

Region 6 Compliance Assurance and Enforcement Division

INSPECTION REPORT

Inspection Date(s):	08/23/2016 – 8/24/2016		
Media:	Water		
Regulatory Program(s)	NPDES - Oil and Gas, Produced/Brine Water		
Company Name:	Seven Cross Operating, LLC		
Facility Name:	Novice Unit 8022 Battery Lease (RRC Lease No. 10904)		
Facility Physical Location:	Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
(city, state, zip code)	Novice, Texas 79538		
Mailing address:	10973 FM 1176		
(city, state, zip code)	Santa Anna, Texas 76878		
County/Parish:	Coleman County		
Facility Contact:	Loy Strom	Registered Agent	
	(325) 200-1020		
FRS Number:	N/A		
Identification/Permit Number:	TXU011175		
Media Number:	N/A		
NAICS:	211111		
SIC:	1311		
Personnel participating in inspection:			
Jeanne Eckhart	6EN – WR	Environmental Scientist	(214) 665 – 8174
Jack Arias	6EN – WR	Environmental Scientist	(214) 665 – 8164
EPA Lead Inspector Signature/Date			
	Jeanne Eckhart		Date
Supervisor Signature/Date			
	Willie Lane		Date

Section I - INTRODUCTION

PURPOSE OF THE INSPECTION

The purpose of the inspection was to determine if the facility was in compliance with Section 301 of the Clean Water Act (CWA) and to identify and document discharges of produced wastewater (brine) to waters of the United States. The inspection was conducted under the authority of Section 308 of the CWA. EPA Region 6 inspectors, Jeanne Eckhart and Jack Arias, arrived at the Seven Cross Operating, LLC – Novice Unit 8022 Battery lease at approximately 01:00 PM on August 23, 2016 for an unannounced inspection. We presented our credentials to C.T. Taylor and Jet Taylor, landowners where Seven Cross Operating, LLC operates the Novice Unit 8022 Battery Lease. We proceeded to conduct an oil and gas, produced/brine water Clean Water Act (CWA) inspection. The scope of the inspection was to evaluate the facility's tanks, flow lines, flow paths, ponds, tributaries, creeks, and other related factors that are connected to the CWA at the facility.

FACILITY DESCRIPTION

The facility is known as the Seven Cross Operating, LLC – Novice Unit 8022 Battery lease and is located in Novice, Coleman County, Texas. The lease is located at latitude 32.006819 N and longitude -99.639053 W. The facility consisted of two oil storage tanks approximately 600 barrels each, one produced water storage tank approximately 400 barrels, one heater treater, and a horizontal separator. A transfer pump was located between the heater treater and the storage tanks. There were at least three active wells associated with this tank battery at the time of the inspection. We also observed gas production equipment at the facility. See Photo Nos. 1 – 3, 9, 11, 15 – 18 in Appendix 1.

The lease consists of production wells, injection wells, vessels, flow lines, collection points, and other equipment used for the production of crude oil and natural gas. Production wells produce a mixture of produced water and crude oil (well fluids). Flow lines are used to transport well fluids from various locations on the leases. Collection points known as tank batteries consist of various tanks, vessels, and equipment used to separate and store the produced water, brine water, and crude oil. Produced water is typically high in salts and is commonly known as oil field brine. The crude oil is sold for profit and the produced water, and/or brine, is transported to and disposed of in various injection wells. The lease also produces and commercially sells natural gas.

The facility is located near a tributary of the South Fork of Jim Ned Creek, which coalesces with the South Fork of the Jim Ned Creek and connects to the Jim Ned Creek which coalesces with Lake Coleman. Lake Coleman has the Texas stream segment number 1419, which has a designated use as a domestic public water supply. The facility is approximately 8 miles from the designated stream segment 1419. Therefore this facility meets the National Enforcement Initiative for Energy Extraction and this lease is an Energy Extraction facility.

Section II – OBSERVATIONS

When we arrived at this facility on August 23, 2016, we observed that the tank battery and associated equipment had inadequate secondary containment, due to visible flow paths leading from the tank battery area west towards the tributary of the South Fork of Jim Ned Creek and fluids in the containment area near the horizontal separator. We observed salt crystals and visible oil staining present throughout the facility at the time of the inspection. According to the on-site representatives, there was a rain event within the week prior to the inspection of approximately 1 inch to 1.5 inches of rain in the area. We observed the Novice Unit 8022 Tank battery and associated production equipment connected to the tank battery, including active production wells.

Novice Unit 8022 Tank Battery

The Novice Unit 8022 Tank battery was located at 32.006819 N and longitude -99.639053 W. On August 23, 2016, we observed the Novice Unit 8022 Tank battery had inadequate raised secondary containment berm walls that separated two areas and had visible erosion, oil staining, and dry flow paths from the facility. There were also fluids in the containment area of the horizontal separator. At the time of the inspection there were oil, fluids, oil staining on the ground, and salt crystals visible at this facility. See Photo Nos. 2 – 7 in Appendix 1. At the south side of the tank battery, where the oil and produced water storage tanks were located, visible salt crystals were seen in the containment area near the produced water storage tank. We saw rusting valves on the storage tanks at the time of the inspection. We saw that the containment area where the oil storage tanks were located had excessive vegetation and inadequate berms on the west side of the tank battery. See Photo Nos. 2 – 3 in Appendix 1. We also observed oil staining near the catch boxes of the oil storage tanks, where trucks connect to the storage tanks via out-flow lines to pump the oil into a truck to be hauled. See Photo No. 4 in Appendix 1. The visible flow paths we saw from the west side of the facility led to the tributary of the South Fork of the Jim Ned Creek, and there was dead vegetation along the flow path. The berm walls on the secondary containment of the facility had also been compacted and had some erosion that was visible at the time of the inspection. There was also oil staining on the west side of the facility along the flow path. The smell of hydrocarbons was present at the time of the inspection. See Photo Nos. 5 – 8 in Appendix 1.

Also, we observed a transfer pump between the heater treater and the storage tanks at the facility that showed fluids and oil in open containers around the pump as well as pooled fluids near the pump. The pump did not have secondary containment and had visible oil staining around it. The transfer pump was seen near and in part of the flow path at the time of the inspection and there was no visible vegetation near the pump. The transfer pump was leaking at the time of the inspection. See Photo Nos. 9 – dg 10 in Appendix 1.

The heater treater, separator, and gas production equipment were located in a containment area separately from the tanks. The containment area was inadequate due to a potential overflow of fluids from the containment area. This bermed area was not sufficiently raised and sized to account for potential runoff of fluids and a rainfall event. At the time of the inspection, we observed that the horizontal separator was actively leaking from the valve on the bottom of the separator. The leak was

consistently dripping and the separator had significant rusting on the tank and the valves associated to the tank. At the time of the inspection, the separator's pressure gauge read 45 psi. We saw that the heater treater also had significant rusting on the equipment and valves, including a large corroded hole at the bottom exterior of the heater treater with visible oil staining and fluids near the heater treater. The electrical conduit box and several valves were also visible rusted at the time of the inspection at this part of the facility. See Photo Nos. 11 – 13 in Appendix 1. Using a calibrated YSI 30 Salinity Meter, we took a Total Soluble Salts (TSS) measurement of the fluids inside the containment area near the separator at the time of the inspection and the fluids measured over 80,000 parts-per-million (ppm) of TSS. There were visible flow lines coming into this part of the facility and we observed approximately 7 in-flow lines at the time of the inspection. See Photo Nos. 14 – 15 in Appendix 1.

Novice Unit – Well No. 8026

The Novice Unit – Well No. 8026 was located at 32.004964 N and -99.642435 W. On August 23, 2016, we observed the Novice Unit – Well No. 8026, which was connected to the heater treater, separator, and Novice Unit 8022 Battery Lease at the time of the inspection. We saw visible oil staining and a leaking well head near the stuffing box and casing head at the time of the inspection. The leaking fluids included oil and produced water. See Photo No. 16 in Appendix 1.

Novice Unit – Well No. 8028

The Novice Unit – Well No. 8028 was located at 31.999887 N and -99.642997 W. On August 23, 2016, we observed the Novice Unit – Well No. 8028, which was connected to the heater treater, separator, and Novice Unit 8022 Battery Lease at the time of the inspection. We saw visible oil staining and a leaking well head near the stuffing box and casing head at the time of the inspection. The leaking fluids included oil and produced water. See Photo No. 17 in Appendix 1.

Novice Unit – Well No. 8099

The Novice Unit – Well No. 8099 was located at 32.007412 N and -99.639320 W. On August 23, 2016, we observed the Novice Unit – Well No. 8099, which was connected to the heater treater, separator, and Novice Unit 8022 Battery Lease at the time of the inspection. We saw visible oil staining and a leaking well head near the stuffing box and casing head at the time of the inspection. The fluids we observed included oil and produced water. Salt crystals were also observed near the well head at the time of the inspection. Fluids were near the well head and ponded near at the well site area, and some fluids were covered with soil at the time of the inspection. A flow path could be seen westward from this area of the facility, which was located near the separator, was observed at the time of the inspection. Also, we observed a chemical storage container with no secondary containment near the well, connected to the lease. Near the well head there were ponded fluids and we took TSS reading of 72,900 ppm at the time of the inspection. See Photo Nos. 18 - 21 in Appendix 1.

The Flow Path, Point of Entry, and Downstream TSS Reading

On August 23, 2016, we observed a dry flow path, which was connected to the Novice Unit 8022 Battery Lease at the time of the inspection. We saw visible oil staining and dead vegetation along the flow path west of the tank battery. The flow path lead to the tributary of the South Fork of the Jim Ned Creek, which was west of the facility approximately 360 feet west of the tank battery. We took a TSS measurement of 4,000 ppm at latitude 32.008648 N and -99.640657 W at the point of entry to the tributary of the South Fork of the Jim Ned Creek, which was approximately 0.3 miles from the facility. Also, we took a downstream TSS measurement of 700 ppm along the South Fork of the Jim Ned Creek after the tributary coalesces with the South Fork of the Jim Ned Creek located at latitude 32.015545 N and longitude -99.640737 W, which was approximately 1.1 miles downstream from the facility. See Photo Nos. 22 - 26 in Appendix 1.

Background TSS Readings

On August 23, 2016, we took a TSS measurement upstream along the South Fork of the Jim Ned Creek, approximately 100 feet upstream from where the tributary of the South Fork of the Jim Ned Creek coalesces with the South Fork of the Jim Ned Creek. This background TSS reading of 400 ppm was taken at this location, which was located at latitude 32.014905 N and longitude -99.640939 W. On August 24, 2016, we took a TSS measurement of 200 ppm upstream on the tributary of the South Fork of the Jim Ned Creek, approximately 1.2 miles south east of the facility. The TSS reading was taken at latitude 31.993257 N and longitude -99.626160 W. See Photo Nos. 27 - 28 in Appendix 1.

A summary of the TSS readings taken during the inspection can be seen in Table 1.

Table 1. Summary of Total Soluble Salts (TSS) Measurements taken during the inspection

	TSS Reading	Latitude	Longitude
Point of Discharge – Separator	> 80,000 ppm	32.006819 N	-99.639053 W
Point of Discharge – Novice Unit – Well No. 8099	72,900 ppm	32.007412 N	-99.639320 W
Point of Entry to tributary of South Fork of the Jim Ned Creek, approx. 0.3 miles from facility	4,000 ppm	32.008648 N	-99.640657 W
Downstream TSS reading – Approx. 1.1 mile downstream from facility	700 ppm	32.015545 N	-99.640737 W
Background TSS Reading – Upstream on the South Fork of the Jim Ned Creek	400 ppm	32.014905 N	-99.640939 W
Background TSS Reading – Upstream from facility along a tributary of the South Fork of the Jim Ned Creek	200 ppm	31.993257 N	-99.626160 W

Section III – AREAS OF CONCERN

We observed areas of concerns at this facility during the inspection that included:

- Inadequate secondary raised containment walls at the facility, including, the produced water tank, oil storage tanks, transfer pump, separator, and heater treater due to fluids in the containment area, visible dry flow paths from the area towards the west, and eroded and compacted berm walls
- Visible salt crystals, oil staining, fluids, and oil throughout the facility, catch boxes, and wells
- Rusted tanks and valves, especially on the heater treater and separator
- An actively leaking horizontal separator with a consistent dripping leak and fluids in the inadequate containment area that measured over 80,000 ppm TSS
- A leaking transfer pump with oil and fluids near the pump
- Dead vegetation along the flow path from the facility towards the tributary of the South Fork of the Jim Ned Creek.
- Significant corrosion on the heater treater's exterior, especially at the bottom of the heater treater, and rusting on equipment connected to the heater treater and separator
- Leaking of fluids and oil at the well head of Novice Unit – Well No. 8026 with visible oil and oil staining
- Leaking of fluids and oil at the well head of Novice Unit – Well No. 8028 with visible oil staining and fluids
- Leaking of fluids and oil at the well head of the Novice Unit – Well No. 8099 with visible oil staining, ponded fluids that measured 72,900 ppm TSS, oil, oil sheen, and fluids covered with soil
- A chemical storage tank at the Novice Unit – Well No. 8099 with no secondary containment
- Visible fluids and flow paths towards the west side of the facility near the Novice Unit – Well No. 8099, which was located near the same flow paths observed from the separator and heater treater containment area of the facility
- At the point of entry into the tributary of the South Fork of the Jim Ned Creek, a TSS reading of 4,000 ppm was taken
- Downstream approximately 1.1 miles from the facility after the tributary of the South Fork of the Jim Ned Creek coalesces with the South Fork of the Jim Ned Creek a TSS reading of 700 ppm was taken

Section IV – FOLLOW UP

The following follow-up actions will be conducted:

- EPA will send a copy of the inspection report to the facility
- EPW will refer this facility to the EPA Region 6 SPCC program

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 28 photos taken on 08/23/2016 and 08/24/2016.

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0877.JPG

Date of Photograph: 08/23/2016

Latitude: 32.006819 N

Longitude: -99.639053 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 02:49 PM

Photographer: Jack Arias

Description: This image shows the signs at the Seven Cross Operating, LLC – Novice Unit 8022 Battery lease.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0880.JPG

Date of Photograph: 08/23/2016

Latitude: 32.006849 N

Longitude: -99.639063 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 02:53 PM

Photographer: Jack Arias

Description: This image shows the south side of the tank battery, including two oil storage tanks and a produced water tank in this portion of the tank battery and lease. We observed visible salt crystals near and south of the produced water tank.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0876.JPG

Date of Photograph: 08/23/2016

Latitude: 32.006819 N

Longitude: -99.639053 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 02:49 PM

Photographer: Jack Arias

Description: This image shows the oil storage tanks, also seen in Photo No. 2 in Appendix 1. We saw excessive vegetation within the secondary containment area. The secondary containment was not adequate due to visible dry flow paths from the oil storage tank berm and the produced water on the west side of the facility going westwards towards the tributary of the South Fork of the Jim Ned Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0878.JPG

Date of Photograph: 08/23/2016

Latitude: 32.006849 N

Longitude: -99.639063 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 02:50 PM

Photographer: Jack Arias

Description: This image shows one of the catch boxes at the outlet line from the oil storage tanks to the connection valve area for hauling the oil from the facility. We observed oil staining around the catch box. We also observed excessive vegetation in the secondary containment and an inadequate secondary containment berms due to visible dry flow paths from the tank battery location westward towards the tributary of the South Fork of Jim Ned Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0879.JPG

Date of Photograph: 08/23/2016

Latitude: 32.006849 N

Longitude: -99.639063 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 02:52 PM

Photographer: Jack Arias

Description: This image shows produced water storage tank and the secondary containment berm on the west side of the tank battery. We observed a dry flow path west towards the tributary of the South Fork of Jim Ned Creek. We observed that the berm walls of the secondary containment were compacted and had some erosion on the west side of the facility and along the visible dry flow path.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0881.JPG

Date of Photograph: 08/23/2016

Latitude: 32.006849 N

Longitude: -99.639063 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 02:54 PM

Photographer: Jack Arias

Description: This image shows the west side of the tank battery near the produced water storage tank shown in Photo No. 5 of Appendix 1. We observed a visible dry flow path from the west side of the facility towards the tributary of the South Fork of Jim Ned Creek. We saw erosion along the west side of the berm as well. The flow path had no visible vegetation, while visible vegetation was around the flow path at the time of the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0874.JPG

Date of Photograph: 08/23/2016

Latitude: 32.006813 N

Longitude: -99.639390 W

Orientation: SE

Map Datum: WGS-84

Time of Photo: 02:47 PM

Photographer: Jack Arias

Description: This image shows the west side of the tank battery, near the oil storage tanks. We observed oil staining on the secondary containment berm and outside of the secondary containment area. We observed a flow path from the west side of the tank battery towards the tributary of the South Fork of the Jim Ned Creek. There was no vegetation along the flow path at the time of the inspection. The smell of hydrocarbons was also present at the time of the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0875.JPG

Date of Photograph: 08/23/2016

Latitude: 32.006848 N

Longitude: -99.639390 W

Orientation: SW

Map Datum: WGS-84

Time of Photo: 02:47 PM

Photographer: Jack Arias

Description: This image shows the visible dry flow path from the west side of the tank battery near the oil storage tanks, shown in Photo No. 7 in Appendix 1. We observed oil staining along the flow path and no vegetation along the flow path. The flow path went west towards the tributary of the South Fork of Jim Ned Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0873.JPG

Date of Photograph: 08/23/2016

Latitude: 31.695895 N

Longitude: -99.063817 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 02:42 PM

Photographer: Jack Arias

Description: This image shows a transfer pump that is located between the heater treater and the oil and produced water storage tanks at the tank battery. We observed buckets of oil and fluids at the transfer pump, oil staining around the equipment, and no secondary containment for this pump. We also observed the flow path from the west side of the tank battery. North of the transfer pump, the horizontal separator was visible with an inadequate secondary containment area full of fluids.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0872.JPG

Date of Photograph: 08/23/2016

Latitude: 32.007130 N

Longitude: -99.639371 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 02:25 PM

Photographer: Jack Arias

Description: This image shows the leaking transfer pump from Photo No. 9 in Appendix 1. The transfer pump was pumping fluids from the heater treater to the tank battery storage tanks. We observed oil staining and the pump leaking at the time of the inspection. Fluids filled several containers and holes near the pump as well.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0869.JPG

Date of Photograph: 08/23/2016

Latitude: 32.007191 N

Longitude: -99.639502 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 02:35 PM

Photographer: Jack Arias

Description: This image shows the horizontal separator and the heater treater at the facility, north of the oil and produced water storage tanks at the tank battery. There was an inadequate secondary containment due to fluids in the containment area and eroded berm walls. We observed significant rust on the heater treater and the separator at the time of the inspection. The fluids in the secondary containment area were from the leaking separator at the time of the inspection. Several flow lines were visible as well.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 12

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0870.JPG

Date of Photograph: 08/23/2016

Latitude: 32.007191 N

Longitude: -99.639502 W

Orientation: E

Map Datum: WGS-84

Time of Photo: 02:36 PM

Photographer: Jack Arias

Description: This image shows the horizontal separator with an active leak at the time of the inspection. We observed fluids leaking from the bottom of the separator at the time of the inspection. These fluids were inside the secondary containment of the separator, which was inadequate at the time of the inspection. We observed significant rusting on the separator as well.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 13

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0871.JPG

Date of Photograph: 08/23/2016

Latitude: 32.007191 N

Longitude: -99.639502 W

Orientation: E

Map Datum: WGS-84

Time of Photo: 02:38 PM

Photographer: Jack Arias

Description: This image shows the bottom of the heater treater, as shown in Photo No. 11 in Appendix 1. We observed significant corrosion and rusting on the heater treater. The heater treater had corrosion on the bottom and holes in the exterior. We observed oil staining and fluids near the heater treater in the secondary containment. The secondary containment was inadequate at the time of the inspection due to fluids being inside the secondary containment at the time of the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 14

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0865.JPG

Date of Photograph: 08/23/2016

Latitude: 32.007191 N

Longitude: -99.639502 W

Orientation: NE

Map Datum: WGS-84

Time of Photo: 02:30 PM

Photographer: Jeanne Eckhart

Description: This image shows the fluids in the inadequate secondary containment area of the heater treater and horizontal separator. We took a Total Soluble Salts (TSS) reading of over 80,000 parts-per-million (ppm) of the fluids in the containment area at the time of the inspection. The separator was actively leaking at the time of the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 15

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0864.JPG
Date of Photograph: 08/23/2016
Latitude: 32.007309 N
Longitude: -99.639300 W
Orientation: SW
Map Datum: WGS-84
Time of Photo: 02:27 PM
Photographer: Jeanne Eckhart
Description:

This image shows the heater treater and horizontal separator at the facility. We observed gas production equipment, including a gas pipeline was visible at the time of the inspection. At the facility approximately 7 pipes from wells were connected to the separator and heater treater. We observed fluids in the secondary containment area at this part of the facility, as shown in Photo Nos. 9, 11, 12, and 14 in Appendix 1.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 16

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0899.JPG

Date of Photograph: 08/23/2016

Latitude: 32.004964 N

Longitude: -99.642435 W

Orientation: E

Map Datum: WGS-84

Time of Photo: 03:43 PM

Photographer: Jack Arias

Description: This image shows the Novice Unit Well No. 8026, which is associated with the Novice Unit 8022 Battery Lease. At the time of the inspection, we observed visible oil staining and a leaking well head, near the stuffing box and casing head.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 17

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0901.JPG

Date of Photograph: 08/23/2016

Latitude: 31.999887 N

Longitude: -99.642997 W

Orientation: NE

Map Datum: WGS-84

Time of Photo: 03:49 PM

Photographer: Jack Arias

Description: This image shows the Novice Unit Well No. 8028, which is associated with the Novice Unit 8022 Battery Lease. At the time of the inspection, we observed visible oil staining and a leaking well head, near the stuffing box and casing head.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 18

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0859.JPG
Date of Photograph: 08/23/2016
Latitude: 32.007412 N
Longitude: -99.639320 W
Orientation: NW
Map Datum: WGS-84
Time of Photo: 02:20 PM
Photographer: Jeanne Eckhart
Description:

This image shows the Novice Unit Well No. 8099, which is associated with the Novice Unit 8022 Battery Lease. At the time of the inspection, we observed visible oil pooled near the well head, oil staining, and a leaking well head near the stuffing box and casing head. Fluids were also observed near the well head. A chemical storage container was at the well location and did not have a secondary containment.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 19

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0863.JPG
Date of Photograph: 08/23/2016
Latitude: 32.007425 N
Longitude: -99.639222 W
Orientation: SW
Map Datum: WGS-84
Time of Photo: 02:26 PM
Photographer: Jeanne Eckhart
Description:

This image shows the Novice Unit Well No. 8099, which is associated with the Novice Unit 8022 Battery Lease. At the time of the inspection, we observed visible oil pooled near the well head, oil staining, and a leaking well head near the stuffing box and casing head. Fluids were also observed near the well. We observed fluids covered with soil near the well at the time of the inspection. The horizontal separator near this well associated to the tank battery, as shown in Photo No. 11, can be seen south west of the well. A dry flow path was visible west of the well site and separator area at the time of the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 20

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0860.JPG
Date of Photograph: 08/23/2016
Latitude: 32.007412 N
Longitude: -99.639320 W
Orientation: NE
Map Datum: WGS-84
Time of Photo: 02:21 PM
Photographer: Jeanne Eckhart

Description: This image shows the Novice Unit Well No. 8099, which is associated with the Novice Unit 8022 Battery Lease. At the time of the inspection, we observed visible oil pooled near the well head, oil staining, and a leaking well head near the stuffing box and casing head. Fluids were also observed near the well head.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 21

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0862.JPG

Date of Photograph: 08/23/2016

Latitude: 32.007412 N

Longitude: -99.639320 W

Orientation: NE

Map Datum: WGS-84

Time of Photo: 02:24 PM

Photographer: Jeanne Eckhart

Description: This image shows the Novice Unit Well No. 8099, which is associated with the Novice Unit 8022 Battery Lease. At the time of the inspection, we observed visible oil pooled near the well head, oil staining, and a leaking well head near the stuffing box and casing head. Fluids were also observed near the well head with oil sheen and salt crystals near the well head. A TSS reading of 72,900 ppm was taken from the fluids pooled near the well head that we observed leaking.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 22

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0857.JPG

Date of Photograph: 08/23/2016

Latitude: 32.007786 N

Longitude: -99.640440 W

Orientation: S

Map Datum: WGS-84

Time of Photo: 02:16 PM

Photographer: Jack Arias

Description: This image shows the dry flow path, downstream of the Novice Unit 8022 Battery Lease. We observed that the flow path merged with the tributary of the South Fork of the Jim Ned Creek and went north towards the South Fork of the Jim Ned Creek. We observed bed and bank along the tributary as well as a lack of vegetation along the flow path



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 23

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0854.JPG

Date of Photograph: 08/23/2016

Latitude: 32.008648 N

Longitude: -99.640657 W

Orientation: S

Map Datum: WGS-84

Time of Photo: 02:02 PM

Photographer: Jeanne Eckhart

Description: This image shows the dry flow path, downstream of the Novice Unit 8022 Battery Lease. We observed that the flow path merged with the tributary of the South Fork of the Jim Ned Creek and went north towards the South Fork of the Jim Ned Creek. We observed bed and bank along the tributary, including visible rock bottom and bank on the west side of the tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 24

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0856.JPG

Date of Photograph: 08/23/2016

Latitude: 32.008648 N

Longitude: -99.640657 W

Orientation: NW

Map Datum: WGS-84

Time of Photo: 02:06 PM

Photographer: Jeanne Eckhart

Description: This image shows the dry flow path, downstream of the Novice Unit 8022 Battery Lease. We observed a dry flow path to a tributary of the South Fork of the Jim Ned Creek and ponded fluids. We took a TSS reading at the point of entry of the flow path from the tank battery, downstream along the tributary. We observed visible bed and bank as well as high water marks shown on the tributary at the time of the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 25

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0855.JPG

Date of Photograph: 08/23/2016

Latitude: 32.008648 N

Longitude: -99.640657 W

Orientation: NW

Map Datum: WGS-84

Time of Photo: 02:05 PM

Photographer: Jeanne Eckhart

Description: This image shows the dry flow path, downstream of the Novice Unit 8022 Battery Lease. We observed a dry flow path to a tributary of the South Fork of the Jim Ned Creek and ponded fluids. We took a TSS reading of 4,000 ppm at the point of entry of the flow path from the tank battery, downstream along the tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 26

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0909.JPG

Date of Photograph: 08/23/2016

Latitude: 32.015545 N

Longitude: -99.640737 W

Orientation: SW

Map Datum: WGS-84

Time of Photo: 04:48 PM

Photographer: Jack Arias

Description: This image shows the South Fork of the Jim Ned Creek downstream from where the tributary coalesces with the South Fork of Jim Ned Creek. A TSS reading of 700 ppm was taken at this location. We observed riparian debris and vegetation at the time of inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 27

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0908.JPG

Date of Photograph: 08/23/2016

Latitude: 32.014905 N

Longitude: -99.640939 W

Orientation: SW

Map Datum: WGS-84

Time of Photo: 04:41 PM

Photographer: Jack Arias

Description: This image shows the South Fork of the Jim Ned Creek upstream approximately 100 feet from where the tributary coalesces with the South Fork of Jim Ned Creek. A TSS reading of 400 ppm was taken at this location as a background measurement. We observed that the South Fork of Jim Ned Creek, which can be seen in the back ground of Photo No. 26, has bed and bank characteristics similar to a riparian environment.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 28

Location: Approx. 0.5 mile SW of HWY 84 and CR 702 (32.006819, -99.639053)		
City: Novice	County/Parish: Coleman	State: Texas



Photograph File Name: DSCN0939.JPG

Date of Photograph: 08/24/2016

Latitude: 31.993257 N

Longitude: -99.626160 W

Orientation: SW

Map Datum: WGS-84

Time of Photo: 10:20 AM

Photographer: Jack Arias

Description: This image shows an additional background TSS reading of 200 ppm taken upstream along the tributary of the South Fork of the Jim Ned Creek. We observed visible aquatic life at the time of the inspection at the ponded area, as seen in this photo.