

New Jersey Department of Environmental Protection (DEP)
Bureau of Nuclear Engineering (BNE)
Investigation of Tritium Found in Onsite Vault
At the Oyster Creek Nuclear Generating Station

Background and Installation of Groundwater Monitoring Wells

In April of 2009, during a planned cable replacement within an onsite cable vault, plant workers at the Oyster Creek Nuclear Generating Station (Oyster Creek) discovered water within the vault. Plant policy is to sample any water collecting onsite in vaults, excavation trenches, and buildings for radioactivity. As a result, sampling of the water that had collected within the vault indicated 102,000 picoCuries per Liter (pCi/L) tritium. After this discovery, 4.5 million pCi/L of tritium was detected in an existing, onsite groundwater monitoring well (Well MW-15K-1A). Five additional groundwater wells (Wells MW-50, MW-51, MW-52, MW-53, and MW-54) were installed and sampled in the vicinity of the underground cable vault. Existing groundwater monitoring wells were sampled (Wells MW-11I-1A, MW-11I-2A, W-1, W-2C, W-2K, W-5C, W-5K, W-3, W-4, W-5 and W-6). These wells are part of Exelon's ongoing voluntary Radiological Groundwater Protection Program (RGPP).

As part of Exelon's investigation, they discovered two active pipe leaks. The underground portion of these pipes was replaced during April and May 2009. Other nearby pipes underwent pressure testing or excavated and visually inspected and no leakage was found. The inspection of a one-inch stainless steel pipe near the Condensate Storage Tank (CST) was completed in July 2009. No leak was detected. In May 2009, divers completed an underwater inspection of the inside of a large tank containing water with tritium. This inspection concluded that the tank was not leaking. A pumping well, designated W-55, was installed in May, close to the existing well W-50, to conduct a pump test to evaluate hydrogeologic parameters and groundwater flow rates. In August 2009, Exelon discovered water leaking into a sump inside the Turbine Building. An investigation revealed that a six-inch aluminum pipe was leaking at the location where the pipe enters through the Turbine Building wall underground. The leaking water had elevated levels of tritium. Exelon made a 24-hour report to the DEP hotline, since some of this water had leaked outside of the building. The leak was stopped and the section of pipe with the leak was replaced.

Based on reviews of groundwater elevation and tritium sampling results, additional groundwater monitoring wells were needed to better define the groundwater flow paths and the potential for migration of tritium.

In September 2009, Exelon installed monitoring wells in the Cohansey Formation to assess the potential for vertical migration of tritium from the Cape May Formation into the Cohansey. One well (MW-56I) was installed in the area near existing well MW-15K-1A. The second well (MW-57I) was installed east of the Intake Structure in the area of the April 2009 leak. A map showing sample locations is **available for download here**.

In March of 2010, Exelon completed the drilling of four (4) additional wells in the Cape May Formation (MW-62, MW-64, MW-65, and MW-67) and one (1) well in the Cohansey Formation (MW-59I) to further characterize the groundwater movement in the area. One Cape May well (MW-64) was installed alongside the existing Cohansey well MW-57I. A second well (MW-65) was installed north of existing well W-50 between it and the existing RGPP wells W-5 and W-6. The other two new Cape May wells were installed closer to the CST. One new well (MW-62) is located near the aforementioned one-inch stainless steel pipe near the CST (northwest corner of the Turbine Building). The other new well (MW-67) was installed between the west wall of the Turbine Building and the CST, north of the concrete vault.

Wells MW-62 and MW-67 are located in the vicinity of the April 2009 release. The newly installed Cohansey Formation well designated MW-59I is co-located with Cape May well, MW-65.

In June 2010, the DEP and Exelon agreed that additional groundwater monitoring wells were needed in the intermediate and deep Cohansey Formation to further delineate the horizontal and vertical extent of the tritium plume in the Cohansey Formation. As a result, eight (8) new groundwater monitoring wells were installed during June 16 through July 6, 2010. Four of the wells (MW-58I, MW-61I, MW-66I and MW-69I) were installed in the intermediate Cohansey Formation and four wells (MW-60I, MW-63I, MW-68I and MW-70I) were installed in the deep Cohansey Formation. All the wells were installed near existing shallow Cohansey and Cape May Formation wells, essentially forming four (4) clusters of wells. Each well cluster includes a shallow, intermediate, and deep Cohansey Formation well along with a Cape May Formation well. The depth of each well is noted on the corresponding table of results. A map showing the locations of the cluster wells is [available for download here](#).

In early July 2010, two new wells, designated MW-71, and MW-72, were installed in the Cape May Formation. The wells were installed near several plant-related system underground pipes/vaults that potentially contain radionuclides (including tritium). Well MW-71 is located along the southwest corner of the Reactor Building near the recently renovated underground piping vault. Well MW-72 is located just north of the Reactor Building.

Installation of Onsite Remedial Pumping Well

On September 28, 2010, Exelon installed a remedial pumping well (MW-73) near the center of the defined shallow Cohansey onsite tritium plume. The well was located on the south side of the circulating water discharge tunnel, extending into the upper Cohansey Formation, approximately 55-feet deep. It was installed in accordance with a Directive issued by the DEP on May 7, 2010, requiring Exelon to clean up and remove the discharge of tritium at the Oyster Creek Nuclear Generating Station. A copy of the Directive is [available for download here](#).

Since November 17, 2010, MW-73 pumped at an approximate rate of 70 gallons per minute. With DEP approval, Exelon continuously pumped groundwater from remedial well MW-73, measured the concentration of tritium in the extracted groundwater, and diverted it into the plant's intake structure in order to reduce the tritium concentration. After being diverted to the plant's intake structure, the extracted groundwater was combined with up to 460,000 gallons per minute of intake canal water and pumped through the plant's circulating water system and released to the plant's discharge canal. Up through October 2019, 260 million gallons of groundwater was extracted from pumping well MW-73.

Since pumping of well MW-73 began, tritium concentrations in groundwater monitoring wells located in the Cape May and Cohansey Formations decreased significantly (see Table 1).

On September 17, 2018, Exelon permanently ceased power operations at Oyster Creek. On May 9, 2019, Exelon submitted a letter to the NJDEP in support of closing out the Directive. A copy of the correspondence is [available for download here](#).

On June 20, 2019, the U.S. Nuclear Regulatory Commission (NRC) approved the transfer of the Oyster Creek license from Exelon Corporation to Oyster Creek Environmental Protection (a Holtec subsidiary), as owner, and Holtec Decommissioning International (HDI), as decommissioning operator. Following the transfer, HDI continued the sampling and measurement of tritium concentrations in groundwater from MW-73.

On November 4, 2019, MW-73 was removed from service. The decision was based on the continued decreasing trend in tritium activity during the October 2019 RGPP sampling round and recommendations by the licensee's groundwater consultants that further removal of tritium in the groundwater at this stage is minimal.

Remediation Closure

In a letter from NJDEP to HDI on January 9, 2020, the BNE and NJDEP's Site Remediation Program concurred that the Oyster Creek site had complied with the requirements outlined in the Directive, thereby closing it out. A copy of this correspondence [is available for download here](#). While the pump and treat remediation of tritium has been completed, HDI continues groundwater monitoring as part of their RGPP.

Reduction in Groundwater Monitoring Wells

Once decommissioning commenced, Exelon reduced their quarter-annual RGPP split-sample network, with the NJDEP, from twenty-eight (28) monitoring wells to nineteen (19). Of the 19 monitoring wells, fourteen (14) were sampled quarterly and five (5) annually. Another nine (9) monitoring wells were no longer split-sampled with the NJDEP. They are considered 'idle' but available for future sampling should an onsite issue arise (i.e., spill, pipe leak) in the vicinity of one of the "idle" wells. The reduction in the RGPP network was based on (1) historic tritium activity results, (2) location of monitoring wells and their proximity to plant structures, systems, and components (SSC's) such as tanks and radioactive fluid piping, (3) other nearby monitoring wells (well clusters), (4) groundwater flow, and (4) lithology. A map showing the current RGPP network is [available for download here](#).

Starting in 2022, based on the trend in historic groundwater data and the current Oyster Creek decommissioning status, which includes removal of liquid sources, the RGPP sampling frequency was reduced from quarterly to semi-annually for the aforementioned fourteen (14) monitoring wells. There was no change in sample frequency for the five (5) monitoring wells sampled annually.

Data Reporting

Presently, HDI continues to collect groundwater samples and surface water at the intake structure for tritium analysis. The BNE receives splits of these samples for an independent analysis of tritium by the BNE's radiological contract laboratory.

Table 1 represents BNE results obtained from split samples of onsite groundwater monitoring wells. BNE split sample results from early May 2010 through mid-June 2010 were not available due to the shutdown of the BNE's Radiological Contract Lab, Centauri Labs, of Montgomery, Alabama on June 29, 2010, with no prior notification to the BNE. For this time frame, split sample data from the licensees' contract laboratory, Teledyne Brown Engineering, Inc., (Teledyne) have been reported in Table 1. In August 2010, following the shutdown of Centauri Labs, the U.S. Environmental Protection Agency's (EPA) National Air and Radiation Monitoring Laboratory (NAREL) in Montgomery, Alabama, analyzed the BNE's split surface water samples for tritium (noted on Table 2, Surface Water) while the BNE secured a multiyear-radioanalytical lab services contract with General Laboratories (GEL). GEL has been analyzing all the BNE's sampling media since October 24, 2011.

Samples reported in Table 1 were analyzed for tritium and/or gamma emitting radionuclides. No gamma emitting radionuclides have been found. The depth of each well along with the associated groundwater aquifer designation is indicated on Table 1. No tritium has been detected in any groundwater wells

monitored offsite. Information on the Exelon/HDI RGPP can be found in the licensee's Annual Radiological Environmental Operating Reports (the 'Environmental Report') available through the U.S. Nuclear Regulatory Commission's website at <http://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-specific-reports/oc.html> or at any branch of the Ocean County Public Library.

Table 2 represents BNE results from split samples of surface water obtained from the plant's intake canal: the main condenser discharge sampling point: and in the discharge canal located at the Route 9 Bridge, which represents the nearest public access point. The DEP's split sample results for tritium and/or gamma emitting radionuclides indicated no activity.

Table 3 represents BNE results obtained from split samples of soil core borings during the installation of the groundwater monitoring wells, MW-50 through MW-55, MW-58I, MW-59I, MW-60I, MW-62, MW-63I, MW-64, MW-65, MW-66I, MW-67, MW-68I, MW-69I, MW-70I, MW-71, and MW-73. Sampling showed no detectable levels of gamma emitting radionuclides in any of the soil cores.

Controlled liquid effluent discharges from Oyster Creek are reported to the DEP and available through the Department's monthly reports. This information is also reported to the NRC on an annual basis in the licensee's Annual Effluent Release Report (the 'Effluent Report'), available through the NRC website's public library at <http://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-specific-reports/oc.html> or at any branch of the Ocean County Public Library.

BNE staff will continue to participate in ongoing radiological effluent and environmental inspections with HDI and the NRC. Additional information on tritium in groundwater at nuclear power plants can be found at the NRC website address at: <http://www.nrc.gov/reactors/operating/ops-experience/grndwtr-contam-tritium.html>.

Revised: 06/09/2023

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-15K-1A | 18.5 | Cape May | 04/17/09 | 2,467,185 ± 4,022 | 09/25/09 | 71,510 ± 744 |
| | | | 04/20/09 | 1,358,090 ± 3,003 | 09/28/09 | 65,840 ± 724 |
| | | | 04/29/09 | 2,753,467 ± 4,904 | 09/30/09 | 67,280 ± 723 |
| | | | 05/01/09 | 2,795,335 ± 4,980 | 10/02/09 | 60,920 ± 690 |
| | | | 05/06/09 | 2,478,167 ± 4,662 | 10/07/09 | 60,630 ± 688 |
| | | | 05/13/09 | 1,304,093 ± 3,420 | 10/14/09 | 41,470 ± 576 |
| | | | 05/20/09 | 776,787 ± 2,624 | 10/21/09 | 49,590 ± 625 |
| | | | 05/28/09 | 452,406 ± 2,007 | 10/29/09 | 39,660 ± 560 |
| | | | 06/02/09 | 312,230 ± 1,650 | 11/04/09 | 13,760 ± 349 |
| | | | 06/09/09 | 46,670 ± 658 | 11/11/09 | 11,250 ± 318 |
| | | | 06/16/09 | 63,290 ± 755 | 11/18/09 | 16,630 ± 390 |
| | | | 06/23/09 | 57,610 ± 728 | 11/24/09 | 16,460 ± 388 |
| | | | 07/01/09 | 43,050 ± 631 | 12/01/09 | 17,400 ± 396 |
| | | | 07/07/09 | 48,660 ± 668 | 12/08/09 | 46,460 ± 612 |
| | | | 07/15/09 | 56,380 ± 666 | 12/15/09 | 22,640 ± 441 |
| | | | 07/22/09 | 65,310 ± 713 | 12/22/09 | 14,450 ± 366 |
| | | | 07/29/09 | 98,550 ± 868 | 12/29/09 | 72,360 ± 749 |
| | | | 08/05/09 | 94,040 ± 848 | 01/05/10 | 28,610 ± 507 |
| | | | 08/12/09 | 48,750 ± 619 | 01/12/10 | 27,140 ± 490 |
| | | | 08/19/09 | 35,550 ± 536 | 01/19/10 | 29,030 ± 492 |
| | | | 08/25/09 | 42,750 ± 583 | 01/26/10 | 37,340 ± 543 |
| | | | 08/28/09 | 48,070 ± 615 | 02/02/10 | 23,660 ± 445 |
| | | | 08/31/09 | 121,030 ± 957 | 02/09/10 | 23,480 ± 441 |
| | | | 09/08/09 | 68,550 ± 729 | 02/16/10 | 3,560 ± 231 |
| | | | 09/09/09 | 97,910 ± 866 | 02/24/10 | 1,940 ± 200 |
| | | | 09/18/09 | 108,690 ± 915 | 03/02/10 | 1,670 ± 197 |
| | | | 09/21/09 | 91,940 ± 839 | 03/09/10 | 3,140 ± 220 |
| | | | 09/23/09 | 77,890 ± 775 | 03/16/10 | 2,720 ± 211 |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|--------------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-15K-1A (continued) | 18.5 | Cape May | 03/23/10 | 4,630 ± 256 | 09/22/10 | 12,900 ± 381 |
| | | | 03/31/10 | 4,310 ± 252 | 09/28/10 | 9,950 ± 399 |
| | | | 04/06/10 | 5,370 ± 271 | 10/13/10 | 815 ± 164 |
| | | | 04/14/10 | 4,520 ± 236 | 10/27/10 | 1,420 ± 341 |
| | | | 04/20/10 | 7,130 ± 270 | 11/10/10 | 2,220 ± 238 |
| | | | 04/27/10 | 9,600 ± 308 | 12/02/10 | 3,470 ± 304 |
| | | | 05/04/10 | 11,800* | 12/14/10 | 6,810 ± 290 |
| | | | 05/11/10 | 7,390* | 01/11/11 | 46,000 ± 673 |
| | | | 05/19/10 | 9,360* | 02/15/11 | 20,100 ± 487 |
| | | | 05/25/10 | 8,020* | 03/15/11 | 10,000 ± 649 |
| | | | 06/02/10 | 4,270* | 04/13/11 | 14,500 ± 449 |
| | | | 06/08/10 | 6,210* | 05/10/11 | 9,720 ± 693 |
| | | | 06/15/10 | 4,770* | 06/14/11 | 18,300 ± 749 |
| | | | 06/22/10 | 3,884 ± 373 | 07/13/11 | 4,370 ± 418 |
| | | | 06/30/10 | 3,666 ± 374 | 08/16/11 | 2,450 ± 296 |
| | | | 07/07/10 | 5,849 ± 444 | 09/13/11 | 1,670 ± 294 |
| | | | 07/13/10 | 6,427 ± 445 | 10/11/11 | 1,480 ± 228 |
| | | | 07/21/10 | 8,519 ± 491 | 11/16/11 | 1,450 ± 227 |
| | | | 07/27/10 | 7,126 ± 471 | 12/14/11 | 557 ± 144 |
| | | | 08/04/10 | 8,872 ± 483 | 01/18/12 | 824 ± 183 |
| | | | 08/11/10 | 8,732 ± 493 | 02/14/12 | 1,310 ± 272 |
| | | | 08/18/10 | 9,416 ± 579 | 03/13/12 | < 223 |
| | | | 08/24/10 | 10,700 ± 755 | 04/18/12 | 4,210 ± 244 |
| | | | 09/08/10 | 9,400 ± 330 | 05/15/12 | < 252 |

*BNE split sample results from 05/04/10 through 06/15/10 were not available due to the closing of Centauri Labs-Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|--------------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-15K-1A (continued) | 18.5 | Cape May | 06/20/12 | < 268 | 10/18/16 | < 214 |
| | | | 07/03/12 | < 258 | 01/10/17 | < 214 |
| | | | 08/15/12 | < 163 | 04/05/17 | < 202 |
| | | | 09/19/12 | < 197 | 07/11/17 | < 236 |
| | | | 10/02/12 | < 173 | 10/17/17 | < 214 |
| | | | 11/14/12 | < 214 | 01/18/18 | < 237 |
| | | | 12/05/12 | < 172 | 04/18/18 | < 191 |
| | | | 01/08/13 | < 210 | 07/31/18 | < 159 |
| | | | 02/12/13 | < 216 | 10/30/18 | < 201 |
| | | | 03/05/13 | < 176 | 01/15/19 | < 209 |
| | | | 04/09/13 | < 227 | 04/16/19 | < 208 |
| | | | 07/11/13 | < 263 | 07/23/19 | < 238 |
| | | | 10/08/13 | < 259 | 10/08/19 | < 203 |
| | | | 01/13/14 | < 185 | 01/28/20 | < 237 |
| | | | 04/09/14 | < 209 | 05/19/20 | < 230 |
| | | | 07/15/14 | < 258 | 08/18/20 | 248 ± 161 |
| | | | 10/14/14 | 270 ± 158 | 10/13/20 | < 217 |
| | | | 01/13/15 | < 262 | 02/09/21 | < 182 |
| | | | 04/14/15 | < 238 | 05/04/21 | < 257 |
| | | | 07/15/15 | < 227 | 07/27/21 | < 282 |
| | | | 10/13/15 | < 216 | 10/19/21 | < 252 |
| | | | 01/20/16 | < 260 | 04/26/22 | < 198 |
| | | | 04/05/16 | < 202 | 10/25/22 | < 215 |
| | | | 07/19/16 | < 231 | 04/18/23 | < 244 |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly.
- MW-15K-1A is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-50 | 20.0 | Cape May | 04/21/09 | 2,823,074 ± 4,349 | 09/28/09 | 622,120 ± 2,160 |
| | | | 04/29/09 | 2,214,127 ± 4,414 | 09/30/09 | 477,010 ± 1,890 |
| | | | 05/06/09 | 2,051,065 ± 4,287 | 10/02/09 | 565,200 ± 2,050 |
| | | | 05/13/09 | 2,292,943 ± 4,513 | 10/07/09 | 392,610 ± 1,710 |
| | | | 05/20/09 | 1,917,053 ± 4,192 | 10/14/09 | 320,340 ± 1,550 |
| | | | 05/28/09 | 1,587,124 ± 3,802 | 10/21/09 | 366,750 ± 1,660 |
| | | | 06/02/09 | 1,190,610 ± 3,230 | 10/28/09 | 137,940 ± 1,020 |
| | | | 06/09/09 | 1,775,520 ± 3,940 | 11/04/09 | 285,300 ± 1,450 |
| | | | 06/16/09 | 1,608,280 ± 3,890 | 11/11/09 | 272,690 ± 1,430 |
| | | | 06/23/09 | 1,559,120 ± 3,680 | 11/18/09 | 343,810 ± 1,610 |
| | | | 07/01/09 | 1,162,650 ± 3,170 | 11/24/09 | 333,790 ± 1,580 |
| | | | 07/07/09 | 940,910 ± 2,860 | 12/01/09 | 353,550 ± 1,630 |
| | | | 07/15/09 | 1,094,690 ± 2,850 | 12/08/09 | 374,360 ± 1,670 |
| | | | 07/22/09 | 942,220 ± 2,640 | 12/15/09 | 207,320 ± 1,250 |
| | | | 07/29/09 | 909,470 ± 2,600 | 12/22/09 | 274,420 ± 1,430 |
| | | | 08/05/09 | 980,510 ± 2,690 | 12/29/09 | 244,980 ± 1,350 |
| | | | 08/12/09 | 820,290 ± 2,460 | 01/05/10 | 259,840 ± 1,420 |
| | | | 08/19/09 | 561,020 ± 2,040 | 01/12/10 | 257,220 ± 1,420 |
| | | | 08/25/09 | 1,145,140 ± 2,910 | 01/19/10 | 273,830 ± 1,430 |
| | | | 08/28/09 | 866,010 ± 2,530 | 01/26/10 | 271,230 ± 1,410 |
| | | | 08/31/09 | 1,600,500 ± 3,440 | 02/02/10 | 386,120 ± 1,670 |
| | | | 09/08/09 | 1,070,150 ± 2,820 | 02/09/10 | 363,060 ± 1,610 |
| | | | 09/09/09 | 1,074,510 ± 2,830 | 02/16/10 | 388,700 ± 1,670 |
| | | | 09/16/09 | 828,110 ± 2,480 | 02/24/10 | 207,050 ± 1,230 |
| | | | 09/18/09 | 494,480 ± 1,910 | 03/02/10 | 143,300 ± 1,020 |
| | | | 09/21/09 | 627,730 ± 2,160 | 03/09/10 | 186,460 ± 1,160 |
| | | | 09/23/09 | 634,360 ± 2,170 | 03/16/10 | 134,280 ± 986 |
| | | | 09/25/09 | 651,210 ± 2,200 | 03/23/10 | 180,000 ± 1,200 |

- Results in picocuries per liter (pCi/L)
- Sampling frequency is weekly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-50 (continued) | 20.0 | Cape May | 03/31/10 | 173,000 ± 1,180 | 10/06/10 | 192,000 ± 1,420 |
| | | | 04/07/10 | 153,000 ± 1,020 | 10/13/10 | 146,000 ± 2,870 |
| | | | 04/14/10 | 176,000 ± 1,090 | 10/20/10 | 141,000 ± 1,430 |
| | | | 04/21/10 | 95,800 ± 843 | 10/27/10 | 133,000 ± 1,360 |
| | | | 04/28/10 | 221,000 ± 1,260 | 11/03/10 | 115,000 ± 2,230 |
| | | | 05/04/10 | 125,000* | 11/10/10 | 134,000 ± 2,640 |
| | | | 05/11/10 | 116,000* | 11/17/10 | 125,000 ± 1,200 |
| | | | 05/18/10 | 175,000* | 11/23/10 | 121,000 ± 2,350 |
| | | | 05/26/10 | 209,000* | 12/15/10 | 127,000 ± 1,160 |
| | | | 06/02/10 | 214,000* | 01/11/11 | 183,000 ± 1,340 |
| | | | 06/08/10 | 187,000* | 02/15/11 | 131,000 ± 1,420 |
| | | | 06/15/10 | 148,000* | 04/13/11 | 102,000 ± 2,030 |
| | | | 06/22/10 | 95,129 ± 696 | 05/10/11 | 63,100 ± 1,710 |
| | | | 06/30/10 | 167,085 ± 886 | 06/14/11 | 65,300 ± 1,420 |
| | | | 07/07/10 | 64,179 ± 564 | 07/13/11 | 51,800 ± 1,390 |
| | | | 07/14/10 | 184,564 ± 919 | 08/16/11 | 99,000 ± 1,920 |
| | | | 07/21/10 | 175,227 ± 913 | 09/13/11 | 27,700 ± 1,080 |
| | | | 07/27/10 | 136,100 ± 788 | 10/11/11 | 46,400 ± 924 |
| | | | 08/04/10 | 107,294 ± 760 | 11/16/11 | 50,700 ± 932 |
| | | | 08/11/10 | 107,404 ± 768 | 12/08/11 | 44,500 ± 1,300 |
| | | | 08/18/10 | 129,550 ± 1,817 | 01/17/12 | 51,200 ± 889 |
| | | | 08/24/10 | 174,000 ± 3,430 | 02/14/12 | 54,300 ± 1,540 |
| | | | 08/31/10 | 114,000 ± 2,250 | 03/13/12 | 48,900 ± 759 |
| | | | 09/08/10 | 83,500 ± 1,650 | 04/18/12 | 36,400 ± 1,260 |
| | | | 09/15/10 | 131,000 ± 2,580 | 05/15/12 | 31,900 ± 639 |
| | | | 09/22/10 | 144,000 ± 1,200 | 06/20/12 | 10,900 ± 705 |
| | | | 09/29/10 | 205,000 ± 4,000 | 07/03/12 | 10,100 ± 688 |

*BNE split sample results from 05/04/10 through 06/15/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- In November 2010 sampling frequency was changed from weekly to monthly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-50 (continued) | 20.0 | Cape May | 08/14/12 | 13,000 ± 771 | 01/17/18 | < 243 |
| | | | 09/19/12 | 6,120 ± 461 | 04/17/18 | < 192 |
| | | | 10/02/12 | 19,000 ± 789 | 07/31/18 | 176 ± 121 |
| | | | 11/14/12 | 13,600 ± 780 | | |
| | | | 12/05/12 | 12,300 ± 640 | | |
| | | | 01/08/13 | 18,000 ± 914 | | |
| | | | 02/12/13 | 17,300 ± 507 | | |
| | | | 03/05/13 | 8,350 ± 617 | | |
| | | | 04/08/13 | 8,500 ± 494 | | |
| | | | 07/10/13 | 8,330 ± 366 | | |
| | | | 10/08/13 | 11,500 ± 430 | | |
| | | | 01/14/14 | 4,600 ± 304 | | |
| | | | 04/08/14 | 3,260 ± 408 | | |
| | | | 07/15/14 | 6,270 ± 318 | | |
| | | | 10/14/14 | 3,080 ± 247 | | |
| | | | 01/13/15 | 5,980 ± 318 | | |
| | | | 04/14/15 | 337 ± 154 | | |
| | | | 07/15/15 | 733 ± 155 | | |
| | | | 10/13/15 | 1,990 ± 182 | | |
| | | | 01/20/16 | 4,440 ± 455 | | |
| | | | 04/05/16 | 1,350 ± 173 | | |
| | | | 07/19/16 | 653 ± 158 | | |
| | | | 10/18/16 | 1,010 ± 232 | | |
| | | | 01/10/17 | < 176 | | |
| | | | 04/04/17 | < 207 | | |
| | | | 07/10/17 | < 242 | | |
| | | | 10/17/17 | < 212 | | |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly. In October 2018, split sampling of this well with the BNE was discontinued.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-51 | 20.0 | Cape May | 04/29/09 | 1,318,529 ± 14,083 | 12/29/09 | 3,680 ± 233 |
| | | | 05/06/09 | 1,822,494 ± 16,463 | 01/05/10 | 34,290 ± 540 |
| | | | 05/13/09 | 1,549,918 ± 13,908 | 01/19/10 | 99,360 ± 872 |
| | | | 05/20/09 | 1,824,459 ± 13,470 | 01/26/10 | 98,360 ± 861 |
| | | | 05/27/09 | 2,199,630 ± 4,060 | 02/02/10 | 50,990 ± 632 |
| | | | 06/02/09 | 2,020,420 ± 3,880 | 02/09/10 | 95,100 ± 842 |
| | | | 06/09/09 | 1,356,880 ± 3,440 | 02/16/10 | 7,880 ± 288 |
| | | | 06/16/09 | 1,513,910 ± 3,360 | 02/23/10 | 36,930 ± 537 |
| | | | 06/23/09 | 535,990 ± 2,150 | 03/02/10 | 7,510 ± 281 |
| | | | 07/01/09 | 781,470 ± 2,610 | 03/09/10 | 25,510 ± 455 |
| | | | 07/07/09 | 801,140 ± 2,640 | 03/16/10 | 18,620 ± 396 |
| | | | 07/15/09 | 1,570,800 ± 3,410 | 03/23/10 | 9,280 ± 321 |
| | | | 07/29/09 | 1,555,820 ± 3,390 | 03/30/10 | 5,970 ± 278 |
| | | | 08/05/09 | 1,433,510 ± 3,250 | 04/06/10 | 14,500 ± 379 |
| | | | 08/12/09 | 932,210 ± 2,620 | 04/13/10 | 23,100 ± 423 |
| | | | 08/20/09 | 203,960 ± 1,240 | 04/20/10 | 37,500 ± 521 |
| | | | 08/26/09 | 322,630 ± 1,550 | 04/27/10 | 33,800 ± 521 |
| | | | 08/31/09 | 219,810 ± 1,280 | 05/04/10 | 48,600* |
| | | | 09/16/09 | 147,000 ± 1,100 | 05/25/10 | 37,800* |
| | | | 09/18/09 | 214,000 ± 1,310 | 06/02/10 | 38,200* |
| | | | 09/21/09 | 411,000 ± 1,810 | 09/14/11 | 6,350 ± 292 |
| | | | 09/23/09 | 697,000 ± 2,360 | 04/05/17 | < 231 |
| | | | 09/25/09 | 761,000 ± 2,480 | | |
| | | | 09/28/09 | 744,000 ± 2,450 | | |

BNE split samples between 10/09/09 and 12/22/09, 05/12/10, 05/19/10, 06/08/10 through 08/04/11, and 10/14/11 through 01/10/17 were not available. The well was reported dry by Exelon.

* BNE split sample results from 05/04/10 through 06/02/10 were not available due to the closing of Centauri Labs Alabama facility. For this time-period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly. In October 2018, split sampling of this well with the BNE was discontinued.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-52 | 20.0 | Cape May | 04/23/09 | < 296 | 11/18/09 | < 294 |
| | | | 04/29/09 | < 290 | 11/24/09 | < 294 |
| | | | 05/13/09 | < 283 | 12/01/09 | < 294 |
| | | | 05/20/09 | < 296 | 12/08/09 | < 293 |
| | | | 05/27/09 | < 288 | 12/15/09 | < 267 |
| | | | 06/02/09 | < 277 | 12/22/09 | < 267 |
| | | | 06/09/09 | < 275 | 12/29/09 | < 276 |
| | | | 06/16/09 | 1,320 ± 209 | 01/05/10 | < 289 |
| | | | 06/23/09 | < 273 | 01/12/10 | < 294 |
| | | | 06/30/09 | < 284 | 01/19/10 | < 290 |
| | | | 07/07/09 | < 283 | 01/26/10 | < 287 |
| | | | 07/15/09 | < 278 | 02/02/10 | < 287 |
| | | | 07/22/09 | < 278 | 02/09/10 | < 287 |
| | | | 07/29/09 | < 277 | 02/16/10 | < 284 |
| | | | 08/05/09 | < 277 | 02/23/10 | < 285 |
| | | | 08/12/09 | 1,250 ± 182 | 03/02/10 | < 285 |
| | | | 08/19/09 | < 266 | 03/09/10 | < 279 |
| | | | 08/25/09 | < 266 | 03/16/10 | < 273 |
| | | | 09/16/09 | < 273 | 03/30/10 | < 286 |
| | | | 09/23/09 | < 273 | 04/06/10 | < 286 |
| | | | 09/30/09 | < 272 | 04/13/10 | < 267 |
| | | | 10/07/09 | 457 ± 160 | 04/20/10 | < 267 |
| | | | 10/14/09 | 478 ± 160 | 04/28/10 | < 266 |
| | | | 10/21/09 | < 248 | 05/04/10 | < 179* |
| | | | 10/28/09 | 448 ± 160 | 05/11/10 | < 177* |
| | | | 11/04/09 | < 252 | 05/18/10 | < 153* |
| | | | 11/11/09 | < 256 | 05/25/10 | < 178* |

*BNE split sample results from 05/04/10 through 06/16/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-52 (continued) | 20.0 | Cape May | 06/03/10 | < 155* | 11/15/11 | < 280 |
| | | | 06/09/10 | < 168* | 12/14/11 | < 204 |
| | | | 06/16/10 | < 152* | 01/17/12 | < 217 |
| | | | 06/22/10 | < 216 | 02/13/12 | < 213 |
| | | | 06/29/10 | < 207 | 03/13/12 | < 219 |
| | | | 07/07/10 | < 210 | 04/17/12 | < 203 |
| | | | 07/13/10 | < 433 | 05/15/12 | < 253 |
| | | | 07/21/10 | < 457 | 06/19/12 | < 260 |
| | | | 07/28/10 | < 444 | 07/02/12 | < 257 |
| | | | 08/03/10 | < 443 | 08/15/12 | < 170 |
| | | | 08/10/10 | < 484 | 09/18/12 | < 190 |
| | | | 08/17/10 | < 591 | 10/02/12 | < 179 |
| | | | 08/25/10 | < 234 | 11/14/12 | < 217 |
| | | | 09/28/10 | < 245 | 12/05/12 | < 168 |
| | | | 10/13/10 | < 212 | 01/08/13 | < 142 |
| | | | 11/16/10 | < 199 | 02/12/13 | < 212 |
| | | | 12/14/10 | < 214 | 03/05/13 | < 177 |
| | | | 01/11/11 | < 201 | 04/09/13 | < 240 |
| | | | 02/15/11 | < 217 | 07/09/13 | < 263 |
| | | | 03/15/11 | < 184 | 10/09/13 | < 298 |
| | | | 04/12/11 | < 257 | 01/14/14 | < 185 |
| | | | 05/10/11 | < 197 | 04/09/14 | < 209 |
| | | | 06/14/11 | < 182 | 07/16/14 | < 254 |
| | | | 07/12/11 | < 159 | 10/13/14 | < 237 |
| | | | 08/16/11 | < 169 | 01/13/15 | < 262 |
| | | | 09/13/11 | < 221 | 04/14/15 | < 240 |
| | | | 10/11/11 | < 169 | 07/15/15 | < 209 |

*BNE split sample results from 05/04/10 through 06/16/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-52 (continued) | 20.0 | Cape May | 10/13/15 | < 212 | | |
| | | | 01/20/16 | < 264 | | |
| | | | 04/05/16 | < 203 | | |
| | | | 07/19/16 | < 227 | | |
| | | | 10/17/16 | < 192 | | |
| | | | 01/10/17 | < 243 | | |
| | | | 04/05/17 | < 201 | | |
| | | | 07/10/17 | < 238 | | |
| | | | 10/10/17 | < 211 | | |
| | | | 01/17/18 | < 237 | | |
| | | | 04/18/18 | < 194 | | |
| | | | 07/31/18 | < 175 | | |
| | | | 04/17/19 | < 210 | | |
| | | | 05/19/20 | < 210 | | |
| | | | 05/04/21 | < 259 | | |
| | | | 04/26/22 | < 175 | | |
| | | | 04/20/23 | < 243 | | |

- Results in picocuries per liter (pCi/L)
- In October 2018, the sampling frequency was reduced from quarterly to annually.
- MW-52 is part of the HDI existing Radiological Groundwater Protection Program.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-53 | 20.0 | Cape May | 04/24/09 | 1,256 ± 198 | 11/04/09 | < 250 |
| | | | 04/29/09 | 4,519 ± 261 | 11/11/09 | < 253 |
| | | | 05/01/09 | 7,120 ± 298 | 11/18/09 | < 294 |
| | | | 05/06/09 | 6,413 ± 289 | 11/24/09 | < 294 |
| | | | 05/13/09 | 2,154 ± 217 | 12/01/09 | < 294 |
| | | | 05/20/09 | 1,048 ± 202 | 12/08/09 | < 293 |
| | | | 05/27/09 | 1,923 ± 212 | 12/15/09 | < 267 |
| | | | 06/02/09 | 716 ± 182 | 12/22/09 | 337 ± 167 |
| | | | 06/09/09 | 317 ± 172 | 12/29/09 | < 276 |
| | | | 06/16/09 | < 263 | 01/05/10 | < 289 |
| | | | 06/23/09 | < 273 | 01/12/10 | < 293 |
| | | | 06/30/09 | < 284 | 01/19/10 | < 289 |
| | | | 07/07/09 | < 283 | 01/26/10 | < 287 |
| | | | 07/15/09 | < 278 | 02/02/10 | < 287 |
| | | | 07/22/09 | < 278 | 02/09/10 | < 287 |
| | | | 07/29/09 | < 277 | 02/16/10 | < 288 |
| | | | 08/05/09 | < 277 | 02/23/10 | < 289 |
| | | | 08/12/09 | 330 ± 162 | 03/02/10 | < 296 |
| | | | 08/19/09 | < 266 | 03/09/10 | < 286 |
| | | | 08/25/09 | < 266 | 03/16/10 | < 271 |
| | | | 09/16/09 | < 273 | 03/30/10 | < 267 |
| | | | 09/23/09 | < 273 | 04/06/10 | < 289 |
| | | | 09/30/09 | < 272 | 04/13/10 | < 266 |
| | | | 10/07/09 | 408 ± 160 | 04/20/10 | < 201 |
| | | | 10/14/09 | 558 ± 167 | 04/27/10 | < 263 |
| | | | 10/21/09 | < 249 | 05/04/10 | < 175* |
| | | | 10/28/09 | 429 ± 156 | 05/11/10 | < 178* |

*BNE split sample results from 05/04/10 through 06/15/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-53 (continued) | 20.0 | Cape May | 05/18/10 | < 168* | 07/12/11 | 1,940 ± 285 |
| | | | 05/25/10 | < 178* | 08/16/11 | 239 ± 133 |
| | | | 06/03/10 | < 179* | 09/13/11 | < 220 |
| | | | 06/08/10 | < 168* | 10/11/11 | < 174 |
| | | | 06/15/10 | 215* | 11/15/11 | < 278 |
| | | | 06/22/10 | < 214 | 12/14/11 | < 201 |
| | | | 06/30/10 | < 210 | 01/17/12 | < 211 |
| | | | 07/08/10 | < 210 | 02/13/12 | < 180 |
| | | | 07/13/10 | < 429 | 03/12/12 | < 222 |
| | | | 07/21/10 | < 458 | 04/17/12 | < 200 |
| | | | 07/27/10 | < 455 | 05/15/12 | < 253 |
| | | | 08/04/10 | < 447 | 06/20/12 | < 276 |
| | | | 08/11/10 | < 466 | 07/03/12 | < 262 |
| | | | 08/17/10 | < 584 | 08/15/12 | < 167 |
| | | | 08/25/10 | < 235 | 09/18/12 | < 190 |
| | | | 09/28/10 | < 247 | 10/02/12 | < 175 |
| | | | 10/12/10 | < 206 | 11/14/12 | < 217 |
| | | | 11/16/10 | < 204 | 12/05/12 | < 168 |
| | | | 12/14/10 | < 207 | 01/09/13 | < 137 |
| | | | 01/11/11 | < 203 | 02/12/13 | < 209 |
| | | | 02/15/11 | < 278 | 03/05/13 | < 179 |
| | | | 03/15/11 | 233 ± 145 | 04/09/13 | < 233 |
| | | | 04/12/11 | < 253 | 07/11/13 | < 206 |
| | | | 05/10/11 | < 196 | 10/08/13 | < 260 |
| | | | 06/14/11 | 7,770 ± 503 | 01/15/14 | < 223 |

*BNE split sample results from 05/04/10 through 06/15/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-53 (continued) | 20.0 | Cape May | 04/10/14 | < 209 | | |
| | | | 07/17/14 | < 210 | | |
| | | | 10/14/14 | < 244 | | |
| | | | 01/13/15 | < 258 | | |
| | | | 04/16/15 | < 239 | | |
| | | | 07/15/15 | < 218 | | |
| | | | 10/14/15 | < 213 | | |
| | | | 01/22/16 | < 261 | | |
| | | | 04/07/16 | < 203 | | |
| | | | 07/20/16 | < 230 | | |
| | | | 10/20/16 | < 224 | | |
| | | | 01/11/17 | < 222 | | |
| | | | 04/05/17 | < 197 | | |
| | | | 07/12/17 | < 238 | | |
| | | | 10/11/17 | < 205 | | |
| | | | 01/19/18 | < 243 | | |
| | | | 04/24/18 | < 190 | | |
| | | | 08/01/18 | < 223 | | |
| | | | 04/18/19 | < 206 | | |
| | | | 05/19/20 | < 234 | | |
| | | | 05/04/21 | < 258 | | |
| | | | 04/26/22 | < 166 | | |
| | | | 04/18/23 | < 245 | | |

- Results in picocuries per liter (pCi/L)
- In October 2018, the sampling frequency was reduced from quarterly to annually
- MW-53 is part of the HDI existing Radiological Groundwater Protection Program.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-54 | 20.0 | Cape May | 04/21/09 | 3,565 ± 234 | 11/04/09 | 514 ± 163 |
| | | | 04/29/09 | 416 ± 182 | 11/11/09 | 1,210 ± 173 |
| | | | 05/01/09 | 414 ± 156 | 11/18/09 | 796 ± 194 |
| | | | 05/06/09 | 5,894 ± 285 | 11/24/09 | 3,390 ± 231 |
| | | | 05/13/09 | 3,615 ± 246 | 12/01/09 | 5,950 ± 269 |
| | | | 05/20/09 | 2,420 ± 218 | 12/08/09 | 1,620 ± 211 |
| | | | 05/28/09 | 4,913 ± 270 | 12/15/09 | 415 ± 169 |
| | | | 06/02/09 | 6,460 ± 294 | 12/22/09 | 695 ± 175 |
| | | | 06/09/09 | 4,220 ± 254 | 12/29/09 | 434 ± 174 |
| | | | 06/16/09 | 1,690 ± 202 | 01/05/10 | 492 ± 184 |
| | | | 06/23/09 | 4,000 ± 247 | 01/12/10 | 1,535 ± 208 |
| | | | 06/30/09 | 2,950 ± 232 | 01/19/10 | 1,130 ± 200 |
| | | | 07/07/09 | 3,380 ± 239 | 01/26/10 | 5,020 ± 253 |
| | | | 07/15/09 | 8,380 ± 298 | 02/02/10 | 4,480 ± 243 |
| | | | 07/22/09 | 6,070 ± 267 | 02/09/10 | 3,470 ± 228 |
| | | | 07/29/09 | 5,050 ± 253 | 02/16/10 | 10,670 ± 320 |
| | | | 08/05/09 | 3,440 ± 228 | 02/23/10 | 759 ± 179 |
| | | | 08/12/09 | 2,590 ± 207 | 03/02/10 | < 290 |
| | | | 08/19/09 | 3,010 ± 218 | 03/09/10 | 1,120 ± 183 |
| | | | 08/25/09 | 1,760 ± 195 | 03/16/10 | < 270 |
| | | | 09/16/09 | 1,130 ± 181 | 03/30/10 | < 284 |
| | | | 09/23/09 | 1,860 ± 195 | 04/06/10 | 451 ± 180 |
| | | | 09/30/09 | 1,150 ± 169 | 04/13/10 | 417 ± 168 |
| | | | 10/07/09 | 1,500 ± 182 | 04/20/10 | 4,860 ± 238 |
| | | | 10/14/09 | 2,300 ± 205 | 04/27/10 | 1,890 ± 194 |
| | | | 10/21/09 | 676 ± 165 | 05/04/10 | 550* |
| | | | 10/28/09 | 551 ± 160 | 05/11/10 | 368* |

*BNE split sample results from 05/04/10 through 06/15/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-54 (continued) | 20.0 | Cape May | 05/18/10 | < 149* | 05/10/11 | < 198 |
| | | | 05/25/10 | < 179* | 06/14/11 | 1,040 ± 211 |
| | | | 06/02/10 | < 180* | 07/13/11 | 350 ± 149 |
| | | | 06/09/10 | < 200* | 08/16/11 | 297 ± 143 |
| | | | 06/15/10 | 244* | 09/13/11 | < 221 |
| | | | 06/22/10 | < 217 | 10/11/11 | 1,050 ± 208 |
| | | | 06/29/10 | < 209 | 11/16/11 | 749 ± 200 |
| | | | 07/08/10 | < 209 | 12/14/11 | 247 ± 132 |
| | | | 07/14/10 | < 473 | 01/18/12 | < 244 |
| | | | 07/21/10 | < 471 | 02/14/12 | 334 ± 150 |
| | | | 07/27/10 | < 451 | 03/13/12 | 273 ± 144 |
| | | | 08/04/10 | < 428 | 04/18/12 | < 222 |
| | | | 08/11/10 | < 434 | 05/16/12 | < 249 |
| | | | 08/18/10 | < 582 | 06/20/12 | 659 ± 220 |
| | | | 08/25/10 | 304 ± 166 | 07/03/12 | 1,060 ± 267 |
| | | | 09/08/10 | 527 ± 142 | 08/15/12 | 318 ± 153 |
| | | | 09/22/10 | < 215 | 09/18/12 | 3,780 ± 370 |
| | | | 09/28/10 | 304 ± 161 | 10/02/12 | 3,990 ± 374 |
| | | | 10/13/10 | 343 ± 193 | 11/14/12 | < 225 |
| | | | 10/27/10 | 809 ± 237 | 12/05/12 | < 168 |
| | | | 11/10/10 | 473 ± 165 | 01/08/13 | < 138 |
| | | | 11/23/10 | 22,100 ± 515 | 02/12/13 | < 206 |
| | | | 12/14/10 | 570 ± 150 | 03/05/13 | < 179 |
| | | | 01/11/11 | < 202 | 04/09/13 | < 239 |
| | | | 02/15/11 | < 219 | 07/10/13 | 303 ± 166 |
| | | | 03/15/11 | < 183 | 10/08/13 | < 265 |
| | | | 04/13/11 | < 258 | 01/14/14 | < 223 |

*BNE split sample results from 05/04/10 through 06/15/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-54 (continued) | 20.0 | Cape May | 04/09/14 | < 209 | | |
| | | | 07/16/14 | 220 ± 140 | | |
| | | | 10/14/14 | 323 ± 161 | | |
| | | | 01/13/15 | < 273 | | |
| | | | 04/14/15 | 318 ± 154 | | |
| | | | 07/15/15 | 389 ± 143 | | |
| | | | 10/13/15 | 256 ± 133 | | |
| | | | 01/20/16 | < 255 | | |
| | | | 04/05/16 | < 208 | | |
| | | | 07/19/16 | < 229 | | |
| | | | 10/18/16 | < 219 | | |
| | | | 01/10/17 | 258 ± 137 | | |
| | | | 04/05/17 | < 208 | | |
| | | | 07/11/17 | 380 ± 154 | | |
| | | | 10/10/17 | 668 ± 151 | | |
| | | | 01/17/18 | < 226 | | |
| | | | 04/18/18 | < 196 | | |
| | | | 07/31/18 | 444 ± 176 | | |
| | | | 04/16/19 | < 209 | | |
| | | | 05/19/20 | 278 ± 125 | | |
| | | | 05/04/21 | < 266 | | |
| | | | 04/26/22 | 183 ± 127 | | |
| | | | 04/20/23 | < 246 | | |

- Results in picocuries per liter (pCi/L)
- In October 2018, the sampling frequency was reduced from quarterly to annually.
- MW-54 is part of the HDI existing Radiological Groundwater Protection Program

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-55 | 20.0 | Cape May | 06/02/09 | 1,469,959 ± 3,637 | 12/15/09 | 31,950 ± 513 |
| | | | 07/01/09 | 110,780 ± 996 | 12/22/09 | 50,500 ± 633 |
| | | | 07/29/09 | 284,070 ± 1,460 | 12/29/09 | 20,770 ± 425 |
| | | | 08/25/09 | 667,030 ± 2,220 | 01/05/10 | 32,310 ± 529 |
| | | | 08/28/09 | 1,471,170 ± 3,290 | 01/12/10 | 62,240 ± 711 |
| | | | 08/31/09 | 752,630 ± 2,360 | 01/19/10 | 125,320 ± 976 |
| | | | 09/04/09 | 560,560 ± 2,040 | 01/26/10 | 66,470 ± 705 |
| | | | 09/08/09 | 607,780 ± 2,130 | 02/02/10 | 51,680 ± 636 |
| | | | 09/14/09 | 135,290 ± 1,010 | 02/09/10 | 61,970 ± 690 |
| | | | 09/16/09 | 155,290 ± 1,080 | 02/16/10 | 34,740 ± 522 |
| | | | 09/18/09 | 123,440 ± 978 | 02/24/10 | 11,820 ± 334 |
| | | | 09/21/09 | 151,960 ± 1,070 | 03/02/10 | 14,630 ± 362 |
| | | | 09/23/09 | 173,170 ± 1,140 | 03/09/10 | 22,610 ± 435 |
| | | | 09/25/09 | 220,770 ± 1,290 | 03/16/10 | 13,190 ± 348 |
| | | | 09/28/09 | 346,540 ± 1,620 | 03/23/10 | 21,400 ± 445 |
| | | | 09/30/09 | 216,810 ± 1,280 | 03/31/10 | 10,400 ± 334 |
| | | | 10/02/09 | 202,770 ± 1,240 | 04/07/10 | 17,800 ± 378 |
| | | | 10/07/09 | 179,870 ± 1,160 | 04/14/10 | 29,900 ± 472 |
| | | | 10/14/09 | 190,280 ± 1,200 | 04/21/10 | 68,800 ± 691 |
| | | | 10/21/09 | 115,410 ± 929 | 04/27/10 | 87,500 ± 802 |
| | | | 10/28/09 | 90,360 ± 837 | 05/04/10 | 68,000* |
| | | | 11/04/09 | 44,050 ± 585 | 05/11/10 | 95,000* |
| | | | 11/11/09 | 96,450 ± 855 | 05/19/10 | 91,800* |
| | | | 11/18/09 | 75,490 ± 820 | 05/26/10 | 50,800* |
| | | | 11/24/09 | 83,350 ± 804 | 06/02/10 | 56,600* |
| | | | 12/01/09 | 94,260 ± 852 | 06/08/10 | 53,800* |
| | | | 12/08/09 | 40,390 ± 574 | 06/15/10 | 58,800* |

*BNE split sample results from 05/04/10 through 06/15/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-55 (continued) | 20.0 | Cape May | 06/22/10 | 65,480 ± 583 | 05/10/11 | 9,060 ± 669 |
| | | | 06/30/10 | 72,079 ± 596 | 06/14/11 | 31,200 ± 982 |
| | | | 07/08/10 | 88,138 ± 656 | 07/13/11 | 6,310 ± 495 |
| | | | 07/14/10 | 77,311 ± 590 | 08/16/11 | 2,140 ± 279 |
| | | | 07/21/10 | 66,211 ± 566 | 09/13/11 | 7,110 ± 567 |
| | | | 07/27/10 | 53,776 ± 506 | 10/11/11 | 8,650 ± 426 |
| | | | 08/04/10 | 52,243 ± 546 | 11/16/11 | 16,900 ± 556 |
| | | | 08/11/10 | 66,778 ± 607 | 12/08/11 | 4,980 ± 449 |
| | | | 08/18/10 | 61,733 ± 1,280 | 01/17/12 | 9,550 ± 411 |
| | | | 08/24/10 | 71,400 ± 1,840 | 02/14/12 | 10,400 ± 669 |
| | | | 08/31/10 | 50,700 ± 1,010 | 03/13/12 | 6,190 ± 298 |
| | | | 09/08/10 | 74,300 ± 1,470 | 04/18/12 | 14,900 ± 804 |
| | | | 09/15/10 | 85,200 ± 1,680 | 05/15/12 | 3,510 ± 260 |
| | | | 09/22/10 | 53,900 ± 1,110 | 06/20/12 | 1,600 ± 299 |
| | | | 09/29/10 | 36,800 ± 764 | 07/03/12 | 2,470 ± 363 |
| | | | 10/06/10 | 7,460 ± 309 | 08/14/12 | < 285 |
| | | | 10/13/10 | 13,000 ± 438 | 09/19/12 | 2,920 ± 329 |
| | | | 10/20/10 | 18,000 ± 522 | 10/02/12 | 12,400 ± 656 |
| | | | 10/27/10 | 17,700 ± 501 | 11/14/12 | 721 ± 224 |
| | | | 11/03/10 | 17,000 ± 640 | 12/05/12 | 978 ± 211 |
| | | | 11/10/10 | 11,000 ± 439 | 01/08/13 | 1,730 ± 307 |
| | | | 11/17/10 | 14,900 ± 429 | 02/12/13 | 641 ± 156 |
| | | | 11/23/10 | 22,400 ± 734 | 03/05/13 | 924 ± 232 |
| | | | 12/15/10 | 30,400 ± 584 | 04/08/13 | 1,170 ± 184 |
| | | | 01/11/11 | 24,100 ± 492 | 07/11/13 | 1,330 ± 185 |
| | | | 02/15/11 | 16,700 ± 529 | 10/08/13 | 3,010 ± 263 |
| | | | 03/15/11 | 7,290 ± 552 | 01/14/14 | < 225 |
| | | | 04/13/11 | 15,000 ± 459 | 04/08/14 | < 209 |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-55 (continued) | 20.0 | Cape May | 07/15/14 | 1,020 ± 175 | 07/28/21 | < 198 |
| | | | 10/14/14 | 539 ± 166 | 10/19/21 | 178 ± 128 |
| | | | 01/13/15 | < 267 | 04/26/22 | < 201 |
| | | | 04/14/15 | < 227 | 10/25/22 | < 210 |
| | | | 07/15/15 | < 213 | 04/18/23 | < 245 |
| | | | 10/13/15 | < 211 | | |
| | | | 01/20/16 | < 263 | | |
| | | | 04/05/16 | < 205 | | |
| | | | 07/19/16 | < 231 | | |
| | | | 10/18/16 | < 192 | | |
| | | | 01/10/17 | < 174 | | |
| | | | 04/04/17 | < 207 | | |
| | | | 07/11/17 | < 241 | | |
| | | | 10/10/17 | < 214 | | |
| | | | 01/17/18 | < 244 | | |
| | | | 04/17/18 | < 193 | | |
| | | | 07/31/18 | < 143 | | |
| | | | 10/30/18 | < 210 | | |
| | | | 01/15/19 | < 218 | | |
| | | | 04/16/19 | < 215 | | |
| | | | 07/23/19 | < 263 | | |
| | | | 10/08/19 | < 203 | | |
| | | | 01/28/20 | < 241 | | |
| | | | 05/19/20 | < 228 | | |
| | | | 08/18/20 | < 215 | | |
| | | | 10/13/20 | < 216 | | |
| | | | 02/09/21 | < 191 | | |
| | | | 05/04/21 | < 262 | | |

- Results in picocuries per liter (pCi/L)
- MW-55 is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

**State of New Jersey – Bureau of Nuclear Engineering
Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-56I | 51.9 | Cohansey | 09/16/09 | 471,830 ± 1,870 | 02/23/10 | 1,176,430 ± 2,870 |
| | | | 09/18/09 | 430,890 ± 1,790 | 03/02/10 | 1,154,420 ± 2,900 |
| | | | 09/23/09 | 537,400 ± 2,000 | 03/09/10 | 1,060,510 ± 2,720 |
| | | | 09/25/09 | 531,540 ± 1,990 | 03/16/10 | 1,069,680 ± 2,740 |
| | | | 09/28/09 | 566,120 ± 2,070 | 03/23/10 | 928,000 ± 2,690 |
| | | | 09/30/09 | 596,900 ± 2,110 | 03/31/10 | 906,000 ± 2,660 |
| | | | 10/02/09 | 636,940 ± 2,180 | 04/06/10 | 871,000 ± 2,620 |
| | | | 10/07/09 | 589,230 ± 2,090 | 04/14/10 | 912,000 ± 2,470 |
| | | | 10/14/09 | 698,720 ± 2,280 | 04/20/10 | 926,000 ± 2,470 |
| | | | 10/21/09 | 765,490 ± 2,390 | 04/27/10 | 990,000 ± 2,650 |
| | | | 10/29/09 | 897,460 ± 2,570 | 05/04/10 | 1,300,000* |
| | | | 11/04/09 | 938,790 ± 2,630 | 05/12/10 | 979,000* |
| | | | 11/11/09 | 945,720 ± 2,670 | 05/18/10 | 985,000* |
| | | | 11/18/09 | 957,790 ± 2,670 | 05/25/10 | 868,000* |
| | | | 11/24/09 | 993,290 ± 2,720 | 06/02/10 | 1,010,000* |
| | | | 12/01/09 | 1,186,030 ± 2,970 | 06/08/10 | 1,080,000* |
| | | | 12/08/09 | 1,221,800 ± 3,010 | 06/15/10 | 1,020,000* |
| | | | 12/15/09 | 1,166,990 ± 2,940 | 06/22/10 | 777,484 ± 1,978 |
| | | | 12/22/09 | 1,140,240 ± 2,910 | 06/30/10 | 749,160 ± 1,881 |
| | | | 12/29/09 | 1,056,500 ± 2,800 | 07/07/10 | 701,353 ± 1,805 |
| | | | 01/05/10 | 1,026,580 ± 2,820 | 07/14/10 | 601,118 ± 1,650 |
| | | | 01/12/10 | 983,540 ± 2,750 | 07/21/10 | 657,401 ± 1,764 |
| | | | 01/19/10 | 940,970 ± 2,640 | 07/27/10 | 552,797 ± 1,571 |
| | | | 01/26/10 | 1,089,600 ± 2,800 | 08/04/10 | 632,517 ± 1,826 |
| | | | 02/02/10 | 1,111,600 ± 2,890 | 08/11/10 | 603,662 ± 1,792 |
| | | | 02/09/10 | 1,139,800 ± 2,880 | 08/18/10 | 634,648 ± 3,961 |
| | | | 02/16/10 | 874,010 ± 2,470 | 08/24/10 | 641,000 ± 12,500 |

*BNE split sample results from 05/04/10 through 06/15/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

**State of New Jersey – Bureau of Nuclear Engineering
Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|-----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-56I (continued) | 51.9 | Cohansey | 08/31/10 | 538,000 ± 10,500 | 02/24/12 | 14,400 ± 789 |
| | | | 09/08/10 | 596,000 ± 11,700 | 03/13/12 | 4,920 ± 272 |
| | | | 09/15/10 | 578,000 ± 11,130 | 04/18/12 | 3,440 ± 402 |
| | | | 09/22/10 | 296,000 ± 1,730 | 05/15/12 | 5,020 ± 294 |
| | | | 09/28/10 | 333,000 ± 6,490 | 06/20/12 | 98,700 ± 2,080 |
| | | | 10/06/10 | 474,000 ± 2,280 | 07/03/12 | 11,800 ± 409 |
| | | | 10/14/10 | 305,000 ± 5,940 | 08/14/12 | 41,100 ± 1,340 |
| | | | 10/20/10 | 337,000 ± 2,180 | 09/19/12 | 6,250 ± 470 |
| | | | 10/27/10 | 321,000 ± 3,130 | 10/02/12 | 6,690 ± 483 |
| | | | 11/03/10 | 377,000 ± 7,300 | 11/14/12 | 46,700 ± 1,440 |
| | | | 11/10/10 | 338,000 ± 6,620 | 12/05/12 | 34,300 ± 1,070 |
| | | | 11/17/10 | 274,000 ± 1,760 | 01/08/13 | 5,350 ± 493 |
| | | | 11/23/10 | 41,000 ± 821 | 02/12/13 | 4,800 ± 293 |
| | | | 12/15/10 | 3,910 ± 235 | 03/05/13 | 6,180 ± 526 |
| | | | 01/11/11 | 2,340 ± 193 | 04/08/13 | 6,010 ± 300 |
| | | | 02/15/11 | 4,960 ± 316 | 07/11/13 | 8,720 ± 381 |
| | | | 03/15/11 | 5,060 ± 459 | 10/08/13 | 4,340 ± 291 |
| | | | 04/13/11 | 5,090 ± 506 | 01/13/14 | 18,900 ± 524 |
| | | | 05/10/11 | 3,980 ± 466 | 04/09/14 | 7,870 ± 614 |
| | | | 06/14/11 | 20,700 ± 793 | 07/15/14 | 5,630 ± 309 |
| | | | 07/13/11 | 7,540 ± 515 | 10/14/14 | 24,500 ± 584 |
| | | | 08/16/11 | 46,500 ± 1,190 | 12/11/14 | 7,290 ± 366 |
| | | | 09/13/11 | 17,800 ± 862 | 01/13/15 | 5,090 ± 305 |
| | | | 10/12/11 | 5,490 ± 353 | 04/14/15 | 22,100 ± 531 |
| | | | 11/16/11 | 5,960 ± 352 | 06/05/15 | 2,980 ± 270 |
| | | | 12/14/11 | 6,210 ± 281 | 07/15/15 | 7,330 ± 313 |
| | | | 01/18/12 | 5,870 ± 332 | 10/13/15 | 2,320 ± 195 |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|-----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-56I (continued) | 51.9 | Cohansey | 01/20/16 | 2,520 ± 357 | | |
| | | | 04/05/16 | 2,910 ± 221 | | |
| | | | 07/19/16 | 2,580 ± 211 | | |
| | | | 10/18/16 | 1,770 ± 289 | | |
| | | | 01/17/17 | 8,030 ± 305 | | |
| | | | 04/05/17 | 9,970 ± 325 | | |
| | | | 07/11/17 | 3,340 ± 246 | | |
| | | | 10/10/17 | 4,070 ± 240 | | |
| | | | 01/17/18 | 1,100 ± 182 | | |
| | | | 04/18/18 | 1,540 ± 164 | | |
| | | | 07/31/18 | 1,410 ± 266 | | |
| | | | 10/30/18 | 794 ± 153 | | |
| | | | 01/15/19 | 533 ± 199 | | |
| | | | 04/16/19 | 1,100 ± 161 | | |
| | | | 07/23/19 | 1,280 ± 251 | | |
| | | | 10/08/19 | 1,180 ± 190 | | |
| | | | 01/28/20 | < 236 | | |
| | | | 05/19/20 | < 230 | | |
| | | | 08/18/20 | 426 ± 178 | | |
| | | | 10/13/20 | 702 ± 155 | | |
| | | | 02/09/21 | 579 ± 182 | | |
| | | | 05/04/21 | 353 ± 158 | | |
| | | | 07/27/21 | 397 ± 206 | | |
| | | | 10/19/21 | 390 ± 151 | | |
| | | | 04/26/22 | < 179 | | |
| | | | 10/25/22 | < 209 | | |
| | | | 04/18/23 | < 239 | | |

- Results in picocuries per liter (pCi/L)
- MW-56I is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-57I | 47.9 | Cohansey | 09/03/09 | 536,700 ± 2,000 | 02/09/10 | 214,620 ± 1,250 |
| | | | 09/11/09 | 761,976 ± 2,383 | 02/16/10 | 229,860 ± 1,290 |
| | | | 09/16/09 | 455,260 ± 1,840 | 02/24/10 | 287,130 ± 1,440 |
| | | | 09/18/09 | 392,930 ± 1,700 | 03/02/10 | 246,190 ± 1,330 |
| | | | 09/23/09 | 407,243 ± 1,740 | 03/09/10 | 207,840 ± 1,220 |
| | | | 09/25/09 | 388,670 ± 1,700 | 03/16/10 | 218,560 ± 1,250 |
| | | | 09/28/09 | 359,120 ± 1,650 | 03/23/10 | 198,000 ± 1,240 |
| | | | 09/30/09 | 389,410 ± 1,710 | 03/31/10 | 114,000 ± 956 |
| | | | 10/02/09 | 470,360 ± 1,870 | 04/07/10 | 194,000 ± 1,140 |
| | | | 10/07/09 | 505,120 ± 1,940 | 04/14/10 | 168,000 ± 1,060 |
| | | | 10/14/09 | 423,320 ± 1,780 | 04/20/10 | 155,000 ± 1,020 |
| | | | 10/21/09 | 292,380 ± 1,480 | 04/27/10 | 174,000 ± 1,120 |
| | | | 10/29/09 | 410,580 ± 1,740 | 05/05/10 | 83,800* |
| | | | 11/04/09 | 331,990 ± 1,570 | 05/12/10 | 60,100* |
| | | | 11/11/09 | 288,900 ± 1,460 | 05/19/10 | 83,800* |
| | | | 11/18/09 | 403,090 ± 1,740 | 05/25/10 | 59,800* |
| | | | 11/24/09 | 350,320 ± 1,620 | 06/02/10 | 53,600* |
| | | | 12/01/09 | 569,690 ± 2,060 | 06/08/10 | 51,900* |
| | | | 12/08/09 | 289,460 ± 1,470 | 06/15/10 | 51,300* |
| | | | 12/15/09 | 549,530 ± 2,020 | 06/22/10 | 69,680 ± 601 |
| | | | 12/22/09 | 314,700 ± 1,530 | 06/29/10 | 96,565 ± 678 |
| | | | 12/29/09 | 253,010 ± 1,380 | 07/07/10 | 92,615 ± 671 |
| | | | 01/05/10 | 294,700 ± 1,520 | 07/14/10 | 21,601 ± 336 |
| | | | 01/12/10 | 294,680 ± 1,520 | 07/21/10 | 55,763 ± 522 |
| | | | 01/19/10 | 637,900 ± 2,180 | 07/27/10 | 51,550 ± 514 |
| | | | 01/26/10 | 248,750 ± 1,330 | 08/03/10 | 40,496 ± 476 |
| | | | 02/02/10 | 277,340 ± 1,430 | 08/11/10 | 54,532 ± 556 |

*BNE split sample results from 05/05/10 through 06/15/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|-----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-57I (continued) | 47.9 | Cohansey | 08/18/10 | 49,698 ± 1,150 | 02/14/12 | 20,600 ± 946 |
| | | | 08/24/10 | 150,000 ± 2,960 | 03/13/12 | 24,400 ± 539 |
| | | | 08/31/10 | 49,300 ± 983 | 04/18/12 | 28,700 ± 1,120 |
| | | | 09/08/10 | 64,700 ± 1,280 | 05/16/12 | 35,300 ± 679 |
| | | | 09/15/10 | 60,300 ± 1,200 | 06/20/12 | 34,800 ± 1,230 |
| | | | 09/22/10 | 72,700 ± 864 | 07/03/12 | 23,300 ± 1,020 |
| | | | 09/29/10 | 64,700 ± 1,300 | 08/14/12 | 19,500 ± 920 |
| | | | 10/06/10 | 54,900 ± 783 | 09/18/12 | 13,800 ± 690 |
| | | | 10/13/10 | 80,800 ± 1,610 | 10/02/12 | 16,000 ± 724 |
| | | | 10/20/10 | 40,900 ± 773 | 11/14/12 | 18,700 ± 925 |
| | | | 10/27/10 | 7,450 ± 358 | 12/05/12 | 15,800 ± 720 |
| | | | 11/03/10 | 71,200 ± 1,380 | 01/08/13 | 6,690 ± 557 |
| | | | 11/10/10 | 42,700 ± 857 | 02/12/13 | 13,700 ± 462 |
| | | | 11/16/10 | 47,600 ± 744 | 03/05/13 | 15,900 ± 860 |
| | | | 12/15/10 | 69,900 ± 861 | 04/08/13 | 19,300 ± 500 |
| | | | 01/11/11 | 81,600 ± 892 | 07/09/13 | 12,900 ± 449 |
| | | | 02/15/11 | 80,100 ± 1,120 | 10/08/13 | 1,240 ± 210 |
| | | | 04/13/11 | 84,000 ± 1,670 | 01/14/14 | 14,400 ± 453 |
| | | | 05/10/11 | 37,400 ± 1,330 | 04/09/14 | 10,900 ± 720 |
| | | | 06/14/11 | 40,700 ± 1,120 | 07/15/14 | 6,940 ± 340 |
| | | | 07/13/11 | 17,100 ± 798 | 10/13/14 | 6,370 ± 324 |
| | | | 08/16/11 | 49,400 ± 1,230 | 01/13/15 | 1,760 ± 219 |
| | | | 09/13/11 | 38,700 ± 1,290 | 04/14/15 | 1,660 ± 202 |
| | | | 10/12/11 | 15,700 ± 552 | 07/15/15 | 701 ± 154 |
| | | | 11/16/11 | 33,600 ± 768 | 10/13/15 | 2,970 ± 208 |
| | | | 12/08/11 | 27,600 ± 1,020 | 01/20/16 | 6,350 ± 522 |
| | | | 01/17/12 | 29,800 ± 1,140 | 04/05/16 | 2,670 ± 214 |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|-----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-57I (continued) | 47.9 | Cohansey | 07/19/16 | 2,680 ± 218 | | |
| | | | 10/17/16 | 3,500 ± 395 | | |
| | | | 01/10/17 | 435 ± 164 | | |
| | | | 04/03/17 | < 201 | | |
| | | | 07/10/17 | < 241 | | |
| | | | 10/10/17 | 516 ± 147 | | |
| | | | 01/17/18 | 855 ± 173 | | |
| | | | 04/17/18 | 2,820 ± 196 | | |
| | | | 07/31/18 | 1,150 ± 242 | | |
| | | | 10/30/18 | 1,020 ± 167 | | |
| | | | 01/15/19 | 666 ± 193 | | |
| | | | 04/16/19 | 729 ± 152 | | |
| | | | 07/23/19 | 553 ± 209 | | |
| | | | 10/08/19 | 599 ± 190 | | |
| | | | 01/28/20 | 728 ± 169 | | |
| | | | 05/19/20 | 590 ± 157 | | |
| | | | 08/18/20 | 646 ± 219 | | |
| | | | 10/13/20 | 1,950 ± 193 | | |
| | | | 02/10/21 | 287 ± 152 | | |
| | | | 05/04/21 | 497 ± 153 | | |
| | | | 07/27/21 | < 299 | | |
| | | | 10/19/21 | 220 ± 135 | | |
| | | | 04/26/22 | 336 ± 163 | | |
| | | | 10/25/22 | < 207 | | |
| | | | 04/20/23 | < 243 | | |

- Results in picocuries per liter (pCi/L)
- MW-57I is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-58I | 72.0 | Cohansey | 07/21/10 | < 213 | 01/20/16 | < 262 |
| | | | 07/27/10 | < 199 | 04/05/16 | < 240 |
| | | | 08/03/10 | < 227 | 07/19/16 | < 220 |
| | | | 08/11/10 | < 228 | 10/17/16 | < 193 |
| | | | 08/18/10 | < 581 | 01/10/17 | < 181 |
| | | | 08/24/10 | < 237 | 04/03/17 | < 225 |
| | | | 10/14/10 | < 210 | 07/10/17 | < 196 |
| | | | 01/11/11 | < 252 | 10/10/17 | < 214 |
| | | | 04/13/11 | < 181 | 01/17/18 | < 183 |
| | | | 07/12/11 | < 182 | 04/17/18 | < 194 |
| | | | 10/12/11 | < 155 | 07/31/18 | < 169 |
| | | | 01/18/12 | < 240 | | |
| | | | 04/18/12 | < 218 | | |
| | | | 07/03/12 | < 217 | | |
| | | | 10/02/12 | < 226 | | |
| | | | 01/08/13 | < 140 | | |
| | | | 04/09/13 | < 228 | | |
| | | | 07/09/13 | < 262 | | |
| | | | 10/08/13 | < 260 | | |
| | | | 01/14/14 | < 181 | | |
| | | | 04/09/14 | < 155 | | |
| | | | 07/15/14 | < 208 | | |
| | | | 10/13/14 | < 245 | | |
| | | | 01/13/15 | < 269 | | |
| | | | 04/14/15 | < 273 | | |
| | | | 07/21/15 | < 226 | | |
| | | | 10/13/15 | < 213 | | |

- Results in picocuries per liter (pCi/L)
- Well Water ID MW-58I is part of the Exelon Nuclear existing Radiological Groundwater Protection Program.
- In October 2018, split sampling of this well with the BNE was discontinued.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-59I | 44.0 | Cohansey | 03/24/10 | 1,540 ± 208 | 09/28/10 | < 249 |
| | | | 03/30/10 | 2,660 ± 227 | 10/13/10 | < 213 |
| | | | 04/06/10 | 2,000 ± 214 | 10/27/10 | < 245 |
| | | | 04/13/10 | 2,120 ± 199 | 11/10/10 | < 248 |
| | | | 04/21/10 | 2,240 ± 207 | 11/23/10 | 353 ± 129 |
| | | | 04/28/10 | 2,060 ± 198 | 12/14/10 | < 208 |
| | | | 05/05/10 | 2,580* | 01/11/11 | < 199 |
| | | | 05/11/10 | 2,260* | 02/15/11 | < 218 |
| | | | 05/18/10 | 1,580* | 04/13/11 | < 256 |
| | | | 05/26/10 | 1,170* | 07/13/11 | < 159 |
| | | | 06/02/10 | 776* | 10/11/11 | < 279 |
| | | | 06/08/10 | 755* | 01/17/12 | < 214 |
| | | | 06/16/10 | 563* | 04/18/12 | < 203 |
| | | | 06/22/10 | < 215 | 07/02/12 | < 260 |
| | | | 06/29/10 | < 447 | 10/02/12 | < 169 |
| | | | 07/07/10 | < 438 | 01/08/13 | < 277 |
| | | | 07/13/10 | < 444 | 04/09/13 | < 240 |
| | | | 07/21/10 | < 448 | 07/09/13 | < 262 |
| | | | 07/28/10 | < 456 | 10/09/13 | < 251 |
| | | | 08/03/10 | < 440 | 01/14/14 | < 184 |
| | | | 08/10/10 | < 478 | 04/09/14 | < 158 |
| | | | 08/18/10 | < 579 | 07/16/14 | < 211 |
| | | | 08/24/10 | < 236 | 10/13/14 | < 240 |
| | | | 09/08/10 | < 209 | 01/13/15 | < 266 |
| | | | 09/22/10 | < 215 | 04/14/15 | < 275 |

*BNE split sample results from 05/05/10 through 06/16/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- Current sampling frequency is quarterly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|-----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-59I (continued) | 44.0 | Cohansey | 07/21/15 | < 222 | 10/19/21 | 235 ± 133 |
| | | | 10/13/15 | < 200 | 04/26/22 | 465 ± 170 |
| | | | 01/20/16 | < 259 | 10/25/22 | < 212 |
| | | | 04/05/16 | < 241 | 04/18/23 | < 244 |
| | | | 07/19/16 | < 211 | | |
| | | | 10/17/16 | < 191 | | |
| | | | 01/10/17 | < 180 | | |
| | | | 04/04/17 | 534 ± 156 | | |
| | | | 07/10/17 | < 220 | | |
| | | | 10/10/17 | < 213 | | |
| | | | 01/17/18 | < 164 | | |
| | | | 04/18/18 | < 194 | | |
| | | | 07/31/18 | < 170 | | |
| | | | 10/30/18 | < 208 | | |
| | | | 01/15/19 | < 204 | | |
| | | | 04/16/19 | < 193 | | |
| | | | 07/23/19 | < 255 | | |
| | | | 10/08/19 | < 207 | | |
| | | | 01/28/20 | < 236 | | |
| | | | 05/19/20 | < 230 | | |
| | | | 08/18/20 | < 221 | | |
| | | | 10/13/20 | 715 ± 151 | | |
| | | | 02/09/21 | 254 ± 158 | | |
| | | | 05/04/21 | < 253 | | |
| | | | 07/27/21 | < 279 | | |

*BNE split sample results from 05/05/10 through 06/16/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- MW-59I is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-60I | 92.0 | Cohansey | 07/21/10 | < 210 | 07/21/15 | < 207 |
| | | | 07/27/10 | < 198 | 10/13/15 | < 199 |
| | | | 08/03/10 | < 223 | 01/20/16 | < 260 |
| | | | 08/11/10 | < 223 | 04/05/16 | < 226 |
| | | | 08/18/10 | < 580 | 07/19/16 | < 211 |
| | | | 08/24/10 | < 236 | 10/17/16 | < 190 |
| | | | 10/14/10 | < 142 | 01/10/17 | < 182 |
| | | | 01/11/11 | < 232 | 04/03/17 | < 203 |
| | | | 04/13/11 | < 179 | 07/10/17 | < 220 |
| | | | 07/12/11 | < 185 | 10/10/17 | < 210 |
| | | | 10/12/11 | < 275 | 01/17/18 | < 190 |
| | | | 01/18/12 | < 247 | 04/17/18 | < 190 |
| | | | 04/18/12 | < 222 | 07/31/18 | < 155 |
| | | | 07/03/12 | < 214 | | |
| | | | 10/02/12 | < 210 | | |
| | | | 01/08/13 | < 137 | | |
| | | | 04/09/13 | < 150 | | |
| | | | 07/09/13 | < 264 | | |
| | | | 10/08/13 | < 254 | | |
| | | | 01/14/14 | < 187 | | |
| | | | 04/09/14 | < 164 | | |
| | | | 07/15/14 | < 213 | | |
| | | | 10/13/14 | < 240 | | |
| | | | 01/13/15 | < 276 | | |
| | | | 04/14/15 | < 278 | | |

- Results in picocuries per liter (pCi/L)
- Well Water ID MW-60I is part of the HDI existing Radiological Groundwater Protection Program.
- In October 2018, split sampling of this well with the BNE was discontinued.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-61I | 72.0 | Cohansey | 07/21/10 | 4,815 ± 198 | 07/21/15 | < 221 |
| | | | 07/27/10 | 8,469 ± 231 | 10/13/15 | < 210 |
| | | | 08/03/10 | 10,569 ± 268 | 01/20/16 | < 253 |
| | | | 08/11/10 | 11,337 ± 277 | 04/05/16 | < 244 |
| | | | 08/18/10 | 12,766 ± 657 | 07/19/16 | < 211 |
| | | | 08/24/10 | 11,000 ± 746 | 10/18/16 | < 188 |
| | | | 01/11/11 | 6,180 ± 1,240 | 01/10/17 | < 182 |
| | | | 04/12/11 | 390 ± 175 | 04/03/17 | < 226 |
| | | | 07/13/11 | < 259 | 07/11/17 | < 219 |
| | | | 10/12/11 | < 278 | 10/10/17 | < 212 |
| | | | 01/18/12 | < 231 | 01/17/18 | < 239 |
| | | | 04/17/12 | < 221 | 04/17/18 | < 211 |
| | | | 07/03/12 | < 210 | 07/31/18 | < 194 |
| | | | 10/03/12 | < 220 | 10/30/18 | < 211 |
| | | | 01/08/13 | < 140 | 01/15/19 | < 223 |
| | | | 04/09/13 | < 152 | 04/16/19 | < 193 |
| | | | 07/11/13 | < 262 | 07/23/19 | < 257 |
| | | | 10/08/13 | < 259 | 10/08/19 | < 204 |
| | | | 01/13/14 | < 221 | 01/28/20 | < 231 |
| | | | 04/10/14 | < 155 | 05/19/20 | < 229 |
| | | | 07/16/14 | < 203 | 08/18/20 | < 211 |
| | | | 10/14/14 | < 238 | 10/14/20 | < 218 |
| | | | 01/13/15 | < 269 | 02/10/21 | < 202 |
| | | | 04/15/15 | < 275 | 05/05/21 | < 263 |

- Results in picocuries per liter (pCi/L)
- MW-61I is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|-----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-61I (continued) | 72.0 | Cohansey | 07/28/21 | < 296 | | |
| | | | 10/19/21 | 200 ± 133 | | |
| | | | 04/26/22 | < 172 | | |
| | | | 10/25/22 | < 212 | | |
| | | | 04/18/23 | < 246 | | |

- Results in picocuries per liter (pCi/L)
- MW-61I is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-62 | 25.0 | Cape May | 03/10/10 | < 270 | 09/28/10 | < 245 |
| | | | 03/17/10 | < 292 | 10/13/10 | < 213 |
| | | | 03/24/10 | < 284 | 11/16/10 | < 203 |
| | | | 03/30/10 | < 283 | 12/14/10 | < 203 |
| | | | 04/06/10 | < 284 | 01/11/11 | < 201 |
| | | | 04/13/10 | < 270 | 02/15/11 | < 219 |
| | | | 04/20/10 | < 265 | 03/15/11 | 240 ± 130 |
| | | | 04/28/10 | < 267 | 04/12/11 | < 255 |
| | | | 05/04/10 | < 180* | 05/10/11 | < 195 |
| | | | 05/12/10 | < 176* | 06/14/11 | < 179 |
| | | | 05/18/10 | < 168* | 07/12/11 | < 160 |
| | | | 05/27/10 | < 178* | 08/16/11 | < 174 |
| | | | 06/03/10 | < 200* | 09/13/11 | < 218 |
| | | | 06/09/10 | < 169* | 10/11/11 | < 277 |
| | | | 06/16/10 | < 150* | 11/15/11 | < 278 |
| | | | 06/23/10 | < 205 | 12/08/11 | < 206 |
| | | | 06/29/10 | < 205 | 01/17/12 | < 244 |
| | | | 07/07/10 | < 206 | 02/13/12 | < 210 |
| | | | 07/13/10 | < 456 | 03/13/12 | < 220 |
| | | | 07/21/10 | < 201 | 04/17/12 | < 199 |
| | | | 07/28/10 | < 467 | 05/15/12 | < 255 |
| | | | 08/04/10 | < 435 | 06/19/12 | < 269 |
| | | | 08/10/10 | 3,022 ± 364 | 07/02/12 | < 264 |
| | | | 08/17/10 | < 564 | 08/14/12 | < 170 |
| | | | 08/25/10 | < 214 | 09/18/12 | < 191 |

*BNE split sample results from 05/04/10 through 06/16/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-62 (continued) | 25.0 | Cape May | 10/01/12 | < 175 | 01/15/19 | < 232 |
| | | | 03/05/13 | < 237 | 04/16/19 | < 190 |
| | | | 04/08/13 | < 170 | 07/23/19 | < 264 |
| | | | 07/11/13 | < 205 | 10/08/19 | < 212 |
| | | | 10/09/13 | < 200 | 01/28/20 | < 237 |
| | | | 01/14/14 | < 227 | 05/20/20 | < 226 |
| | | | 04/08/14 | < 209 | 08/18/20 | < 227 |
| | | | 07/15/14 | < 211 | 10/14/20 | < 219 |
| | | | 10/14/14 | < 235 | 02/09/21 | < 202 |
| | | | 01/13/15 | < 275 | 05/05/21 | < 262 |
| | | | 04/16/15 | < 236 | 07/27/21 | < 294 |
| | | | 07/15/15 | < 215 | 10/20/21 | 160 ± 111 |
| | | | 10/14/15 | < 207 | 04/26/22 | 201 ± 144 |
| | | | 01/20/16 | < 265 | 10/25/22 | < 206 |
| | | | 04/06/16 | < 202 | 04/25/23 | < 244 |
| | | | 07/19/16 | < 233 | | |
| | | | 10/18/16 | < 223 | | |
| | | | 01/10/17 | < 187 | | |
| | | | 04/04/17 | < 206 | | |
| | | | 07/11/17 | < 214 | | |
| | | | 10/10/17 | < 214 | | |
| | | | 01/17/18 | < 194 | | |
| | | | 04/18/18 | < 211 | | |
| | | | 08/01/18 | < 200 | | |
| | | | 10/30/18 | < 199 | | |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly
- MW-62 is part of the HDI existing Radiological Groundwater Protection Program.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-63I | 92.0 | Cohansey | 07/21/10 | < 213 | 07/21/15 | < 212 |
| | | | 07/27/10 | < 203 | 10/13/15 | < 206 |
| | | | 08/03/10 | < 224 | 01/20/16 | < 260 |
| | | | 08/11/10 | < 223 | 04/05/16 | < 241 |
| | | | 08/17/10 | < 561 | 07/19/16 | < 217 |
| | | | 08/24/10 | < 233 | 10/18/16 | < 190 |
| | | | 10/14/10 | < 210 | 01/10/17 | < 212 |
| | | | 01/11/11 | < 252 | 04/03/17 | < 208 |
| | | | 04/12/11 | < 170 | 07/11/17 | < 248 |
| | | | 07/13/11 | < 180 | 10/10/17 | < 209 |
| | | | 10/12/11 | < 279 | 01/17/18 | < 171 |
| | | | 01/18/12 | < 248 | 04/18/18 | < 212 |
| | | | 04/17/12 | < 222 | 07/31/18 | < 206 |
| | | | 07/03/12 | < 207 | | |
| | | | 10/03/12 | < 221 | | |
| | | | 01/08/13 | < 141 | | |
| | | | 04/09/13 | < 153 | | |
| | | | 07/11/13 | < 195 | | |
| | | | 10/08/13 | < 280 | | |
| | | | 01/13/14 | < 186 | | |
| | | | 04/10/14 | < 156 | | |
| | | | 07/16/14 | < 207 | | |
| | | | 10/14/14 | < 240 | | |
| | | | 01/13/15 | < 275 | | |
| | | | 04/15/15 | < 287 | | |

- Results in picocuries per liter (pCi/L)
- MW-63I is part of the HDI existing Radiological Groundwater Protection Program.
- In October 2018, split sampling of this well with the BNE was discontinued.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-64 | 25.0 | Cape May | 03/10/10 | 12,930 ± 344 | 09/08/10 | 25,100 ± 530 |
| | | | 03/17/10 | 5,450 ± 268 | 09/22/10 | 22,300 ± 489 |
| | | | 03/24/10 | 2,830 ± 230 | 09/29/10 | 28,100 ± 631 |
| | | | 03/31/10 | 2,150 ± 216 | 10/13/10 | 24,200 ± 590 |
| | | | 04/07/10 | 1,910 ± 196 | 10/27/10 | 13,000 ± 460 |
| | | | 04/14/10 | 1,640 ± 193 | 11/10/10 | 7,510 ± 367 |
| | | | 04/20/10 | 2,260 ± 201 | 11/23/10 | 6,100 ± 392 |
| | | | 04/27/10 | 13,300 ± 348 | 12/15/10 | 6,060 ± 279 |
| | | | 05/05/10 | 2,070* | 01/11/11 | 3,650 ± 222 |
| | | | 05/12/10 | 7,040* | 02/15/11 | 2,850 ± 219 |
| | | | 05/19/10 | 16,200* | 03/15/11 | 3,490 ± 387 |
| | | | 05/25/10 | 5,130* | 04/13/11 | 3,240 ± 251 |
| | | | 06/02/10 | 4,820* | 05/10/11 | 2,680 ± 397 |
| | | | 06/08/10 | 6,520* | 06/14/11 | 2,360 ± 290 |
| | | | 06/15/10 | 13,200* | 07/13/11 | 1,050 ± 222 |
| | | | 06/22/10 | 10,155 ± 531 | 08/16/11 | 2,080 ± 270 |
| | | | 06/29/10 | 6,608 ± 458 | 09/13/11 | 3,780 ± 415 |
| | | | 07/07/10 | 7,767 ± 471 | 10/12/11 | 2,780 ± 277 |
| | | | 07/14/10 | 13,816 ± 581 | 11/16/11 | 3,280 ± 285 |
| | | | 07/21/10 | 13,188 ± 581 | 12/08/11 | 2,030 ± 301 |
| | | | 07/27/10 | 7,702 ± 480 | 01/17/12 | 2,100 ± 328 |
| | | | 08/03/10 | 10,261 ± 536 | 02/14/12 | 3,800 ± 421 |
| | | | 08/11/10 | 11,238 ± 546 | 03/13/12 | 1,650 ± 191 |
| | | | 08/18/10 | 10,984 ± 613 | 04/18/12 | 1,950 ± 315 |
| | | | 08/24/10 | 40,300 ± 1,390 | 05/16/12 | 818 ± 180 |

*BNE split sample results from 05/05/10 through 06/15/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-64 (continued) | 25.0 | Cape May | 06/20/12 | < 270 | 01/10/17 | < 238 |
| | | | 07/03/12 | < 249 | 04/03/17 | < 205 |
| | | | 08/14/12 | < 283 | 07/10/17 | < 260 |
| | | | 09/18/12 | < 196 | 10/10/17 | < 213 |
| | | | 10/02/12 | 401 ± 138 | 01/17/18 | < 177 |
| | | | 11/14/12 | < 215 | 04/17/18 | < 205 |
| | | | 12/05/12 | < 209 | 07/31/18 | < 205 |
| | | | 01/08/13 | 384 ± 180 | 10/30/18 | < 209 |
| | | | 02/12/13 | 261 ± 133 | 01/15/19 | < 210 |
| | | | 03/05/13 | 208 ± 138 | 04/16/19 | < 187 |
| | | | 04/09/13 | < 227 | 07/23/19 | < 255 |
| | | | 07/09/13 | < 245 | 10/08/19 | < 196 |
| | | | 10/08/13 | 280 ± 166 | 01/28/20 | < 230 |
| | | | 01/14/14 | 186 ± 122 | 05/19/20 | < 231 |
| | | | 04/09/14 | < 209 | 08/18/20 | < 237 |
| | | | 07/15/14 | < 211 | 10/13/20 | < 207 |
| | | | 10/13/14 | < 241 | 02/09/21 | < 186 |
| | | | 01/13/15 | < 274 | 05/04/21 | < 261 |
| | | | 04/14/15 | < 240 | 07/27/21 | < 203 |
| | | | 07/15/15 | < 214 | 10/19/21 | 188 ± 125 |
| | | | 10/13/15 | < 208 | 04/26/22 | < 192 |
| | | | 01/20/16 | < 256 | 10/25/22 | < 213 |
| | | | 04/05/16 | < 200 | 04/20/23 | < 245 |
| | | | 07/19/16 | < 234 | | |
| | | | 10/17/16 | < 191 | | |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly
- MW-64 is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-65 | 25.0 | Cape May | 03/10/10 | < 269 | 08/24/10 | < 233 |
| | | | 03/17/10 | < 294 | 09/28/10 | < 246 |
| | | | 03/24/10 | < 283 | 10/12/10 | < 211 |
| | | | 03/30/10 | < 283 | 11/16/10 | < 202 |
| | | | 04/06/10 | < 285 | 12/14/10 | < 207 |
| | | | 04/13/10 | < 268 | 01/11/11 | < 202 |
| | | | 04/21/10 | < 267 | 02/15/11 | < 218 |
| | | | 04/28/10 | < 265 | 03/15/11 | 193 ± 141 |
| | | | 05/05/10 | < 174* | 04/12/11 | < 255 |
| | | | 05/11/10 | < 174* | 05/10/11 | < 198 |
| | | | 05/18/10 | < 152* | 06/14/11 | < 176 |
| | | | 05/26/10 | < 178* | 07/12/11 | < 161 |
| | | | 06/02/10 | < 181* | 08/16/11 | < 175 |
| | | | 06/08/10 | < 170* | 09/13/11 | < 219 |
| | | | 06/16/10 | < 149* | 10/11/11 | < 180 |
| | | | 06/22/10 | < 216 | 11/15/11 | < 278 |
| | | | 06/29/10 | < 210 | 12/14/11 | < 202 |
| | | | 07/07/10 | < 211 | 01/17/12 | < 243 |
| | | | 07/13/10 | < 469 | 02/13/12 | < 175 |
| | | | 07/21/10 | < 424 | 03/12/12 | < 221 |
| | | | 07/28/10 | < 451 | 04/17/12 | < 204 |
| | | | 08/03/10 | < 446 | 05/16/12 | < 254 |
| | | | 08/10/10 | < 464 | 06/19/12 | < 272 |
| | | | 08/18/10 | < 558 | 07/02/12 | < 256 |

*BNE split sample results from 05/05/10 through 06/16/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-65 (continued) | 25.0 | Cape May | 08/15/12 | < 167 | 04/04/17 | < 215 |
| | | | 09/18/12 | < 190 | 07/10/17 | < 257 |
| | | | 10/02/12 | < 175 | 10/10/17 | < 215 |
| | | | 11/14/12 | < 227 | 01/17/18 | < 191 |
| | | | 12/05/12 | < 171 | 04/18/18 | < 213 |
| | | | 01/08/13 | < 138 | 07/31/18 | < 207 |
| | | | 02/12/13 | < 202 | 10/30/18 | < 205 |
| | | | 03/05/13 | < 172 | 01/15/19 | < 217 |
| | | | 04/09/13 | < 237 | 04/16/19 | < 191 |
| | | | 07/09/13 | < 257 | 07/23/19 | < 240 |
| | | | 10/09/13 | < 256 | 10/08/19 | < 197 |
| | | | 01/14/14 | < 184 | 01/28/20 | < 239 |
| | | | 04/09/14 | < 209 | 05/19/20 | < 219 |
| | | | 07/16/14 | < 210 | 08/18/20 | < 228 |
| | | | 10/13/14 | < 244 | 10/13/20 | < 220 |
| | | | 01/13/15 | < 270 | 02/09/21 | < 188 |
| | | | 04/14/15 | < 236 | 05/04/21 | < 260 |
| | | | 07/15/15 | < 211 | 07/27/21 | < 273 |
| | | | 10/13/15 | < 209 | 10/19/21 | < 136 |
| | | | 01/20/16 | < 268 | 04/26/22 | 210 ± 141 |
| | | | 04/05/16 | < 204 | 10/25/22 | < 213 |
| | | | 07/19/16 | < 234 | 04/18/23 | < 244 |
| | | | 10/17/16 | < 192 | | |
| | | | 01/10/17 | < 185 | | |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly
- MW-65 is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-66I | 80.0 | Cohansey | 07/21/10 | < 211 | 10/14/15 | < 206 |
| | | | 07/29/10 | < 221 | 01/21/16 | < 207 |
| | | | 08/05/10 | < 228 | 04/07/16 | < 240 |
| | | | 08/10/10 | < 223 | 07/20/16 | < 217 |
| | | | 08/17/10 | < 555 | 10/19/16 | < 221 |
| | | | 08/25/10 | < 206 | 01/11/17 | < 222 |
| | | | 10/12/10 | < 211 | 04/04/17 | < 214 |
| | | | 01/11/11 | < 254 | 07/12/17 | < 245 |
| | | | 04/12/11 | < 178 | 10/11/17 | < 204 |
| | | | 07/13/11 | < 188 | 01/18/18 | < 192 |
| | | | 10/11/11 | < 173 | 04/20/18 | < 210 |
| | | | 04/17/12 | < 220 | 08/01/18 | < 201 |
| | | | 07/02/12 | < 214 | | |
| | | | 10/02/12 | < 221 | | |
| | | | 01/09/13 | < 203 | | |
| | | | 04/10/13 | < 151 | | |
| | | | 07/10/13 | < 248 | | |
| | | | 10/09/13 | < 270 | | |
| | | | 01/14/14 | < 184 | | |
| | | | 04/11/14 | < 168 | | |
| | | | 07/16/14 | < 214 | | |
| | | | 10/15/14 | < 234 | | |
| | | | 01/14/15 | < 274 | | |
| | | | 04/16/15 | < 274 | | |
| | | | 07/20/15 | < 223 | | |

- Results in picocuries per liter (pCi/L)
- MW-66I is part of the HDI existing Radiological Groundwater Protection Program.
- In October 2018, split sampling of this well with the BNE was discontinued.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-67 | 25.0 | Cape May | 03/10/10 | 637,410 ± 2,120 | 08/25/10 | 554,000 ± 10,800 |
| | | | 03/17/10 | 728,000 ± 2,390 | 08/31/10 | 570,000 ± 11,200 |
| | | | 03/24/10 | 787,000 ± 2,480 | 09/08/10 | 577,000 ± 11,300 |
| | | | 03/30/10 | 806,000 ± 2,510 | 09/15/10 | 427,000 ± 8,360 |
| | | | 04/06/10 | 965,000 ± 2,740 | 09/22/10 | 480,000 ± 2,190 |
| | | | 04/13/10 | 918,000 ± 2,450 | 09/29/10 | 551,000 ± 10,700 |
| | | | 04/20/10 | 736,000 ± 2,210 | 10/06/10 | 639,000 ± 2,630 |
| | | | 04/28/10 | 904,000 ± 2,510 | 10/14/10 | 306,000 ± 5,960 |
| | | | 05/04/10 | 702,000* | 10/20/10 | 277,000 ± 1,990 |
| | | | 05/12/10 | 893,000* | 10/27/10 | 243,000 ± 2,380 |
| | | | 05/18/10 | 823,000* | 11/03/10 | 1,170,000 ± 22,400 |
| | | | 05/27/10 | 899,000* | 11/10/10 | 714,000 ± 13,900 |
| | | | 06/03/10 | 925,000* | 11/17/10 | 614,000 ± 2,650 |
| | | | 06/09/10 | 915,000* | 11/23/10 | 544,000 ± 10,500 |
| | | | 06/15/10 | 941,000* | 12/15/10 | 676,000 ± 2,640 |
| | | | 06/23/10 | 688,075 ± 1,847 | 01/11/11 | 831,000 ± 2,830 |
| | | | 06/29/10 | 630,745 ± 1,726 | 02/15/11 | 759,000 ± 7,360 |
| | | | 07/07/10 | 605,089 ± 1,698 | 04/13/11 | 458,000 ± 8,950 |
| | | | 07/14/10 | 591,415 ± 1,666 | 05/10/11 | 210,000 ± 3,110 |
| | | | 07/21/10 | 579,843 ± 1,692 | 06/14/11 | 288,000 ± 5,580 |
| | | | 07/28/10 | 579,669 ± 1,732 | 07/13/11 | 200,000 ± 3,890 |
| | | | 08/04/10 | 608,716 ± 3,558 | 08/16/11 | 318,000 ± 6,140 |
| | | | 08/10/10 | 563,162 ± 3,438 | 09/13/11 | 183,000 ± 3,560 |
| | | | 08/17/10 | 594,373 ± 3,826 | 10/11/11 | 202,000 ± 1,900 |

*BNE split sample results from 05/04/10 through 06/15/10 were not available due to the closing of Centauri Labs- Alabama facility. For this time period, data reported above are from Exelon's contract lab, Teledyne Brown Engineering. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- Sampling frequency is monthly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-67 (continued) | 25.0 | Cape May | 11/16/11 | 301,000 ± 2,930 | 10/14/14 | 1,730 ± 210 |
| | | | 12/08/11 | 168,000 ± 3,270 | 01/13/15 | 12,200 ± 492 |
| | | | 01/17/12 | 315,000 ± 3,070 | 04/14/15 | 4,180 ± 268 |
| | | | 02/14/12 | 376,000 ± 7,310 | 07/15/15 | 2,830 ± 215 |
| | | | 03/13/12 | 294,000 ± 1,840 | 10/14/15 | 1,590 ± 177 |
| | | | 04/18/12 | 228,000 ± 4,440 | 01/20/16 | 6,660 ± 527 |
| | | | 05/15/12 | 181,000 ± 3,560 | 04/06/16 | 5,630 ± 281 |
| | | | 06/19/12 | 70,600 ± 1,720 | 07/19/16 | 6,140 ± 291 |
| | | | 07/02/12 | 60,900 ± 1,630 | 10/19/16 | 2,400 ± 278 |
| | | | 08/14/12 | 52,000 ± 1,500 | 01/10/17 | < 218 |
| | | | 09/18/12 | 51,400 ± 1,300 | 04/05/17 | < 214 |
| | | | 10/01/12 | 85,500 ± 1,680 | 07/11/17 | 226 ± 138 |
| | | | 11/14/12 | 35,100 ± 1,250 | 10/10/17 | 366 ± 142 |
| | | | 12/05/12 | 31,000 ± 1,020 | 01/17/18 | 460 ± 132 |
| | | | 01/08/13 | 78,100 ± 1,520 | 04/18/18 | 320 ± 136 |
| | | | 02/12/13 | 14,900 ± 465 | 08/01/18 | 395 ± 137 |
| | | | 03/05/13 | 9,380 ± 360 | 10/30/18 | 265 ± 137 |
| | | | 04/08/13 | 18,500 ± 709 | 01/15/19 | < 230 |
| | | | 07/09/13 | 21,600 ± 559 | 04/16/19 | < 192 |
| | | | 10/09/13 | 11,100 ± 731 | 07/23/19 | < 265 |
| | | | 01/14/14 | 7,660 ± 339 | 10/08/19 | < 202 |
| | | | 04/08/14 | 8,400 ± 635 | 01/28/20 | < 252 |
| | | | 07/15/14 | 21,500 ± 569 | 05/20/20 | < 231 |
| | | | 08/27/14 | 2,980 ± 246 | 08/18/20 | < 224 |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly
- MW-67 is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-67 (continued) | 25.0 | Cape May | 10/14/20 | < 220 | | |
| | | | 02/09/21 | < 189 | | |
| | | | 05/05/21 | < 256 | | |
| | | | 07/27/21 | < 278 | | |
| | | | 10/20/21 | 280 ± 152 | | |
| | | | 04/26/22 | 205 ± 151 | | |
| | | | 10/26/22 | < 210 | | |
| | | | 04/25/23 | < 244 | | |

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly
- MW-67 is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-68I | 100.0 | Cohansey | 07/21/10 | < 214 | 07/20/15 | < 219 |
| | | | 07/29/10 | < 218 | 10/14/15 | < 209 |
| | | | 08/05/10 | < 227 | 01/21/16 | < 204 |
| | | | 08/10/10 | < 224 | 04/07/16 | < 188 |
| | | | 08/17/10 | < 552 | 07/20/16 | < 210 |
| | | | 08/25/10 | < 207 | 10/19/16 | < 219 |
| | | | 10/12/10 | < 209 | 01/11/17 | < 224 |
| | | | 01/11/11 | < 253 | 04/04/17 | < 216 |
| | | | 04/12/11 | < 185 | 07/12/17 | < 220 |
| | | | 07/13/11 | < 180 | 10/11/17 | < 202 |
| | | | 10/11/11 | < 177 | 01/18/18 | < 200 |
| | | | 04/17/12 | < 222 | 04/19/18 | < 206 |
| | | | 07/02/12 | < 218 | 08/01/18 | < 201 |
| | | | 10/02/12 | < 219 | | |
| | | | 01/09/13 | < 203 | | |
| | | | 04/10/13 | < 150 | | |
| | | | 07/10/13 | < 202 | | |
| | | | 10/09/13 | < 266 | | |
| | | | 01/14/14 | < 226 | | |
| | | | 04/11/14 | < 161 | | |
| | | | 07/16/14 | < 214 | | |
| | | | 10/15/14 | < 244 | | |
| | | | 01/14/15 | < 268 | | |
| | | | 04/16/15 | < 240 | | |

- Results in picocuries per liter (pCi/L)
- MW-68I is part of the HDI existing Radiological Groundwater Protection Program.
- In October 2018, split sampling of this well with the BNE was discontinued.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-69I | 78.0 | Cohansey | 07/21/10 | < 210 | 07/22/15 | < 218 |
| | | | 07/29/10 | < 216 | 10/14/15 | < 207 |
| | | | 08/04/10 | < 226 | 01/21/16 | < 200 |
| | | | 08/10/10 | < 226 | 04/06/16 | < 238 |
| | | | 08/17/10 | < 559 | 07/20/16 | < 216 |
| | | | 08/25/10 | < 206 | 10/19/16 | < 215 |
| | | | 10/12/10 | < 145 | 01/12/17 | < 249 |
| | | | 01/11/11 | < 230 | 04/04/17 | < 218 |
| | | | 04/12/11 | < 185 | 07/11/17 | < 218 |
| | | | 07/13/11 | < 185 | 10/11/17 | < 199 |
| | | | 10/12/11 | < 148 | 01/18/18 | < 179 |
| | | | 04/18/12 | < 220 | 04/19/18 | < 212 |
| | | | 07/03/12 | < 220 | 08/01/18 | < 190 |
| | | | 10/02/12 | < 223 | | |
| | | | 01/09/13 | < 203 | | |
| | | | 04/10/13 | < 142 | | |
| | | | 07/10/13 | < 205 | | |
| | | | 10/09/13 | < 200 | | |
| | | | 01/14/14 | < 228 | | |
| | | | 04/07/14 | < 160 | | |
| | | | 07/16/14 | < 204 | | |
| | | | 10/15/14 | < 244 | | |
| | | | 01/14/15 | < 275 | | |
| | | | 04/15/15 | < 273 | | |

- Results in picocuries per liter (pCi/L)
- MW-69I is part of the HDI existing Radiological Groundwater Protection Program.
- In October 2018, split sampling of this well with the BNE was discontinued.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-70I | 98.0 | Cohansey | 07/21/10 | < 211 | 07/22/15 | < 215 |
| | | | 07/28/10 | < 217 | 10/14/15 | < 202 |
| | | | 08/04/10 | < 226 | 01/21/16 | < 198 |
| | | | 08/10/10 | < 228 | 04/06/16 | < 238 |
| | | | 08/17/10 | < 561 | 07/20/16 | < 209 |
| | | | 08/25/10 | < 212 | 10/19/16 | < 217 |
| | | | 10/12/10 | < 142 | 01/12/17 | < 224 |
| | | | 01/11/11 | < 233 | 04/04/17 | < 217 |
| | | | 04/12/11 | < 180 | 07/11/17 | < 216 |
| | | | 07/13/11 | < 185 | 10/11/17 | < 197 |
| | | | 10/12/11 | < 155 | 01/18/18 | < 170 |
| | | | 04/18/12 | < 223 | 04/19/18 | < 210 |
| | | | 07/03/12 | < 219 | 08/01/18 | < 197 |
| | | | 10/02/12 | < 216 | | |
| | | | 01/09/13 | < 202 | | |
| | | | 04/10/13 | < 150 | | |
| | | | 07/10/13 | < 203 | | |
| | | | 10/09/13 | < 200 | | |
| | | | 01/14/14 | < 229 | | |
| | | | 04/07/14 | < 158 | | |
| | | | 07/16/14 | < 210 | | |
| | | | 10/15/14 | < 241 | | |
| | | | 01/14/15 | < 275 | | |
| | | | 04/15/15 | < 241 | | |

- Results in picocuries per liter (pCi/L)
- MW-70I is part of the HDI existing Radiological Groundwater Protection Program.
- In October 2018, split sampling of this well with the BNE was discontinued.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-71 | 25.0 | Cape May | 10/13/10 | 522 ± 152 | 10/11/17 | < 197 |
| | | | 01/11/11 | < 202 | 01/18/18 | < 194 |
| | | | 04/13/11 | < 184 | 04/20/18 | < 210 |
| | | | 07/13/11 | < 186 | 08/01/18 | < 197 |
| | | | 10/11/11 | < 168 | 10/31/18 | < 204 |
| | | | 04/17/12 | < 219 | 01/16/19 | < 220 |
| | | | 07/02/12 | < 211 | 04/18/19 | < 191 |
| | | | 10/02/12 | < 230 | 07/24/19 | < 256 |
| | | | 01/09/13 | < 206 | 10/09/19 | < 207 |
| | | | 04/10/13 | < 137 | 01/29/20 | < 249 |
| | | | 07/10/13 | < 203 | 05/21/20 | < 227 |
| | | | 10/09/13 | < 272 | 08/19/20 | < 225 |
| | | | 01/14/14 | < 226 | 10/13/20 | < 216 |
| | | | 04/11/14 | < 159 | 02/10/21 | < 190 |
| | | | 07/16/14 | < 210 | 05/06/21 | < 265 |
| | | | 10/15/14 | < 243 | 07/28/21 | < 283 |
| | | | 01/14/15 | < 274 | 10/19/21 | < 254 |
| | | | 04/16/15 | < 281 | 04/27/22 | < 187 |
| | | | 07/20/15 | < 219 | 10/25/22 | < 209 |
| | | | 10/14/15 | < 210 | 04/25/23 | < 245 |
| | | | 01/20/16 | < 194 | | |
| | | | 04/07/16 | < 238 | | |
| | | | 07/20/16 | < 218 | | |
| | | | 10/19/16 | < 224 | | |
| | | | 01/11/17 | < 221 | | |
| | | | 04/05/17 | < 219 | | |
| | | | 07/12/17 | < 220 | | |

- Results in picocuries per liter (pCi/L)
- MW-71 is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-72 | 25.0 | Cape May | 10/13/10 | < 142 | 10/11/17 | < 218 |
| | | | 01/11/11 | < 232 | 01/18/18 | < 244 |
| | | | 04/12/11 | < 181 | 04/19/18 | < 211 |
| | | | 07/13/11 | < 186 | 08/01/18 | < 191 |
| | | | 10/12/11 | < 156 | 10/31/18 | < 206 |
| | | | 04/18/12 | < 222 | 01/15/19 | < 224 |
| | | | 07/02/12 | < 214 | 04/17/19 | < 187 |
| | | | 10/02/12 | < 224 | 07/24/19 | < 256 |
| | | | 01/09/12 | < 199 | 10/09/19 | < 200 |
| | | | 04/10/13 | < 152 | 01/29/20 | < 237 |
| | | | 07/10/13 | < 204 | 05/21/20 | < 229 |
| | | | 10/09/13 | < 273 | 08/19/20 | < 228 |
| | | | 01/14/14 | < 228 | 10/13/20 | < 218 |
| | | | 04/08/14 | < 157 | 02/10/21 | < 189 |
| | | | 07/16/14 | < 209 | 05/05/21 | < 251 |
| | | | 10/16/14 | < 244 | 07/27/21 | < 294 |
| | | | 01/14/15 | < 275 | 10/19/21 | < 244 |
| | | | 04/15/15 | < 242 | 04/27/22 | 224 ± 150 |
| | | | 07/22/15 | < 219 | 10/26/22 | < 211 |
| | | | 10/14/15 | < 213 | 04/25/23 | < 246 |
| | | | 01/21/16 | < 206 | | |
| | | | 04/06/16 | < 237 | | |
| | | | 07/20/16 | < 212 | | |
| | | | 11/29/16 | < 208 | | |
| | | | 01/12/17 | < 245 | | |
| | | | 04/04/17 | < 208 | | |
| | | | 07/11/17 | < 220 | | |

- Results in picocuries per liter (pCi/L)
- MW-72 is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|-----------------|----------|-------------|-----------------------|-------------|-----------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-73 | 55.0 | Cohansey | 11/18/10 | 6,980 ± 705 | 06/04/11 | 6,550 ± 524 |
| | | | 11/25/10 | 23,000 ± 1,160 | 06/15/11 | 14,500 ± 668 |
| | | | 12/03/10 | 16,400 ± 1,000 | 06/22/11 | 11,200 ± 691 |
| | | | 12/07/10 | 14,200 ± 939 | 06/29/11 | 9,050 ± 484 |
| | | | 12/15/10 | 11,100 ± 357 | 07/06/11 | 8,090 ± 454 |
| | | | 12/22/10 | 10,800 ± 408 | 07/13/11 | 7,830 ± 515 |
| | | | 12/27/10 | 9,540 ± 318 | 07/20/11 | 6,720 ± 480 |
| | | | 01/04/11 | 8,840 ± 307 | 07/27/11 | 6,610 ± 421 |
| | | | 01/12/11 | 8,840 ± 341 | 08/03/11 | 6,250 ± 417 |
| | | | 01/27/11 | 8,660 ± 349 | 08/18/11 | 4,980 ± 462 |
| | | | 02/02/11 | 8,710 ± 341 | 08/24/11 | 7,990 ± 582 |
| | | | 02/23/11 | 7,710 ± 379 | 08/31/11 | 4,960 ± 473 |
| | | | 03/02/11 | 7,610 ± 565 | 09/07/11 | 7,180 ± 561 |
| | | | 03/09/11 | 7,520 ± 563 | 09/14/11 | 8,100 ± 416 |
| | | | 03/30/11 | 6,620 ± 668 | 09/22/11 | 7,710 ± 403 |
| | | | 04/06/11 | 6,010 ± 632 | 09/28/11 | 7,320 ± 392 |
| | | | 04/13/11 | 7,000 ± 327 | 10/05/11 | 6,770 ± 379 |
| | | | 04/20/11 | 6,370 ± 315 | 10/12/11 | 4,850 ± 475 |
| | | | 04/27/11 | 7,320 ± 342 | 10/19/11 | 5,210 ± 496 |
| | | | 05/04/11 | 6,810 ± 337 | 10/26/11 | 5,130 ± 499 |
| | | | 05/07/11 | 7,140 ± 602 | 11/02/11 | 4,100 ± 316 |
| | | | 05/11/11 | 6,070 ± 550 | 11/09/11 | 4,000 ± 310 |
| | | | 05/15/11 | 6,220 ± 506 | 11/16/11 | 4,370 ± 316 |
| | | | 05/28/11 | 6,970 ± 289 | 11/23/11 | 3,670 ± 297 |
| | | | 06/03/11 | 19,000 ± 888 | 11/30/11 | 3,830 ± 300 |

- Results in picocuries per liter (pCi/L)
- Current sampling frequency is weekly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|-----------------|----------|-------------|-----------------------|-------------|-----------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-73 (continued) | 55.0 | Cohansey | 12/07/11 | 4,110 ± 409 | 05/09/12 | 3,070 ± 248 |
| | | | 12/14/11 | 3,610 ± 232 | 06/22/12 | 1,820 ± 216 |
| | | | 12/21/11 | 3,410 ± 225 | 06/27/12 | 6,200 ± 317 |
| | | | 12/28/11 | 3,340 ± 223 | 07/04/12 | 4,450 ± 400 |
| | | | 01/04/12 | 4,190 ± 294 | 07/11/12 | 3,730 ± 255 |
| | | | 01/11/12 | 3,660 ± 280 | 07/18/12 | 3,240 ± 240 |
| | | | 01/18/12 | 3,120 ± 384 | 07/25/12 | 3,120 ± 239 |
| | | | 01/25/12 | 2,940 ± 292 | 08/01/12 | 2,880 ± 236 |
| | | | 02/01/12 | 2,660 ± 277 | 08/17/12 | 2,060 ± 286 |
| | | | 02/08/12 | 2,670 ± 280 | 08/22/12 | 4,170 ± 387 |
| | | | 02/15/12 | 3,410 ± 257 | 08/29/12 | 3,090 ± 340 |
| | | | 02/22/12 | 2,650 ± 236 | 09/05/12 | 2,980 ± 331 |
| | | | 02/29/12 | 2,690 ± 238 | 09/12/12 | 3,330 ± 354 |
| | | | 03/07/12 | 2,720 ± 237 | 09/19/12 | 2,810 ± 326 |
| | | | 03/14/12 | 3,060 ± 248 | 09/26/12 | 2,680 ± 311 |
| | | | 03/21/12 | 2,640 ± 222 | 10/03/12 | 2,550 ± 223 |
| | | | 03/28/12 | 2,540 ± 206 | 10/10/12 | 2,560 ± 226 |
| | | | 04/04/12 | 2,650 ± 210 | 10/17/12 | 3,110 ± 250 |
| | | | 04/11/12 | 2,140 ± 191 | 10/24/12 | 2,050 ± 207 |
| | | | 04/18/12 | 2,360 ± 200 | 12/20/12 | 575 ± 225 |
| | | | 04/25/12 | 2,820 ± 242 | 12/26/12 | 3,030 ± 390 |
| | | | 04/30/12 | 2,520 ± 229 | 01/02/13 | 2,820 ± 373 |
| | | | 05/02/12 | 2,680 ± 235 | 01/09/13 | 3,090 ± 397 |

- Results in picocuries per liter (pCi/L)
- Current sampling frequency is weekly

Note: MW-73 was removed from service on 05/15/12 due to a malfunctioning pump. A replacement pump was installed on 06/20/12 and sampling resumed on 06/22/12. MW-73 was removed from service on 08/03/12 due to a faulty flowmeter. Repair to the flowmeter was completed on 08/16/12 and sampling resumed on 08/17/12. MW-73 was removed from service on 10/28/12 due to Hurricane Sandy and remained out of service throughout the refuel outage in December and later suspension of pumping due to a faulty flow totalizer. Repair to the totalizer was completed on 12/19/12. MW-73 was returned to service on 12/20/12.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|-----------------|----------|-------------|-----------------------|-------------|-----------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-73 (continued) | 55.0 | Cohansey | 01/16/13 | 2,410 ± 248 | 06/26/13 | 1,360 ± 211 |
| | | | 01/23/13 | 1,770 ± 227 | 07/03/13 | 1,420 ± 215 |
| | | | 01/30/13 | 2,020 ± 236 | 07/10/13 | 1,570 ± 219 |
| | | | 02/06/13 | 1,760 ± 226 | 07/17/13 | 1,180 ± 215 |
| | | | 02/13/13 | 1,570 ± 189 | 07/24/13 | 1,070 ± 216 |
| | | | 02/20/13 | 1,780 ± 202 | 07/31/13 | 1,100 ± 214 |
| | | | 02/27/13 | 1,560 ± 183 | 08/07/13 | 1,060 ± 252 |
| | | | 03/06/13 | 1,430 ± 187 | 08/14/13 | 1,030 ± 247 |
| | | | 03/13/13 | 1,370 ± 218 | 08/21/13 | 1,000 ± 185 |
| | | | 03/20/13 | 1,500 ± 227 | 08/28/13 | 905 ± 183 |
| | | | 03/27/13 | 1,340 ± 215 | 09/04/13 | 991 ± 185 |
| | | | 04/03/13 | 1,410 ± 222 | 09/11/13 | 915 ± 184 |
| | | | 04/10/13 | 1,490 ± 218 | 09/18/13 | 777 ± 179 |
| | | | 04/17/13 | 1,420 ± 206 | 09/25/13 | 1,000 ± 248 |
| | | | 04/24/13 | 1,600 ± 217 | 10/02/13 | 1,040 ± 251 |
| | | | 05/01/13 | 1,510 ± 213 | 10/09/13 | 799 ± 221 |
| | | | 05/08/13 | 1,490 ± 212 | 10/16/13 | 785 ± 169 |
| | | | 05/15/13 | 1,340 ± 201 | 10/23/13 | 826 ± 176 |
| | | | 05/22/13 | 1,230 ± 194 | 10/30/13 | 750 ± 167 |
| | | | 05/29/13 | 1,300 ± 203 | 11/06/13 | 927 ± 177 |
| | | | 06/05/13 | 1,110 ± 186 | 11/13/13 | 662 ± 170 |
| | | | 06/12/13 | 1,390 ± 213 | 11/20/13 | 546 ± 163 |
| | | | 06/19/13 | 1,130 ± 189 | 11/27/13 | 578 ± 154 |

- Results in picocuries per liter (pCi/L)
- Current sampling frequency is weekly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|-----------------|----------|-------------|-----------------------|-------------|-----------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-73 (continued) | 55.0 | Cohansey | 12/04/13 | 448 ± 149 | 06/25/14 | 626 ± 158 |
| | | | 12/11/13 | 630 ± 157 | 07/02/14 | 565 ± 177 |
| | | | 12/19/13 | 709 ± 172 | 07/09/14 | 596 ± 175 |
| | | | 12/27/13 | 781 ± 175 | 07/16/14 | 410 ± 165 |
| | | | 03/12/14 | 505 ± 198 | 07/23/14 | 572 ± 168 |
| | | | 03/15/14 | 933 ± 242 | 07/30/14 | 833 ± 178 |
| | | | 03/19/14 | 1,450 ± 282 | 08/06/14 | 667 ± 173 |
| | | | 03/27/14 | 1,220 ± 184 | 08/13/14 | 799 ± 178 |
| | | | 04/02/14 | 851 ± 179 | 08/20/14 | 915 ± 181 |
| | | | 04/09/14 | 878 ± 179 | 08/27/14 | 778 ± 239 |
| | | | 04/16/14 | 886 ± 183 | 09/03/14 | 711 ± 239 |
| | | | 04/23/14 | 911 ± 183 | 09/10/14 | 636 ± 231 |
| | | | 05/01/14 | 821 ± 177 | 11/07/14 | 808 ± 191 |
| | | | 05/07/14 | 565 ± 160 | 11/25/14 | 593 ± 181 |
| | | | 05/14/14 | 787 ± 173 | 11/26/14 | 564 ± 174 |
| | | | 05/21/14 | 709 ± 172 | 12/03/14 | 1,370 ± 204 |
| | | | 05/28/14 | 871 ± 157 | 12/10/14 | 1,180 ± 199 |
| | | | 06/04/14 | 723 ± 149 | 12/17/14 | 1,130 ± 191 |
| | | | 06/11/14 | 726 ± 155 | 12/24/14 | 808 ± 174 |
| | | | 06/18/14 | 943 ± 167 | 12/31/14 | 765 ± 179 |

- Results in picocuries per liter (pCi/L)
- Current sampling frequency is weekly

Note: MW-73 was removed from service on 12/27/13 due to a malfunctioning pump. A replacement pump was installed on 03/07/14 and sampling resumed on 03/12/14. MW-73 was removed from service on 08/25/14 due to a pump electrical breaker malfunction. The pump was placed back into service on 08/26/14. On 09/16/14 MW-73 was removed from service due to the shutdown of the intake circulating water pumps in support of the scheduled 1R25 refuel and maintenance outage. Due to a maintenance issue with the on-site Chemistry Laboratory tritium analyzer, MW-73 remained out of service after completion of the outage (10/16/14) until 11/07/14 when the pump was re-started. However, the pump was shut down on 11/10/14 due to continued issues with the tritium analyzer. Repairs to the analyzer were completed and the pump was restarted on 11/25/14

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|-----------------|----------|-------------|-----------------------|-------------|-----------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-73 (continued) | 55.0 | Cohansey | 01/07/15 | 788 ± 177 | 08/12/15 | 350 ± 140 |
| | | | 01/14/15 | 596 ± 171 | 08/19/15 | 297 ± 137 |
| | | | 01/21/15 | 587 ± 191 | 08/26/15 | 382 ± 156 |
| | | | 01/30/15 | 365 ± 175 | 09/02/15 | < 282 |
| | | | 04/16/15 | 423 ± 208 | 09/09/15 | < 268 |
| | | | 04/29/15 | 454 ± 191 | 09/16/15 | < 266 |
| | | | 05/06/15 | 819 ± 238 | 09/23/15 | 371 ± 186 |
| | | | 05/13/15 | 807 ± 229 | 09/30/15 | 254 ± 170 |
| | | | 05/20/15 | 547 ± 211 | 10/07/15 | < 208 |
| | | | 05/27/15 | 459 ± 204 | 10/14/15 | 228 ± 136 |
| | | | 06/03/15 | 461 ± 211 | 10/21/15 | 367 ± 150 |
| | | | 06/10/15 | 475 ± 186 | 10/28/15 | 297 ± 147 |
| | | | 06/17/15 | 489 ± 186 | 11/04/15 | 384 ± 134 |
| | | | 06/24/15 | 534 ± 152 | 11/11/15 | < 227 |
| | | | 07/01/15 | 416 ± 149 | 11/18/15 | < 235 |
| | | | 07/08/15 | 453 ± 151 | 11/25/15 | < 227 |
| | | | 07/15/15 | 372 ± 142 | 12/02/15 | < 225 |
| | | | 07/22/15 | 479 ± 165 | 12/09/15 | < 218 |
| | | | 07/29/15 | 353 ± 132 | 12/16/15 | < 211 |
| | | | 08/05/15 | 468 ± 132 | 12/23/15 | 298 ± 141 |

- Results in picocuries per liter (pCi/L)
- Current sampling frequency is weekly

Note: On January 26, 2015, MW-73 was removed from service as part of station's preparation for an approaching winter storm. Shutting down the pump was a safety precaution to minimize work outside during the storm event. On January 28, 2015, an attempt was made to restart the pump. However, due to a frozen discharge pipe line, the unit had to be shut down again. Pumping well MW-73 was again restarted on January 30, 2015. However, due to an emergent issue with the in-line composite sampler along with a damaged section of the system's discharge pipe, the system once again had to be shut down. On April 28, 2015, repairs to the in-line compositor were made and pumping well MW-73 was restarted.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|-----------------|----------|-------------|-----------------------|-------------|-----------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-73 (continued) | 55.0 | Cohansey | 12/30/15 | < 196 | 09/14/16 | < 218 |
| | | | 01/06/16 | 286 ± 133 | 10/12/16 | 248 ± 142 |
| | | | 01/13/16 | 281 ± 131 | 10/19/16 | < 224 |
| | | | 01/20/16 | 247 ± 131 | 10/26/16 | 214 ± 129 |
| | | | 02/10/16 | < 234 | 11/02/16 | 420 ± 138 |
| | | | 02/17/16 | < 257 | 11/09/16 | 441 ± 141 |
| | | | 02/24/16 | < 244 | 11/17/16 | 491 ± 141 |
| | | | 03/09/16 | < 233 | 11/23/16 | 756 ± 150 |
| | | | 03/30/16 | < 242 | 11/30/16 | 497 ± 161 |
| | | | 06/22/16 | 329 ± 145 | 12/07/16 | 458 ± 166 |
| | | | 06/29/16 | < 265 | 12/14/16 | 355 ± 166 |
| | | | 07/06/16 | < 223 | 12/21/16 | 247 ± 154 |
| | | | 07/13/16 | < 225 | 12/28/16 | 289 ± 157 |
| | | | 07/20/16 | < 218 | 01/04/17 | 339 ± 157 |
| | | | 07/27/16 | < 228 | 01/11/17 | 468 ± 163 |
| | | | 08/03/16 | < 228 | 01/18/17 | 540 ± 148 |
| | | | 08/10/16 | 274 ± 144 | 01/25/17 | 617 ± 150 |
| | | | 08/17/16 | < 226 | 02/01/17 | 548 ± 140 |
| | | | 08/24/16 | < 228 | 02/08/17 | 415 ± 137 |
| | | | 08/31/16 | < 224 | 02/15/17 | 470 ± 139 |
| | | | 09/07/16 | < 226 | 02/22/17 | 604 ± 142 |

- Results in picocuries per liter (pCi/L)
- Current sampling frequency is weekly

Note: On January 22, 2016, MW-73 was removed from service as part of station's preparation for an approaching winter storm. Shutting down the pump was a safety precaution to minimize work outside during the storm event. The pump was restarted on January 27, 2016. On April 12, 2016, MW-73 was removed from service due to the failure of the composite sampler totalizer. In addition, due to the ongoing plant maintenance outage, MW-73 remained out of service through June 5, 2016. Repairs to the totalizer were made and MW-73 was back in operation on June 6, 2016. On September 29, 2016, MW-73 was removed from service due to the scheduled plant refuel and maintenance outage (1R26). On October 9, 2016, MW-73 was returned to service.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|-----------------|----------|-------------|-----------------------|-------------|-----------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-73 (continued) | 55.0 | Cohansey | 03/01/17 | 614 ± 139 | 08/09/17 | 310 ± 130 |
| | | | 03/08/17 | 508 ± 138 | 08/16/17 | 329 ± 129 |
| | | | 03/15/17 | 670 ± 143 | 08/23/17 | < 189 |
| | | | 03/22/17 | 539 ± 139 | 08/30/17 | 299 ± 132 |
| | | | 03/29/17 | 503 ± 130 | 09/06/17 | 333 ± 134 |
| | | | 04/05/17 | 708 ± 143 | 09/13/17 | 370 ± 136 |
| | | | 04/12/17 | 658 ± 178 | 09/20/17 | 350 ± 134 |
| | | | 04/19/17 | 580 ± 178 | 09/27/17 | 321 ± 134 |
| | | | 04/26/17 | 609 ± 181 | 10/04/17 | 293 ± 128 |
| | | | 05/03/17 | 606 ± 179 | 12/08/17 | < 269 |
| | | | 05/10/17 | 381 ± 167 | 12/13/17 | < 257 |
| | | | 05/17/17 | 553 ± 178 | 12/20/17 | 297 ± 173 |
| | | | 05/24/17 | 544 ± 169 | 12/27/17 | 327 ± 180 |
| | | | 05/31/17 | 572 ± 177 | 01/03/18 | 296 ± 171 |
| | | | 06/07/17 | 397 ± 168 | 01/10/18 | 374 ± 174 |
| | | | 06/14/17 | 552 ± 149 | 01/18/18 | 290 ± 162 |
| | | | 06/21/17 | 287 ± 172 | 01/24/18 | 314 ± 139 |
| | | | 06/28/17 | 452 ± 169 | 01/31/18 | 304 ± 140 |
| | | | 07/05/17 | 305 ± 167 | 02/14/18 | 224 ± 131 |
| | | | 07/12/17 | 509 ± 162 | 02/21/18 | < 206 |
| | | | 07/19/17 | 269 ± 120 | 02/28/18 | < 219 |
| | | | 07/26/17 | 378 ± 134 | 03/07/18 | < 213 |
| | | | 08/02/17 | 394 ± 138 | 03/14/18 | 215 ± 134 |

- Results in picocuries per liter (pCi/L)
- Current sampling frequency is weekly

Note: On October 6, 2017, MW-73 was removed from service due to an observed ‘reduced flow’ from the normal 60 gpm down to 18-20 gpm. Flow-induced galvanic reactions have been observed to occur in the past on this pumping well, causing severe erosion to the pump discharge pipe fittings which have resulted in the significant reduction in flow. Plant maintenance replaced the in-line totalizer during the month of November. MW-73 was placed back into service on December 7, 2017.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|----------------------|-----------------|----------|-------------|-----------------------|-------------|-----------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-73 (continued) | 55.0 | Cohansey | 03/21/18 | < 219 | 09/19/18 | < 239 |
| | | | 03/28/18 | < 222 | 09/26/18 | < 228 |
| | | | 04/04/18 | 259 ± 142 | 10/03/18 | < 231 |
| | | | 04/11/18 | < 219 | 10/10/18 | < 221 |
| | | | 04/18/18 | 243 ± 139 | 10/17/18 | < 232 |
| | | | 04/25/18 | 273 ± 129 | 11/08/18 | < 177 |
| | | | 05/02/18 | 228 ± 130 | 01/29/19 | 205 ± 124 |
| | | | 05/09/18 | 344 ± 136 | 04/15/19 | < 189 |
| | | | 05/16/18 | 266 ± 134 | 07/16/19 | < 249 |
| | | | 05/23/18 | < 199 | | |
| | | | 05/30/18 | 320 ± 136 | | |
| | | | 06/06/18 | < 203 | | |
| | | | 06/13/18 | < 201 | | |
| | | | 06/20/18 | < 206 | | |
| | | | 06/27/18 | 216 ± 131 | | |
| | | | 07/04/18 | 295 ± 131 | | |
| | | | 07/25/18 | 263 ± 135 | | |
| | | | 08/01/18 | 312 ± 138 | | |
| | | | 08/08/18 | < 229 | | |
| | | | 08/15/18 | < 236 | | |
| | | | 08/30/18 | 240 ± 147 | | |
| | | | 09/05/18 | < 236 | | |
| | | | 09/12/18 | < 222 | | |

- Results in picocuries per liter (pCi/L)
- In October 2018, the sampling frequency was reduced from weekly to quarterly.
- On November 4, 2019, MW-73 was removed from service due to a flow meter calibration deficiency. The licensee does not plan on returning the pumping well to service unless an increase in tritium is seen in future monitoring of the onsite RGPP wells.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| MW-1I-1A | 17.3 | Cape May | 04/17/09 | < 259 | 04/28/10 | < 291 |
| | | | 04/20/09 | < 255 | 06/29/10 | < 446 |
| | | | 05/27/09 | < 285 | 07/28/10 | < 444 |
| | | | 06/30/09 | < 284 | 08/25/10 | < 235 |
| | | | 07/29/09 | < 277 | 10/12/10 | < 143 |
| | | | 08/26/09 | < 264 | 01/11/11 | < 230 |
| | | | 09/30/09 | < 272 | | |
| | | | 10/29/09 | < 251 | | |
| | | | 11/24/09 | < 294 | | |
| | | | 12/30/09 | < 267 | | |
| | | | 01/27/10 | < 287 | | |
| | | | 02/24/10 | < 286 | | |
| | | | 03/22/10 | < 264 | | |
| | | | | | | |
| MW-1I-2A | 16.8 | Cape May | 04/20/09 | < 266 | 01/27/10 | < 287 |
| | | | 05/27/09 | < 285 | 02/24/10 | < 285 |
| | | | 06/30/09 | < 282 | 03/22/10 | < 264 |
| | | | 07/29/09 | < 277 | 04/28/10 | < 279 |
| | | | 08/26/09 | < 264 | 06/29/10 | < 434 |
| | | | 09/30/09 | < 272 | 07/28/10 | < 455 |
| | | | 10/29/09 | < 250 | 08/25/10 | < 214 |
| | | | 11/24/09 | < 294 | 10/12/10 | < 144 |
| | | | 12/30/09 | < 267 | 01/11/11 | < 234 |
| | | | | | | |

Note: BNE split sample results for May 2010 were not available due to the closing of Centauri Labs- Alabama facility. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- In 2011, split sampling of these wells with the BNE was discontinued. Monitoring wells MW-1I-1A and MW-1I-2A are part of the HDI existing Radiological Groundwater Protection Program (RGPP). Results of Exelon's RGPP sampling can be found in the licensee's Annual Radiological Groundwater Protection Program Report. This report is part of the licensee's Annual "Environmental Report" available on the USNRC website at <http://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-specific-reports/oc.html>

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| W-3 | 22.8 | Cape May | 04/17/09 | < 270 | 05/10/11 | < 197 |
| | | | 04/20/09 | < 263 | 06/14/11 | < 180 |
| | | | 05/27/09 | < 285 | 07/12/11 | < 156 |
| | | | 06/30/09 | < 284 | 08/16/11 | < 179 |
| | | | 07/29/09 | < 277 | 09/13/11 | < 223 |
| | | | 08/26/09 | < 264 | 10/11/11 | < 173 |
| | | | 09/30/09 | < 272 | 11/15/11 | < 279 |
| | | | 10/29/09 | < 248 | 12/14/11 | < 201 |
| | | | 11/24/09 | < 294 | 01/17/12 | < 211 |
| | | | 12/30/09 | < 267 | 02/13/12 | < 182 |
| | | | 01/27/10 | < 287 | 03/12/12 | < 218 |
| | | | 02/23/10 | < 282 | 04/17/12 | < 202 |
| | | | 03/22/10 | < 266 | 05/16/12 | < 246 |
| | | | 04/27/10 | < 281 | 06/19/12 | < 278 |
| | | | 06/30/10 | < 432 | 07/03/12 | < 258 |
| | | | 07/27/10 | < 465 | 08/15/12 | < 168 |
| | | | 08/24/10 | 1,810 ± 395 | 09/19/12 | < 194 |
| | | | 09/28/10 | < 248 | 10/02/12 | < 176 |
| | | | 10/12/10 | < 211 | 11/14/12 | < 225 |
| | | | 11/16/10 | < 204 | 12/05/12 | < 168 |
| | | | 12/14/10 | < 216 | 01/08/13 | < 143 |
| | | | 01/11/11 | < 201 | 02/12/13 | < 204 |
| | | | 02/15/11 | < 211 | 03/05/13 | < 176 |
| | | | 03/15/11 | < 185 | 04/09/13 | < 232 |
| | | | 04/12/11 | < 254 | 07/09/13 | < 265 |

Note: BNE split sample results from May 2010 were not available due to the closing of Centauri Labs- Alabama facility. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)
- On May 1, 2013, the sampling frequency was reduced from monthly to quarterly

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| W-3 (continued) | 22.8 | Cape May | 10/08/13 | < 259 | 01/28/20 | < 251 |
| | | | 01/13/14 | < 186 | 05/19/20 | < 230 |
| | | | 04/10/14 | < 209 | 08/18/20 | < 205 |
| | | | 07/16/14 | < 261 | 10/13/20 | < 220 |
| | | | 10/14/14 | < 232 | 02/09/21 | < 201 |
| | | | 01/13/15 | < 264 | 05/04/21 | < 260 |
| | | | 04/15/15 | < 242 | 07/27/21 | < 286 |
| | | | 07/15/15 | < 231 | 10/19/21 | < 149 |
| | | | 10/13/15 | < 212 | 04/26/22 | < 178 |
| | | | 01/20/16 | < 255 | 10/25/22 | < 213 |
| | | | 04/05/16 | < 198 | 04/20/23 | < 244 |
| | | | 07/19/16 | < 232 | | |
| | | | 10/18/16 | < 224 | | |
| | | | 01/10/17 | < 213 | | |
| | | | 04/06/17 | < 209 | | |
| | | | 07/11/17 | < 240 | | |
| | | | 10/10/17 | < 214 | | |
| | | | 01/18/18 | < 244 | | |
| | | | 04/18/18 | < 192 | | |
| | | | 07/31/18 | < 168 | | |
| | | | 10/30/18 | < 206 | | |
| | | | 01/15/19 | < 224 | | |
| | | | 04/16/19 | < 208 | | |
| | | | 07/23/19 | < 225 | | |
| | | | 10/08/19 | < 199 | | |

- Results in picocuries per liter (pCi/L)
- W-3 is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| W-4 | 48.5 | Cohansey | 04/17/09 | < 262 | 07/12/11 | < 163 |
| | | | 04/20/09 | < 270 | 10/11/11 | < 173 |
| | | | 05/27/09 | < 282 | 01/17/12 | < 207 |
| | | | 06/30/09 | < 281 | 04/17/12 | < 201 |
| | | | 07/29/09 | < 277 | 07/03/12 | < 267 |
| | | | 08/26/09 | < 264 | 10/02/12 | < 178 |
| | | | 09/30/09 | < 272 | 01/08/13 | < 198 |
| | | | 10/29/09 | < 249 | 04/09/13 | < 237 |
| | | | 11/24/09 | < 294 | 07/09/13 | < 264 |
| | | | 12/30/09 | < 267 | 10/08/13 | < 262 |
| | | | 01/27/10 | < 287 | 01/13/14 | < 185 |
| | | | 02/24/10 | < 289 | 04/10/14 | < 155 |
| | | | 03/22/10 | < 266 | 07/16/14 | < 261 |
| | | | 04/27/10 | < 283 | 10/14/14 | < 236 |
| | | | 06/30/10 | < 440 | 01/13/15 | < 269 |
| | | | 07/27/10 | < 464 | 04/15/15 | < 238 |
| | | | 08/24/10 | < 234 | 07/15/15 | < 208 |
| | | | 09/28/10 | < 247 | 10/13/15 | < 213 |
| | | | 10/12/10 | < 210 | 01/20/16 | < 261 |
| | | | 11/16/10 | 401 ± 140 | 04/05/16 | < 204 |
| | | | 12/14/10 | < 202 | 07/19/16 | < 238 |
| | | | 01/11/11 | < 203 | 10/18/16 | < 225 |
| | | | 02/15/11 | < 218 | 01/10/17 | < 218 |
| | | | 04/12/11 | < 254 | 04/06/17 | < 215 |

Note: BNE split sample results from May 2010 were not available due to the closing of Centauri Labs- Alabama facility. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP.

- Results in picocuries per liter (pCi/L)

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering
Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| W-4 | 48.5 | Cohansey | 07/11/17 | < 240 | | |
| | | | 07/11/17 | < 259 | | |
| | | | 10/10/17 | < 213 | | |
| | | | 01/18/18 | < 236 | | |
| | | | 04/18/18 | < 191 | | |
| | | | 07/31/18 | < 204 | | |
| | | | 04/16/19 | < 210 | | |
| | | | 05/19/20 | < 232 | | |
| | | | 05/04/21 | < 266 | | |
| | | | 04/26/22 | < 189 | | |
| | | | 04/20/23 | < 246 | | |

- Results in picocuries per liter (pCi/L)
- Two separate samples were taken on 07/11/17 and reported
- In October 2018, the sampling frequency was reduced from quarterly to annually.
- W-4 is part of the HDI existing Radiological Groundwater Protection Program.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| W-5 | 20.7 | Cape May | 04/16/09 | < 276 | 10/11/11 | < 276 |
| | | | 04/20/09 | < 270 | 01/17/12 | < 247 |
| | | | 05/27/09 | < 288 | 04/17/12 | < 201 |
| | | | 06/30/09 | < 283 | 07/02/12 | < 260 |
| | | | 07/29/09 | < 277 | 10/01/12 | < 171 |
| | | | 08/26/09 | < 264 | 01/08/13 | < 137 |
| | | | 09/30/09 | < 272 | 04/09/13 | < 237 |
| | | | 10/29/09 | < 249 | 07/09/13 | < 259 |
| | | | 11/24/09 | < 294 | 10/09/13 | < 263 |
| | | | 12/30/09 | < 276 | 01/14/14 | < 185 |
| | | | 01/27/10 | < 287 | 04/08/14 | < 159 |
| | | | 02/24/10 | < 290 | 07/16/14 | < 262 |
| | | | 03/22/10 | < 260 | 10/15/14 | < 231 |
| | | | 04/28/10 | < 280 | 01/13/15 | < 271 |
| | | | 06/29/10 | < 433 | 04/14/15 | < 232 |
| | | | 07/28/10 | < 463 | 07/21/15 | 299 ± 142 |
| | | | 08/24/10 | < 245 | 10/13/15 | < 216 |
| | | | 09/28/10 | < 248 | 01/20/16 | < 255 |
| | | | 10/12/10 | < 211 | 04/06/16 | < 198 |
| | | | 11/16/10 | < 204 | 07/19/16 | < 220 |
| | | | 12/14/10 | < 202 | 10/18/16 | < 226 |
| | | | 01/11/11 | < 199 | 01/10/17 | < 175 |
| | | | 02/15/11 | < 217 | 04/04/17 | < 196 |
| | | | 04/12/11 | < 256 | 07/11/17 | < 240 |
| | | | 07/12/11 | < 163 | 10/10/17 | < 213 |

Note: BNE split sample results from May 2010 were not available due to the closing of Centauri Labs- Alabama facility. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP

- Results in picocuries per liter (pCi/L)

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| W-5 (continued) | 20.7 | Cape May | 01/17/18 | < 247 | | |
| | | | 04/18/18 | < 189 | | |
| | | | 07/31/18 | < 156 | | |
| | | | 10/30/18 | < 208 | | |
| | | | 01/15/19 | < 216 | | |
| | | | 04/17/19 | < 210 | | |
| | | | 07/23/19 | < 234 | | |
| | | | 10/08/19 | < 202 | | |
| | | | 01/28/20 | < 242 | | |
| | | | 05/20/20 | < 228 | | |
| | | | 08/18/20 | < 195 | | |
| | | | 10/14/20 | < 206 | | |
| | | | 02/09/21 | < 182 | | |
| | | | 05/04/21 | < 255 | | |
| | | | 07/27/21 | < 296 | | |
| | | | 10/19/21 | < 145 | | |
| | | | 04/26/22 | < 189 | | |
| | | | 10/25/22 | < 207 | | |
| | | | 04/24/23 | < 247 | | |

- Results in picocuries per liter (pCi/L)
- W-5 is part of the HDI existing Radiological Groundwater Protection Program. In 2022 sampling frequency was changed from quarterly to semi-annual.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| W-6 | 47.7 | Cohansey | 04/16/09 | < 261 | 10/11/11 | < 279 |
| | | | 04/20/09 | < 265 | 01/17/12 | < 240 |
| | | | 05/27/09 | < 285 | 04/17/12 | < 203 |
| | | | 06/30/09 | < 264 | 07/02/12 | < 256 |
| | | | 07/29/09 | < 277 | 10/01/12 | < 172 |
| | | | 08/26/09 | < 264 | 01/08/13 | < 136 |
| | | | 09/30/09 | < 272 | 04/09/13 | < 236 |
| | | | 10/29/09 | < 250 | 07/09/13 | < 264 |
| | | | 11/24/09 | < 294 | 10/09/13 | < 200 |
| | | | 12/30/09 | < 267 | 01/14/14 | < 186 |
| | | | 01/27/10 | < 287 | 04/08/14 | < 162 |
| | | | 02/23/10 | < 285 | 07/16/14 | < 261 |
| | | | 03/22/10 | < 265 | 10/15/14 | < 237 |
| | | | 04/28/10 | < 293 | 01/13/15 | < 272 |
| | | | 06/29/10 | < 429 | 04/14/15 | < 237 |
| | | | 07/28/10 | < 455 | 07/21/15 | < 219 |
| | | | 08/24/10 | < 236 | 10/13/15 | < 212 |
| | | | 09/28/10 | < 241 | 01/20/16 | < 261 |
| | | | 10/12/10 | < 212 | 04/06/16 | < 207 |
| | | | 11/16/10 | < 203 | 07/19/19 | < 232 |
| | | | 12/14/10 | < 204 | 10/18/16 | < 222 |
| | | | 01/11/11 | < 202 | 01/10/17 | < 187 |
| | | | 02/15/11 | < 217 | 04/04/17 | < 214 |
| | | | 04/12/11 | < 253 | 07/11/17 | < 229 |
| | | | 07/12/11 | < 166 | 10/10/17 | < 213 |

Note: BNE split sample results from May 2010 were not available due to the closing of Centauri Labs- Alabama facility. Subsequent samples were analyzed by Eberline Services and GEL Laboratories, both under contract with the NJDEP

- Results in picocuries per liter (pCi/L)

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|--------------------|----------|----------------|--------------------------|----------------|--------------------------|
| MDA ¹ | | | | 300 | | 300 |
| NJGWQS ² | | | | 20,000 | | 20,000 |
| W-6 (continued) | 47.7 | Cohansey | 01/17/18 | < 231 | | |
| | | | 04/18/18 | < 192 | | |
| | | | 07/31/18 | < 161 | | |
| | | | 04/17/19 | < 209 | | |
| | | | 05/20/20 | < 227 | | |
| | | | 05/04/21 | < 262 | | |
| | | | 04/27/22 | < 167 | | |
| | | | 04/25/23 | < 243 | | |

- Results in picocuries per liter (pCi/L)
- In October 2018, the sampling frequency was reduced from quarterly to annually.
- W-6 is part of the HDI existing Radiological Groundwater Protection Program.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 1: Groundwater Monitoring Wells (continued)

| Well ID | Well Depth (ft) | Aquifer | Sample Date | Tritium (H-3) (pCi/L) |
|---------------------|----------------------------|----------------|------------------------|----------------------------------|
| MDA ¹ | | | | 300 |
| NJGWQS ² | | | | 20,000 |
| W-1 | 49.0 | Cohansey | 05/27/09 | < 290 |
| | | | 09/11/09 | < 273 |
| | | | 11/24/09 | < 294 |
| W-2C | 46.7 | Cohansey | 05/27/09 | < 292 |
| | | | 09/11/09 | < 273 |
| | | | 11/24/09 | < 294 |
| | | | 04/27/10 | < 275 |
| W-2K | 145.0 | Kirkwood | 05/27/09 | < 292 |
| | | | 11/24/09 | < 294 |
| | | | 04/27/10 | < 276 |
| W-4K | 100.0 | Kirkwood | 10/28/09 | < 295 |
| | | | 04/27/10 | < 275 |
| W-5C | 60.0 | Cohansey | 09/15/10 | < 207 |
| | | | 10/14/10 | < 210 |
| W-5K | 150.0 | Kirkwood | 09/15/10 | < 209 |
| | | | 10/14/10 | < 210 |

- Results in picocuries per liter (pCi/L)
- In 2010, split sampling of these wells with the BNE was discontinued. Monitoring wells W-1, W-2C, W-2K, W-4K, W-5C and W-5K are part of the Exelon Nuclear existing Radiological Groundwater Protection Program (RGPP). Results of Exelon's RGPP sampling can be found in the licensee's Annual Radiological Groundwater Protection Program Report. This report is part of the licensee's Annual Environmental Report available on the USNRC website at <http://www.nrc.gov/reactors/operating/ops-experience/tritium/plant-specific-reports/oc.html>

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water

Main Condenser Discharge Sampling Point

| | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---------------------|----------|--------------------|----------|--------------------|----------|--------------------|
| MDA ¹ | | 300 | | 300 | | 300 |
| NJGWQS ² | | 20,000 | | 20,000 | | 20,000 |
| | 04/27/09 | < 256 | 07/16/09 | < 277 | 08/16/09 | < 263 |
| | 04/28/09 | < 278 | 07/17/09 | < 281 | 08/17/09 | < 263 |
| | 04/29/09 | < 274 | 07/18/09 | < 282 | 08/18/09 | < 263 |
| | 05/05/09 | < 274 | 07/19/09 | < 279 | 08/19/09 | < 263 |
| | 05/12/09 | < 274 | 07/20/09 | < 278 | 08/20/09 | < 274 |
| | 05/19/09 | < 273 | 07/21/09 | < 278 | 08/21/09 | < 274 |
| | 05/26/09 | < 271 | 07/22/09 | < 240 | 08/22/09 | < 274 |
| | 06/02/09 | < 273 | 07/23/09 | < 239 | 08/23/09 | < 274 |
| | 06/08/09 | < 287 | 07/24/09 | < 237 | 08/24/09 | < 274 |
| | 06/15/09 | < 288 | 07/25/09 | < 236 | 08/25/09 | < 274 |
| | 06/22/09 | < 291 | 07/26/09 | < 240 | 08/26/09 | < 265 |
| | 06/26/09 | < 288 | 07/27/09 | < 239 | 08/27/09 | < 265 |
| | 06/27/09 | < 265 | 07/28/09 | < 251 | 08/28/09 | < 265 |
| | 06/28/09 | < 266 | 07/29/09 | < 252 | 08/29/09 | < 265 |
| | 06/29/09 | < 268 | 07/30/09 | < 262 | 08/30/09 | < 265 |
| | 06/30/09 | 310 ± 166 | 07/31/09 | < 262 | 08/31/09 | < 265 |
| | 07/01/09 | < 269 | 08/01/09 | < 262 | 09/01/09 | < 265 |
| | 07/02/09 | < 265 | 08/02/09 | < 262 | 09/02/09 | < 266 |
| | 07/03/09 | < 265 | 08/03/09 | < 262 | 09/03/09 | < 266 |
| | 07/04/09 | < 283 | 08/04/09 | < 262 | 09/04/09 | < 266 |
| | 07/05/09 | < 285 | 08/05/09 | < 267 | 09/05/09 | < 266 |
| | 07/06/09 | < 285 | 08/06/09 | < 267 | 09/06/09 | < 266 |
| | 07/07/09 | < 284 | 08/07/09 | < 267 | 09/07/09 | < 266 |
| | 07/08/09 | < 284 | 08/08/09 | < 267 | 09/08/09 | < 266 |
| | 07/09/09 | < 285 | 08/09/09 | < 267 | 09/09/09 | < 265 |
| | 07/10/09 | < 280 | 08/10/09 | < 267 | 09/10/09 | < 265 |
| | 07/11/09 | < 277 | 08/11/09 | < 267 | 09/11/09 | < 265 |
| | 07/12/09 | < 274 | 08/12/09 | < 267 | 09/12/09 | < 265 |
| | 07/13/09 | < 277 | 08/13/09 | < 267 | 09/13/09 | < 265 |
| | 07/14/09 | < 277 | 08/14/09 | < 263 | 09/14/09 | < 265 |
| | 07/15/09 | < 272 | 08/15/09 | < 263 | 09/15/09 | < 265 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Main Condenser Discharge Sampling Point (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 09/16/09 | < 265 | 10/21/09 | < 270 | 11/22/09 | < 267 |
| | 09/17/09 | < 265 | 10/22/09 | < 249 | 11/23/09 | < 267 |
| | 09/18/09 | < 265 | 10/23/09 | < 247 | 11/24/09 | < 267 |
| | 09/19/09 | < 265 | 10/24/09 | < 248 | 11/25/09 | < 280 |
| | 09/20/09 | < 265 | 10/25/09 | < 263 | 11/26/09 | < 295 |
| | 09/21/09 | < 265 | 10/26/09 | < 263 | 11/27/09 | < 295 |
| | 09/22/09 | < 265 | 10/27/09 | < 251 | 11/28/09 | < 295 |
| | 09/23/09 | < 265 | 10/28/09 | < 269 | 11/29/09 | < 295 |
| | 09/24/09 | < 265 | 10/29/09 | < 269 | 12/02/09 | < 295 |
| | 09/25/09 | < 265 | 10/30/09 | < 269 | 12/03/09 | < 294 |
| | 09/26/09 | < 270 | 10/31/09 | < 269 | 12/04/09 | < 270 |
| | 09/27/09 | < 270 | 11/01/09 | < 269 | 12/05/09 | < 270 |
| | 09/28/09 | < 268 | 11/02/09 | < 269 | 12/06/09 | < 276 |
| | 09/29/09 | < 268 | 11/03/09 | < 269 | 12/07/09 | < 276 |
| | 09/30/09 | < 268 | 11/04/09 | < 269 | 12/08/09 | < 276 |
| | 10/01/09 | < 268 | 11/05/09 | < 269 | 12/09/09 | < 275 |
| | 10/02/09 | < 268 | 11/06/09 | < 269 | 12/10/09 | < 275 |
| | 10/03/09 | < 268 | 11/07/09 | < 254 | 12/11/09 | < 275 |
| | 10/04/09 | < 240 | 11/08/09 | < 251 | 12/12/09 | < 280 |
| | 10/05/09 | < 241 | 11/09/09 | < 251 | 12/13/09 | < 280 |
| | 10/06/09 | < 237 | 11/10/09 | < 251 | 12/14/09 | < 280 |
| | 10/07/09 | < 241 | 11/11/09 | < 254 | 12/15/09 | < 280 |
| | 10/08/09 | < 242 | 11/12/09 | < 294 | 12/16/09 | < 280 |
| | 10/09/09 | < 244 | 11/13/09 | < 294 | 12/17/09 | < 280 |
| | 10/10/09 | < 219 | 11/14/09 | < 294 | 12/18/09 | < 279 |
| | 10/11/09 | < 264 | 11/15/09 | < 294 | 12/19/09 | < 279 |
| | 10/12/09 | < 264 | 11/16/09 | < 294 | 12/20/09 | < 279 |
| | 10/13/09 | < 264 | 11/17/09 | < 294 | 12/21/09 | < 279 |
| | 10/14/09 | < 263 | 11/18/09 | < 267 | 12/22/09 | < 279 |
| | 10/15/09 | < 263 | 11/19/09 | < 267 | 12/23/09 | < 272 |
| | 10/19/09 | < 270 | 11/20/09 | < 267 | 12/24/09 | < 272 |
| | 10/20/09 | < 270 | 11/21/09 | < 267 | 12/25/09 | < 272 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Main Condenser Discharge Sampling Point (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 12/26/09 | < 272 | 01/27/10 | < 284 | 02/28/10 | < 287 |
| | 12/27/09 | < 272 | 01/28/10 | < 286 | 03/01/10 | < 273 |
| | 12/28/09 | < 272 | 01/29/10 | < 281 | 03/02/10 | < 273 |
| | 12/29/09 | < 272 | 01/30/10 | < 284 | 03/03/10 | < 272 |
| | 12/30/09 | < 268 | 01/31/10 | < 285 | 03/04/10 | < 272 |
| | 12/31/09 | < 268 | 02/01/10 | < 287 | 03/05/10 | < 244 |
| | 01/01/10 | < 268 | 02/02/10 | < 277 | 03/06/10 | < 245 |
| | 01/02/10 | < 267 | 02/03/10 | < 286 | 03/07/10 | < 246 |
| | 01/03/10 | < 267 | 02/04/10 | < 286 | 03/08/10 | < 245 |
| | 01/04/10 | < 296 | 02/05/10 | < 286 | 03/09/10 | < 241 |
| | 01/05/10 | < 296 | 02/06/10 | < 286 | 03/10/10 | < 242 |
| | 01/06/10 | < 296 | 02/07/10 | < 286 | 03/11/10 | < 270 |
| | 01/07/10 | < 296 | 02/08/10 | < 286 | 03/12/10 | < 278 |
| | 01/08/10 | < 296 | 02/09/10 | < 276 | 03/13/10 | < 273 |
| | 01/09/10 | < 296 | 02/10/10 | < 281 | 03/14/10 | < 270 |
| | 01/10/10 | < 286 | 02/11/10 | < 300 | 03/15/10 | < 268 |
| | 01/11/10 | < 275 | 02/12/10 | < 279 | 03/16/10 | < 269 |
| | 01/12/10 | < 275 | 02/13/10 | < 286 | 03/17/10 | < 276 |
| | 01/13/10 | < 286 | 02/14/10 | < 273 | 03/18/10 | < 271 |
| | 01/14/10 | < 286 | 02/15/10 | < 292 | 03/19/10 | < 275 |
| | 01/15/09 | < 286 | 02/16/10 | < 286 | 03/20/10 | < 274 |
| | 01/16/10 | < 285 | 02/17/10 | < 285 | 03/21/10 | < 274 |
| | 01/17/10 | < 285 | 02/18/10 | < 284 | 03/22/10 | < 276 |
| | 01/18/10 | < 236 | 02/19/10 | < 286 | 03/23/10 | < 271 |
| | 01/19/10 | < 232 | 02/20/10 | < 289 | 03/24/10 | < 271 |
| | 01/20/10 | < 275 | 02/21/10 | < 258 | 03/25/10 | < 271 |
| | 01/21/10 | < 275 | 02/22/10 | < 261 | 03/26/10 | < 271 |
| | 01/22/10 | < 275 | 02/23/10 | < 286 | 03/27/10 | < 271 |
| | 01/23/10 | < 275 | 02/24/10 | < 283 | 03/28/10 | < 271 |
| | 01/24/10 | < 275 | 02/25/10 | < 281 | 03/29/10 | < 275 |
| | 01/25/10 | < 275 | 02/26/10 | < 286 | 03/30/10 | < 278 |
| | 01/26/10 | < 279 | 02/27/10 | < 291 | 03/31/10 | < 274 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Main Condenser Discharge Sampling Point (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 04/01/10 | < 279 | 06/28/10 | < 140 | 07/28/10 | < 438 |
| | 04/02/10 | < 275 | 06/29/10 | < 140 | 07/29/10 | < 422 |
| | 04/03/10 | < 273 | 07/01/10 | < 422 | 07/30/10 | < 409 |
| | 04/04/10 | < 273 | 07/02/10 | < 420 | 07/31/10 | < 449 |
| | 04/05/10 | < 273 | 07/03/10 | < 426 | 08/01/10 | < 445 |
| | 04/06/10 | < 275 | 07/04/10 | < 422 | 08/02/10 | < 445 |
| | 04/07/10 | < 280 | 07/05/10 | < 429 | 08/03/10 | < 430 |
| | 04/08/10 | < 286 | 07/06/10 | < 422 | 08/04/10 | < 424 |
| | 04/09/10 | < 286 | 07/07/10 | < 413 | 08/05/10 | < 160 |
| | 04/10/10 | < 284 | 07/08/10 | < 422 | 08/06/10 | < 160 |
| | 04/11/10 | < 287 | 07/09/10 | < 421 | 08/07/10 | < 160 |
| | 04/12/10 | < 287 | 07/10/10 | < 406 | 08/08/10 | < 160 |
| | 04/13/10 | < 289 | 07/11/10 | < 399 | 08/09/10 | < 160 |
| | 04/14/10 | < 290 | 07/12/10 | < 399 | 08/10/10 | < 160 |
| | 04/15/10 | < 275 | 07/13/10 | < 414 | 08/11/10 | < 160 |
| | 04/16/10 | < 274 | 07/14/10 | < 450 | 08/12/10 | < 140 |
| | 04/17/10 | < 277 | 07/15/10 | < 447 | 08/13/10 | < 140 |
| | 04/18/10 | < 273 | 07/16/10 | < 463 | 08/14/10 | < 140 |
| | 04/29/10 | < 273 | 07/17/10 | < 440 | 08/15/10 | < 140 |
| | 04/30/10 | < 268 | 07/18/10 | < 460 | 08/16/10 | < 140 |
| | 05/01/10 | < 276 | 07/19/10 | < 463 | 08/17/10 | < 140 |
| | 05/02/10 | < 275 | 07/20/10 | < 458 | 08/18/10 | < 140 |
| | 05/03/10 | < 283 | 07/21/10 | < 444 | 08/19/10 | < 140 |
| | 05/04/10 | < 267 | 07/22/10 | < 461 | 08/20/10 | < 140 |
| | 06/23/10 | < 140 | 07/23/10 | < 461 | 08/21/10 | < 150 |
| | 06/24/10 | < 140 | 07/24/10 | < 447 | 08/22/10 | < 150 |
| | 06/25/10 | < 140 | 07/25/10 | < 456 | 08/23/10 | < 140 |
| | 06/26/10 | < 140 | 07/26/10 | < 458 | 08/24/10 | < 140 |
| | 06/27/10 | < 140 | 07/27/10 | < 462 | 08/25/10 | < 150 |

Note: Split sample results from 04/19/10 through 04/28/10 and from 05/05/10 through 06/22/10 were not available due to the closing of the BNE's contract laboratory.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Main Condenser Discharge Sampling Point (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 08/26/10 | < 150 | 02/02/11 | < 150 | 09/22/11 | < 280 |
| | 08/27/10 | < 150 | 02/09/11 | < 140 | 09/28/11 | < 265 |
| | 08/28/10 | < 150 | 02/16/11 | < 140 | 10/05/11 | < 282 |
| | 08/29/10 | < 150 | 03/02/11 | < 140 | 10/12/11 | < 232 |
| | 09/01/10 | < 150 | 03/09/11 | < 140 | 10/19/11 | < 234 |
| | 09/08/10 | < 130 | 03/16/11 | < 140 | 10/26/11 | < 238 |
| | 09/15/10 | < 130 | 03/23/11 | < 140 | 11/02/11 | < 275 |
| | 09/22/10 | < 130 | 03/30/11 | < 140 | 11/09/11 | < 277 |
| | 09/29/10 | < 130 | 04/06/11 | < 152 | 11/16/11 | < 275 |
| | 10/06/10 | < 120 | 04/13/11 | < 257 | 11/23/11 | < 158 |
| | 10/11/10 | < 140 | 04/20/11 | < 230 | 11/30/11 | < 157 |
| | 10/21/10 | < 140 | 04/27/11 | < 228 | 12/07/11 | < 207 |
| | 10/28/10 | < 130 | 05/04/11 | < 242 | 12/14/11 | < 195 |
| | 10/31/10 | < 130 | 05/11/11 | < 197 | 12/21/11 | < 201 |
| | 11/01/10 | < 130 | 05/18/11 | < 245 | 12/28/11 | < 200 |
| | 11/10/10 | < 120 | 06/01/11 | < 198 | 01/04/12 | < 241 |
| | 11/17/10 | < 120 | 06/08/11 | < 146 | 01/11/12 | < 214 |
| | 11/24/10 | < 140 | 06/15/11 | < 178 | 01/18/12 | < 213 |
| | 12/01/10 | < 140 | 06/22/11 | < 224 | 01/25/12 | < 185 |
| | 12/08/10 | < 140 | 06/29/11 | < 149 | 02/01/12 | < 188 |
| | 12/10/10 | < 140 | 07/06/11 | < 150 | 02/08/12 | < 177 |
| | 12/15/10 | < 140 | 07/13/11 | < 149 | 02/15/12 | < 245 |
| | 12/22/10 | < 140 | 07/20/11 | < 187 | 02/22/12 | < 240 |
| | 12/24/10 | < 140 | 07/27/11 | < 217 | 02/29/12 | < 245 |
| | 12/30/10 | < 140 | 08/03/11 | < 210 | 03/07/12 | < 245 |
| | 01/05/11 | < 140 | 08/18/11 | < 141 | 03/14/12 | < 245 |
| | 01/12/11 | < 140 | 08/24/11 | < 139 | 03/21/12 | < 192 |
| | 01/19/11 | < 140 | 09/07/11 | < 192 | 03/28/12 | < 196 |
| | 01/26/11 | < 140 | 09/14/11 | < 276 | 04/04/12 | < 195 |

Note: As of September 1, 2010, sampling frequency is weekly. Prior to this time, sample collection frequency was daily.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Main Condenser Discharge Sampling Point (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 04/11/12 | < 198 | 01/30/13 | < 263 | 08/21/13 | < 256 |
| | 04/18/12 | < 195 | 02/06/13 | < 271 | 08/28/13 | < 254 |
| | 04/25/12 | < 253 | 02/13/13 | < 224 | 09/04/13 | < 253 |
| | 05/02/12 | < 253 | 02/20/13 | < 226 | 09/11/13 | < 254 |
| | 05/09/12 | < 253 | 02/27/13 | < 231 | 09/18/13 | < 255 |
| | 06/21/12 | < 294 | 03/06/13 | < 217 | 09/25/13 | < 205 |
| | 06/27/12 | < 257 | 03/13/13 | < 173 | 10/02/13 | < 200 |
| | 07/04/12 | < 186 | 03/20/13 | < 180 | 10/09/13 | < 201 |
| | 07/11/12 | < 168 | 03/27/13 | < 174 | 10/16/13 | < 218 |
| | 07/18/12 | < 161 | 04/03/13 | < 178 | 10/23/13 | < 222 |
| | 07/25/12 | < 167 | 04/10/13 | < 147 | 10/30/13 | < 205 |
| | 08/01/12 | < 170 | 04/17/13 | < 156 | 11/06/13 | < 241 |
| | 08/16/12 | < 188 | 04/24/13 | < 149 | 11/13/13 | < 233 |
| | 08/22/12 | < 180 | 05/01/13 | < 161 | 11/20/13 | < 233 |
| | 08/29/12 | < 186 | 05/08/13 | < 154 | 11/27/13 | < 220 |
| | 09/05/12 | < 178 | 05/15/13 | < 156 | 12/04/13 | < 220 |
| | 09/12/12 | < 183 | 05/22/13 | < 148 | 12/11/13 | < 237 |
| | 09/19/12 | < 185 | 05/29/13 | < 158 | 12/19/13 | < 229 |
| | 09/26/12 | < 173 | 06/05/13 | < 152 | 12/27/13 | < 227 |
| | 10/03/12 | < 223 | 06/12/13 | < 140 | 01/15/14 | < 224 |
| | 10/10/12 | < 208 | 06/19/13 | < 148 | 03/12/14 | < 210 |
| | 10/17/12 | < 201 | 06/26/13 | < 149 | 03/19/14 | < 209 |
| | 10/24/12 | < 214 | 07/03/13 | < 148 | 03/27/14 | < 234 |
| | 12/20/12 | < 259 | 07/10/13 | < 152 | 04/02/14 | < 252 |
| | 12/26/12 | < 258 | 07/17/13 | < 296 | 04/09/14 | < 249 |
| | 01/02/13 | < 273 | 07/24/13 | < 288 | 04/16/14 | < 248 |
| | 01/09/13 | < 273 | 07/31/13 | < 290 | 04/23/14 | < 246 |
| | 01/16/13 | < 255 | 08/07/13 | < 236 | 05/01/14 | < 244 |
| | 01/23/13 | < 272 | 08/14/13 | < 246 | 05/07/14 | < 242 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Main Condenser Discharge Sampling Point (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 05/14/14 | < 239 | 01/21/15 | < 280 | 10/21/15 | < 225 |
| | 05/21/14 | < 246 | 01/30/15 | < 274 | 10/28/15 | < 225 |
| | 05/28/14 | < 191 | 04/29/15 | < 211 | 11/04/15 | < 195 |
| | 06/04/14 | < 189 | 05/06/15 | < 229 | 11/11/15 | < 234 |
| | 06/11/14 | < 200 | 05/13/15 | < 219 | 11/18/15 | < 235 |
| | 06/18/14 | < 205 | 05/20/15 | < 222 | 11/25/15 | < 213 |
| | 06/25/14 | < 202 | 05/27/15 | < 285 | 12/02/15 | < 220 |
| | 07/02/14 | < 259 | 06/03/15 | < 284 | 12/09/15 | < 221 |
| | 07/09/14 | < 258 | 06/10/15 | < 278 | 12/16/15 | < 218 |
| | 07/16/14 | < 261 | 06/17/15 | < 282 | 12/23/15 | < 222 |
| | 07/23/14 | < 242 | 06/24/15 | < 224 | 12/30/15 | < 197 |
| | 07/30/14 | < 241 | 07/01/15 | < 231 | 01/06/16 | < 203 |
| | 08/06/14 | < 230 | 07/08/15 | < 225 | 01/13/16 | < 203 |
| | 08/13/14 | < 242 | 07/15/15 | < 229 | 01/20/16 | < 186 |
| | 08/20/14 | < 240 | 07/22/15 | < 205 | 11/29/16 | < 207 |
| | 08/27/14 | < 254 | 07/29/15 | < 192 | 01/02/17 | < 247 |
| | 09/03/14 | < 261 | 08/05/15 | < 194 | 04/05/17 | < 206 |
| | 09/10/14 | < 240 | 08/12/15 | < 222 | 10/24/18 | < 232 |
| | 11/25/14 | < 251 | 08/19/15 | < 209 | 01/16/19 | < 225 |
| | 11/26/14 | < 250 | 08/26/15 | < 271 | | |
| | 12/03/14 | < 254 | 09/02/15 | < 269 | | |
| | 12/10/14 | < 246 | 09/09/15 | < 289 | | |
| | 12/17/14 | < 246 | 09/16/15 | < 267 | | |
| | 12/24/14 | < 245 | 09/23/15 | < 213 | | |
| | 12/31/14 | < 247 | 09/30/15 | < 218 | | |
| | 01/07/15 | < 246 | 10/07/15 | < 257 | | |
| | 01/14/15 | < 248 | 10/14/15 | < 207 | | |

- As of February 1, 2016, sampling frequency is quarterly. Prior to this time, sample collection frequency was weekly.
- This location is sampled only when pumping well MW-73 is operational.
- As of March 2019, there are no longer any Circulating Water Pumps in operation with the plant in Decommissioning. Therefore, there is no longer any sampling of the Main Condenser Discharge

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Discharge Canal: U.S. Route 9 Bridge (SW-2)

| | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---------------------|-------------|----------------------------|-------------|----------------------------|-------------|----------------------------|
| MDA ¹ | | 300 | | 300 | | 300 |
| NJGWQS ² | | 20,000 | | 20,000 | | 20,000 |
| | 04/27/09 | < 276 | 07/16/09 | < 281 | 08/16/09 | < 263 |
| | 04/28/09 | < 261 | 07/17/09 | < 278 | 08/17/09 | < 263 |
| | 04/29/09 | < 269 | 07/18/09 | < 280 | 08/18/09 | < 263 |
| | 05/05/09 | < 273 | 07/19/09 | < 280 | 08/19/09 | < 263 |
| | 05/12/09 | < 271 | 07/20/09 | < 280 | 08/20/09 | < 274 |
| | 05/19/09 | < 272 | 07/21/09 | < 275 | 08/21/09 | < 274 |
| | 05/26/09 | < 271 | 07/22/09 | < 240 | 08/22/09 | < 274 |
| | 06/02/09 | < 273 | 07/23/09 | < 230 | 08/23/09 | < 274 |
| | 06/08/09 | < 285 | 07/24/09 | < 232 | 08/24/09 | < 274 |
| | 06/15/09 | < 287 | 07/25/09 | < 238 | 08/25/09 | < 274 |
| | 06/22/09 | < 286 | 07/26/09 | < 240 | 08/26/09 | < 274 |
| | 06/26/09 | < 286 | 07/27/09 | < 240 | 08/27/09 | < 265 |
| | 06/27/09 | < 272 | 07/28/09 | < 240 | 08/28/09 | < 265 |
| | 06/28/09 | < 267 | 07/29/09 | < 252 | 08/29/09 | < 265 |
| | 06/29/09 | < 269 | 07/30/09 | < 262 | 08/30/09 | < 265 |
| | 06/30/09 | < 263 | 07/31/09 | < 262 | 08/31/09 | < 265 |
| | 07/01/09 | < 265 | 08/01/09 | < 262 | 09/01/09 | < 265 |
| | 07/02/09 | < 267 | 08/02/09 | < 262 | 09/02/09 | < 266 |
| | 07/03/09 | < 285 | 08/03/09 | < 262 | 09/03/09 | < 266 |
| | 07/04/09 | < 282 | 08/04/09 | < 262 | 09/04/09 | < 266 |
| | 07/05/09 | < 284 | 08/05/09 | < 262 | 09/05/09 | < 266 |
| | 07/06/09 | < 288 | 08/06/09 | < 267 | 09/06/09 | < 266 |
| | 07/07/09 | < 288 | 08/07/09 | < 267 | 09/07/09 | < 266 |
| | 07/08/09 | < 288 | 08/08/09 | < 267 | 09/08/09 | < 266 |
| | 07/09/09 | < 286 | 08/09/09 | < 267 | 09/09/09 | < 265 |
| | 07/10/09 | < 275 | 08/10/09 | < 267 | 09/10/09 | < 265 |
| | 07/11/09 | < 282 | 08/11/09 | < 267 | 09/11/09 | < 265 |
| | 07/12/09 | < 273 | 08/12/09 | < 267 | 09/12/09 | < 265 |
| | 07/13/09 | < 280 | 08/13/09 | < 267 | 09/13/09 | < 265 |
| | 07/14/09 | < 276 | 08/14/09 | < 263 | 09/14/09 | < 265 |
| | 07/15/09 | < 278 | 08/15/09 | < 263 | 09/15/09 | < 265 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Discharge Canal: U.S. Route 9 Bridge (SW-2) (continued)

| | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---------------------|----------|--------------------|----------|--------------------|----------|--------------------|
| MDA ¹ | | 300 | | 300 | | 300 |
| NJGWQS ² | | 20,000 | | 20,000 | | 20,000 |
| | 09/16/09 | < 265 | 10/21/09 | < 270 | 11/22/09 | < 267 |
| | 09/17/09 | < 265 | 10/22/09 | < 249 | 11/23/09 | < 267 |
| | 09/18/09 | < 265 | 10/23/09 | < 247 | 11/24/09 | < 267 |
| | 09/19/09 | < 265 | 10/24/09 | < 246 | 11/25/09 | < 280 |
| | 09/20/09 | < 265 | 10/25/09 | < 263 | 11/26/09 | < 295 |
| | 09/21/09 | < 265 | 10/26/09 | < 263 | 11/27/09 | < 295 |
| | 09/22/09 | < 265 | 10/27/09 | < 249 | 11/28/09 | < 295 |
| | 09/23/09 | < 265 | 10/28/09 | < 269 | 11/29/09 | < 295 |
| | 09/24/09 | < 265 | 10/29/09 | < 269 | 12/02/09 | < 295 |
| | 09/25/09 | < 265 | 10/30/09 | < 269 | 12/03/09 | < 294 |
| | 09/26/09 | < 270 | 10/31/09 | < 269 | 12/04/09 | < 294 |
| | 09/27/09 | < 270 | 11/01/09 | < 269 | 12/05/09 | < 270 |
| | 09/28/09 | < 268 | 11/02/09 | < 269 | 12/06/09 | < 276 |
| | 09/29/09 | < 268 | 11/03/09 | < 269 | 12/07/09 | < 276 |
| | 09/30/09 | < 268 | 11/04/09 | < 269 | 12/08/09 | < 276 |
| | 10/01/09 | < 268 | 11/05/09 | < 270 | 12/09/09 | < 275 |
| | 10/02/09 | < 268 | 11/06/09 | < 269 | 12/10/09 | < 275 |
| | 10/03/09 | < 268 | 11/07/09 | < 253 | 12/11/09 | < 275 |
| | 10/04/09 | < 268 | 11/08/09 | < 253 | 12/12/09 | < 280 |
| | 10/05/09 | < 243 | 11/09/09 | < 255 | 12/13/09 | < 280 |
| | 10/06/09 | < 242 | 11/10/09 | < 254 | 12/14/09 | < 280 |
| | 10/07/09 | < 240 | 11/11/09 | < 255 | 12/15/09 | < 280 |
| | 10/08/09 | < 239 | 11/12/09 | < 294 | 12/16/09 | < 280 |
| | 10/09/09 | < 240 | 11/13/09 | < 294 | 12/17/09 | < 280 |
| | 10/10/09 | < 248 | 11/14/09 | < 294 | 12/18/09 | < 279 |
| | 10/11/09 | < 264 | 11/15/09 | < 294 | 12/19/09 | < 279 |
| | 10/12/09 | < 264 | 11/16/09 | < 294 | 12/20/09 | < 279 |
| | 10/13/09 | < 263 | 11/17/09 | < 294 | 12/21/09 | < 279 |
| | 10/14/09 | < 263 | 11/18/09 | < 294 | 12/22/09 | < 279 |
| | 10/15/09 | < 263 | 11/19/09 | < 267 | 12/23/09 | < 279 |
| | 10/19/09 | < 270 | 11/20/09 | < 267 | 12/24/09 | < 272 |
| | 10/20/09 | < 270 | 11/21/09 | < 267 | 12/25/09 | < 272 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Discharge Canal: U.S. Route 9 Bridge (SW-2) (continued)

| | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---------------------|----------|--------------------|----------|--------------------|----------|--------------------|
| MDA ¹ | | 300 | | 300 | | 300 |
| NJGWQS ² | | 20,000 | | 20,000 | | 20,000 |
| | 12/26/09 | < 272 | 01/27/10 | < 284 | 02/28/10 | < 286 |
| | 12/27/09 | < 272 | 01/28/10 | < 286 | 03/02/10 | < 272 |
| | 12/28/09 | < 272 | 01/29/10 | < 280 | 03/03/10 | < 272 |
| | 12/29/09 | < 272 | 01/30/10 | < 276 | 03/04/10 | < 272 |
| | 12/30/09 | < 268 | 01/31/10 | < 285 | 03/05/10 | < 272 |
| | 12/31/09 | < 268 | 02/01/10 | < 281 | 03/06/10 | < 257 |
| | 01/01/10 | < 268 | 02/02/10 | < 277 | 03/07/10 | < 246 |
| | 01/02/10 | < 267 | 02/03/10 | < 286 | 03/08/10 | < 243 |
| | 01/03/10 | < 267 | 02/04/10 | < 286 | 03/09/10 | < 241 |
| | 01/04/10 | < 296 | 02/05/10 | < 286 | 03/10/10 | < 244 |
| | 01/05/10 | < 296 | 02/06/10 | < 286 | 03/11/10 | < 268 |
| | 01/06/10 | < 296 | 02/07/10 | < 286 | 03/12/10 | < 275 |
| | 01/07/10 | < 296 | 02/08/10 | < 286 | 03/13/10 | < 268 |
| | 01/08/10 | < 296 | 02/09/10 | < 286 | 03/14/10 | < 271 |
| | 01/09/10 | < 296 | 02/10/10 | < 297 | 03/15/10 | < 271 |
| | 01/10/10 | < 286 | 02/11/10 | < 281 | 03/16/10 | < 270 |
| | 01/11/10 | < 275 | 02/12/10 | < 285 | 03/17/10 | < 271 |
| | 01/12/10 | < 275 | 02/13/10 | < 282 | 03/18/10 | < 274 |
| | 01/13/10 | < 286 | 02/14/10 | < 278 | 03/19/10 | < 272 |
| | 01/14/10 | < 286 | 02/15/10 | < 286 | 03/20/10 | < 277 |
| | 01/15/09 | < 286 | 02/16/10 | < 282 | 03/21/10 | < 272 |
| | 01/16/10 | < 285 | 02/17/10 | < 284 | 03/22/10 | < 275 |
| | 01/17/10 | < 285 | 02/18/10 | < 295 | 03/23/10 | < 271 |
| | 01/18/10 | < 285 | 02/19/10 | < 285 | 03/24/10 | < 271 |
| | 01/19/10 | < 234 | 02/20/10 | < 291 | 03/25/10 | < 271 |
| | 01/20/10 | < 275 | 02/21/10 | < 283 | 03/26/10 | < 271 |
| | 01/21/10 | < 275 | 02/22/10 | < 290 | 03/27/10 | < 271 |
| | 01/22/10 | < 275 | 02/23/10 | < 286 | 03/28/10 | < 271 |
| | 01/23/10 | < 275 | 02/24/10 | < 282 | 03/29/10 | < 271 |
| | 01/24/10 | < 275 | 02/25/10 | < 282 | 03/30/10 | < 274 |
| | 01/25/10 | < 275 | 02/26/10 | < 293 | 03/31/10 | < 277 |
| | 01/26/10 | < 275 | 02/27/10 | < 291 | 04/01/10 | < 277 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Discharge Canal: U.S. Route 9 Bridge (SW-2) (continued)

| | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---------------------|----------|--------------------|----------|--------------------|----------|--------------------|
| MDA ¹ | | 300 | | 300 | | 300 |
| NJGWQS ² | | 20,000 | | 20,000 | | 20,000 |
| | 04/02/10 | < 298 | 06/30/10 | < 140 | 07/30/10 | < 409 |
| | 04/03/10 | < 277 | 07/01/10 | < 420 | 07/31/10 | < 427 |
| | 04/04/10 | < 275 | 07/02/10 | < 423 | 08/01/10 | < 449 |
| | 04/05/10 | < 276 | 07/03/10 | < 426 | 08/02/10 | < 447 |
| | 04/06/10 | < 271 | 07/04/10 | < 422 | 08/03/10 | < 427 |
| | 04/07/10 | < 287 | 07/05/10 | < 424 | 08/04/10 | < 411 |
| | 04/08/10 | < 283 | 07/06/10 | < 411 | 08/05/10 | < 160 |
| | 04/09/10 | < 288 | 07/07/10 | < 429 | 08/06/10 | < 160 |
| | 04/10/10 | < 288 | 07/08/10 | < 417 | 08/07/10 | < 140 |
| | 04/11/10 | < 287 | 07/09/10 | < 422 | 08/08/10 | < 160 |
| | 04/12/10 | < 286 | 07/10/10 | < 424 | 08/09/10 | < 160 |
| | 04/13/10 | < 282 | 07/11/10 | < 402 | 08/10/10 | < 160 |
| | 04/14/10 | < 289 | 07/12/10 | < 389 | 08/11/10 | < 160 |
| | 04/15/10 | < 277 | 07/13/10 | < 422 | 08/12/10 | < 140 |
| | 04/16/10 | < 271 | 07/14/10 | < 437 | 08/13/10 | < 140 |
| | 04/17/10 | < 275 | 07/15/10 | < 446 | 08/14/10 | < 140 |
| | 04/18/10 | < 270 | 07/16/10 | < 443 | 08/15/10 | < 140 |
| | 04/29/10 | < 267 | 07/17/10 | < 448 | 08/16/10 | < 140 |
| | 04/30/10 | < 271 | 07/18/10 | < 460 | 08/17/10 | < 140 |
| | 05/01/10 | < 273 | 07/19/10 | < 454 | 08/18/10 | < 150 |
| | 05/02/10 | < 277 | 07/20/10 | < 432 | 08/19/10 | < 150 |
| | 05/03/10 | < 279 | 07/21/10 | < 460 | 08/20/10 | < 140 |
| | 05/04/10 | < 273 | 07/22/10 | < 450 | 08/21/10 | < 140 |
| | 06/24/10 | < 140 | 07/23/10 | < 459 | 08/22/10 | < 140 |
| | 06/25/10 | < 140 | 07/24/10 | < 452 | 08/23/10 | < 150 |
| | 06/26/10 | < 140 | 07/25/10 | < 451 | 08/24/10 | < 140 |
| | 06/27/10 | < 140 | 07/26/10 | < 457 | 08/25/10 | < 150 |
| | 06/28/10 | < 140 | 07/28/10 | < 446 | 08/26/10 | < 150 |
| | 06/29/10 | < 140 | 07/29/10 | < 416 | 08/27/10 | < 150 |

Note: Split sample results from 04/19/10 through 04/28/10 and from 05/05/10 through 06/23/10 were not available due to the closing of the BNE's contract laboratory.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Discharge Canal: U.S. Route 9 Bridge (SW-2) (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 08/28/10 | < 150 | 09/26/10 | < 130 | 10/29/10 | < 130 |
| | 08/29/10 | < 150 | 09/27/10 | < 130 | 10/30/10 | < 130 |
| | 08/30/10 | < 150 | 09/28/10 | < 130 | 10/31/10 | < 130 |
| | 08/31/10 | < 150 | 09/29/10 | < 130 | 11/01/10 | < 130 |
| | 09/01/10 | < 130 | 09/30/10 | < 120 | 11/02/10 | < 130 |
| | 09/02/10 | < 130 | 10/01/10 | < 120 | 11/03/10 | < 130 |
| | 09/03/10 | < 130 | 10/02/10 | < 120 | 11/04/10 | < 130 |
| | 09/04/10 | < 130 | 10/03/10 | < 120 | 11/05/10 | < 130 |
| | 09/05/10 | < 130 | 10/04/10 | < 120 | 11/06/10 | < 130 |
| | 09/06/10 | < 130 | 10/05/10 | < 120 | 11/07/10 | < 130 |
| | 09/07/10 | < 130 | 10/06/10 | < 140 | 11/08/10 | < 130 |
| | 09/08/10 | < 130 | 10/07/10 | < 140 | 11/09/10 | < 130 |
| | 09/09/10 | < 150 | 10/08/10 | < 140 | 11/10/10 | < 120 |
| | 09/10/10 | < 130 | 10/09/10 | < 140 | 11/11/10 | < 120 |
| | 09/11/10 | < 130 | 10/10/10 | < 140 | 11/12/10 | < 120 |
| | 09/12/10 | < 130 | 10/11/10 | < 140 | 11/13/10 | < 120 |
| | 09/13/10 | < 130 | 10/12/10 | < 140 | 11/14/10 | < 120 |
| | 09/14/10 | < 130 | 10/13/10 | < 140 | 11/15/10 | < 120 |
| | 09/15/10 | < 130 | 10/14/10 | < 140 | 11/16/10 | < 120 |
| | 09/16/10 | < 130 | 10/18/10 | < 140 | 11/17/10 | < 120 |
| | 09/17/10 | < 140 | 10/19/10 | < 140 | 11/18/10 | < 120 |
| | 09/18/10 | < 130 | 10/20/10 | < 140 | 11/19/10 | < 120 |
| | 09/19/10 | < 140 | 10/21/10 | < 140 | 11/20/10 | < 120 |
| | 09/20/10 | < 140 | 10/22/10 | < 140 | 11/21/10 | < 120 |
| | 09/21/10 | < 130 | 10/23/10 | < 140 | 11/22/10 | < 120 |
| | 09/22/10 | < 130 | 10/24/10 | < 140 | 11/23/10 | < 120 |
| | 09/23/10 | < 130 | 10/25/10 | < 140 | 11/24/10 | < 150 |
| | 09/24/10 | < 140 | 10/27/10 | < 130 | 11/25/10 | < 140 |
| | 09/25/10 | < 140 | 10/28/10 | < 130 | 11/26/10 | < 140 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Discharge Canal: U.S. Route 9 Bridge (SW-2) (continued)

| | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---------------------|-------------|----------------------------|-------------|----------------------------|-------------|----------------------------|
| MDA ¹ | | 300 | | 300 | | 300 |
| NJGWQS ² | | 20,000 | | 20,000 | | 20,000 |
| | 11/27/10 | < 140 | 12/29/10 | < 140 | 03/30/11 | < 140 |
| | 11/28/10 | < 140 | 12/30/10 | < 140 | 04/06/11 | < 154 |
| | 11/29/10 | < 140 | 12/31/10 | < 140 | 04/13/11 | < 254 |
| | 11/30/10 | < 140 | 01/01/11 | < 140 | 04/20/11 | < 223 |
| | 12/01/10 | < 140 | 01/02/11 | < 140 | 04/27/11 | 275 ± 149 |
| | 12/02/10 | < 140 | 01/03/11 | < 140 | 05/04/11 | < 242 |
| | 12/03/10 | < 140 | 01/04/11 | < 140 | 05/11/11 | < 197 |
| | 12/04/10 | < 140 | 01/05/11 | < 140 | 05/18/11 | < 149 |
| | 12/05/10 | < 140 | 01/06/11 | < 140 | 06/01/11 | < 199 |
| | 12/06/10 | < 140 | 01/07/11 | < 140 | 06/08/11 | < 151 |
| | 12/07/10 | < 140 | 01/08/11 | < 140 | 06/15/11 | < 226 |
| | 12/08/10 | < 150 | 01/09/11 | < 140 | 06/22/11 | < 146 |
| | 12/09/10 | < 140 | 01/10/11 | < 140 | 06/29/11 | < 152 |
| | 12/10/10 | < 140 | 01/11/11 | < 140 | 07/06/11 | < 149 |
| | 12/11/10 | < 140 | 01/12/11 | < 140 | 07/13/11 | < 183 |
| | 12/12/10 | < 140 | 01/13/11 | < 140 | 07/20/11 | < 188 |
| | 12/15/10 | < 140 | 01/14/11 | < 140 | 07/27/11 | < 216 |
| | 12/16/10 | < 140 | 01/16/11 | < 140 | 08/03/11 | < 214 |
| | 12/17/10 | < 140 | 01/17/11 | < 140 | 08/18/11 | < 142 |
| | 12/18/10 | < 140 | 01/19/11 | < 140 | 08/24/11 | < 142 |
| | 12/19/10 | < 140 | 01/26/11 | < 140 | 08/31/11 | < 219 |
| | 12/20/10 | < 140 | 02/02/11 | < 140 | 09/07/11 | < 218 |
| | 12/21/10 | < 140 | 02/09/11 | < 140 | 09/14/11 | < 282 |
| | 12/22/10 | < 140 | 02/16/11 | < 140 | 09/22/11 | < 279 |
| | 12/23/10 | < 140 | 02/23/11 | < 140 | 09/28/11 | < 266 |
| | 12/24/10 | < 140 | 03/02/11 | < 140 | 10/05/11 | < 285 |
| | 12/25/10 | < 140 | 03/09/11 | < 140 | 10/12/11 | < 234 |
| | 12/26/10 | < 140 | 03/16/11 | < 140 | 10/19/11 | < 232 |
| | 12/27/10 | < 140 | 03/23/11 | < 140 | 10/26/11 | < 237 |

Note: As of January 19, 2011, sampling frequency is weekly. Prior to this time, sample collection frequency was daily.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Discharge Canal: U.S. Route 9 Bridge (SW-2) (continued)

| | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---------------------|-------------|----------------------------|-------------|----------------------------|-------------|----------------------------|
| MDA ¹ | | 300 | | 300 | | 300 |
| NJGWQS ² | | 20,000 | | 20,000 | | 20,000 |
| | 11/02/11 | < 276 | | | | |
| | 11/09/11 | < 275 | | | | |
| | 11/16/11 | < 283 | | | | |
| | 11/23/11 | < 162 | | | | |
| | 11/30/11 | < 159 | | | | |
| | 12/07/11 | < 208 | | | | |
| | 12/14/11 | < 203 | | | | |
| | 12/21/11 | < 200 | | | | |
| | 12/28/11 | < 199 | | | | |
| | 01/04/12 | < 247 | | | | |
| | 01/11/12 | < 243 | | | | |
| | 01/18/12 | < 212 | | | | |
| | 01/25/12 | < 181 | | | | |
| | 06/19/12 | < 268 | | | | |
| | 12/18/13 | < 206 | | | | |
| | 01/15/14 | < 228 | | | | |
| | 07/17/14 | < 259 | | | | |
| | 10/14/14 | < 240 | | | | |
| | 01/12/15 | < 273 | | | | |
| | 04/13/15 | < 240 | | | | |
| | 07/13/15 | < 211 | | | | |
| | 10/12/15 | < 212 | | | | |
| | 01/19/16 | < 204 | | | | |
| | 04/04/16 | < 205 | | | | |
| | 07/18/16 | < 230 | | | | |
| | 04/03/17 | < 216 | | | | |
| | 10/12/17 | < 220 | | | | |
| | 01/22/18 | < 254 | | | | |

Note: As of the first quarter 2018, this location is no longer sampled as part of the RGPP. However, Surface Water split sampling at this location is conducted as part of the site's Radiological Environmental Monitoring Program (REMP) quarterly. Results of the BNE split sample results can be found on the NJDEP website at, <https://www.state.nj.us/dep/rpp/bne/esmr.htm>

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Intake Canal (SW-1)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 04/27/09 | < 276 | 07/16/09 | < 288 | 08/16/09 | < 263 |
| | 04/28/09 | < 277 | 07/17/09 | < 283 | 08/17/09 | < 263 |
| | 04/29/09 | < 276 | 07/18/09 | < 282 | 08/18/09 | < 263 |
| | 05/05/09 | < 293 | 07/19/09 | < 280 | 08/19/09 | < 263 |
| | 05/12/09 | < 275 | 07/20/09 | < 284 | 08/20/09 | < 274 |
| | 05/19/09 | < 269 | 07/21/09 | < 281 | 08/21/09 | < 274 |
| | 05/26/09 | < 273 | 07/22/09 | < 243 | 08/22/09 | < 274 |
| | 06/02/09 | < 271 | 07/23/09 | < 242 | 08/23/09 | < 274 |
| | 06/08/09 | < 279 | 07/24/09 | < 238 | 08/24/09 | < 274 |
| | 06/15/09 | < 284 | 07/25/09 | < 237 | 08/25/09 | < 274 |
| | 06/22/09 | < 287 | 07/26/09 | < 241 | 08/26/09 | < 274 |
| | 06/26/09 | < 288 | 07/27/09 | < 239 | 08/27/09 | < 265 |
| | 06/27/09 | < 266 | 07/28/09 | < 239 | 08/28/09 | < 265 |
| | 06/28/09 | < 268 | 07/29/09 | < 251 | 08/29/09 | < 265 |
| | 06/29/09 | < 265 | 07/30/09 | < 262 | 08/30/09 | < 265 |
| | 06/30/09 | < 266 | 07/31/09 | < 262 | 08/31/09 | < 265 |
| | 07/01/09 | < 266 | 08/01/09 | < 262 | 09/01/09 | < 265 |
| | 07/02/09 | < 273 | 08/02/09 | < 262 | 09/02/09 | < 265 |
| | 07/03/09 | < 268 | 08/03/09 | < 262 | 09/03/09 | < 266 |
| | 07/04/09 | < 285 | 08/04/09 | < 262 | 09/04/09 | < 266 |
| | 07/05/09 | < 285 | 08/05/09 | < 262 | 09/05/09 | < 266 |
| | 07/06/09 | < 283 | 08/06/09 | < 267 | 09/06/09 | < 266 |
| | 07/07/09 | < 285 | 08/07/09 | < 267 | 09/07/09 | < 266 |
| | 07/08/09 | < 287 | 08/08/09 | < 267 | 09/08/09 | < 266 |
| | 07/09/09 | < 285 | 08/09/09 | < 267 | 09/09/09 | < 265 |
| | 07/10/09 | < 278 | 08/10/09 | < 267 | 09/10/09 | < 265 |
| | 07/11/09 | < 275 | 08/11/09 | < 267 | 09/11/09 | < 265 |
| | 07/12/09 | < 274 | 08/12/09 | < 267 | 09/12/09 | < 265 |
| | 07/13/09 | < 276 | 08/13/09 | < 267 | 09/13/09 | < 265 |
| | 07/14/09 | < 218 | 08/14/09 | < 263 | 09/14/09 | < 265 |
| | 07/15/09 | < 277 | 08/15/09 | < 263 | 09/15/09 | < 265 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Intake Canal (SW-1) (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 09/16/09 | < 265 | 10/21/09 | < 270 | 11/21/09 | < 267 |
| | 09/17/09 | < 265 | 10/22/09 | < 247 | 11/22/09 | < 267 |
| | 09/18/09 | < 265 | 10/23/09 | < 247 | 11/23/09 | < 267 |
| | 09/19/09 | < 265 | 10/24/09 | < 244 | 11/24/09 | < 267 |
| | 09/20/09 | < 265 | 10/27/09 | < 248 | 11/25/09 | < 280 |
| | 09/21/09 | < 265 | 10/25/09 | < 263 | 11/26/09 | < 295 |
| | 09/22/09 | < 265 | 10/26/09 | < 263 | 11/27/09 | < 295 |
| | 09/23/09 | < 265 | 10/27/09 | < 248 | 11/28/09 | < 295 |
| | 09/24/09 | < 265 | 10/28/09 | < 269 | 11/29/09 | < 295 |
| | 09/25/09 | < 265 | 10/29/09 | < 269 | 12/02/09 | < 295 |
| | 09/26/09 | < 265 | 10/30/09 | < 269 | 12/03/09 | < 294 |
| | 09/27/09 | < 270 | 10/31/09 | < 269 | 12/04/09 | < 294 |
| | 09/28/09 | < 268 | 11/01/09 | < 269 | 12/05/09 | < 270 |
| | 09/29/09 | < 268 | 11/02/09 | < 269 | 12/06/09 | < 266 |
| | 09/30/09 | < 268 | 11/03/09 | < 269 | 12/07/09 | < 276 |
| | 10/01/09 | < 268 | 11/04/09 | < 269 | 12/08/09 | < 276 |
| | 10/02/09 | < 268 | 11/05/09 | < 269 | 12/09/09 | < 275 |
| | 10/03/09 | < 268 | 11/06/09 | < 269 | 12/10/09 | < 275 |
| | 10/04/09 | < 268 | 11/07/09 | < 269 | 12/11/09 | < 275 |
| | 10/05/09 | < 241 | 11/08/09 | < 252 | 12/12/09 | < 280 |
| | 10/06/09 | < 238 | 11/09/09 | < 252 | 12/13/09 | < 280 |
| | 10/07/09 | < 239 | 11/10/09 | < 254 | 12/14/09 | < 280 |
| | 10/08/09 | < 239 | 11/11/09 | < 253 | 12/15/09 | < 280 |
| | 10/09/09 | < 241 | 11/12/09 | < 294 | 12/16/09 | < 280 |
| | 10/10/09 | < 241 | 11/13/09 | < 294 | 12/17/09 | < 280 |
| | 10/11/09 | < 240 | 11/14/09 | < 294 | 12/18/09 | < 279 |
| | 10/12/09 | < 264 | 11/15/09 | < 294 | 12/19/09 | < 279 |
| | 10/13/09 | < 263 | 11/16/09 | < 294 | 12/20/09 | < 279 |
| | 10/14/09 | < 263 | 11/17/09 | < 294 | 12/21/09 | < 279 |
| | 10/15/09 | < 263 | 11/18/09 | < 294 | 12/22/09 | < 279 |
| | 10/19/09 | < 270 | 11/19/09 | < 267 | 12/23/09 | < 279 |
| | 10/20/09 | < 270 | 11/20/09 | < 267 | 12/24/09 | < 272 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Intake Canal (SW-1) (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 12/25/09 | < 272 | 01/26/10 | < 275 | 02/27/10 | < 290 |
| | 12/26/09 | < 272 | 01/27/10 | < 277 | 02/28/10 | < 286 |
| | 12/27/09 | < 272 | 01/28/10 | < 286 | 03/01/10 | < 273 |
| | 12/28/09 | < 272 | 01/29/10 | < 281 | 03/02/10 | < 272 |
| | 12/29/09 | < 272 | 01/30/10 | < 278 | 03/03/10 | < 272 |
| | 12/30/09 | < 272 | 01/31/10 | < 282 | 03/04/10 | < 272 |
| | 12/31/09 | < 268 | 02/01/10 | < 285 | 03/05/10 | < 272 |
| | 01/01/10 | < 268 | 02/02/10 | < 285 | 03/06/10 | < 238 |
| | 01/02/10 | < 267 | 02/03/10 | < 286 | 03/07/10 | < 248 |
| | 01/03/10 | < 267 | 02/04/10 | < 286 | 03/08/10 | < 243 |
| | 01/04/10 | < 296 | 02/05/10 | < 286 | 03/09/10 | < 241 |
| | 01/05/10 | < 296 | 02/06/10 | < 286 | 03/10/10 | < 242 |
| | 01/06/10 | < 296 | 02/07/10 | < 286 | 03/11/10 | < 268 |
| | 01/07/10 | < 296 | 02/08/10 | < 286 | 03/12/10 | < 274 |
| | 01/08/10 | < 296 | 02/09/10 | < 278 | 03/13/10 | < 266 |
| | 01/09/10 | < 296 | 02/10/10 | < 292 | 03/14/10 | < 276 |
| | 01/10/10 | < 286 | 02/11/10 | < 293 | 03/15/10 | < 270 |
| | 01/11/10 | < 275 | 02/12/10 | < 291 | 03/16/10 | < 270 |
| | 01/12/10 | < 275 | 02/13/10 | < 282 | 03/17/10 | < 268 |
| | 01/13/10 | < 286 | 02/14/10 | < 275 | 03/18/10 | < 279 |
| | 01/14/10 | < 286 | 02/15/10 | < 288 | 03/19/10 | < 275 |
| | 01/15/09 | < 286 | 02/16/10 | < 292 | 03/20/10 | < 276 |
| | 01/16/10 | < 285 | 02/17/10 | < 288 | 03/21/10 | < 274 |
| | 01/17/10 | < 285 | 02/18/10 | < 282 | 03/22/10 | < 275 |
| | 01/18/10 | < 285 | 02/19/10 | < 282 | 03/23/10 | < 271 |
| | 01/19/10 | < 232 | 02/20/10 | < 291 | 03/24/10 | < 271 |
| | 01/20/10 | < 275 | 02/21/10 | < 289 | 03/25/10 | < 271 |
| | 01/21/10 | < 275 | 02/22/10 | < 291 | 03/26/10 | < 271 |
| | 01/22/10 | < 275 | 02/23/10 | < 265 | 03/27/10 | < 271 |
| | 01/23/10 | < 275 | 02/24/10 | < 283 | 03/28/10 | < 271 |
| | 01/24/10 | < 275 | 02/25/10 | < 283 | 03/29/10 | < 271 |
| | 01/25/10 | < 275 | 02/26/10 | < 295 | 03/30/10 | < 281 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Intake Canal (SW-1) (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 03/31/10 | < 275 | 04/30/10 | < 279 | 07/10/10 | < 421 |
| | 04/01/10 | < 281 | 05/01/10 | < 276 | 07/11/10 | < 396 |
| | 04/02/10 | < 275 | 05/02/10 | < 277 | 07/12/10 | < 394 |
| | 04/03/10 | < 271 | 05/03/10 | < 276 | 07/13/10 | < 425 |
| | 04/04/10 | < 276 | 05/04/10 | < 275 | 07/14/10 | < 439 |
| | 04/05/10 | < 276 | 05/05/10 | < 272 | 07/15/10 | < 439 |
| | 04/06/10 | < 272 | 05/06/10 | < 274 | 07/16/10 | < 436 |
| | 04/07/10 | < 270 | 05/07/10 | < 274 | 07/17/10 | < 452 |
| | 04/08/10 | < 281 | 05/08/10 | < 271 | 07/18/10 | < 437 |
| | 04/09/10 | < 270 | 05/09/10 | < 273 | 07/19/10 | < 462 |
| | 04/10/10 | < 269 | 05/10/10 | < 271 | 07/20/10 | < 459 |
| | 04/11/10 | < 266 | 05/11/10 | < 272 | 07/21/10 | < 456 |
| | 04/12/10 | < 271 | 06/23/10 | < 140 | 07/22/10 | < 461 |
| | 04/13/10 | < 270 | 06/24/10 | < 140 | 07/23/10 | < 455 |
| | 04/14/10 | < 267 | 06/25/10 | < 140 | 07/24/10 | < 461 |
| | 04/15/10 | < 243 | 06/26/10 | < 140 | 07/25/10 | < 447 |
| | 04/16/10 | < 267 | 06/27/10 | < 140 | 07/26/10 | < 444 |
| | 04/17/10 | < 263 | 06/28/10 | < 140 | 07/27/10 | < 444 |
| | 04/18/10 | < 265 | 06/29/10 | < 140 | 07/28/10 | < 441 |
| | 04/21/10 | < 279 | 06/30/10 | < 140 | 07/29/10 | < 433 |
| | 04/22/10 | < 279 | 07/01/10 | < 420 | 07/30/10 | < 420 |
| | 04/23/10 | < 278 | 07/02/10 | < 422 | 07/31/10 | < 421 |
| | 04/24/10 | < 278 | 07/03/10 | < 422 | 08/01/10 | < 436 |
| | 04/25/10 | < 277 | 07/04/10 | < 426 | 08/02/10 | < 445 |
| | 04/26/10 | < 279 | 07/05/10 | < 423 | 08/03/10 | < 447 |
| | 04/27/10 | < 275 | 07/06/10 | < 425 | 08/04/10 | < 427 |
| | 04/28/10 | < 279 | 07/07/10 | < 417 | 08/05/10 | < 160 |
| | 04/29/10 | < 277 | 07/09/10 | < 418 | 08/06/10 | < 160 |

Note: Split sample results from 05/12/10 through 06/22/10 were not available due to the closing of the BNE contract laboratory.

Samples for 04/19/10 and 04/20/10 were unavailable due to leakage in transport to the BNE contract lab.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Intake Canal (SW-1) (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 08/07/10 | < 160 | 10/11/10 | < 140 | 04/27/11 | < 227 |
| | 08/08/10 | < 160 | 10/21/10 | < 140 | 05/04/11 | < 241 |
| | 08/09/10 | < 160 | 10/28/10 | < 130 | 05/11/11 | < 197 |
| | 08/10/10 | < 160 | 11/03/10 | < 130 | 05/18/11 | < 149 |
| | 08/11/10 | < 160 | 11/10/10 | < 130 | 06/01/11 | < 198 |
| | 08/12/10 | < 140 | 11/17/10 | < 120 | 06/08/11 | < 145 |
| | 08/13/10 | < 140 | 11/24/10 | < 140 | 06/15/11 | < 186 |
| | 08/14/10 | < 140 | 12/01/10 | < 140 | 06/22/11 | < 222 |
| | 08/15/10 | < 140 | 12/08/10 | < 140 | 06/29/11 | < 155 |
| | 08/16/10 | < 140 | 12/15/10 | < 140 | 07/06/11 | < 154 |
| | 08/18/10 | < 140 | 12/22/10 | < 140 | 07/13/11 | < 185 |
| | 08/19/10 | < 140 | 12/30/10 | < 140 | 07/20/11 | < 191 |
| | 08/20/10 | < 150 | 01/05/11 | < 140 | 07/27/11 | < 214 |
| | 08/21/10 | < 150 | 01/12/11 | < 140 | 08/03/11 | < 211 |
| | 08/22/10 | < 140 | 01/19/11 | < 140 | 08/18/11 | < 177 |
| | 08/23/10 | < 140 | 01/26/11 | < 140 | 08/24/11 | < 134 |
| | 08/24/10 | < 140 | 02/02/11 | < 150 | 09/01/11 | < 216 |
| | 08/25/10 | < 150 | 02/09/11 | < 140 | 09/07/11 | < 194 |
| | 08/26/10 | < 150 | 02/16/11 | < 140 | 09/14/11 | < 276 |
| | 08/27/10 | < 150 | 02/23/11 | < 140 | 09/22/11 | < 286 |
| | 08/28/10 | < 150 | 03/02/11 | < 140 | 09/28/11 | < 287 |
| | 08/29/10 | < 150 | 03/09/11 | < 140 | 10/05/11 | < 280 |
| | 09/01/10 | < 150 | 03/16/11 | < 140 | 10/12/11 | < 238 |
| | 09/08/10 | < 130 | 03/23/11 | < 140 | 10/19/11 | < 233 |
| | 09/15/10 | < 130 | 03/30/11 | < 140 | 10/26/11 | < 238 |
| | 09/22/10 | < 130 | 04/06/11 | < 154 | 11/02/11 | < 277 |
| | 09/29/10 | < 130 | 04/13/11 | < 256 | 11/09/11 | < 278 |
| | 10/06/10 | < 120 | 04/20/11 | < 231 | 11/16/11 | < 276 |

Note: As of September 1, 2010, sampling frequency is weekly. Prior to this time, sample collection frequency was daily.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Intake Canal (SW-1) (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 11/23/11 | < 161 | 07/11/12 | < 163 | 03/20/13 | < 175 |
| | 11/30/11 | < 162 | 07/18/12 | < 170 | 03/27/13 | < 171 |
| | 12/07/11 | < 203 | 07/25/12 | < 226 | 04/03/13 | < 171 |
| | 12/14/11 | < 196 | 08/01/12 | < 228 | 04/10/13 | < 154 |
| | 12/21/11 | < 199 | 08/16/12 | < 186 | 04/17/13 | < 147 |
| | 12/28/11 | < 200 | 08/22/12 | < 184 | 04/24/13 | < 155 |
| | 01/04/12 | < 249 | 08/29/12 | < 178 | 05/01/13 | < 155 |
| | 01/11/12 | < 211 | 09/05/12 | < 185 | 05/08/13 | < 158 |
| | 01/18/12 | < 214 | 09/12/12 | < 188 | 05/15/13 | < 156 |
| | 01/25/12 | < 186 | 09/19/12 | < 182 | 05/22/13 | < 151 |
| | 02/01/12 | < 182 | 09/26/12 | < 176 | 05/29/13 | < 152 |
| | 02/08/12 | < 181 | 10/03/12 | < 209 | 06/05/13 | < 157 |
| | 02/15/12 | < 238 | 10/10/12 | < 207 | 06/12/13 | < 154 |
| | 02/22/12 | < 240 | 10/17/12 | < 206 | 06/19/13 | < 148 |
| | 02/29/12 | < 241 | 10/24/12 | < 204 | 06/26/13 | < 151 |
| | 03/07/12 | < 246 | 12/20/12 | < 267 | 07/03/13 | < 148 |
| | 03/14/12 | < 244 | 12/26/12 | < 273 | 07/10/13 | < 147 |
| | 03/21/12 | < 195 | 01/02/13 | < 270 | 07/17/13 | < 289 |
| | 03/28/12 | < 199 | 01/09/13 | < 271 | 07/24/13 | < 296 |
| | 04/04/12 | < 196 | 01/16/13 | < 264 | 07/31/13 | < 294 |
| | 04/11/12 | < 212 | 01/23/13 | < 273 | 08/07/13 | < 293 |
| | 04/18/12 | < 197 | 01/30/13 | < 272 | 08/14/13 | < 251 |
| | 04/25/12 | < 253 | 02/06/13 | < 266 | 08/21/13 | < 251 |
| | 05/02/12 | < 243 | 02/13/13 | < 228 | 08/28/13 | < 255 |
| | 05/09/12 | < 250 | 02/20/13 | < 218 | 09/04/13 | < 253 |
| | 06/21/12 | < 298 | 02/27/13 | < 225 | 09/11/13 | < 248 |
| | 06/27/12 | < 258 | 03/06/13 | < 236 | 09/18/13 | < 219 |
| | 07/04/12 | < 181 | 03/13/13 | < 169 | 09/25/13 | < 201 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Intake Canal (SW-1) (continued)

| MDA ¹ NJGWQS ² | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---|----------|--------------------|----------|--------------------|----------|--------------------|
| | | 300 20,000 | | 300 20,000 | | 300 20,000 |
| | 10/02/13 | < 200 | 06/25/14 | < 197 | 06/17/15 | < 273 |
| | 10/09/13 | < 200 | 07/02/14 | < 251 | 06/24/15 | < 224 |
| | 10/16/13 | < 231 | 07/09/14 | < 260 | 07/01/15 | < 225 |
| | 10/23/13 | < 229 | 07/16/14 | < 259 | 07/08/15 | < 227 |
| | 10/30/13 | < 233 | 07/23/14 | < 239 | 07/15/15 | < 221 |
| | 11/06/13 | < 237 | 07/30/14 | < 244 | 07/22/15 | < 255 |
| | 11/13/13 | < 231 | 08/06/14 | < 243 | 07/29/15 | < 190 |
| | 11/20/13 | < 231 | 08/13/14 | < 243 | 08/05/15 | < 188 |
| | 11/27/13 | < 220 | 08/20/14 | < 237 | 08/12/15 | < 210 |
| | 12/04/13 | < 220 | 08/27/14 | < 259 | 08/19/15 | < 206 |
| | 12/11/13 | < 220 | 09/03/14 | < 259 | 08/26/15 | < 230 |
| | 12/19/13 | < 228 | 09/10/14 | < 260 | 09/02/15 | < 266 |
| | 12/27/13 | < 230 | 11/26/14 | < 244 | 09/09/15 | < 282 |
| | 01/15/14 | < 228 | 12/03/14 | < 257 | 09/16/15 | < 279 |
| | 03/12/14 | < 210 | 12/10/14 | < 247 | 09/23/15 | < 217 |
| | 03/19/14 | < 210 | 12/17/14 | < 246 | 09/30/15 | < 214 |
| | 03/27/14 | < 231 | 12/24/14 | < 248 | 10/07/15 | < 206 |
| | 04/02/14 | < 247 | 12/31/14 | < 243 | 10/14/15 | < 213 |
| | 04/09/14 | < 242 | 01/07/15 | < 246 | 10/21/15 | < 227 |
| | 04/16/14 | < 246 | 01/14/15 | < 245 | 10/28/15 | < 222 |
| | 04/23/14 | < 239 | 01/21/15 | < 282 | 11/04/15 | < 200 |
| | 05/01/14 | < 248 | 01/30/15 | < 277 | 11/11/15 | < 232 |
| | 05/07/14 | < 243 | 04/29/15 | < 224 | 11/18/15 | < 229 |
| | 05/14/14 | < 241 | 05/06/15 | < 243 | 11/25/15 | < 218 |
| | 05/21/14 | < 242 | 05/13/15 | < 219 | 12/02/15 | < 222 |
| | 05/28/14 | < 187 | 05/20/15 | < 222 | 12/09/15 | < 226 |
| | 06/04/14 | < 189 | 05/27/15 | < 290 | 12/16/15 | < 218 |
| | 06/11/14 | < 230 | 06/03/15 | < 281 | 12/23/15 | < 228 |
| | 06/18/14 | < 200 | 06/10/15 | < 278 | 12/30/15 | < 195 |

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 2: Surface Water (continued)

Intake Canal (SW-1) (continued)

| | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) | Date | Tritium (pCi/L) |
|---------------------|-------------|----------------------------|-------------|----------------------------|-------------|----------------------------|
| MDA ¹ | | 300 | | 300 | | 300 |
| NJGWQS ² | | 20,000 | | 20,000 | | 20,000 |
| | 01/06/16 | < 196 | | | | |
| | 01/13/16 | < 193 | | | | |
| | 01/20/16 | < 203 | | | | |
| | 04/08/16 | < 275 | | | | |
| | 07/06/16 | < 218 | | | | |
| | 11/29/16 | < 209 | | | | |
| | 01/09/17 | < 245 | | | | |
| | 04/05/17 | < 232 | | | | |
| | 07/10/17 | < 219 | | | | |
| | 01/22/18 | < 264 | | | | |
| | 04/18/18 | < 208 | | | | |
| | 08/01/18 | < 195 | | | | |
| | 10/24/18 | < 207 | | | | |
| | 01/16/19 | < 217 | | | | |
| | 04/15/19 | < 191 | | | | |
| | 08/08/19 | < 282 | | | | |
| | 10/07/19 | < 192 | | | | |
| | 01/27/20 | < 239 | | | | |
| | 05/18/20 | < 224 | | | | |
| | 08/17/20 | < 226 | | | | |
| | 10/12/20 | < 215 | | | | |
| | 02/08/21 | < 168 | | | | |
| | 05/03/21 | < 257 | | | | |
| | 07/28/21 | < 295 | | | | |
| | 10/18/21 | < 251 | | | | |
| | 04/24/22 | < 177 | | | | |
| | 10/26/22 | < 209 | | | | |
| | 04/24/23 | < 246 | | | | |

- As of February 1, 2016, sampling frequency is quarterly. Prior to this time, sample collection frequency was weekly.

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.

² New Jersey Groundwater Quality Standards (NJGWQS) are the same as the New Jersey Surface Water Quality Standards and the US Environmental Protection Agency drinking water standards for radionuclides

State of New Jersey – Bureau of Nuclear Engineering

**Investigation of Tritium found in Onsite Vault
At the Oyster Creek Nuclear Generating Station**

BNE Split Sample Results

Table 3: Well Core Soil Samples

| Soil ID | Sample Date | Co-58 | Co-60 | Cs-134 | Cs-137 |
|------------------|--------------------|--------------|--------------|---------------|---------------|
| MDA ¹ | | 30 | 30 | 150 | 180 |
| MW-50 | 04/21/09 | < 18 | < 13 | < 12 | < 13 |
| MW-51 | 04/22/09 | < 13 | < 10 | < 9 | < 10 |
| MW-52 | 04/23/09 | < 20 | < 12 | < 12 | < 14 |
| MW-53 | 04/24/09 | < 18 | < 12 | < 12 | < 12 |
| MW-54 | 04/24/09 | < 19 | < 12 | < 11 | < 14 |
| MW-55 | 05/26/09 | < 15 | < 13 | < 13 | < 14 |
| MW-58I* | 07/01/10 | < 37 | < 23 | < 32 | < 32 |
| MW-59 | 03/16/10 | < 28 | < 18 | < 22 | < 22 |
| MW-60I* | 06/30/10 | < 43 | < 38 | < 36 | < 39 |
| MW-62 | 03/04/10 | < 8 | < 7 | < 9 | < 8 |
| MW-63I* | 07/02/10 | < 51 | < 43 | < 40 | < 43 |
| MW-64 | 02/23/10 | < 7 | < 5 | < 6 | < 7 |
| MW-65 | 03/01/10 | < 6 | < 5 | < 6 | < 6 |
| MW-66I* | 06/25/10 | < 62 | < 51 | < 43 | < 41 |
| MW-67 | 03/03/10 | < 7 | < 7 | < 6 | < 7 |
| MW-68I* | 06/23/10 | < 47 | < 33 | < 42 | < 54 |
| MW-69I* | 06/28/10 | < 93 | < 113 | < 67 | < 88 |
| MW-70I* | 06/27/10 | < 93 | < 83 | < 68 | < 70 |
| MW-71* | 07/20/10 | < 27 | < 31 | < 29 | < 33 |
| MW-73 | 09/27/10 | < 24 | < 13 | < 18 | < 12 |

* The minimum detectable activity achieved for these samples was higher due to an insufficient sample size sent to the BNE contract laboratory (Eberline Services and GEL Laboratories) for analysis.

- Results in picoCuries per kilogram (pCi/kg) - DRY
- Soil samples are composite soil boring samples from the surface down to approximately the depth of each boring during the associated well construction

¹ The Minimum Detectable Activity (MDA) is the smallest amount of radioactivity in a sample that can be detected with a 5% probability of erroneously detecting radioactivity, when, in fact, none was present, also, a 5% probability of not detecting radioactivity, when in fact it is present.