

# Oil Field Environmental Incident Summary

**Incident:** 20150506090227      **Date/Time of Notice:** 05/06/2015 09:02  
**Responsible Party:** OASIS PETROLEUM NORTH AMERICA LLC  
**Well Operator:** OASIS PETROLEUM NORTH AMERICA LLC  
**Well Name:** HEGSTAD SWD 6092 41-20  
**Field Name:** COTTONWOOD      **Well File #:** 90232  
**Date Incident:** 5/4/2015      **Time Incident:** 13:07      **Facility ID Number:**  
**County:** BURKE      **Twp:** 160      **Rng:** 92      **Sec:** 20      **Qtr:** SW SE  
**Location Description:** Pasture/Wetland, (Location 48.634533N, 102.685483W CWV 5/6/15)

**Submitted By:** Dan Gafton      **Received By:**  
**Contact Person:** John Lee  
1001 FANNIN STE 1500  
HOUSTON, TX 77002

**General Land Use:** Other - Described Above      **Affected Medium:** Soil and Water

**Distance Nearest Occupied Building:**

**Distance Nearest Water Well:**

**Type of Incident:** Pipeline Leak

**Release Contained in Dike:** No

**Reported to NRC:** Yes

	Spilled	Units	Recovered	Units	Followup	Units
Oil						
Brine	1500	Barrels				
Other			4000	Barrels		

**Description of Other Released Contaminant:**

Mixture of surface water and brine.

**Inspected:**

**Written Report Received:**

**Clean Up Concluded:**

**Risk Evaluation:**

Medium

**Areal Extent:**

**Potential Environmental Impacts:**

The unnamed tributary (surface water) that feeds from the location to Smishek Lake has been impacted. Ground water and soil impacts are currently being assessed.

**Action Taken or Planned:**

Spill is currently isolated and remediation best practices are being implemented. The pipeline has been shut in. The area in the immediate vicinity of the leak had been excavated so the line repairs can be made. Unnamed tributary has been temporally dammed and surface water extraction operations is currently underway.

**Wastes Disposal Location:** Water - Hegstad SWD

**Agencies Involved:** NDIC, NDDOH, NRC/USEPA

**Updates**

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**Date:** 5/5/2015    **Status:** Inspection

**Author:** O’Gorman, Brian

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location at 9:56. 59 degrees F, sunny, south wind 15-25 mph. Walked the area from the pipeline release to the stockpond. The area of the release is grassland that slopes to the east approximately 10 percent for 200 yards then levels out where the unnamed creek moves toward the southeast. Three earthen dams were constructed (1) near the release, (2) at a culvert on 84th St, and (3) at a culvert on 92nd Ave. Some petroleum impacts were noted on the dormant vegetation west of the stockpond. It did not appear that any petroleum products had moved to any water bodies because the natural vegetation intercepted the product before it moved into the creek or stockpond. Four water samples were collected for laboratory analysis. 1. Stockpond east of release (field measurements - EC 370,000 us/cm, Cl - >5930 ppm), 2. Background west of 93rd Ave NW (field measurements - EC 1842 us/cm, Cl - <31 ppm), 3. Creek on south side of 84th St NW (field measurements - EC 115,000 us/cm, Cl - >5930 ppm), 4. Creek on east side of 92nd Ave NW (field measurements - EC 67,000 us/cm, Cl - >5930 ppm), 5. Drainage north of Lake Smishek entrance road (field measurements - EC 2190 us/cm, Cl - <294 ppm). Took photos of area and sampling process. More followup needed.

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**Date:** 5/6/2015    **Status:** Inspection

**Author:** O'Gorman, Brian

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location 10:15. 56 degrees F, rain, SW wind 15-25 mph. Collected three water samples from various creek locations.

1. Southern outlet to Lake Smishek (field measurements - EC - 2190 us/cm, Cl - <294 ppm - high range chloride strip)
2. Wetland SE of creek east of 92nd Avenue (field measurements - EC - 4490 us/cm, Cl - <32ppm - high range chloride strip)
3. 82nd St. NW creek outflow from Lake Smishek (field measurements - EC - 2360 us/cm, Cl - .8 <32 ppm - high range chloride strip). More followup needed.

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**Date:** 5/6/2015    **Status:** Reviewed - Follow-up Required

**Author:** Stockdill, Scott

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

According to the incident summary, this spill impacted waters of the state. Followup is necessary to ensure proper cleanup.

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**Date:** 5/7/2015    **Status:** Inspection

**Author:** O'Gorman, Brian

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived at sampling location at 9:15. Collected a water sample from the creek south of Highway 50 (field measurements - EC - 2400 us/cm, Cl - <294ppm {high range chloride strip}). Drove north on 92nd Avenue and took photos. A staging area to pump water from the creek had been set up east of 92nd Avenue. Rig mats and a frac tank had been set up to transfer water from the creek at the 92nd Avenue embankment and just north of the lake inlet. Met with the consultant and other representatives to discuss future plans and operations. The representative informed me that they were going to (1) conduct an EM survey along the impacted areas, (2) monitor and sample the creek along specified sampling points, (3) conduct soil sampling probes in impacted areas to determine lithology and groundwater movement, and (4) develop a workplan for remediation of the area and NDDoH review. Collected a water sample from the production water tank on the well pad for laboratory analytical. More followup needed.

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**Date:** 5/13/2015    **Status:** Inspection

**Author:** Stockdill, Scott

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location 5/13/2015.

Met with company contact on location.

-Company continues to pump impacted water from tributary to Smishek Lake.

-Company working on delineating the extent of the spill through soil borings, test pits and electrical conductivity soil surveys.

-Sample taken from domestic well along the tributary. Pump for well was shut down, and responsible party is hauling potable water for the user of the domestic well.

More followup is necessary to ensure cleanup.

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**Date:** 5/13/2015    **Status:** Correspondence

**Author:** O'Gorman, Brian

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Received email from company contact with water removal numbers, sampling locations and maps of the work area. Email and associated documents inserted into the report folder.

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**Date:** 5/14/2015    **Status:** Inspection

**Author:** Stockdill, Scott

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location 5/14/2015.

Samples collected at three locations

-south of 84th St crossing

-east of 92nd St crossing

-southwest of culvert entering Smishek Lake (where they are pumping flushing water from)

Responsible party continues to delineate the extent of the impacts.

More followup is necessary to ensure proper cleanup.

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**Date:** 5/18/2015    **Status:** Inspection

**Author:** Stockdill, Scott

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location 5/12/2015.

No Oasis contact on site when inspected.

Crews throughout Smishek lake tributary with vac trucks on location dewatering the creek.

Small excavator in field trying to delineate the extent of the spill movement below ground.

Email sent to Oasis personnel requesting a daily update on the activities related to the spill.

More followup is necessary.

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**Date:** 6/9/2015    **Status:** Inspection

**Author:** Stockdill, Scott

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location 14:30 6/9/2015.

Meeting with landowners whose land was impacted by the Hegstad SWD 6092 41-20 brine release.

Issues and concerns were discussed, and it was recommended that the responsible party sample the wells located at the landowner's residence.

More follow up is necessary.

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**Date:** 6/11/2015    **Status:** Inspection

**Author:** Stockdill, Scott

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location 14:30 6/11/2015.

Samples taken at the standard collection points at the 84th Street culvert, 92nd Ave culvert, inlet to Smishek Lake and the outlet of Smishek Lake.

Field chloride readings indicated levels that were lower than recent samples, however there has been a significant amount of rain in the area and dilution is a factor.

More follow up is necessary.

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**Date:** 6/16/2015    **Status:** Inspection

**Author:** Stockdill, Scott

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location at 9:30 6/16/2015.

Fish samples taken to determine if there were any impacts to Smishek Lake fish. 15 fish samples were taken with there being 5 northern pike, 5 Yellow Perch, 2 Bluegill and 3 Walleye.

Samples were frozen and shipped to a qualified lab.

More follow up is necessary to ensure proper cleanup.

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**Date:** 10/21/2015 **Status:** Inspection

**Author:** Stockdill, Scott

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location 10:00, 10/21/2015.

Smishek Lake sampling event. Five locations sampled on Smishek Lake at 0-6' for Group 190 and volatile organic compounds. One location sampled for diesel range organics. Lake outlet, 92nd Street crossing, and 84th Street crossing sampled for Group 190.

More followup is necessary.

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**Date:** 4/5/2016 **Status:** Inspection

**Author:** Stockdill, Scott

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location at 10:30 AM 4/5/2016.

Site overview with company rep regarding current cleanup status and the implementation of new practices for remediation. Sampled stock pond, 84th Street and 92nd Ave crossings, and Smishek Lake inlet and outlet.

More follow-up is necessary.

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**Date:** 11/16/2016 **Status:** Inspection

**Author:** Stockdill, Scott

**Updated Oil Volume:**

**Updated Salt Water Volume:**

**Updated Other Volume:**

**Updated Other Contaminant**

**Notes:**

Arrived on location 14:00, 11/16/2016.

Samples taken at 84 St creek crossing, 92 Ave creek crossing, inlet to Smishek Lake and outlet of Smishek lake. Impacted soil continues to be scarred due to salts, but an extensive sump network is continually extracting contaminants from the soil.

More follow-up is necessary to ensure proper cleanup.