U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Chevron Bonanza Pipeline Release - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region VIII

Subject: **POLREP #3**
Progress Polrep 3 - Bioremediation and Underflow Dam Construction
Chevron Bonanza Pipeline Release

Bonanza, UT
Latitude: 40.0886800 Longitude: -109.3135800

To:
From: OSC Steven Way
Date: 3/13/2009
Reporting Period: 1/20/2009 - 3/30/2009

1. Introduction

1.1 Background

Site Number:	Z8CS	**Contract Number:**	EP-W-05-050
D.O. Number:		**Action Memo Date:**	
Response Authority:	OPA	**Response Type:**	Emergency
Response Lead:	PRP	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	1/8/2009	**Start Date:**	1/8/2009
Demob Date:	1/9/2009	**Completion Date:**	
CERCLIS ID:		**RCRIS ID:**	
ERNS No.:		**State Notification:**	
FPN#:	EO9802	**Reimbursable Account #:**	

1.1.1 Incident Category
Active Production Facility

1.1.2 Site Description
The Chevron Pipe Line Red Wash Lateral Crude Line feeds crude oil recovered from wells throughout northeastern Utah, near the town of Bonanza, Utah, to the Rangely Pump Station in Rangely, Colorado. On January 7, 2009, at approximately 2300 hours, the Supervisory Control and Data Acquisition (SCADA) System monitoring the pipeline network from the Chevron Operations Center in Houston, TX alarmed to notify local Chevron personnel of a recorded pressure drop in the line. Chevron personnel from Rangely, Colorado shut off the pumps and were dispatched to investigate the alarm. Just after midnight on January 8, 2009, they found oil flowing over the ground in two channels. Chevron personnel mobilized heavy equipment and hastily constructed two containment dams below a culvert where the two channels converged. They also began excavating the area where the spill originated and found that one of three conveyance pipelines had sheared cleanly without explanation, releasing an estimated 1,400 barrels of oil to the unpopulated arid shrubland ecosystem and wholly within Bureau of Land Management (BLM) trustee land.

1.1.2.1 Location
The pipeline break occurred about 5 miles west northwest of the small town of Bonanza and less than a mile due west of the Deseret Power Cooperative's Bonanza Power Plant. The coordinates for the origin of the release are 40.088629 N, 109.314501 W. The land in this area is nearly all managed by BLM and it is extensively leased to oil companies for production purposes. There are networks of roads, produced water pipelines, and below ground crude pipelines running between the numerous wells in the area. The pipeline involved in the release was buried adjacent to Watson Road along with two other conveyance pipelines. The area where the release occurred was just south of badland rock outcrop and upslope of a relatively flat drainage containing shallow arroyos produced by ephemeral precipitation. The release initially flowed within an area bounded by roads and roadside ditches on the south and east sides, by the high ground on the north side and by the arroyos on the west side, where it converged through a culvert in the arroyo.

1.1.2.2 Description of Threat
The release of oil to this environment poses a threat to the ecosystem of the BLM land and a threat of a release to the White River approximately 15-miles away by drainage. Given the fact that the release occurred immediately following several snow storms that left over a foot of snow on the ground in the area and the possibility of further spring precipitation, there is a possibility that the oil released into the drainage

might be carried downstream by future storm events, snowmelt, or a combination thereof.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results
As outlined in the previous POLREPs, the Removal Assessment revealed that the oil had not penetrated deeply into the soils along the arroyos and it had been initially contained within the first dam constructed by Chevron employees responding to the spill. Early on, there were discussions between the PRP, BLM and EPA that recommended the PRP and its contractors immediately begin pumping recoverable oil from the pond and the roadside ditch, and preparing for a possible in-situ burn of the residual oil on the ground throughtout the site as the least invasive removal method. Unfortunately, conditions did not permit such a burn, and removal of recoverable oil took longer than expected, which increased the amount of oil saturating soils at depth throughout the site. This led the PRP to pursue a more conventional removal method; excavation of contaminated soils and land farming using a biocell on site.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative
Since the last POLREP, there have been several developments at the site and the remediation work has progressed significantly. Chevron Pipe Line, the PRP, worked to pump out the free product in the pool behind the first of two containment dams below the culvert south of the haul road that crossed the site from east to west. Once the site had been stabilized and all that was left on the site was the residual contaminated soil and unrecoverable oil in the roadside ditch and the arroyo, CPL and its contractors developed a plan to remediate the remaining contamination. They developed and submitted a Remediation Work Plan for Contaminated Soil to BLM and EPA. Unfortunately, on January 24th and 25th, 2009, before CPL could begin the work outlined in the work plan, there was a significant precipitation event that caused the temporary dams constructed during the emergency response to fail. The runoff from the melting snow and the rainfall occurring at the site breached the dams and washed oil residues downstream approximately two miles, close to the confluence of the ephemeral arroyos and the Coyote Wash. As the runoff subsided and the water evaporated, oil residues were left in the soils approximately 1 mile downstream from the primary containment.

2.1.2 Response Actions to Date
For information about previous actions taken at the site, please see POLREPs #1 and #2.

Immediately following the precipitation event on January 25, 2009, CPL began working to design and build an underflow dam approximately 2.5 miles downstream of the original release. CPL worked with BLM to site the dam in an area that would not impact sensitive vegetation or archeological sites. The construction of the dam began on February 12, 2009. To provide a dry construction site for the dam, a bypass channel was constructed to divert runoff from the drainage area. The dam foundation was prepared to receive imported clay that would become the impermeable core of the dam. The clay and native soils that made up the dam were placed in lifts and compacted following placement. Four 18" pipes were placed across the center of the dam between lifts to serve as the conduits for the underflow system that was connected later. Dam construction was completed on February 16, 2009 and the bypass channel was closed with a sacrificial fuse plug of loose material that would erode during extreme flow situations and prevent the dam from being destroyed. CPL also installed sorbent booms to capture surface oil on water flowing into the pond behind the newly constructed dam and on sheen developing in the pond.

Over the following week, CPL monitored the flow through the dam system. On February 23, 2009, the flow was approximately 30 GPM. On February 24, 2009, following elevated temperatures and increased snow melt, the flow increased to 300 GPM. By February 28, 2009, the snow in the drainage had all melted and there was no flow through the underflow dam system constructed by CPL. Sorbent materials behind the dam were changed as needed and the dam continues to be monitored following precipitation events.

Bioremediation of the petroleum hydrocarbons in the contaminated soils from the roadside ditch and the arroyo was the established for the removal action. Soil removal from the road side ditch and the bioremediation cell construction were initiated in initiated in February. The cell is being constructed near the location of the first containment dam to reduce the distance materials from the site would have to be hauled. The cell was constructed atop a large plastic sheet that was covered with shredded alfalfa hay. Required nutrients were added to the contaminated soils in-situ with a small tractor and 8-foot wheel implement before being excavated and transported to the cell. The contaminated soil is placed in 24" lifts on the plastic sheet and a network of perforated drain pipe was placed across the level cell to aerate and ventilate the contaminated soils. Additional 24" lifts were placed on the cell and the perforated pipe was installed atop that with 8-foot spacing and vertical risers fitted with attic vents that extended above the finished height of the cell. To date, approximately 3,800 cubic yards of soils has been removed from the road ditches. An estimated 1,800 cubic yards will be removed from the arroyo. This cell will be left in place until further analysis reveals successful bioremediation of petroleum contaminants in the soils.

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)
One PRP, CPL, has agreed to conduct the removal action as outlined in the provisions of Section 300.320(a)(3) of the National Oil and Hazardous Substances Contingency Plan. BLM and EPA are providing oversight of the removal action.

2.1.4 Progress Metrics

Wastestream	***Medium***	***Quantity***	***Manifest #***	***Treatment***	***Disposal***

crude oil	*soil*	*4000 cy*		*onsite biocell*	

2.2 Planning Section

2.2.1 Anticipated Activities

BLM will continue monitoring CPL removal and remediation efforts within the impacted drainage. CPL will operate the underflow dam and biocell until contamination levels in the drainage and the contaminated soils have been brought down to cleanup levels. BLM will work with CPL to revegetate and restore impacted portions of the ecosystem following remediation efforts in the drainage.

2.2.1.1 Planned Response Activities

No further response activities are necessary.

2.2.1.2 Next Steps

Monitor CPL progress toward meeting objectives outlined in the approved workplan for the site and provide technical assistance to BLM as requested.

2.2.2 Issues

None.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

Bureau of Land Management - Vernal Field Office
Utah Department of Environmental Quality - Air Program
TriCounty Health Department - Vernal Office
Chevron Pipe Line Company - Rangely Pump Station
EarthFax Engineering - PRP Technical Contractor
EnviroCare - PRP Removal Contractor

4. Personnel On Site

2 EPA OSCs - Way & Merritt
2 START - URS Operating Services, Inc.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.