



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

Inspection Date(s):	02/08/2018		
Media:	Water		
Regulatory Program(s)	NPDES - Oil and Gas, Produced/Brine Water		
Company Name:	Perdue Commercial Disposal, LLC		
Facility Name:	Townsend 6 SWD Lease		
Facility Physical Location:	1001-1099 Armer Rd, El Dorado, AR 71730 (33.256739 N, -92.536727 W)		
(city, state, zip code)	El Dorado, AR 71730		
Mailing address:	4448 Haynesville Hwy		
(city, state, zip code)	El Dorado, AR 71730		
County/Parish:	Union County		
Facility Contact:	Mr. West Baldwin	General Manager	
	870-314-4906 (Cell)		
FRS Number:	N/A		
Identification/Permit Number:	ARU001210		
Media Number:	N/A		
NAICS:	211111		
SIC:	1311		
Personnel participating in inspection:			
Jack Arias	US EPA, Region 6 (EPA)	Environmental Scientist	(214) 665 – 8164
Eric Ferrell	Arkansas Oil and Gas Commission	District Supervisor	(870) 862 – 4965
EPA Lead Inspector Signature/Date			
	Jack Arias		Date
Supervisor Signature/Date			27 APR 2018
	Guy Tidmore		Date

Section I - INTRODUCTION

PURPOSE OF THE INSPECTION

The purpose of the inspection was to follow-up previous enforcement actions and 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 inspector Jack Arias arrived at Perdue Commercial Disposal, LLC – Townsend 6 SWD Lease at approximately 3:02 pm on February 08, 2018 for an unannounced inspection. EPA Region 6 inspector notified the Arkansas Oil and Gas Commission (AOGC) about the inspection and met with AOGC representative, Eric Ferrell District Supervisor, from Arkansas Oil and Gas Commission. There were no representatives from Perdue Commercial Disposal, LLC present at the time of entry. Eric Ferrell and I proceeded to conduct an oil and gas, produced/brine water inspection. The scope of the inspection was to evaluate the facility's oil and produced water storage tanks and associated equipment at the site; flow paths, if any, from the facility and containment area to a nearby tributary and creek; potential downstream impacts, sensitive areas, and ponds; and other related factors both upstream and downstream of the facility.

FACILITY DESCRIPTION

The facility is known as the Perdue Commercial Disposal, LLC – Townsend 6 SWD Lease and is located in a remote zone in Strong, Union County, Arkansas (See Photo No. 1 in Appendix 1). The facility consisted of six produced water storage tanks, and two oil storage tanks (See Photo Nos. 2 - 3 in Appendix 1). The tanks were surrounded by a secondary containment wall constructed of compacted soil. The capacity of the tanks to store produced water and oil was approximately 600 barrels. The tanks were connected to production wells, vessels, flow lines, collection points, and other equipment used for the production of crude oil and disposal of produced water. 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 or brine water is typically high in salts and is commonly known as brine.

Section II – OBSERVATIONS

FACILITY AND POINT OF ENTRY OBSERVATIONS

When we arrived at this facility on February 08, 2018, we conducted a preliminary evaluation of the tanks and the secondary containment wall conditions. I observed that the facility had an inadequate raised secondary containment wall around the oil and produced water storage tanks. At the time of the inspection, we observed visible erosion on the containment wall, oil pools and staining in and out the containment area, oil and produced water leaks from valves, visible broken flowlines, corroded tanks and flowlines, and a flow path going down from the facility to the tributary of Mill Creek.

At the time of the inspection, at approximately five feet from the tanks, using a calibrated YSI 30 Pro Conductivity Meter, at latitude 33.256739 N and longitude -92.536727 W, we took a Total Dissolved Solids (TDS) measurement of 19,581 ppm in the containment area near the oil and produced water storage tanks (See Photo Nos. 3 - 4 in Appendix 1).

At the time of the inspection, at the north east and north west corners of the containment area, we observed that the fluids nearly overflow and reach the level of the secondary containment wall around the oil and produced water storage tanks (See Photo Nos. 4 – 5 in Appendix 1). At this point at latitude 33.256500 N and longitude -92.536778 W, using a calibrated YSI 30 Pro Conductivity Meter, I took a TDS measurement of 17,676 ppm. (See Photo Nos. 5 – 8 in Appendix 1).

Next to the west corner of the containment area at approximately 10 feet from the containment area, we observed a flow path of fluids going downstream to the tributary of Mill Creek. At this point at latitude 33.256444 N and longitude -92.536750 W, using a calibrated YSI 30 Pro Conductivity Meter, we took a TDS measurement of 7,177 ppm. (See Photo Nos. 9 – 10 in Appendix 1).

we followed the flow path downstream from the facility to tributary of Mill Creek and at approximately 180 feet from the facility to the tributary, we identified the Point of Entry (POE) at latitude 33.256375 N and longitude -92.537334 W. At this point, using a calibrated YSI 30 Pro Conductivity Meter, we took a Total Dissolved Solids (TDS) measurement of 12,697 ppm. At this point, we observed dead vegetation, defined bed and bank, high water marks, debris, and riparian vegetation growing along the tributary. (See Photo Nos. 11 – 12 in Appendix 1).

DOWNSTREAM OBSERVATIONS ALONG THE TRIBUTARY OF MILL CREEK

We followed the tributary downstream to determine if low lying areas and potential vegetation along the tributary were impacted by oil and produced water discharges. At approximately 200 feet downstream from the POE at latitude 33.255917 N and longitude -92.537286 W, we found a flow path of fluids with oil staining on vegetation and debris, dead vegetation, and debris along the tributary. At this point, using a calibrated YSI 30 Pro Conductivity Meter, we took a TDS measurement of 7,638 ppm (See Photo No. 13 – 15 in Appendix 1).

We followed the tributary of North Lapile Creek approximately 700 feet downstream from the POE and we still observed fluids, dead vegetation along the tributary, and a high TDS measurement (See Photo No. 15 - 16 in Appendix 1).

UPSTREAM OBSERVATIONS ALONG THE TRIBUTARY OF MILL CREEK

we followed the tributary upstream to determine if higher lying areas of the tributary were impacted by oil and produced water discharges and I found that the tributary was dry with no impacts.

Section III – AREAS OF CONCERN

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

- High concentrations of TDS around tanks and downstream in the tributary.
- Potential leaks of oil and produced water from tanks.
- Flowpath of fluids along the tributary.
- Oil staining and dead vegetation along the flow path
- Potential concerns of soil contamination at the facility, flowpath, and downstream of the facility

Section IV – FOLLOW UP

The following follow-up actions will be conducted:

- EPA will call and send a copy of the inspection report to the facility
- EPA will refer this facility to the EPA Region 6 Spill Prevention Control and Countermeasure (SPCC) program
- EPA will send a copy of the inspection report to the Arkansas Department of Environmental Quality (ADEQ) and Arkansas Oil and Gas Commission (AOGC).

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 16 photos taken on 04/08/2018.

Appendix 1

Photograph Log



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3227.JPG
Date of Photograph: 02/08/2018
Latitude: 33.256739 N
Longitude: -92.536727 W
Orientation: N
Map Datum: WGS-84
Time of Photo: 3:02 PM
Photographer: Jack Arias
Description: This image shows the sign at the Perdue Commercial Disposal, LLC – Townsend 6 SWD Lease.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3222.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 256739 N

Longitude: -92. 536727 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 3:00 PM

Photographer: Jack Arias

Description: This image shows 6 produced water storage tanks, and two oil storage tanks. The facility had a visible erosion on the containment wall, oil staining in the containment area, and visible leaks, corrosion on tanks and flowlines.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3221.JPG
Date of Photograph: 02/08/2018
Latitude: 33. 256739 N
Longitude: -92. 536727 W
Orientation: W
Map Datum: WGS-84
Time of Photo: 2:59 PM
Photographer: Jack Arias
Description: This image shows tanks and fluids around tanks.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3228.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 256739 N

Longitude: -92. 536727 W

Orientation: NW

Map Datum: WGS-84

Time of Photo: 3:03 PM

Photographer: Jack Arias

Description: This image shows a Total Dissolved Solids (TDS) measurement of 19,581 ppm in the containment area near the oil and produced water storage tanks.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3225.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 256739 N

Longitude: -92. 536727 W

Orientation: NW

Map Datum: WGS-84

Time of Photo: 3:01 PM

Photographer: Jack Arias

Description: This image shows tanks, flowlines, and fluids in the containment area near the oil and produced water storage tanks.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3226.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 256739 N

Longitude: -92. 536727 W

Orientation: SW

Map Datum: WGS-84

Time of Photo: 3:02 PM

Photographer: Jack Arias

Description: This image shows flowlines and fluids nearly overflowing the secondary containment wall around the oil and produced water storage tanks.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3223.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 256500 N

Longitude: -92. 536778 W

Orientation: NW

Map Datum: WGS-84

Time of Photo: 3:00 PM

Photographer: Jack Arias

Description: This image shows fluids nearly overflowing the secondary containment wall around the oil and produced water storage tanks.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3224.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 256500 N

Longitude: -92. 536778 W

Orientation: NW

Map Datum: WGS-84

Time of Photo: 3:00 PM

Photographer: Jack Arias

Description: This image shows a Total Dissolved Solids (TDS) measurement of 17,676 ppm in the containment area near the oil and produced water storage tanks.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3230.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 256444 N

Longitude: -92. 536750 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 3:06 PM

Photographer: Jack Arias

Description: This image shows a flow path of fluids going downstream to the tributary of Mill Creek. This point is located at the west corner of the containment area at approximately 10 feet from the containment area.

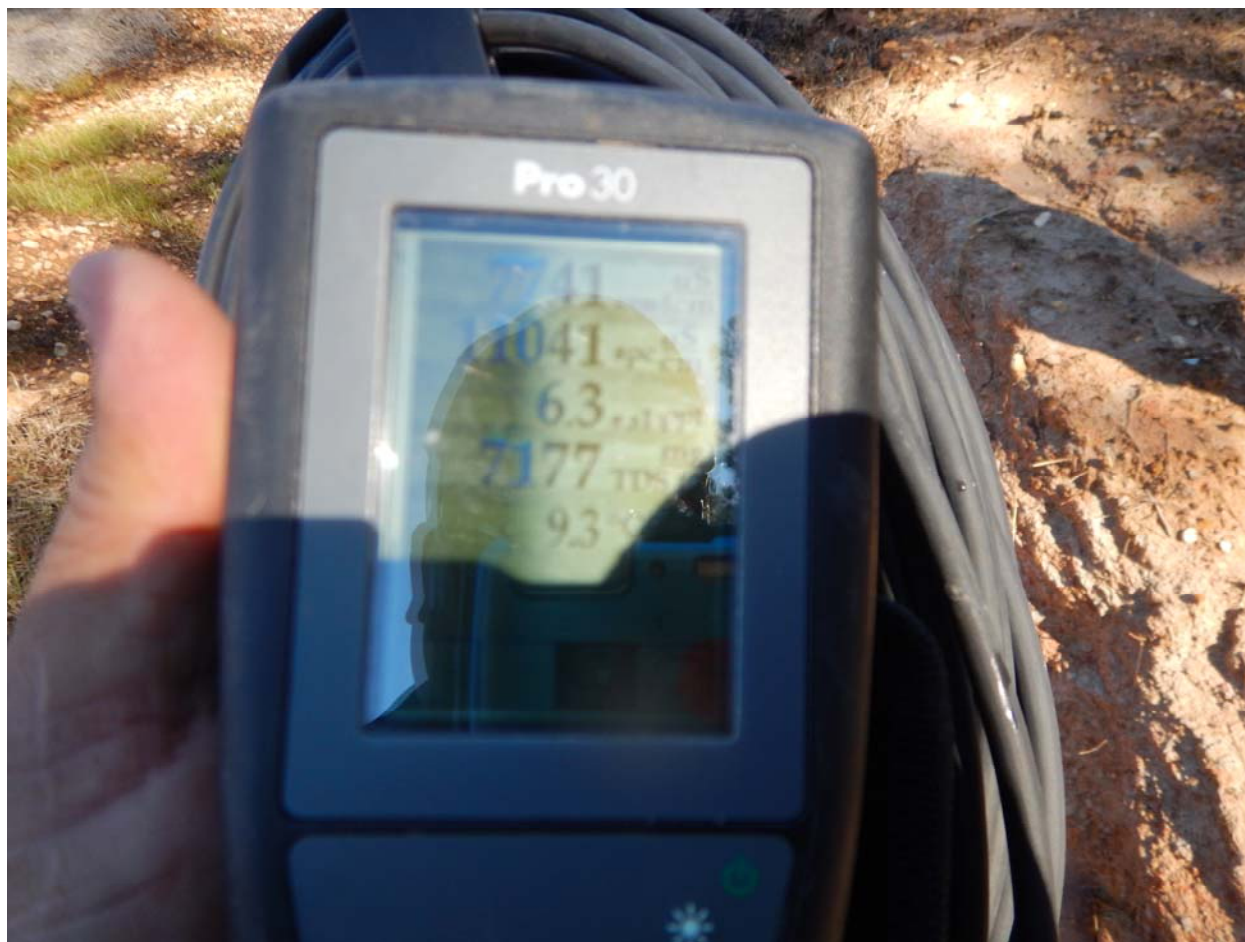


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3229.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 256444 N

Longitude: -92. 536750 W

Orientation: W

Map Datum: WGS-84

Time of Photo: 3:06 PM

Photographer: Jack Arias

Description: This image shows a Total Dissolved Solids (TDS) measurement of 7,177 ppm at the flow path next to the tanks.

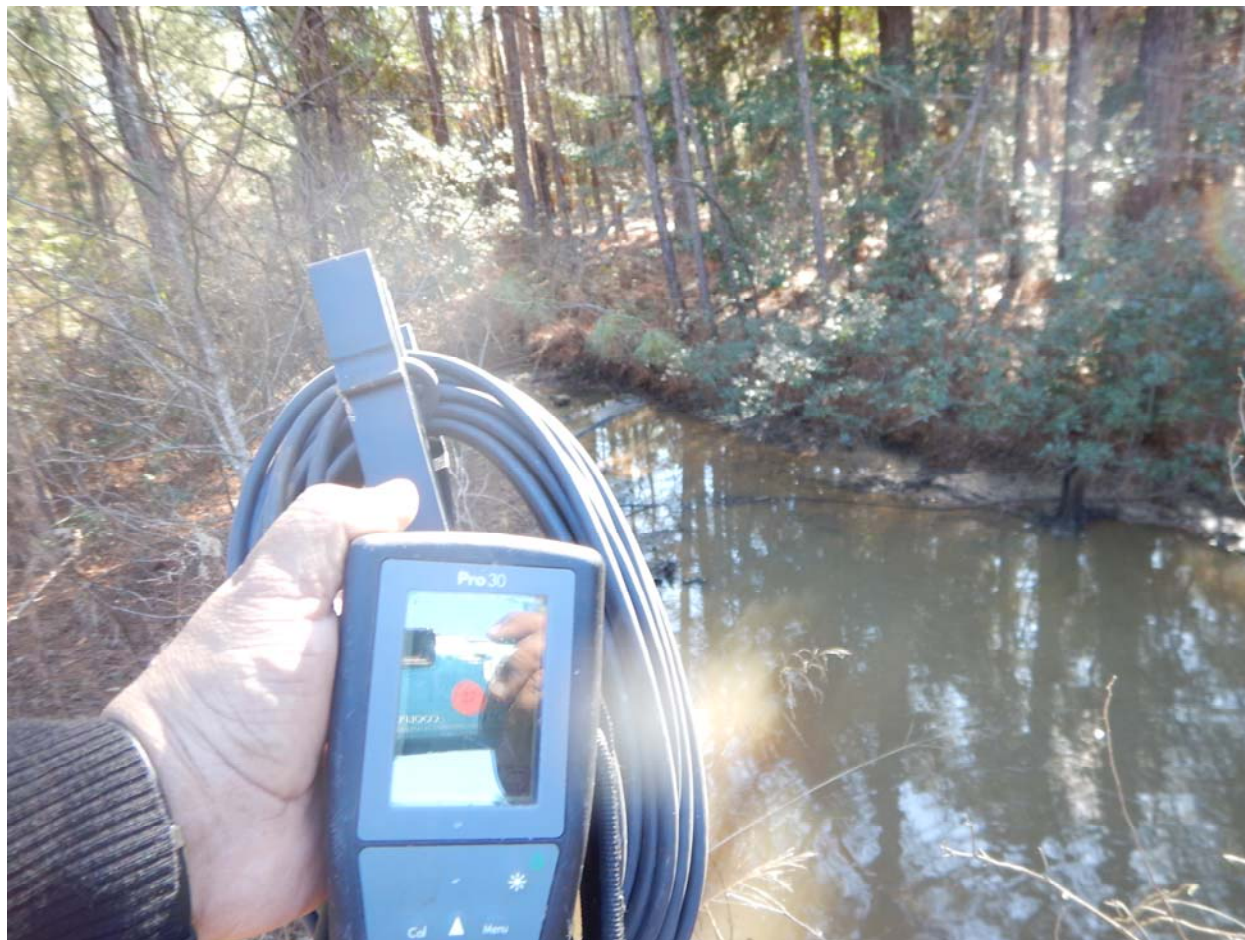


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3232.JPG
Date of Photograph: 02/08/2018
Latitude: 33. 256375 N
Longitude: -92. 537334 W
Orientation: N
Map Datum: WGS-84
Time of Photo: 3:15 PM
Photographer: Jack Arias
Description: This image shows the Point of Entry (POE) to the tributary of Mill Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 12

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3231.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 256375 N

Longitude: -92. 537334 W

Orientation: N

Map Datum: WGS-84

Time of Photo: 3:14 PM

Photographer: Jack Arias

Description: This image shows a Total Dissolved Solids (TDS) measurement of 12,697 ppm at the POE to the tributary of Mill Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 13

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3233.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 255917 N

Longitude: -92. 537286 W

Orientation: NE

Map Datum: WGS-84

Time of Photo: 3:18 PM

Photographer: Jack Arias

Description: This image shows a flow path of fluids and a downstream low lying areas and impacted vegetation along the tributary of Mill Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 14

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3234.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 255917 N

Longitude: -92. 537286 W

Orientation: NE

Map Datum: WGS-84

Time of Photo: 3:18 PM

Photographer: Jack Arias

Description: This image shows a flow path of fluids and a downstream area with impacted vegetation along the tributary of Mill Creek.

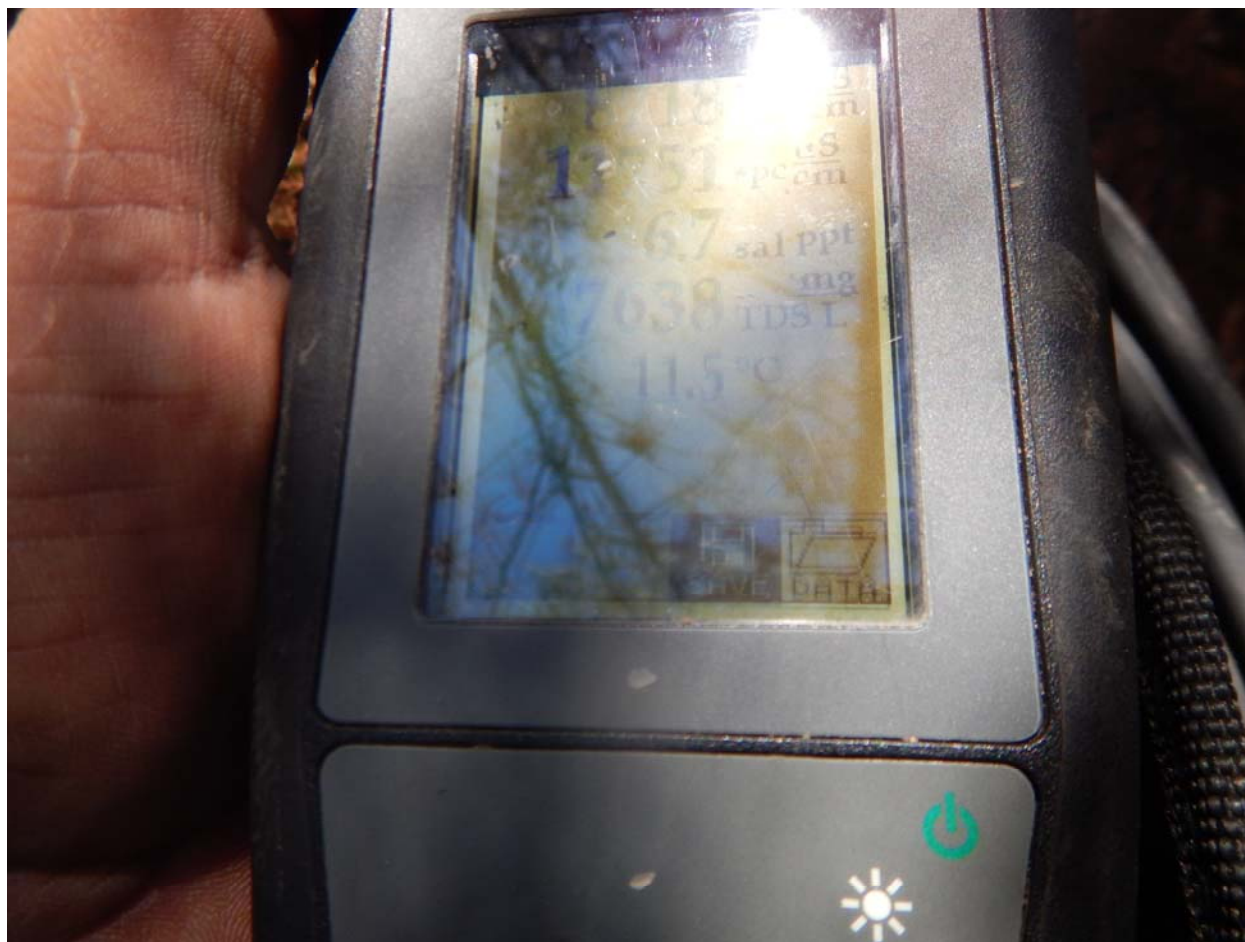


UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 15

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3235.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 255917 N

Longitude: -92. 537286 W

Orientation: NE

Map Datum: WGS-84

Time of Photo: 3:22 PM

Photographer: Jack Arias

Description: This image shows a Total Dissolved Solids (TDS) measurement of 7,638 ppm downstream to the tributary of Mill Creek.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 16

Location: Unnamed Road, Strong, AR 71765 (33.151948 N, -92.396574 W)		
City: Strong	County: Union	State: Arkansas



Photograph File Name: DSCN3235.JPG

Date of Photograph: 02/08/2018

Latitude: 33. 255917 N

Longitude: -92. 537286 W

Orientation: NE

Map Datum: WGS-84

Time of Photo: 3:22 PM

Photographer: Jack Arias

Description: This image shows a flowpath of the tributary of Mill Creek with dead vegetation.