United States Environmental Protection Agency
Region X
POLLUTION REPORT

Date: Friday, March 24, 2006
From: Carl Lautenberger

Subject: Progress Report
BP Alaska GC1-GC2 Transmission Pipeline Discharge
BP Explortion 900 E Benson Blvd, Deadhorse, AK
Latitude: 70.3074300
Longitude: -148.8157100

POLREP No.:	12	**Site #:**	AKOil012006
Reporting Period:		**D.O. #:**	
Start Date:	3/2/2006	**Response Authority:**	OPA
Mob Date:	3/2/2006	**Response Type:**	Emergency
Demob Date:		**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Action
CERCLIS ID #:		**Contract #**	
RCRIS ID #:		**Reimbursable Account #**	
FPN#	E06005		

Site Description

This crude oil spill, discovered on March 2, 2006, occurred within a 3-mile pipline stretch between Gathering Centers 1 and 2. The spill area adjacent to the pipeline has been fully delineated. It was calculated that 1.93 acres of tundra and frozen lake surface have been impacted. A detailed oil location and depth survey performed soon after the spill indicated the spill volume to be 210,000 gallons, plus or minus 33%. This volume estimate is the best available information at this time. The source of the spill was determined to be a one-quarter inch hole in the 34-inch diameter pipeline at the 6 o'clock position in a portion of the pipeline buried under a caribou crossing. Internal corrosion is the reported cause of the pipeline break.

The aerial photo at left shows the status of contaminated snow removal operations on March 13.

The frozen, snow-covered spill area surface allows for working directly on the tundra, helps minimize damage from worker and equipment traffic, and helps retard oil contamination penetration. Snow berms constructed to originally contain the spill have been dismantled (no movement of contamination beyond the original spill perimeter was observed) to allow greater space and access for the ice and vegetation trimming equipment.

The GC2 facility has remained shutdown since the spill, with freeze protection applied by BP to approximately 230 feeder wells and associated flow lines effected by the shutdown. BP plans on resuming GC2 operations by early April 2006 and will prepare another pipeline to serve as the oil transit line.

Weather: has consisted of mostly sunny days with natibviksuq (Inupiat for drifting snow) and itrifubaa (Inupiat for icy cold) with daytime highs ranging from -5 to -15 degrees F ambient and ambient lows ranging down to about -20F. It has been anuqjiqsuq (Inupiat for windy) for several days with east winds of 10-30 mph, resulting in wind chills ranging from -30F to -55F both day and night.

On March 18, 2006, BP transitioned their response organization from an Incident Management Team into a project management phase. The IMT at BP's Prudhoe Bay Operating Center has been disbanded but many original IMT personnel have retained their roles under the new phase. The Unified Command stood down at the time of the transition. EPA and START have demobilized from the site and currently an ADEC representative remains on-site to continue monitoring cleanup activities and consulting with BP and their contractors. The response currently operates under a Clean Up Project Team Transition Document dated March 18, 2006.

Current Activities

RESPONSE ACTION: Incident response priorities and objectives are:
• Ensure all personnel are safe
• Mitigate potential of further release

• Remove contamination from the area
• Manage and dispose of wastes appropriately

Response tactics initially consisted of the recovery of free liquid oil by vacuum equipment followed several days later by collection and removal of surficial contaminated snow by tracked machinery. To aid in further oil removal, clean snow from uncontaminated areas was added to the spill site to absorb more oil on the surface and was then removed. Primary remediation efforts currently consist of contaminated ice and vegetation trimming, completion of contaminated gravel removal from the pipeline corridor underneath the caribou crossing, and melting of contaminated snow at the CC-2A pad.

The underlying, oil-contaminated frozen water surface, intermingled with the underlying tundra vegetation, is now being remediated through the use of trimmer machinery, which grinds away the frozen ice and vegetative canopy surface to a targeted depth in order to remove the remaining oil contamination. This trimmming operation was started on March 19, 2006. Other residual oil removal techniques, such as warm water flushing, weed burning, and tundra removal, are options outlined in a Tundra Treatment Plan and can be applied if necessary. Tundra specialists are on-scene to advise the cleanup team in tundra impact minimization, vegetation restoration concerns, and sampling proecdures in support of cleanup attainment.

Ice and tundra trimming is occurring in accordance with the Tundra Treatment Plan finalized on 3/15/06. Machinery with 72", 40", and 18" wide trimming attachments are being used for the trimming as well as as sweeper unit. Differing width trimmers and trimming techniques are being used due to the uneven ground surface and oil deposition patterns. To achieve the goal of removal of remaining surficial oil contamination while minimizing tundra impacts, trimming is being conducted from between 1-3 inches deep on the ice/tundra canopy surface. Deeper trimming could result in damage to the tundra root zone and would have negative effects on the health of the tundra and stability of the underlying permafrost. The trimmer deposits ground or chipped ice and vegetation material on the ground as it operates. Once trimmed, areas are swept by hand or by sweeper attachment on a Bobcat machine and the consolidated trimmings are taken off-site for disposal. Cleanup workers are finding the plateaus or "table top" portions of the polygon-shaped land features to have limited oil contamination compared to the polygon troughs and other low-lying areas. Both a linear grid and individual polygon site referencing system are in use for tracking cleanup progess and sampling location identification. The majority of the spill area has undergone an initial, gross contamination trimming effort. Localized areas of concentrated oil as well as the contaminated lake ice still require remediation. A sampling and analysis plan has been prepared to address the field screening and confirmation sampling parameters and protocols.

The caribou crossing gravel has been excavated to the bottom of the pipe elevation to allow examination of the pipeline. As the pipeline leak occurred on the pipeline's bottom, oil is being found in the bottom of the pipeline culvert. Gravel beneath the culvert has also been found to be oiled and liquid oil is still being found. The gravel will continue to be excavated and collected by supersucker. Respiratory protection will be used by workers as required due to VOC levels. Scaffolding and tenting installed at the caribou crossing remains in place, although strong winds have twice destroyed the tenting. The leaking pipeline has been repaired via a welded sleeve.

Two snow melters are presently staged and operational at pad CC2A near the spill site. Two more units are being mobilized to the melting site for operation. These units will work simultaneously both day and night. The snowmelt is being transferred from the melters to a holding tank at nearby Flow Station 2. As of March 26, 2006, 4,590 bbls (192,780 gallons) of snowmelt has been produced and transferred to the holding tank. Some of this snowmelt has been introduced into facility process systems designed to treat oily water.

A wildlife fence has been constructed around the spill site to exclude wildlife, such as arctic fox. Some fencing has been improved with plastic sheeting to prevent potential off-site movement of finer particles as trimming and sweeping occurs.

The cleanup operation is still occurring 24-hours. Day shift is currently staffed with up to 64 workers and 23 during night shift. Trimming work is confined to daylight hours only. Night operations primarily consist of snow melting and equipment maintenance.

Planned Removal Actions

Gross oil contamination removal has already occurred, and contaminated ice and vegetation trimming, conducted according to the Tundra Treatment Plan dated 3/15/06, is the primary cleanup method currently being employed. Trimming work is anticipated to last for approximately another week. Removal of contaminated lake ice is anticipated to begin March 27, 2006.

Two melters used to melt oil-contaminated snow are in operation, and two more units may come on-line soon.

Contaminated weed burning, warm water flushing, and tundra removal techniques could be applied to the contaminated ice and vegetation layer if either trimming is not fully effective or if the testing of these other remediation techniques is determined worthwhile. All runoff generated under a flushing operation would be captured and collected. These options are outlined in the approved Tundra Treatment Plan.

Additional oil-contaminated gravel is being encountered as workers continue to uncover the pipeline buried in the caribou crossing east of where the leak occurred. The entire width of the crossing (approximately 80 feet) is being excavated to gain access to all contaminated gravel as well as provide access to engineers for thorough pipeline integrity testing. The remaining pipeline excavation work may last approximately 1-2 weeks.

Some of the contaminated snowmelt has been released into facility process equipment designed to handle contaminated water. No other waste materials have undergone disposal yet. Stockpiling of each wastestream will continue until collected in full, unless storage space becomes an issue.

The need for and techniques for re-sodding the spill area in areas of deeper tundra trimming are being evaluated. An amendment to the Tundra Treatment Plan is anticipated to address the need for tundra restoration work.

Next Steps

The grind and inject facility at Drill Site 4 will be the disposal facility for contaminated gravel from the caribou crossing and for the trimming-generated material. These two wastestreams are currently being maintained in separate stockpiles at DS4. The G&I facility is currently inactive but is expected to become operational in April 2006, at which point disposal of these wastestreams may occur. ADEC will be closely involved with eventual waste disposal activities and subsequent wastestream volume determinations.

EPA and START have demobilized from the site. EPA will continue to monitor the cleanup progress from their office in Anchorage, and EPA or START may return to the site to view continuing cleanup operations. One ADEC responder is expected to remain on the North Slope to monitor the spill progress.

Demobilization of response equipment no longer required will continue.

Key Issues

Extreme cold and blowing snow continue to hamper cleanup operations by posing safety hazards to site workers and by causing equipment difficulties. Additional effort is required under these conditions to assure worker safety and to perform equipment maintenance and safekeeping activities. Site workers are working outside shifts as short as 30-60 minutes between warm-up periods, depending on the wind chill. Frostbite is a major worker concern along with slick walking surfaces and dehydration.

Air monitoring for vapors such as VOCs and benzene will continue particularly during caribou crossing gravel excavation, where heavy oil contamination could still be encountered.

A BP Business Resumption team, operating separate from the cleanup operation, is addressing necessary activities for resuming the operation of the GC2 facility and the facility's output flow of oil to the Trans Alaska Pileline. A different transit line is being prepared to handle the flow of oil once GC2 is operational. This operation could be active in April 2006.

Disposition of Wastes

Waste Stream	Quantity	Manifest #	Disposal Facility
Recovered crude oil free-product, collected from the ground by vacuum truck or pump.	1,513 bbl		Presently bulked into tank #1934 at Flow Station 2. Final volume determination and disposal method are pending.
Oil-contaminated snow, collected directly off the spill area or generated	5,284 cubic		Currently being stockpiled at CC-2A pad and fed into snow melters there (see

through the addition of clean snow as an absorbent	yards		snowmelt wastestream for volumes generated through the melting operation)
Oil-contaminated gravel removed from the leak point within the caribou crossing	332 cubic yards		Currently being stockpiled at Drill Site 4's grind and inject facility until final disposal occurs.
Snowmelt created through the melting of oil-contaminated snow	4,590 bbl		Taken from melters at CC-2A to tank #1934 at FS2 (also holds recovered oil). Some water has been decanted and released into facility treatment system
Contaminated ice/vegetation trimmings	1,116 cubic yards		Currently being stockpiled at Drill Site 4's grind and inject facility until final disposal occurs.

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