



west virginia department of environmental protection

Office of Oil and Gas
601 57th Street, S.E.
Charleston, WV 25304
Phone: (304) 926-0450; Fax: (304) 926-0452

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

October 19, 2015

Site Visit – Storm Water Runoff Sample Collection
Hall Drilling, LLC – Tech Service Center
UIC Facility Permit No. 2D0859909
Lamberton, Richie County, WV
September 10, 2015 10:44-13:30

WVDEP Personnel On-Site:

T. Bass– WVDEP-OOG
A. Lockwood – WVDEP-OOG
J. King – WVDEP-Environmental Advocate

Hall Drilling Personnel On-Site:

Jason Hall – Manager, Hall Drilling, LLC

Site Conditions:

Temp: 73° F, Wind: 5 mph NNW, Overcast.

Rainfall: 0.91 inches in previous 24 hours.

All ditchlines and streams were running at moderate levels with cloudy and turbid discharge reflecting recent rains.

Field Narrative

Personnel from the WVDEP-Office of Oil & Gas visited the Hall Drilling, LLC– Tech Service Center on September 10, 2015 to collect water samples from surface drainage locations on-site and from Hushers Run located off-site south of the facility. WVDEP Environmental Advocate, J. King, observed the sampling activities and toured the facility in order to familiarize himself with the operation. The purpose of the sample collection was to assess the water quality conditions after a typical rainfall/runoff event. As noted above, the area had recently experienced 24 hours of steady rain (0.91 in.) and the ground surface was wet and saturated with all ditchlines and streams running at moderate levels.

Sample locations were chosen so that the contributions of various tributaries to Hushers Run that drain the Hall facility could be assessed. Sample No. 1, No. 2, and No. 5 were located on the main stem of Hushers Run. Sample No.1 was collected

Promoting a healthy environment.

downstream of the tributary that drains the center of the Hall facility. The flow at this point was moderate with a milky and turbid character.



Hushers Run Sample Point No. 1 – Downstream of center tributary

Sample No. 2 was collected downstream of the confluence of the tributary that drains the east side of the Hall facility. The flow at this point was also moderate with a milky and turbid character.



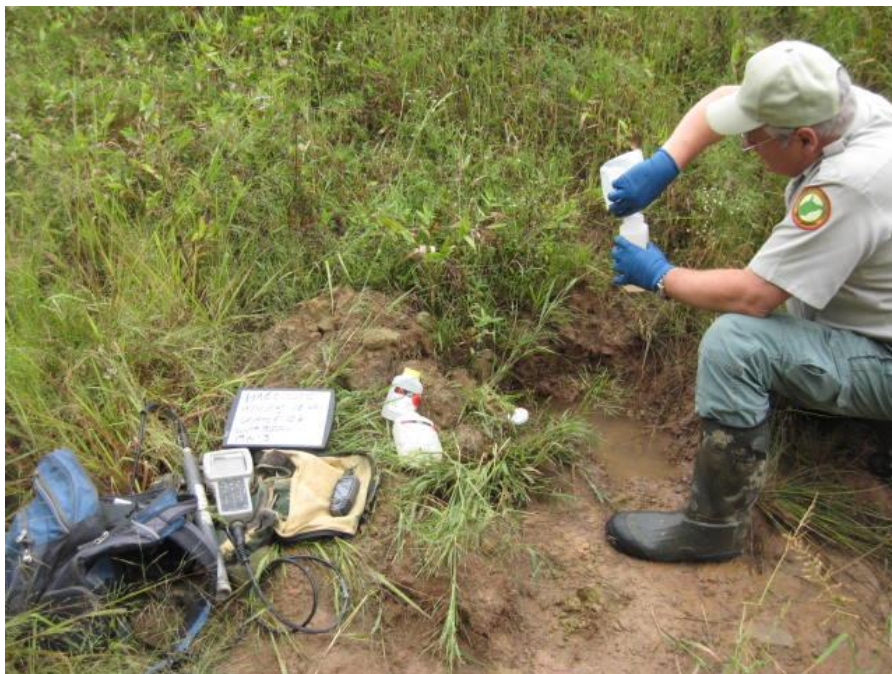
Hushers Run Sample Point No. 2 – Downstream of east tributary

Sample No. 3 was collected from the center tributary just north of the guardhouse at the entrance to the Hall facility. The flow was moderate and was clear to slightly turbid.



Sample Point No. 3 – center tributary

Sample No.4 was collected from a small seep approximately 50 feet east and downslope from Monitoring Well No.3 (MW-3) located at the west side of the west holding pit. During a previous site visit, a shallow sump was dug at the location of the seep in order to allow sufficient water to collect for sampling purposes. At the time of this visit, the sump was full and clear and recharged at a rapid rate after sample extraction.



Sample Point No.4 - Sump below Monitoring Well No.3

Sample No. 5 was collected upstream of the confluence of the east tributary that drains the east side of the complex. The flow upstream at this point was moderate and was clear to slightly turbid.



Hushers Run Sample Point No.5 – Upstream of east tributary

All samples were collected according to standard protocols including chain of custody documentation and refrigerated storage. The samples were delivered under seal to REIC laboratory in Beckley, West Virginia by Thomas L. Bass early on Friday, September 11, 2015.

WVDEP personnel toured the site with Jason Hall, Manager of the facility. All three groundwater monitoring wells were in good condition with locked caps.



Monitoring Well No. 1 (facing south)



Monitoring Well No. 2 (facing northwest)



Monitoring Well No. 3 (at left, facing south)

Field measurements of conductivity, temperature, pH, and GPS location were collected at each sample location. GPS locations were corrected using photos and Google Earth. Sample site locations are shown in Figure 1. Analytical data is summarized in Figure 2. Analytical results are attached as Appendix 1. Site photographs and a photo log are attached to this report as Appendix 2.

Prepared by:
Andrew L. Lockwood
Permitting Geologist
WVDEP-OOG