Oil Field Environmental Incident Summary

Incident: 20190714201733 **Notice:** 7/14/2019 20:17 **Occurred:** 7/14/2019 06:00

Responsible Party: Polar Midstream, LLC

Well Operator: WHITING OIL AND GAS CORPORATION

Well Name: P VANCE 154-97-2-17-5-5H

Field Name: TRUAX

Well File #: 22190

Facility ID #:

County: WILLIAMS

Twp Rng Sec Qtr: 154 97 17 NW NE

Location Description: A produced water spill occurred at the P Vance 154-97-2-17 (API # 33-105-02496) well pad in Williams County, located approximately 24 miles east of Williston. The produced water spill released on the well pad then traveled offsite into a small unnamed tributary of the Missouri River, and an unknown quantity reached the Missouri River.

Lat: 48.16871377
Long: -103.17975064

Submitted By: Andrew Parisi

Received By:

Contact Info: Andrew Parisi
1700 BROADWAY STE 2300
DENVER CO 80290

Affected Medium: Soil and Water

General Land Use: Other - Described Above

Near. Occupied Bldg: 1.2 Mile

Nearest Water Well:

Type of Incident: Pipeline Leak

Release Contained: No

Reported to NRC: Yes

	Spilled	Units	Recovered	Units	Followup	Units
Oil						
Brine	500	Barrels				
Other						

Oth Rel. Contaminant:

Date Inspected:

Clean Up Concluded:

Written Report Recd:

Risk Evaluation:

Produced Water traveled off of the P Vance 154-97-2-17 and impacted a small tributary of the Missouri River and entered the Missouri River.

Areal Extent:

Undetermined

Potential Env. Impacts:

The produced water impacted soil on the P Vance 154-97-2-17 well pad, and the stormwater retention dike, then traveled offsite and entered a small tributary of the Missouri River. The unnamed tributary connects with the Missouri River about one mile downstream of where the produced water entered the

stream. After conducting foot patrols of the stream from the well pad down to the Missouri River no sheen or oil was observed anywhere on the surface waters. Field personnel used chloride field strips to test the surface water downstream of the release point to delineate impacts to the surface water. At the confluence with the Missouri River a field reading of 800 ppm chloride was detected.

Action Taken/Planned:

A line imbalance was detected during the morning of 7/14/2019 by Summit Midstream Operations Control Center (SOCC). SOCC shut down the pipeline system and Operations was dispatched to investigate the pipeline. Personnel confirmed that a spill had occurred and the OSRO (SWAT Consulting) was dispatched to assist with the response and remediation. Secondary containment dam's are being installed in the unnamed tributary to control water flow and assist with the recovery of impacted surface water. The impacted surface water will be pumped from behind the dams into temporary frac tanks before being removed by water hauling trucks. The impacted soil on the well pad will be delineated, excavated and removed from location.

Wastes Disposal Location:

Recovered produced water and impacted soil will be disposed of at a licensed disposal facilities.

Other Agencies Involved:

Called NRC at 9:28am CDT (filed verbal report) - Report# 1251898
Called NDIC field inspector for non-working hours at 9:54am CDT (Samuel Skurupey).
Called NDDEQ emergency hotline at 10:00am CDT.
Filed an updated report with NRC at 3:30pm CDT.

Updates

Date: 7/14/2019 ***Status:*** Inspection ***No Further Action:*** ☑

Author: Crowdus, Kory

Notes:

On location 7/14/2019, at 2:49pm. Met with Whiting personnel and drove to a point near the Missouri river. Approximately 500 yards to the Northwest of the river a culvert has been blocked to prevent further contamination reaching the river. A dike was also being constructed before the culvert to aid in containing the release. Pom poms are lining the diked area. Water does not appear to be flowing into area at this time but a rainfall event would cause water to come into this area again. A sample was taken East of the culvert and West of the culvert. Chloride strips were also used in both locations and both the High and Low range strips were maxed out. No oil staining was seen at this location.

The location of release was on the in the Southeast corner of the (P Vance 154-97-2-17) well pad and left the location in the Southwest corner of the pad. It flowed to the southeast and reached the Missouri River approximately 1.5 miles away. Some oil staining was seen on location near the release point. The pipeline has been shut down but no excavation has taken place to expose pipeline at time of inspection. Further follow-up is required.

Updated Volumes and Contaminant None at the time of this update

Date: 7/15/2019 ***Status:*** Inspection ***No Further Action:*** ☑

Author: Crowdus, Kory

Notes:

On location 7/15/2019, at 11:01am. Work is being done near the confluence to get berms constructed. They are also constructing an area to place frac tanks so the water can be removed from the tributary. Hard booms are in place in multiple locations nearing the confluence. No oil sheen noticed in this area at this time.

On location, lines are being marked so the pipeline can be exposed. Some oil staining is visible on the pad near release area. Water on location is being hydrovaced and placed in trucks for disposal.

Further follow-up is required.

Updated Volumes and Contaminant None at the time of this update

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Date: 7/16/2019 ***Status:*** Inspection ***No Further Action:*** ☑

Author: Crowdus, Kory

Notes:

On location 7/16/2019, at 9:17am. Frac tanks are in place at the collection point near the confluence. Pumping will begin today. Along the flow path totes are being placed at locations where standing water is visible and able to be pumped out.

The tributary was walked from the pad to the Missouri River. From the pad to approximately 200 yards downstream some possible oil sheen is visible where there is standing water. This could also be biofilm, it is difficult to determine at this time. There is some slightly discolored vegetation along the path, possibly due to brine impacts. One small frog was seen dead in the tributary. Pumping into totes was in progress along the flow path.

On the well pad crews were hydrovacing to expose the pipeline.

Further follow-up is required.

Updated Volumes and Contaminant None at the time of this update

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Date: 7/26/2019 ***Status:*** Inspection ***No Further Action:*** ☑

Author: Biemiller, Richard

Notes:

Arrived on site 7/23/2019 at 830AM CST. Spoke with responsible party representative. He said that the plan for the week was to fresh water flush the impacted area and collect the water at check dams for disposal and will retest at that point. No sheen or smell noticed at either the mid-stream dam or near the point of origination. More follow-up needed.

Updated Volumes and Contaminant None at the time of this update

Date: 8/1/2019 ***Status:*** Inspection ***No Further Action:*** ☑

Author: Stockdill, Scott

Notes:

Arrived on location 7:43 8/1/2019.

Large amount of excavation done on well pad location. Vegetation done in the drainage is doing well, pumps and hose set up throughout drainage to recover spilled produced water.

More follow-up is necessary.

Updated Volumes and Contaminant None at the time of this update

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Date: 8/6/2019 ***Status:*** Reviewed - Immediate Inspection Required ***No Further Action:*** ☑

Author: Crowdus, Kory

Notes:

Release from pipeline impacted soil and water. Follow-up is required.

Updated Volumes and Contaminant None at the time of this update

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Date: 8/6/2019 ***Status:*** Inspection ***No Further Action:*** ☑

Author: Torgerson, Brad

Notes:

On 8/6/2019 at 3:45 PM - Sunny and 88 Degrees F - I visited the Whiting Petroleum - P. Vance 154-97-2-17-5H production location. An excavator was digging soil on the location. More follow-up appears to be necessary for this release site.

Updated Volumes and Contaminant None at the time of this update

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Date: 8/20/2019 ***Status:*** Inspection ***No Further Action:*** ☑

Author: Stockdill, Scott

Notes:

Arrived on location 5:51 8/20/2019.

Walked drainage until road crossing. Pumps and underflow dams present throughout site. Vegetation is doing well throughout site with a few areas of stressed vegetation.

Contact Company about samples results.

More follow-up is necessary.

Updated Volumes and Contaminant None at the time of this update

Date: 9/10/2019 ***Status:*** Inspection - More Follow-up Required ***No Further Action:*** ☑

Author: Crowdus, Kory

Notes:

On location 9/10/2019, at 11:00am. Met with company contact and consultant. Split samples were taken at 4 sites along the flow path from release. Lab report will be added to the report folder showing sample locations. Further follow up is required. No photos taken.

Updated Volumes and Contaminant None at the time of this update

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Date: 9/13/2019 ***Status:*** Correspondence ***No Further Action:*** ☑

Author: DeVries, Taylor

Notes:

Received multiple reports from the third party consultant. All can be found in the report folder.

Updated Volumes and Contaminant None at the time of this update

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Date: 12/13/2019 ***Status:*** Correspondence - More Follow-up Required ***No Further Action:*** ☑

Author: DeVries, Taylor

Notes:

Sample results received from 7/14/2019-7/15/2019 sampling events.
The sample taken north of the culvert came back with a chloride level of 43,300 mg/L.
The sample taken south of the culvert came back with a chloride level of 32,400 mg/L.
Results show high contamination of production water near the culvert.

The results from the east and west confluence came back as follows (chlorides):
East: 13.4 mg/L
West: 19.3 mg/L
These results show no contamination of production water.

Sample results can be found in the report folder.

Further follow up is needed.

Updated Volumes and Contaminant None at the time of this update

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Date: 12/13/2019 ***Status:*** Correspondence - More Follow-up Required ***No Further Action:*** ☑

Author: DeVries, Taylor

Notes:

Samples results were received from the sampling event on 9/10/2019. Results are as follows (chlorides):
MZ-3: 30.3mg/L
CP- Bottom: 33.1 mg/L
CP- Middle: 53.1 mg/L
470: 34.4 mg/L

All of these results are well below our water quality standards. Further follow up is needed.

Sample results can be found in the report folder.

Updated Volumes and Contaminant None at the time of this update

Date: 6/3/2020 ***Status:*** Inspection - More Follow-up Required ***No Further Action:*** ☑

Author: DeVries, Taylor

Notes:

Split Sampling Day: 6/3/2020

Arrived on location with responsible party's environmental consultant. Together we split sampled 5 sediment sites down the drainage. Those locations were:
10+00
20+00
30+00
40+00
50+00

4 water locations were split sampled down the drainage as well. Those locations were:
CP-MIDDLE
CP-BOTTOM
MZ-3
(last location dry)

Soil and water samples were brought to the lab and will be analyzed for general chemistry, nutrients and trace metals. Further follow-up is needed.

Photos were taken (by environmental consultant) and can be found in the report folder.

Updated Volumes and Contaminant None at the time of this update

Date: 10/22/2020 ***Status:*** Inspection - More Follow-up Required ***No Further Action:*** ☑

Author: DeVries, Taylor

Notes:

Received soil and water sample results from split sampling event on 6/3/2020.

Soil sample results for chloride all came back under 20 ppm. A breakdown of the chloride results can be found below:

10+00 (0-6 inches) 8.36 ppm
10+00 (12-18 inches) 16.6 ppm
20+00 (0-6 inches) 3.34 ppm
20+00 (12-18 inches) 1.84 ppm
30+00 (0-6 inches) 1.79 ppm
30+00 (12-18 inches) 2.00 ppm
40+00 (0-6 inches) 1.44 ppm
40+00 (12-18 inches) 4.02 ppm
50+00 (0-6 inches) 1.29 ppm
50+00 (12-18 inches) 1.95 ppm

Water sample results came back under 30 ppm chloride. A breakdown of the chloride results can be found below:
CP-MIDDLE 26.2 ppm
CP-BOTTOM 14.4 ppm
MZ-3 10.6 ppm

Full sample results can be found in the report folder.

Updated Volumes and Contaminant None at the time of this update

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Date: 9/9/2021 ***Status:*** Inspection - No Action Required ***No Further Action:*** ☑

Author: Torgerson, Brad

Notes:

On 9/9/2021 at 8:12 AM, I visited the Whiting Oil & Gas Corp - P. Vance 154-97-2-17-5-5H production location historical produced water release area. Walked the drainage area below the release point for about a mile. Cattle were grazing within the drainage area, and the vegetation appeared to be ok.

Updated Volumes and Contaminant None at the time of this update