

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**BNE Background Locations
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

BNE Office (COAI01)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.005
01/14/20	-	01/29/20	< 0.004
01/29/20	-	02/12/20	< 0.014
02/12/20	-	02/26/20	< 0.006
02/26/20	-	03/11/20	< 0.004
03/11/20	-	03/25/20	< 0.004
03/25/20	-	04/08/20	< 0.004
04/08/20	-	04/22/20	< 0.005
04/22/20	-	05/06/20	< 0.006
05/06/20	-	05/20/20	< 0.005
05/20/20	-	06/03/20	< 0.003
06/03/20	-	06/17/20	< 0.004
06/17/20	-	07/01/20	< 0.005
07/01/20	-	07/15/20	< 0.006
07/15/20	-	07/29/20	< 0.008
07/29/20	-	08/11/20	< 0.005
08/11/20	-	08/26/20	< 0.004
08/26/20	-	09/09/20	< 0.004
09/09/20	-	09/23/20	< 0.005
09/23/20	-	10/07/20	< 0.004
10/07/20	-	10/21/20	< 0.007
10/21/20	-	11/04/20	< 0.005
11/04/20	-	11/18/20	< 0.003
11/18/20	-	12/02/20	< 0.009
12/02/20	-	12/16/20	< 0.005
12/16/20	-	12/30/20	< 0.005

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**BNE Background Locations
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

Brendan T. Byrne State Forest (COAI02)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.002
01/14/20	-	01/29/20	< 0.003

Results in picoCuries per cubic meter (pCi/m³)

Note: The collection and analysis of Air Iodine has been discontinued as of January 29, 2020, because the Oyster Creek nuclear plant has been in decommissioning since September 25, 2018, and has not released I-131 since that time. The half-life of I-131 is 8.02 days.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

Waretown Municipal Building (OCAI01)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.005
01/14/20	-	01/29/20	< 0.004

Results in picoCuries per cubic meter (pCi/m³)

Note: The collection and analysis of Air Iodine has been discontinued as of January 29, 2020, because the Oyster Creek nuclear plant has been in decommissioning since September 25, 2018, and has not released I-131 since that time. The half-life of I-131 is 8.02 days.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

Sands Point Harbor (OCAI02)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.005
01/14/20	-	01/29/20	< 0.005

Results in picoCuries per cubic meter (pCi/m³)

Note: The collection and analysis of Air Iodine has been discontinued as of January 29, 2020, because the Oyster Creek nuclear plant has been in decommissioning since September 25, 2018, and has not released I-131 since that time. The half-life of I-131 is 8.02 days.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

Forked River Marina (OCAI03)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.005
01/14/20	-	01/29/20	< 0.004

Results in picoCuries per cubic meter (pCi/m³)

Note: The collection and analysis of Air Iodine has been discontinued as of January 29, 2020, because the Oyster Creek nuclear plant has been in decommissioning since September 25, 2018, and has not released I-131 since that time. The half-life of I-131 is 8.02 days.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

Lacey Township Recreation Building (OCAI04)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.003
01/14/20	-	01/29/20	< 0.005

Results in picoCuries per cubic meter (pCi/m³)

Note: The collection and analysis of Air Iodine has been discontinued as of January 29, 2020, because the Oyster Creek nuclear plant has been in decommissioning since September 25, 2018, and has not released I-131 since that time. The half-life of I-131 is 8.02 days.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

JCP&L Substation (OCAI05)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.005
01/14/20	-	01/29/20	< 0.005

Results in picoCuries per cubic meter (pCi/m³)

Note: The collection and analysis of Air Iodine has been discontinued as of January 29, 2020, because the Oyster Creek nuclear plant has been in decommissioning since September 25, 2018, and has not released I-131 since that time. The half-life of I-131 is 8.02 days.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses for Iodine-131 in Weekly Air Samples**

Finninger Farm, OC Dredge Site (OCAI06)*

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
01/02/20	-	01/09/20	< 0.011
01/09/20	-	01/15/20	< 0.016
01/15/20	-	01/22/20	< 0.017
01/22/20	-	01/29/20	< 0.016
01/29/20	-	02/05/20	< 0.012
02/05/20	-	02/12/20	< 0.012
02/12/20	-	02/19/20	< 0.024

* Air Iodine samples are collected by the licensee on a weekly basis

Results in picoCuries per cubic meter (pCi/m³)

Note: The collection and analysis of Air Iodine has been discontinued as of February 19, 2020, because the Oyster Creek nuclear plant has been in decommissioning since September 25, 2018, and has not released I-131 since that time. The half-life of I-131 is 8.02 days.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

Access Road to Finninger Farm Property (ENE Sector) (OCAI07)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.005
01/14/20	-	01/29/20	< 0.004

Results in picoCuries per cubic meter (pCi/m³)

Note: The collection and analysis of Air Iodine has been discontinued as of January 29, 2020, because the Oyster Creek nuclear plant has been in decommissioning since September 25, 2018, and has not released I-131 since that time. The half-life of I-131 is 8.02 days.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

East of US Route 9 and South of Discharge Canal Inside Fence (SE Sector) (OCAI08)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.003
01/14/20	-	01/29/20	< 0.006

Results in picoCuries per cubic meter (pCi/m³)

Note: The collection and analysis of Air Iodine has been discontinued as of January 29, 2020, because the Oyster Creek nuclear plant has been in decommissioning since September 25, 2018, and has not released I-131 since that time. The half-life of I-131 is 8.02 days.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

Fort Elfsborg Road (AIAI01)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.004
01/14/20	-	01/29/20	< 0.006
01/29/20	-	02/12/20	< 0.014
02/12/20	-	02/26/20	< 0.005
02/26/20	-	03/11/20	< 0.004
03/11/20	-	03/25/20	< 0.004
03/25/20	-	04/08/20	< 0.005
04/08/20	-	04/22/20	< 0.004
04/22/20	-	05/06/20	< 0.005
05/06/20	-	05/20/20	< 0.005
05/20/20	-	06/03/20	< 0.005
06/03/20	-	06/17/20	< 0.005
06/17/20	-	07/01/20	< 0.005
07/01/20	-	07/15/20	< 0.004
07/15/20	-	07/29/20	< 0.007
07/29/20	-	08/11/20	< 0.004
08/11/20	-	08/26/20	< 0.004
08/26/20	-	09/09/20	< 0.006
09/09/20	-	09/23/20	< 0.004
09/23/20	-	10/07/20	< 0.004
10/07/20	-	10/21/20	< 0.006
10/21/20	-	11/04/20	< 0.004
11/04/20	-	11/18/20	< 0.004
11/18/20	-	12/02/20	< 0.007
12/02/20	-	12/16/20	< 0.005
12/16/20	-	12/30/20	< 0.005

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

Plant Access Road (AIAI02)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.004
01/14/20	-	01/29/20	< 0.003
01/29/20	-	02/12/20	< 0.013
02/12/20	-	02/26/20	< 0.006
02/26/20	-	03/11/20	< 0.006
03/11/20	-	03/25/20	< 0.004
03/25/20	-	04/08/20	< 0.004
04/08/20	-	04/22/20	< 0.004
04/22/20	-	05/06/20	< 0.006
05/06/20	-	05/20/20	< 0.004
05/20/20	-	06/03/20	< 0.004
06/03/20	-	06/17/20	< 0.005
06/17/20	-	07/01/20	< 0.004
07/01/20	-	07/15/20	< 0.003
07/15/20	-	07/29/20	< 0.007
07/29/20	-	08/11/20	< 0.004
08/11/20	-	08/26/20	< 0.003
08/26/20	-	09/09/20	< 0.003
09/09/20	-	09/23/20	< 0.004
09/23/20	-	10/07/20	< 0.004
10/07/20	-	10/21/20	< 0.007
10/21/20	-	11/04/20	< 0.004
11/04/20	-	11/18/20	< 0.006
11/18/20	-	12/02/20	< 0.006
12/02/20	-	12/16/20	< 0.004
12/16/20	-	12/30/20	< 0.005

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

Lower Alloways Creek School (AIAI03)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.005
01/14/20	-	01/29/20	< 0.004
01/29/20	-	02/12/20	< 0.009
02/12/20	-	02/26/20	< 0.007
02/26/20	-	03/11/20	< 0.006
03/11/20	-	03/25/20	< 0.004
03/25/20	-	04/08/20	< 0.004
04/08/20	-	04/22/20	< 0.005
04/22/20	-	05/06/20	< 0.005
05/06/20	-	05/20/20	< 0.005
05/20/20	-	06/03/20	< 0.006
06/03/20	-	06/17/20	< 0.006
06/17/20	-	07/01/20	< 0.004
07/01/20	-	07/15/20	< 0.006
07/15/20	-	07/29/20	< 0.009
07/29/20	-	08/11/20	< 0.005
08/11/20	-	08/26/20	< 0.008
08/26/20	-	09/09/20	< 0.004
09/09/20	-	09/23/20	< 0.005
09/23/20	-	10/07/20	< 0.005
10/07/20	-	10/21/20	< 0.007
10/21/20	-	11/04/20	< 0.003
11/04/20	-	11/18/20	< 0.003
11/18/20	-	12/02/20	< 0.006
12/02/20	-	12/16/20	< 0.003
12/16/20	-	12/30/20	< 0.004

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses for Iodine-131 in Bi-Weekly Air Samples**

SE Sector, PSE&G Owner Controlled Area (AIAI04)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	< 0.005
01/14/20	-	01/29/20	< 0.004
01/29/20	-	02/12/20	< 0.011
02/12/20	-	02/26/20	< 0.006
02/26/20	-	03/11/20	< 0.005
03/11/20	-	03/25/20	< 0.005
03/25/20	-	04/08/20	< 0.004
04/08/20	-	04/22/20	< 0.004
04/22/20	-	05/06/20	< 0.006
05/06/20	-	05/20/20	< 0.004
05/20/20	-	06/03/20	< 0.003
06/03/20	-	06/17/20	< 0.004
06/17/20	-	07/01/20	< 0.004
07/01/20	-	07/15/20	< 0.004
07/15/20	-	07/29/20	< 0.006
07/29/20	-	08/11/20	< 0.003
08/11/20	-	08/26/20	< 0.004
08/26/20	-	09/09/20	< 0.008
09/09/20	-	09/23/20	< 0.004
09/23/20	-	10/07/20	< 0.004
10/07/20	-	10/21/20	< 0.005
10/21/20	-	11/04/20	< 0.005
11/04/20	-	11/18/20	< 0.005
11/18/20	-	12/02/20	< 0.006
12/02/20	-	12/16/20	< 0.004
12/16/20	-	12/30/20	< 0.004

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**BNE Background Locations
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

BNE Office (COAP01)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.012 ± 0.001
01/14/20	-	01/29/20	0.020 ± 0.002
01/29/20	-	02/12/20	0.015 ± 0.002
02/12/20	-	02/26/20	0.021 ± 0.002
02/26/20	-	03/11/20	0.015 ± 0.002
03/11/20	-	03/25/20	0.014 ± 0.001
03/25/20	-	04/08/20	0.011 ± 0.001
04/08/20	-	04/22/20	0.020 ± 0.002
04/22/20	-	05/06/20	0.014 ± 0.001
05/06/20	-	05/20/20	0.015 ± 0.002
05/20/20	-	06/03/20	0.011 ± 0.001
06/03/20	-	06/17/20	0.015 ± 0.002
06/17/20	-	07/01/20	0.017 ± 0.002
07/01/20	-	07/15/20	0.017 ± 0.002
07/15/20	-	07/29/20	0.019 ± 0.002
07/29/20	-	08/11/20	0.026 ± 0.002
08/11/20	-	08/26/20	0.023 ± 0.002
08/26/20	-	09/09/20	0.018 ± 0.002
09/09/20	-	09/23/20	0.015 ± 0.002
09/23/20	-	10/07/20	0.025 ± 0.002
10/07/20	-	10/21/20	0.018 ± 0.002
10/21/20	-	11/04/20	0.014 ± 0.002
11/04/20	-	11/18/20	0.025 ± 0.002
11/18/20	-	12/02/20	0.022 ± 0.002
12/02/20	-	12/16/20	0.025 ± 0.002
12/16/20	-	12/30/20	0.020 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**BNE Background Locations
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

Brendan T. Byrne State Forest (COAP02)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.015 ± 0.002
01/14/20	-	01/29/20	0.016 ± 0.002
01/29/20	-	02/12/20	0.014 ± 0.001
02/12/20	-	02/26/20	0.025 ± 0.002
02/26/20	-	03/11/20	0.015 ± 0.002
03/11/20	-	03/25/20	0.019 ± 0.002
03/25/20	-	04/08/20	0.014 ± 0.001
04/08/20	-	04/22/20	0.018 ± 0.002
04/22/20	-	05/06/20	0.014 ± 0.001
05/06/20	-	05/20/20	0.014 ± 0.002
05/20/20	-	06/03/20	0.010 ± 0.001
06/03/20	-	06/17/20	0.014 ± 0.002
06/17/20	-	07/01/20	0.015 ± 0.002
07/01/20	-	07/15/20	0.015 ± 0.002
07/15/20	-	07/29/20	0.022 ± 0.002
07/29/20	-	08/11/20	0.021 ± 0.002
08/11/20	-	08/26/20	0.021 ± 0.002
08/26/20	-	09/09/20	0.017 ± 0.002
09/09/20	-	09/23/20	0.014 ± 0.001
09/23/20	-	10/07/20	0.022 ± 0.002
10/07/20	-	10/21/20	0.015 ± 0.001
10/21/20	-	11/04/20	0.015 ± 0.002
11/04/20	-	11/18/20	0.023 ± 0.002
11/18/20	-	12/02/20	0.020 ± 0.002
12/02/20	-	12/16/20	0.022 ± 0.002
12/16/20	-	12/30/20	0.017 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

Waretown Municipal Building (OCAP01)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.012 ± 0.001
01/14/20	-	01/29/20	0.016 ± 0.002
01/29/20	-	02/12/20	0.014 ± 0.002
02/12/20	-	02/26/20	0.022 ± 0.002
02/26/20	-	03/11/20	0.019 ± 0.002
03/11/20	-	03/25/20	0.016 ± 0.002
03/25/20	-	04/08/20	0.013 ± 0.002
04/08/20	-	04/22/20	0.026 ± 0.002
04/22/20	-	05/06/20	0.016 ± 0.002
05/06/20	-	05/20/20	0.014 ± 0.002
05/20/20	-	06/03/20	0.012 ± 0.002
06/03/20	-	06/17/20	0.015 ± 0.002
06/17/20	-	07/01/20	0.015 ± 0.002
07/01/20	-	07/15/20	0.017 ± 0.002
07/15/20	-	07/29/20	0.021 ± 0.002
07/29/20	-	08/11/20	0.022 ± 0.002
08/11/20	-	08/26/20	0.023 ± 0.002
08/26/20	-	09/09/20	0.017 ± 0.002
09/09/20	-	09/23/20	0.014 ± 0.002
09/23/20	-	10/07/20	0.024 ± 0.002
10/07/20	-	10/21/20	0.016 ± 0.002
10/21/20	-	11/04/20	0.014 ± 0.002
11/04/20	-	11/18/20	0.024 ± 0.002
11/18/20	-	12/02/20	0.020 ± 0.002
12/02/20	-	12/16/20	0.020 ± 0.002
12/16/20	-	12/30/20	0.018 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

Sands Point Harbor (OCAP02)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.013 ± 0.001
01/14/20	-	01/29/20	0.015 ± 0.002
01/29/20	-	02/12/20	0.017 ± 0.002
02/12/20	-	02/26/20	0.020 ± 0.002
02/26/20	-	03/11/20	0.019 ± 0.002
03/11/20	-	03/25/20	0.016 ± 0.002
03/25/20	-	04/08/20	0.016 ± 0.002
04/08/20	-	04/22/20	0.020 ± 0.002
04/22/20	-	05/06/20	0.013 ± 0.002
05/06/20	-	05/20/20	0.014 ± 0.002
05/20/20	-	06/03/20	0.011 ± 0.001
06/03/20	-	06/17/20	0.015 ± 0.002
06/17/20	-	07/01/20	0.015 ± 0.002
07/01/20	-	07/15/20	0.014 ± 0.002
07/15/20	-	07/29/20	0.023 ± 0.002
07/29/20	-	08/11/20	0.015 ± 0.002
08/11/20	-	08/26/20	0.022 ± 0.002
08/26/20	-	09/09/20	0.020 ± 0.002
09/09/20	-	09/23/20	0.012 ± 0.001
09/23/20	-	10/07/20	0.026 ± 0.002
10/07/20	-	10/21/20	0.016 ± 0.002
10/21/20	-	11/04/20	0.016 ± 0.002
11/04/20	-	11/18/20	0.025 ± 0.002
11/18/20	-	12/02/20	0.018 ± 0.002
12/02/20	-	12/16/20	0.026 ± 0.002
12/16/20	-	12/30/20	0.050 ± 0.016 ¹

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

¹ Air sampler found with no power upon arrival. Existing pump was removed and replaced with a new pump. Total sample volume for the period was approximately 5% of normal biweekly volume for the site. Analysis was performed.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

Forked River Marina (OCAP03)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.013 ± 0.001
01/14/20	-	01/29/20	0.020 ± 0.002
01/29/20	-	02/12/20	0.014 ± 0.002
02/12/20	-	02/26/20	0.023 ± 0.002
02/26/20	-	03/11/20	0.015 ± 0.002
03/11/20	-	03/25/20	0.016 ± 0.002
03/25/20	-	04/08/20	0.013 ± 0.002
04/08/20	-	04/22/20	0.019 ± 0.002
04/22/20	-	05/06/20	0.013 ± 0.002
05/06/20	-	05/20/20	0.013 ± 0.002
05/20/20	-	06/03/20	0.011 ± 0.001
06/03/20	-	06/17/20	0.016 ± 0.002
06/17/20	-	07/01/20	0.017 ± 0.002
07/01/20	-	07/15/20	0.016 ± 0.002
07/15/20	-	07/29/20	0.020 ± 0.002
07/29/20	-	08/11/20	No Data ²
08/11/20	-	08/26/20	0.022 ± 0.002
08/26/20	-	09/09/20	0.015 ± 0.002
09/09/20	-	09/23/20	0.015 ± 0.001
09/23/20	-	10/07/20	0.022 ± 0.002
10/07/20	-	10/21/20	0.014 ± 0.001
10/21/20	-	11/04/20	0.015 ± 0.002
11/04/20	-	11/18/20	0.023 ± 0.002
11/18/20	-	12/02/20	0.021 ± 0.002
12/02/20	-	12/16/20	0.021 ± 0.002
12/16/20	-	12/30/20	0.020 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

² Sample lost in transit to radiochemistry laboratory.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

Lacey Twp. Recreation Building (OCAP04)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.015 ± 0.002
01/14/20	-	01/29/20	0.018 ± 0.002
01/29/20	-	02/12/20	0.014 ± 0.002
02/12/20	-	02/26/20	0.024 ± 0.002
02/26/20	-	03/11/20	0.016 ± 0.002
03/11/20	-	03/25/20	0.020 ± 0.002
03/25/20	-	04/08/20	0.012 ± 0.001
04/08/20	-	04/22/20	0.019 ± 0.002
04/22/20	-	05/06/20	0.015 ± 0.002
05/06/20	-	05/20/20	0.016 ± 0.002
05/20/20	-	06/03/20	0.009 ± 0.001
06/03/20	-	06/17/20	0.013 ± 0.002
06/17/20	-	07/01/20	0.014 ± 0.001
07/01/20	-	07/15/20	0.016 ± 0.002
07/15/20	-	07/29/20	0.021 ± 0.002
07/29/20	-	08/11/20	0.020 ± 0.002
08/11/20	-	08/26/20	0.022 ± 0.002
08/26/20	-	09/09/20	0.017 ± 0.002
09/09/20	-	09/23/20	0.013 ± 0.001
09/23/20	-	10/07/20	0.025 ± 0.002
10/07/20	-	10/21/20	0.014 ± 0.001
10/21/20	-	11/04/20	0.016 ± 0.002
11/04/20	-	11/18/20	0.020 ± 0.002
11/18/20	-	12/02/20	0.020 ± 0.002
12/02/20	-	12/16/20	0.023 ± 0.002
12/16/20	-	12/30/20	0.019 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

JCP&L Substation (OCAP05)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.013 ± 0.002
01/14/20	-	01/29/20	0.016 ± 0.002
01/29/20	-	02/12/20	0.015 ± 0.002
02/12/20	-	02/26/20	0.025 ± 0.002
02/26/20	-	03/11/20	0.019 ± 0.002
03/11/20	-	03/25/20	0.017 ± 0.002
03/25/20	-	04/08/20	0.014 ± 0.002
04/08/20	-	04/22/20	0.022 ± 0.002
04/22/20	-	05/06/20	0.018 ± 0.002
05/06/20	-	05/20/20	0.017 ± 0.002
05/20/20	-	06/03/20	0.013 ± 0.002
06/03/20	-	06/17/20	0.015 ± 0.002
06/17/20	-	07/01/20	0.015 ± 0.002
07/01/20	-	07/15/20	0.015 ± 0.002
07/15/20	-	07/29/20	0.018 ± 0.002
07/29/20	-	08/11/20	0.021 ± 0.002
08/11/20	-	08/26/20	0.021 ± 0.002
08/26/20	-	09/09/20	0.017 ± 0.002
09/09/20	-	09/23/20	0.014 ± 0.002
09/23/20	-	10/07/20	0.023 ± 0.002
10/07/20	-	10/21/20	0.016 ± 0.002
10/21/20	-	11/04/20	0.014 ± 0.001
11/04/20	-	11/18/20	0.026 ± 0.002
11/18/20	-	12/02/20	0.021 ± 0.002
12/02/20	-	12/16/20	0.023 ± 0.002
12/16/20	-	12/30/20	0.018 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Gross Beta Activity in Weekly Air Particulate Samples**

Finninger Farm, OC Dredge Site (OCAP06)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
01/02/20	-	01/09/20	0.026 ± 0.005
01/09/20	-	01/15/20	0.023 ± 0.005
01/15/20	-	01/22/20	0.037 ± 0.005
01/22/20	-	01/29/20	0.023 ± 0.004
01/29/20	-	02/05/20	0.028 ± 0.005
02/05/20	-	02/12/20	0.030 ± 0.005
02/12/20	-	02/19/20	0.031 ± 0.005
02/19/20	-	02/26/20	0.036 ± 0.005
02/26/20	-	03/04/20	0.029 ± 0.005
03/04/20	-	03/11/20	0.025 ± 0.004
03/11/20	-	03/18/20	0.031 ± 0.005
03/18/20	-	03/26/20	0.034 ± 0.005
03/26/20	-	04/01/20	0.029 ± 0.005
04/01/20	-	04/09/20	0.022 ± 0.004
04/09/20	-	04/22/20	0.031 ± 0.003
04/22/20	-	05/06/20	0.022 ± 0.003
05/06/20	-	05/20/20	0.024 ± 0.003
05/20/20	-	06/04/20	0.013 ± 0.002
06/04/20	-	06/18/20	0.017 ± 0.003
06/18/20	-	07/01/20	0.028 ± 0.003
07/01/20	-	07/15/20	0.027 ± 0.003
07/15/20	-	07/30/20	0.030 ± 0.003
07/30/20	-	08/12/20	0.034 ± 0.004
08/12/20	-	08/27/20	0.031 ± 0.003
08/27/20	-	09/14/20	No Data ³
09/14/20	-	09/22/20	0.029 ± 0.004

Note: Air Particulate samples are collected by the licensee on a weekly basis (through 04/09/20).
Subsequent sample collection frequency reduced to biweekly by the licensee.

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

³ Sampler cartridge malfunction and low vacuum gauge. Sampler activated on 09/14/20. Collection period is 8 days.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Gross Beta Activity in Weekly Air Particulate Samples**

Finninger Farm, OC Dredge Site (OCAP06) - continued

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
09/22/20	-	10/06/20	0.037 ± 0.003
10/06/20	-	10/21/20	0.027 ± 0.003
10/21/20	-	11/05/20	0.025 ± 0.003
11/05/20	-	11/18/20	0.030 ± 0.003
11/18/20	-	12/03/20	0.025 ± 0.003
12/03/20	-	12/15/20	0.040 ± 0.004
12/15/20	-	12/29/20	0.026 ± 0.003

Note: Air Particulate samples are collected by the licensee on a biweekly basis starting the period 04/09/22 through 04/22/22

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

Access Road to Finninger Farm Property (ENE Sector) (OCAP07)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.013 ± 0.001
01/14/20	-	01/29/20	0.017 ± 0.002
01/29/20	-	02/12/20	0.016 ± 0.002
02/12/20	-	02/26/20	0.019 ± 0.002
02/26/20	-	03/11/20	0.018 ± 0.002
03/11/20	-	03/25/20	0.016 ± 0.002
03/25/20	-	04/08/20	0.014 ± 0.002
04/08/20	-	04/22/20	0.022 ± 0.002
04/22/20	-	05/06/20	0.014 ± 0.002
05/06/20	-	05/20/20	0.015 ± 0.002
05/20/20	-	06/03/20	0.010 ± 0.001
06/03/20	-	06/17/20	0.015 ± 0.002
06/17/20	-	07/01/20	0.014 ± 0.002
07/01/20	-	07/15/20	0.014 ± 0.001
07/15/20	-	07/29/20	0.021 ± 0.002
07/29/20	-	08/11/20	No Data ⁴
08/11/20	-	08/26/20	0.021 ± 0.002
08/26/20	-	09/09/20	0.018 ± 0.002
09/09/20	-	09/23/20	0.013 ± 0.001
09/23/20	-	10/07/20	0.023 ± 0.002
10/07/20	-	10/21/20	0.016 ± 0.002
10/21/20	-	11/04/20	0.014 ± 0.001
11/04/20	-	11/18/20	0.025 ± 0.002
11/18/20	-	12/02/20	0.023 ± 0.002
12/02/20	-	12/16/20	0.025 ± 0.002
12/16/20	-	12/30/20	0.017 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

⁴ Sample lost in transit to radiochemistry laboratory.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

East of US Route 9 and South of Discharge Canal Inside Fence (SE Sector) (OCAP08)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.013 ± 0.001
01/14/20	-	01/29/20	0.020 ± 0.002
01/29/20	-	02/12/20	0.015 ± 0.002
02/12/20	-	02/26/20	0.021 ± 0.002
02/26/20	-	03/11/20	0.016 ± 0.002
03/11/20	-	03/25/20	0.016 ± 0.002
03/25/20	-	04/08/20	0.012 ± 0.002
04/08/20	-	04/22/20	0.022 ± 0.002
04/22/20	-	05/06/20	0.015 ± 0.002
05/06/20	-	05/20/20	0.015 ± 0.002
05/20/20	-	06/03/20	0.011 ± 0.001
06/03/20	-	06/17/20	0.015 ± 0.002
06/17/20	-	07/01/20	0.018 ± 0.002
07/01/20	-	07/15/20	0.016 ± 0.002
07/15/20	-	07/29/20	0.022 ± 0.002
07/29/20	-	08/11/20	0.020 ± 0.002
08/11/20	-	08/26/20	0.021 ± 0.002
08/26/20	-	09/09/20	0.034 ± 0.007
09/09/20	-	09/23/20	0.019 ± 0.003
09/23/20	-	10/07/20	0.024 ± 0.002
10/07/20	-	10/21/20	0.017 ± 0.002
10/21/20	-	11/04/20	0.015 ± 0.002
11/04/20	-	11/18/20	0.023 ± 0.002
11/18/20	-	12/02/20	0.020 ± 0.002
12/02/20	-	12/16/20	0.024 ± 0.002
12/16/20	-	12/30/20	0.021 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

Fort Elfsborg Road (AIAP01)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.017 ± 0.002
01/14/20	-	01/29/20	0.017 ± 0.002
01/29/20	-	02/12/20	0.014 ± 0.002
02/12/20	-	02/26/20	0.025 ± 0.002
02/26/20	-	03/11/20	0.016 ± 0.002
03/11/20	-	03/25/20	0.020 ± 0.002
03/25/20	-	04/08/20	0.013 ± 0.001
04/08/20	-	04/22/20	0.020 ± 0.002
04/22/20	-	05/06/20	0.013 ± 0.001
05/06/20	-	05/20/20	0.016 ± 0.002
05/20/20	-	06/03/20	0.011 ± 0.001
06/03/20	-	06/17/20	0.015 ± 0.002
06/17/20	-	07/01/20	0.015 ± 0.002
07/01/20	-	07/15/20	0.017 ± 0.002
07/15/20	-	07/29/20	0.020 ± 0.002
07/29/20	-	08/11/20	0.020 ± 0.002
08/11/20	-	08/26/20	0.023 ± 0.002
08/26/20	-	09/09/20	0.019 ± 0.002
09/09/20	-	09/23/20	0.016 ± 0.002
09/23/20	-	10/07/20	0.022 ± 0.002
10/07/20	-	10/21/20	0.017 ± 0.002
10/21/20	-	11/04/20	0.016 ± 0.002
11/04/20	-	11/18/20	0.024 ± 0.002
11/18/20	-	12/02/20	0.022 ± 0.002
12/02/20	-	12/16/20	0.026 ± 0.002
12/16/20	-	12/30/20	0.019 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

Plant Access Road (AIAP02)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.014 ± 0.002
01/14/20	-	01/29/20	0.017 ± 0.002
01/29/20	-	02/12/20	0.015 ± 0.002
02/12/20	-	02/26/20	0.022 ± 0.002
02/26/20	-	03/11/20	0.018 ± 0.002
03/11/20	-	03/25/20	0.016 ± 0.002
03/25/20	-	04/08/20	0.014 ± 0.002
04/08/20	-	04/22/20	0.024 ± 0.002
04/22/20	-	05/06/20	0.016 ± 0.002
05/06/20	-	05/20/20	0.017 ± 0.002
05/20/20	-	06/03/20	0.012 ± 0.001
06/03/20	-	06/17/20	0.016 ± 0.002
06/17/20	-	07/01/20	0.016 ± 0.002
07/01/20	-	07/15/20	0.018 ± 0.002
07/15/20	-	07/29/20	0.019 ± 0.002
07/29/20	-	08/11/20	0.020 ± 0.002
08/11/20	-	08/26/20	0.022 ± 0.002
08/26/20	-	09/09/20	0.018 ± 0.002
09/09/20	-	09/23/20	0.016 ± 0.002
09/23/20	-	10/07/20	0.023 ± 0.002
10/07/20	-	10/21/20	0.016 ± 0.002
10/21/20	-	11/04/20	0.015 ± 0.002
11/04/20	-	11/18/20	0.022 ± 0.002
11/18/20	-	12/02/20	0.021 ± 0.002
12/02/20	-	12/16/20	0.029 ± 0.002
12/16/20	-	12/30/20	0.019 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

Lower Alloways Creek School (AIAP03)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.013 ± 0.001
01/14/20	-	01/29/20	0.017 ± 0.002
01/29/20	-	02/12/20	0.017 ± 0.002
02/12/20	-	02/26/20	0.020 ± 0.002
02/26/20	-	03/11/20	0.017 ± 0.002
03/11/20	-	03/25/20	0.016 ± 0.002
03/25/20	-	04/08/20	0.015 ± 0.002
04/08/20	-	04/22/20	0.020 ± 0.002
04/22/20	-	05/06/20	0.013 ± 0.002
05/06/20	-	05/20/20	0.014 ± 0.002
05/20/20	-	06/03/20	0.011 ± 0.001
06/03/20	-	06/17/20	0.015 ± 0.002
06/17/20	-	07/01/20	0.015 ± 0.002
07/01/20	-	07/15/20	0.016 ± 0.002
07/15/20	-	07/29/20	0.021 ± 0.002
07/29/20	-	08/11/20	0.019 ± 0.002
08/11/20	-	08/26/20	0.021 ± 0.002
08/26/20	-	09/09/20	0.018 ± 0.002
09/09/20	-	09/23/20	0.014 ± 0.001
09/23/20	-	10/07/20	0.022 ± 0.002
10/07/20	-	10/21/20	0.017 ± 0.002
10/21/20	-	11/04/20	0.016 ± 0.002
11/04/20	-	11/18/20	0.021 ± 0.002
11/18/20	-	12/02/20	0.021 ± 0.002
12/02/20	-	12/16/20	0.027 ± 0.002
12/16/20	-	12/30/20	0.019 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Gross Beta Activity in Bi-Weekly Air Particulate Samples**

SE Sector, PSE&G Owner Controlled Area (AIAP04)

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/30/19	-	01/14/20	0.013 ± 0.001
01/14/20	-	01/29/20	0.022 ± 0.002
01/29/20	-	02/12/20	0.015 ± 0.002
02/12/20	-	02/26/20	0.022 ± 0.002
02/26/20	-	03/11/20	0.016 ± 0.002
03/11/20	-	03/25/20	0.015 ± 0.002
03/25/20	-	04/08/20	0.015 ± 0.002
04/08/20	-	04/22/20	0.021 ± 0.002
04/22/20	-	05/06/20	0.014 ± 0.001
05/06/20	-	05/20/20	0.017 ± 0.002
05/20/20	-	06/03/20	0.010 ± 0.001
06/03/20	-	06/17/20	0.015 ± 0.002
06/17/20	-	07/01/20	0.017 ± 0.002
07/01/20	-	07/15/20	0.017 ± 0.002
07/15/20	-	07/29/20	0.022 ± 0.002
07/29/20	-	08/11/20	0.017 ± 0.002
08/11/20	-	08/26/20	0.023 ± 0.002
08/26/20	-	09/09/20	0.016 ± 0.002
09/09/20	-	09/23/20	0.014 ± 0.001
09/23/20	-	10/07/20	0.022 ± 0.002
10/07/20	-	10/21/20	0.016 ± 0.002
10/21/20	-	11/04/20	0.017 ± 0.002
11/04/20	-	11/18/20	0.024 ± 0.002
11/18/20	-	12/02/20	0.022 ± 0.002
12/02/20	-	12/16/20	0.024 ± 0.002
12/16/20	-	12/30/20	0.022 ± 0.002

Results in picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**BNE Background Location
Results of Analyses of Gamma Emitters and Strontium in
Quarterly Composite Air Samples**

BNE Office (COAP01)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.4	< 0.5	< 0.4	121 ± 17	< 36.0	< 16.2
03/25/20	-	07/01/20	< 0.2	< 0.4	< 0.2	150 ± 18	< 32.9	< 14.2
07/01/20	-	10/07/20	< 0.2	< 0.2	< 0.2	107 ± 15	< 39.0	< 23.8
10/07/20	-	12/30/20	< 0.3	< 0.3	< 0.3	117 ± 14	< 36.8	< 19.6

Brendan T. Byrne State Forest (COAP02)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.3	< 0.2	< 0.2	119 ± 16	< 30.6	< 18.3
03/25/20	-	07/01/20	< 0.2	< 0.2	< 0.2	147 ± 17	< 30.9	< 17.5
07/01/20	-	10/07/20	< 0.2	< 0.2	< 0.2	115 ± 14	< 36.7	< 20.4
10/07/20	-	12/30/20	< 0.7	< 0.7	< 0.5	103 ± 17	< 35.9	< 21.5

Results in 10⁻³ picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

Beryllium-7 (Be-7) is a naturally occurring radionuclide found in the environment.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses of Gamma Emitters and Strontium in
Quarterly Composite Air Samples**

Waretown Municipal Building (OCAP01)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.3	< 0.3	< 0.2	116 ± 16	< 55.5	< 15.8
03/25/20	-	07/01/20	< 0.2	< 0.4	< 0.3	148 ± 19	< 43.8	< 17.5
07/01/20	-	10/07/20	< 0.3	< 0.4	< 0.4	132 ± 20	< 33.8	< 9.6
10/07/20	-	12/30/20	< 0.3	< 0.3	< 0.3	96 ± 13	< 38.4	< 18.5

Sands Point Harbor (OCAP02)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.3	< 0.4	< 0.3	104 ± 14	< 43.0	< 18.1
03/25/20	-	07/01/20	< 0.3	< 0.3	< 0.3	156 ± 20	< 40.3	< 17.2
07/01/20	-	10/07/20	< 0.3	< 0.3	< 0.3	115 ± 17	< 35.0	< 15.4
10/07/20	-	12/30/20	< 0.4	< 0.3	< 0.3	109 ± 15	< 48.2	< 43.9

Forked River Marina (OCAP03)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.4	< 0.2	< 0.2	121 ± 16	< 40.0	< 18.1
03/25/20	-	07/01/20	< 0.3	< 0.3	< 0.2	117 ± 16	< 43.5	< 25.6
07/01/20	-	10/07/20	< 0.1	< 0.2	< 0.2	100 ± 14	< 35.4	< 13.2
10/07/20	-	12/30/20	< 0.3	< 0.3	< 0.2	102 ± 14	< 29.1	< 16.9

Lacey Township Recreation Building (OCAP04)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.3	< 0.2	< 0.2	128 ± 17	< 29.0	< 12.8
03/25/20	-	07/01/20	< 0.2	< 0.2	< 0.2	136 ± 16	< 45.2	< 25.6
07/01/20	-	10/07/20	< 0.2	< 0.2	< 0.2	113 ± 15	< 33.5	< 13.8
10/07/20	-	12/30/20	< 0.4	< 0.3	< 0.2	102 ± 14	< 44.0	< 16.4

Results in 10^{-3} picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

Beryllium-7 (Be-7) is a naturally occurring radionuclide found in the environment.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses of Gamma Emitters and Strontium in
Quarterly Composite Air Samples**

Jersey Central Power and Light Substation (OCAP05)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.4	< 0.4	< 0.4	125 ± 16	< 37.7	< 20.3
03/25/20	-	07/01/20	< 0.3	< 0.3	< 0.2	141 ± 17	< 59.5	< 19.7
07/01/20	-	10/07/20	< 0.2	< 0.2	< 0.2	107 ± 14	< 32.2	< 12.1
10/07/20	-	12/30/20	< 0.3	< 0.3	< 0.2	104 ± 13	< 41.7	< 19.1

Finninger Farm, OC Dredge Site (OCAP06)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
01/02/20	-	04/01/20	< 0.7	< 0.6	< 0.6	115 ± 19	< 49.1	< 36.9
04/01/20	-	07/01/20	< 0.5	< 0.5	< 0.6	107 ± 19	< 94.7	< 72.4
07/01/20	-	10/06/20	< 0.5	< 0.5	< 0.4	104 ± 18	< 73.3	< 59.9
10/06/20	-	12/29/20	< 0.5	< 0.5	< 0.6	74 ± 16	< 58.4	< 40.7

Access Road, Finninger Farm Property (ENE Sector) (OCAP07)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.3	< 0.4	< 0.4	126 ± 18	< 28.3	< 19.1
03/25/20	-	07/01/20	< 0.3	< 0.2	< 0.2	141 ± 17	< 45.2	< 16.8
07/01/20	-	10/07/20	< 0.2	< 0.2	< 0.2	98 ± 13	< 53.9	< 23.3
10/07/20	-	12/30/20	< 0.2	< 0.3	< 0.2	105 ± 13	< 45.4	< 36.5

East of US Route 9 & South of the Discharge Canal Inside Fence (SE Sector) (OCAP08)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.3	< 0.3	< 0.3	119 ± 15	< 44.8	< 23.2
03/25/20	-	07/01/20	< 0.6	< 0.5	< 0.4	156 ± 22	< 26.1	< 13.7
07/01/20	-	10/07/20	< 0.2	< 0.3	< 0.1	112 ± 15	< 44.6	< 34.2
10/07/20	-	12/30/20	< 0.3	< 0.4	< 0.3	118 ± 14	< 46.2	< 33.6

Results in 10^{-3} picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

Beryllium-7 (Be-7) is a naturally occurring radionuclide found in the environment.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem / Hope Creek
Results of Analyses of Gamma Emitters and Strontium in
Quarterly Composite Air Samples**

Fort Elfsborg Road (AIAP01)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.2	< 0.3	< 0.3	109 ± 15	< 31.2	< 11.1
03/25/20	-	07/01/20	< 0.3	< 0.3	< 0.3	139 ± 18	< 32.8	< 12.7
07/01/20	-	10/07/20	< 0.2	< 0.2	< 0.2	111 ± 15	< 28.2	< 14.4
10/07/20	-	12/30/20	< 0.4	< 0.3	< 0.3	101 ± 13	< 42.3	< 15.7

Plant Access Road (AIAP02)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.3	< 0.3	< 0.3	118 ± 14	< 33.6	< 13.3
03/25/20	-	07/01/20	< 0.3	< 0.2	< 0.2	124 ± 15	< 31.2	< 17.6
07/01/20	-	10/07/20	< 0.2	< 0.3	< 0.2	123 ± 16	< 46.8	< 20.6
10/07/20	-	12/30/20	< 0.4	< 0.3	< 0.3	110 ± 16	< 49.6	< 24.8

Lower Alloways Creek School (AIAP03)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.3	< 0.3	< 0.3	111 ± 15	< 48.6	< 15.1
03/25/20	-	07/01/20	< 0.3	< 0.2	< 0.2	146 ± 17	< 34.3	< 17.2
07/01/20	-	10/07/20	< 0.3	< 0.3	< 0.2	132 ± 18	< 43.8	< 10.4
10/07/20	-	12/30/20	< 0.2	< 0.3	< 0.2	105 ± 14	< 34.5	< 22.2

SE Sector, PSE&G Owner Controlled Area (AIAP04)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/30/19	-	03/25/20	< 0.2	< 0.3	< 0.2	119 ± 15	< 41.7	< 16.0
03/25/20	-	07/01/20	< 0.4	< 0.2	< 0.2	139 ± 17	< 27.4	< 13.8
07/01/20	-	10/07/20	< 0.4	< 0.3	< 0.2	124 ± 17	< 42.0	< 11.9
10/07/20	-	12/30/20	< 0.2	< 0.3	< 0.2	105 ± 13	< 40.1	< 29.0

Results in 10^{-3} picoCuries per cubic meter (pCi/m³) +/- 2 Standard Deviations total measurement uncertainty

Beryllium-7 (Be-7) is a naturally occurring radionuclide found in the environment.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses of Gamma Emitters and Strontium in Fish/Shellfish Samples**

Stouts Creek (OCFS01)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
06/01/20 - Clams	< 6	< 5	< 6	< 5	1,830 ± 236	< 88	< 169
10/19/20 - Clams	< 5	< 5	< 5	< 6	1,530 ± 207	< 87	< 193

East of Site – Barnegat Bay (OCFS02)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
06/01/20 – Clams	< 5	< 6	< 6	< 5	1,670 ± 224	< 77	< 97
06/02/20–American Eel	< 15	< 18	< 17	< 21	2,780 ± 520	< 149	< 216
06/02/20 – White Perch	< 13	< 12	< 14	< 14	2,870 ± 401	< 98	< 136
10/20/20 -American Eel	< 10	< 11	< 12	< 9	3,130 ± 395	< 219	< 181
10/21/20 - White Perch	< 18	< 27	< 22	< 21	3,290 ± 525	< 268	< 225
10/21/20 - Dogfish	< 18	< 22	< 16	< 22	2,920 ± 546	< 136	< 271
10/21/20 - Striped Bass	< 7	< 9	< 8	< 8	3,770 ± 436	< 209	< 225
10/21/20 - Crab	< 10	< 14	< 13	< 12	2,220 ± 379	< 94	< 89
10/20/20 - Clams	< 6	< 8	< 7	< 7	1,340 ± 213	< 82	< 125

Great Bay / Little Egg Harbor (OCFS03)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
06/01/20 - Clams	< 5	< 6	< 8	< 7	1,570 ± 215	< 84	< 113
10/21/20 - Clams	< 6	< 8	< 9	< 7	1,520 ± 256	< 114	< 99

OCNGS Discharge Canal between Pump Discharges and US Route 9 (OCFS04)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
10/20/20 - Striped Bass	< 7	< 8	< 8	< 7	3,640 ± 493	< 225	< 224

Results in picoCuries per kilogram – WET (pCi/kg) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) is a naturally occurring radionuclide found in the environment

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses of Gamma Emitters and Strontium in Fish/Shellfish Samples**

Delaware River – Near Plant Discharge Outfall Area – Salem NGS (AIFS01)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
05/01/20 – White Perch	< 15	< 16	< 17	< 17	3,560 ± 576	< 125	< 148
05/01/20 – Catfish	< 11	< 14	< 14	< 13	3,110 ± 423	< 113	< 104
05/01/20 – Striped Bass	< 15	< 18	< 16	< 15	4,210 ± 541	< 113	< 129
07/15/20 - Crab	< 5	< 6	< 5	< 5	3,270 ± 367	< 138	< 131
08/26/20 - Crab	< 7	< 4	< 7	< 6	1,790 ± 252	< 73	< 142
10/14/20 – Striped Bass	< 11	< 12	< 11	< 10	3,520 ± 427	< 301	< 204
10/19/20 – Striped Bass	< 8	< 9	< 8	< 8	4,040 ± 436	< 241	< 330

Delaware River – West Bank Upstream (AIFS02)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
04/28/20 – Striped Bass	< 11	< 10	< 11	< 9	3,280 ± 437	< 150	< 178
04/28/20 - Catfish	< 17	< 21	< 22	< 19	3,360 ± 507	< 84	< 198
07/15/20 - Crab	< 5	< 5	< 5	< 5	2,060 ± 255	< 77	< 88
08/26/20 - Crab	< 8	< 9	< 7	< 7	3,340 ± 408	< 168	< 155
09/24/20 – Bluefish	< 13	< 14	< 12	< 12	3,940 ± 481	< 506	< 569
10/13/20 – Striped Bass	< 7	< 7	< 7	< 7	3,640 ± 395	< 323	< 434

Delaware River – One Mile West of Mad Horse Creek (AIFS03)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
04/28/20 – Stripped Bass	< 8	< 9	< 9	< 7	4,760 ± 591	< 107	< 108
10/14/20 – Striped Bass	< 10	< 11	< 11	< 9	3,850 ± 451	< 260	< 272
10/19/20 - Catfish	< 13	< 17	< 13	< 13	3,380 ± 468	< 210	< 237

Results in picocuries per kilogram – WET (pCi/kg) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) is a naturally occurring radionuclide found in the environment.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses of Gamma Emitters in Aquatic Sediment Samples**

Barnegat Bay (OCAQ01)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
06/01/20	< 197	< 21	< 25	< 31	< 27	< 27	10,600 ± 1,360
10/20/20	< 123	< 13	< 15	< 22	< 15	< 15	13,000 ± 1,340

Oyster Creek Discharge Canal (OCAQ02)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
06/02/20	< 99	< 13	< 15	< 19	32 ± 18 ⁵	< 12	8,350 ± 956
10/20/20	< 61	< 6	< 6	< 9	< 8	< 7	1,310 ± 192

Great Bay / Little Egg Harbor (OCAQ03)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
06/02/20	593 ± 277	< 23	< 25	< 34	41 ± 27	< 26	16,200 ± 1,860
10/20/20	< 167	< 20	< 23	< 28	< 20	< 21	18,400 ± 1,850

Stouts Creek (OCAQ04)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
06/01/20	< 96	< 8	< 10	< 13	< 12	< 10	2,020 ± 350
10/19/20	198 ± 92	< 10	< 11	< 15	< 10	< 10	6,790 ± 669

Results in picoCuries per kilogram – DRY (pCi/kg) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) and Beryllium-7 (Be-7) are naturally occurring radionuclides found in the environment.

⁵ Since the plant has been in Decommissioning since 2018, this trace amount of Cs-137 is likely attributed to radioactive fallout due to historical nuclear weapons testing and the Chernobyl accident.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses of Gamma Emitters in Aquatic Sediment Samples**

Delaware River Near Site Helipad (AIAQ01)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/21/20	< 86	< 9	< 11	< 15	< 12	< 10	6,810 ± 752
11/23/20	138 ± 66	< 6	< 9	< 9	10 ± 7	< 8	5,490 ± 570

Delaware River Near Plant Discharge Outfall Area – Salem Station NGS (AIAQ02)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/21/20	< 65	< 7	< 8	< 10	< 8	< 8	3,000 ± 375
11/19/20	< 89	< 9	< 13	< 12	< 11	< 12	3,620 ± 443

Delaware River - Near Hope Creek NGS Cooling Tower Blow Down Discharge Line Outfall (AIAQ03)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/21/20	< 147	< 13	< 20	< 24	< 15	< 15	8,880 ± 956
11/19/20	< 66	< 7	< 5	< 11	< 8	< 7	3,660 ± 423

Delaware River Near South Storm Drain Discharge Line (AIAQ04)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/21/20	< 113	< 12	< 16	< 19	< 13	< 13	6,320 ± 689
11/19/20	< 104	< 10	< 11	< 16	< 11	< 10	4,760 ± 515

West Bank of Delaware River – Upstream (AIAQ05)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/21/20	< 192	< 16	< 19	< 27	< 22	< 21	11,700 ± 1,170
11/19/20	< 118	< 14	< 14	< 20	< 14	< 13	14,500 ± 1,440

Delaware Riverbank – 1.0 Miles W of Mad Horse Creek (AIAQ06)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/21/20	< 106	< 11	< 13	< 20	< 14	< 13	12,000 ± 1,220
11/13/20	< 109	< 11	< 11	< 12	< 12	< 10	10,300 ± 1,040

Results in picoCuries per kilogram – DRY (pCi/kg) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) and Beryllium-7 (Be-7) are naturally occurring radionuclides found in the environment.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses of Gamma Emitters in Vegetable Samples**

Oyster Creek Onsite Garden - ESE (OCVE01)

<u>Sample⁶</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Cabbage	06/16/20	< 14	< 17	< 17	< 15	4,270 ± 653
Collards	06/16/20	< 11	< 11	< 13	< 12	4,600 ± 602
Kale	06/16/20	< 18	< 17	< 16	< 15	4,830 ± 678
Cabbage	07/22/20	< 14	< 31	< 20	< 19	3,470 ± 588
Collards	07/22/20	< 15	< 13	< 23	< 15	3,210 ± 577
Kale	07/22/20	< 18	< 26	< 20	< 21	4,510 ± 689
Cabbage	08/31/20	< 14	< 17	< 15	< 14	1,800 ± 321
Collards	08/31/20	< 14	< 18	< 16	< 14	3,090 ± 453
Cabbage	09/23/20	< 17	< 20	< 18	< 18	3,040 ± 537
Collards	09/23/20	< 11	< 13	< 13	< 14	3,050 ± 481
Collards	10/26/20	< 13	< 15	< 16	< 16	2,600 ± 465

Private Farm – NW (OCVE02)

<u>Sample⁵</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Collards	06/16/20	< 11	< 17	< 11	< 13	3,740 ± 502
Kale	06/16/20	< 12	< 14	< 12	< 11	4,270 ± 599
Rape	06/16/20	< 12	< 14	< 15	< 11	3,990 ± 525
Cabbage	07/22/20	< 13	< 19	< 21	< 16	2,510 ± 492
Collards	07/22/20	< 12	< 16	< 13	< 11	3,790 ± 570
Kale	07/22/20	< 30	< 31	< 29	< 23	3,280 ± 748
Collards	08/31/20	< 13	< 12	< 12	< 12	3,190 ± 430
Kale	08/31/20	< 12	< 16	< 14	< 12	4,020 ± 550
Mustard Green	08/31/20	< 22	< 21	< 26	< 24	4,860 ± 712
Cabbage	09/23/20	< 14	< 18	< 15	< 14	3,010 ± 446
Collards	09/23/20	< 6	< 7	< 8	< 7	4,510 ± 490
Kale	09/23/20	< 11	< 14	< 11	< 10	4,010 ± 468
Cabbage	10/26/20	< 12	< 10	< 12	< 12	2,360 ± 362
Collards	10/26/20	< 10	< 11	< 12	< 10	3,790 ± 497
Swiss Chard	10/26/20	< 16	< 20	< 15	< 16	4,390 ± 709

Results in picoCuries per kilogram – WET (pCi/kg) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) is a naturally occurring radionuclide found in the environment.

⁶ No Kale sample available at OCVE01 and OCVE02 in September and October 2020 due to low yield at gardens

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses of Gamma Emitters in Vegetable Samples**

Oyster Creek Onsite Garden - SE (OCVE03)

<u>Sample</u> ⁷	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Cabbage	06/16/20	< 15	< 21	< 20	< 17	5,810 ± 730
Collards	06/16/20	< 18	< 22	< 18	< 22	6,070 ± 880
Kale	06/16/20	< 12	< 16	< 16	< 14	5,170 ± 660
Cabbage	07/22/20	< 17	< 13	< 19	< 20	2,630 ± 552
Collards	07/22/20	< 19	< 25	< 27	< 28	4,360 ± 793
Kale	07/22/20	< 24	< 31	< 30	< 26	4,520 ± 804
Cabbage	08/31/20	< 18	< 21	< 19	< 17	3,430 ± 529
Collards	08/31/20	< 15	< 18	< 20	< 15	3,970 ± 540
Kale	08/31/20	< 23	< 23	< 29	< 22	4,660 ± 741

Oyster Creek Onsite Garden - E (OCVE07)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Cabbage	06/16/20	< 14	< 14	< 12	< 15	2,710 ± 436
Collards	06/16/20	< 10	< 14	< 15	< 17	3,640 ± 527
Kale	06/16/20	< 9	< 11	< 13	< 12	3,650 ± 504
Cabbage	07/22/20	< 14	< 15	< 18	< 18	3,550 ± 536
Collards	07/22/20	< 13	< 16	< 13	< 17	3,560 ± 541
Kale	07/22/20	< 16	< 22	< 20	< 16	3,080 ± 514
Cabbage	08/31/20	< 13	< 14	< 12	< 14	1,880 ± 373
Collards	08/31/20	< 14	< 12	< 15	38 ± 14 ⁸	2,860 ± 471
Kale	08/31/20	< 19	< 26	< 21	< 24	< 271
Cabbage	09/23/20	< 15	< 21	< 19	< 20	2,200 ± 443
Collards	09/23/20	< 13	< 13	< 14	< 11	3,500 ± 461
Cabbage	10/26/20	< 16	< 18	< 15	< 16	2,190 ± 414
Collards	10/26/20	< 15	< 20	< 16	< 18	3,020 ± 476

Results in picoCuries per kilogram – WET (pCi/kg) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) is a naturally occurring radionuclide found in the environment.

⁷ No samples from OCVE03 onsite garden available in September and October 2020 due to low yield at gardens

⁸ Since the plant has been in Decommissioning since 2018, these trace amounts of Cs-137 are likely attributed to radioactive fallout due to historical nuclear weapons testing and the Chernobyl accident.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses of Gamma Emitters in Vegetable Samples**

Local Farm - NNE (AIVE04)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Peppers	07/07/20	< 22	< 17	< 19	< 17	1,570 ± 426
Tomato	07/07/20	< 7	< 7	< 9	< 8	1,900 ± 275
Corn	07/07/20	< 8	< 11	< 9	< 11	2,000 ± 329
Peach	07/07/20	< 9	< 8	< 8	< 8	1,720 ± 334

Local Farm - NNE (AIVE05)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Asparagus	05/05/20	< 10	< 13	< 11	< 11	2,400 ± 341
Tomato	07/07/20	< 11	< 16	< 7	< 12	2,240 ± 374
Peppers	07/07/20	< 12	< 16	< 14	< 12	1,540 ± 331
Corn	07/07/20	< 21	< 16	< 23	< 21	2,970 ± 556

Farm Market – NE (AIVE11)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Asparagus	05/05/20	< 8	< 10	< 10	< 9	2,820 ± 353
Peppers	07/07/20	< 18	< 28	< 17	< 15	1,540 ± 402
Cabbage	07/07/20	< 17	< 22	< 18	< 14	2,490 ± 484
Peach	07/07/20	< 13	< 10	< 13	< 10	1,240 ± 284
Tomato	07/07/20	< 12	< 9	< 9	< 11	1,930 ± 337
Corn	07/07/20	< 17	< 19	< 16	< 18	2,540 ± 443

Onsite – N (AIVE12)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Broccoli	07/13/20	< 13	< 12	< 16	< 13	6,610 ± 895
Broccoli	08/31/20	< 11	< 15	< 13	< 15	4,450 ± 541
Lambs Ear	08/31/20	< 30	< 33	< 34	< 32	7,810 ± 1,110

Onsite - NNW (AIVE14)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Hosta	07/13/20	< 22	< 31	< 28	< 25	4,070 ± 733
Lambs Ear	07/13/20	< 37	< 50	< 43	< 39	7,000 ± 1,140
Broccoli	08/31/20	< 10	< 13	< 13	< 11	4,490 ± 572
Lambs Ear	08/31/20	< 31	< 31	< 33	< 33	7,260 ± 990

Results in picoCuries per kilogram – WET (pCi/kg) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) is a naturally occurring radionuclide found in the environment

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses of Gamma Emitters in Vegetable Samples**

Private Farm – SSW (AIVE15)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Hosta	07/13/20	< 23	< 28	< 31	< 24	3,860 ± 809
Lambs Ear	07/13/20	< 30	< 33	< 31	< 26	5,570 ± 791
Broccoli	08/31/20	< 16	< 19	< 17	< 15	4,010 ± 597
Lambs Ear	08/31/20	< 24	< 30	< 32	< 27	10,600 ± 1,330
Hosta	08/31/20	< 20	< 23	< 24	< 22	3,980 ± 614

Private Farm – S (AIVE16)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Tomato	07/29/20	< 8	< 13	< 13	< 11	1,980 ± 331

Private Farm – NNE (AIVE18)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Asparagus	05/05/20	< 9	< 11	< 9	< 9	2,460 ± 325
Peppers	07/07/20	< 14	< 22	< 20	< 13	1,620 ± 379
Peach	07/29/20	< 8	< 8	< 8	< 10	1,540 ± 259
Tomato	07/29/20	< 11	< 13	< 8	< 9	2,740 ± 415
Corn	07/29/20	< 14	< 12	< 17	< 13	2,330 ± 395

Private Farm – NW (AIVE22)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Corn	07/29/20	< 10	< 11	< 9	< 10	2,920 ± 373

Onsite - SE (AIVE25)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Lambs Ear	07/29/20	< 24	< 27	< 30	< 27	11,300 ± 1,360
Broccoli	08/31/20	< 9	< 14	< 12	< 9	5,380 ± 645
Lambs Ear	08/31/20	< 12	< 19	< 13	< 13	7,770 ± 942

Onsite - NW (AIVE26)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Hosta	07/13/20	< 20	< 32	< 27	< 27	4,780 ± 751
Broccoli	08/31/20	< 22	< 23	< 25	< 20	3,690 ± 673
Lambs Ear	08/31/20	< 27	< 39	< 31	< 28	8,650 ± 1,180
Hosta	08/31/20	< 26	< 27	< 30	< 31	4,480 ± 788

Results in picoCuries per kilogram – WET (pCi/kg) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) is a naturally occurring radionuclide found in the environment.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**BNE Background Location
Results of Analyses of Gamma Emitters and Strontium in Milk Samples**

State of New Jersey Dairy Farm (COMI01)²

<u>Collection Date</u>	<u>Cs-137</u>	<u>I-131</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
03/09/20	< 1.84	< 0.61	1,260 ± 142	< 0.90	< 0.86

Results in picoCuries per Liter (pCi/L) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) is a naturally occurring radionuclide found in the environment.

⁹ No samples collected from the second to fourth quarter as the farm suspended all activities due to the Covid-19 Pandemic travel restrictions placed on BNE staff.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses of Gamma Emitters and Strontium in Milk Samples**

Private Farm – NNE (AIMI01)

<u>Collection Date</u>	<u>Cs-137</u>	<u>I-131</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
01/06/20	< 1.77	< 0.77	1,670 ± 212	< 0.87	< 0.89
02/03/20	< 1.63	< 0.75	1,830 ± 174	< 0.90	< 0.98
03/03/20	< 2.84	< 0.63	1,510 ± 179	< 0.94	< 0.86
04/06/20	< 2.10	< 0.60	1,530 ± 175	< 1.46	< 1.18
05/04/20	< 1.59	< 0.46	1,630 ± 173	< 0.84	< 0.85
06/08/20	< 1.63	< 0.47	1,340 ± 127	< 0.55	< 0.91
07/06/20	< 1.58	< 0.61	1,520 ± 163	< 0.93	< 0.63
07/20/20	< 1.87	< 0.63	1,890 ± 185	< 0.83	< 0.89
08/03/20	< 2.73	< 0.49	1,290 ± 162	< 0.91	< 0.95
09/08/20	< 1.75	< 0.57	1,470 ± 146	< 0.91	< 0.92
10/05/20	< 1.65	< 0.99	1,560 ± 156	< 0.83	< 0.93
11/02/20	< 1.99	< 0.47	1,330 ± 143	< 2.14 ⁶	< 0.81
12/07/20	< 2.02	< 0.57	1,780 ± 203	< 0.56	< 0.96

Private Farm – WNW (AIMI03)¹⁰

<u>Collection Date</u>	<u>Cs-137</u>	<u>I-131</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
01/06/20	< 2.01	< 0.66	1,410 ± 153	< 0.91	< 0.94
02/03/20	< 1.77	< 0.67	1,940 ± 198	< 0.91	< 0.67
03/03/20	< 2.98	< 0.53	1,280 ± 146	< 0.86	< 0.92
07/20/20	< 2.24	< 0.67	1,900 ± 204	< 0.85	< 0.91
08/03/20	< 2.13	< 0.62	1,570 ± 190	< 0.84	< 0.95
09/08/20	< 1.57	< 0.46	1,340 ± 134	< 0.91	< 0.94
10/05/20	< 1.88	< 0.95	1,410 ± 136	< 0.83	< 0.92
11/02/20	< 1.99	< 0.43	1,380 ± 161	< 2.07	< 0.77
12/07/20	< 1.74	< 0.72	1,290 ± 135	< 0.36	< 0.50

Results in picoCuries per Liter (pCi/L) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) is a naturally occurring radionuclide found in the environment

¹⁰ No samples collected from April through June 2020 as the farm suspended all activities due to the Covid-19 Pandemic travel restrictions placed on BNE staff.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses of Gamma Emitters and Strontium in Milk Samples**

Private Farm – W (AIMI04)¹¹

<u>Collection Date</u>	<u>Cs-137</u>	<u>I-131</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
01/06/20	< 2.16	< 0.70	1,480 ± 190	< 0.88	< 0.89
02/03/20	< 2.10	< 0.71	1,800 ± 172	< 0.91	< 0.95
03/03/20	< 2.90	< 0.53	1,450 ± 160	< 0.97	< 0.91
07/20/20	< 2.66	< 0.60	1,930 ± 236	< 0.84	< 0.90
08/03/20	< 2.92	< 0.51	1,210 ± 147	< 0.88	< 0.96
09/08/20	< 1.65	< 0.57	1,560 ± 162	< 0.79	< 0.93
10/05/20	< 1.62	< 0.58	1,570 ± 152	< 1.69	< 0.94
11/02/20	< 1.91	< 0.48	1,390 ± 150	< 1.91	< 0.72
12/07/20	< 2.04	< 0.79	1,490 ± 142	< 2.43	< 0.75

Results in picoCuries per Liter (pCi/L) +/- 2 Standard Deviations total measurement uncertainty

Potassium-40 (K-40) is a naturally occurring radionuclide found in the environment

¹¹ No samples collected from April through July 2020 as the farm suspended all activities due to Covid-19 Pandemic travel restrictions placed on BNE staff.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses of Gamma Emitters and Tritium (H-3) in Surface Water**

Barnegat Bay (OCSW01)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
06/01/20	< 1.64	< 1.78	< 1.98	< 2.02	< 230	< 0.89
10/20/20	< 1.67	< 1.87	< 1.82	< 1.90	< 195	No Data ¹²

Great Bay / Little Egg Harbor (OCSW02)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/08/20 – 01/29/20	< 1.49	< 1.38	< 1.56	< 1.37	< 241	< 1.65
02/04/20 – 02/25/20	< 1.42	< 1.34	< 1.38	< 1.23	< 196	< 4.07
03/03/20 – 03/30/20	< 1.17	< 1.33	< 1.36	< 1.20	< 191	< 1.65
04/27/20 ¹³	< 1.54	< 1.68	< 1.62	< 1.57	< 264	< 0.82
05/27/20	< 1.32	< 1.58	< 1.50	< 1.39	< 232	< 0.53
07/01/20	< 1.95	< 2.65	< 2.32	< 2.12	< 253	< 0.91
07/30/20	< 1.65	< 1.79	< 1.76	< 1.70	< 236	< 0.90
08/27/20	< 1.58	< 1.71	< 1.87	< 1.88	< 236	< 0.81
09/25/20	< 1.67	< 2.23	< 2.04	< 1.84	< 258	< 0.80
10/30/20	< 1.70	< 1.74	< 1.70	< 1.80	< 200	< 0.90
11/30/20	< 1.90	< 2.32	< 2.17	< 1.93	< 255	< 0.93
12/29/20	< 1.61	< 1.73	< 2.11	< 1.96	< 185	< 0.93

Results in picoCuries per Liter (pCi/L)

¹² Radiochemical analysis for I-131 not performed as plant is in Decommissioning and no longer producing fission products.

¹³ Monthly grab samples commence. Prior split samples were monthly composites of weekly grab samples.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

Oyster Creek

Results of Analyses of Gamma Emitters and Tritium (H-3) in Surface Water (continued)

Stouts Creek (OCSW03)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
06/01/20	< 1.71	< 1.79	< 1.93	< 1.60	< 230	< 0.95
10/19/20	< 1.21	< 1.47	< 1.46	< 1.43	< 205	No Data ¹⁴

Oyster Creek Discharge Canal (OCSW04)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/08/20 – 01/29/20	< 1.65	< 1.36	< 1.74	< 1.51	< 236	< 0.89
02/04/20 – 02/25/20	< 1.44	< 1.43	< 1.56	< 1.32	< 194	< 2.17
03/03/20 – 03/30/20	< 1.40	< 1.43	< 1.30	< 1.26	< 190	< 1.95
04/27/20 ¹⁵	< 1.78	< 1.99	< 1.78	< 1.83	< 262	< 0.70
05/27/20	< 1.17	< 1.39	< 1.38	< 1.09	< 225	< 0.53
07/01/20	< 1.39	< 1.80	< 1.64	< 1.19	< 253	< 0.88
07/30/20	< 1.60	< 1.76	< 2.02	< 1.87	< 232	< 0.81
08/27/20	< 1.64	< 2.30	< 1.88	< 1.74	< 242	< 0.89
09/25/20	< 1.68	< 1.80	< 1.92	< 1.61	< 241	< 0.78
10/30/20	< 2.16	< 2.31	< 1.98	< 2.37	< 201	< 0.87
11/30/20	< 1.72	< 2.03	< 2.06	< 1.74	< 256	< 0.86
12/29/20	< 1.97	< 1.88	< 1.98	< 1.82	< 209	< 0.94

Results in picoCuries per Liter (pCi/L)

¹⁴ Radiochemical analysis for I-131 not performed as plant is in Decommissioning and no longer producing fission products.

¹⁵ Monthly grab sample collection commences at Oyster Creek. Prior split samples were monthly composites of weekly grab samples.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses of Gamma Emitters and Tritium (H-3) in Surface Water**

Delaware River – Near Plant Discharge Outfall Area – Salem NGS (AISW01)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/07/20	< 1.24	< 1.25	< 1.18	< 1.20	< 241	< 0.84
01/22/20	< 1.36	< 1.63	< 1.60	< 1.49	< 217	< 0.91
02/03/20	< 1.72	< 1.89	< 1.90	< 1.67	< 198	< 0.86
02/18/20	< 1.53	< 1.47	< 1.58	< 1.50	< 207	< 0.81
03/03/20	< 1.32	< 1.55	< 1.66	< 1.58	< 193	< 0.86
03/17/20	< 1.44	< 1.53	< 1.46	< 1.54	< 224	< 0.80
04/06/20	< 1.86	< 1.80	< 2.05	< 1.81	< 228	< 0.89
04/20/20	< 1.63	< 2.01	< 1.80	< 1.67	1,110 ± 282 ¹⁶	< 0.85
05/05/20	< 1.22	< 1.31	< 1.41	< 1.25	< 231	< 0.85
05/21/20	< 1.32	< 1.57	< 1.65	< 1.90	< 193	< 0.85
06/09/20	< 1.48	< 1.87	< 1.86	< 1.64	< 206	< 0.87
06/26/20	< 1.35	< 1.87	< 1.64	< 1.49	< 251	< 0.83
07/07/20	< 1.45	< 1.77	< 1.72	< 1.41	< 220	< 0.76
07/21/20	< 1.42	< 1.56	< 1.62	< 1.56	< 247	< 0.82
08/07/20	< 1.58	< 1.42	< 1.46	< 1.40	< 241	< 0.84
08/17/20	< 1.96	< 1.92	< 1.77	< 1.78	< 241	< 0.76
09/09/20	< 1.47	< 1.53	< 1.68	< 1.49	< 235	< 0.87
09/24/20	< 1.70	< 1.78	< 2.13	< 2.00	< 242	< 0.69
10/08/20	< 1.37	< 1.49	< 1.78	< 1.39	< 194	< 0.95
10/23/20	< 1.48	< 1.50	< 1.53	< 1.38	< 188	< 0.93
11/05/20	< 2.14	< 3.01	< 2.10	< 2.37	< 203	< 0.88
11/19/20	< 1.30	< 1.23	< 1.40	< 1.21	< 264	< 0.74
12/10/20	< 1.39	< 1.45	< 1.51	< 1.44	< 233	< 0.91
12/21/20	< 1.61	< 1.78	< 1.63	< 1.76	< 239	< 0.87

Results in picoCuries per Liter (pCi/L) +/- 2 Standard Deviations total measurement uncertainty

¹⁶ The Plant Discharge Outfall Area (AISW01) is in the vicinity of where liquid radioactive effluents from the Salem Station are discharged into the Delaware River. The Salem station releases liquid effluent on a routine basis below limits set forth in Federal Guidance 10CFR20, Appendix B. The New Jersey Surface Water Quality Standard for tritium is 20,000 pCi/L. The reading of 1,110 pCi/L is approximately 6 percent of the applicable limit.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses of Gamma Emitters and Tritium (H-3) in Surface Water**

West Bank – Delaware River (AISW02)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/07/20	< 1.23	< 1.53	< 1.46	< 1.38	< 242	< 0.96
01/22/20	< 1.55	< 1.76	< 1.84	< 1.84	< 230	< 0.91
02/03/20	< 1.30	< 1.52	< 1.45	< 1.64	< 235	< 0.89
02/18/20	< 1.54	< 1.52	< 1.51	< 1.32	< 211	< 0.65
03/03/20	< 1.51	< 1.41	< 1.64	< 1.51	< 191	< 0.87
03/17/20	< 1.70	< 1.55	< 1.49	< 2.07	< 227	< 0.88
04/06/20	< 1.75	< 1.98	< 1.68	< 1.74	< 216	< 0.81
04/20/20	< 1.37	< 1.63	< 1.66	< 1.44	< 234	< 0.91
05/05/20	< 1.38	< 1.57	< 1.47	< 1.54	< 239	< 0.89
05/21/20	< 1.23	< 1.43	< 1.55	< 1.50	< 192	< 0.82
06/09/20	< 1.45	< 1.55	< 1.63	< 1.59	< 207	< 0.87
06/26/20	< 1.78	< 1.96	< 1.71	< 1.68	< 242	< 0.89
07/07/20	< 1.25	< 1.33	< 1.38	< 1.83	< 235	< 0.81
07/21/20	< 1.18	< 1.40	< 1.51	< 1.41	< 251	< 0.80
08/07/20	< 1.75	< 1.81	< 1.81	< 1.75	< 248	< 0.71
08/17/20	< 1.42	< 1.48	< 1.59	< 1.60	< 237	< 0.65
09/09/20	< 1.47	< 1.45	< 1.65	< 1.40	< 238	< 0.85
09/24/20	< 1.29	< 1.38	< 1.22	< 1.32	< 245	< 0.80
10/08/20	< 1.69	< 1.47	< 1.65	< 1.59	< 194	< 0.92
10/23/20	< 1.37	< 1.63	< 1.65	< 1.51	< 193	< 0.93
11/05/20	< 1.65	< 1.79	< 1.69	< 1.83	< 201	< 0.86
11/19/20	< 1.14	< 1.26	< 1.14	< 1.25	< 259	< 0.90
12/10/20	< 1.27	< 1.39	< 1.34	< 1.32	< 231	< 0.89
12/21/20	< 1.38	< 1.45	< 1.54	< 1.44	< 258	< 0.76

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses of Gamma Emitters and Tritium (H-3) in Surface Water**

Delaware River - One Mile West of Mad Horse Creek (AISW03)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/07/20	< 1.26	< 1.37	< 1.43	< 1.31	< 233	< 0.90
01/22/20	< 1.57	< 1.91	< 2.06	< 1.65	< 221	< 0.94
02/03/20	< 1.42	< 1.60	< 1.58	< 1.48	< 233	< 0.93
02/18/20	< 1.75	< 1.87	< 1.61	< 1.93	< 211	< 0.58
03/03/20	< 1.54	< 1.58	< 1.63	< 1.39	< 190	< 0.86
03/17/20	< 1.92	< 1.94	< 1.96	< 1.96	< 225	< 0.75
04/06/20	< 1.61	< 1.68	< 1.68	< 1.63	< 255	< 0.72
04/20/20	< 1.86	< 2.08	< 2.14	< 2.00	< 235	< 0.76
05/05/20	< 1.32	< 1.41	< 1.48	< 1.26	< 235	< 0.87
05/21/20	< 1.34	< 1.63	< 1.68	< 1.48	< 191	< 0.85
06/09/20	< 1.59	< 1.59	< 1.69	< 1.60	< 204	< 0.83
06/26/20	< 1.86	< 1.88	< 2.11	< 1.79	< 256	< 0.91
07/07/20	< 1.31	< 1.39	< 1.36	< 1.31	< 229	< 0.94
07/21/20	< 1.88	< 1.99	< 2.08	< 1.92	< 232	< 0.82
08/07/20	< 1.57	< 1.89	< 1.81	< 1.73	< 252	< 0.86
08/17/20	< 1.60	< 1.69	< 1.83	< 1.59	< 238	< 0.69
09/09/20	< 1.26	< 1.30	< 1.39	< 1.26	< 235	< 0.89
09/24/20	< 1.92	< 2.03	< 2.21	< 2.06	< 240	< 0.77
10/08/20	< 1.50	< 1.57	< 1.75	< 1.64	< 192	< 0.68
10/23/20	< 1.28	< 1.59	< 1.50	< 1.42	< 197	< 0.93
11/05/20	< 1.64	< 1.50	< 1.48	< 1.41	< 203	< 0.89
11/19/20	< 1.51	< 1.52	< 1.57	< 1.62	< 265	< 0.93
12/10/20	< 1.31	< 1.37	< 1.44	< 1.35	< 230	< 0.88
12/21/20	< 1.39	< 1.52	< 1.41	< 1.36	< 229	< 0.78

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Results of Analyses of Gamma Emitters and Tritium (H-3) in Well Water¹⁷**

Oyster Creek Administration Building Onsite (OCWW01)¹⁸

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/22/20	< 1.43	< 1.98	< 1.72	< 1.45	< 217	< 0.81
09/29/20	< 1.95	< 2.34	< 2.24	< 2.21	< 250	< 0.68

Forked River Marina (OCWW02)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/22/20	< 1.66	< 1.86	< 1.74	< 1.68	< 219	< 0.62
06/29/20	< 1.19	< 1.57	< 1.48	< 1.32	< 225	< 0.93
09/29/20	< 2.00	< 2.30	< 2.17	< 2.19	< 249	< 0.68

Lacey MUA Pumping Station (OCWW03)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/22/20	< 1.85	< 1.88	< 1.96	< 1.94	< 223	< 0.88
06/29/20	< 1.29	< 1.49	< 1.57	< 1.99	< 223	< 0.71
09/29/20	< 1.43	< 1.42	< 1.71	< 1.81	< 233	< 0.63

Ocean Township MUA Pumping Station (OCWW04)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/22/20	< 1.61	< 1.80	< 1.84	< 1.72	< 231	< 0.74
06/29/20	< 1.41	< 1.71	< 1.61	< 1.51	< 220	< 0.61
09/29/20	< 1.66	< 1.71	< 1.57	< 2.18	< 258	< 0.50

Results in picoCuries per Liter (pCi/L)

¹⁷ No samples collected during fourth quarter 2020 due to Covid-19 Pandemic travel restrictions placed on BNE staff.

¹⁸ No sample collected onsite at Oyster Creek in June 2020 due to Covid-19 Pandemic travel restrictions placed on BNE staff.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Results of Analyses of Gamma Emitters and Tritium (H-3) in Well Water¹⁹**

Elsinboro School (AIWW01)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/22/20	< 1.20	< 1.92	< 1.81	< 1.59	< 225	< 0.73
06/29/20	< 1.46	< 1.59	< 1.80	< 1.56	< 235	< 0.54
09/29/20	< 1.62	< 1.55	< 1.65	< 1.61	< 225	< 0.83

Lower Alloways Creek Police Station (AIWW02)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/22/20	< 1.46	< 1.62	< 1.48	< 1.48	< 229	< 0.71
06/29/20	< 1.37	< 1.69	< 1.70	< 1.54	< 221	< 0.60
09/29/20	< 1.63	< 1.80	< 2.02	< 1.74	< 224	< 0.92

Salem Processing Center (AIWW03)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/22/20	< 1.19	< 1.35	< 1.47	< 1.34	< 225	< 0.85
06/29/20	< 1.37	< 1.35	< 1.54	< 1.40	< 230	< 0.45
07/01/20 ²⁰	< 1.52	< 1.65	< 1.81	< 1.66	< 249	< 0.87
09/29/20	< 1.70	< 1.59	< 1.87	< 1.62	< 218	< 0.83

Lower Alloways Creek School (AIWW04)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/22/20	< 2.04	< 2.33	< 2.47	< 2.21	< 215	< 0.95
06/29/20	< 1.29	< 1.65	< 1.36	< 1.23	< 234	< 0.99
09/29/20	< 1.37	< 1.72	< 1.75	< 1.70	< 232	< 0.95

City of Salem Water & Sewage Department (AIWW05)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>H-3</u>	<u>I-131</u>
01/22/20	< 1.48	< 1.72	< 1.53	< 1.58	< 240	< 0.83
06/29/20	< 1.39	< 1.53	< 1.66	< 1.57	< 226	< 0.57
09/29/20	< 1.52	< 1.79	< 1.67	< 1.68	< 240	< 0.68

Results in picoCuries per Liter (pCi/L)

¹⁹ No samples collected during fourth quarter 2020 due to Covid-19 Pandemic travel restrictions placed on BNE staff.

²⁰ A second sample was taken at this location and both results were reported.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**BNE Background Location
Thermoluminescent Dosimetry Data
Quarterly Results**

<u>Station</u>	<u>Location</u>	<u>1st Quarter</u>		<u>2nd Quarter</u>		<u>3rd Quarter</u>		<u>4th Quarter</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
CO01	BNE Office, Arctic Parkway, Ewing, NJ	16.7	1.7	14.8	4.4	12.2	7.1	13.3	6.0
CO02	Brendan T. Byrne State Forest, New Lisbon, NJ	13.5	2.8	11.8	3.5	11.7	5.2	11.3	6.7

Results are reported in units of milliroentgens (mR)

CV is the coefficient of variation; the ratio of the standard deviation to the mean, and is normally reported as a percentage

All exposures were normalized to 90 days (a standard quarter)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Thermoluminescent Dosimetry Data
Quarterly Results**

Station	Location	<u>1st Quarter</u>		<u>2nd Quarter</u>		<u>3rd Quarter</u>		<u>4th Quarter</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
1	Ocean County Vocational School	11.7	4.9	10.9	2.2	11.8	4.2	10.4	7.6
2	Ocean Twp. Municipal Building	13.5	3.1	12.1	1.4	14.0	7.1	10.1	5.0
3	Sewage Pumping Station, Forked River	15.6	6.8	13.2	3.4	12.7	5.5	11.6	7.4
4	Twin River Station, Forked River	12.2	2.5	11.1	4.6	10.5	5.4	10.1	6.2
5	Sewage Pumping Station, Ocean Twp.	13.2	3.0	11.8	3.3	12.2	7.7	10.2	2.5
6	Oyster Creek, Gate #2, Forked River	13.1	3.5	16.2	2.5	12.2	3.7	11.2	4.0
7	Finninger Farm, Forked River	12.0	4.0	10.4	3.2	12.5	6.6	9.3	4.5
8	Ocean Co. Memorial Cemetery, Waretown	12.3	2.4	10.4	6.5	10.0	7.5	12.3	5.6
9	Oyster Creek Building 17, Forked River	13.7	3.3	12.1	5.3	12.2	11.4	10.6	7.7
10	Sheffield & Derby Rd, Forked River	12.9	2.9	11.5	4.6	12.6	5.1	10.6	6.2
11	Lakeside Drive, Forked River	13.4	1.0	11.4	2.9	11.6	4.1	10.2	7.7
12	Forked River Game Farm, Forked River	13.2	3.0	12.4	6.4	10.6	2.6	11.9	3.0

Results are reported in units of milliroentgens (mR)

CV is the coefficient of variation; the ratio of the standard deviation to the mean and is normally reported as a percentage.

All exposures were normalized to 90 days (a standard quarter)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Thermoluminescent Dosimetry Data
Quarterly Results**

<u>Station</u>	<u>Location</u>	<u>1st Quarter</u>		<u>2nd Quarter</u>		<u>3rd Quarter</u>		<u>4th Quarter</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
13	Restrooms, Lakeside Dr., Forked River	13.1	5.0	10.9	2.2	11.5	4.1	10.1	5.0
14	Sands Pt. Park, Dock Ave., Waretown	13.6	4.5	12.6	2.6	11.5	6.2	11.7	3.7
15	Recreation Center, Waretown	12.5	6.6	10.8	0.6	10.0	4.4	10.0	6.2
16	North Access Rd., Forked River	13.1	2.1	11.2	6.3	11.1	2.0	10.6	3.9
20	Third Avenue, Barnegat Light	11.8	1.9	No Data	No Data	9.6	2.0	10.3	3.1
21	Rose Hill Road & Barnegat Blvd	13.7	2.9	No Data	No Data	11.6	4.0	10.4	4.5
22	Bay Way & Clairmore Avenue	13.2	3.6	No Data	No Data	12.1	6.4	10.0	3.9
23	Island Beach State Park, Parking Lot A5	12.3	2.0	No Data	No Data	10.5	3.4	9.3	7.6
24	Forked River Site Access Rd. (N)	16.8	2.8	14.3	3.3	13.3	5.1	12.7	6.5
25	Forked River Site Access Rd. NNW)	17.2	2.1	16.2	4.6	13.5	3.9	12.9	8.4
26	Forked River Site Access Rd. (NW)	14.7	4.9	13.6	4.2	12.8	1.8	12.8	7.5
27	Southern Area Stores Fence, FR Site	18.7	2.2	17.9	3.3	15.2	1.4	13.9	3.9

Results are reported in units of milliroentgens (mR).

CV is the coefficient of variation; the ratio of the standard deviation to the mean and is normally reported as a percentage.

All exposures were normalized to 90 days (a standard quarter).

No Data collection/deployment during 2nd Quarter 2020 due to limited sampling during Covid-19 pandemic

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Thermoluminescent Dosimetry Data
Quarterly Results**

<u>Station</u>	<u>Location</u>	<u>1st Quarter</u>		<u>2nd Quarter</u>		<u>3rd Quarter</u>		<u>4th Quarter</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
28	Southern Area Stores, FR Site (WSW)	16.4	5.8	14.9	3.2	13.4	4.6	13.5	3.6
29	Southern Area Stores Access Rd (SSW)	12.9	3.7	11.8	2.9	10.3	5.6	10.6	6.3
30	Southern Area Stores Access Road (S)	15.5	3.5	13.7	5.0	15.5	6.7	11.4	6.1
31	Southern Area Stores Access Road (SSE)	14.0	1.4	14.8	3.2	14.3	5.2	11.2	10.4
32	U.S. Route 9 (ESE) Forked River., NJ	12.1	7.7	11.6	4.1	10.7	5.7	10.9	5.5
33	U.S. Route 9 (NE) Forked River, NJ	13.2	2.8	11.9	1.8	11.6	4.8	11.7	7.2
34	Garden St Pkwy Svc. Forked River, NJ	<i>No Data</i>	<i>No Data</i>	<i>No Data</i>	<i>No Data</i>	13.3	7.5	11.7	3.6
35	U.S. Route 9 & Harbor Inn Rd, Bayville, NJ	14.4	5.8	<i>No Data</i>	<i>No Data</i>	11.2	2.2	11.6	6.3
36	Orlando Dr. & Penguin Ct., Forked River, NJ	12.9	4.5	12.2	6.7	11.8	2.2	11.5	6.4
37	Bay Pkwy, Sands Point, Waretown, NJ	12.2	1.6	11.4	4.8	11.7	4.7	9.7	4.2
38	Hightide & Bonita Dr., Waretown, NJ	14.6	6.7	12.9	3.1	13.1	2.9	12.1	1.0
39	Brook & School St. Barnegat, NJ	13.4	4.3	<i>No Data</i>	<i>No Data</i>	12.1	6.6	11.2	6.5

Results are reported in units of milliroentgens (mR).

CV is the coefficient of variation; the ratio of the standard deviation to the mean and is normally reported as a percentage.

All exposures were normalized to 90 days (a standard quarter).

No Data collection/deployment during 2nd Quarter 2020 due to limited sampling during Covid-19 pandemic. Station OC34 inaccessible for collection/deployment due to facility construction

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Thermoluminescent Dosimetry Data
Quarterly Results**

<u>Station</u>	<u>Location</u>	<u>1st Quarter</u>		<u>2nd Quarter</u>		<u>3rd Quarter</u>		<u>4th Quarter</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
40	County Rt. 554, Barnegat, NJ	14.0	1.8	<i>No Data</i>	<i>No Data</i>	12.6	2.1	10.6	5.6
41	County Rt. 532, Waretown, NJ	12.0	3.5	<i>No Data</i>	<i>No Data</i>	11.2	6.3	9.9	3.0
42	Lacey Rd. WEST, Forked River, NJ	14.6	6.6	<i>No Data</i>	<i>No Data</i>	14.3	3.0	12.4	22.6
43	U.S. Route 9 (E) Forked River, NJ	13.5	2.8	12.5	2.5	12.5	15.7	11.9	5.8

Results are reported in units of milliroentgens (mR).

CV is the coefficient of variation; the ratio of the standard deviation to the mean and is normally reported as a percentage.

All exposures were normalized to 90 days (a standard quarter)

No Data collection/deployment during 2nd Quarter 2020 due to limited sampling during Covid-19 pandemic

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Thermoluminescent Dosimetry Data
Quarterly Results**

Station	Location	<u>1st Quarter</u>		<u>2nd Quarter</u>		<u>3rd Quarter</u>		<u>4th Quarter</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
1	Access Road – Security Checkpoint	14.6	1.5	14.4	5.5	13.6	3.4	13.5	6.8
2	Poplar Road, Lower Alloways	15.0	3.2	13.3	2.0	13.1	6.8	11.2	4.3
3	Money and Eagle Island Road	15.7	3.4	15.0	2.9	14.9	7.1	12.2	1.1
4	Ft. Elfsborg / Hancocks – East	16.4	1.7	16.2	2.4	14.5	4.2	12.4	6.9
5	Ft. Elfsborg / Hancocks – West	20.5	3.7	19.6	3.7	17.6	6.6	17.3	2.1
6	Stathems Neck Road	15.2	2.8	14.2	2.9	13.0	5.4	14.5	2.7
7	Stow Neck Road Lower Alloways	12.5	1.7	11.9	4.7	13.2	14.7	12.7	7.5
8	Alloways Creek Neck Road - Middle	12.6	0.7	12.3	5.2	11.2	4.8	12.2	2.0
9	Alloways Creek Neck Road - North	16.3	2.2	16.8	4.7	14.1	5.9	15.3	5.0
10	Abbotts Farm Road	10.7	3.1	11.8	2.4	11.1	5.1	12.5	10.3

Results are reported in units of milliroentgens (mR)

CV is the coefficient of variation; the ratio of the standard deviation to the mean and is normally reported as a percentage.

All exposures were normalized to 90 days (a standard quarter).

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Thermoluminescent Dosimetry Data
Quarterly Results**

<u>Station</u>	<u>Location</u>	<u>1st Quarter</u>		<u>2nd Quarter</u>		<u>3rd Quarter</u>		<u>4th Quarter</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
11	PSEG Education Center/EOF	16.7	2.8	14.8	3.8	14.8	4.6	12.0	3.2
12	Onsite Access Rd N Sector	17.8	4.9	16.3	4.9	16.4	6.0	14.8	5.4
13	Onsite Laydown Area - NNE Sector	16.3	2.6	15.0	4.0	13.9	1.2	14.0	0.9
14	Onsite Utility Pole NE Sector	14.9	2.2	13.2	4.7	14.9	1.7	12.7	7.3
15	Onsite Hope Creek Road – ENE Sector	14.9	5.1	13.7	3.1	13.7	4.1	13.0	3.2
16	Onsite Parking Lot ESE Sector	18.1	2.4	16.7	2.5	16.0	6.9	15.4	5.3
17	Onsite Salem NGS SE Sector	17.0	2.2	15.7	1.0	15.8	4.0	15.9	1.4
18	Bayside Road Bayside, NJ	15.0	4.7	14.0	3.4	14.1	9.2	12.4	3.0

Results are reported in units of milliroentgens (mR)

CV is the coefficient of variation; the ratio of the standard deviation to the mean and is normally reported as a percentage.

All exposures were normalized to 90 days (a standard quarter).

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

Comparison of NJDEP and Mirion Technologies Thermoluminescent Dosimetry Data for Oyster Creek

Quarterly Results for Co-located Dosimeters

<u>Station</u>	<u>Location</u>	<u>1st Quarter</u>				<u>2nd Quarter</u>				<u>3rd Quarter</u>				<u>4th Quarter</u>			
		<u>NJDEP</u>		<u>Mirion</u>		<u>NJDEP</u>		<u>Mirion</u>		<u>NJDEP</u>		<u>Mirion</u>		<u>NJDEP</u>		<u>Mirion</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
5	Sewage Pump. Station, Ocean Township	13.2	3.0	11.5	2.9	11.8	3.3	10.2	4.2	12.2	7.7	13.1	9.1	10.2	2.5	10.6	2.5
7	Finninger Farm,OCNGS Forked River	12.0	4.0	10.8	2.8	10.4	3.2	8.7	7.4	12.5	6.6	12.0	3.7	9.3	4.5	9.2	3.8
13	Restrooms, Lakeside Dr. Forked River	13.1	5.0	10.9	8.4	10.9	2.2	10.0	6.0	11.5	4.1	12.4	4.8	10.1	5.0	10.1	9.3
21	Rose Hill and Barnegat Rd Barnegat Twp.	13.7	2.9	12.3	4.5	No Data	No Data	9.6	4.2	11.6	4.0	12.6	4.7	10.4	4.5	10.5	4.2

Results are reported in units of milliroentgens (mR)

CV is the coefficient of variation; the ratio of the standard deviation to the mean, and is normally reported as a percentage

All exposures were normalized to 90 days (a standard quarter). No Data during 2nd Quarter due to reduced collection/deployment due to Covid-19 pandemic

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

Comparison of NJDEP and Mirion Technologies Thermoluminescent Dosimetry Data for Salem/Hope Creek

Quarterly Results for Co-located Dosimeters

<u>Station</u>	<u>Location</u>	<u>1st Quarter</u>				<u>2nd Quarter</u>				<u>3rd Quarter</u>				<u>4th Quarter</u>			
		<u>NJDEP</u>		<u>Mirion</u>		<u>NJDEP</u>		<u>Mirion</u>		<u>NJDEP</u>		<u>Mirion</u>		<u>NJDEP</u>		<u>Mirion</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
1	Access Road – Security Checkpoint	14.6	1.5	13.4	1.7	14.4	5.5	11.0	4.0	13.6	3.4	13.4	6.2	13.5	6.8	10.6	5.6
2	Poplar Road, Lower Alloways	15.0	3.2	13.7	3.0	13.3	2.0	11.9	4.5	13.1	6.8	14.5	6.9	11.2	4.3	11.4	4.5
3	Money and Eagle Island Roads	15.7	3.4	15.2	1.6	15.0	2.9	12.4	2.5	14.9	7.1	15.0	3.9	12.2	1.1	13.1	4.6
5	Ft. Elfsborg/ Hancocks - West	20.5	3.7	18.4	3.2	19.6	3.7	17.1	5.0	17.6	6.6	18.5	7.4	17.3	2.1	16.3	3.4

Results are reported in units of milliroentgens (mR)

CV is the coefficient of variation; the ratio of the standard deviation to the mean, and is normally reported as a percentage

All exposures were normalized to 90 days (a standard quarter)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Comparison of NJDEP and Mirion Technologies Thermoluminescent Dosimetry for Salem/Hope Creek
Quarterly Results for Co-located Dosimeters**

<u>Station</u>	<u>Location</u>	<u>1st Quarter</u>				<u>2nd Quarter</u>				<u>3rd Quarter</u>				<u>4th Quarter</u>			
		<u>NJDEP</u>		<u>Mirion</u>		<u>NJDEP</u>		<u>Mirion</u>		<u>NJDEP</u>		<u>Mirion</u>		<u>NJDEP</u>		<u>Mirion</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
7	Stow Neck Road-Lower Alloways	12.5	1.7	12.0	2.9	11.9	4.7	10.6	2.8	13.2	14.7	12.0	6.7	12.7	7.5	10.0	4.5
9	Alloways Creek Neck Road - North	16.3	2.2	14.7	2.6	16.8	4.7	13.2	3.8	14.1	5.9	15.7	8.5	15.3	5.0	12.3	3.3
11	PSEG Ed. Center/EOF Salem City	16.7	2.8	14.4	3.3	14.8	3.8	12.5	5.6	14.8	4.6	13.8	6.7	12.0	3.2	13.2	8.2

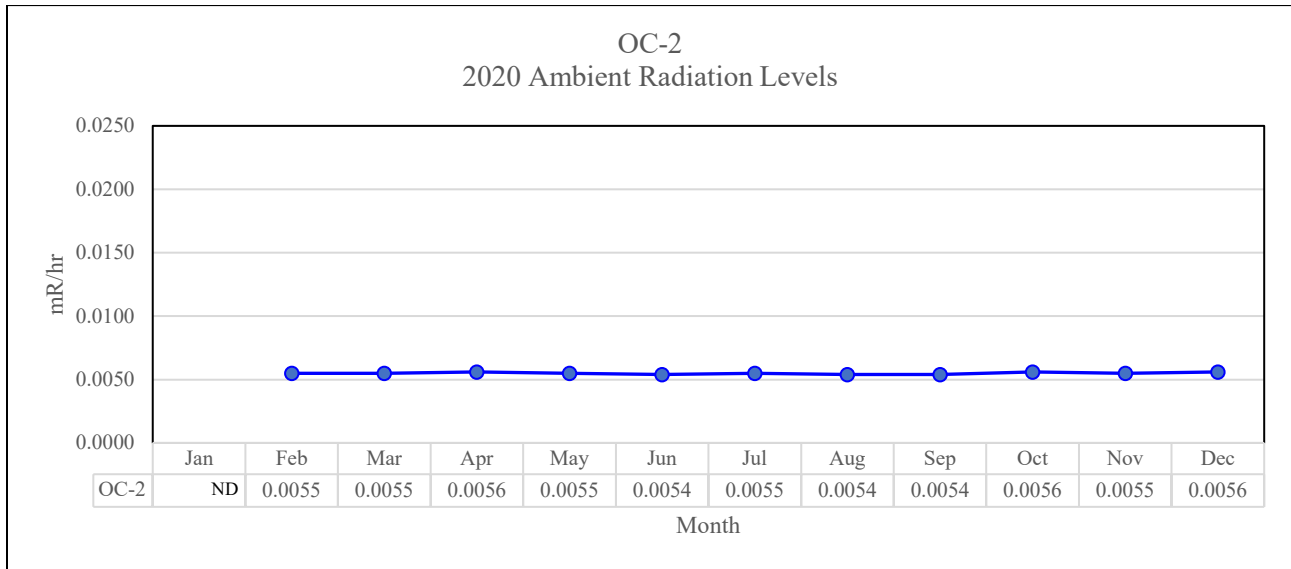
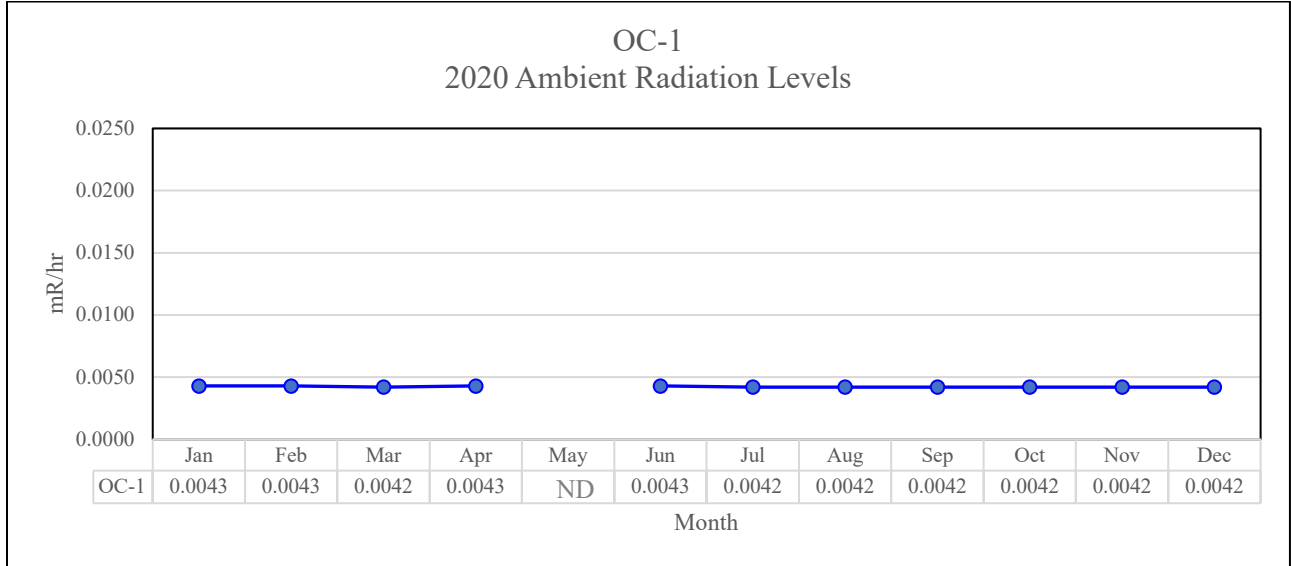
Results are reported in units of milliroentgens (mR)

CV is the coefficient of variation; the ratio of the standard deviation to the mean, and is normally reported as a percentage

All exposures were normalized to 90 days (a standard quarter)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

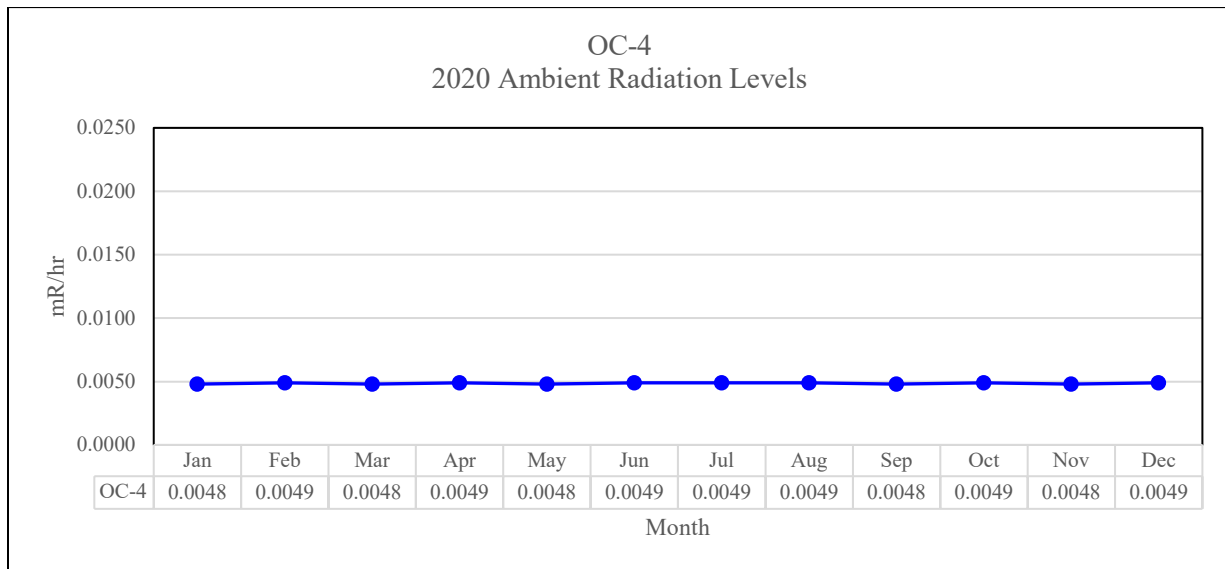
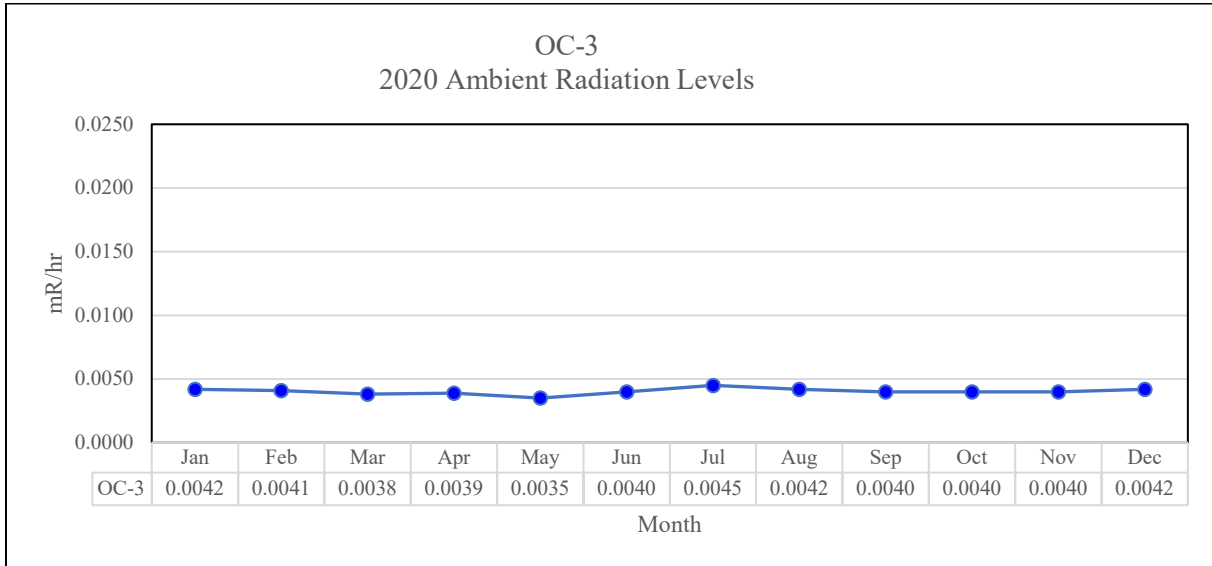
**Oyster Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



Note: 'ND' indicates that no data were available

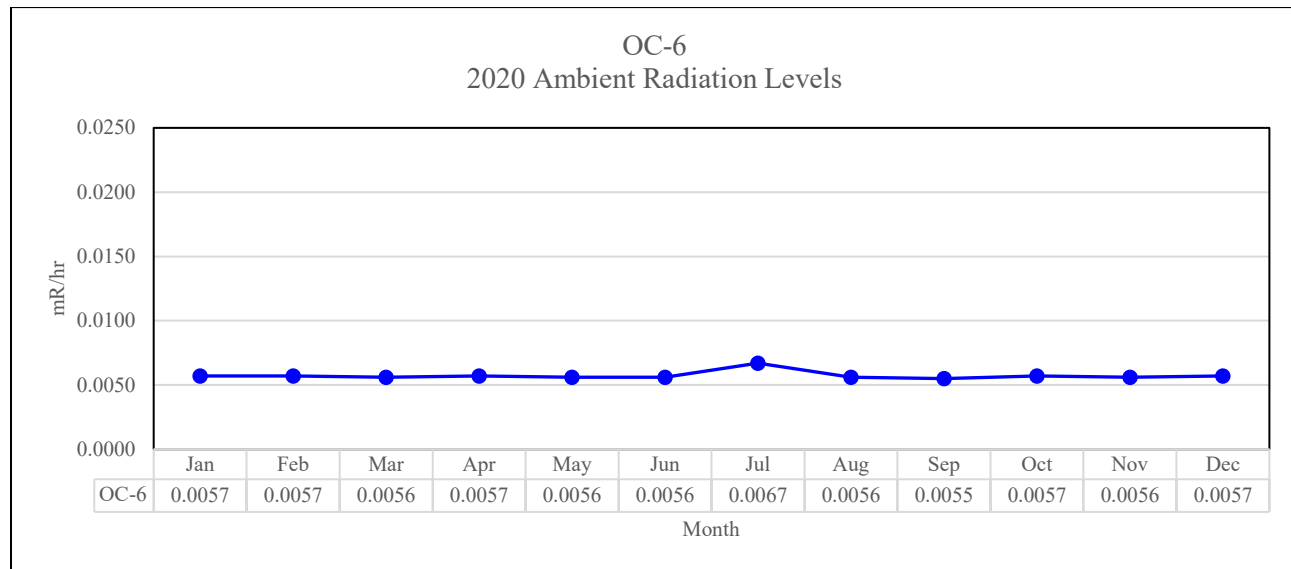
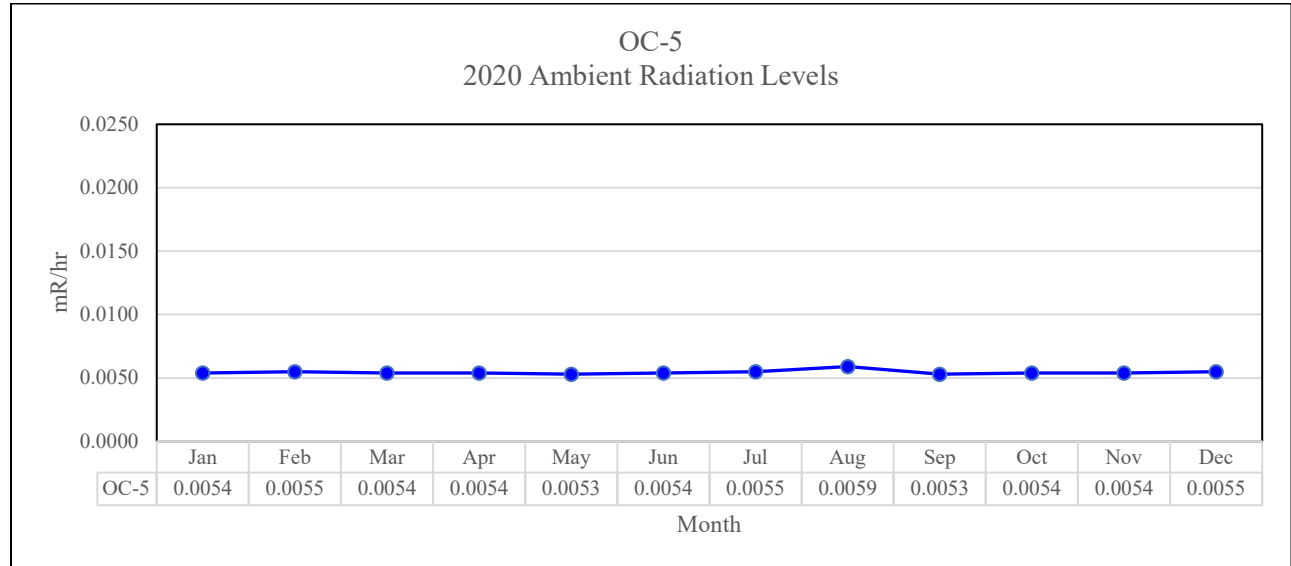
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



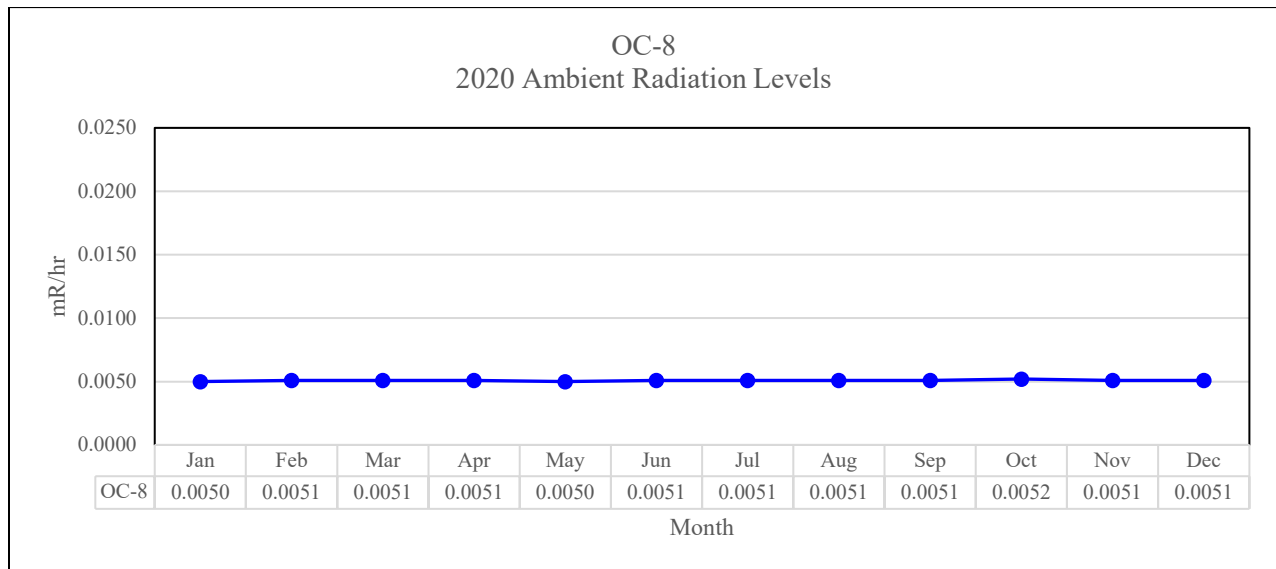
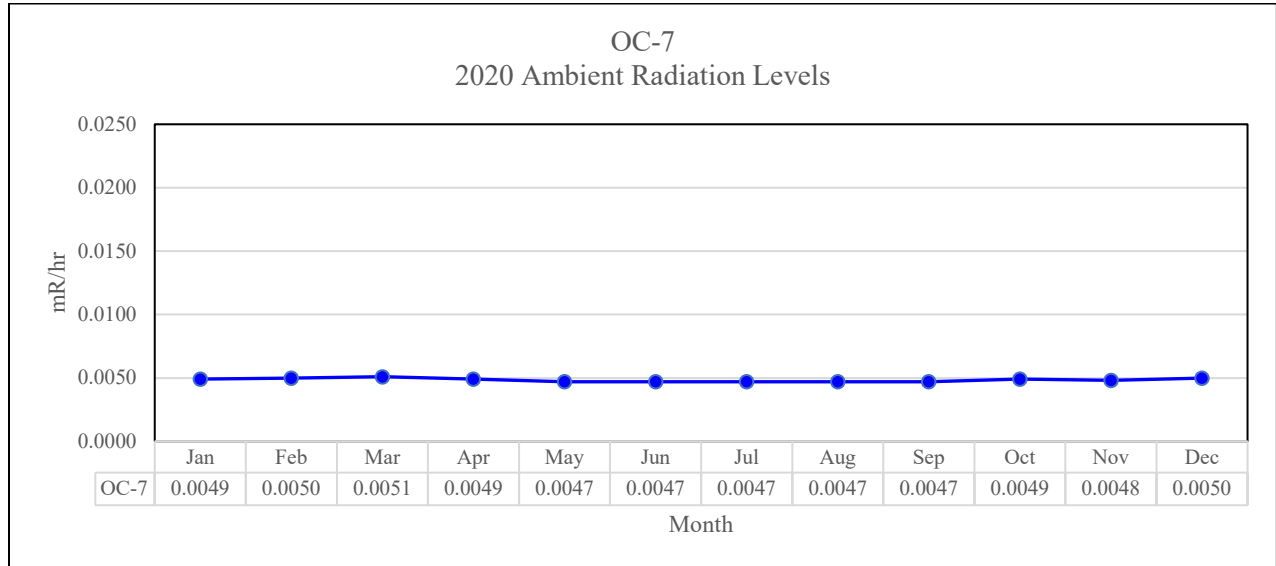
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



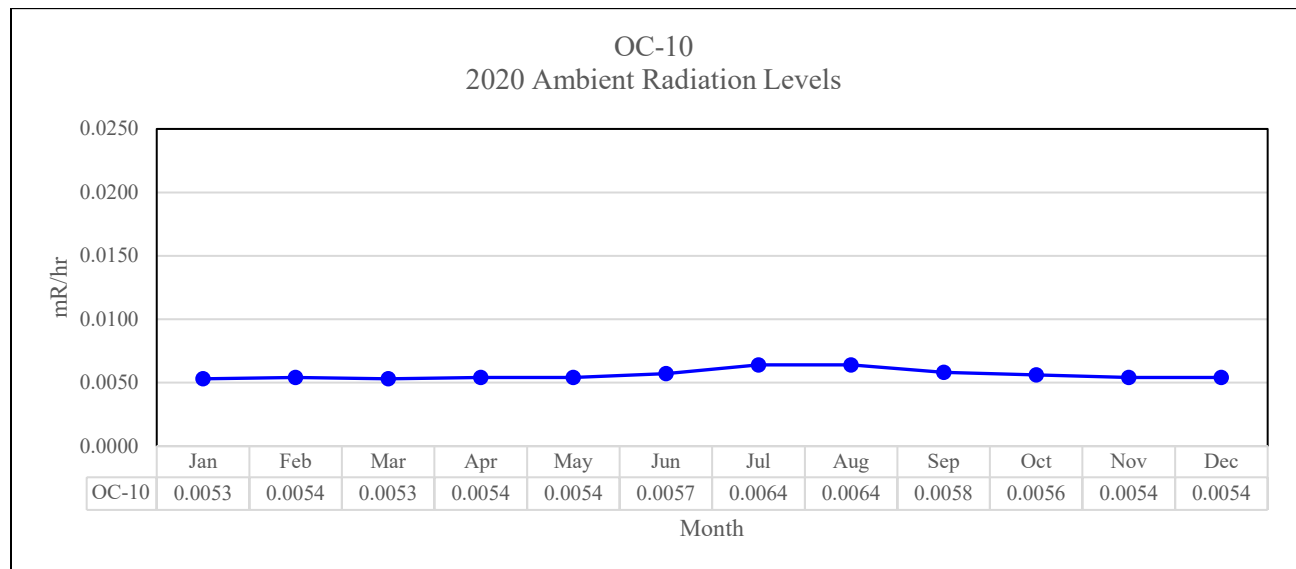
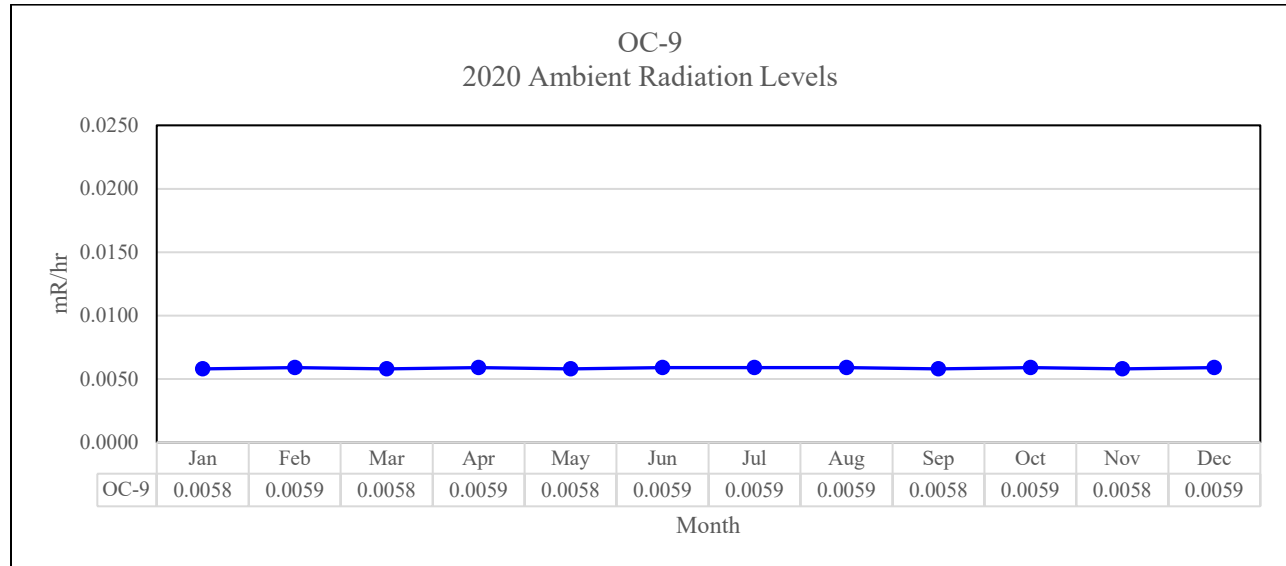
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



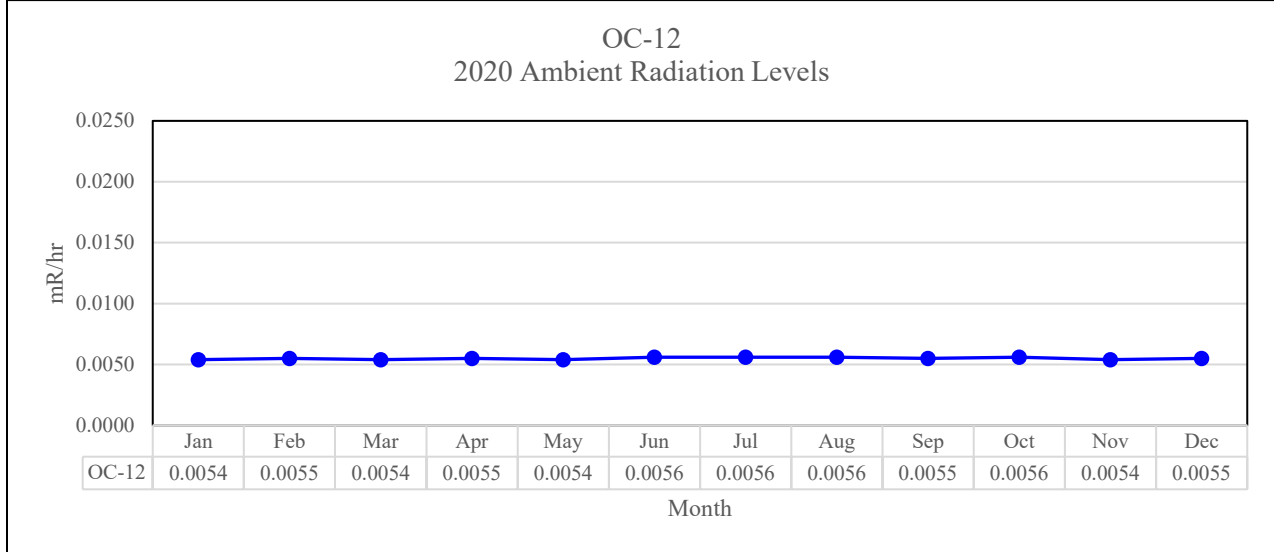
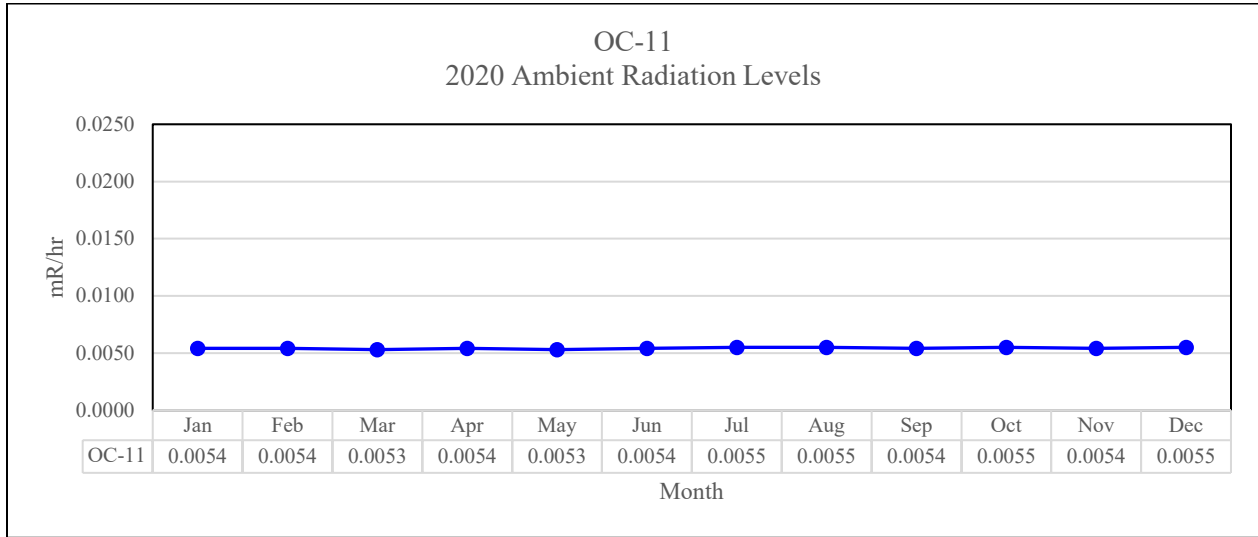
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



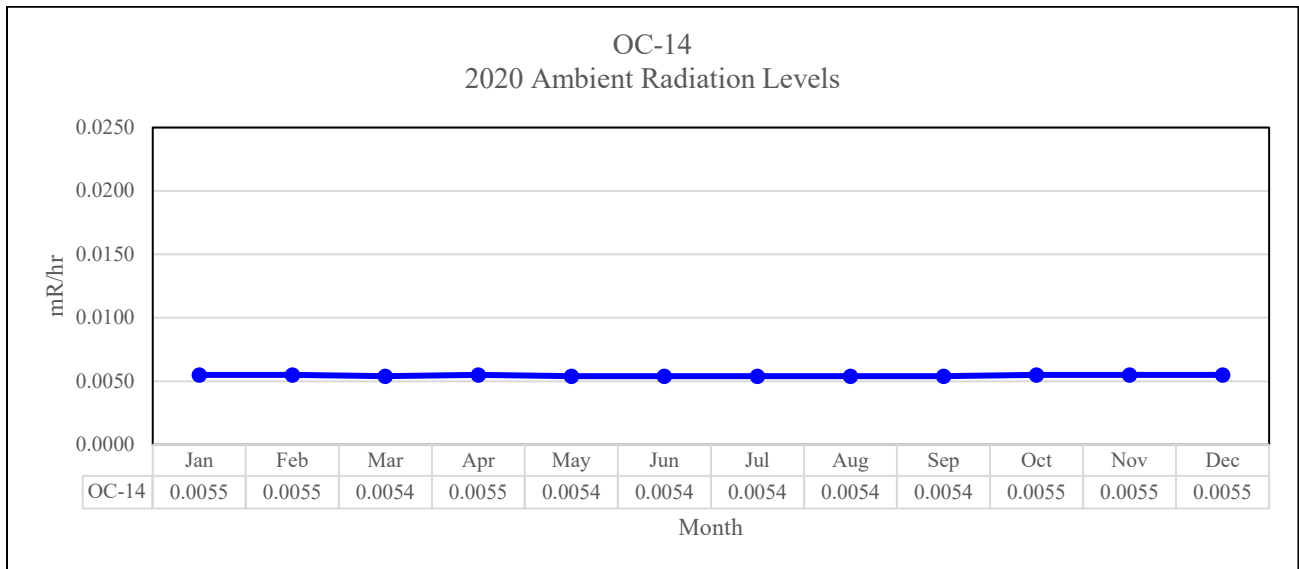
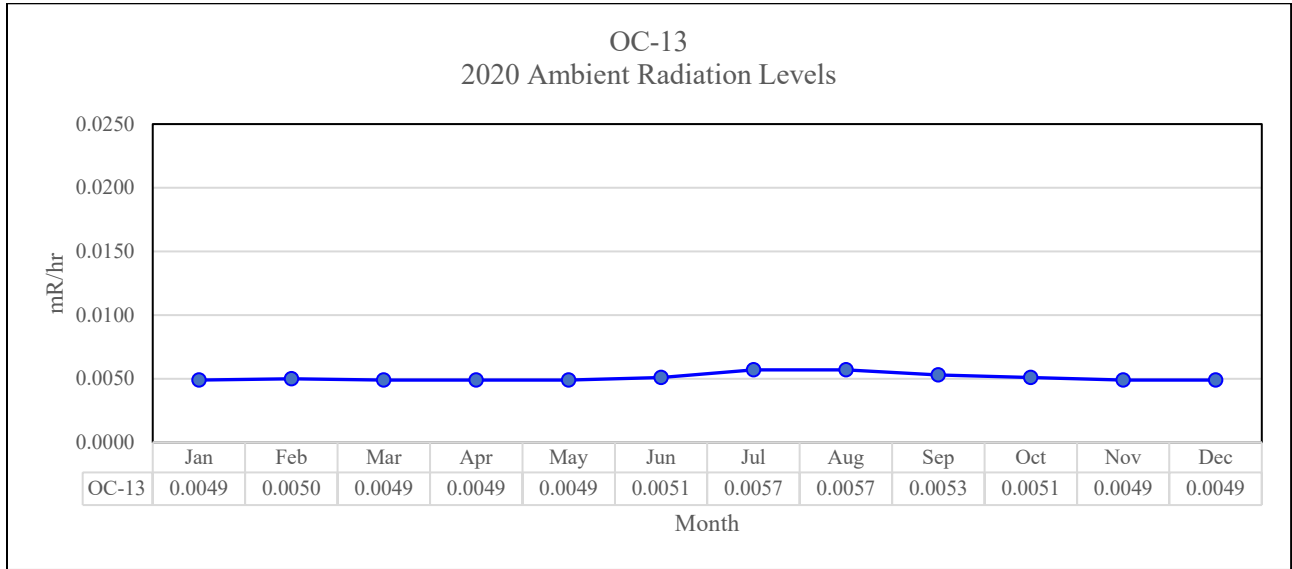
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



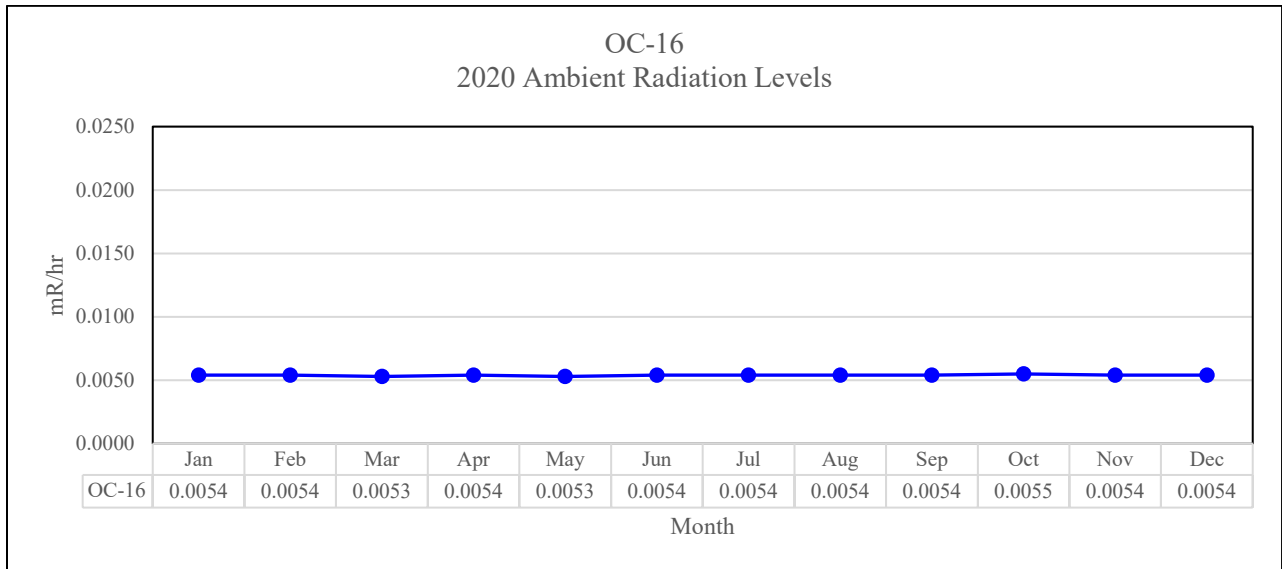
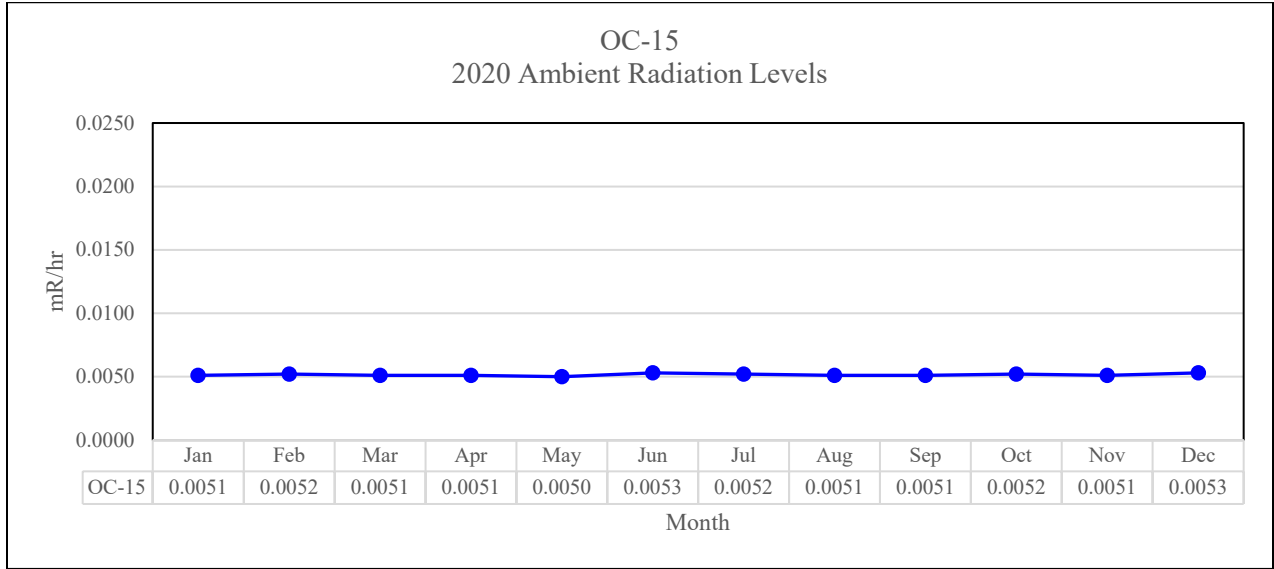
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



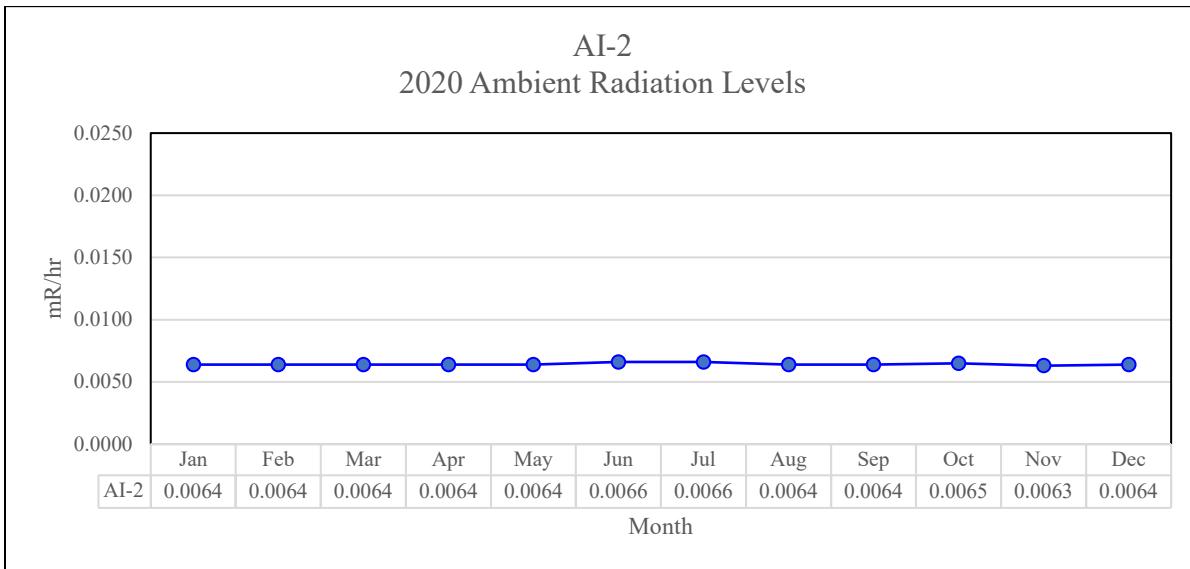
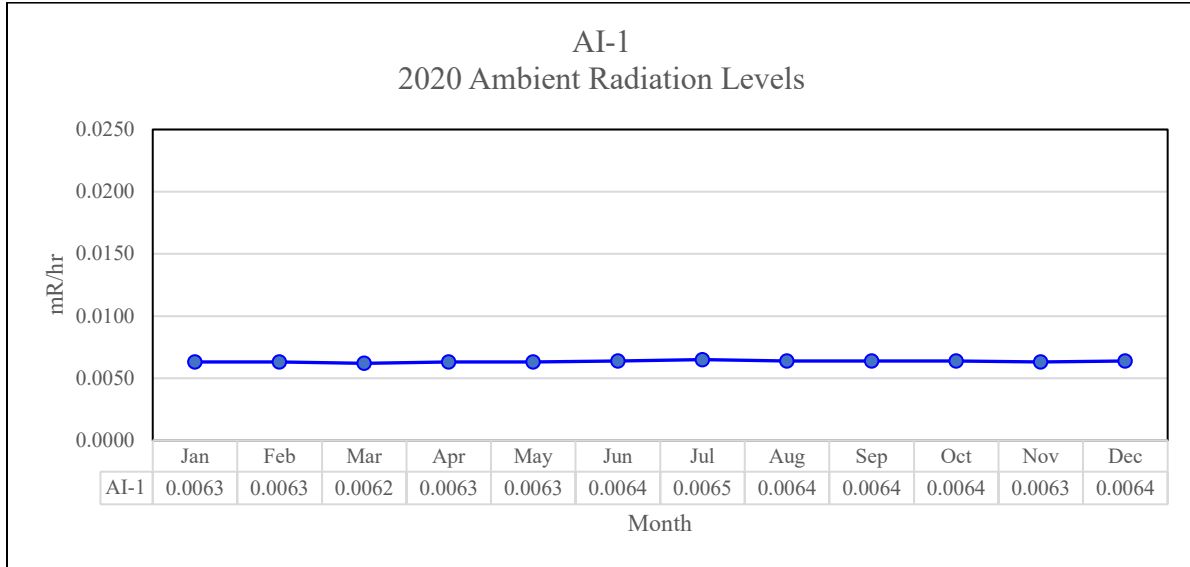
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Oyster Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



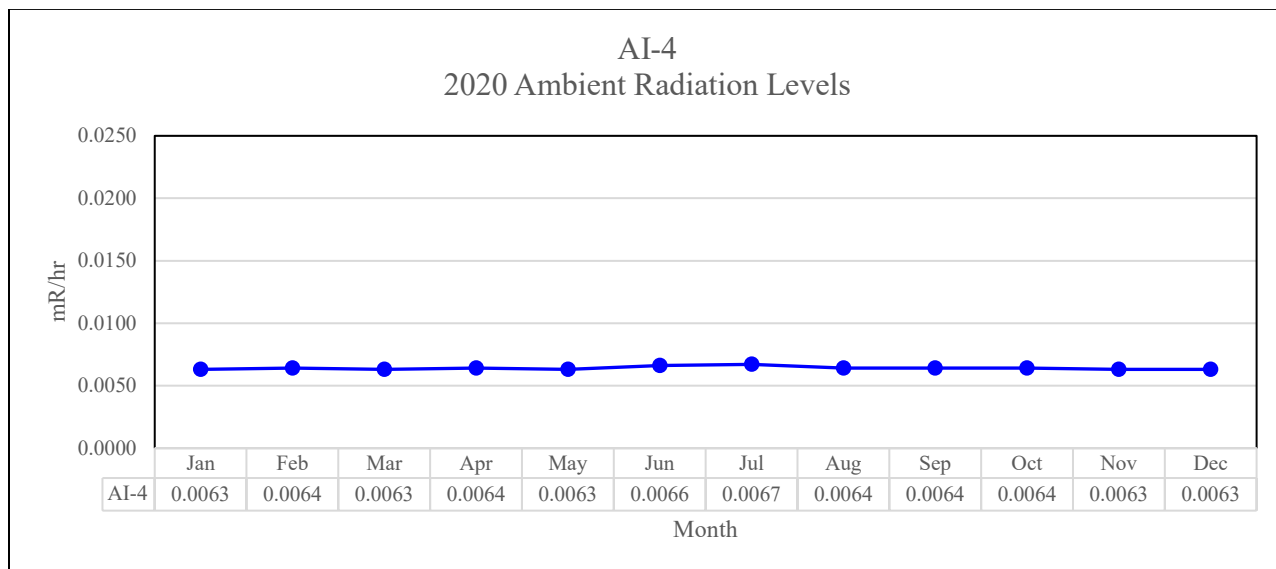
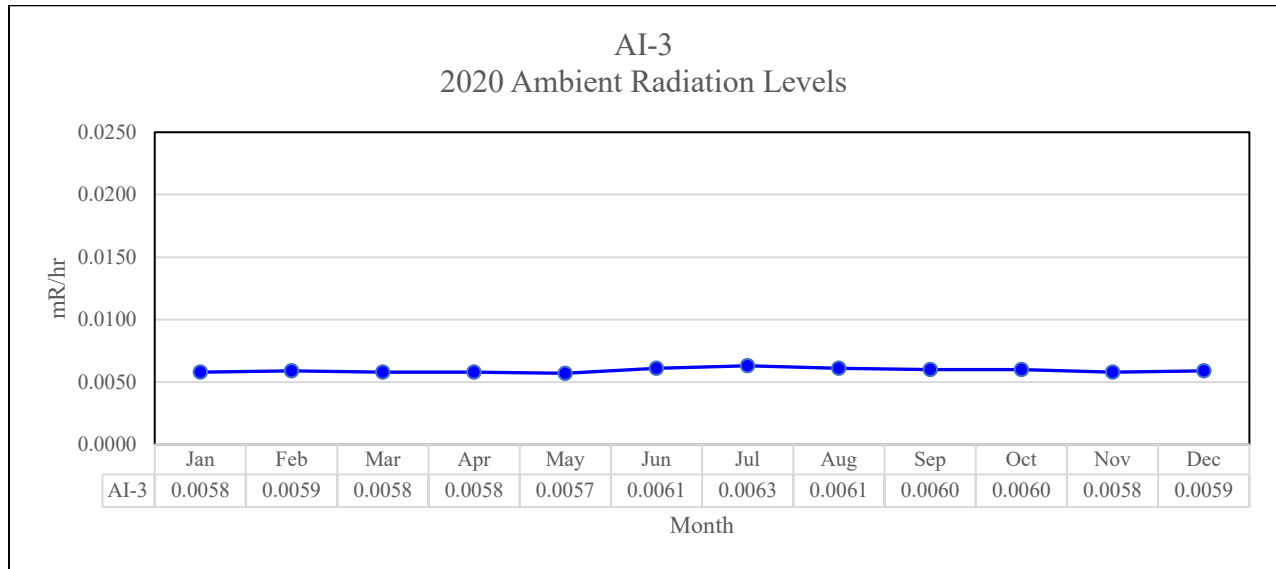
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



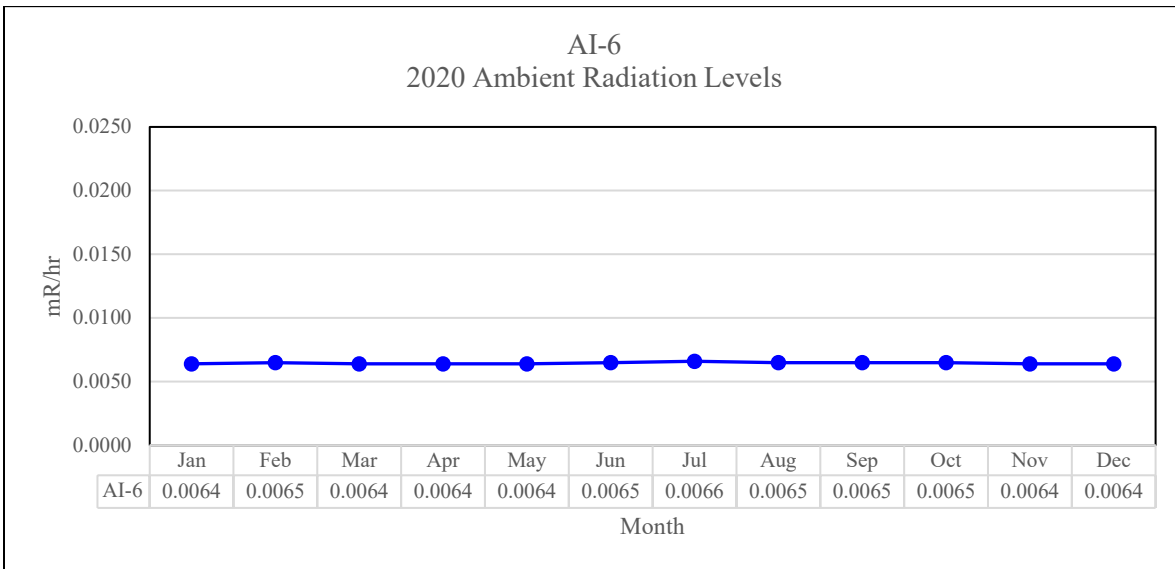
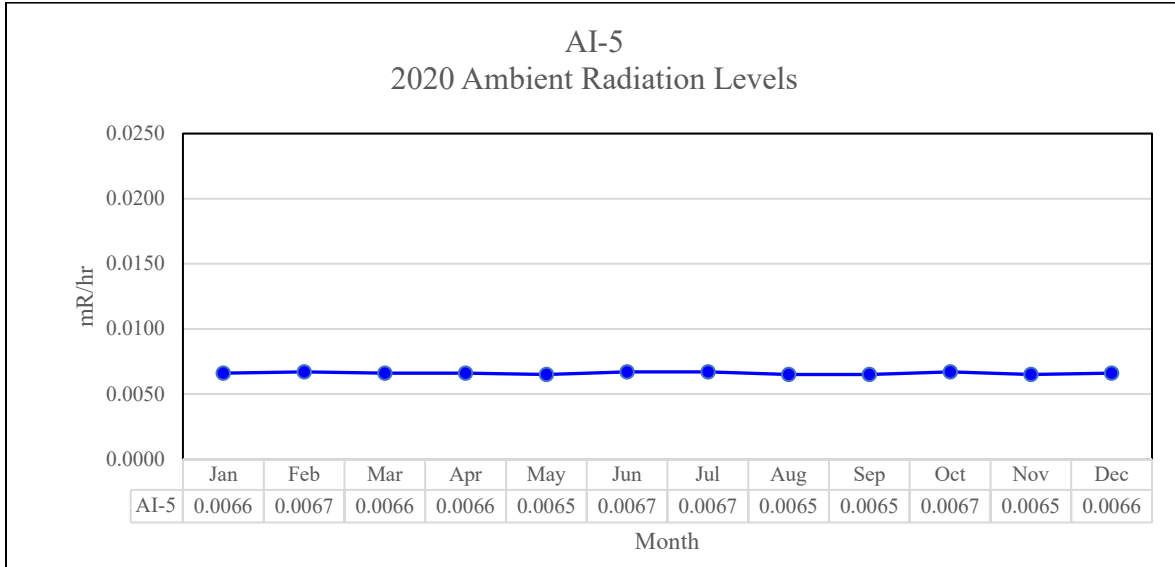
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



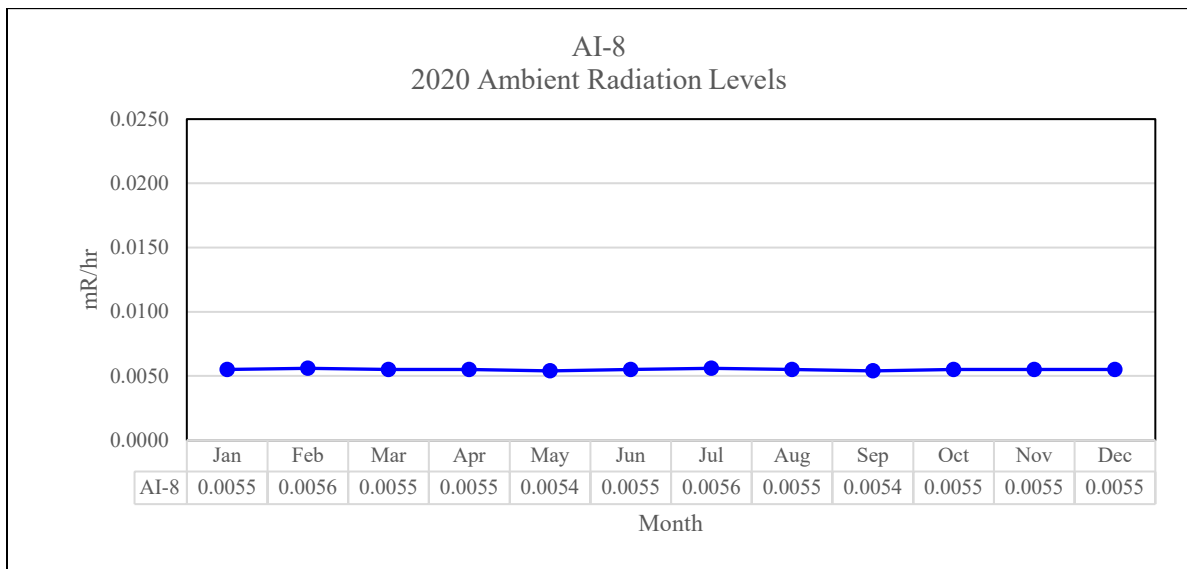
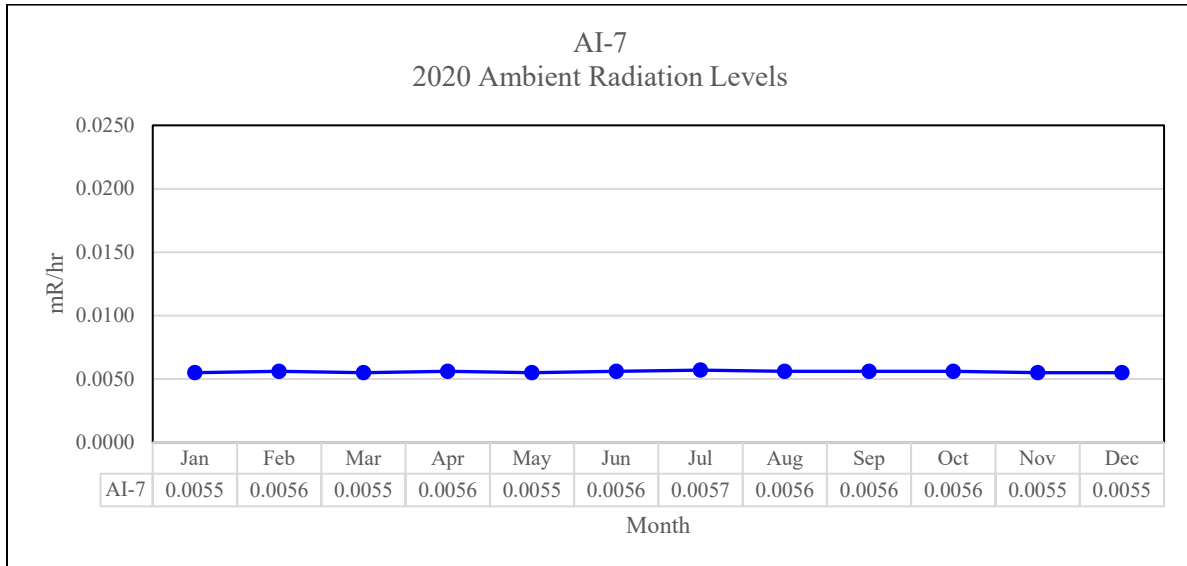
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2020 Radiological Environmental Monitoring Program**

**Salem/Hope Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**

