Thirty Wells

Natural gas well in Putnam county, West Virginia, without required secondary containment for condensate storage tank.

George Monk & Molly Schaffnit
September 2011

Thirty Wells

This is a compilation of data on 30 wells examined in Putnam and Kanawha counties between September 2008 and May 2011. The list includes 27 producing wells and 3 storage wells. Two of those storage wells were former producing wells and one has a condensate storage tank.

Issues we've noted are presented on two tables that follow. Wells are indicated by location and API number.

Table 1. Examined Wells in Putnam and Kanawha Counties

API Number	Missing or Incorrect API Number	Lacking or Inadequate Secondary Containment for Condensate Storage Tanks	Buried Pit Waste Exposed on Surface
Putnam County			
Long Road Group			
47-079-01288		(X)	**X** (liner)
47-079-01215 (storage well, no tank)			
47-079-01178		**X**	
47-079-01299		(X)	
47-079-00702		(X)	
47-079-01314	**X**	(X) no rainwater drain	**X** (liner, chloride)
47-079-00706	**X**	no rainwater drain	
47-079-01364	**X**	(X)	
47-079-01155		no rainwater drain	
47-079-01363	**X**	(X)	
47-079-01354	**X**	(X)	
River Road Group			
47-079-00735	(X)	**X**	
47-079-00601			
47-079-00570		**X**	
47-079-00583		**X**	
47-079-00731	**X**	**X**	
47-079-01492 (no tank)			**X** (chloride)
47-079-00615	**X**	**X**	
47-079-00743 (no tank)			
47-079-00775 (no tank)			
47-079-00746			
47-079-00739	**X**	**X**	
King Cemetery Group			
47-079-01200		no rainwater drain	**X** (liner)
47-079-00274 (storage well, tank)		**X**	
47-079-00404 (storage well, no tank)			
Kanawha County			
47-039-02026	(X)	(X)	**X** (liner, chloride)
47-039-05714		(X)	**X** (liner, chloride)
47-039-05999	**X**		**X** (liner)
47-039-01266	**X**	no rainwater drain	
47-039-06155			**X** (liner, chloride)
Percentage of Wells Examined	40%	68%	27%

X indicates problem (X) indicates corrected problem

Missing or Incorrect API Number[1]

Twelve wells, or 40%, weren't in compliance.

Two wells since our first examination have had their API numbers added or corrected. Three wells are problematic. 47-079-00601 when first seen had its API number lying on the ground near the wellhead. That number was missing when we visited again in 2010. 47-079-00570 and 47-079-01200 now have their API numbers detached from the wellhead and lying on the ground. API numbers of one operator's wells were on placards with the final group of digits still clear but the first and second groups barely visible or not visible at all (e.g., 47-079-00743). Since the final digits were legible, we did not count these as missing or incorrect even though state law requires the complete API number at the wellhead.

Lacking or Inadequate Secondary Containment for Condensate Storage Tanks[2]

Seventeen wells, or 68%, weren't in compliance.

Not all the sites had condensate storage tanks (those sites without are noted). The count on our table is for sites without secondary containment or with inadequate secondary containment and does not include lack of the required rainwater drain. A significant majority were without secondary containment as required by state law.

Buried Pit Waste Exposed on Surface[3]

Eight wells, or 27%, weren't in compliance.

Presence of pit waste exposed on the surface at well sites was determined by the presence of exposed pit liner and/or the presence of elevated chloride. We've closely examined several of these sites. 47-039-05714 had large bare areas on the pad and large pieces of exposed pit liner. Laboratory testing of a sample of pit waste from about 4 inches below the surface found 2,550 mg/kg chloride and 16 mg/kg arsenic. The arsenic was above maximum state background levels. Exposed pit liner was not seen at 47-079-01492. What we noted at that site was a stream running through the area of buried pit waste. Significant concentrations of chloride were found in that area, down the fill slope below that spot, and across another well site. The water entering a culvert to the Pocatalico River has a lower concentration due to mixing with uncontaminated water.

---

[1] Required in 35CSR4.5.5.a. The API number, according to the regulation, "consists of the state (47), county (001 through 109), and permit number." API numbers are also required in §22.6.6(f).

[2] Secondary containment requirements are split between 35CSR1.7 and West Virginia Division of Environmental Protection, [1992], *West Virginia Erosion and Sediment Control Field*, III.D, Table III-1 and Figure III-5.

[3] The General Permit requires "adequate" cover of unspecified thickness in G.4(f). Inadequate cover is considered a violation of the permit. See West Virginia Office of Oil and Gas, *General Water Pollution Control Permit*, GP-WV-1-88.

Table 2. Examined Wells in Putnam and Kanawha Counties				
API Number	**Blowout**	**Contaminated Domestic Drinking Water Source**	**No Well Completion Report Filed**	**No Annual Production Report Filed**
Putnam County				
Long Road Group				
47-079-01288	X	X		
47-079-01215 (storage well, no tank)				
47-079-01178				
47-079-01299				
47-079-00702				
47-079-01314				X
47-079-00706				
47-079-01364				
47-079-01155				
47-079-01363				
47-079-01354				
River Road Group				
47-079-00735				
47-079-00601				
47-079-00570				
47-079-00583				
47-079-00731				
47-079-01492 (no tank)			X	X
47-079-00615				
47-079-00743 (no tank)				
47-079-00775 (no tank)				
47-079-00746				
47-079-00739				
King Cemetery Group				
47-079-01200				
47-079-00274 (storage well, tank)				
47-079-00404 (storage well, no tank)				
Kanawha County				
47-039-02026	X			
47-039-05714				
47-039-05999				
47-039-01266				
47-039-06155	X	X		
Percentage of Wells Examined	10%	7%	3%	7%
X indicates problem (X) indicates corrected problem				

Blowout

Anecdotal evidence exists of three blowouts, or 10%.

Evidence for blowouts is anecdotal. We've heard an account of a blowout below 47-039-02026. A hunter on a flat below the well noticed a bad odor and oily material coming up out of the ground. He described it as the operator "dumping brine." A blowout occurred at 47-079-01288 with sulfurous fumes filling the hollow below the well and the domestic water supply at that home there becoming contaminated. A subsurface blowout at 47-039-06155 has contaminated the drinking water supply for

the home nearby. According to the surface owner that well, or others drilled nearby at the same time, has contaminated the drinking water of 12 households. Also according to the surface owner there was a deliberate uncontrolled release of flowback from 47-039-06155 over a period of days onto soil and into a nearby stream.

Contaminated Domestic Drinking Water Source
Two wells, or 7%, contaminated water.
Drinking water sources at homes close to 47-039-06155 and 47-079-01288 have become contaminated due to subsurface blowouts.

No Well Completion Report Filed[4]
One well, or 3%, was not in compliance.
According to a public database (Pipeline) at the West Virginia Geological and Economic Survey website there has been no completion report filed for 47-079-01492 drilled in 2008.

No Annual Production Report Filed[5]
Two wells, or 7%, weren't in compliance.
We have found that two wells (different operators) have not filed their required annual production reports. 47-079-01492 has neither a completion report or annual reports filed. 47-079-01314 was considered abandoned by the Office of Oil and Gas until recently when the operator filed the report for 2010. The operator, according to databases, has yet to file reports for 2005-2009.

For more information visit our website at
http://members.citynet.net/sootypaws/gws

[4] A well completion form must be filed under 35CSR4.12.2.a within 90 days after well work is done.
[5] Annual production reports are required for producing wells under 35CSR4.15.1. If an annual report is not made to the Office of Oil and Gas, then the well is considered abandoned (under §22-6-19**)** and must be plugged.