## Location:

38°48'36.31"N 110° 3'42.16"W

Approximately 13.5 miles south of Green River near Ruby Ranch

From the Floy Wash exit on I-70, head south on a dirt road approximately 12 miles following the signs to Ruby Ranch. The well is not visible from the Ruby Ranch Road. At about 11.5 miles take an unmarked road to the right. Ruby Ranch is visible from this point.

## Well Owner/Responsible Party:

Rosanne Henshaw SW Energy 847 East 400 South Salt Lake City Utah

## Property Owner:

Bureau of Land Management

## Chronology:

May 20, 5:00 pm. Well in tact according to SW employee Jim Pinneo

May 21, 8:00 am. Jim Pinneo arrives at well which is discharging uncontrolled. Mr. Pinneo investigates cause and begins notifications including request for equipment to plug the well and contain the discharge. I was informed of the spill at 2:30 .m. I arrived at the site at 5:00 pm. Bart Kettle, DOGM was on site assisting in efforts to plug the well and contain the release. Bart estimated the flow at 80-100 bbl per hour based upon observation of the ponds after filling pumper trucks. The release consisted primarily of brine water. Primary and secondary earth containment structures were complete. They were being pumped and disposed of in available storage tanks near the site and the Danish Flats commercial disposal site. Additional tankers arrived to assist at about 6:00 pm. The blow out was the result of improper maintenance of a buried valve and plug. The plug apparently corroded and blew. The valve was in the open position. Bart Kettle, investigated the drainage near the confluence with Green River and reported the release did not reach the river. Bart Kettle, a BLM employee and I walked the drainage for approximately 1.5 miles below the well head but did not reach the end of the spill. At about 7:00 p.m. equipment to plug the well arrived. At about 9:00 pm. the first effort to plug the well began. I left the site at 9:00 pm.

Note: Later reports of loss of containment were not accurate. During efforts to plug the well, the pumper trucks removed brine from the primary containment to be used in the plugging operation. The effort to plug the well failed and resulted in a release from the primary containment to the secondary containment. The spill was limited to product released from the time of failure at the well head to approximately noon on May 21.

May 22, 10:00 am. Scott Hacking and I arrived at the site. Steve Merritt of the EPA was on site with an EPA assessment team. Additional equipment was on site to improve containment. A reasonable probability of a rain was forecast. Containment measures were being improved, including construction of an underflow dam at the well head. At approximately noon, a second

effort to plug the well using drilling mud was initiated. This effort was successful. Scott and I collected a sample of the discharge from the well. Rosanne Henshaw-SW Energy, Steve Merritt-EPA, Clifford Giffen-BLM, Scott and I met to discuss what the next steps were. I encourage Rosanne to get a qualified environmental response contractor as soon as possible. We discussed possible containment measures in the event of a storm. Scott and I collected a sample from the Green River 0.25 miles above the confluence with the wash. We left the site at 3:00 pm.

Note: I was on annual leave May 23. Sometime during the night a storm event carried mobile components of the release into the Green River. Booms placed in the wash below the extent of the original release were only marginally effective in containment. The underflow dam at the river was not complete. Accurately estimating the amount of petroleum product mobilized and carried into the river is not possible. However, based upon observation of the wash prior to the storm, including pools, etc., I estimate the total volume of petroleum product did not exceed 100 gallons. Most of the release was absorbed into the soil, greatly reducing volume which could be mobilized by the storm. The storm was not significant, causing little erosion.

May 28, 11:00 am. I arrived at the site. Bart Kettle was on site as well as AnnMarie Aubrey, BLM. Custom Environmental Services was on site and involved in containment and cleanup. A local contractor, KSue of Moab also has equipment on site. KSue has provided heavy equipment including a dozer, backhoe and track hoe since May 21. Bart, AnnMarie and I inspected the containment at the confluence with the Green River. The mouth of the drainage provides calm water which excellent for placement of booms. We also observed the lower underflow dam. Contaminated soils are being removed and collected at a lined storage area awaiting final disposal. After containment at the river was impoved, the focus was on areas of gross contamination, i.e. the pad and channels above the primary containment. The cleanup operation was well organized and with adequate resources to efficiently finish the work.

May 30, 9:00 am. Arrive at Green River State Park. The BLM, in cooperation with State Parks arranged river transportation to determine impact to the Green River and collect samples. We observed probable areas of collection, i.e. backwater in drainages, debris jams, and vegetation along embankments. We also interviewed approximately 10 boaters. We did not observe any evidence of contamination. None of the boaters contacted reported anything unusual. When questioned specifically about petroleum, they did not report any observation of sheen, smell etc. A sample was collected in the backwater of Spring Canyon. We covered approximately 47 miles of the Green River, focusing primarily on the area immediately below the confluence of the affected wash. The sample was collected at a randomly selected site.

June 3, 1:00 pm. Arrive at well site. I met with representatives of BLM (Clifford, Area Manager, Resource Manager), Well Owner (Rosanne), DOGM (Bart). We observed cleanup activities in progress and areas which have been cleaned. Bart estimates completion of cleanup by mid June. Bart, Cliff and I discussed the initial release and trying to estimate how much actually reached the river as a result of the storm. We all agreed the amount which reached the river was minimal. Based upon the dilution factor, the concentration downstream was probably below detection levels. I do not anticipate any long term impacts attributable to this event.

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Note: It was determined by EPA, DOGM, and BLM that cleanup would entail removal of soil contaminated with oil. Identification would be by smell and visible staining. In remote areas where soil contamination is small spots, raking and aeration will be used. No soil testing was proposed. However, removed soil was tested to determine compliance for disposal at ECDC or Klondike. I concurred with this protocol.

The information above was condensed from my recollection of events and notes taken during visits to the site.

David R. Ariotti, P.E. Southeast District Engineer.