Docket No: 50-219

OYSTER CREEK GENERATING STATION
UNIT 1

Annual Radiological
Groundwater Protection Program Report

1 January through 31 December 2016

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I. Summary and Conclusions

This report on the Radiological Groundwater Protection Program (RGPP) conducted for the Oyster Creek Generating Station (OCGS) by Exelon Generation Company LLC (Exelon) covers the period 01 January 2016 through 31 December 2016.

This report covers groundwater and surface water samples collected from the environment, both on and off station property in 2016. In 2016, 772 analyses were performed on 277 samples from 69 locations.

There were three inadvertent releases of contaminated water into the groundwater during 2009. There is a plume located west of the turbine building and is monitored via a series of monitoring wells.

Gamma-emitting radionuclide Potassium-40 (K-40) was detected in 1 of the 69 groundwater well samples. The concentration was 114 pCi/L. K-40 was detected in 36 of 36 surface water samples. The concentrations ranged from 167 to 469 pCi/L.

In the case of tritium, Exelon specified that its laboratories achieve a lower limit of detection 100 times lower than the drinking water limit specified by the United States Environmental Protection Agency (USEPA) (200 pCi/l versus 20,000 pCi/l).

As expected, tritium was detected in groundwater samples. The 2016 Tritium concentrations varied from <200 to 7,040 pCi/l. The well with the highest concentration was MW-67. The flow of groundwater is in the direction of the intake and discharge canals.

No detectable tritium (greater than the MDC) was found in surface water or precipitation samples collected from onsite and offsite monitoring locations during 2016.

Strontium-89 (Sr-89) and Strontium-90 (Sr-90) were not detected in any groundwater samples during 2016.

Gross Alpha and Gross Beta analyses in the dissolved and suspended fractions were performed on groundwater samples during the second quarter sampling in 2016.

There were 50 samples taken from 43 groundwater well locations. Gross Alpha (dissolved) was detected in one sample with a concentration of 2.3 pCi/L. Gross Alpha (suspended) was detected in 7 samples and ranged from 2.7 to 29.8 pCi/L. Gross Beta (dissolved) was detected in 48 samples and ranged from 1.1

to 33.5 pCi/L. Gross Beta (suspended) was detected in 8 samples and ranged from 1.7 to 145 pCi/L.

"Hard-To-Detect" analyses were performed on a select group of groundwater locations. The analyses for groundwater included Americium-241 (Am-241), Cerium-242 (Cm-242), Cerium-243/244 (Cm-243/244), Plutonium-238 (Pu-238), Plutonium-239/240 (Pu-239/240), Uranium-234 (U-234), Uranium-235 (U-235), Uranium-238 (U-238), Iron-55 (Fe-55), and Nickel-63 (Ni-63). U-234 and U-238 were detected in 2 of 10 samples. The concentrations of U-234 and U-238 ranged from 0.22 to 3.02 pCi/L and 0.37 to 2.71 pCi/L, respectively. All other Hard-To-Detect analyses were less than the MDC. Occasionally the isotopes of U-234 and U-238 are detected and are considered background.

II. Introduction

The Oyster Creek Nuclear Generating Station consists of a single boiling water reactor (BWR) and turbine generator capable of producing 650 megawatts of electricity. The Station operates under Nuclear Regulatory Commission (NRC) renewed facility operating license number DPR-16. Brackish water from Barnegat Bay is supplied to the circulating water system. The circulating water system is designed to supply a continuous flow of water from Barnegat Bay through the plant to remove the waste heat released by the power cycle in the Main Condenser. The circulating water system is comprised of the intake canal from Barnegat Bay to the plant, the Main Condenser Circulating Water System, the dilution plant, and the discharge canal to Barnegat Bay. The dilution plant portion of the system minimizes the adverse effects of hot discharge water on aquatic life in the discharge canal and Barnegat Bay to meet the conditions of the Oyster Creek New Jersey Pollutant Discharge Elimination system (NJPDES) Permit No. NJ0005550. Approximately 1 million gallons per minute of water are withdrawn from the intake canal for dilution and station use and returned to the discharge canal.

The Station is located in the Atlantic Coastal Plain physiographic province. Topography in the region of the Station is a slightly undulating coastal plain having low relief. The land surface gradually rises from sea level at Barnegat Bay, which is located east of the Station, to approximately 50 feet above mean sea level (AMSL) 2 miles inland. This region of the coastal plain has numerous tidal marshes and is incised by easterly flowing streams and creeks. Elevations at the Station property west of Route 9 range from approximately 0 to 15 feet AMSL immediately adjacent to the intake and discharge canals to slightly more than 30 feet AMSL in the northwest portion of the Station property. The 132-acre developed portion of the Site located within the "horseshoe" formed by the intake and discharge canals west of Route 9 has an approximate average elevation of 20 feet AMSL. In the immediate vicinity of the intake and discharge canals, the Station property slopes steeply down to the canal. The average elevation of the surface water level in the intake and discharge canals is approximately 1-foot AMSL. The remaining 637-acre portion of the Station located east of Route 9 is primarily vegetated and undeveloped. The ground surface is relatively level except for the steep slopes at areas adjacent to the intake and discharge canals.

The three shallowest stratigraphic units in the vicinity of the Oyster Creek area in descending order are the Cape May Formation, the Cohansey Formation, and the Kirkwood Formation. Some of the Station structures are constructed to depths of approximately 50 feet below ground surface (bgs). Excavations were completed from grade, through the fill, Cape May Formation, Upper Clay, and into the Cohansey Formation during construction. Consequently, the bottoms of

some Station structures are completed within the Cohansey Formation and some structures breach the Upper Clay.

The Cape May Formation regionally has an average thickness of 40 feet and at OCGS, the Cape May is described as a light gray to tan, medium- to fine-grained sand, with trace to some silt and occasional coarse sand. It is generally poorly compacted. The Cape May Formation varies from 0 to 21 feet in thickness based on historical boring logs. The variation principally is due to the varying amount of material excavated and replaced by fill during Station construction. When present, the thickness of the Cape May generally ranges from 15 to 20 feet thick. The base of the Cape May generally is defined by the presence of a dark clay unit referred to as the Upper Clay unit. The Upper Clay is a stiff to hard, gray, plastic organic clay containing inclusions (also described as lenses or partings) of dense fine sand with trace to some organic silt. The deposits of fine sand within the Upper Clay layer have high relative densities and occur as lenses or inclusions.

The Cohansey Formation is primarily composed of a light-colored, fine- to very coarse-grained quartzose sand with lenses of silt and clay. Although most borings at the Station do not penetrate the entire Cohansey Formation, this formation appears to be approximately 60 to 80 feet thick at OCGS. A clay sequence, referred to at the Station as the "Lower Clay", marks the base of the Cohansey, which generally is present to approximately 90 to 100 feet bgs. The lower clay is a dense gray medium- to fine-grained sand containing trace to some organic silt and layers or inclusions of very stiff to hard gray organic clay. The thickness of the lower clay is estimated to be approximately 10 to 20 feet in the vicinity of OCGS.

The Cohansey Formation is underlain by the Kirkwood Formation which consists of several stratigraphic units. The Kirkwood Formation is described as a medium- to fine-grained sand with trace silt. The thickness of this formation beneath the Station is unknown. The south domestic supply well terminates in the Kirkwood at a depth of 310 feet bgs. The Kirkwood thickness in Ocean County ranges from approximately 300 to 400 feet.

This report covers those analyses performed by Teledyne Brown Engineering (TBE) and Environmental Inc. (Midwest Labs) on samples collected in 2016.

A. Objectives of the RGPP

The long-term objectives of the RGPP are as follows:

- Ensure that the site characterization of geology and hydrology provides an understanding of predominant ground water gradients based upon current site conditions

- Identify site risk based on plant design and work practices
- Evaluate all SSCs that contain or could contain licensed material and for which there is a credible mechanism for the licensed material to reach groundwater
- Evaluate work practices that involve licensed material and for which there is a credible mechanism for the licensed material to reach groundwater
- Perform on-site monitoring to ensure timely detection of inadvertent radiological releases to ground water
- Understand background concentrations of radioactive analytes outside of the REMP, as required
- Evaluate return/re-use of previously discharged radioactive effluents in gaseous or liquid effluents that are returned from the environment to the operating nuclear power facility
- Ensure controls are established for the selection, installation and retirement of monitoring wells
- Perform remediation protocols to prevent migration of licensed material off-site and to minimize decommissioning impacts
- Ensure that records of leaks, spills, remediation efforts are retained and retrievable to meet the requirements of 10 CFR 50.75(g)
- Ensure periodic communications are held on the RGPP with the designated State/Local officials
- Ensure timely verbal and written reporting occurs if there is an inadvertent release of licensed materials to the soil, groundwater or surface water
- Document and report all applicable RGPP data
- Identify and resolve deficiencies via the Corrective Action Process as delineated in PI-AA-120 "Issue Identification and Screening Process"
- Perform program oversight to ensure effective implementation of the voluntary RGPP

B. Implementation of the Objectives

The objectives identified have been implemented at the Oyster Creek Generating Station through compliance with approved procedures EN-AA-408-4000, Radiological Groundwater Protection Program Implementation and site specific procedure EN-OC-408-4160, RGPP Reference Material for Oyster Creek Generating Station.

C. Program Description

Samples for the OCGS site were collected for Exelon by on-site personnel and Normandeau Associates, Inc. This section describes the general collection methods used to obtain environmental samples for the OCGS RGPP in 2016. Sample locations can be found in Table A–1, Appendix A.

1. Sample Collection

Samples of water are collected, managed, transported and analyzed in accordance with approved procedures. Both groundwater and surface water are collected. Sample locations, sample collection frequencies and analytical frequencies are controlled in accordance with approved station procedures. Contractor and/or station personnel are trained in the collection, preservation management, and shipment of samples, as well as in documentation of sampling events.

2. Sample Analysis

Samples are analyzed in accordance with approved procedures that are based on industry standards.

3. Quality Control

Analytical laboratories are subject to internal quality assurance programs, industry cross-check programs, nuclear industry audits, as well as being certified by the State of New Jersey.

4. Data Interpretation

Station personnel review and evaluate all analytical data deliverables as data is received. Analytical data results are reviewed by both station personnel and independent consultants, including a hydrogeologist, for adverse trends or changes to hydrogeologic conditions.

D. Characteristics of Tritium (H-3)

Tritium (chemical symbol H-3) is a radioactive isotope of hydrogen. The most common form of tritium is tritium oxide, which is also called "tritiated water." The chemical properties of tritium are essentially those of ordinary hydrogen.

Tritiated water behaves the same as ordinary water in both the environment and the body. Tritium can be taken into the body by drinking water, breathing air, eating food, or absorption through the skin. Once tritium enters the body, it disperses quickly and is uniformly distributed throughout the body. Tritium is excreted primarily through urine with a clearance rate characterized by an effective biological half-life of about 10 days.

Tritium is produced naturally in the upper atmosphere when cosmic rays strike air molecules. Tritium is also produced during nuclear weapons explosions, as a by-product in reactors producing electricity, and in special production reactors. Also, tritium was released into the atmosphere from Chernobyl in 1986. Like normal water, tritiated water is colorless and odorless. Tritiated water behaves chemically and physically like non-tritiated water in the subsurface, and therefore tritiated water will travel at the same velocity as the average groundwater velocity.

Tritium has a half-life of approximately 12.3 years. It decays spontaneously to Helium-3 (He-3). This radioactive decay releases a beta particle (18.6 keV low-energy electron). The radioactive decay of tritium is the source of the health risk from exposure to tritium. Tritium is one of the least dangerous radionuclides because it emits very weak radiation and leaves the body relatively quickly. Since tritium is almost always found as water, it goes directly into soft tissues and organs. The associated dose to these tissues is generally uniform and is dependent on the water content of the specific tissue.

III. Program Description

A. Sample Analysis

This section describes the general analytical methodologies used by TBE to analyze the environmental samples for radioactivity for the Oyster Creek Generating Station RGPP in 2016. The sampling frequencies are increased if activity is detected.

In order to achieve the stated objectives, the current program includes the following analyses for groundwater, surface water, and precipitation water:

1. Gamma emitters

2. Strontium-89 and Strontium-90

3. Tritium

4. Gross Alpha (Dissolved and Suspended) and Gross Beta (Dissolved and Suspended)

5. Selected transuranics

6. Fe-55

7. Ni-63

B. Data Interpretation

The radiological data collected prior to Oyster Creek Generating Station becoming operational, as well as background data from publicly available databases, were used as a baseline with which these operational data were compared. For the purpose of this report, Oyster Creek Generating Station was considered operational at initial criticality. Several factors were important in the interpretation of the data:

1. Lower Limit of Detection and Minimum Detectable Concentration

The lower limit of detection (LLD) is defined as the smallest concentration of radioactive material in a sample that would yield a net count (above background) that would be detected with only a 5% probability of falsely concluding that a blank observation represents a "real" signal. The LLD is intended as a before the fact estimate of a system (including instrumentation, procedure and sample type) and not as an after the fact criterion for the presence of activity. All analyses were designed to achieve the required OCGS detection capabilities for environmental sample analysis.

The minimum detectable concentration (MDC) is defined as the smallest concentration of radioactive material in a sample that would yield a net count (above background) that would be detected with only a 5% probability of falsely concluding that a blank observation represents a "real" signal as an after the fact estimate of the presence of activity.

2. Laboratory Measurements Uncertainty

The estimated uncertainty in measurement of tritium in environmental samples is frequently on the order of 50% of the measurement value.

Statistically, the exact value of a measurement is expressed as a range with a stated level of confidence. The convention is to report results with a 95% level of confidence. The uncertainty comes from calibration standards, sample volume or weight measurements, sampling uncertainty and other factors. Exelon reports the uncertainty of a measurement created by statistical process (counting error) as well as all sources of error (Total Propagated Uncertainty or TPU). Each result has two values calculated. Exelon reports the TPU by following the result with plus or minus (±) the estimated sample standard deviation, as TPU, that is obtained by propagating all sources of analytical uncertainty in measurements.

Analytical uncertainties are reported at the 95% confidence level.

C. Background Analysis

1. Background Concentrations of Tritium

The purpose of the following discussion is to summarize background measurements of tritium in various media performed by others. Additional detail may be found by consulting references.

a. Tritium Production

Tritium is created in the environment from naturally occurring processes both cosmic and subterranean, as well as from anthropogenic (i.e., man-made) sources. In the upper atmosphere, "cosmogenic" tritium is produced from the bombardment of stable nuclides and combines with oxygen to form tritiated water, which will then enter the hydrologic cycle. Below ground, "lithogenic" tritium is produced by the bombardment of natural lithium present in crystalline rocks by neutrons produced by the radioactive decay of naturally abundant uranium and thorium. Lithogenic production of tritium is usually negligible compared to other sources due to the limited abundance of lithium in rock. The lithogenic tritium is introduced directly to groundwater.

A major anthropogenic source of tritium and Sr-90 comes from the former atmospheric testing of thermonuclear weapons. Levels of tritium in precipitation increased significantly during the 1950s and peaked in 1963 with the signing of the limited test ban treaty. The Canadian heavy water nuclear power reactors, other commercial power reactors, nuclear research and weapons production continue to influence tritium concentrations in the environment. Also, tritium was released into the atmosphere from Chernobyl in 1986.

b. Precipitation Data

Precipitation samples are routinely collected at stations around the world for the analysis of tritium and other radionuclides. One publicly available database that provides tritium concentrations in precipitation is the USEPA's RadNet database. RadNet provides tritium precipitation concentration data for samples collected at stations throughout the U.S. from 1978 up to and including 1996. Tritium concentrations in precipitation in New Jersey from 1978 through 1996 have ranged from 600 pCi/l in 1979 to 0 pCi/l in 1996, with an average of 185 pCi/l. Tritium concentrations in wells may still be above the 200 pCi/l detection limit from the external causes described above. Water from previous years and decades is naturally captured in groundwater, so some well water sources today are affected by the surface water from the 1960s that was elevated in tritium.

c. Surface Water Data

Tritium concentrations are routinely measured in surface water bodies, including Oyster Creek and the Delaware River. New Jersey surface water data between 1978 and 1998 averaged 185 pCi/l.

The USEPA RadNet surface water data typically has a reported 'Combined Standard Uncertainty' of 2 standard deviations. This corresponds to a ± 36 to ±100 pCi/l confidence bound on each given reported measurement so that the typical surface water background data provided by RadNet may be subject to measurement uncertainty of up to 100 pCi/l.

The radio-analytical laboratory counts tritium results to an Exelon specified LLD of 200 pCi/l with a typical uncertainty of ±100 pCi/l. Therefore, sample results reported by TBE near this LLD cannot be distinguished from natural background concentrations in surface water.

IV. Results and Discussion

A. Program Exceptions

There were no program exceptions in 2016.

B. Groundwater Results

Samples were collected from on-site locations in accordance with the station radiological groundwater protection program. As reported in GHD's 2016 Hydrogeologic Investigation Report, groundwater flow in the vicinity of the Torus Water Storage Tank and the Condensate Storage Tank is towards the intake and discharge canals.

Tritium

Samples from 56 locations were analyzed for tritium activity (Table B–I.1, Appendix B). Tritium was detected in 18 of 202 samples. The values ranged from <200 to 7,040 pCi/l. The well with the highest concentration was MW-67 (Table B-I.1, Appendix B).

Strontium

Strontium-89 and Strontium-90 were not detected in any location sampled in 2016. (Table B-I.1, Appendix B)

Gross Alpha and Gross Beta (dissolved and suspended)

Gross Alpha and Gross Beta analyses in the dissolved and suspended fractions were performed on groundwater samples during the second sampling in 2016.

There were 50 samples taken from 43 groundwater well locations. Gross Alpha (dissolved) was detected in one sample with a concentration of 2.3 pCi/L. Gross Alpha (suspended) was detected in 7 samples and ranged from 2.7 to 29.8 pCi/L. Gross Beta (dissolved) was detected in 48 samples and ranged from 1.1 to

33.5 pCi/L. Gross Beta (suspended) was detected in 8 samples and ranged from 1.7 to 145 pCi/L.

Gamma Emitters

Gamma-emitting nuclide K-40 was detected in 1 of 69 samples analyzed during 2016. The concentration was 114 pCi/L. (Table B–I.2, Appendix B).

"Hard-To-Detect"

"Hard-To-Detect" analyses were performed on a select group of groundwater locations. The analyses for groundwater included Am-241, Cm-242, Cm-243/244, Pu-238, Pu-239/240, U-234, U-235, U-238, Fe-55, and Ni-63. U-234 and U-238 were detected in 2 of 10 samples. The concentrations of U-234 and U-238 ranged from 0.22 to 3.02 pCi/L and 0.37 to 2.71 pCi/L, respectively. All other Hard-To-Detect analyses were less than the MDC. Occasionally the isotopes of U-234 and U-238 are detected and are considered background. (Table B-I.3, Appendix B).

C. Surface Water Results

Samples were collected from on-site locations in accordance with the station radiological groundwater protection program. Analytical results and anomalies are discussed below:

Tritium

Samples from 8 locations were analyzed for tritium activity (Table B–II.1, Appendix B). No detectable tritium (greater than the LLD) was found in any surface water samples collected from onsite and offsite monitoring locations.

Gross Alpha and Gross Beta (dissolved and suspended)

Gross Alpha and Gross Beta analyses in the dissolved and suspended fractions are not required on a routine basis and were not analyzed in 2016.

Gamma Emitters

Naturally-occurring K-40, a gamma-emitting nuclide, was detected in 36 of 36 samples analyzed. The concentrations ranged from 167 to 469 pCi/L. (Table B–II.2, Appendix B)

"Hard-To-Detect"

"Hard-To-Detect" analyses are not required on a routine basis and were not analyzed in 2016.

D. Precipitation Water Results

Precipitation samples were collected from onsite and offsite locations in accordance with the station radiological groundwater protection program. Analytical results and anomalies are discussed below:

Tritium

Samples from five locations were analyzed for tritium activity (Table B–III.1, Appendix B). No detectable tritium (greater than the LLD) was found in any precipitation water samples collected from onsite and offsite monitoring locations. (Table B–III.1, Appendix B)

E. Summary of Results – Inter-Laboratory Comparison Program

Inter-Laboratory Comparison Program results for TBE and Environmental Inc. (Midwest Labs) are presented in the 2016 Oyster Creek AREOR. This report is part of the AREOR.

F. Leaks, Spills, and Releases

There were no abnormal liquid releases during 2016.

G. Trends

Active remediation of tritium in groundwater due to the spills that occurred in 2009 was initiated in October 2010. Trending of the data due to active remediation is on-going. Overall, the station has seen a decreasing trend in tritium values.

H. Investigations

Conestoga Rovers and Associates performed an independent assessment of the tritium plume. The results of their assessment can be found in References 1, 2 and 3.

I. Actions Taken

1. Compensatory Actions

Active remediation of tritium in groundwater due to the spills that occurred in 2009 was initiated in October, 2010.

2. Installation of Monitoring Wells

The following wells were installed in 2010 to better characterize and monitor the tritium plume and site hydrology:

Well Number	Formation	Well Installation Date
W-58 I	Cohansey	July
W-59 I	Cohansey	March
W-60 I	Cohansey	July
W-61 I	Cohansey	July
W-62	Cape May	March
W-63 I	Cohansey	July
W-64	Cape May	March
W-65	Cape May	March
W-66 I	Cohansey	July
W-67	Cape May	March
W-68 I	Cohansey	July
W-69 I	Cohansey	July
W-70 I	Cohansey	July
W-71	Cape May	August
W-72	Cape May	August
W-73 Pumping well	Cohansey	October

3. Actions to Recover/Reverse Plumes

Oyster Creek Generating Station is currently addressing the tritium in groundwater through pumping of groundwater out of W-73 into the intake structure.

V. References

1. Conestoga Rovers and Associates, Hydrogeologic Investigation Report, Fleetwide Assessment, Oyster Creek Generating Station, Forked River, New Jersey, Ref. No. 055875 (6), April 2011

2. Conestoga Rovers and Associates, Site Investigation Report, Oyster Creek Generating Station, Forked River, New Jersey, Ref. No. 055875 (4), August 2009

3. Conestoga Rovers and Associates, Remedial Investigation Workplan, Oyster Creek Generating Station, Forked River, New Jersey, Ref. No. 055875 (5), October 2009

APPENDIX A

LOCATION DESIGNATION

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Oyster Creek Generating Station, 2016

Oyster Creek Generating Station RGPP Sample Point List

Sample Identification Number	Location	Well GPS Coordinates (Northing/Easting)	Depth (ft)	RGPP Sample Point Designation	Tritium Alert Value	Aquifer or Water Body Monitored
DWN	North Domestic Well	358373.33 574672.98	300.0	B	2,000 pCi/L	Kirkwood
DWS	South Domestic Well	356955.90 574616.69	145.0	B	2,000 pCi/L	Kirkwood
LW-1	E of ISFSI – (microwave zone)	357632.49 575569.96	21.0	I	2,000 pCi/L	Cape May
LW-2	E of ISFSI – (microwave zone)	357645.30 575581.92	21.0	I	2,000 pCi/L	Cape May
LW-3	E of ISFSI – (microwave zone)	357630.20 575575.52	21.0	D	2,000 pCi/L	Cape May
LW-4	East of ISFSI – (microwave zone)	357652.78 575573.75	49.0	D	2,000 pCi/L	Cohansey
MW-1A-2A	SW of MFOT Moat	357380.76 575043.44	24.0	D	2,000 pCi/L	Cape May
MW-1G-1A	East of fueling station	358551.94 575308.91	20.0	I	2,000 pCi/L	Cape May
MW-1G-1B	East of fueling station	358550.57 575316.19	45.0	I	2,000 pCi/L	Cohansey
MW-1I-1A	Roadway – NW of TWST	357598.17 574412.70	19.0	D	2,000 pCi/L	Cape May
MW-1I-2A	Roadway – SE of TWST	357574.80 574493.50	17.5	D	2,000 pCi/L	Cape May
MW-15K-1A	Roadway - Intake	357297.90 574469.50	19.0	D	2,000 pCi/L	Cape May
MW-16D	Yard – W of MAC Building	357573.30 574746.50	25.0	D	2,000 pCi/L	Cape May

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Oyster Creek Generating Station, 2016

Oyster Creek Generating Station RGPP Sample Point List

Sample Identification Number	Location	Well GPS Coordinates (Northing/Easting)	Depth (ft)	RGPP Sample Point Designation	Tritium Alert Value	Aquifer or Water Body Monitored
MW-24-2A	Finninger Farm – near DSB	356838.52 579470.94	18.0	I	2,000 pCi/L	Cape May
MW-24-3A	Finninger Farm – near DSB	356828.49 578969.05	17.0	I	2,000 pCi/L	Cape May
MCD	Main Condenser Discharge	N/A	N/A	SW	2,000 pCi/L	Surface Water
SW-1	Intake Canal	N/A	N/A	SW	2,000 pCi/L	Surface Water
SW-2	RT 9 South Bridge	N/A	N/A	SW	2,000 pCi/L	Surface Water
SW-3	Fire Pond	N/A	N/A	SW	2,000 pCi/L	Surface Water
W-1	Dilution Pump Area – West Bank	357029.86 574140.61	50.0	I	2,000 pCi/L	Cohansey
W-1A	North Yard Area	358311.70 574679.00	50.0	B	2,000 pCi/L	Cohansey
W-1B	North Yard Area	358312.80 574685.40	20.0	I	2,000 pCi/L	Cape May
W-1C	West end of backsite	357149.22 572741.00	60.0	I	2,000 pCi/L	Cohansey
W-1K	West end of backsite	357151.55 572728.77	150.0	I	2,000 pCi/L	Kirkwood
W-2	S of EDG Bldg	356965.65 574555.73	57.0	I	2,000 pCi/L	Cohansey
W-2A	Field – W of North Yard Bldg	358105.00 574348.60	50.0	I	2,000 pCi/L	Cohansey

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Oyster Creek Generating Station, 2016

Oyster Creek Generating Station RGPP Sample Point List

Sample Identification Number	Location	Well GPS Coordinates (Northing/Easting)	Depth (ft)	RGPP Sample Point Designation	Tritium Alert Value	Aquifer or Water Body Monitored
~~W-2B~~	Field – W of North Yard Building	358110.30 574348.50	20.0	B	2,000 pCi/L	Cape May
W-2C	Forked River CT Site	357923.67 573809.92	60.0	I	2,000 pCi/L	Cohansey
W-2K	Forked River CT Site	358030.88 573762.54	150.0	I	2,000 pCi/L	Kirkwood
W-3	Intake – Access Road	357173.00 574499.10	24.0	D	2,000 pCi/L	Cape May
W-3A	Plant Access Road	358067.92 575664.22	50.0	I	2,000 pCi/L	Cohansey
W-3B	Plant Access Road	358070.58 575656.25	20.0	I	2,000 pCi/L	Cape May
W-3C	Finninger Farm – N of Discharge	356595.30 576663.33	60.0	I	2,000 pCi/L	Cohansey
W-3K	Finninger Farm – N of Discharge	356602.17 576675.04	100.0	I	2,000 pCi/L	Kirkwood
W-4	Intake – Access Road	357176.40 574497.70	55.0	D	2,000 pCi/L	Cohansey
W-4A	SE of OCAB Building	356913.30 575387.10	50.0	B	2,000 pCi/L	Cohansey
W-4B	SE of OCAB Building	356916.40 575388.90	20.0	B	2,000 pCi/L	Cape May
W-4C	Finninger Farm – S of Intake	359305.61 575867.58	60.0	I	2,000 pCi/L	Cohansey
W-4K	Finninger Farm – S of Intake	359321.83 575874.07	100.00	I	2,000 pCi/L	Kirkwood

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Oyster Creek Generating Station, 2016

Oyster Creek Generating Station RGPP Sample Point List

Sample Identification Number	Location	Well GPS Coordinates (Northing/Easting)	Depth (ft)	RGPP Sample Point Designation	Tritium Alert Value	Aquifer or Water Body Monitored
W-5	NW Yard area, near Fire Water Tank	357510.95 574374.05	20.5	D	2,000 pCi/L	Cape May
W-5C	Finninger Farm – E of dredge spoils	356758.59 580642.26	60.0	B	2,000 pCi/L	Cohansey
W-5K	Finninger Farm – E of dredge spoils	356743.81 580646.48	150.0	B	2,000 pCi/L	Kirkwood
W-6	NW Yard – near Fire Water Tank	357514.02 574373.77	52.0	D	2,000 pCi/L	Cohansey
W-7	NE – Building 4	357074.46 574713.08	20.0	D	2,000 pCi/L	Cape May
W-9	Roadway – NE of SAS Building	357289.29 574892.74	20.0	D	2,000 pCi/L	Cape May
W-10	NW of SAS Building	357286.29 574890.61	60.0	D	2,000 pCi/L	Cohansey
W-12	Yard – NW of DWPC Building	357669.10 574755.60	20.0	D	2,000 pCi/L	Cape May
W-13	Yard – NW of DWPC Building	357666.00 574755.90	50.0	D	2,000 pCi/L	Cohansey
W-14	Yard – SW of Warehouse	357702.41 575018.75	53.0	D	2,000 pCi/L	Cohansey
W-15	Yard – SW of Warehouse	357705.83 575017.70	20.0	D	2,000 pCi/L	Cape May
W-16	Yard – E of LLRW	357967.26 574933.03	20.0	D	2,000 pCi/L	Cape May
W-17	Road/ Exit Near W-3A	358078.05 575667.14	150.0	I	2,000 pCi/L	Kirkwood

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Oyster Creek Generating Station, 2016

Oyster Creek Generating Station RGPP Sample Point List

Sample Identification Number	Location	Well GPS Coordinates (Northing/Easting)	Depth (ft)	RGPP Sample Point Designation	Tritium Alert Value	Aquifer or Water Body Monitored
~~W-18~~	Near ~~EDG~~ Building	357005.78 574621.6	20.0	I	2,000 pCi/L	Cape May
W-19	Near EDG Building	357077.91 574633.23	20.0	I	2,000 pCi/L	Cape May
W-20	SW of EDG Building	356927.46 574542.59	20.0	I	2,000 pCi/L	Cape May
W-21	Near EDG Building	357009.15 574518.22	20.0	I	2,000 pCi/L	Cape May
W-22	Near EDG Building	357024.50 574590.19	39.0	I	2,000 pCi/L	Cape May
W-23	Near EDG Building	357054.89 574564.88	20.0	I	2,000 pCi/L	Cape May
W-24	South of TB W of old Machine Shop	357128.94 574650.77	19.0	D	2,000 pCi/L	Cape May
W-25	Near EDG Building	356962.59 574677.59	20.0	I	2,000 pCi/L	Cape May
W-26	Near EDG Building	357006.60 574644.03	20.0	I	2,000 pCi/L	Cape May
W-27	Near EDG Building	357042.43 574636.35	20.0	I	2,000 pCi/L	Cape May
W-28	Near EDG Building	356991.29 574573.64	19.5	I	2,000 pCi/L	Cape May
W-29	Near EDG Building	357012.62 574568.69	19.5	I	2,000 pCi/L	Cape May
W-30	Near EDG Building	357058.00 574516.71	19.5	I	2,000 pCi/L	Cape May

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Oyster Creek Generating Station, 2016

Oyster Creek Generating Station RGPP Sample Point List

Sample Identification Number	Location	Well GPS Coordinates (Northing/Easting)	Depth (ft)	RGPP Sample Point Designation	Tritium Alert Value	Aquifer or Water Body Monitored
W-31	Near EDG Building	357051.78 574495.62	19.5	I	2,000 pCi/L	Cape May
W-32	Near EDG Building	356978.58 574528.44	19.5	I	2,000 pCi/L	Cape May
W-33	Near EDG Building	357026.93 574499.17	19.5	I	2,000 pCi/L	Cape May
W-34	South of TB W of old Machine Shop	357196.14 574649.43	40.0	D	2,000 pCi/L	Cohansey
MW-50	Between CST and Intake Structure	357368.21 574436.80	20.0	E	2,000 pCi/L	Cape May
MW-51	Near CST	357378.30 574480.80	20.0	E	2,000 pCi/L	Cape May
MW-52	Near Intake Structure	357400.90 574353.00	20.0	D	2,000 pCi/L	Cape May
MW-53	Near end of CW discharge piping	357272.80 574447.60	20.0	D	2,000 pCi/L	Cape May
MW-54	Near Intake Structure	357276.20 574311.70	20.0	E	2,000 pCi/L	Cape May
MW-55	Between CST and Intake Structure	357354.88 574440.07	30.0	E	2,000 pCi/L	Cape May
MW-56I	By NaOCl tanks	357305.30 574465.50	52.0	E	2,000 pCi/L	Cohansey
MW-57I	Near Intake Structure	357343.71 574373.89	50.0	E	2,000 pCi/L	Cohansey
MW-58I	Near Intake Structure	357346.70 574377.28	72.0	D	2,000 pCi/L	Cohansey

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Oyster Creek Generating Station, 2016

Oyster Creek Generating Station RGPP Sample Point List

Sample Identification Number	Location	Well GPS Coordinates (Northing/Easting)	Depth (ft)	RGPP Sample Point Designation	Tritium Alert Value	Aquifer or Water Body Monitored
MW-59I	Intake Roadway – NW of CST	357422.14 574406.38	44.0	D	2,000 pCi/L	Cohansey
MW-60I	Near Intake Structure	357346.55 574373.88	92.0	D	2,000 pCi/L	Cohansey
MW-61I	Between CST and Intake Structure	357328.64 574444.45	72.0	E	2,000 pCi/L	Cohansey
MW-62	NW Corner of Turbine Bldg	357467.93 574524.10	25.0	D	2,000 pCi/L	Cape May
MW-63I	Between CST and Intake Structure	357329.40 574447.67	92.0	D	2,000 pCi/L	Cohansey
MW-64	Near Intake Structure	357343.96 574377.88	25.0	E	2,000 pCi/L	Cape May
MW-65	Intake Roadway – NW of CST	357421.00 574402.55	25.0	D	2,000 pCi/L	Cape May
MW-66I	SE of Reactor Bldg	357320.44 574889.18	80.0	D	2,000 pCi/L	Cohansey
MW-67	West side of Turbine Bldg	357401.99 574540.38	25.0	E	2,000 pCi/L	Cape May
MW-68I	SE of Reactor Bldg	357323.83 574897.64	100.0	D	2,000 pCi/L	Cohansey
MW-69I	Yard – NW of DWPC Building	357664.03 574760.93	78.0	D	2,000 pCi/L	Cohansey
MW-70I	Yard – NW of DWPC Building	357670.57 574759.18	98.0	D	2,000 pCi/L	Cohansey
MW-71	S of Reactor Bldg	357365.52 574841.89	25.0	D	2,000 pCi/L	Cape May

TABLE A-1: Radiological Groundwater Protection Program - Sampling Locations, Oyster Creek Generating Station, 2016

Oyster Creek Generating Station RGPP Sample Point List

Sample Identification Number	Location	Well GPS Coordinates (Northing/Easting)	Depth (ft)	RGPP Sample Point Designation	Tritium Alert Value	Aquifer or Water Body Monitored
MW-72	N of Reactor Bldg	357549.87 574788.52	25.0	D	2,000 pCi/L	Cape May
MW-73	Remediation System	N/A	N/A	N/A	N/A	N/A

* Tritium sampling frequency based upon agreement made with the NJDEP on 4/26/13.

D = Daily
W = Weekly
M = Monthly
S = Semi-annual
B = Biennial

Figure A-1
Sampling Locations – Selected Cohansey
and Cape May Formation Wells,
Oyster Creek Generating Station, 2016

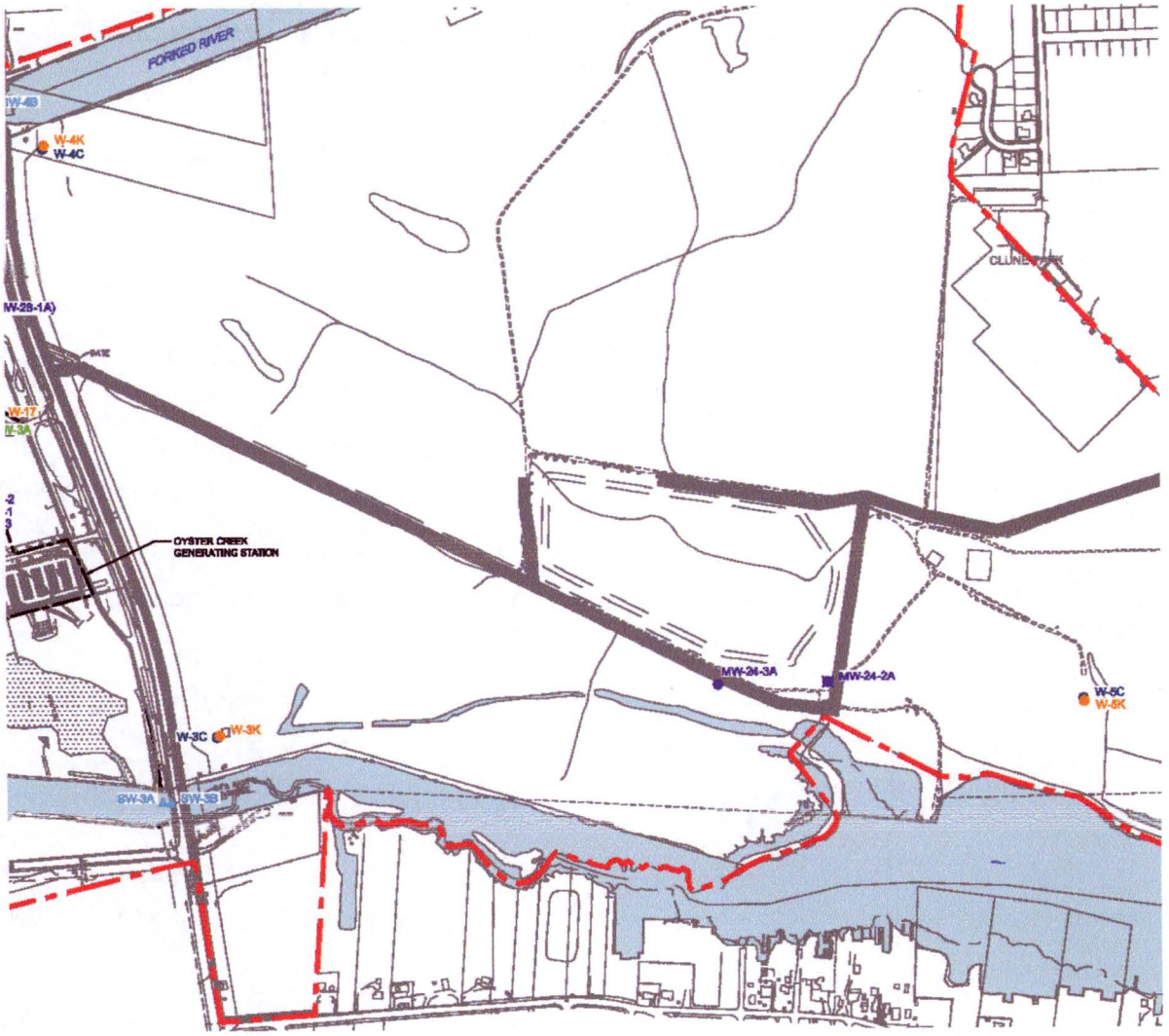

Figure A-1
Sampling Locations – Selected Cohansey
and Cape May Formation Wells,
Oyster Creek Generating Station, 2016

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM, STRONTIUM, GROSS ALPHA, AND GROSS BETA IN GROUNDWATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE		H-3	Sr-89	Sr-90	Gr-A (Dis)	Gr-A (Sus)	Gr-B (Dis)	Gr-B (Sus)
DWN	07/08/16		< 186						
DWN	07/19/16		< 179						
DWS	05/23/16		< 196						
LW-3	01/22/16	TBE	< 185						
LW-3	01/22/16	TBE	< 183						
LW-3	01/22/16	EIML	< 148						
LW-3	04/06/16	TBE	< 164	< 6.7	< 0.5	< 0.5	< 0.9	< 0.8	< 1.6
LW-3	04/06/16	TBE	< 166	< 6.4	< 0.5	< 0.6	< 0.9	< 0.8	< 1.6
LW-3	04/06/16	EIML	< 142				< 0.6 (1)		< 1.5 (1)
LW-3	07/20/16		< 180						
LW-3	10/20/16		< 181						
LW-4	01/22/16		< 186						
LW-4	04/06/16		< 166	< 8.9	< 0.5	< 0.5	< 0.9	1.1 ± 0.5	< 1.6
LW-4	07/20/16		< 175						
LW-4	10/20/16		< 183						
MW-15K-1A	01/20/16		< 188						
MW-15K-1A	04/05/16		< 162	< 6.6	< 0.8	< 0.9	< 1.4	5.0 ± 0.8	< 2.5
MW-15K-1A	07/19/16		< 180						
MW-15K-1A	10/18/16		< 184						
MW-16D	01/21/16		< 192						
MW-16D	04/06/16		< 166	< 7.8	< 0.7	**< 3.3**	< 1.1	15.0 ± 1.9	< 2.3
MW-16D	07/20/16		< 174						
MW-16D	10/19/16		< 189						
MW-1A-2A	01/20/16		< 185						
MW-1A-2A	04/07/16		< 181	< 7.7	< 0.8	< 1.3	< 0.4	2.6 ± 0.9	< 1.4
MW-1A-2A	07/20/16		< 174						
MW-1A-2A	10/19/16		< 183						
MW-1I-1A	01/21/16		< 188						
MW-1I-1A	04/06/16		< 163	< 7.2	< 0.5	< 0.9	< 0.9	2.4 ± 0.7	< 1.6
MW-1I-1A	07/19/16		< 186						
MW-1I-1A	10/18/16		< 186						
MW-1I-2A	01/21/16		< 184						
MW-1I-2A	04/06/16		< 162	< 9.0	< 0.7	< 0.6	< 0.9	1.4 ± 0.5	< 1.6
MW-1I-2A	07/19/16		< 178						
MW-1I-2A	10/18/16		< 186						
MW-50	01/20/16		4270 ± 479						
MW-50	04/05/16	*Original*	1070 ± 184	< 8.7	< 1.0	< 1.4	2.7 ± 1.2	8.6 ± 1.2	6.0 ± 1.6
MW-50	04/05/16	*Reanalysis*	1300 ± 205						
MW-50	07/19/16		628 ± 135						
MW-50	10/18/16		820 ± 157						
MW-52	01/20/16		< 184						
MW-52	04/05/16		< 180	< 6.3	< 0.9	< 0.7	2.7 ± 1.1	3.1 ± 0.7	2.8 ± 1.2
MW-52	07/19/16		< 174						
MW-52	10/17/16		< 189						
MW-53	01/22/16		< 185						
MW-53	04/07/16		< 163	< 6.8	< 0.6	< 1.3	< 1.0	9.1 ± 1.1	< 1.6
MW-53	07/20/16	TBE	< 176						
MW-53	07/20/16	TBE	< 174						
MW-53	07/20/16	EIML	< 145						
MW-53	10/20/16	TBE	< 185						
MW-53	10/20/16	TBE	< 187						
MW-53	10/20/16	EIML	< 154						
MW-54	01/20/16		< 185						

(1) Reported values are TOTAL (not Suspended)

Bolded values indicate LLD was not met due to limited sample volume and the age of the sample at the time of receipt at the laboratory

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM, STRONTIUM, GROSS ALPHA, AND GROSS BETA IN GROUNDWATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE		H-3	Sr-89	Sr-90	Gr-A (Dis)	Gr-A (Sus)	Gr-B (Dis)	Gr-B (Sus)
MW-54	04/05/16		< 182	< 6.7	< 0.8	< 2.9	29.8 ± 8.3	8.8 ± 5.5	65.5 ± 8.6
MW-54	07/19/16		< 174						
MW-54	10/18/16		< 182						
~~MW-54~~	~~10/18/16~~		~~< 182~~						
MW-55	01/20/16		< 185						
MW-55	01/20/16		< 185						
MW-55	04/05/16		< 187	< 6.7	< 0.6	< 1.1	< 0.6	8.4 ± 1.4	< 1.5
MW-55	07/19/16		< 174						
MW-55	10/18/16		< 184						
MW-56I	01/20/16		2830 ± 343						
MW-56I	04/05/16	TBE	3000 ± 360	< 6.3	< 0.8	< 0.6	< 0.7	5.3 ± 0.8	< 1.5
MW-56I	04/05/16	TBE	3410 ± 402	< 9.8	< 0.8	< 0.6	< 1.2	5.2 ± 0.8	< 2.4
MW-56I	04/05/16	EIML	3034 ± 174	< 0.8	< 0.6		5.5 ± 0.9 (1)		3.9 ± 0.7 (1)
MW-56I	07/19/16		2470 ± 303						
MW-56I	10/18/16		1410 ± 203						
MW-57I	01/20/16		6800 ± 737						
MW-57I	04/05/16		3090 ± 376	< 9.1	< 0.9	< 1.2	2.9 ± 1.1	29.0 ± 2.0	2.7 ± 1.2
MW-57I	07/19/16		2440 ± 302						
MW-57I	10/17/16		3270 ± 380						
MW-58I	01/20/16		< 152						
MW-58I	04/05/16		< 182	< 9.0	< 0.6	< 0.3	< 0.6	1.9 ± 0.6	< 1.5
MW-58I	07/19/16		< 175						
MW-58I	10/17/16		< 189						
MW-59I	01/20/16		< 150						
MW-59I	04/05/16		< 183	< 7.2	< 0.9	< 0.7	< 1.2	4.2 ± 0.7	< 2.4
MW-59I	07/19/16		< 175						
MW-59I	10/17/16		< 189						
MW-60I	01/20/16		< 151						
MW-60I	04/05/16		< 185	< 4.6	< 0.8	< 0.5	< 0.6	1.4 ± 0.6	< 1.5
MW-60I	07/19/16		< 178						
MW-60I	10/17/16		< 190						
MW-61I	01/20/16		< 191						
MW-61I	04/05/16		< 187	< 7.2	< 0.8	< 0.7	< 1.1	2.0 ± 0.6	< 2.3
MW-61I	07/19/16		< 174						
MW-61I	10/18/16		< 187						
MW-62	01/20/16		< 188						
MW-62	04/06/16		< 194	< 5.1	< 0.5	< 1.0	< 0.6	7.6 ± 1.2	< 1.5
MW-62	07/19/16		< 173						
MW-62	10/18/16		< 193						
MW-63I	01/20/16		< 190						
MW-63I	04/05/16		< 183	< 8.6	< 0.9	< 0.5	< 0.6	2.1 ± 0.6	< 1.5
MW-63I	07/19/16		< 175						
MW-63I	10/18/16		< 184						
MW-64	01/20/16		< 191						
MW-64	04/05/16	*Original*	< 165	< 6.6	< 0.7	< 1.4	< 1.2	30.9 ± 1.7	< 2.3
MW-64	04/05/16	*Recount*						33.5 ± 1.8	
MW-64	07/19/16		< 177						
MW-64	10/17/16		< 188						
MW-65	01/20/16		< 188						
MW-65	04/05/16		< 195	< 9.4	< 0.7	< 1.1	< 0.7	6.5 ± 1.3	< 2.2
MW-65	07/19/16		< 174						
MW-65	10/17/16		< 188						
MW-66I	01/21/16		< 189						
MW-66I	04/07/16		< 185	< 6.9	< 0.7	< 0.5	< 0.6	2.3 ± 0.6	< 1.5

(1) Reported values are TOTAL (not Suspended)

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM, STRONTIUM, GROSS ALPHA, AND GROSS BETA IN GROUNDWATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE		H-3	Sr-89	Sr-90	Gr-A (Dis)	Gr-A (Sus)	Gr-B (Dis)	Gr-B (Sus)
MW-66I	07/20/16		< 175						
MW-67	01/20/16		7040 ± 761						
MW-67	04/06/16		6830 ± 746	< 7.2	< 0.9	< 0.4	< 1.4	2.5 ± 0.6	3.2 ± 1.8
~~MW-67~~	~~07/19/16~~		~~5080 ± 560~~						
MW-67	10/19/16	TBE	2360 ± 295						
MW-67	10/19/16	TBE	2250 ± 284						
MW-67	10/19/16	EIML	2480 ± 162						
MW-68I	01/21/16		< 190						
MW-68I	04/07/16		< 184	< 7.4	< 0.8	< 0.3	< 0.6	2.7 ± 0.6	< 1.5
MW-68I	07/20/16		< 176						
MW-69I	01/21/16		< 189						
MW-69I	04/06/16		< 187	< 8.5	< 0.8	< 0.4	< 1.1	3.2 ± 0.6	< 2.2
MW-69I	07/20/16		< 176						
MW-69I	10/19/16		< 180						
MW-70I	01/21/16		< 189						
MW-70I	04/06/16		< 185	< 6.9	< 0.6	< 0.4	< 0.6	5.8 ± 0.7	< 1.5
MW-70I	07/20/16		< 174						
MW-70I	10/19/16		< 189						
MW-71	01/20/16		< 188						
MW-71	04/07/16		< 187	< 6.0	< 0.6	< 0.7	< 0.6	5.1 ± 0.9	< 1.5
MW-71	07/20/16		< 176						
MW-71	10/19/16		< 182						
MW-72	01/21/16		< 192						
MW-72	04/06/16		< 187	< 8.5	< 0.7	< 0.6	< 0.6	5.9 ± 0.8	< 1.5
MW-72	07/20/16		< 177						
MW-72	11/29/16		< 188						
SW-2	04/04/16		< 164						
SW-3	04/04/16		< 165						
W-10	01/20/16		< 185						
W-10	04/07/16		< 172	< 6.6	< 0.9	< 0.7	< 0.5	2.1 ± 0.6	< 1.6
W-10	07/20/16		< 177						
W-10	10/19/16		< 184						
W-12	01/21/16		< 185						
W-12	04/06/16		< 176	< 4.6	< 0.6	< 2.5	19.0 ± 8.4	3.7 ± 1.9	145 ± 13.9
W-12	07/20/16		< 177						
W-12	10/19/16		< 192						
W-13	01/21/16		< 187						
W-13	04/06/16		< 175	< 4.7	< 0.6	< 0.7	< 0.5	1.1 ± 0.6	< 1.6
W-13	07/20/16		< 179						
W-13	10/19/16		< 191						
W-14	01/21/16		< 185						
W-14	04/06/16		< 184	< 6.9	< 0.7	< 0.4	< 0.4	3.2 ± 0.6	< 1.4
W-14	07/20/16		< 179						
W-14	10/19/16		< 183						
W-15	01/21/16		< 183						
W-15	04/06/16		< 184	< 5.7	< 0.7	< 1.0	7.7 ± 3.2	5.6 ± 0.9	18.6 ± 3.4
W-15	07/20/16		< 178						
W-15	10/19/16		< 182						
W-16	01/21/16	TBE	< 186						
W-16	01/21/16	TBE	< 181						
W-16	01/21/16	EIML	< 148						
W-16	04/06/16	TBE	< 162	< 6.9	< 0.6	< 0.4	< 0.4	2.6 ± 0.6	< 1.4
W-16	04/06/16	TBE	< 164	< 7.1	< 0.7	< 0.5	< 0.4	3.1 ± 0.6	< 1.4
W-16	04/06/16	EIML	< 142				< 0.5 (1)		1.7 ± 0.6 (1)

(1) Reported values are TOTAL (not Suspended)

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM, STRONTIUM, GROSS ALPHA, AND GROSS BETA IN GROUNDWATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE		H-3	Sr-89	Sr-90	Gr-A (Dis)	Gr-A (Sus)	Gr-B (Dis)	Gr-B (Sus)
W-16	07/20/16	TBE	< 176						
W-16	07/20/16	TBE	< 179						
W-16	07/20/16	EIML	< 145						
~~W-16~~	~~10/19/16~~		~~< 190~~						
W-1A	04/04/16		< 164						
W-24	01/20/16		< 185						
W-24	04/07/16		< 184	< 6.9	< 0.8	< 0.7	2.7 ± 1.0	3.4 ± 0.7	3.5 ± 1.2
W-24	07/19/16		< 175						
W-24	10/19/16		< 182						
W-2B	04/04/16		< 164						
W-3	01/20/16	TBE	< 188						
W-3	01/20/16	TBE	< 186						
W-3	01/20/16	EIML	< 148						
W-3	04/05/16		< 166	< 7.8	< 0.5	< 1.2	< 0.9	3.1 ± 1.1	< 1.6
W-3	07/19/16		< 177						
W-3	10/18/16		< 190						
W-34	01/22/16		< 182						
W-34	04/07/16		< 164	< 7.8	< 0.5	< 1.0	< 0.9	4.4 ± 0.8	< 1.6
W-34	07/19/16		< 176						
W-34	10/19/16		< 183						
W-4	01/20/16		< 182						
W-4	04/05/16	TBE	< 165	< 8.7	< 0.5	< 0.7	< 0.9	5.0 ± 0.8	< 1.6
W-4	04/05/16	TBE	< 163	< 7.8	< 0.7	< 1.1	< 0.9	5.2 ± 0.8	< 1.6
W-4	04/05/16	EIML	< 142				2.5 ± 0.8 (1)		4.1 ± 0.7 (1)
W-4	07/19/16	TBE	< 184						
W-4	07/19/16	TBE	< 178						
W-4	07/19/16	EIML	< 145						
W-4	10/18/16	TBE	< 177						
W-4	10/18/16	TBE	< 193						
W-4	10/18/16	EIML	< 154						
W-4A	04/07/16		< 183						
W-4B	04/07/16		< 165						
W-5	01/20/16	TBE	< 187						
W-5	01/20/16	TBE	< 185						
W-5	01/20/16	EIML	< 148						
W-5	04/06/16	TBE	< 166	< 6.8	< 0.6	< 0.8	< 0.9	4.7 ± 0.7	< 1.6
W-5	04/06/16	TBE	< 165	< 6.2	< 0.4	< 0.5	< 0.9	4.3 ± 0.7	< 1.6
W-5	04/06/16	EIML	< 142				1.2 ± 0.9 (1)		5.3 ± 1.1 (1)
W-5	07/19/16	TBE	< 179						
W-5	07/19/16	TBE	< 175						
W-5	07/19/16	EIML	< 145						
W-5	10/18/16	TBE	< 183						
W-5	10/18/16	TBE	< 184						
W-5	10/18/16	EIML	< 154						
W-5C	04/08/16		< 174						
W-5K	04/08/16		< 176						
W-6	01/20/16		< 187						
W-6	04/06/16		< 180	< 7.4	< 0.6	2.3 ± 0.7	< 1.2	7.0 ± 0.9	< 2.3
W-6	07/19/16		< 177						
W-6	10/18/16		< 181						
W-66I	10/19/16		< 182						
W-68I	10/19/16		< 180						
W-7	01/20/16	TBE	< 183						
W-7	01/20/16	TBE	< 186						

(1) Reported values are TOTAL (not Suspended)

TABLE B-I.1 **CONCENTRATIONS OF TRITIUM, STRONTIUM, GROSS ALPHA, AND GROSS BETA IN GROUNDWATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE		H-3	Sr-89	Sr-90	Gr-A (Dis)	Gr-A (Sus)	Gr-B (Dis)	Gr-B (Sus)
W-7	01/20/16	EIML	< 148						
W-7	04/07/16	TBE	< 180	< 7.9	< 1.0	< 1.1	< 0.7	8.1 ± 1.3	< 2.2
W-7	04/07/16	TBE	< 184	< 6.5	< 0.7	< 1.1	< 0.7	8.1 ± 1.3	< 2.2
W-7	**04/07/16**	**EIML**	**< 142**				**< 1.2** (1)		**< 1.6** (1)
W-7	07/19/16	TBE	< 173						
W-7	07/19/16	TBE	< 176						
W-7	07/19/16	EIML	< 145						
W-7	10/19/16	TBE	< 182						
W-7	10/19/16	TBE	< 180						
W-7	10/19/16	EIML	< 154						
W-9	01/20/16		< 184						
W-9	04/07/16		< 179	< 3.4	< 0.5	< 2.0	< 0.8	14.8 ± 1.8	< 2.2
W-9	07/20/16		< 175						
W-9	10/19/16		< 183						

(1) Reported values are TOTAL (not Suspended)

TABLE B-I.2

CONCENTRATIONS OF GAMMA EMITTERS IN GROUNDWATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE		Be-7	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
DWN	07/19/16		< 48	< 148	< 7	< 6	< 11	< 7	< 13	< 8	< 11	< 13	< 6	< 5	< 36	< 10
DWN	07/08/16		< 30	< 27	< 1	< 2	< 11	< 1	< 2	< 3	< 4	< **19760**	< 1	< 1	< **1834**	< **588**
DWS	05/23/16		< 16	< 15	< 2	< 2	< 4	< 2	< 3	< 2	< 3	< 5	< 2	< 2	< 12	< 4
LW-3	04/06/16	TBE	< 43	< 36	< 4	< 4	< 10	< 4	< 8	< 5	< 7	< 7	< 4	< 4	< 19	< 7
LW-3	04/06/16	TBE	< 35	< 51	< 4	< 4	< 9	< 4	< 8	< 4	< 7	< 7	< 4	< 4	< 19	< 7
LW-3	04/06/16	EIML	< 16	< 57	< 2	< 1	< 3	< 2	< 5	< 3	< 3	< 4	< 2	< 3	< 12	< 1
LW-4	04/06/16		< 39	< 39	< 5	< 5	< 10	< 5	< 9	< 5	< 8	< 8	< 4	< 5	< 22	< 6
MW-15K-1A	04/05/16		< 36	< 71	< 3	< 3	< 7	< 3	< 7	< 4	< 7	< 7	< 4	< 4	< 18	< 5
MW-16D	04/06/16		< 68	< 132	< 7	< 6	< 15	< 5	< 10	< 7	< 10	< 11	< 6	< 6	< 32	< 11
MW-1A-2A	04/07/16		< 47	< 85	< 4	< 4	< 9	< 4	< 10	< 5	< 8	< 9	< 5	< 5	< 20	< 8
MW-1I-1A	04/06/16		< 36	< 56	< 3	< 3	< 8	< 3	< 7	< 3	< 6	< 6	< 4	< 4	< 17	< 6
MW-1I-2A	04/06/16		< 51	< 47	< 6	< 6	< 12	< 6	< 11	< 6	< 10	< 9	< 5	< 6	< 27	< 9
MW-50	04/05/16		< 52	< 34	< 5	< 6	< 11	< 5	< 10	< 5	< 9	< 10	< 5	< 6	< 29	< 7
MW-50	10/18/16		< 44	< 86	< 4	< 5	< 10	< 5	< 9	< 5	< 8	< 15	< 4	< 4	< 32	< 10
MW-52	04/05/16		< 56	< 37	< 5	< 5	< 8	< 6	< 10	< 5	< 9	< 10	< 5	< 5	< 27	< 8
MW-53	04/07/16		< 34	< 82	< 4	< 4	< 10	< 4	< 8	< 4	< 7	< 6	< 4	< 4	< 18	< 6
MW-54	04/05/16		< 47	< 49	< 4	< 5	< 10	< 4	< 10	< 6	< 9	< 9	< 6	< 5	< 28	< 8
MW-54	10/18/16		< 30	< 29	< 3	< 3	< 7	< 3	< 6	< 4	< 6	< 11	< 3	< 3	< 21	< 7
MW-55	04/05/16		< 42	< 113	< 4	< 5	< 10	< 4	< 7	< 6	< 6	< 12	< 5	< 4	< 18	< 6
MW-55	10/18/16		< 39	< 33	< 4	< 5	< 10	< 4	< 9	< 5	< 9	< 14	< 4	< 5	< 32	< 10
MW-56I	04/05/16	TBE	< 62	< 56	< 6	< 7	< 14	< 7	< 13	< 6	< 13	< 15	< 6	< 7	< 35	< 7
MW-56I	04/05/16	TBE	< 49	< 51	< 6	< 5	< 12	< 5	< 13	< 6	< 10	< 14	< 5	< 5	< 30	< 7
MW-56I	04/05/16	EIML	< 25	< 58	< 2	< 2	< 4	< 2	< 5	< 2	< 2	< 5	< 2	< 3	< 16	< 1
MW-56I	10/18/16		< 45	< 40	< 4	< 5	< 12	< 4	< 10	< 6	< 10	< 13	< 4	< 5	< 31	< 10
MW-57I	04/05/16		< 79	< 145	< 8	< 7	< 13	< 7	< 14	< 8	< 10	< 14	< 6	< 6	< 39	< 10
MW-57I	10/17/16		< 36	< 34	< 4	< 4	< 8	< 4	< 7	< 5	< 8	< 15	< 3	< 4	< 28	< 10
MW-58I	04/05/16		< 51	< 135	< 4	< 6	< 13	< 6	< 13	< 7	< 11	< 12	< 5	< 7	< 27	< 9
MW-59I	04/05/16		< 41	< 104	< 4	< 5	< 11	< 6	< 10	< 5	< 8	< 11	< 4	< 4	< 25	< 9
MW-60I	04/05/16		< 55	< 127	< 5	< 5	< 13	< 5	< 12	< 7	< 11	< 14	< 7	< 6	< 33	< 12
MW-61I	04/05/16		< 56	< 60	< 6	< 6	< 12	< 6	< 9	< 7	< 11	< 13	< 6	< 7	< 35	< 7
MW-61I	10/18/16		< 43	< 43	< 4	< 5	< 10	< 5	< 8	< 5	< 9	< 14	< 4	< 5	< 30	< 12
MW-62	04/06/16		< 83	< 163	< 6	< 8	< 15	< 12	< 11	< 9	< 13	< 14	< 7	< 7	< 37	< 7
MW-63I	04/05/16		< 62	< 61	< 6	< 6	< 12	< 7	< 10	< 7	< 12	< 14	< 6	< 6	< 36	< 10
MW-64	04/05/16		< 28	< 29	< 3	< 3	< 6	< 3	< 7	< 3	< 5	< 6	< 3	< 3	< 14	< 5
MW-64	10/17/16		< 33	< 33	< 4	< 4	< 9	< 4	< 8	< 5	< 8	< 14	< 4	< 4	< 32	< 11
MW-65	04/05/16		< 53	< 54	< 7	< 5	< 11	< 8	< 11	< 7	< 11	< 15	< 6	< 6	< 36	< 8
MW-66I	04/07/16		< 49	< 31	< 5	< 7	< 11	< 6	< 14	< 7	< 12	< 12	< 6	< 6	< 27	< 9
MW-67	04/06/16		< 72	< 133	< 6	< 6	< 13	< 5	< 5	< 6	< 11	< 13	< 5	< 6	< 25	< 11

Bolded values indicate LLD was not met due to the age of the sample at the time of receipt at the laboratory

TABLE B-I.2 **CONCENTRATIONS OF GAMMA EMITTERS IN GROUNDWATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE		Be-7	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
MW-67	10/19/16	TBE	< 28	< 69	< 3	< 3	< 6	< 2	< 6	< 4	< 5	< 9	< 3	< 3	< 19	< 6
MW-67	10/19/16	TBE	< 35	< 33	< 4	< 4	< 8	< 4	< 7	< 5	< 8	< 12	< 3	< 4	< 26	< 8
MW-67	10/19/16	EIML	< 28	< 61	< 2	< 3	< 5	< 2	< 3	< 3	< 5	< 15	< 2	< 2	< 28	< 7
MW-68I	04/07/16		< 39	< 50	< 4	< 5	< 10	< 5	< 7	< 4	< 7	< 8	< 4	< 4	< 22	< 6
MW-69I	04/06/16		< 44	< 63	< 4	< 4	< 4	< 2	< 9	< 5	< 8	< 11	< 4	< 5	< 29	< 8
MW-70I	04/06/16		< 51	< 51	< 5	< 6	< 11	< 5	< 12	< 5	< 9	< 10	< 5	< 6	< 26	< 8
MW-71	04/07/16		< 55	114 ± 69	< 5	< 6	< 13	< 5	< 12	< 5	< 9	< 10	< 5	< 6	< 28	< 8
MW-72	04/06/16		< 54	< 62	< 6	< 5	< 10	< 5	< 10	< 6	< 11	< 12	< 6	< 5	< 33	< 9
SW-2	04/04/16		< 74	< 87	< 8	< 8	< 16	< 7	< 16	< 7	< 16	< 15	< 7	< 8	< 40	< 12
SW-3	04/04/16		< 50	< 35	< 4	< 5	< 10	< 6	< 11	< 6	< 10	< 10	< 4	< 5	< 35	< 10
W-10	04/07/16		< 60	< 142	< 7	< 6	< 10	< 5	< 12	< 6	< 11	< 13	< 7	< 7	< 35	< 8
W-12	04/06/16		< 75	< 65	< 6	< 7	< 12	< 8	< 8	< 7	< 10	< 14	< 6	< 6	< 33	< 12
W-13	04/06/16		< 56	< 157	< 7	< 5	< 13	< 3	< 13	< 6	< 12	< 15	< 5	< 7	< 33	< 12
W-14	04/06/16		< 45	< 45	< 5	< 6	< 10	< 7	< 9	< 6	< 8	< 12	< 5	< 6	< 29	< 6
W-15	04/06/16		< 70	< 151	< 6	< 7	< 14	< 10	< 17	< 8	< 15	< 13	< 7	< 7	< 33	< 13
W-16	04/06/16	TBE	< 61	< 156	< 7	< 6	< 14	< 8	< 12	< 6	< 13	< 12	< 5	< 7	< 30	< 11
W-16	04/06/16	TBE	< 56	< 129	< 6	< 7	< 12	< 6	< 11	< 4	< 10	< 12	< 6	< 6	< 28	< 6
W-16	04/06/16	EIML	< 21	< 57	< 3	< 2	< 6	< 2	< 4	< 3	< 5	< 5	< 2	< 3	< 9	< 2
W-1A	04/04/16		< 60	< 171	< 9	< 6	< 11	< 5	< 13	< 8	< 13	< 14	< 6	< 7	< 34	< 11
W-24	04/07/16		< 46	< 53	< 6	< 5	< 5	< 6	< 10	< 4	< 11	< 8	< 6	< 6	< 26	< 9
W-2B	04/04/16		< 50	< 54	< 6	< 6	< 11	< 5	< 9	< 6	< 11	< 11	< 5	< 5	< 29	< 7
W-3	04/05/16		< 52	< 70	< 5	< 6	< 18	< 6	< 11	< 7	< 11	< 12	< 6	< 7	< 34	< 12
W-34	04/07/16		< 45	< 107	< 5	< 4	< 9	< 5	< 7	< 5	< 10	< 8	< 5	< 6	< 23	< 8
W-4	04/05/16	TBE	< 47	< 111	< 6	< 5	< 12	< 6	< 12	< 8	< 10	< 10	< 7	< 7	< 33	< 10
W-4	04/05/16	TBE	< 40	< 31	< 4	< 4	< 7	< 3	< 8	< 4	< 8	< 9	< 4	< 4	< 21	< 5
W-4	04/05/16	EIML	< 21	< 54	< 2	< 3	< 2	< 2	< 2	< 3	< 4	< 6	< 3	< 2	< 13	< 3
W-4A	04/07/16		< 57	< 97	< 5	< 4	< 9	< 4	< 13	< 5	< 10	< 8	< 5	< 5	< 27	< 9
W-4B	04/07/16		< 45	< 82	< 5	< 5	< 9	< 5	< 9	< 6	< 10	< 8	< 3	< 5	< 22	< 7
W-5	04/06/16	TBE	< 36	< 48	< 4	< 5	< 10	< 4	< 10	< 5	< 7	< 8	< 4	< 5	< 24	< 8
W-5	04/06/16	TBE	< 53	< 83	< 4	< 6	< 12	< 7	< 11	< 7	< 10	< 13	< 6	< 6	< 32	< 13
W-5	04/06/16	EIML	< 17	< 71	< 3	< 3	< 4	< 2	< 3	< 3	< 3	< 4	< 3	< 2	< 9	< 3
W-5C	04/08/16		< 45	< 54	< 6	< 6	< 12	< 5	< 11	< 5	< 10	< 9	< 4	< 6	< 26	< 7
W-5K	04/08/16		< 33	< 58	< 3	< 3	< 6	< 5	< 6	< 4	< 6	< 7	< 4	< 4	< 20	< 6
W-6	04/06/16		< 50	< 49	< 6	< 5	< 13	< 6	< 10	< 7	< 12	< 11	< 6	< 6	< 31	< 7
W-7	04/07/16	TBE	< 48	< 44	< 5	< 6	< 11	< 5	< 12	< 6	< 10	< 9	< 5	< 6	< 25	< 7
W-7	04/07/16	TBE	< 42	< 75	< 4	< 4	< 8	< 4	< 10	< 4	< 8	< 7	< 4	< 5	< 22	< 5
W-7	04/07/16	EIML	< 30	< 55	< 2	< 2	< 3	< 3	< 3	< 2	< 5	< 6	< 3	< 2	< 14	< 2
W-9	04/07/16		< 49	< 89	< 7	< 5	< 14	< 6	< 9	< 6	< 11	< 9	< 5	< 7	< 30	< 7

TABLE B-I.3 CONCENTRATIONS OF HARD-TO-DETECTS IN GROUNDWATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	Am-241	Cm-242	Cm-243/244	Pu-238	Pu-239/240	U-234	U-235	U-238	Fe-55	Ni-63
MW-50	04/05/16	< 0.09	< 0.07	< 0.12	< 0.04	< 0.07	< 0.03	< 0.06	< 0.10	< 116	< 4
MW-54	04/05/16	< 0.19	< 0.03	< 0.14	< 0.12	< 0.14	3.02 ± 0.71	< 0.06	2.71 ± 0.67	< 148	< 5
MW-55	04/05/16	< 0.16	< 0.04	< 0.08	< 0.02	< 0.04	< 0.10	< 0.02	< 0.04	< 158	< 4
MW-56I	04/05/16	< 0.18	< 0.10	< 0.18	< 0.12	< 0.08	< 0.11	< 0.03	< 0.08	< 169	< 4
MW-56I	04/05/16	< 0.09	< 0.04	< 0.09	< 0.04	< 0.08	< 0.09	< 0.07	< 0.10	< 146	< 4
MW-57I	04/05/16	< 0.06	< 0.06	< 0.11	< 0.02	< 0.12	< 0.13	< 0.03	< 0.18	< 185	< 4
MW-61I	04/05/16	< 0.06	< 0.05	< 0.05	< 0.05	< 0.03	< 0.12	< 0.05	< 0.11	< 139	< 4
MW-64	04/05/16	< 0.10	< 0.05	< 0.05	< 0.15	< 0.04	< 0.15	< 0.03	< 0.13	< 142	< 4
MW-67	04/06/16	< 0.15	< 0.02	< 0.14	< 0.04	< 0.10	0.22 ± 0.14	< 0.09	0.37 ± 0.18	< 154	< 4

TABLE B-II.1 **CONCENTRATIONS OF TRITIUM IN SURFACE WATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016**

RESULTS IN UNITS OF PCI/LITER + 2 SIGMA

SITE	COLLECTION DATE	H-3
MCD	01/01/16	< 188
MCD	01/02/16	< 190
MCD	01/03/16	< 188
MCD	01/04/16	< 189
MCD	01/05/16	< 186
MCD	01/06/16	< 186
MCD	01/07/16	< 187
MCD	01/08/16	< 189
MCD	01/09/16	< 184
MCD	01/10/16	< 188
MCD	01/11/16	< 188
MCD	01/12/16	< 185
MCD	01/13/16	< 186
MCD	01/14/16	< 188
MCD	01/15/16	< 185
MCD	01/16/16	< 184
MCD	01/17/16	< 184
MCD	01/18/16	< 185
MCD	01/19/16	< 183
MCD	01/20/16	< 183
MCD	01/21/16	< 181
MCD	01/22/16	< 192
MCD	01/27/16	< 191
MCD	01/28/16	< 191
MCD	01/29/16	< 189
MCD	01/30/16	< 191
MCD	01/31/16	< 190
MCD	02/01/16	< 188
MCD	05/18/16	< 194
MCD	07/06/16	< 174
MCD	11/29/16	< 191
SW-1	01/06/16	< 184
SW-1	01/13/16	< 186
SW-1	01/20/16	< 185
SW-1	01/27/16	< 192
SW-1	04/08/16	< 175
SW-1	05/25/16	< 195
SW-1	07/06/16	< 178
SW-1	11/29/16	< 190
SW-2	01/19/16	< 191
SW-2	07/18/16	< 177
SW-2	10/19/16	< 185
SW-3	01/19/16	< 188
SW-3	07/18/16	< 178
SW-3	10/19/16	< 184

TABLE B-II.2 **CONCENTRATIONS OF GAMMA EMITTERS IN SURFACE WATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	Be-7	K-40	Mn-54	Co-58	Fe-59	Co-60	Zn-65	Nb-95	Zr-95	I-131	Cs-134	Cs-137	Ba-140	La-140
MCD	01/01/16	< 20	341 ± 64	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< **17**	< 2	< 2	< 26	< 7
MCD	01/02/16	< 24	313 ± 86	< 2	< 3	< 6	< 2	< 5	< 3	< 5	< **19**	< 2	< 2	< 32	< 9
MCD	01/03/16	< 22	342 ± 84	< 2	< 2	< 5	< 2	< 4	< 3	< 4	< **17**	< 2	< 2	< 27	< 8
MCD	01/04/16	< 22	221 ± 80	< 2	< 2	< 5	< 2	< 4	< 3	< 4	< 14	< 2	< 2	< 24	< 5
MCD	01/05/16	< 19	301 ± 65	< 2	< 2	< 4	< 2	< 3	< 2	< 4	< 12	< 2	< 2	< 19	< 6
MCD	01/06/16	< 20	403 ± 68	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 12	< 2	< 2	< 21	< 7
MCD	01/07/16	< 18	399 ± 67	< 2	< 2	< 4	< 2	< 4	< 2	< 4	< **16**	< 2	< 2	< 24	< 7
MCD	01/08/16	< 23	349 ± 92	< 2	< 2	< 5	< 2	< 5	< 3	< 5	< **17**	< 2	< 2	< 28	< 7
MCD	01/09/16	< 19	283 ± 59	< 2	< 2	< 5	< 2	< 3	< 2	< 4	< 11	< 2	< 2	< 21	< 8
MCD	01/10/16	< 20	369 ± 67	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 12	< 2	< 2	< 21	< 5
MCD	01/11/16	< 14	252 ± 54	< 1	< 2	< 3	< 1	< 2	< 2	< 3	< 8	< 1	< 1	< 17	< 3
MCD	01/12/16	< 19	287 ± 68	< 2	< 2	< 5	< 2	< 4	< 2	< 3	< 11	< 2	< 2	< 20	< 6
MCD	01/13/16	< 18	281 ± 77	< 2	< 2	< 5	< 3	< 4	< 2	< 4	< 11	< 2	< 2	< 22	< 6
MCD	01/14/16	< 14	296 ± 63	< 1	< 2	< 4	< 1	< 3	< 2	< 3	< 9	< 2	< 2	< 16	< 4
MCD	01/15/16	< 22	167 ± 97	< 3	< 2	< 6	< 2	< 5	< 3	< 5	< 11	< 2	< 2	< 22	< 6
MCD	01/16/16	< 18	340 ± 80	< 2	< 2	< 3	< 1	< 3	< 2	< 4	< 8	< 2	< 2	< 16	< 4
MCD	01/17/16	< 19	349 ± 69	< 2	< 2	< 4	< 2	< 4	< 2	< 3	< 7	< 2	< 2	< 16	< 5
MCD	01/18/16	< 17	323 ± 64	< 2	< 2	< 4	< 2	< 4	< 2	< 3	< 7	< 2	< 2	< 14	< 5
MCD	01/19/16	< 23	248 ± 87	< 3	< 2	< 6	< 2	< 5	< 3	< 5	< 12	< 2	< 3	< 24	< 8
MCD	01/20/16	< 19	291 ± 72	< 2	< 2	< 4	< 2	< 4	< 2	< 4	< 9	< 2	< 2	< 16	< 4
MCD	01/21/16	< 14	257 ± 57	< 2	< 2	< 3	< 2	< 4	< 2	< 3	< 7	< 1	< 2	< 13	< 4
MCD	01/22/16	< 26	282 ± 72	< 2	< 2	< 5	< 2	< 5	< 3	< 5	< 13	< 2	< 3	< 22	< 6
MCD	01/27/16	< 27	388 ± 78	< 3	< 3	< 6	< 3	< 6	< 3	< 5	< 9	< 2	< 3	< 21	< 7
MCD	01/28/16	< 32	252 ± 90	< 4	< 4	< 8	< 4	< 8	< 4	< 7	< 10	< 3	< 4	< 22	< 8
MCD	01/29/16	< 26	469 ± 89	< 3	< 3	< 6	< 3	< 5	< 3	< 5	< 8	< 3	< 3	< 18	< 5
MCD	01/30/16	< 22	399 ± 73	< 2	< 2	< 5	< 2	< 5	< 3	< 4	< 6	< 2	< 3	< 15	< 5
MCD	01/31/16	< 26	237 ± 70	< 3	< 3	< 7	< 3	< 7	< 3	< 6	< 7	< 3	< 3	< 19	< 6
MCD	02/01/16	< 22	263 ± 69	< 2	< 2	< 4	< 3	< 4	< 2	< 4	< 5	< 2	< 3	< 13	< 4
MCD	05/18/16	< 24	237 ± 53	< 3	< 3	< 6	< 2	< 5	< 3	< 5	< 9	< 2	< 3	< 19	< 5
MCD	07/06/16	< 27	321 ± 77	< 3	< 3	< 7	< 2	< 5	< 3	< 5	< 14	< 3	< 3	< 27	< 8
SW-1	01/06/16	< 28	262 ± 105	< 3	< 3	< 7	< 3	< 5	< 4	< 6	< **28**	< 2	< 3	< 39	< 13
SW-1	01/13/16	< 20	323 ± 72	< 2	< 2	< 5	< 2	< 4	< 2	< 4	< 12	< 2	< 2	< 21	< 6
SW-1	01/20/16	< 18	324 ± 62	< 2	< 2	< 4	< 2	< 4	< 2	< 3	< 8	< 1	< 2	< 17	< 4
SW-1	01/27/16	< 21	325 ± 63	< 2	< 2	< 4	< 2	< 4	< 3	< 4	< 8	< 2	< 2	< 15	< 4
SW-1	04/08/16	< 55	234 ± 130	< 6	< 8	< 15	< 7	< 16	< 6	< 10	< 12	< 6	< 6	< 34	< 4
SW-1	05/25/16	< 46	379 ± 91	< 5	< 5	< 11	< 5	< 10	< 5	< 9	< 14	< 5	< 5	< 33	< 10
SW-1	07/06/16	< 27	324 ± 65	< 3	< 3	< 5	< 2	< 6	< 3	< 5	< 14	< 2	< 3	< 27	< 7

Bolded values indicate LLD was not met due to limited sample volume and the age of the sample at the time of receipt at the laboratory

TABLE B-II.3 **CONCENTRATIONS OF HARD TO DETECTS IN SURFACE WATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016**

RESULTS IN UNITS OF PCI/LITER ± 2 SIGMA

SITE	COLLECTION DATE	Am-241	Cm-242	Cm-243/244	Pu-238	Pu-239/240	U-234	U-235	U-238	Fe-55	Ni-63

NONE FOR 2016

TABLE B-III.1 CONCENTRATIONS OF TRITIUM IN PRECIPITATION WATER SAMPLES COLLECTED AS PART OF THE RADIOLOGICAL GROUNDWATER PROTECTION PROGRAM, OYSTER CREEK GENERATING STATION, 2016

RESULTS IN UNITS OF PCI/LITER + 2 SIGMA

SITE	COLLECTION DATE	H-3
2	01/22/16	< 195
2	04/08/16	< 191
2	07/18/16	< 182
2	10/07/16	< 184
3	01/22/16	< 185
3	04/08/16	< 192
3	07/18/16	< 180
3	10/07/16	< 183
4	01/22/16	< 163
4	04/08/16	< 196
4	07/18/16	< 188
4	10/07/16	< 187
5	01/22/16	< 185
5	04/08/16	< 194
5	07/18/16	< 181
5	10/07/16	< 188
6	01/22/16	< 188
6	04/08/16	< 194
6	07/18/16	< 185
6	10/07/16	< 187