

Issue/Title: Pilgrim Nuclear Power Station (PNPS): Tritium in Groundwater Monitoring Wells

Topic: PNPS Updates as of January 2, 2013

Previous Plans: Results from groundwater monitoring well samples collected during the weeks of November 12, 2012 and November 26, 2012 were reported by Entergy. Split sample results for the weeks of November 12, 2012 and November 26, 2012 were also reported by MERL.

Current Status:

Table 1¹: Week of November 12th

Location	Date	MERL pCi/L	GEL pCi/L
MW 201	11/12/2012	500	551
MW 202	11/12/2012	1,489	1,160
MW 202 I	11/12/2012	449	NDA(365)*
MW 203	11/12/2012	NDA(300)*	NDA(363)*
MW 204	11/12/2012	428	NDA(370)*
MW 205	11/12/2012	1,411	1,210
MW 206	11/12/2012	1,767	1,510
MW 207	11/12/2012	407	NDA(389)*
MW 208-S	11/12/2012	369	NDA(387)*
MW 208-I	11/12/2012	325	NDA(387)*
MW 209	11/12/2012	931	714
MW 210	11/12/2012	1,147	844
MW 211	11/12/2012	1,097	1,070
MW 212	11/12/2012	***	***
MW 213	11/12/2012	NDA(300)*	NDA(363)*
MW 214	11/12/2012	NDA(300)*	NDA(381)*
MW 215	11/12/2012	1,310	1,010
MW 216 new	11/12/2012	3,148	2,460
MW 217	11/12/2012	640	NDA(372)*
MW 3	11/12/2012	342	NDA(388)*
MW 4	11/12/2012	645	696
SW-boat ramp	11/12/2012	NDA(300)*	NDA(391)*
SW-intake	11/12/2012	NDA(300)*	NDA(377)*

Table 2: Week of November 26th

Location	Date	MERL pCi/L	GEL pCi/L
MW 201	11/26/2012	457	NDA(371)*
MW 202	11/26/2012	-	-
MW 202 I	11/26/2012	-	-
MW 203	11/26/2012	-	-
MW 204	11/26/2012	-	-
MW 205	11/26/2012	4,235	3,680
MW 206	11/26/2012	2,060	1,970
MW 207	11/26/2012	-	-
MW 208-S	11/26/2012	-	-
MW 208-I	11/26/2012	-	-
MW 209	11/26/2012	980	810
MW 210	11/26/2012	-	-
MW 211	11/26/2012	1,087	986
MW 212	11/26/2012	-	-
MW 213	11/26/2012	-	-
MW 214	11/26/2012	-	-
MW 215	11/26/2012	1,173	1,010
MW 216 new	11/26/2012	4,668	3,960
MW 217	11/26/2012	469	NDA(372)*
MW 3	11/26/2012	-	-
MW 4	11/26/2012	-	-
SW-boat ramp	11/26/2012	-	-
SW-intake	11/26/2012	NDA(300)*	NDA(371)*

* NDA = not detected at less than activity value listed

** results pending

*** well inaccessible

- not analyzed this week

The groundwater monitoring results reported by Entergy show MW205 decreased to a level of 1,210 pCi/L of tritium detected during the week of November 12th and increased to a level

¹ PNPS screening level for tritium in groundwater monitoring wells is 3,000 pCi/L, which is 1/10th of the NRC-approved Pilgrim Offsite Dose Calculation Manual standard for tritium in non-drinking water sources. The EPA drinking water standard is 20,000 pCi/L. The nearest drinking water wells are approximately 2.5 miles from the plant.

of 3,680 pCi/L of tritium detected during the week of November 26th (the previous result during the week of October 29th was 3,520 pCi/L). Entergy results show that MW206 decreased to a level of 1,510 pCi/L of tritium detected during the week of November 12th and increased to a level of 1,970 pCi/L of tritium detected during the week of November 26th (the previous result during the week of October 29th was 4,300 pCi/L). Results for the other wells sampled during the weeks of November 12th and November 26th were within typical ranges detected since the groundwater monitoring for tritium began. The week of November 12th was also a comprehensive round. It should be noted MW212 was not accessible due to ongoing site activities in that area. Split sample results from MERL for the weeks of November 12th and November 26th were generally consistent with Entergy results (see tables above).

Weekly sampling of MW216 continued. Entergy results for MW216 to date indicate fluctuations between 2,250 to 7,620 pCi/L of tritium detected for the weeks of September 17th through December 3rd. The most recent result for MW216 was 3,740 pCi/L of tritium detected the week of December 3rd. MERL split sample results for MW216 for the September 17th through November 26th period were generally consistent with Entergy's results. MERL is currently awaiting receipt of the December 3rd split sample from Entergy. Weekly sampling is continuing. The sampling schedule for MW216 will be re-evaluated once all results for 2012 weekly sampling have been reviewed.

Entergy surface water sampling results for the intake canal downstream of MW205 for the weeks of November 12th and November 26th indicated no detectable tritium. The week of November 12th was also a comprehensive round, and a second surface water sample from the intake canal was collected, which also indicated no detectable tritium. MERL split sample results for surface water also indicated no detectable tritium for samples collected during the weeks of November 12th and November 26th.

At the request of MDPH, Entergy is currently preparing a detailed summary of potential sources that have been investigated during the past 2.5 years (including a spill of

contaminated water in 1988 in the area of MW206 and MW216) and their likely relationship to detections of tritium in groundwater at PNPS.

Looking Forward:

MDPH will continue to closely follow all investigational activities that are currently underway at PNPS.