

**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 collected 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-1I-1A, MW-1I-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.

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 fourteen (14) monitoring wells. There was no change in sample frequency for the five (5) monitoring wells sampled annually.

Starting in 2024, with the remediation of tritium in groundwater completed, based on the trend in historic groundwater data and the current Oyster Creek decommissioning status, the RGPP split sampling with the BNE was reduced from nineteen (19) to six (6) monitoring wells starting in 2024. In addition, sampling frequency has been reduced for all wells to annual. The BNE currently receives split samples from Monitoring Wells MW-56I, MW-67, W-71, W-72, W-12, and W-13. A map showing the current RGPP network is [available for download here](#).

### 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>.

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**State of New Jersey – Bureau of Nuclear Engineering**

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup> NJGWQS <sup>2</sup>				300 20,000		300 20,000
MW-15K-1A <i>(continued)</i>	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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
MW-15K-1A <i>(continued)</i>	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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
MW-15K-1A (continued)	18.5	Cape May	10/17/23	< 221		

- 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.
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.



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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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, the 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.

<sup>1</sup> 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.

<sup>2</sup> 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.



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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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  
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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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

**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
MW-54 <i>(continued)</i>	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
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.

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

**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
MW-55 <i>(continued)</i>	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	10/17/23	< 221
			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.
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.



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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**Investigation of Tritium found in Onsite Vault  
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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
MW-56I <i>(continued)</i>	51.9	Cohansey	01/20/16	2,520 ± 357	10/17/23	< 231
			04/05/16	2,910 ± 221	04/16/24	< 206
			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.
- In 2024 split sampling frequency was changed from semi-annual to annual.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**Investigation of Tritium found in Onsite Vault  
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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup> NJGWQS <sup>2</sup>				300 20,000		300 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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
MW-57I <i>(continued)</i>	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		
			10/17/23	< 221		

- 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.
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**Investigation of Tritium found in Onsite Vault  
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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.



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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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	10/17/23	< 223
			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.
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
MW-61I <i>(continued)</i>	72.0	Cohansey	07/28/21	< 296		
			10/19/21	200 ± 133		
			04/26/22	< 172		
			10/25/22	< 212		
			04/18/23	< 246		
			10/17/23	< 221		

- 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.
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.

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

**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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

**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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	10/17/23	< 221
			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.
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.

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

**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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At the Oyster Creek Nuclear Generating Station**

**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.



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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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	10/17/23	< 221
			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.
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
MW-65 <i>(continued)</i>	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	10/17/23	< 221
			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.
- In 2024, split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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		
			10/17/23	< 222		
			04/16/24	< 202		

- 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.
- In 2024 split sampling frequency was changed from semi-annual to annual.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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



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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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	10/18/23	< 223
			04/07/16	< 238	04/16/24	< 204
			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.
- In 2024, split sampling frequency was changed from semi-annual to annual.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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	10/18/23	< 221
			04/06/16	< 237	04/17/24	< 222
			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.
- In 2024, split sampling frequency was changed from semi-annual to annual.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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

**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.



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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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**Investigation of Tritium found in Onsite Vault  
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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**Investigation of Tritium found in Onsite Vault  
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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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>

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.

<sup>1</sup> 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.

<sup>2</sup> 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

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
W-3 <i>(continued)</i>	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	10/17/23	< 221
			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.
- In 2024 split sampling of this well with the BNE was discontinued

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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)

<sup>1</sup> 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.

<sup>2</sup> 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.



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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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.
- In 2024 split sampling of this well with the BNE was discontinued

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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)

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
W-5 <i>(continued)</i>	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		
			10/17/23	< 221		

- 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.
- In 2024 split sampling of this well with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				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)

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
W-6 <i>(continued)</i>	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.
- In 2024 split sampling of this well with the BNE was discontinued

<sup>1</sup> 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.

<sup>2</sup> 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.

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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 <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
W-12	20.0	Cape May	04/17/24	< 204		

- Results in picocuries per liter (pCi/L)
- Split sampling of monitoring Well W-12 commenced in 2024. The sample frequency is annual.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

<b>Well ID</b>	<b>Well Depth (ft)</b>	<b>Aquifer</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>	<b>Sample Date</b>	<b>Tritium (H-3) (pCi/L)</b>
MDA <sup>1</sup>				300		300
NJGWQS <sup>2</sup>				20,000		20,000
W-13	50.0	Cohansey	04/17/24	< 201		

- Results in picocuries per liter (pCi/L)
- Split sampling of monitoring Well W-12 commenced in 2024. The sample frequency is annual.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 1: Groundwater Monitoring Wells (continued)**

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

<sup>1</sup> 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.

<sup>2</sup> 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.



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**BNE Split Sample Results**

**Table 2: Surface Water**

**Main Condenser Discharge Sampling Point**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		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

<sup>1</sup> 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.

<sup>2</sup> 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.

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**BNE Split Sample Results**

**Table 2: Surface Water (continued)**

**Main Condenser Discharge Sampling Point (continued)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		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	< 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

<sup>1</sup> 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.

<sup>2</sup> 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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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

<sup>1</sup> 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.

<sup>2</sup> 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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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.

<sup>1</sup> 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.

<sup>2</sup> 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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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.

<sup>1</sup> 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.

<sup>2</sup> 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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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

<sup>1</sup> 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.

<sup>2</sup> 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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		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

<sup>1</sup> 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.

<sup>2</sup> 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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		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

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		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

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		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>

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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

<sup>1</sup> 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.

<sup>2</sup> 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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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

<sup>1</sup> 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.

<sup>2</sup> 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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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.

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		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

<sup>1</sup> 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.

<sup>2</sup> 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.

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**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)**

	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>	<b>Date</b>	<b>Tritium (pCi/L)</b>
MDA <sup>1</sup>		300		300		300
NJGWQS <sup>2</sup>		20,000		20,000		20,000
	01/06/16	< 196	10/16/23	< 221		
	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.
- In 2022 split sampling frequency was reduced from quarterly to semi-annually
- In 2024, split sampling of with the BNE was discontinued.

<sup>1</sup> 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.

<sup>2</sup> 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.

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

**BNE Split Sample Results**

**Table 3: Well Core Soil Samples**

<b>Soil ID</b>	<b>Sample Date</b>	<b>Co-58</b>	<b>Co-60</b>	<b>Cs-134</b>	<b>Cs-137</b>
MDA <sup>1</sup>		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.

<sup>1</sup> 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.