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

Topic: PNPS Updates as of August 10, 2012

Previous Plans: Routine sampling in June was reportedly impacted due to scheduling issues with the off-site contractor who collects samples at the site. The week of June 11th was scheduled to be a priority well sampling event, however, it was rescheduled to the week of June 18th. During the week of June 25th the non-priority wells were sampled. Results from groundwater monitoring well samples collected during the weeks of June 18th and 25th, 2012 and July 9th, 2012 were reported by Entergy. Split sample results for the weeks of June 18th and 25th, 2012 and July 9th, 2012 were also reported by MERL.

Current Status:

Table 1[1]: June 18th and June 25th

Location	Date	MERL pCi/L	GEL pCi/L
MW 201	06/18/2012	391	554
MW 202	06/25/2012	851	985
MW 202 I	06/25/2012	392	541
MW 203	06/25/2012	NDA	NDA
MW 204	06/25/2012	415	NDA
MW 205	06/18/2012	6,462	6,440
MW 206	06/18/2012	931	1,010
MW 207	06/25/2012	429	488
MW 208-S	06/25/2012	NDA	NDA
MW 208-I	06/25/2012	NDA	NDA
MW 209	06/18/2012	990	1,050
MW 210	06/25/2012	845	1,010
MW 211	06/18/2012	1,216	1,130
MW 212	06/25/2012	-	-
MW 213	06/25/2012	NDA	NDA
MW 214	06/25/2012	NDA	NDA
MW 215 new	06/18/2012	1,075	900
MW 217 new	06/18/2012	591	865
MW 3	06/25/2012	NDA	NDA
MW 4	06/25/2012	388	421
SW-boat ramp	06/25/2012	NDA	NDA
SW-intake	06/25/2012	-	-

Table 2: July 9th

Location	Date	MERL pCi/L	GEL pCi/L
MW 201	07/09/2012	484	648
MW 202	07/09/2012	-	-
MW 202 I	07/09/2012	-	-
MW 203	07/09/2012	-	-
MW 204	07/09/2012	-	-
MW 205	07/09/2012	1,033	1,220
MW 206	07/09/2012	1,226	1,240
MW 207	07/09/2012	-	-
MW 208-S	07/09/2012	-	-
MW 208-I	07/09/2012	-	-
MW 209	07/09/2012	858	889
MW 210	07/09/2012	-	-
MW 211	07/09/2012	1,190	1,360
MW 212	07/09/2012	-	-
MW 213	07/09/2012	-	-
MW 214	07/09/2012	-	-
MW 215 new	07/09/2012	1,154	1,360
MW 217 new	07/09/2012	547	NDA
MW 3	07/09/2012	-	-
MW 4	07/09/2012	-	-
SW-boat ramp	07/09/2012	-	-
SW-intake	07/09/2012	-	-

*** 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 increased to a level of 6,440 pCi/L of tritium detected on June 18th and decreased to a level 1,220 pCi/L of tritium detected on July 9th (the previous Entergy result on May 29th was 5,760 pCi/L). Entergy results show that MW206 decreased to 1,130 pCi/L of tritium detected on June 18th and slightly increased to a level of 1,240 pCi/L of tritium detected on July 9th (the previous Entergy result on May 29th was 1,550 pCi/L). Results for the other priority wells during the weeks of June 18th and July 9th were within typical ranges detected since the groundwater monitoring for tritium began (i.e. no detectable tritium to

[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.

approximately 1,400 pCi/L of tritium detected. Results for the non-priority well samples taken the week of June 25th were primarily non-detect or slightly above detection with the exception of MW210 and MW202 which were approximately 1000 pCi/L. It should be noted that MW212 was not sampled because it is temporarily inaccessible due to the construction of the access road for the dry cask storage facility. Split sample results from MERL for the weeks of June 18th, June 25th and July 9th were generally consistent with Entergy results (see table above).

A surface water sample from the boat ramp was taken the week of June 25th as scheduled. Surface water sampling for the intake canal down stream of MW205 was conducted the week of July 23rd, 2012 and results are currently being analyzed by Entergy and MERL. Entergy results and MERL split sample results for surface water from the boat ramp for the week of June 25th indicated no detectable tritium (see table above).

Ground penetrating radar is scheduled to arrive on site this week and will be used to confirm exact locations for the excavation and installation of MW216 and to identify feasible locations for excavating down to the main stack drain line and station heating line for visual inspection purposes. The vacuum excavator is scheduled to be on site the week of August 27th to excavate MW216 and inspection shafts for the main stack drain line and the station heating line. Soil samples will also be collected at this time at the depth of the excavations and will be analyzed for tritium. The well casing for MW216 is scheduled to be installed the week of September 3rd. MDPH staff is making arrangements with Entergy to visit PNPS and observe the excavation phase of the process.

Looking Forward:

MDPH will continue to closely follow all investigational activities that are currently underway at PNPS (i.e. well placement, excavation activities, etc.).