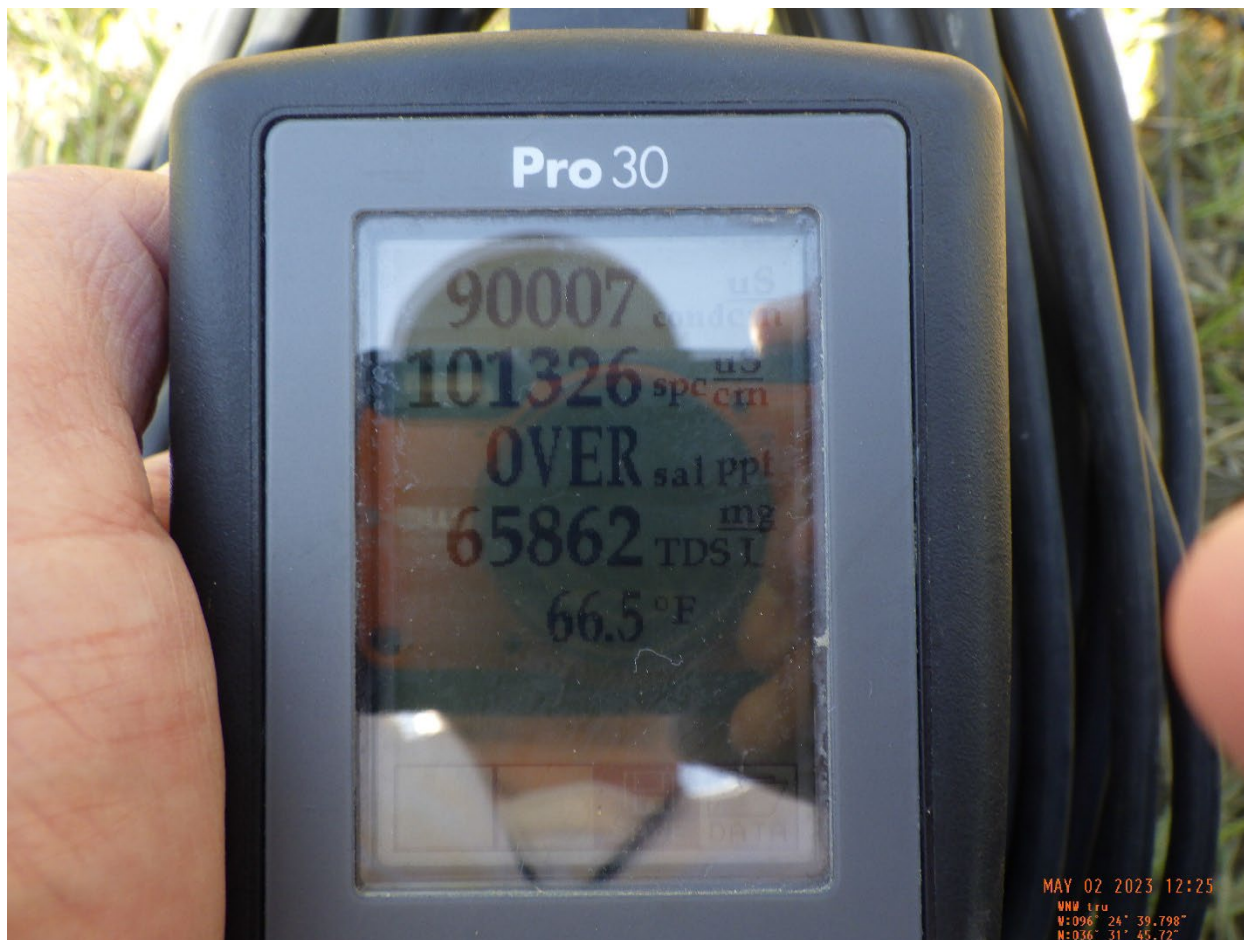


Photo File Name: R0010131

Orientation: N/A

Date of Photo: 05/02/2023

Time of Photo: 12:25 PM

Latitude: 36.529281

Longitude: -96.411180

Photographer: Matthew Allen

Description: This was an elevated TDS field reading of 65,862 mg/L taken at the POE into the impacted tributary of Little Hominy Creek. This was the highest TDS level observed during the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010132

Orientation: NE

Date of Photo: 05/02/2023

Time of Photo: 12:26 PM

Latitude: 36.529281

Longitude: -96.411180

Photographer: Matthew Allen

Description: This was the pool of water where the elevated TDS of 65,862 mg/L measurement was taken at the POE, with a view looking downstream. Oil was also present at the POE.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010133

Orientation: SW

Date of Photo: 05/02/2023

Time of Photo: 12:27 PM

Latitude: 36.529281

Longitude: -96.411180

Photographer: Matthew Allen

Description: This was a photo standing at the POE with a view to the SW or upstream.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010134

Orientation: N

Date of Photo: 05/02/2023

Time of Photo: 12:32 PM

Latitude: 36.529671

Longitude: -96.410226

Photographer: Matthew Allen

Description: This was a photo taken downstream from the POE. Workers and equipment "sweeping" or emptying the brine from one hole of water downstream to the next hole of water, progressively moving the water toward vacuum trucks stationed downstream which were removing impacted water from the tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010135

Orientation: N/A

Date of Photo: 05/02/2023

Time of Photo: 12:40 PM

Latitude: 36.530626

Longitude: -96.408306

Photographer: Matthew Allen

Description: This was an elevated TDS field reading of 3,578 mg/L taken downstream from the POE.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010136

Orientation: SW

Date of Photo: 05/02/2023

Time of Photo: 12:41 PM

Latitude: 36.530626

Longitude: -96.408306

Photographer: Matthew Allen

Description: This was a photo taken at the same location as Photo No. 8 on the previous page. This is a view looking SW or upstream, this photo shows the bed and bank features of the impacted tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010137

Orientation: NE

Date of Photo: 05/02/2023

Time of Photo: 12:42 PM

Latitude: 36.530626

Longitude: -96.408306

Photographer: Matthew Allen

Description: This was a photo taken from the same location as photos No. 8 and 9. This was a photo with a NE or downstream view, showing the bed and bank features of the impacted tributary. There was a transfer pump moving impacted water downstream toward the vacuum trucks.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010138

Orientation: N/A

Date of Photo: 05/02/2023

Time of Photo:

Latitude: 36.530675

Longitude: -96.406554

Photographer: Matthew Allen

Description: This was an elevated TDS field reading of 3,940 mg/L taken downstream from the POE along the main channel of the impacted tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 12

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010139

Orientation: SW

Date of Photo: 05/02/2023

Time of Photo: 12:50 PM

Latitude: 36.530675

Longitude: -96.406554

Photographer: Matthew Allen

Description: This was a photo taken from the same location as Photo No. 11. This was a view looking SW or upstream showing the bed and bank features of the impacted tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 13

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010140

Orientation: NE

Date of Photo: 05/02/2023

Time of Photo: 12:51 PM

Latitude: 36.530675

Longitude: -96.406554

Photographer: Matthew Allen

Description: This was a photo taken from the same location as Photos No. 11 and 12. This was a view looking NE or downstream showing the bed and bank features of the impacted tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 14

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010141

Orientation: N/A

Date of Photo: 05/02/2023

Time of Photo: 12:59 PM

Latitude: 36.531256

Longitude: -96.403969

Photographer: Matthew Allen

Description: This was an elevated TDS field reading of 1,700 mg/L taken in the lowermost impacted pool of the impacted tributary. This field reading was taken in the pool of water immediately upstream from the lower, temporary containment dam which had been placed by the operator to prevent further downstream migration of impacted waters.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 15

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010142

Orientation: S

Date of Photo: 05/02/2023

Time of Photo: 1:04 PM

Latitude: 36.531256

Longitude: -96.403969

Photographer: Matthew Allen

Description: This is the lowermost, temporary containment dam, placed by the operator to prevent further downstream migration of brine impacted waters. The dam was placed in an appropriate location, as evidence of spill impacts were not observed as the inspection continued downstream.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 16

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010143

Orientation: E

Date of Photo: 05/02/2023

Time of Photo: 1:06 PM

Latitude: 36.531256

Longitude: -96.403969

Photographer: Matthew Allen

Description: This was a photo taken from the same location as photo No. 15. This is a downstream view toward the east. I did not observe spill impacts at any point downstream from the temporary containment dam at the time of the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 17

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010144

Orientation: N/A

Date of Photo: 05/02/2023

Time of Photo: 1:08 PM

Latitude: 36.531218

Longitude: -96.403516

Photographer: Matthew Allen

Description: This was a TDS field reading of 950 mg/L observed in a deep hole downstream from the last recorded spill impacts. This TDS field reading was lower than the upstream background reading observed at the beginning of the inspection and should also be used when considering “background” TDS levels for the area.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 18

Location: 36.529327, -96.411303		
City: Hominy	County/Parish: Osage	State: Oklahoma



Photo File Name: R0010145

Orientation: E

Date of Photo: 05/02/2023

Time of Photo: 1:10 PM

Latitude: 36.531256

Longitude: -96.403969

Photographer: Matthew Allen

Description: This was the deep pool where the TDS field reading from photo No. 17 was observed. At the time of the inspection, there was no evidence of spill impacts at this location, or at any point further downstream.