United States Environmental Protection Agency

Region 6 Compliance Assurance and Enforcement Division

INSPECTION REPORT

Inspection Date(s):	August 28, 2018		
Media:	Water (Clean Water Act)		
Regulatory Program(s)	NPDES – Brine		
Company Name:	**Special Energy Corporation**		
Facility Name:	***Ramsey***		
Facility Physical Location:	36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
(city, state, zip code)	Stillwater, Oklahoma 74074		
Mailing address:	4815 N. Perkins Rd.		
(city, state, zip code)	Stillwater, Oklahoma 74056		
County/Parish:	Payne		
Facility Contact:	Larry Berry		
	405-377-1177		
FRS Number:	N/A		
Identification/Permit Number:	OKU000873		
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
EPA Lead Inspector Signature/Date	Sanborn, Kent Digitally signed by Sanborn, Kent DN: cn=Sanborn, Kent, email=Sanborn.Kent@epa.gov Date: 2018.09.08 09:47:21 -05'00'		
	Kent W. Sanborn		Date
Supervisor Signature/Date	GUY TIDMORE Digitally signed by GUY TIDMORE DN: c=US, o=U.S. Government, ou=USEPA, ou=Staff, cn=GUY TIDMORE, dnQualifier=0000012807 Date: 2018.09.14 11:30:23 -05'00'		9/15/2018
	Guy Tidmore		Date

Section I – INTRODUCTION

PURPOSE OF THE INSPECTION

EPA Region 6 inspector Kent W. Sanborn arrived at the Special Energy Corporation / Ramsey lease on a property near Stillwater, Oklahoma at about 2:00 pm on August 28, 2018 for an inspection. The inspection was initiated by an National Response Center (NRC) reported discharge of oil and brine into a dry creek bed. There were several company representatives at the site during the inspection including Mr. Larry Berry of Special Energy Corporation. 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 the 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 included storage tanks, flow lines and other equipment associated with oil and gas operations. The origination point of discharge was a 6-inch buried fiberglass injection line. The line appeared to have sustained damage when it was installed and buried.

Section II – OBSERVATIONS

I initially arrived at the Special Energy Corp. Ramsey lease at about 2:00 pm on August 28, 2018. Upon inspection, I determined that the brine spill had reached a major tributary of Wild Horse Creek and had traveled 1-2 miles downstream from the point of entry into the tributary. Cleanup activities were ongoing at the site. Photo 1 shows the tank battery associated with the lease. Photo 2 is the sign present near the discharge point at the lease. The discharge occurred from a buried injection flow line (Photos 3 and 4). I observed that the line appeared to have leaked from some damage that could have occurred when it was installed underground. Company representatives indicated that pressure in the line normally measures about 150 psi. Brine fluids from the leak surfaced and flowed south down a hill (Photos 5 and 6) toward the tributary of Wild Horse Creek. A large area of dead grass was affected. The brine entered the tributary along the area shown in Photo 7. The tributary was dry upstream from the point of entry. A reading at the point of entry was taken of Total Dissolved Solids (TDS) with a calibrated YSI Pro 30 Conductivity Meter. The reading exceeded the limits of the meter to measure TDS, which indicates TDS was over 125,000 milligrams per liter (mg/L) (Photo 8). The tributary had been pumped out at the first access point southeast of the discharge point (Photo 9). TDS at the location shown in Photo 9 was 126,791 mg/L (Photo 10). Flushing activities of the hill, or flow path, and the upper portion of the tributary were occurring during the inspection. The tributary south of Photo 9 is shown in Photo 11. The tributary was much larger here and had large pools of water. The TDS at this location was 113,736 mg/L (Photo 12). A dam was constructed (Photo 13) south of the tributary location shown in Photo 11. A vacuum truck was removing brine on the upstream side of the dam (Photo 14). Photo 15 shows the view downstream from the dam. The TDS was measured at 79,354 mg/L (Photo 16) south, or downstream, of the dam. No other dams were constructed downstream of this location. I observed that the dam was not containing the spill in the tributary and brine was flowing further downstream.

Photo 17 is a view of the tributary south of the dam, or downstream. The TDS at that location was measured at 100,543 mg/L (Photo 18). There were a few dead fish at this location (Photo 19). The tributary was observed farther south (Photo 20) of the location shown in Photo 17. Numerous dead fish were seen here (Photos 21, and 22). The TDS near the fish kill was 102,987 mg/L (Photo 23). I observed another location south, or downstream, in the tributary (Photo 24). TDS had dropped to 9,043 mg/L (Photo 25). Moving south again, or downstream, I observed the tributary (Photo 26) and measured a TDS of 3,852 mg/L (Photo 27). I traveled south to another segment or tributary of Wild Horse Creek, outside the downstream area of contamination from the flow of brine fluids in the main tributary of Wild Horse Creek and observed the background water quality of the creek (Photo 28) and measured a TDS of 468 mg/L (Photo 29).

Section III – AREAS OF CONCERN

There are elevated levels of TDS in the tributary of Wild Horse Creek that continue to effect aquatic life, including fish that were killed in the tributary, downstream from remedial activities. The large volume of brine contamination in the tributary continues to flow further downstream and continues to negatively affect the water quality and aquatic life in the tributary. The flow path from the point of discharge to the point of entry to the tributary of Wild Horse Creek was wide and still contaminated. The injection line was still leaking slightly from the clamp repair.

Section IV – FOLLOW UP

A follow up inspection will be conducted as needed.

Section V – LIST OF APPENDICES

Appendix 1 – Photo Log – 29 photos taken August 28, 2018.

Appendix 1

Photographic Log (29 photos)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 1

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 1 (DSC_0016)
Orientation: Southwest
Date of Photo: 08/28/2018
Time of Photo: 1:55 pm
Latitude: 36.036848N
Longitude: -97.132861W
Photographer: K.W. Sanborn
Description: The discharge originated from an injection line near this tank battery.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 2

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 2 (DSC_0015)
Orientation: Southeast
Date of Photo: 08/28/1018
Time of Photo: 1:55 pm
Latitude: 36.036848N
Longitude: -97.132861W
Photographer: K.W. Sanborn
Description: This photo shows the sign which identifies the lease at the spill site.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 3

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 3 (DSC_0003)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 1:23 pm
Latitude: 36.036005N
Longitude: -96.131580W
Photographer: K.W. Sanborn
Description: Brine fluids were discharged from an injection flow line near the tank battery, which was the point of discharge. The flow line was buried during the inspection.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 4

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 4 (DSC_0005)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 1:23 pm
Latitude: 36.036005N
Longitude: -97.131580W
Photographer: K.W. Sanborn
Description: The 6-inch fiberglass injection line had been clamped at the time of the inspection and was the source of the discharge of produced water, or brine. The pipe appeared to be damaged on the bottom and was still leaking slightly during the inspection.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 5

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 5 (DSC_0006)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 1:23 pm
Latitude: 36.036005N
Longitude: -97.131580W
Photographer: K.W. Sanborn
Description: The produced water or brine from the line bubbled out of the ground here from the leaking flow line and flowed south down the hill.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 6

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 6 (DSC_0008)
Orientation: Southeast
Date of Photo: 08/28/2018
Time of Photo: 1:25 pm
Latitude: 36.036005N
Longitude: -97.131580W
Photographer: K.W. Sanborn
Description: The brine flowed down the hill here toward the tributary of Wild Horse Creek. I observed dead grass and salt staining along the flow path during the inspection.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 7

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 7 (DSC_0010)
Orientation: Southeast
Date of Photo: 08/28/2018
Time of Photo: 1:26 pm
Latitude: 36.035107N
Longitude: -97.131449W
Photographer: K.W. Sanborn
Description: This is the point of entry to tributary of Wild Horse Creek The tributary was dry upstream from this location.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 8

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 8 (DSC_0012)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 1:26 pm
Latitude: 36.035107N
Longitude: -97.131449W
Photographer: K.W. Sanborn
Description: With a calibrated YSI Pro 30 Conductivity meter, the Total Dissolved Solids (TDS) reading was over the meter limit at the point of entry. This indicated that the TDS reading at the point of entry was over 125,000 milligrams per liter (mg/L).

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 9

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 9 (DSC_0001)
Orientation: Northwest
Date of Photo: 08/28/2018
Time of Photo: 12:58 pm
Latitude: 36.033413N
Longitude: -97.122443W
Photographer: K.W. Sanborn
Description: This bridge southeast of the spill site had been pumped out prior to the inspection. The tributary continued south from this point.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 10

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 10 (DSC_0002)
Orientation: West
Date of Photo: 08/28/2018
Time of Photo: 12:58 pm
Latitude: 36.033413N
Longitude: -97.122443W
Photographer: K.W. Sanborn
Description: I took a TDS reading at the bridge crossing that was 126,791 mg/L.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 11

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 11 (DSC_0019)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 2:06 pm
Latitude: 36.028985N
Longitude: -97.121705W
Photographer: K.W. Sanborn
Description: This was the view from another County Road bridge farther southeast of the spill, downstream along the tributary of Wild Horse Creek. I observed defined banks at this location.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 12

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 12 (DSC_0021)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 2:11 pm
Latitude: 36.028985N
Longitude: -97.121705W
Photographer: K.W. Sanborn
Description: The TDS at the location shown in Photo 11 was 113,736 mg/L.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 13

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 13 (DSC_0026)
Orientation: East
Date of Photo: 08/28/2018
Time of Photo: 2:34 pm
Latitude: 36.028426N
Longitude: -97.121660W
Photographer: K.W. Sanborn
Description: A dam had been built south of the location in Photo 11. I observed brine was still leaking through the base of the dam along the tributary of Wild Horse Creek.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 14

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 14 (DSC_0024)
Orientation: North
Date of Photo: 08/28/2018
Time of Photo: 2:33 pm
Latitude: 36.028426N
Longitude: -97.121660W
Photographer: K.W. Sanborn
Description: A truck was removing brine from the tributary shown here on the upstream side of the dirt dam, seen in Photo 13.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 15

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 15 (DSC_0025)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 2:33 pm
Latitude: 36.028426N
Longitude: -97.121660W
Photographer: K.W. Sanborn
Description: This was a view downstream on the tributary of Wild Horse Creek from the dam location.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 16

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 16 (DSC_0023)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 2:33 pm
Latitude: 36.028426N
Longitude: -97.121660W
Photographer: K.W. Sanborn
Description: The TDS on the downstream side of the dam was 79,354 mg/L.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 17

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 17 (DSC_0029)
Orientation: West
Date of Photo: 08/28/2018
Time of Photo: 2:41 pm
Latitude: 36.027910N
Longitude: -97.121589W
Photographer: K.W. Sanborn
Description: The tributary was shown here downstream of the dam. I observed defined banks at this location along the tributary.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 18

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 18 (DSC_0027)
Orientation: Southeast
Date of Photo: 08/28/2018
Time of Photo: 2:38 pm
Latitude: 36.027910N
Longitude: -97.121589W
Photographer: K.W. Sanborn
Description: The TDS of the tributary shown in Photo 17 was 100,543 mg/L.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 19

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo file Name: Photo 19 (DSC_0030)
Orientation: East
Date of Photo: 08/28/2018
Time of Photo: 2:43 pm
Latitude: 36.027910N
Longitude: -97.121589W
Photographer: K.W. Sanborn
Description: I observed dead fish at the location in Photo 17, in the tributary of Wild Horse Creek.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 20

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 20 (DSC_0035)
Orientation: Southeast
Date of Photo: 08/28/2018
Time of Photo: 2:45 pm
Latitude: 36.02701N
Longitude: -97.12145W
Photographer: K.W. Sanborn
Description: This was the tributary of Wild Horse Creek south of the location in Photo 17.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 21

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 21 (DSC_0031)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 2:43 pm
Latitude: 36.02701N
Longitude: -97.12145W
Photographer: K. W. Sanborn
Description: I observed more dead fish in the tributary of Wild Horse Creek near the location in Photo 20.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 22

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 22 (DSC_0032)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 2:44 pm
Latitude: 36.02701N
Longitude: -97.12145W
Photographer: K.W. Sanborn
Description: I observed more dead fish in the tributary at the location in Photo 20.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 23

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

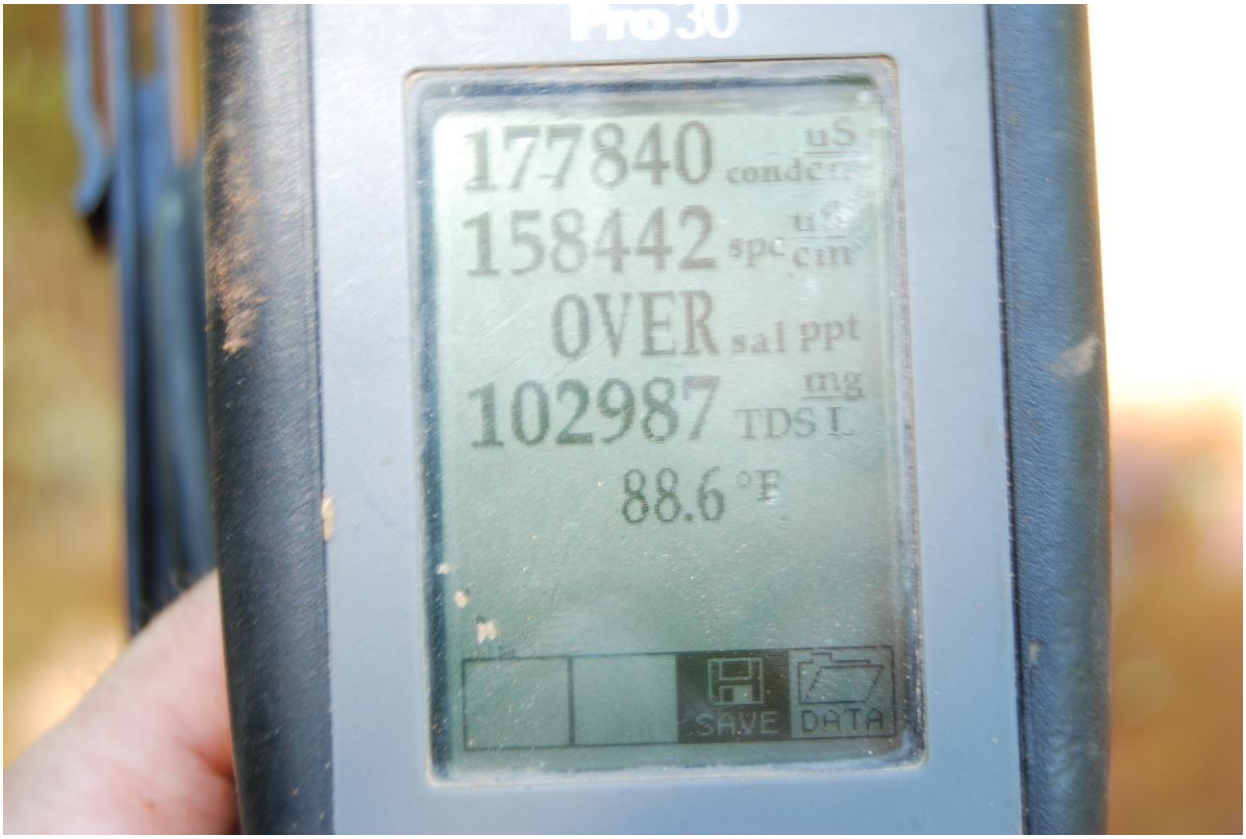

Photo File Name: Photo 23 (DSC_0034)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 2:45 pm
Latitude: 36.02701N
Longitude: -97.12145W
Photographer: K.W. Sanborn
Description: The TDS of the tributary at Photo 20 location was 102,987 mg/L.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 24

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 24 (DSC_0036)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 3:06 pm
Latitude: 36.023288N
Longitude: -97.121842W
Photographer: K.W. Sanborn
Description: The tributary was observed farther south as shown here. I observed defined banks and some riparian vegetation along the tributary.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 25

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo file Name: Photo 25 (DSC_0037)
Orientation: East
Date of Photo: 08/28/2018
Time of Photo: 3:06 pm
Latitude: 36.023288N
Longitude: -97.121842W
Photographer: K.W. Sanborn
Description: The TDS of the tributary shown in Photo 24 was 9,045 mg/L.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 26

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 26 (DSC_0039)
Orientation: East
Date of Photo: 08/28/2018
Time of Photo: 3:13 pm
Latitude: 36.021568N
Longitude: -97.122067W
Photographer: K.W. Sanborn
Description: Another observation of the tributary south of Photo 24 location, showed the defined banks of the tributary.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 27

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 27 (DSC_0038)
Orientation: East
Date of Photo: 08/28/2018
Time of Photo: 3:13 pm
Latitude: 36.021568N
Longitude: -97.122067W
Photographer: K.W. Sanborn
Description: The TDS of the creek at the Photo 26 location was 3,852 mg/L.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 28

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo File Name: Photo 28 (DSC_0041)
Orientation: South
Date of Photo: 08/28/2018
Time of Photo: 4:24 pm
Latitude: 36.0145N
Longitude: -97.1193W
Photographer: K.W. Sanborn
Description: This was the tributary of Wild Horse Creek south of the spill site, but not along the flow path of the brine spill into the tributary. I observed that water at this location was a representation of background water quality.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Photograph Log

Photo No. 29

36.031157N, -97.122338W (Sect. 17, T 18N, R 2E)		
City: Stillwater	County: Payne	State: Oklahoma

Photo file Name: Photo 29 (DSC_0040)
Orientation: North
Date of Photo: 08/28/2018
Time of Photo: 4:24 pm
Latitude: 36.0145N
Longitude: -97.1193W
Photographer: K.W. Sanborn
Description: The TDS of background water in the tributary of Wild Horse Creek in the area was 468 mg/L.