

**Region 6 Compliance Assurance and Enforcement Division  
INSPECTION REPORT**

|                                        |                                                  |                        |              |
|----------------------------------------|--------------------------------------------------|------------------------|--------------|
| Inspection Date(s):                    | May 17, 2018                                     |                        |              |
| Media:                                 | Water (CWA)                                      |                        |              |
| Regulatory Program(s)                  | NPDES – Brine                                    |                        |              |
| Company Name:                          | <b>LBOC, LLC</b>                                 |                        |              |
| Facility Name:                         | <b><i>Staples-Olney-Lion</i></b>                 |                        |              |
| Facility Physical Location:            | 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |                        |              |
| (city, state, zip code)                | Calion, Arkansas 71724                           |                        |              |
| Mailing address:                       | 787 All Gulf Road                                |                        |              |
| (city, state, zip code)                | Norphlet, Arkansas 71759                         |                        |              |
| County/Parish:                         | Union                                            |                        |              |
| Facility Contact:                      | Charles Long                                     | Owner                  |              |
|                                        | 870-546-3457                                     |                        |              |
| FRS Number:                            | N/A                                              |                        |              |
| Identification/Permit Number:          | ARU001230                                        |                        |              |
| Media Number:                          | N/A                                              |                        |              |
| NAICS:                                 | 21111                                            |                        |              |
| SIC:                                   | 1311                                             |                        |              |
| Personnel participating in inspection: |                                                  |                        |              |
| Kent W. Sanborn                        | EPA Region 6, 6EN-WR                             | Environmental Engineer | 918-557-1615 |
|                                        |                                                  |                        |              |
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|                                        |                                                  |                        |              |
| EPA Lead Inspector<br>Signature/Date   |                                                  |                        |              |
|                                        | Kent W. Sanborn                                  |                        | Date         |
| Supervisor<br>Signature/Date           |                                                  |                        |              |
| for                                    | Guy Tidmore                                      |                        | Date         |

## **Section I – INTRODUCTION**

### **PURPOSE OF THE INSPECTION**

EPA Region 6 inspector Kent W. Sanborn arrived at the LBOC, LLC Staples-Olney-Lion SWD site on a property near Calion, Arkansas at about 12:00 pm on May 17, 2018 for an inspection. There were no company representatives at the site during the inspection. The inspection was conducted under the authority of Section 308 of the CWA. The scope of the inspection was to determine if the facility was in compliance with Clean Water Act, including Section 301, and to identify and document discharges of produced wastewater (brine) to waters of the United States.

### **FACILITY DESCRIPTION**

The facility was a brine disposal facility associated with the oil and gas industry. I observed a release of produced water and other fluids from the facility. An injection well known as permitted well number 0693-WG-SW was located at the site. The area was remote and located immediately next to the Ouachita River.

## **Section II – OBSERVATIONS**

I initially arrived at the LBOC Staples-Olney-Lion lease at about 12:00 pm on May 17, 2018, 2018. Photo 1 shows the well location nearest the discharge point. Photo 2 shows the tank and well associated with the pit responsible for the discharge. I observed that the tank overflows and well fluids were drained to the large pit (Photo 3). Photos 4, 5, and 6 show the large oil covered pit at the facility that has fluids in it. I observed several dead birds were visible in the pit and I notified the Arkansas Game and Fish Dept. of the dead birds. The pit was the source of the discharge of brine and oil fluids that seeped from the pit on the south side. The large oil covered pit was constructed on the side of a steep hill. The discharge had reached a tributary of the Ouachita River. The pit was seeping brine and some oil from its base outside of the containment area (Photos 7 and 8). The pit was built on the side of a large hill located just south of the well at the facility and seepage that was occurring flowed south. With a calibrated YSI 30 Pro Conductivity Meter, a Total Dissolved Solids (TDS) measurement of the seep was taken and was 7,185 mg/L (Photo 9). Photo 10 shows a view of the back side of the pit from the bottom of the hill at the seep. Photos 11 and 12 show the flow path of the brine and some oil from the pit base toward the tributary point of entry. TDS of the flow was 13,032 mg/L (Photo 13). The flow path was shown again farther south with active flow (Photo 14). Dead vegetation was evident along the flow path, as shown at the location of Photo 14. TDS at the point shown in Photo 14 was 9,143 mg/L (Photo 15). The point of entry to the tributary of the Ouachita River was shown in Photo 16. The TDS at the entry point was 3,094 mg/L (Photo 17). Downstream from the point of entry (Photo 18) the tributary had a TDS of 1,044 mg/L (Photo 19). Upstream from the point of entry (Photo 20) the TDS of the tributary was 137 mg/L (Photo 21).

**Section III – AREAS OF CONCERN**

I observed fluids in the pit, including oil and brine at the facility. I observed oil staining inside and outside of the secondary containment. I observed the storage tank on site overflowing and causing fluids to build up in the pit. The secondary containment was inadequate and seeping during the inspection. There were brine and oil fluids actively flowing to a tributary of the Ouachita River during the inspection. There were dead birds observed in the fluids of the pit.

**Section IV – FOLLOW UP**

A follow up inspection will be conducted as needed.

**Section V – LIST OF APPENDICES**

Appendix 1 – Photo Log – 21 photos taken 5/17/2018

## Appendix 1

### Photographic Log (21 photos)



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 1

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 1 (DSC\_0056)

Orientation: East

Date of Photo: 05/17/2018

Time of Photo: 12:59 pm

Latitude: 33.318266N

Longitude: -92.516216W

Photographer: K.W. Sanborn

Description: This image shows the sign at the facility where a discharge originated from a pit located next to and south of the salt water disposal well indicated on the sign.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 2 (DSC\_0057)

Orientation: East

Date of Photo: 05/17/2018

Time of Photo: 12:59 pm

Latitude: 33.318266N

Longitude: -92.516216W

Photographer: K.W. Sanborn

Description: The injection well was observed during the inspection. Oil and brine fluids and a flow path were visible from a tank (shown) to a large pit a few yards south of the tank.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 3

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 3 (DSC\_0058)

Orientation: Southeast

Date of Photo: 05/17/2018

Time of Photo: 12:59 pm

Latitude: 33.318266N

Longitude: -92.516216W

Photographer: K.W. Sanborn

Description: I observed that fluids from the tank and well entered the pit here.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 4

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 4 (DSC\_0059)

Orientation: Southeast

Date of Photo: 05/17/2018

Time of Photo: 12:59 pm

Latitude: 33.318146N

Longitude: -92.516208W

Photographer: K.W. Sanborn

Description: The large pit shown here was covered with oil. The pit received overflowing fluids from a single fiberglass tank and the disposal well shown in Photo 2.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 5

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 5 (DSC\_0060)

Orientation: East

Date of Photo: 05/17/2018

Time of Photo: 1:00 pm

Latitude: 33.318146N

Longitude: -92.516208W

Photographer: K.W. Sanborn

Description: The oil covered pit has trapped several birds in the oily fluids. These birds were dead during the inspection. I observed two dead birds here in the pit fluids.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 6

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 6 (DSC\_0062)

Orientation: Northeast

Date of Photo: 05/17/2018

Time of Photo: 1:00 pm

Latitude: 33.318146N

Longitude: -92.516208W

Photographer: K.W. Sanborn

Description: I observed another bird that was trapped in the pit fluids, including oil, that was dead during the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 7

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 7 (DSC\_0063)

Orientation: South

Date of Photo: 05/17/2018

Time of Photo: 1:01 pm

Latitude: 33.317832N

Longitude: -92.516116W

Photographer: K.W. Sanborn

Description: This image shows a view from the top of the pit siding towards the south. I observed that the entire south side of the pit was built into a steep hill. I observed that the pit was seeping out of the base of the pit wall towards the south, and could see oil staining along the flow path south of the pit.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 8

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 8 (DSC\_0064)

Orientation: South

Date of Photo: 05/17/2018

Time of Photo: 1:01 pm

Latitude: 33.317832N

Longitude: -92.516116W

Photographer: K.W. Sanborn

Description: This image shows the seeping south side of the pit as seen in Photo 7.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 9

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 9 (DSC\_0065)

Orientation: East

Date of Photo: 05/17/2018

Time of Photo: 1:02 pm

Latitude: 33.317832N

Longitude: -92.516116W

Photographer: K.W. Sanborn

Description: With a calibrated YSI Pro 30 Conductivity meter, I took a Total Dissolved Solids (TDS) measurement at the base of the pit and the reading was 7,185 milligrams per Liter (mg/L). I observed that the seeping was active and flowing south at a trickle towards an unnamed tributary of the Ouachita River.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 10

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 10 (DSC\_0067)

Orientation: North

Date of Photo: 05/17/2018

Time of Photo: 1:06 pm

Latitude: 33.317832N

Longitude: -92.516116W

Photographer: K.W. Sanborn

Description: This image shows a view from the point of discharge, where the seep was occurring from the base of the pit. The entire hill shown was excavated to construct the pit shown in Photo 4.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 11

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 11 (DSC\_0068)

Orientation: South

Date of Photo: 05/17/2018

Time of Photo: 1:07 pm

Latitude: 33.31760N

Longitude: -92.51530W

Photographer: K.W. Sanborn

Description: In this photo, I observed that brine and some oil seeped from the pit and flowed south along this path toward the unnamed tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 12

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 12 (DSC\_0069)

Orientation: Southeast

Date of Photo: 05/17/2018

Time of Photo: 1:07 pm

Latitude: 33.3176N

Longitude: -92.5153W

Photographer: K.W. Sanborn

Description: This photo shows a close-up view of the seepage mixture of brine and oil along the flow path to the tributary.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 13

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 13 (DSC\_0070)

Orientation: South

Date of Photo: 05/17/2018

Time of Photo: 1:08 pm

Latitude: 33.3176N

Longitude: -92.5153W

Photographer: K.W. Sanborn

Description: I measured the TDS of the seepage mixture along the flow path was 13,032 mg/L.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 14

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 14 (DSC\_0071)

Orientation: South

Date of Photo: 05/17/2018

Time of Photo: 1:09 pm

Latitude: 33.3175N

Longitude: -92.5151W

Photographer: K.W. Sanborn

Description: I observed farther south of the point shown in Photo 13, that there was dead vegetation present along the flow path.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 15

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 15 (DSC\_0072)

Orientation: East

Date of Photo: 05/17/2018

Time of Photo: 1:09 pm

Latitude: 33.3175N

Longitude: -92.5151W

Photographer: K.W. Sanborn

Description: I took a TDS reading at the point shown in Photo 14 and it was 9,143 mg/L.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 16

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 16 (DSC\_0074)

Orientation: Southeast

Date of Photo: 05/17/2018

Time of Photo: 1:11 pm

Latitude: 33.3169N

Longitude: -92.5154W

Photographer: K.W. Sanborn

Description: This image shows the point of entry to the tributary of the Ouachita River where brine and oil fluids had entered the tributary. The flow of the tributary was east.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 17

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 17 (DSC\_0076)

Orientation: South

Date of Photo: 05/17/2018

Time of Photo: 1:13 pm

Latitude: 33.3169N

Longitude: -92.5154W

Photographer: K.W. Sanborn

Description: A TDS reading at the point of entry was 3,094 mg/L.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 18

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 18 (DSC\_0078)

Orientation: Southeast

Date of Photo: 05/17/2018

Time of Photo: 1:13 pm

Latitude: 33.3178N

Longitude: -92.5130W

Photographer: K.W. Sanborn

Description: This was the view of the tributary downstream from the point of entry. Flow was southeast towards another tributary of the Ouachita River which flowed to the Ouachita River. This location was approximately 1,200 feet south of the Ouachita River in a remote location and further access downstream was not feasible during the inspection.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 19

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo file Name: Photo 19 (DSC\_0081)

Orientation: East

Date of Photo: 05/17/2018

Time of Photo: 1:16 pm

Latitude: 33.3178N

Longitude: -92.5130W

Photographer: K.W. Sanborn

Description: I took a TDS reading of the tributary at the location in Photo 18 and it was 1,044 mg/L.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

## Photograph Log

Photo No. 20

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 20 (DSC\_0077)

Orientation: West

Date of Photo: 05/17/2018

Time of Photo: 1:13 pm

Latitude: 33.3159N

Longitude: -92.5161W

Photographer: K.W. Sanborn

Description: This image shows a view of the creek upstream from the point of entry of the brine to the tributary. I observed flow in the tributary at this location.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 21

|                                                  |               |                 |
|--------------------------------------------------|---------------|-----------------|
| 33.318275N, -92.516243W (Sect. 23, T 16S, R 14W) |               |                 |
| City: Calion                                     | County: Union | State: Arkansas |



Photo File Name: Photo 21 (DSC\_0083)

Orientation: West

Date of Photo: 05/17/2018

Time of Photo: 1:17 pm

Latitude: 33.3159N

Longitude: -92.5161W

Photographer: K. W. Sanborn

Description: The TDS reading taken here, upstream, was 137 mg/L.