

White, Chuck (CONTR)

From: Lupton, Gregory (CONTR)
Sent: Monday, June 04, 2012 4:21 PM
To: White, Chuck (CONTR)
Subject: FW: 2012 Fernald Wellfiled Shutdowns for Water Level Rebound and Associated Maintenance Work

-----Original Message-----

From: Hertel, Bill (CONTR)
Sent: Monday, June 04, 2012 3:18 PM
To: Lupton, Gregory (CONTR)
Subject: FW: 2012 Fernald Wellfiled Shutdowns for Water Level Rebound and Associated Maintenance Work

-----Original Message-----

From: Hooten, Gwen
Sent: Thursday, April 05, 2012 2:17 PM
To: Schneider, Tom; Tim Fischer (Fischer.Timothy@epa.gov)
Cc: Powell, Jane; Hertel, Bill (CONTR)
Subject: 2012 Fernald Wellfiled Shutdowns for Water Level Rebound and Associated Maintenance Work

Tim and Tom,

Just wanted to keep you apprised of some of our upcoming activities and ask if you have any concerns.

Due to the relatively high water levels we are already seeing this spring, and the need to perform maintenance on the site's outfall line, we are targeting two shutdowns this year. The first would be for 2 weeks starting Monday April 16th and ending on Monday April 30.

The second shutdown would be for 4 weeks starting Monday June 11 and ending on Monday July 9. As in the past, during these shutdowns we complete major aquifer restoration infrastructure maintenance that cannot be completed while the wells are online. During this second shutdown we are planning to open up the site's outfall line to remove a blockage in the line near the old dissolved oxygen (DO) building, just west of the final effluent sampling station located at the east property boundary. The blockage appears to be related to an old abandoned-in-place valve that was associated with the former DO facility. This blockage appears to be causing significant backpressure on our extraction well system which in turn is causing us to lose efficiency (i.e., using more electricity to maintain required pumping rates). We anticipate the work associated with removal of the blockage will take 1-2 weeks but may last longer if unforeseen problems are encountered. During this repair all wells will need to be off. During past planned annual shutdowns, the 4 leading edge South Plume Recovery Wells (1-4) have been left operating to ensure ongoing capture of uranium contamination in that area according to well field operational objectives presented in the site Operations and Maintenance Master Plan for Aquifer Restoration and Wastewater Treatment Plan (OMMP). As further explained below, capture zone interpretations and time of travel calculations for water in the area of the recovery wells under non pumping conditions indicate that capture will be maintained if the south plume recovery wells are not off for longer than a conservative estimate of 90 days.

Section 3.6.2.1 of the OU5 RI presents time of travel calculations for three areas of the plume under non-pumping conditions, including the Paddy's Run Outlet where the South Plume Recovery Wells (1-4) are located. The horizontal seepage velocity for the Paddy's Run Outlet is calculated as 2.75 feet per day. Capture zone interpretations presented in the annual SERs indicate that the southern extent of capture of the south plume recovery system is approximately 250 feet south of the recovery wells. This indicates that water in this area (moving by advection only) would need approximately 90 days to travel the 250 feet required to move past the southern edge of capture of the well system. It should also be noted that, if the OU5 RI established retardation factor of 12 for the migration of uranium in the subsurface is also taken into consideration, uranium contamination would need approximately 1,080 days to travel the 250 foot distance.

The start date for the second shutdown is subject to change slightly based on procurement of a contractor to do the outfall line repair and what we see the water table do this spring. We may start the second shutdown earlier if the contractor is available and we see water levels begin to fall significantly.

Let me know if you have questions regarding these planned well field shutdowns.

Thanks,

Gwen

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