

Region 6 - Enforcement & Compliance Assurance Division
INSPECTION REPORT

Inspection Date(s):	11/08/2019	
Media Program:	Water, Clean Water Act, National Pollution Discharge Elimination System	
Regulatory Program(s)	Oil and Gas, Produced Water	
Company Name:	Red Oak Operating, LLC	
Facility Name:	Shiloh Lease	
Facility Physical Location:	33.394962N, -93.463712W	
(city, state, zip code)	Buckner, Arkansas 71827	
Mailing address:	1997 Columbia 34	
(city, state, zip code)	Magnolia, Arkansas 71753	
County/Parish:	Lafayette	
Facility Phone Number	870-310-4254	
Facility Contact:	Mark Thomas	N/A
	N/A	
FRS Number:	N/A	
Identification/Permit Number:	ARU001274	
Media Identifier Number:	N/A	
NAICS:	211111	
SIC:	1311	
Personnel participating in inspection:		
Kent W. Sanborn	U.S. EPA, Region 6, ECDWE	918-557-1615
EPA Lead Inspector Signature/Date		
	Kent W. Sanborn	Date
Supervisor Signature/Date		12 DEC 2019
	Guy Tidmore	Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspector Kent W. Sanborn arrived at the Red Oak Operating, LLC Shiloh Lease near Stamps, Arkansas at about 10:30 AM on November 8, 2019 for an unannounced inspection. There were no company representatives at the site. The inspection was conducted to determine the facility's compliance with the Clean Water Act (CWA). The scope of the inspection was to determine if the facility was in compliance with the CWA, and to identify and document unauthorized discharges of produced wastewater (brine) to a water of the United States.

FACILITY DESCRIPTION

There were no signs on the lease or wells that indicate a legal description or location. The area was known as the Shiloh oil and gas field. The discharge of produced water, or brine, originated from the facility associated with the Shiloh Lease, where brine was stored. The brine was being released out a drain valve and pipe effectively draining the secondary containment pit to the nearby Clear Creek. The origination point of discharge was the tank battery secondary containment pit, and the pit fluids, including brine drained directly to Clear Creek.

Section II - OBSERVATIONS

I initially arrived at the Red Oak Operating, LLC Shiloh lease at about 10:30 AM on November 8, 2019. Identification of the lease ownership is shown in Photo 1. An additional sign was located at the tank indicating an additional owner or operator of the lease was present (Photo 2). The pit at the battery, which was the source of the brine discharge, is shown in Photo 3 and Photo 4. I observed that the pit had been completely drained. The pit was drained through a pipe and valve (Photo 5) and fluids, including brine, flowed east to Clear Creek. With a calibrated YSI Pro 30 conductivity meter, I took a Total Dissolved Solids (TDS) reading at the pipe exit of the pit and it measured 17,762 milligrams per liter (mg/L) (Photo 6). The discharge flowed along the south boundary of the tank battery and then flowed east toward Clear Creek (Photo 7). TDS at the location shown in Photo 7 measured 20,935 mg/L (Photo 8). The discharge entered the forested area farther east as shown in Photo 9. The TDS of the location shown in Photo 9 measured 21,262 mg/L (Photo 10). The discharge continued to flow east, down the hill, toward the point of entry to Clear Creek as shown in Photo 11. The TDS just before the entry point to Clear Creek was measured in Photo 11 and was 21,235 mg/L (Photo 12). The discharge entered the creek at the point shown in Photo 13. At the time of the inspection, Clear Creek was flowing and appeared to be spring fed. TDS at the point of entry to the creek measured 28,316 mg/L (Photo 14). Upstream on Clear Creek (Photo 15), the TDS of the flowing creek measured 37 mg/L (Photo 16). I observed that the general flow of Clear Creek was north and northeast.

Section III – AREAS OF CONCERN

The facility did not have a proper sign to correctly identify ownership and lease location information on site during the inspection. The facility had improper maintenance of the tank battery and was releasing fluids from inside the secondary containment pit by a valve located on the pit. The fluids flowed to Clear

Creek from the tank battery. Elevated levels of TDS were present from the facility, along the flow path, and in Clear Creek

Section IV – FOLLOW UP

A follow up inspection will be conducted as needed. This facility will be referred to EPA water enforcement.

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 16 photos taken 11/8/2019.

Appendix 1

Photographic Log (16 photos)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 1 (DSC_0100)

Orientation: South

Date of Photo: 11/8/2019

Time of Photo: 11:02 am

Latitude: 33.394947N

longitude: -93.463716W

Photographer: K.W. Sanborn

Description: This was the first sign that identified the owner and operator at the lease during the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 2 (DSC_0102)

Orientation: South

Date of Photo: 11/8/2019

Time of Photo: 11:03 am

Latitude: 33.394947N

Longitude: -93.463716W

Photographer: K.W. Sanborn

Description: This sign located at the tank battery identified itself as the Minter #1.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 3 (DSC_0101)

Orientation: South

Date of Photo: 11/8/2019

Time of Photo: 11:02 am

Latitude: 33.394947N

Longitude: -93.463716W

Photographer: K.W. Sanborn

Description: This image shows the overview of the tank battery and secondary containment pit, which had recently been drained. The pit was the source of the discharge or brine from the facility to Clear Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 4 (DSC_0098)

Orientation: Southeast

Date of Photo: 11/8/2019

Time of Photo: 11:02 am

Latitude: 33.394947N

Longitude: -93.463716W

Photographer: K.W. Sanborn

Description: I observed that the tank battery pit was dry after had been drained recently from the facility to Clear Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 5 (DSC_0080)

Orientation: Southwest

Date of Photo: 11/8/2019

Time of Photo: 10:51 am

Latitude: 33.394843N

Longitude: -93.463435W

Photographer: K.W. Sanborn

Description: I observed the drain pipe was draining brine from the tank battery pit to Clear Creek, during the inspection. I observed an oil sheen along the flow path as well.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 6 (DSC_0085)

Orientation: Southwest

Date of Photo: 11/8/2019

Time of Photo: 10:53 am

Latitude: 33.394843N

Longitude: -93.463435W

Photographer: K.W. Sanborn

Description: With a calibrated YSI Pro 30 conductivity meter, I measured Total Dissolved Solids (TDS) at the drain pipe and the discharged fluid, including brine, measured 17,762 milligrams per liter (mg/L).



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 7 (DSC_0079)

Orientation: Southeast

Date of Photo: 11/8/2019

Time of Photo: 10:10:51 am

Latitude: 33.394843N

Longitude: -93.463435W

Photographer: K.W. Sanborn

Description: I observed brine that flowed from the pit and the flow path went east toward Clear Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 8 (DSC_0083)

Orientation: South

Date of Photo: 11/8/2019

Time of Photo: 10:52 am

Latitude: 33.394843N

Longitude: -93.463435W

Photographer: K.W. Sanborn

Description: The TDS at the location shown in Photo 7 measured 20,935 mg/L.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 9 (DSC_0087)

Orientation: East

Date of Photo: 11/8/2019

Time of Photo: 10:56 am

Latitude: 33.394725N

Longitude: -93.463435W

Photographer: K.W. Sanborn

Description: The brine flowed into the woods here, on the way to the Clear Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 10 (DSC_0088)

Orientation: Southeast

Date of Photo: 11/8/2019

Time of Photo: 10:56 am

Latitude: 33.394725N

Longitude: -93.463189W

Photographer: K.W. Sanborn

Description: The TDS at the location shown in Photo 9 measured 21,262 mg/L.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 11 (DSC_0090)

Orientation: Southeast

Date of Photo: 11/8/2019

Time of Photo: 10:57 am

Latitude: 33.394604N

Longitude: -93.462669W

Photographer: K.W. Sanborn

Description: This was a view of the brine discharge flowing towards the point of entry to Clear Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 12

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 12 (DSC_0089)

Orientation: East

Date of Photo: 11/8/2019

Time of Photo: 10:56 am

Latitude: 33.394604N

Longitude: -93.462669W

Photographer: K.W. Sanborn

Description: The TDS of the discharge location shown in Photo 11 measured 21,235 mg/L.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 13

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 13 (DSC_0092)

Orientation: East

Date of Photo: 11/8/2019

Time of Photo: 10:57 am

Latitude: 33.39470N

Longitude: -93.46241W

Photographer: K.W. Sanborn

Description: I observed that the brine discharge from the Shiloh lease facility entered Clear Creek here.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 14

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 14 (DSC_0093)

Orientation: North

Date of Photo: 11/8/2019

Time of Photo: 10:58 am

Latitude: 33.39470N

Longitude: -93.46241W

Photographer: K.W. Sanborn

Description: The TDS of Clear Creek at the point of entry measured 28,316 mg/L.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 15

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 15 (DSC_0096)

Orientation: South

Date of Photo: 11/8/2019

Time of Photo: 10:58 am

Latitude: 33.39440N

Longitude: -93.46258W

Photographer: K.W. Sanborn

Description: I observed Clear Creek upstream from the point of entry of the discharged brine, here. The creek was flowing at the time of the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 16

33.394962N, -93.463712W		
City: Stamps	County: Lafayette	State: Arkansas



Photo File Name: Photo 16 (DSC_0095)

Orientation: South

Date of Photo: 11/8/2019

Time of Photo: 10:58 am

Latitude: 33.39440N

Longitude: -93.46258W

Photographer: K.W. Sanborn

Description: The TDS of Clear Creek, upstream of the discharge entry point measured 37 mg/L.