

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
01/02/18	-	01/16/18	< 0.012
01/16/18	-	01/30/18	< 0.006
01/30/18	-	02/13/18	< 0.011
02/13/18	-	02/27/18	< 0.006
02/27/18	-	03/13/18	< 0.012
03/13/18	-	03/27/18	< 0.006
03/27/18	-	04/11/18	< 0.006
04/11/18	-	04/24/18	< 0.008
04/24/18	-	05/08/18	< 0.012
05/08/18	-	05/22/18	< 0.005
05/22/18	-	06/05/18	< 0.013
06/05/18	-	06/19/18	< 0.007
06/19/18	-	07/03/18	< 0.005
07/03/18	-	07/16/18	< 0.013
07/16/18	-	07/31/18	< 0.007
07/31/18	-	08/14/18	< 0.007
08/14/18	-	08/28/18	< 0.009
08/28/18	-	09/11/18	< 0.006
09/11/18	-	09/25/18	< 0.010
09/25/18	-	10/09/18	< 0.009
10/09/18	-	10/23/18	< 0.005
10/23/18	-	11/06/18	< 0.011
11/06/18	-	11/20/18	< 0.008
11/20/18	-	12/04/18	< 0.005
12/04/18	-	12/18/18	< 0.005
12/18/18	-	01/02/19	< 0.006

Results in picoCuries per cubic meter (pCi/m³)

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**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>
01/02/18	-	01/16/18	< 0.009
01/16/18	-	01/30/18	< 0.004
01/30/18	-	02/13/18	< 0.010
02/13/18	-	02/27/18	< 0.009
02/27/18	-	03/13/18	< 0.008
03/13/18	-	03/27/18	< 0.005
03/27/18	-	04/10/18	< 0.007
04/10/18	-	04/24/18	< 0.012
04/24/18	-	05/08/18	< 0.009
05/08/18	-	05/22/18	< 0.007
05/22/18	-	06/05/18	< 0.010
06/05/18	-	06/18/18	< 0.008
06/18/18	-	07/02/18	< 0.006
07/02/18	-	07/16/18	< 0.008
07/16/18	-	07/31/18	< 0.010
07/31/18	-	08/14/18	< 0.007
08/14/18	-	08/28/18	< 0.005
08/28/18	-	09/11/18	< 0.004
09/11/18	-	09/25/18	< 0.005
09/25/18	-	10/09/18	< 0.008
10/09/18	-	10/23/18	< 0.003
10/23/18	-	11/06/18	< 0.004
11/06/18	-	11/20/18	< 0.006
11/20/18	-	12/04/18	< 0.005
12/04/18	-	12/18/18	< 0.010
12/18/18	-	12/31/18	< 0.007

Results in picoCuries per cubic meter (pCi/m³)

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**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>
01/02/18	-	01/16/18	< 0.009
01/16/18	-	01/30/18	< 0.004
01/30/18	-	02/13/18	< 0.011
02/13/18	-	02/27/18	< 0.007
02/27/18	-	03/13/18	< 0.020
03/13/18	-	03/27/18	< 0.006
03/27/18	-	04/10/18	< 0.011
04/10/18	-	04/24/18	< 0.008
04/24/18	-	05/08/18	< 0.012
05/08/18	-	05/22/18	< 0.008
05/22/18	-	06/05/18	< 0.011
06/05/18	-	06/18/18	< 0.007
06/18/18	-	07/02/18	< 0.004
07/02/18	-	07/16/18	< 0.009
07/16/18	-	07/31/18	< 0.010
07/31/18	-	08/14/18	< 0.007
08/14/18	-	08/28/18	< 0.007
08/28/18	-	09/11/18	< 0.006
09/11/18	-	09/25/18	< 0.011
09/25/18	-	10/09/18	< 0.010
10/09/18	-	10/23/18	< 0.003
10/23/18	-	11/06/18	< 0.008
11/06/18	-	11/20/18	< 0.007
11/20/18	-	12/04/18	< 0.008
12/04/18	-	12/18/18	< 0.005
12/18/18	-	12/31/18	< 0.010

Results in picoCuries per cubic meter (pCi/m³)

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**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>
01/02/18	-	01/16/18	< 0.012
01/16/18	-	01/30/18	< 0.005
01/30/18	-	02/13/18	< 0.014
02/13/18	-	02/27/18	< 0.005
02/27/18	-	03/13/18	< 0.009
03/13/18	-	03/27/18	< 0.004
03/27/18	-	04/10/18	< 0.009
04/10/18	-	04/24/18	< 0.012
04/24/18	-	05/08/18	< 0.011
05/08/18	-	05/22/18	< 0.006
05/22/18	-	06/05/18	< 0.016
06/05/18	-	06/18/18	< 0.006
06/18/18	-	07/02/18	< 0.005
07/02/18	-	07/16/18	< 0.010
07/16/18	-	07/31/18	No Data ¹
07/31/18	-	08/14/18	< 0.004
08/14/18	-	08/28/18	< 0.007
08/28/18	-	09/11/18	< 0.008
09/11/18	-	09/25/18	< 0.009
09/25/18	-	10/09/18	< 0.016
10/09/18	-	10/23/18	< 0.004
10/23/18	-	11/06/18	< 0.007
11/06/18	-	11/20/18	< 0.003
11/20/18	-	12/04/18	< 0.007
12/04/18	-	12/18/18	< 0.007
12/18/18	-	12/31/18	< 0.007

Results in picoCuries per cubic meter (pCi/m³)

¹ No data available due to maintenance issues

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**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>
01/02/18	-	01/16/18	< 0.009
01/16/18	-	01/30/18	< 0.004
01/30/18	-	02/13/18	< 0.015
02/13/18	-	02/27/18	< 0.006
02/27/18	-	03/13/18	< 0.013
03/13/18	-	03/27/18	< 0.004
03/27/18	-	04/10/18	< 0.010
04/10/18	-	04/24/18	< 0.007
04/24/18	-	05/08/18	< 0.016
05/08/18	-	05/22/18	< 0.007
05/22/18	-	06/05/18	< 0.014
06/05/18	-	06/18/18	< 0.005
06/18/18	-	07/02/18	< 0.005
07/02/18	-	07/16/18	< 0.015
07/16/18	-	07/31/18	< 0.006
07/31/18	-	08/14/18	< 0.006
08/14/18	-	08/28/18	< 0.006
08/28/18	-	09/11/18	< 0.006
09/11/18	-	09/25/18	< 0.011
09/25/18	-	10/09/18	< 0.013
10/09/18	-	10/23/18	< 0.004
10/23/18	-	11/06/18	< 0.009
11/06/18	-	11/20/18	< 0.005
11/20/18	-	12/04/18	< 0.006
12/04/18	-	12/18/18	< 0.004
12/18/18	-	12/31/18	< 0.008

Results in picoCuries per cubic meter (pCi/m³)

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**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>
01/02/18	-	01/16/18	< 0.010
01/16/18	-	01/30/18	< 0.005
01/30/18	-	02/13/18	< 0.012
02/13/18	-	02/27/18	< 0.007
02/27/18	-	03/13/18	< 0.004
03/13/18	-	03/27/18	< 0.005
03/27/18	-	04/10/18	< 0.009
04/10/18	-	04/24/18	< 0.009
04/24/18	-	05/08/18	< 0.008
05/08/18	-	05/22/18	< 0.013
05/22/18	-	06/05/18	< 0.008
06/05/18	-	06/18/18	< 0.005
06/18/18	-	07/02/18	< 0.006
07/02/18	-	07/16/18	< 0.012
07/16/18	-	07/31/18	< 0.007
07/31/18	-	08/14/18	< 0.009
08/14/18	-	08/28/18	< 0.012
08/28/18	-	09/11/18	< 0.007
09/11/18	-	09/25/18	< 0.014
09/25/18	-	10/09/18	< 0.011
10/09/18	-	10/23/18	< 0.006
10/23/18	-	11/06/18	< 0.009
11/06/18	-	11/20/18	< 0.006
11/20/18	-	12/04/18	< 0.005
12/04/18	-	12/18/18	< 0.007
12/18/18	-	12/31/18	< 0.007

Results in picoCuries per cubic meter (pCi/m³)

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**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>
01/02/18	-	01/16/18	< 0.015
01/16/18	-	01/30/18	< 0.006
01/30/18	-	02/13/18	< 0.012
02/13/18	-	02/27/18	< 0.007
02/27/18	-	03/13/18	< 0.011
03/13/18	-	03/27/18	< 0.006
03/27/18	-	04/10/18	< 0.007
04/10/18	-	04/24/18	< 0.010
04/24/18	-	05/08/18	< 0.005
05/08/18	-	05/22/18	< 0.008
05/22/18	-	06/05/18	< 0.011
06/05/18	-	06/18/18	< 0.007
06/18/18	-	07/02/18	< 0.004
07/02/18	-	07/16/18	< 0.005
07/16/18	-	07/31/18	< 0.009
07/31/18	-	08/14/18	< 0.005
08/14/18	-	08/28/18	< 0.006
08/28/18	-	09/11/18	< 0.005
09/11/18	-	09/25/18	< 0.009
09/25/18	-	10/09/18	< 0.006
10/09/18	-	10/23/18	< 0.006
10/23/18	-	11/06/18	< 0.009
11/06/18	-	11/20/18	< 0.006
11/20/18	-	12/04/18	< 0.009
12/04/18	-	12/18/18	< 0.006
12/18/18	-	12/31/18	< 0.007

Results in picoCuries per cubic meter (pCi/m³)

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**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>
01/03/18	-	01/11/18	< 0.027
01/11/18	-	01/18/18	< 0.028
01/18/18	-	01/24/18	< 0.014
01/24/18	-	01/31/18	< 0.016
01/31/18	-	02/08/18	< 0.026
02/08/18	-	02/15/18	< 0.030
02/15/18	-	02/22/18	< 0.015
02/22/18	-	02/28/18	< 0.030
02/28/18	-	03/06/18	< 0.011
03/06/18	-	03/14/18	< 0.030
03/14/18	-	03/20/18	< 0.040
03/20/18	-	03/28/18	< 0.021
03/28/18	-	04/04/18	< 0.017
04/04/18	-	04/11/18	< 0.025
04/11/18	-	04/18/18	< 0.016
04/18/18	-	04/25/18	< 0.028
04/25/18	-	05/02/18	< 0.034
05/02/18	-	05/08/18	< 0.014
05/08/18	-	05/16/18	< 0.003
05/16/18	-	05/22/18	< 0.036
05/22/18	-	05/30/18	< 0.028
05/30/18	-	06/05/18	< 0.041
06/05/18	-	06/13/18	< 0.022
06/13/18	-	06/20/18	< 0.028
06/20/18	-	06/26/18	< 0.014
06/20/18	-	07/03/18	< 0.017

Results in picoCuries per cubic meter (pCi/m³)

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

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

Finninger Farm, OC Dredge Site (OCAI06) - continued

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
07/03/18	-	07/11/18	< 0.019
07/11/18	-	07/19/18	< 0.020
07/19/18	-	07/26/18	< 0.022
07/26/18	-	08/01/18	< 0.017
08/01/18	-	08/07/18	< 0.047
08/07/18	-	08/14/18	< 0.021
08/14/18	-	08/21/18	< 0.018
08/21/18	-	08/28/18	< 0.029
08/28/18	-	09/05/18	< 0.010
09/05/18	-	09/11/18	< 0.068
09/11/18	-	09/18/18	< 0.035
09/18/18	-	09/26/18	No Data ²
09/26/18	-	10/03/18	< 0.027
10/03/18	-	10/11/18	< 0.028
10/11/18	-	10/17/18	< 0.012
10/17/18	-	10/24/18	< 0.015
10/24/18	-	10/31/18	< 0.020
10/31/18	-	11/07/18	< 0.031
11/07/18	-	11/14/18	< 0.033
11/14/18	-	11/20/18	< 0.040
11/20/18	-	11/28/18	< 0.032
11/28/18	-	12/06/18	< 0.039
12/06/18	-	12/12/18	< 0.024
12/12/18	-	12/19/18	< 0.023
12/19/18	-	12/27/18	< 0.022

Results in picoCuries per cubic meter (pCi/m³)

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

² No data available due to maintenance issues with air sampler

**New Jersey Department of Environmental Protection
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**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>
01/02/18	-	01/16/18	< 0.006
01/16/18	-	01/30/18	< 0.005
01/30/18	-	02/13/18	< 0.017
02/13/18	-	02/27/18	< 0.007
02/27/18	-	03/13/18	< 0.008
03/13/18	-	03/27/18	< 0.005
03/27/18	-	04/10/18	< 0.008
04/10/18	-	04/24/18	< 0.012
04/24/18	-	05/08/18	< 0.010
05/08/18	-	05/22/18	< 0.016
05/22/18	-	06/05/18	< 0.014
06/05/18	-	06/18/18	< 0.007
06/18/18	-	07/02/18	< 0.004
07/02/18	-	07/16/18	< 0.008
07/16/18	-	07/31/18	< 0.004
07/31/18	-	08/14/18	< 0.004
08/14/18	-	08/28/18	< 0.009
08/28/18	-	09/11/18	< 0.005
09/11/18	-	09/25/18	< 0.007
09/25/18	-	10/09/18	< 0.005
10/09/18	-	10/23/18	< 0.005
10/23/18	-	11/06/18	< 0.008
11/06/18	-	11/20/18	< 0.006
11/20/18	-	12/04/18	< 0.005
12/04/18	-	12/18/18	< 0.004
12/18/18	-	12/31/18	< 0.006

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
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**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>
01/02/18	-	01/16/18	< 0.013
01/16/18	-	01/30/18	< 0.003
01/30/18	-	02/13/18	< 0.019
02/13/18	-	02/27/18	< 0.004
02/27/18	-	03/13/18	< 0.004
03/13/18	-	03/27/18	< 0.007
03/27/18	-	04/10/18	< 0.008
04/10/18	-	04/24/18	< 0.007
04/24/18	-	05/08/18	< 0.010
05/08/18	-	05/22/18	< 0.008
05/22/18	-	06/05/18	< 0.010
06/05/18	-	06/18/18	< 0.007
06/18/18	-	07/02/18	< 0.008
07/02/18	-	07/16/18	< 0.006
07/16/18	-	07/31/18	< 0.005
07/31/18	-	08/14/18	< 0.009
08/14/18	-	08/28/18	< 0.006
08/28/18	-	09/11/18	< 0.012
09/11/18	-	09/25/18	< 0.007
09/25/18	-	10/09/18	< 0.012
10/09/18	-	10/23/18	< 0.007
10/23/18	-	11/06/18	< 0.012
11/06/18	-	11/20/18	< 0.005
11/20/18	-	12/04/18	< 0.006
12/04/18	-	12/18/18	< 0.009
12/18/18	-	12/31/18	< 0.006

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
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**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>
01/02/18	-	01/16/18	< 0.010
01/16/18	-	01/30/18	< 0.009
01/30/18	-	02/13/18	< 0.015
02/13/18	-	02/27/18	< 0.007
02/27/18	-	03/13/18	< 0.012
03/13/18	-	03/27/18	< 0.008
03/27/18	-	04/11/18	< 0.004
04/11/18	-	04/24/18	< 0.010
04/24/18	-	05/08/18	< 0.006
05/08/18	-	05/22/18	< 0.010
05/22/18	-	06/05/18	< 0.013
06/05/18	-	06/19/18	< 0.004
06/19/18	-	07/03/18	< 0.004
07/03/18	-	07/16/18	< 0.010
07/16/18	-	07/31/18	< 0.009
07/31/18	-	08/14/18	< 0.004
08/14/18	-	08/28/18	< 0.006
08/28/18	-	09/11/18	< 0.006
09/11/18	-	09/25/18	< 0.009
09/25/18	-	10/09/18	< 0.009
10/09/18	-	10/23/18	< 0.004
10/23/18	-	11/06/18	< 0.013
11/06/18	-	11/20/18	< 0.008
11/20/18	-	12/04/18	< 0.007
12/04/18	-	12/18/18	< 0.007
12/18/18	-	01/02/19	< 0.006

Results in picoCuries per cubic meter (pCi/m³)

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**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>
01/02/18	-	01/16/18	< 0.009
01/16/18	-	01/30/18	< 0.009
01/30/18	-	02/13/18	< 0.010
02/13/18	-	02/27/18	< 0.009
02/27/18	-	03/13/18	< 0.005
03/13/18	-	03/27/18	< 0.008
03/27/18	-	04/11/18	< 0.007
04/11/18	-	04/24/18	< 0.013
04/24/18	-	05/08/18	< 0.011
05/08/18	-	05/22/18	< 0.008
05/22/18	-	06/05/18	< 0.008
06/05/18	-	06/19/18	< 0.009
06/19/18	-	07/03/18	< 0.007
07/03/18	-	07/16/18	< 0.007
07/16/18	-	07/31/18	< 0.007
07/31/18	-	08/14/18	< 0.007
08/14/18	-	08/28/18	< 0.004
08/28/18	-	09/11/18	< 0.006
09/11/18	-	09/25/18	< 0.007
09/25/18	-	10/09/18	< 0.009
10/09/18	-	10/23/18	< 0.003
10/23/18	-	11/06/18	< 0.011
11/06/18	-	11/20/18	< 0.004
11/20/18	-	12/04/18	< 0.006
12/04/18	-	12/18/18	< 0.008
12/18/18	-	01/02/19	< 0.007

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
01/02/18	-	01/16/18	< 0.015
01/16/18	-	01/30/18	< 0.006
01/30/18	-	02/13/18	< 0.013
02/13/18	-	02/27/18	< 0.007
02/27/18	-	03/13/18	< 0.008
03/13/18	-	03/27/18	< 0.007
03/27/18	-	04/11/18	< 0.004
04/11/18	-	04/24/18	< 0.010
04/24/18	-	05/08/18	< 0.011
05/08/18	-	05/22/18	< 0.008
05/22/18	-	06/05/18	< 0.006
06/05/18	-	06/19/18	< 0.007
06/19/18	-	07/03/18	< 0.006
07/03/18	-	07/16/18	< 0.003
07/16/18	-	07/31/18	< 0.009
07/31/18	-	08/14/18	< 0.013
08/14/18	-	08/28/18	< 0.007
08/28/18	-	09/11/18	< 0.006
09/11/18	-	09/25/18	< 0.011
09/25/18	-	10/09/18	< 0.008
10/09/18	-	10/23/18	< 0.004
10/23/18	-	11/06/18	< 0.015
11/06/18	-	11/20/18	< 0.005
11/20/18	-	12/04/18	< 0.006
12/04/18	-	12/18/18	< 0.003
12/18/18	-	01/02/19	< 0.012

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
01/02/18	-	01/16/18	< 0.008
01/16/18	-	01/30/18	< 0.006
01/30/18	-	02/13/18	< 0.008
02/13/18	-	02/27/18	< 0.007
02/27/18	-	03/13/18	< 0.012
03/13/18	-	03/27/18	< 0.005
03/27/18	-	04/11/18	< 0.009
04/11/18	-	04/24/18	< 0.009
04/24/18	-	05/08/18	< 0.011
05/08/18	-	05/22/18	< 0.008
05/22/18	-	06/05/18	< 0.008
06/05/18	-	06/19/18	< 0.010
06/19/18	-	07/03/18	< 0.005
07/03/18	-	07/16/18	< 0.008
07/16/18	-	07/31/18	< 0.014
07/31/18	-	08/14/18	< 0.007
08/14/18	-	08/28/18	< 0.007
08/28/18	-	09/11/18	< 0.006
09/11/18	-	09/25/18	< 0.009
09/25/18	-	10/09/18	< 0.009
10/09/18	-	10/23/18	< 0.003
10/23/18	-	11/06/18	< 0.011
11/06/18	-	11/20/18	< 0.006
11/20/18	-	12/04/18	< 0.005
12/04/18	-	12/18/18	< 0.006
12/18/18	-	01/02/19	< 0.006

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
01/02/18	-	01/16/18	0.023 ± 0.002
01/16/18	-	01/30/18	0.029 ± 0.002
01/30/18	-	02/13/18	0.021 ± 0.002
02/13/18	-	02/27/18	0.015 ± 0.001
02/27/18	-	03/13/18	0.011 ± 0.001
03/13/18	-	03/27/18	0.019 ± 0.002
03/27/18	-	04/11/18	0.019 ± 0.002
04/11/18	-	04/24/18	0.019 ± 0.002
04/24/18	-	05/08/18	0.019 ± 0.002
05/08/18	-	05/22/18	0.017 ± 0.002
05/22/18	-	06/05/18	0.011 ± 0.001
06/05/18	-	06/19/18	0.018 ± 0.002
06/19/18	-	07/03/18	0.018 ± 0.002
07/03/18	-	07/16/18	0.020 ± 0.002
07/16/18	-	07/31/18	0.016 ± 0.001
07/31/18	-	08/14/18	0.023 ± 0.002
08/14/18	-	08/28/18	0.023 ± 0.002
08/28/18	-	09/11/18	0.020 ± 0.002
09/11/18	-	09/25/18	0.014 ± 0.001
09/25/18	-	10/09/18	0.023 ± 0.002
10/09/18	-	10/23/18	0.017 ± 0.002
10/23/18	-	11/06/18	0.015 ± 0.002
11/06/18	-	11/20/18	0.019 ± 0.002
11/20/18	-	12/04/18	0.018 ± 0.002
12/04/18	-	12/18/18	0.023 ± 0.002
12/18/18	-	01/02/19	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
2018 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>
01/02/18	-	01/16/18	0.024 ± 0.002
01/16/18	-	01/30/18	0.028 ± 0.002
01/30/18	-	02/13/18	0.021 ± 0.002
02/13/18	-	02/27/18	0.017 ± 0.001
02/27/18	-	03/13/18	0.011 ± 0.001
03/13/18	-	03/27/18	0.019 ± 0.002
03/27/18	-	04/10/18	0.016 ± 0.002
04/11/18	-	04/24/18	0.016 ± 0.002
04/24/18	-	05/08/18	0.020 ± 0.002
05/08/18	-	05/22/18	0.012 ± 0.001
05/22/18	-	06/05/18	0.014 ± 0.002
06/05/18	-	06/18/18	0.015 ± 0.002
06/18/18	-	07/02/18	0.017 ± 0.002
07/02/18	-	07/16/18	0.019 ± 0.002
07/16/18	-	07/31/18	0.016 ± 0.001
07/31/18	-	08/14/18	0.021 ± 0.002
08/14/18	-	08/28/18	0.026 ± 0.002
08/28/18	-	09/11/18	0.021 ± 0.002
09/11/18	-	09/25/18	0.011 ± 0.001
09/25/18	-	10/09/18	0.022 ± 0.002
10/09/18	-	10/23/18	0.016 ± 0.001
10/23/18	-	11/06/18	0.014 ± 0.001
11/06/18	-	11/20/18	0.015 ± 0.001
11/20/18	-	12/04/18	0.015 ± 0.001
12/04/18	-	12/18/18	0.023 ± 0.002
12/18/18	-	12/31/18	0.016 ± 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
2018 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>
01/02/18	-	01/16/18	0.022 ± 0.002
01/16/18	-	01/30/18	0.033 ± 0.002
01/30/18	-	02/13/18	0.019 ± 0.002
02/13/18	-	02/27/18	0.015 ± 0.001
02/27/18	-	03/13/18	0.011 ± 0.001
03/13/18	-	03/27/18	0.014 ± 0.001
03/27/18	-	04/10/18	0.016 ± 0.002
04/11/18	-	04/24/18	0.015 ± 0.001
04/24/18	-	05/08/18	0.024 ± 0.002
05/08/18	-	05/22/18	0.011 ± 0.001
05/22/18	-	06/05/18	0.013 ± 0.001
06/05/18	-	06/18/18	0.014 ± 0.001
06/18/18	-	07/02/18	0.014 ± 0.001
07/02/18	-	07/16/18	0.017 ± 0.002
07/16/18	-	07/31/18	0.018 ± 0.002
07/31/18	-	08/14/18	0.026 ± 0.002
08/14/18	-	08/28/18	0.024 ± 0.002
08/28/18	-	09/11/18	0.023 ± 0.002
09/11/18	-	09/25/18	0.012 ± 0.001
09/25/18	-	10/09/18	0.019 ± 0.002
10/09/18	-	10/23/18	0.016 ± 0.002
10/23/18	-	11/06/18	0.018 ± 0.002
11/06/18	-	11/20/18	0.020 ± 0.002
11/20/18	-	12/04/18	0.015 ± 0.002
12/04/18	-	12/18/18	0.021 ± 0.002
12/18/18	-	12/31/18	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
2018 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>
01/02/18	-	01/16/18	0.024 ± 0.002
01/16/18	-	01/30/18	0.028 ± 0.002
01/30/18	-	02/13/18	0.020 ± 0.002
02/13/18	-	02/27/18	0.017 ± 0.001
02/27/18	-	03/13/18	0.011 ± 0.001
03/13/18	-	03/27/18	0.016 ± 0.002
03/27/18	-	04/10/18	0.020 ± 0.002
04/11/18	-	04/24/18	0.018 ± 0.002
04/24/18	-	05/08/18	0.019 ± 0.002
05/08/18	-	05/22/18	0.012 ± 0.001
05/22/18	-	06/05/18	0.011 ± 0.001
06/05/18	-	06/18/18	0.013 ± 0.001
06/18/18	-	07/02/18	0.016 ± 0.002
07/02/18	-	07/16/18	0.022 ± 0.002
07/16/18	-	07/31/18	0.023 ± 0.003
07/31/18	-	08/14/18	0.023 ± 0.002
08/14/18	-	08/28/18	0.021 ± 0.002
08/28/18	-	09/11/18	0.021 ± 0.002
09/11/18	-	09/25/18	0.016 ± 0.002
09/25/18	-	10/09/18	0.017 ± 0.002
10/09/18	-	10/23/18	0.019 ± 0.002
10/23/18	-	11/06/18	0.015 ± 0.002
11/06/18	-	11/20/18	0.017 ± 0.002
11/20/18	-	12/04/18	0.018 ± 0.002
12/04/18	-	12/18/18	0.022 ± 0.002
12/18/18	-	12/31/18	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
2018 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>
01/02/18	-	01/16/18	0.022 ± 0.002
01/16/18	-	01/30/18	0.031 ± 0.002
01/30/18	-	02/13/18	0.019 ± 0.002
02/13/18	-	02/27/18	0.015 ± 0.001
02/27/18	-	03/13/18	0.012 ± 0.001
03/13/18	-	03/27/18	0.020 ± 0.002
03/27/18	-	04/10/18	0.019 ± 0.002
04/11/18	-	04/24/18	0.015 ± 0.002
04/24/18	-	05/08/18	0.017 ± 0.002
05/08/18	-	05/22/18	0.014 ± 0.002
05/22/18	-	06/05/18	0.012 ± 0.001
06/05/18	-	06/18/18	0.015 ± 0.002
06/18/18	-	07/02/18	0.017 ± 0.002
07/02/18	-	07/16/18	0.018 ± 0.002
07/16/18	-	07/31/18	0.013 ± 0.001
07/31/18	-	08/14/18	0.020 ± 0.002
08/14/18	-	08/28/18	0.021 ± 0.002
08/28/18	-	09/11/18	0.019 ± 0.002
09/11/18	-	09/25/18	0.013 ± 0.001
09/25/18	-	10/09/18	0.022 ± 0.002
10/09/18	-	10/23/18	0.017 ± 0.002
10/23/18	-	11/06/18	0.014 ± 0.001
11/06/18	-	11/20/18	0.019 ± 0.002
11/20/18	-	12/04/18	0.018 ± 0.002
12/04/18	-	12/18/18	0.020 ± 0.002
12/18/18	-	12/31/18	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
2018 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>
01/02/18	-	01/16/18	0.025 ± 0.002
01/16/18	-	01/30/18	0.031 ± 0.002
01/30/18	-	02/13/18	0.022 ± 0.002
02/13/18	-	02/27/18	0.017 ± 0.001
02/27/18	-	03/13/18	0.011 ± 0.001
03/13/18	-	03/27/18	0.016 ± 0.002
03/27/18	-	04/10/18	0.017 ± 0.002
04/11/18	-	04/24/18	0.015 ± 0.002
04/24/18	-	05/08/18	0.020 ± 0.002
05/08/18	-	05/22/18	0.013 ± 0.001
05/22/18	-	06/05/18	0.015 ± 0.002
06/05/18	-	06/18/18	0.015 ± 0.002
06/18/18	-	07/02/18	0.016 ± 0.002
07/02/18	-	07/16/18	0.018 ± 0.002
07/16/18	-	07/31/18	0.014 ± 0.001
07/31/18	-	08/14/18	0.021 ± 0.002
08/14/18	-	08/28/18	0.025 ± 0.002
08/28/18	-	09/11/18	0.020 ± 0.002
09/11/18	-	09/25/18	0.013 ± 0.001
09/25/18	-	10/09/18	0.022 ± 0.002
10/09/18	-	10/23/18	0.015 ± 0.001
10/23/18	-	11/06/18	0.014 ± 0.002
11/06/18	-	11/20/18	0.017 ± 0.002
11/20/18	-	12/04/18	0.018 ± 0.002
12/04/18	-	12/18/18	0.022 ± 0.002
12/18/18	-	12/31/18	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
2018 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>
01/02/18	-	01/16/18	0.024 ± 0.002
01/16/18	-	01/30/18	0.028 ± 0.002
01/30/18	-	02/13/18	0.020 ± 0.002
02/13/18	-	02/27/18	0.016 ± 0.001
02/27/18	-	03/13/18	0.009 ± 0.001
03/13/18	-	03/27/18	0.015 ± 0.002
03/27/18	-	04/10/18	0.017 ± 0.002
04/11/18	-	04/24/18	0.016 ± 0.001
04/24/18	-	05/08/18	0.024 ± 0.002
05/08/18	-	05/22/18	0.013 ± 0.001
05/22/18	-	06/05/18	0.013 ± 0.001
06/05/18	-	06/18/18	0.012 ± 0.001
06/18/18	-	07/02/18	0.013 ± 0.001
07/02/18	-	07/16/18	0.016 ± 0.002
07/16/18	-	07/31/18	0.017 ± 0.002
07/31/18	-	08/14/18	0.024 ± 0.002
08/14/18	-	08/28/18	0.023 ± 0.002
08/28/18	-	09/11/18	0.023 ± 0.002
09/11/18	-	09/25/18	0.012 ± 0.001
09/25/18	-	10/09/18	0.018 ± 0.002
10/09/18	-	10/23/18	0.015 ± 0.001
10/23/18	-	11/06/18	0.016 ± 0.002
11/06/18	-	11/20/18	0.017 ± 0.002
11/20/18	-	12/04/18	0.016 ± 0.002
12/04/18	-	12/18/18	0.018 ± 0.002
12/18/18	-	12/31/18	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
2018 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>
01/03/18	-	01/11/18	0.021 ± 0.004
01/11/18	-	01/18/18	0.021 ± 0.004
01/18/18	-	01/24/18	0.047 ± 0.006
01/24/18	-	01/31/18	0.021 ± 0.004
01/31/18	-	02/08/18	0.015 ± 0.003
02/08/18	-	02/15/18	0.023 ± 0.004
02/15/18	-	02/22/18	0.029 ± 0.004
02/22/18	-	02/28/18	0.025 ± 0.004
02/28/18	-	03/06/18	0.023 ± 0.004
03/06/18	-	03/14/18	0.015 ± 0.003
03/14/18	-	03/20/18	0.033 ± 0.006
03/20/18	-	03/28/18	0.026 ± 0.004
03/28/18	-	04/04/18	0.032 ± 0.005
04/04/18	-	04/11/18	0.028 ± 0.005
04/11/18	-	04/18/18	0.026 ± 0.005
04/18/18	-	04/25/18	0.036 ± 0.006
04/25/18	-	05/02/18	0.030 ± 0.005
05/02/18	-	05/08/18	0.046 ± 0.007
05/08/18	-	05/16/18	0.005 ± 0.001
05/16/18	-	05/22/18	0.022 ± 0.005
05/22/18	-	05/30/18	0.031 ± 0.005
05/30/18	-	06/05/18	0.023 ± 0.005
06/05/18	-	06/13/18	0.028 ± 0.005
06/13/18	-	06/20/18	0.032 ± 0.005
06/20/18	-	06/26/18	0.026 ± 0.005
06/26/18	-	07/03/18	0.036 ± 0.005

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

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

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
07/03/18	-	07/11/18	0.034 ± 0.005
07/11/18	-	07/19/18	0.029 ± 0.004
07/19/18	-	07/26/18	0.020 ± 0.004
07/26/18	-	08/01/18	0.043 ± 0.006
08/01/18	-	08/07/18	0.039 ± 0.006
08/07/18	-	08/14/18	0.039 ± 0.005
08/14/18	-	08/21/18	0.044 ± 0.006
08/21/18	-	08/28/18	0.049 ± 0.007
08/28/18	-	09/05/18	0.036 ± 0.005
09/05/18	-	09/11/18	0.034 ± 0.006
09/11/18	-	09/18/18	0.031 ± 0.005
09/18/18	-	09/26/18	No Data ³
09/26/18	-	10/03/18	0.035 ± 0.005
10/03/18	-	10/11/18	0.036 ± 0.005
10/11/18	-	10/17/18	0.035 ± 0.006
10/17/18	-	10/24/18	0.035 ± 0.005
10/24/18	-	10/31/18	0.023 ± 0.005
10/31/18	-	11/07/18	0.028 ± 0.005
11/07/18	-	11/14/18	0.016 ± 0.004
11/14/18	-	11/20/18	0.025 ± 0.005
11/20/18	-	11/28/18	0.018 ± 0.003
11/28/18	-	12/06/18	0.026 ± 0.004
12/06/18	-	12/12/18	0.048 ± 0.006
12/12/18	-	12/19/18	0.030 ± 0.005
12/19/18	-	12/27/18	0.027 ± 0.004

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

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

³ No data available due to maintenance issues with air sampler

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
01/02/18	-	01/16/18	0.024 ± 0.002
01/16/18	-	01/30/18	0.028 ± 0.002
01/30/18	-	02/13/18	0.020 ± 0.002
02/13/18	-	02/27/18	0.016 ± 0.001
02/27/18	-	03/13/18	0.011 ± 0.001
03/13/18	-	03/27/18	0.016 ± 0.002
03/27/18	-	04/10/18	0.021 ± 0.002
04/10/18	-	04/24/18	0.019 ± 0.002
04/24/18	-	05/08/18	0.020 ± 0.002
05/08/18	-	05/22/18	0.013 ± 0.001
05/22/18	-	06/05/18	0.011 ± 0.001
06/05/18	-	06/18/18	0.013 ± 0.001
06/18/18	-	07/02/18	0.015 ± 0.001
07/02/18	-	07/16/18	0.021 ± 0.002
07/16/18	-	07/31/18	0.016 ± 0.002
07/31/18	-	08/14/18	0.021 ± 0.002
08/14/18	-	08/28/18	0.023 ± 0.002
08/28/18	-	09/11/18	0.020 ± 0.002
09/11/18	-	09/25/18	0.015 ± 0.002
09/25/18	-	10/09/18	0.019 ± 0.002
10/09/18	-	10/23/18	0.017 ± 0.002
10/23/18	-	11/06/18	0.014 ± 0.001
11/06/18	-	11/20/18	0.019 ± 0.002
11/20/18	-	12/04/18	0.017 ± 0.002
12/04/18	-	12/18/18	0.019 ± 0.002
12/18/18	-	12/31/18	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
2018 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>
01/02/18	-	01/16/18	0.020 ± 0.002
01/16/18	-	01/30/18	0.027 ± 0.002
01/30/18	-	02/13/18	0.019 ± 0.002
02/13/18	-	02/27/18	0.017 ± 0.001
02/27/18	-	03/13/18	0.010 ± 0.001
03/13/18	-	03/27/18	0.019 ± 0.002
03/27/18	-	04/10/18	0.018 ± 0.002
04/10/18	-	04/24/18	0.018 ± 0.002
04/24/18	-	05/08/18	0.018 ± 0.002
05/08/18	-	05/22/18	0.015 ± 0.002
05/22/18	-	06/05/18	0.012 ± 0.001
06/05/18	-	06/18/18	0.016 ± 0.002
06/18/18	-	07/02/18	0.018 ± 0.002
07/02/18	-	07/16/18	0.018 ± 0.002
07/16/18	-	07/31/18	0.010 ± 0.001
07/31/18	-	08/14/18	0.019 ± 0.002
08/14/18	-	08/28/18	0.020 ± 0.002
08/28/18	-	09/11/18	0.021 ± 0.002
09/11/18	-	09/25/18	0.013 ± 0.001
09/25/18	-	10/09/18	0.025 ± 0.002
10/09/18	-	10/23/18	0.016 ± 0.001
10/23/18	-	11/06/18	0.013 ± 0.001
11/06/18	-	11/20/18	0.019 ± 0.002
11/20/18	-	12/04/18	0.016 ± 0.002
12/04/18	-	12/18/18	0.020 ± 0.002
12/18/18	-	12/31/18	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
2018 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>
01/02/18	-	01/16/18	0.023 ± 0.002
01/16/18	-	01/30/18	0.025 ± 0.002
01/30/18	-	02/13/18	0.022 ± 0.002
02/13/18	-	02/27/18	0.017 ± 0.001
02/27/18	-	03/13/18	0.013 ± 0.001
03/13/18	-	03/27/18	0.018 ± 0.002
03/27/18	-	04/11/18	0.019 ± 0.002
04/11/18	-	04/24/18	0.016 ± 0.002
04/24/18	-	05/08/18	0.022 ± 0.002
05/08/18	-	05/22/18	0.014 ± 0.002
05/22/18	-	06/05/18	0.015 ± 0.002
06/05/18	-	06/19/18	0.015 ± 0.002
06/19/18	-	07/03/18	0.016 ± 0.002
07/03/18	-	07/16/18	0.019 ± 0.002
07/16/18	-	07/31/18	0.014 ± 0.001
07/31/18	-	08/14/18	0.020 ± 0.002
08/14/18	-	08/28/18	0.028 ± 0.002
08/28/18	-	09/11/18	0.021 ± 0.002
09/11/18	-	09/25/18	0.014 ± 0.001
09/25/18	-	10/09/18	0.024 ± 0.002
10/09/18	-	10/23/18	0.015 ± 0.001
10/23/18	-	11/06/18	0.013 ± 0.001
11/06/18	-	11/20/18	0.019 ± 0.002
11/20/18	-	12/04/18	0.017 ± 0.002
12/04/18	-	12/18/18	0.025 ± 0.002
12/18/18	-	01/02/19	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
2018 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>
01/02/18	-	01/16/18	0.021 ± 0.002
01/16/18	-	01/30/18	0.026 ± 0.002
01/30/18	-	02/13/18	0.019 ± 0.002
02/13/18	-	02/27/18	0.016 ± 0.001
02/27/18	-	03/13/18	0.013 ± 0.001
03/13/18	-	03/27/18	0.018 ± 0.002
03/27/18	-	04/11/18	0.018 ± 0.002
04/11/18	-	04/24/18	0.017 ± 0.002
04/24/18	-	05/08/18	0.026 ± 0.002
05/08/18	-	05/22/18	0.015 ± 0.002
05/22/18	-	06/05/18	0.014 ± 0.002
06/05/18	-	06/19/18	0.014 ± 0.001
06/19/18	-	07/03/18	0.016 ± 0.001
07/03/18	-	07/16/18	0.016 ± 0.002
07/16/18	-	07/31/18	0.020 ± 0.002
07/31/18	-	08/14/18	0.023 ± 0.002
08/14/18	-	08/28/18	0.026 ± 0.002
08/28/18	-	09/11/18	0.022 ± 0.002
09/11/18	-	09/25/18	0.015 ± 0.001
09/25/18	-	10/09/18	0.023 ± 0.002
10/09/18	-	10/23/18	0.015 ± 0.001
10/23/18	-	11/06/18	0.017 ± 0.002
11/06/18	-	11/20/18	0.019 ± 0.002
11/20/18	-	12/04/18	0.017 ± 0.002
12/04/18	-	12/18/18	0.022 ± 0.002
12/18/18	-	01/02/19	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
2018 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>
01/02/18	-	01/16/18	0.024 ± 0.002
01/16/18	-	01/30/18	0.028 ± 0.002
01/30/18	-	02/13/18	0.023 ± 0.002
02/13/18	-	02/27/18	0.017 ± 0.001
02/27/18	-	03/13/18	0.013 ± 0.001
03/13/18	-	03/27/18	0.017 ± 0.002
03/27/18	-	04/11/18	0.022 ± 0.002
04/11/18	-	04/24/18	0.019 ± 0.002
04/24/18	-	05/08/18	0.021 ± 0.002
05/08/18	-	05/22/18	0.014 ± 0.001
05/22/18	-	06/05/18	0.012 ± 0.001
06/05/18	-	06/19/18	0.015 ± 0.002
06/19/18	-	07/03/18	0.014 ± 0.001
07/03/18	-	07/16/18	0.021 ± 0.002
07/16/18	-	07/31/18	0.016 ± 0.001
07/31/18	-	08/14/18	0.021 ± 0.002
08/14/18	-	08/28/18	0.023 ± 0.002
08/28/18	-	09/11/18	0.022 ± 0.002
09/11/18	-	09/25/18	0.016 ± 0.002
09/25/18	-	10/09/18	0.023 ± 0.002
10/09/18	-	10/23/18	0.020 ± 0.002
10/23/18	-	11/06/18	0.015 ± 0.002
11/06/18	-	11/20/18	0.019 ± 0.002
11/20/18	-	12/04/18	0.015 ± 0.002
12/04/18	-	12/18/18	0.023 ± 0.002
12/18/18	-	01/02/19	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
2018 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>
01/02/18	-	01/16/18	0.023 ± 0.002
01/16/18	-	01/30/18	0.028 ± 0.002
01/30/18	-	02/13/18	0.020 ± 0.002
02/13/18	-	02/27/18	0.017 ± 0.001
02/27/18	-	03/13/18	0.013 ± 0.001
03/13/18	-	03/27/18	0.021 ± 0.002
03/27/18	-	04/11/18	0.020 ± 0.002
04/11/18	-	04/24/18	0.017 ± 0.002
04/24/18	-	05/08/18	0.020 ± 0.002
05/08/18	-	05/22/18	0.019 ± 0.002
05/22/18	-	06/05/18	0.012 ± 0.001
06/05/18	-	06/19/18	0.019 ± 0.002
06/19/18	-	07/03/18	0.016 ± 0.002
07/03/18	-	07/16/18	0.017 ± 0.002
07/16/18	-	07/31/18	0.015 ± 0.001
07/31/18	-	08/14/18	0.020 ± 0.002
08/14/18	-	08/28/18	0.023 ± 0.002
08/28/18	-	09/11/18	0.018 ± 0.002
09/11/18	-	09/25/18	0.015 ± 0.002
09/25/18	-	10/09/18	0.029 ± 0.002
10/09/18	-	10/23/18	0.017 ± 0.002
10/23/18	-	11/06/18	0.015 ± 0.001
11/06/18	-	11/20/18	0.020 ± 0.002
11/20/18	-	12/04/18	0.017 ± 0.002
12/04/18	-	12/18/18	0.025 ± 0.002
12/18/18	-	01/02/19	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
2018 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>
01/02/18	-	03/27/18	< 0.4	< 0.3	< 0.3	104 ± 16	< 45.9	< 13.4
03/27/18	-	07/03/18	< 0.3	< 0.2	< 0.2	128 ± 19	< 26.5	< 15.4
07/03/18	-	09/25/18	< 0.3	< 0.3	< 0.3	120 ± 15	< 22.5	< 13.7
09/25/18	-	01/02/19	< 0.4	< 0.4	< 0.3	76 ± 13	< 20.8	< 9.5

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>
01/02/18	-	03/27/18	< 0.5	< 0.6	< 0.4	104 ± 21	< 40.0	< 9.3
03/27/18	-	07/02/18	< 0.5	< 0.4	< 0.3	128 ± 19	< 16.6	< 18.8
07/02/18	-	09/25/18	< 0.3	< 0.3	< 0.3	113 ± 15	< 30.8	< 10.0
09/25/18	-	12/31/18	< 0.6	< 0.5	< 0.4	89 ± 18	< 31.9	< 11.5

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
2018 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>
01/02/18	- 03/27/18	< 0.3	< 0.3	< 0.3	103 ± 15	< 28.5	< 12.7
03/27/18	- 07/02/18	< 0.3	< 0.2	< 0.2	119 ± 15	< 26.1	< 20.6
07/02/18	- 09/25/18	< 0.3	< 0.3	< 0.3	104 ± 14	< 33.9	< 10.7
09/25/18	- 12/31/18	< 0.3	< 0.4	< 0.4	82 ± 14	< 31.4	< 20.6

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>
01/02/18	- 03/27/18	< 0.3	< 0.3	< 0.2	93 ± 14	< 47.9	< 10.8
03/27/18	- 07/02/18	< 0.4	< 0.3	< 0.4	111 ± 17	< 25.9	< 13.5
07/02/18	- 09/25/18	< 0.4	< 0.4	< 0.3	108 ± 15	< 42.0	< 10.6
09/25/18	- 12/31/18	< 0.3	< 0.5	< 0.3	97 ± 15	< 36.2	< 17.0

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>
01/02/18	- 03/27/18	< 0.6	< 0.5	< 0.4	105 ± 17	< 26.6	< 9.5
03/27/18	- 07/02/18	< 0.3	< 0.3	< 0.3	121 ± 18	< 20.1	< 12.7
07/02/18	- 09/25/18	< 0.2	< 0.2	< 0.3	104 ± 15	< 31.2	< 14.8
09/25/18	- 12/31/18	< 0.3	< 0.4	< 0.3	81 ± 14	< 40.2	< 15.2

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>
01/02/18	- 03/27/18	< 0.3	< 0.3	< 0.3	116 ± 15	< 40.0	< 12.3
03/27/18	- 07/02/18	< 0.2	< 0.2	< 0.2	119 ± 15	< 21.6	< 18.4
07/02/18	- 09/25/18	< 0.3	< 0.2	< 0.2	110 ± 14	< 23.3	< 10.8
09/25/18	- 12/31/18	< 0.2	< 0.4	< 0.3	87 ± 14	< 19.4	< 10.6

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
2018 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>
01/02/18	-	03/27/18	< 0.3	< 0.3	< 0.2	110 ± 15	< 30.1	< 9.4
03/27/18	-	07/02/18	< 0.2	< 0.3	< 0.3	121 ± 17	< 20.6	< 10.3
07/02/18	-	09/25/18	< 0.3	< 0.3	< 0.2	107 ± 15	< 27.0	< 14.6
09/25/18	-	12/31/18	< 0.1	< 0.3	< 0.2	81 ± 13	< 20.7	< 11.2

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>
12/27/17	-	03/28/18	< 0.4	< 0.7	< 0.4	85 ± 16	< 53.9	< 19.6
03/28/18	-	06/26/18	< 0.6	< 0.4	< 0.6	83 ± 17	< 42.3	< 18.8
06/26/18	-	10/03/18	< 0.7	< 0.8	< 0.7	103 ± 20	< 84.6	< 24.0
10/03/18	-	01/02/19	< 0.6	< 0.3	< 0.7	85 ± 19	< 36.6	< 40.2

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>
01/02/18	-	03/27/18	< 0.3	< 0.3	< 0.2	94 ± 14	< 42.4	< 9.0
03/27/18	-	07/02/18	< 0.3	< 0.4	< 0.2	112 ± 16	< 18.8	< 9.8
07/02/18	-	09/25/18	< 0.3	< 0.3	< 0.2	110 ± 14	< 24.6	< 12.4
09/25/18	-	12/31/18	< 0.2	< 0.2	< 0.2	76 ± 11	< 23.7	< 10.1

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>
01/02/18	-	03/27/18	< 0.3	< 0.2	< 0.2	92 ± 13	< 20.3	< 9.2
03/27/18	-	07/02/18	< 0.3	< 0.2	< 0.3	116 ± 17	< 20.1	< 11.8
07/02/18	-	09/25/18	< 0.3	< 0.2	< 0.2	108 ± 15	< 19.3	< 9.8
09/25/18	-	12/31/18	< 0.3	< 0.3	< 0.2	87 ± 13	< 26.6	< 14.1

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
2018 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>
01/02/18	-	03/27/18	< 0.3	< 0.3	< 0.2	91 ± 17	< 48.4	< 12.3
03/27/18	-	07/03/18	< 0.2	< 0.2	< 0.2	117 ± 17	< 24.2	< 10.8
07/03/18	-	09/25/18	< 0.2	< 0.4	< 0.3	106 ± 15	< 23.8	< 16.8
09/25/18	-	01/02/19	< 0.3	< 0.4	< 0.3	73 ± 12	< 20.5	< 15.3

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>
01/02/18	-	03/27/18	< 0.2	< 0.2	< 0.2	98 ± 14	< 35.3	< 15.2
03/27/18	-	07/03/18	< 0.3	< 0.3	< 0.2	129 ± 16	< 31.0	< 10.3
07/03/18	-	09/25/18	< 0.2	< 0.2	< 0.1	106 ± 15	< 19.4	< 11.4
09/25/18	-	01/02/19	< 0.4	< 0.4	< 0.3	77 ± 14	< 23.1	< 14.3

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>
01/02/18	-	03/27/18	< 0.6	< 0.3	< 0.2	105 ± 17	< 31.8	< 8.2
03/27/18	-	07/03/18	< 0.5	< 0.4	< 0.3	138 ± 19	< 21.0	< 17.5
07/03/18	-	09/25/18	< 0.5	< 0.4	< 0.3	113 ± 15	< 19.2	< 9.7
09/25/18	-	01/02/19	< 0.3	< 0.2	< 0.2	84 ± 12	< 29.9	< 12.2

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>
01/02/18	-	03/27/18	< 0.5	< 0.2	< 0.2	92 ± 14	< 29.2	< 10.2
03/27/18	-	07/03/18	< 0.6	< 0.3	< 0.7	135 ± 24	< 23.7	< 14.2
07/03/18	-	09/25/18	< 0.3	< 0.2	< 0.2	104 ± 15	< 26.9	< 10.6
09/25/18	-	01/02/19	< 0.1	< 0.3	< 0.3	77 ± 13	< 16.4	< 12.8

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
2018 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>
05/14/19 - Clams	< 7	< 8	< 9	< 9	1,440 ± 263	< 107	< 137
10/16/18 – Clams	< 6	< 5	< 8	< 8	1,490 ± 235	< 106	< 136

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>
05/14/18 - Clams	< 7	< 6	< 7	< 6	1,670 ± 233	< 96	< 126
10/16/18 - Clams	< 9	< 9	< 9	< 9	1,560 ± 258	< 126	< 113

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>
05/16/18 - Clams	< 5	< 7	< 7	< 7	1,570 ± 232	< 110	< 161
05/16/18 – Tautog	< 13	< 17	< 16	< 15	3,270 ± 513	< 278	< 275
05/16/18 – Bluefish	< 24	< 22	< 22	< 22	3,530 ± 573	< 221	< 320
05/16/18 – Striped Bass	< 15	< 17	< 18	< 19	3,000 ± 521	< 223	< 170
10/18/18 - Clams	< 5	< 6	< 7	< 6	1,070 ± 179	< 76	< 136

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>
05/15/18 - Bluefish	< 7	< 9	< 10	< 11	3,830 ± 503	< 187	< 241
05/15/18 – Striped Bass	< 9	< 8	< 12	< 10	3,950 ± 465	< 141	< 177
10/16/18 – Bluefish	< 11	< 9	< 11	< 12	3,700 ± 507	< 201	< 209
10/16/18 – Striped Bass	< 7	< 7	< 8	< 8	4,100 ± 479	< 225	< 235
10/18/18 – Blue Crab	< 6	< 6	< 8	< 7	1,920 ± 282	< 180	< 191

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
2018 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>
05/09/18 – Striped Bass	< 7	< 9	< 8	< 7	3,330 ± 363	< 95	< 88
07/30/18 - Crab	< 8	< 8	< 8	< 7	1,120 ± 220	< 68	< 68
08/22/18 - Crab	< 6	< 8	< 7	< 7	1,770 ± 259	< 374	< 507
10/31/18 – Striped Bass	< 4	< 4	< 4	< 5	4,010 ± 396	< 146	< 104

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>
05/09/18 – Catfish	< 4	< 3	< 4	< 4	2,360 ± 228	< 111	< 180
05/09/18 – Striped Bass	< 8	< 8	< 8	< 8	3,440 ± 397	< 179	< 169
07/30/18 - Crab	< 8	< 9	< 8	< 6	2,030 ± 293	< 86	< 80
08/22/18 – Crab	< 7	< 6	< 8	< 7	1,350 ± 213	< 472	< 488
10/31/18 – Striped Bass	< 5	< 5	< 5	< 5	3,700 ± 384	< 101	< 146

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>
05/11/18 – Catfish	< 3	< 3	< 3	< 2	2,750 ± 280	< 166	< 109
11/08/18 – Striped Bass	< 3	< 3	< 3	< 3	3,570 ± 327	< 130	< 84

Delaware River – 2.1 Miles SE (AIFS05)

<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>
06/18/18 - Oysters	< 5	< 5	< 5	< 5	1,220 ± 157	< 64	< 86
10/19/18 - Oysters	< 9	< 9	< 10	< 9	1,240 ± 240	< 144	< 227

Delaware River (Near Benny Sands and Nantuxent Cove) – 19.1 Miles SE (AIFS06)

<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>
06/18/18 – Oysters	< 4	< 4	< 3	< 3	1,690 ± 196	< 173	< 146
10/19/18 - Oysters	< 3	< 3	< 3	< 3	1,410 ± 167	< 200	< 235

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
2018 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>
05/14/18	< 98	< 11	< 10	< 14	< 11	< 9	4,190 ± 468
10/15/18	196 ± 171	< 16	< 20	< 23	< 20	< 18	13,200 ± 1,420

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>
05/14/18	311 ± 69	< 5	< 6	< 9	13 ± 6	< 6	2,330 ± 287
10/15/18	< 77	< 7	< 8	< 11	30 ± 13	< 10	2,410 ± 279

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>
05/16/18	450 ± 258	< 20	< 18	< 29	42 ± 22	< 22	16,800 ± 1,800
10/16/18	< 173	< 21	< 23	< 33	< 25	< 26	17,000 ± 1,630

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>
05/14/18	131 ± 63	< 6	< 6	< 8	< 7	< 5	2,190 ± 252
10/16/18	231 ± 104	< 10	< 11	< 14	< 11	< 10	6,720 ± 748

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
2018 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>
07/02/18	< 92	< 10	< 10	< 15	< 13	< 12	7,870 ± 911
12/10/18	< 80	< 10	< 9	< 15	< 11	< 11	6,490 ± 646

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>
06/29/18	104 ± 76	< 8	< 10	< 14	< 9	< 8	3,380 ± 373
12/05/18	< 85	< 7	< 8	< 12	< 9	< 9	3,720 ± 394

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>
06/29/18	237 ± 145	< 14	< 14	< 21	< 12	< 14	9,460 ± 1,030
12/05/18	126 ± 67	< 9	< 14	< 14	< 10	< 12	6,150 ± 605

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>
06/29/18	< 121	< 13	< 14	< 20	< 13	< 16	6,150 ± 737
12/05/18	< 157	< 17	< 22	< 27	< 21	< 18	5,350 ± 681

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>
06/29/18	< 161	< 17	< 17	< 26	< 18	< 17	12,800 ± 1,380
12/05/18	< 95	< 11	< 11	< 15	< 12	< 13	7,350 ± 778

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>
06/29/18	176 ± 153	< 11	< 14	< 19	< 13	< 15	12,500 ± 1,390
12/05/18	536 ± 177	< 14	< 16	< 23	< 16	< 15	14,000 ± 1,390

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
2018 Radiological Environmental Monitoring Program**

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

Oyster Creek Onsite Garden - ESE (OCVE01)⁴

<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	06/27/18	< 11.3	< 15.0	< 16.0	< 17.4	2,700 ± 431
Collards	06/27/18	< 11.1	< 13.2	< 13.0	17 ± 12	2,960 ± 430
Kale	06/27/18	< 16.5	< 21.1	< 14.8	< 14.7	4,690 ± 648
Cabbage	07/24/18	< 13.5	< 18.1	< 13.3	< 16.7	1,880 ± 335
Collards	07/24/18	< 11.1	< 14.9	< 13.4	< 10.3	< 681
Kale	07/24/18	< 17.7	< 17.4	< 18.1	< 17.6	4,910 ± 647
Cabbage	08/29/18	< 6.4	< 5.3	< 6.9	< 9.3	1,070 ± 184
Collards	08/29/18	< 9.4	< 10.8	< 10.5	< 10.4	3,290 ± 379
Kale	08/29/18	< 8.1	< 9.0	< 9.2	< 8.7	4,450 ± 518
Collards	09/19/18	< 12.6	< 10.6	< 12.3	< 10.0	2,770 ± 421
Kale	09/19/18	< 12.8	< 12.2	< 15.6	< 15.3	3,460 ± 537
Collards	10/22/18	< 26.3	< 26.6	< 25.8	< 25.4	4,060 ± 664
Kale	10/22/18	< 26.6	< 20.4	< 24.9	< 25.4	4,060 ± 676
Collards	11/12/18	< 19.7	< 26.2	< 26.1	< 24.6	4,520 ± 790
Kale	11/12/18	< 32.3	< 36.0	< 32.0	< 30.4	2,500 ± 605

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.

⁴ No cabbage available in September, October, and November 2018

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 Radiological Environmental Monitoring Program**

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

Private Farm – NW (OCVE02)⁵

<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	06/27/18	< 10.3	< 13.0	< 11.1	< 11.8	3,510 ± 472
Collards	06/27/18	< 17.4	< 21.3	< 21.3	< 19.4	4,720 ± 596
Kale	06/27/18	< 13.9	< 16.0	< 15.8	< 14.7	4,110 ± 541
Cabbage	07/24/18	< 13.1	< 17.5	< 15.9	< 13.1	2,430 ± 376
Collards	07/24/18	< 14.8	< 17.1	< 14.8	< 14.1	3,990 ± 530
Kale	07/24/18	< 12.7	< 14.9	< 18.1	< 16.1	3,860 ± 546
Cabbage	08/29/18	< 6.0	< 7.5	< 6.8	< 6.8	2,210 ± 280
Rape	09/19/18	< 14.8	< 21.1	< 20.7	< 23.6	3,840 ± 642
Collards	09/19/18	< 11.8	< 11.0	< 12.5	< 12.9	3,610 ± 515
Kale	09/19/18	< 24.4	< 26.4	< 25.7	< 23.8	3,940 ± 676
Cabbage	10/22/18	< 16.4	< 20.5	< 21.2	< 19.8	1,790 ± 438
Collards	10/22/18	< 20.0	< 29.5	< 29.8	< 22.7	4,440 ± 701
Kale	10/22/18	< 10.8	< 15.0	< 16.8	< 17.2	4,660 ± 624
Cabbage	11/12/18	< 15.0	< 20.9	< 14.4	< 16.0	1,750 ± 375
Collards	11/12/18	< 29.4	< 27.7	< 33.0	< 27.8	4,610 ± 755
Kale	11/12/18	< 26.0	< 23.9	< 26.4	< 27.0	5,530 ± 849

Oyster Creek Onsite Garden - SE (OCVE03)⁶

<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>
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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.

⁵ No collards or kale samples during the month of August 2018. The commercial farm (control location) was temporarily out of these vegetable types. Rape was harvested instead of cabbage during September 2018

⁶ Samples not available during June through November due to insufficient media at time of collection. Plants were too small.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 Radiological Environmental Monitoring Program**

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

Oyster Creek Onsite Garden - E (OCVE07)⁷

<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	06/27/18	< 19.1	< 20.7	< 14.8	37 ± 20	2,380 ± 496
Collards	06/27/18	< 11.1	< 14.3	< 12.3	< 13.8	3,190 ± 476
Kale	06/27/18	< 13.2	< 15.6	< 17.2	< 16.1	4,480 ± 641
Cabbage	07/24/18	< 11.3	< 10.4	< 12.9	30 ± 15	2,170 ± 312
Collards	07/24/18	< 16.7	< 21.1	< 17.9	< 19.7	< 872
Kale	07/24/18	< 21.6	< 24.4	< 28.0	< 24.1	3,890 ± 672
Cabbage	08/29/18	< 7.4	< 7.4	< 8.2	< 8.4	< 310
Collards	08/29/18	< 8.7	< 9.1	< 10.0	< 8.1	3,450 ± 419
Kale	08/29/18	< 10.9	< 10.9	< 12.4	< 11.0	4,380 ± 580
Collards	09/19/18	< 18.1	< 27.5	< 15.4	< 19.3	3,360 ± 596
Kale	09/19/18	< 17.1	< 24.3	< 21.4	< 25.9	3,030 ± 555
Collards	10/22/18	< 23.5	< 27.7	< 30.8	< 31.0	4,920 ± 805
Kale	10/22/18	< 19.5	< 27.0	< 22.5	< 18.5	3,590 ± 593
Collards	11/12/18	< 18.1	< 29.3	< 30.3	< 28.0	3,630 ± 798
Kale	11/12/18	< 24.6	< 27.1	< 29.2	< 38.4	4,100 ± 844

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 cabbage available during September, October, and November 2018 due to insufficient media at time of collection. Plants were too small.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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	06/25/18	< 9.5	< 11.1	< 9.6	< 11.0	2,100 ± 326
Corn	06/25/18	< 12.3	< 15.4	< 16.9	< 14.3	2,520 ± 424
Tomato	07/09/18	< 6.8	< 14.3	< 16.5	< 12.4	2,600 ± 440

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>
Corn	06/27/18	< 8.1	< 9.2	< 7.8	< 9.2	2,580 ± 321
Tomato	07/02/18	< 11.3	< 13.3	< 12.0	< 13.2	2,170 ± 425
Peppers	07/09/18	< 17.6	< 16.3	< 17.6	< 14.0	1,440 ± 363

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	05/02/18	< 11.2	< 13.9	< 13.6	< 11.1	2,290 ± 342
Cabbage	06/25/18	< 12.4	< 13.1	< 9.0	< 14.2	1,840 ± 352
Tomato	06/27/18	< 5.8	< 4.4	< 6.2	< 5.1	2,480 ± 291
Peppers	07/02/18	< 11.7	< 16.4	< 14.2	< 12.8	1,530 ± 321
Corn	07/02/18	< 10.6	< 19.3	< 9.5	< 13.3	2,600 ± 447

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>
Collards	07/25/18	< 23.6	< 30.4	< 28.8	< 26.2	5,550 ± 834
Kale	08/29/18	< 8.0	< 9.3	< 8.6	< 9.1	7,100 ± 775

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>
Kale	07/25/18	< 42.0	< 43.3	< 38.7	< 32.0	5,550 ± 1,020
Collards	07/25/18	< 31.2	< 29.1	< 27.2	< 39.6	5,070 ± 930

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
2018 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>
Kale	07/25/18	< 22.1	< 21.1	< 25.0	< 22.1	3,130 ± 564
Collards	07/25/18	< 13.9	< 17.0	< 16.4	< 15.9	3,060 ± 501
Cabbage	07/25/18	< 22.0	< 36.8	< 24.7	< 22.2	5,170 ± 888
Cabbage	08/29/18	< 9.2	< 9.7	< 10.2	< 8.8	4,660 ± 565

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>
Pepper	07/02/18	< 10.1	< 12.7	< 10.8	< 11.7	1,770 ± 336
Tomato	07/02/18	< 9.1	< 10.6	< 9.7	< 9.5	2,060 ± 286
Corn	07/02/18	< 12.4	< 15.5	< 15.1	< 14.9	2,280 ± 377
Peaches	07/09/18	< 14.8	< 22.1	< 18.7	< 15.2	1,660 ± 402
Cabbage	10/22/18	< 14.3	< 16.3	< 15.4	< 18.2	3,130 ± 509

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	07/25/18	< 12.4	< 20.8	< 21.3	< 24.4	3,160 ± 572
Peppers	08/03/18	< 9.7	< 16.4	< 15.8	< 11.2	1,690 ± 357
Tomato	08/10/18	< 9.4	< 10.4	< 11.3	< 9.4	1,820 ± 292

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>
Kale	07/25/18	< 32.1	< 32.1	< 32.1	< 27.2	5,350 ± 904
Collards	08/29/18	< 8.9	< 10.4	< 9.8	< 9.2	5,220 ± 588

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>
Kale	07/25/18	< 21.0	< 29.8	< 29.4	< 25.4	5,560 ± 878
Cabbage	07/25/18	< 31.0	< 33.8	< 33.9	< 25.0	4,070 ± 869
Collards	08/29/18	< 10.8	< 13.1	< 12.3	< 10.7	4,670 ± 589
Kale	09/24/18	< 14.7	< 17.2	< 17.4	< 22.6	3,140 ± 506
Collards	09/24/18	< 15.9	< 21.7	< 19.5	< 20.3	4,880 ± 680

Private Farm - NE (AIVE27)

<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>
Peaches	07/09/18	< 9.2	< 13.5	< 12.2	< 13.1	1,550 ± 313

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
2018 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)

<u>Collection Date</u>	<u>Cs-137</u>	<u>I-131</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
03/05/18	< 1.64	< 0.67	1,560 ± 163	< 0.90	< 0.94
06/04/18	< 1.57	< 0.54	1,310 ± 125	< 0.86	< 0.94
09/10/18	< 1.72	< 0.78	1,370 ± 158	< 0.84	< 0.91
12/03/18	< 1.62	< 0.60	1,040 ± 110	< 0.78	< 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.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
01/02/18	< 1.67	< 0.86	1,410 ± 145	< 0.87	< 0.84
02/06/18	< 1.56	< 0.61	1,110 ± 116	< 0.89	< 0.76
03/05/18	< 1.51	< 0.54	1,210 ± 117	< 0.91	< 0.92
04/02/18	< 1.79	< 0.59	1,400 ± 153	< 0.75	< 0.94
05/07/18	< 1.92	< 0.56	1,300 ± 127	< 0.79	< 0.51
06/03/18	< 1.99	< 0.63	1,410 ± 139	< 0.84	< 0.67
07/02/18	< 1.86	< 0.63	1,460 ± 166	< 0.72	< 0.90
08/06/18	< 1.90	< 0.59	1,340 ± 148	< 0.59	< 0.62
09/04/18	< 2.23	< 0.40	1,290 ± 144	< 0.89	< 0.89
10/02/18	< 1.84	< 0.62	1,360 ± 131	< 0.58	< 0.84
11/13/18	< 1.79	< 0.46	1,310 ± 153	< 0.89	< 0.66
12/03/18	< 1.73	< 0.89	1,370 ± 156	< 0.43	< 0.54

Private Farm – NE (AIMI02)⁸

<u>Collection Date</u>	<u>Cs-137</u>	<u>I-131</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
01/02/18	< 1.57	< 0.91	1,320 ± 134	< 0.75	< 0.89
02/06/18	< 1.74	< 0.56	1,140 ± 111	< 0.87	< 0.58
03/05/18	< 1.84	< 0.55	1,030 ± 116	< 0.91	< 0.92
04/02/18	< 1.87	< 0.58	1,190 ± 128	< 0.83	< 0.92
05/07/18	< 1.47	< 0.64	1,310 ± 137	< 0.73	< 0.65
06/03/18	< 1.66	< 0.47	1,250 ± 134	< 0.92	< 0.85
07/02/18	< 1.85	< 0.49	1,420 ± 154	< 0.89	< 0.94

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

⁸ Private Farm sample location ceased operation of its dairy farm in August 2018

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 Radiological Environmental Monitoring Program**

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

Private Farm – WNW (AIMI03)

<u>Collection Date</u>	<u>Cs-137</u>	<u>I-131</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
01/02/18	< 1.49	< 0.96	1,160 ± 110	< 0.92	< 0.89
02/06/18	< 1.27	< 0.68	1,500 ± 157	< 0.93	< 0.92
03/05/18	< 1.98	< 0.65	1,220 ± 130	< 0.94	< 0.95
04/02/18	< 1.45	< 0.72	1,370 ± 148	< 0.88	< 0.92
05/07/18	< 1.53	< 0.57	1,390 ± 145	< 0.67	< 0.47
06/03/18	< 1.91	< 0.52	1,120 ± 112	< 0.97	< 0.86
07/02/18	< 1.72	< 0.48	1,230 ± 130	< 0.52	< 0.84
08/06/18	< 1.53	< 0.53	1,290 ± 129	< 0.50	< 0.63
09/04/18	< 1.91	< 0.41	1,340 ± 143	< 0.88	< 0.89
10/02/18	< 1.96	< 0.50	1,320 ± 143	< 0.93	< 0.93
11/13/18	< 1.97	< 0.62	1,410 ± 152	< 0.60	< 0.51
12/03/18	< 1.57	< 0.58	1,440 ± 140	< 0.79	< 0.93

Private Farm – W (AIMI04)⁹

<u>Collection Date</u>	<u>Cs-137</u>	<u>I-131</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
08/20/18	< 1.99	< 0.63	1,250 ± 123	< 0.87	< 0.91
09/04/18	< 1.94	< 0.45	1,400 ± 153	< 0.88	< 0.84
10/02/18	< 1.66	< 0.55	1,330 ± 147	< 0.62	< 0.86
11/13/18	< 1.89	< 0.53	1,330 ± 132	< 0.81	< 0.53
12/03/18	< 1.73	< 0.45	1,510 ± 165	< 0.58	< 0.93

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 Private Farm added to sampling program in August 2018

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
05/14/18	< 1.58	< 1.94	< 1.72	< 1.52	< 197	< 0.71
10/16/18	< 1.18	< 1.47	< 1.45	< 1.34	< 147	< 0.80

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>
01/03/18 – 01/31/18	< 1.72	< 1.59	< 1.71	< 1.62	< 212	< 0.98
02/07/18 – 02/28/18	< 1.36	< 1.34	< 1.39	< 1.35	< 243	< 0.92
03/06/18 – 03/27/18	< 1.27	< 1.20	< 1.34	< 1.25	< 204	< 0.96
04/02/18 – 04/25/18	< 1.26	< 1.32	< 1.35	< 1.20	< 219	< 0.74
04/30/18 – 05/29/18	< 1.52	< 1.47	< 1.48	< 1.35	< 228	< 0.72
06/06/18 – 06/27/18	< 1.64	< 1.75	< 1.57	< 1.35	< 206	< 0.78
07/05/18 – 07/31/18	< 1.46	< 1.49	< 1.67	< 2.01	< 211	< 0.94
08/08/18 – 08/31/18	< 1.45	< 1.46	< 1.42	< 1.37	< 216	< 0.73
09/07/18 – 09/25/18	< 1.80	< 1.72	< 1.67	< 1.78	< 249	< 0.86
10/04/18 – 11/01/19	< 1.33	< 1.21	< 1.30	< 1.16	< 240	< 0.91
11/05/18 – 11/28/18	< 1.66	< 1.48	< 1.69	< 1.54	< 158	< 0.96
12/04/18 – 01/01/19	< 1.44	< 1.37	< 1.35	< 1.27	< 203	< 1.00

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>
05/14/18	< 1.86	< 2.17	< 1.69	< 1.84	< 199	< 0.69
10/16/18	< 1.42	< 1.73	< 1.57	< 1.44	< 145	< 0.71

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>
01/03/18 – 01/31/18	< 1.55	< 1.49	< 1.31	< 1.48	< 214	< 0.84
02/07/18 – 02/28/18	< 1.65	< 1.34	< 1.61	< 1.51	< 252	< 0.93
03/06/18 – 03/27/18	< 1.41	< 1.19	< 1.41	< 1.27	< 207	< 0.89
04/02/18 – 04/25/18	< 1.54	< 1.66	< 1.48	< 1.32	< 212	< 0.84
04/30/18 – 05/29/18	< 1.43	< 1.56	< 1.36	< 1.38	< 230	< 0.94
06/06/18 – 06/26/18	< 1.55	< 1.36	< 1.52	< 1.29	< 201	< 0.88
07/05/18 – 07/31/18	< 1.66	< 1.52	< 1.77	< 1.58	< 213	< 0.88
08/08/18 – 08/31/18	< 1.69	< 1.73	< 1.70	< 1.60	< 218	< 0.78
09/07/18 – 09/25/18	< 1.38	< 1.32	< 1.40	< 1.28	< 235	< 0.81
10/04/18 – 11/01/19	< 1.23	< 1.15	< 1.35	< 1.19	< 234	< 0.91
11/07/18 – 11/26/18	< 1.60	< 1.39	< 1.59	< 1.49	< 145	< 0.95
12/04/18 – 01/02/19	< 1.25	< 1.30	< 1.31	< 1.23	< 208	< 0.92

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
01/18/18	< 1.38	< 1.45	< 1.48	< 1.46	< 233	< 0.77
01/26/18	< 1.43	< 1.69	< 1.79	< 1.56	< 212	< 0.64
02/09/18	< 1.39	< 1.47	< 1.41	< 1.93	< 253	< 0.95
02/21/18	< 1.63	< 1.93	< 1.47	< 1.55	< 253	< 0.88
03/06/18	< 1.55	< 1.53	< 1.56	< 1.56	< 255	< 0.84
03/19/18	< 1.57	< 1.65	< 1.75	< 1.58	< 210	< 0.98
04/03/18	< 1.59	< 1.72	< 1.92	< 1.51	< 227	< 0.71
04/21/18	< 1.96	< 1.83	< 2.00	< 1.76	< 223	< 0.73
05/07/18	< 1.24	< 1.32	< 1.34	< 1.43	< 199	< 0.92
05/24/18	< 1.45	< 1.79	< 1.60	< 1.76	< 229	< 0.85
06/08/18	< 1.49	< 1.64	< 1.52	< 1.42	< 187	< 0.77
06/21/18	< 1.30	< 1.45	< 1.44	< 1.25	< 283	< 0.73
07/05/18	< 1.53	< 1.66	< 1.65	< 1.46	< 197	< 0.85
07/19/18	< 1.72	< 1.72	< 1.73	< 1.74	< 210	< 0.83
08/09/18	< 1.60	< 1.97	< 1.66	< 1.76	< 207	< 0.69
08/20/18	< 1.61	< 1.98	< 1.90	< 1.87	< 187	< 0.83
09/06/18	< 1.78	< 1.74	< 1.98	< 1.89	< 218	< 0.92
09/20/18	< 1.34	< 1.53	< 1.44	< 1.47	1,200 ± 283 ¹⁰	< 0.86
10/04/18	< 1.74	< 1.49	< 1.67	< 1.55	< 183	< 0.56
10/19/18	< 1.45	< 1.68	< 1.51	< 1.51	< 231	< 0.63
11/08/18	< 1.14	< 1.22	< 1.27	< 1.26	< 239	< 0.91
11/19/18	< 1.56	< 1.41	< 1.50	< 1.39	< 206	< 0.92
12/05/18	< 1.71	< 1.55	< 1.70	< 1.73	< 192	< 0.90
12/19/18	< 1.45	< 1.61	< 1.67	< 1.39	< 208	< 0.76

Results in picoCuries per Liter (pCi/L)

¹⁰ 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 readings of 1,200 pCi/L is approximately 6 percent of the applicable limit.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
01/18/18	< 1.43	< 1.47	< 1.59	< 1.38	< 230	< 0.70
01/26/18	< 2.11	< 1.80	< 2.08	< 2.21	< 209	< 0.85
02/09/18	< 1.36	< 1.15	< 1.23	< 1.35	< 252	< 0.95
02/21/18	< 1.21	< 1.32	< 1.50	< 1.23	< 256	< 0.90
03/06/18	< 1.40	< 1.54	< 1.52	< 1.30	< 260	< 0.87
03/19/18	< 1.81	< 2.27	< 2.16	< 2.00	< 209	< 0.93
04/03/18	< 1.58	< 1.69	< 1.57	< 1.62	< 227	< 0.69
04/21/18	< 1.91	< 1.95	< 2.05	< 2.05	< 221	< 0.88
05/07/18	< 1.41	< 1.82	< 1.44	< 1.50	< 195	< 0.88
05/24/18	< 1.25	< 1.49	< 1.36	< 1.30	< 229	< 0.73
06/08/18	< 1.38	< 1.54	< 1.53	< 1.50	< 186	< 0.41
06/21/18	< 1.42	< 1.52	< 1.46	< 1.59	< 297	< 0.87
07/05/18	< 1.36	< 1.20	< 1.48	< 1.37	< 202	< 0.87
07/19/18	< 1.48	< 1.44	< 1.49	< 1.59	< 223	< 0.85
08/09/18	< 1.53	< 1.61	< 1.89	< 1.87	< 203	< 0.60
08/20/18	< 1.29	< 1.49	< 1.45	< 1.57	< 188	< 0.86
09/06/18	< 1.58	< 1.38	< 1.56	< 1.38	< 222	< 0.84
09/20/18	< 1.28	< 1.38	< 1.51	< 1.32	< 240	< 0.89
10/04/18	< 1.45	< 1.49	< 1.58	< 1.85	< 186	< 0.58
10/19/18	< 1.56	< 1.54	< 1.59	< 1.49	< 147	< 0.61
11/08/18	< 1.07	< 1.12	< 1.13	< 1.03	< 241	< 0.90
11/19/18	< 1.35	< 1.47	< 1.40	< 1.36	< 205	< 0.92
12/05/18	< 1.32	< 1.29	< 1.25	< 1.24	< 192	< 0.57
12/19/18	< 1.19	< 1.31	< 1.20	< 1.18	< 205	< 0.90

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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>
01/18/18	< 1.50	< 1.69	< 1.68	< 1.39	< 228	< 0.85
01/26/18	< 1.33	< 1.63	< 1.58	< 1.54	< 213	< 0.80
02/09/18	< 1.47	< 1.55	< 1.57	< 1.49	< 258	< 0.91
02/21/18	< 1.78	< 1.66	< 1.91	< 1.49	< 255	< 0.85
03/06/18	< 1.51	< 1.44	< 1.53	< 2.09	< 265	< 0.84
03/19/18	< 2.00	< 1.96	< 2.70	< 2.31	< 208	< 1.87
04/03/18	< 1.66	< 1.68	< 1.84	< 1.65	< 227	< 0.79
04/21/18	< 1.30	< 1.15	< 1.45	< 1.34	< 223	< 0.90
05/07/18	< 1.78	< 1.88	< 1.74	< 1.75	< 196	< 0.92
05/24/18	< 1.77	< 1.55	< 1.87	< 1.58	< 225	< 0.73
06/08/18	< 1.40	< 1.76	< 1.50	< 1.43	< 188	< 0.83
06/21/18	< 1.53	< 1.64	< 1.39	< 1.39	< 290	< 0.81
07/05/18	< 1.47	< 1.57	< 1.43	< 1.54	< 202	< 0.91
07/19/18	< 1.66	< 1.84	< 1.71	< 1.67	< 221	< 0.81
08/09/18	< 1.53	< 1.93	< 2.11	< 1.86	< 223	< 0.66
08/20/18	< 1.45	< 1.44	< 1.72	< 1.49	< 187	< 0.87
09/06/18	< 1.53	< 1.61	< 1.57	< 1.48	< 222	< 0.92
09/20/18	< 1.87	< 2.01	< 1.98	< 1.71	< 219	< 0.88
10/04/18	< 1.61	< 1.55	< 1.55	< 1.36	< 183	< 0.69
10/19/18	< 1.31	< 1.52	< 1.66	< 1.89	< 203	< 0.63
11/08/18	< 1.16	< 1.12	< 1.12	< 1.23	< 231	< 0.68
11/19/18	< 1.18	< 1.16	< 1.35	< 1.22	< 148	< 0.92
12/05/18	< 1.43	< 1.25	< 1.42	< 1.38	< 190	< 0.50
12/19/18	< 1.38	< 1.38	< 1.74	< 1.49	< 230	< 0.75

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 Radiological Environmental Monitoring Program**

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

Oyster Creek Administration Building Onsite (OCWW01)

<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>
01/23/18	< 1.78	< 1.99	< 2.03	< 1.95	< 230	< 0.42
04/24/18	< 1.28	< 1.62	< 1.60	< 1.49	< 219	< 0.69
07/24/18	< 3.09	< 3.60	< 3.07	< 2.66	< 223	< 0.87
10/24/18	< 1.59	< 1.63	< 2.07	< 1.74	< 228	< 0.69

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>
01/23/18	< 1.50	< 1.54	< 1.71	< 1.48	< 226	< 0.66
04/24/18	< 1.52	< 2.03	< 1.87	< 1.78	< 216	< 0.55
07/24/18	< 2.72	< 2.94	< 2.82	< 2.57	< 219	< 0.94
10/24/18	< 1.99	< 1.87	< 1.95	< 1.94	< 232	< 0.59

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>
01/23/18	< 1.18	< 1.55	< 1.71	< 1.51	< 225	< 0.41
04/24/18	< 1.54	< 1.69	< 1.88	< 1.73	< 222	< 0.57
07/24/18	< 1.66	< 1.97	< 2.10	< 1.76	< 223	< 0.90
10/24/18	< 1.58	< 1.57	< 1.91	< 1.82	< 248	< 0.57

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>
01/23/18	< 1.41	< 1.61	< 1.60	< 1.42	< 228	< 0.55
04/24/18	< 1.45	< 1.58	< 1.74	< 1.46	< 220	< 0.74
07/24/18	< 1.76	< 2.12	< 2.19	< 2.02	< 224	< 0.89
10/24/18	< 1.46	< 1.37	< 1.36	< 1.46	< 213	< 0.86

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 Radiological Environmental Monitoring Program**

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

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>
01/23/18	< 2.20	< 1.95	< 2.61	< 2.41	< 232	< 0.57
04/24/18	< 1.59	< 1.73	< 1.81	< 1.82	< 223	< 0.53
07/24/18	< 1.81	< 2.01	< 1.68	< 1.94	< 223	< 0.93
10/24/18	< 1.43	< 1.41	< 1.48	< 1.40	< 237	< 0.55

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>
01/23/18	< 1.54	< 1.73	< 1.53	< 1.31	< 228	< 0.51
04/24/18	< 1.38	< 1.47	< 1.48	< 1.95	< 218	< 0.52
07/24/18	< 1.88	< 2.18	< 2.19	< 2.02	< 226	< 0.85
10/24/18	< 1.59	< 2.06	< 1.93	< 1.81	< 238	< 0.96

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>
01/23/18	< 1.50	< 2.00	< 2.11	< 1.74	< 220	< 0.89
04/24/18	< 1.51	< 1.71	< 1.98	< 1.71	< 215	< 0.91
07/24/18	< 1.46	< 1.66	< 1.96	< 1.69	< 236	< 0.84
10/24/18	< 1.62	< 1.61	< 1.62	< 1.48	< 232	< 0.70

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>
01/23/18	< 1.48	< 1.50	< 1.50	< 2.01	< 220	< 0.41
04/24/18	< 1.28	< 1.50	< 1.40	< 1.57	< 223	< 0.52
07/24/18	< 2.38	< 2.23	< 2.21	< 2.18	< 221	< 0.84
10/24/18	< 1.62	< 1.80	< 2.03	< 1.76	< 239	< 0.76

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>
01/23/18	< 1.38	< 1.81	< 1.61	< 1.44	< 231	< 0.50
04/24/18	< 1.38	< 1.55	< 1.45	< 1.51	< 224	< 0.48
07/24/18	< 2.33	< 2.61	< 2.82	< 2.57	< 227	< 0.89
10/24/18	< 1.74	< 1.88	< 1.94	< 1.86	< 237	< 0.74

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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	13.5	3.7	12.8	3.5	17.7	5.2	15.0	2.3
CO02	Brendan T. Byrne State Forest, New Lisbon, NJ	10.4	1.8	9.5	2.5	12.8	2.7	11.8	5.7

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
2018 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>
1	Ocean County Vocational School	9.6	2.4	8.3	5.3	12.1	4.5	10.2	1.7
2	Ocean Twp. Municipal Building	10.2	1.9	9.2	3.4	13.9	2.6	11.7	4.1
3	Sewage Pumping Station, Forked River	10.8	2.7	9.8	5.0	14.0	1.1	12.2	1.7
4	Twin River Station, Forked River	9.7	2.8	8.6	4.1	12.6	4.7	10.6	2.1
5	Sewage Pumping Station, Ocean Twp.	10.6	4.6	9.8	6.4	13.2	1.8	11.9	5.4
6	Oyster Creek, Gate #2, Forked River	10.8	5.0	9.9	3.8	14.1	1.8	11.6	4.0
7	Finninger Farm, Forked River	9.4	3.9	8.5	2.7	12.2	8.0	9.9	5.6
8	Ocean Co. Memorial Cemetery, Waretown	9.2	2.7	8.3	2.1	11.9	2.4	10.5	3.0
9	Oyster Creek Building 17, Forked River	11.0	3.2	9.8	3.8	13.5	1.7	12.0	3.1
10	Sheffield & Derby Rd, Forked River	10.5	3.9	8.7	3.3	12.3	4.2	11.3	1.4
11	Lakeside Drive, Forked River	10.5	1.8	9.2	2.8	12.6	3.7	11.9	2.4
12	Forked River Game Farm, Forked River	10.1	1.2	9.1	3.0	13.1	3.1	12.3	2.2

Results are reported in units of milliroentgens (mR)

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

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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	10.0	4.7	8.7	3.6	13.0	4.1	11.5	1.9
14	Sands Pt. Park, Dock Ave., Waretown	10.7	3.6	9.8	1.3	13.5	1.6	13.0	2.4
15	Recreation Center, Waretown	10.0	4.0	8.7	5.0	12.9	2.4	12.0	3.5
16	North Access Rd., Forked River	12.3	2.3	12.0	2.8	15.6	9.7	11.9	3.5
20	Third Avenue, Barnegat Light	9.2	3.3	8.1	3.9	11.7	2.9	10.1	2.5
21	Rose Hill Road & Barnegat Blvd	9.9	3.0	9.4	3.7	14.1	3.3	12.7	3.3
22	Bay Way & Clairmore Avenue	10.4	3.4	9.7	3.8	13.1	2.6	11.8	2.6
23	Island Beach State Park, Parking Lot A5	10.0	2.0	8.3	4.2	11.9	2.9	10.7	3.3
24	Forked River Site Access Rd. (N)	12.9	6.3	11.7	2.4	17.1	3.7	14.2	2.9
25	Forked River Site Access Rd. NNW)	16.0	3.2	15.0	0.5	19.0	1.8	16.2	1.8
26	Forked River Site Access Rd. (NW)	15.3	1.6	13.8	3.3	16.6	1.1	13.7	2.0
27	Southern Area Stores Fence, FR Site	20.9	0.5	19.9	1.6	21.0	1.9	18.0	2.5

Results are reported in units of milliroentgens (mR).

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

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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)	18.5	6.9	19.3	5.9	19.6	2.4	14.8	4.0
29	Southern Area Stores Access Rd (SSW)	15.3	0.9	14.8	1.9	15.5	1.3	11.9	5.4
30	Southern Area Stores Access Road (S)	16.2	1.9	15.1	3.9	16.7	1.8	14.9	3.0
31	Southern Area Stores Access Road (SSE)	12.5	1.6	12.1	2.4	15.1	1.9	12.2	2.2
32	U.S. Route 9 (ESE) Forked River., NJ	10.6	4.1	9.2	1.7	13.4	5.8	12.0	3.1
33	U.S. Route 9 (NE) Forked River, NJ	11.0	3.7	10.0	2.4	13.6	1.9	11.6	2.6
34	Garden St Pkwy Svc. Forked River, NJ	10.8	2.4	10.4	4.9	14.0	2.8	12.3	5.7
35	U.S. Route 9 & Harbor Inn Rd, Bayville, NJ	10.8	1.1	9.7	2.5	13.4	2.2	12.3	3.9
36	Orlando Dr. & Penguin Ct., Forked River, NJ	10.3	5.1	9.1	4.8	12.6	4.1	12.2	5.8
37	Bay Pkwy, Sands Point, Waretown, NJ	9.9	1.5	8.4	5.2	12.7	0.8	11.0	1.1
38	Hightide & Bonita Dr., Waretown, NJ	11.1	0.9	9.7	2.1	14.0	3.1	13.9	3.1
39	Brook & School St. Barnegat, NJ	10.3	4.3	9.6	1.4	13.3	1.7	11.1	2.1

Results are reported in units of milliroentgens (mR).

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

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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	10.7	1.6	9.5	3.2	14.4	3.1	12.8	4.9
41	County Rt. 532, Waretown, NJ	9.6	3.0	8.5	1.0	12.5	1.1	10.7	3.7
42	Lacey Rd. WEST, Forked River, NJ	11.5	1.7	10.7	4.4	15.2	2.2	13.0	3.8
43	U.S. Route 9 (E) Forked River, NJ	10.9	1.8	10.4	3.3	14.6	5.1	12.4	2.6

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
2018 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>
1	Access Road – Security Checkpoint	12.0	3.6	10.8	3.4	14.9	4.4	13.9	3.6
2	Poplar Road, Lower Alloways	12.5	1.9	10.9	4.0	14.9	2.4	14.1	5.1
3	Money and Eagle Island Road	12.8	1.8	12.3	2.3	16.4	3.9	15.5	1.4
4	Ft. Elfsborg / Hancocks – East	13.3	3.1	13.2	1.7	17.5	2.6	15.9	3.5
5	Ft. Elfsborg / Hancocks – West	16.6	2.1	16.2	3.1	21.4	6.4	20.0	3.1
6	Stathems Neck Road	11.9	1.0	10.8	5.6	15.3	2.2	14.7	3.0
7	Stow Neck Road Lower Alloways	10.4	5.2	9.2	3.8	12.8	2.7	12.6	2.9
8	Alloways Creek Neck Road - Middle	10.2	3.2	9.2	2.3	13.7	1.5	12.7	2.1
9	Alloways Creek Neck Road - North	13.9	5.6	12.6	2.6	17.3	3.3	16.7	5.4
10	Abbotts Farm Road	10.3	2.9	9.6	1.1	12.6	4.6	12.5	3.1

Results are reported in units of milliroentgens (mR)

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

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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	12.3	4.0	12.2	6.2	15.8	2.8	15.0	3.3
12	Onsite Access Rd N Sector	14.2	4.2	13.2	3.2	17.8	3.6	16.5	2.8
13	Onsite Laydown Area - NNE Sector	13.0	5.2	12.0	1.6	16.3	2.8	15.6	1.4
14	Onsite Utility Pole NE Sector	12.0	2.2	10.9	2.5	15.5	3.2	14.9	4.2
15	Onsite Hope Creek Road – ENE Sector	12.3	2.1	10.9	2.9	15.4	4.1	14.5	3.7
16	Onsite Parking Lot ESE Sector	15.3	5.1	14.0	4.7	18.2	1.9	17.4	2.3
17	Onsite Salem NGS SE Sector	14.6	1.4	12.8	3.7	17.5	1.9	16.6	3.2
18	Bayside Road Bayside, NJ	12.3	2.3	10.9	3.0	15.1	3.5	14.3	0.9

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).

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2018 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	10.6	4.6	8.7	2.4	9.8	6.4	10.3	2.8	13.2	1.8	10.2	0.0	11.9	5.4	9.1	5.9
7	Finninger Farm,OCNGS Forked River	9.4	3.9	7.6	3.3	8.9	2.7	9.3	5.4	12.2	8.0	8.9	7.0	9.9	5.6	8.6	4.2
13	Restrooms, Lakeside Dr. Forked River	10.0	4.7	8.1	4.7	8.7	3.6	9.6	2.9	13.0	4.1	9.7	4.4	11.5	1.9	9.2	0.0
21	Rose Hill and Barnegat Rd Barnegat Twp.	9.9	3.0	8.9	3.7	9.4	3.7	10.1	3.5	14.1	3.3	10.4	3.4	12.7	3.3	10.1	5.4

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
2018 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	12.0	3.6	9.4	4.8	10.8	3.4	9.6	2.9	14.9	4.4	11.4	2.9	13.9	3.6	11.4	2.7
2	Poplar Road, Lower Alloways	12.5	1.9	10.7	4.5	10.9	4.0	12.9	9.4	14.9	2.4	11.7	5.8	14.1	5.1	11.7	3.5
3	Money and Eagle Island Roads	12.8	1.8	10.9	3.3	12.3	2.3	13.4	0.0	16.4	3.9	12.5	3.4	15.5	1.4	12.7	3.3
5	Ft. Elfsborg/ Hancocks - West	16.6	2.1	15.3	5.9	16.2	3.1	16.6	2.4	21.4	6.4	17.0	3.8	20.0	3.1	16.7	2.7

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
2018 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	10.4	5.2	8.2	3.2	9.2	3.8	10.0	3.8	12.8	2.7	10.7	4.1	12.6	2.9	10.2	0.0
9	Alloways Creek Neck Road - North	13.9	5.6	11.4	4.3	12.6	2.6	13.0	4.6	17.3	3.3	12.9	3.3	16.7	5.4	13.5	3.0
11	PSEG Ed. Center/EOF Salem City	12.3	4.0	11.5	6.2	12.2	6.2	11.4	9.7	15.8	2.8	12.5	5.3	15.0	3.3	12.0	2.6

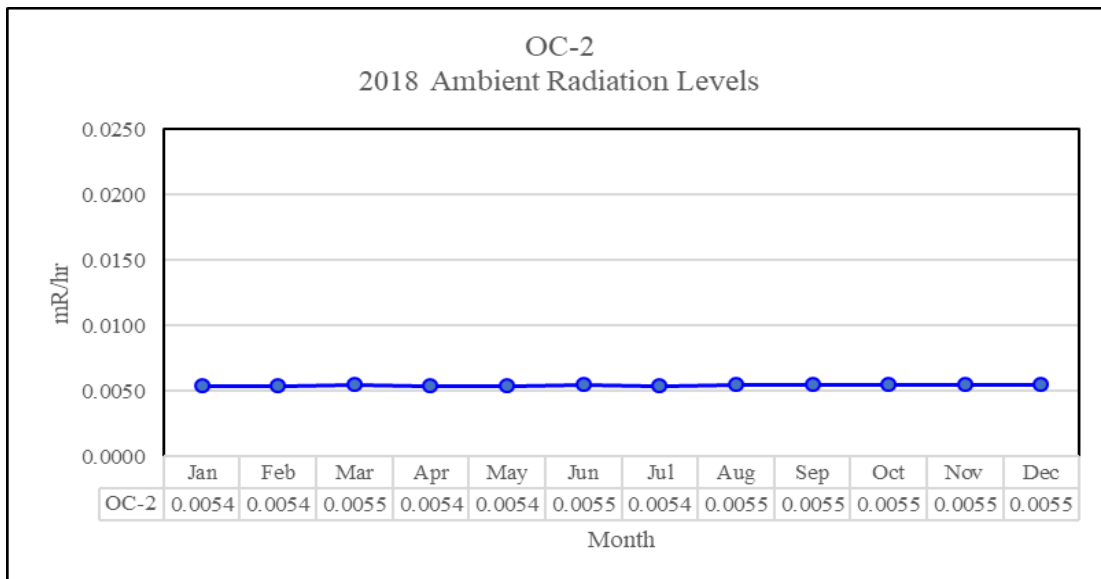
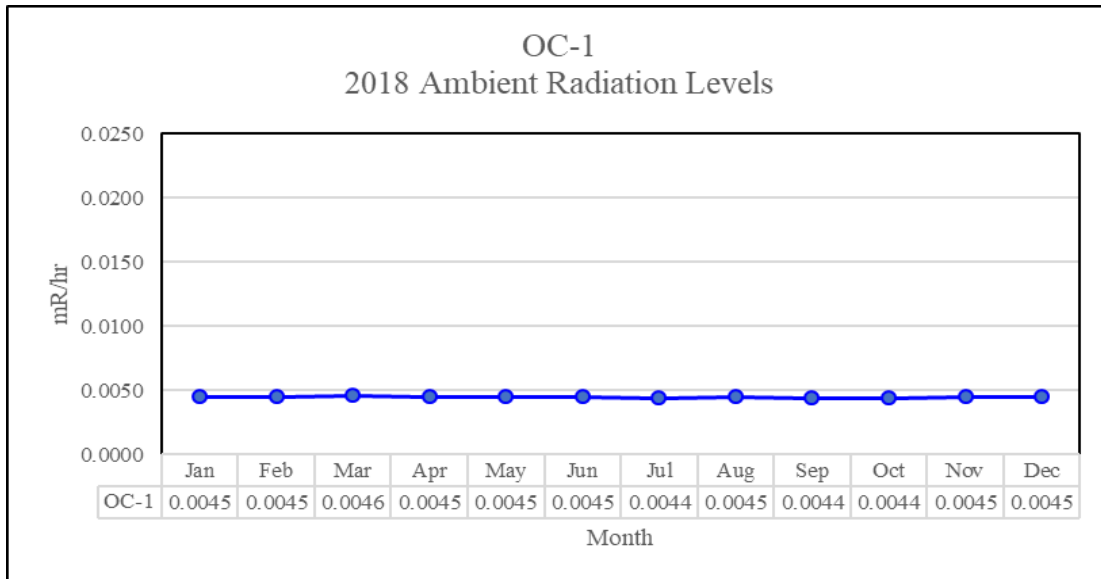
Results are reported in units of milliroentgens (mR)

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)

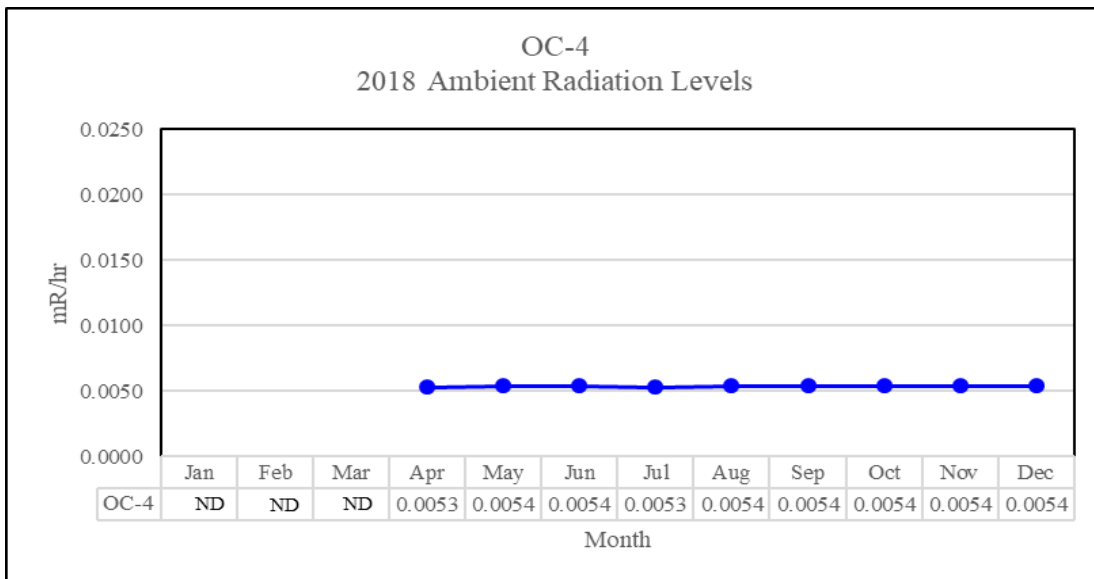
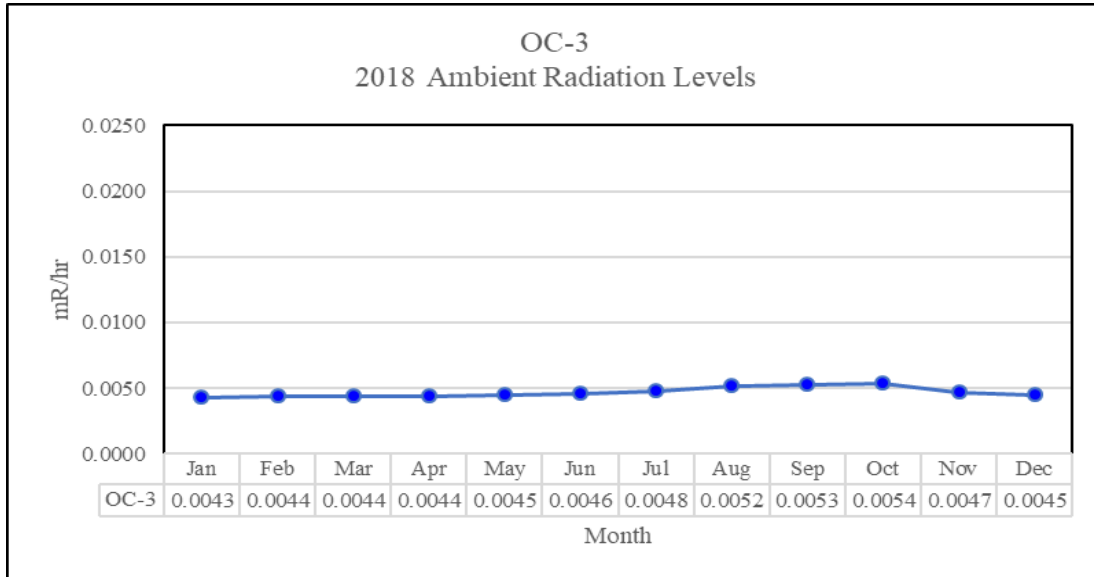
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**Oyster Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



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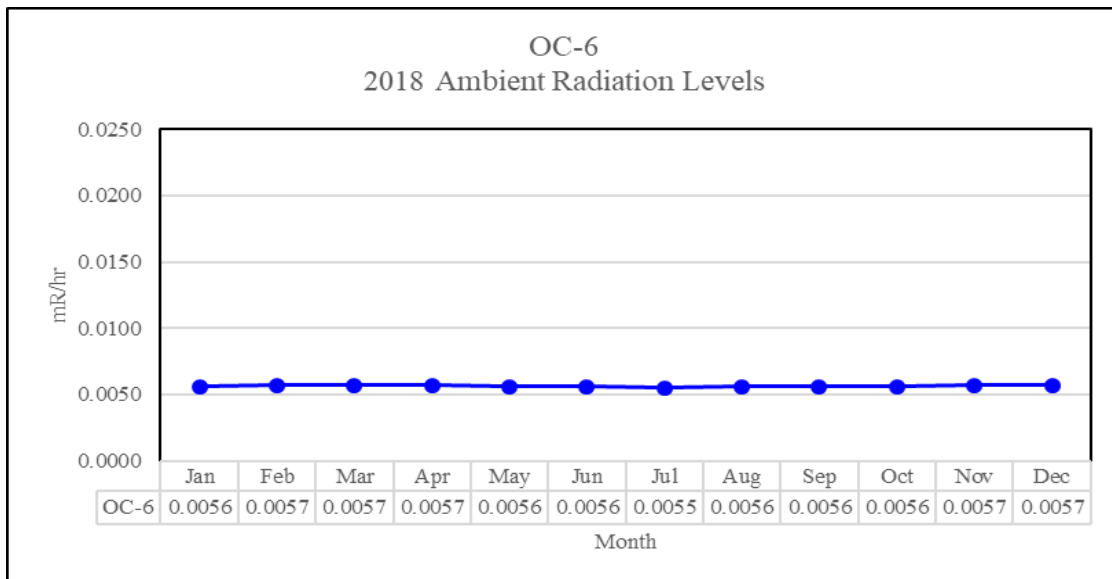
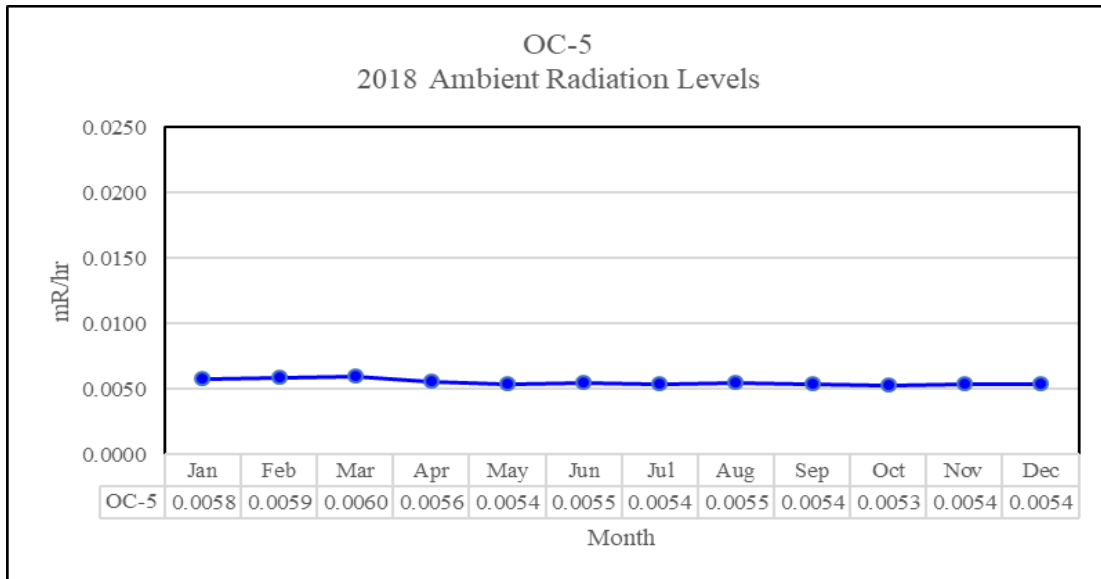
**Oyster Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



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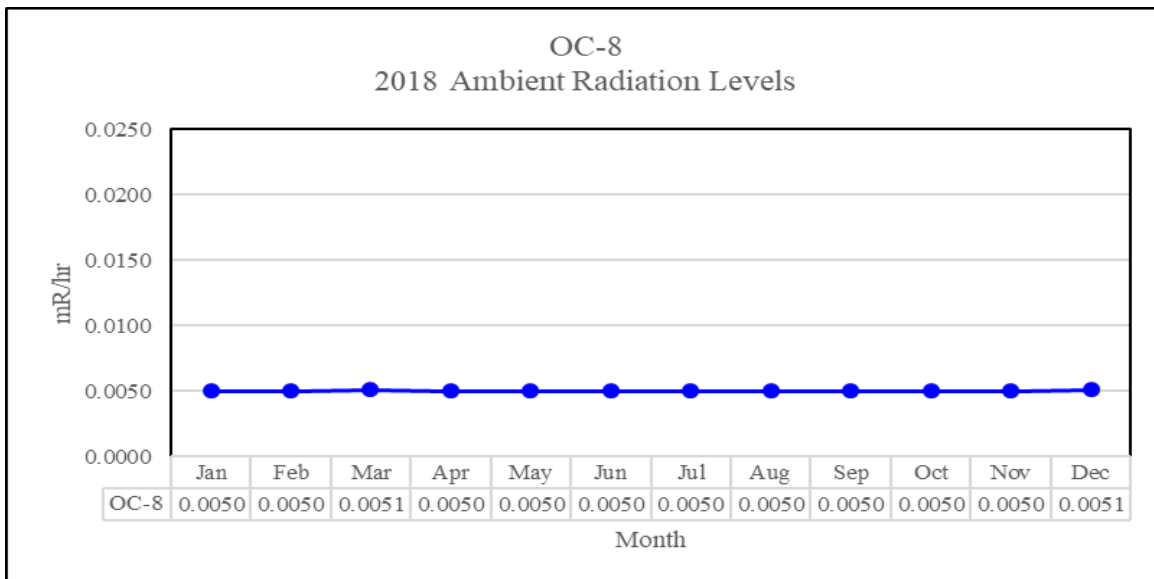
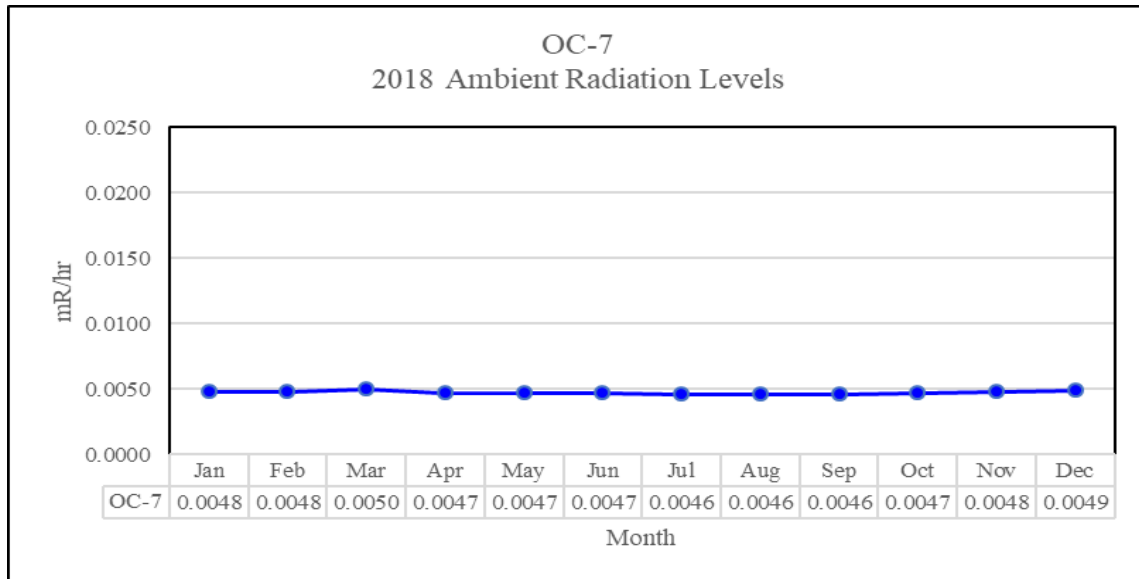
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**Oyster Creek
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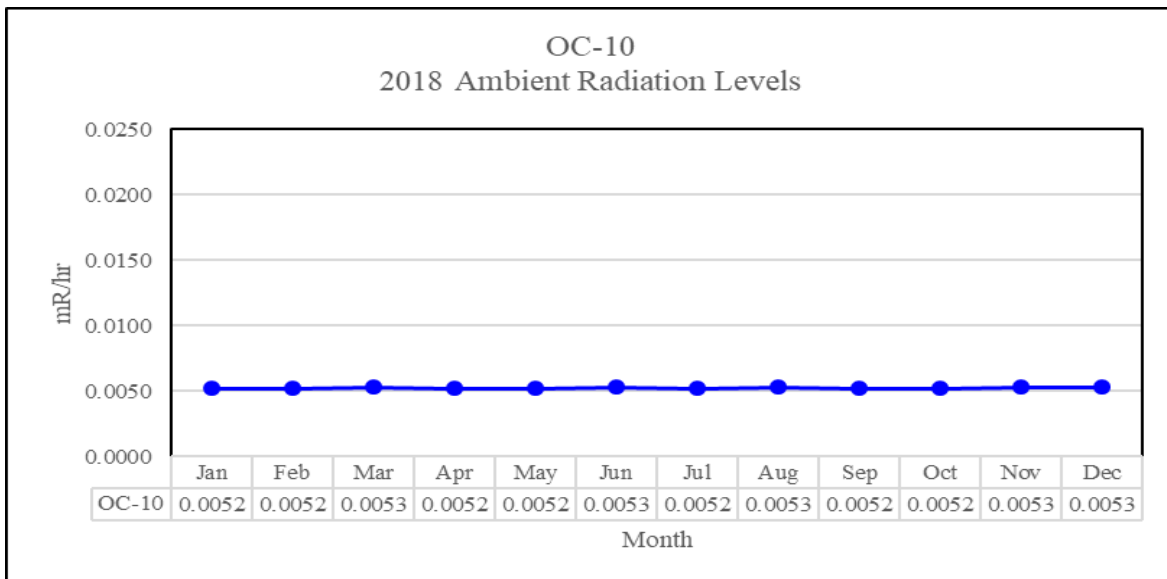
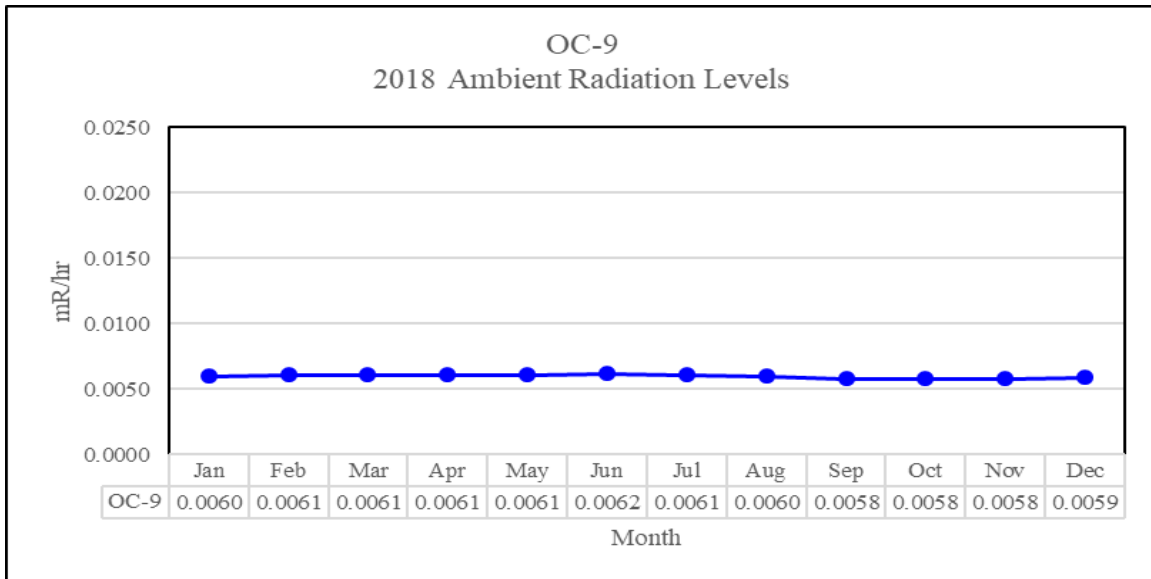
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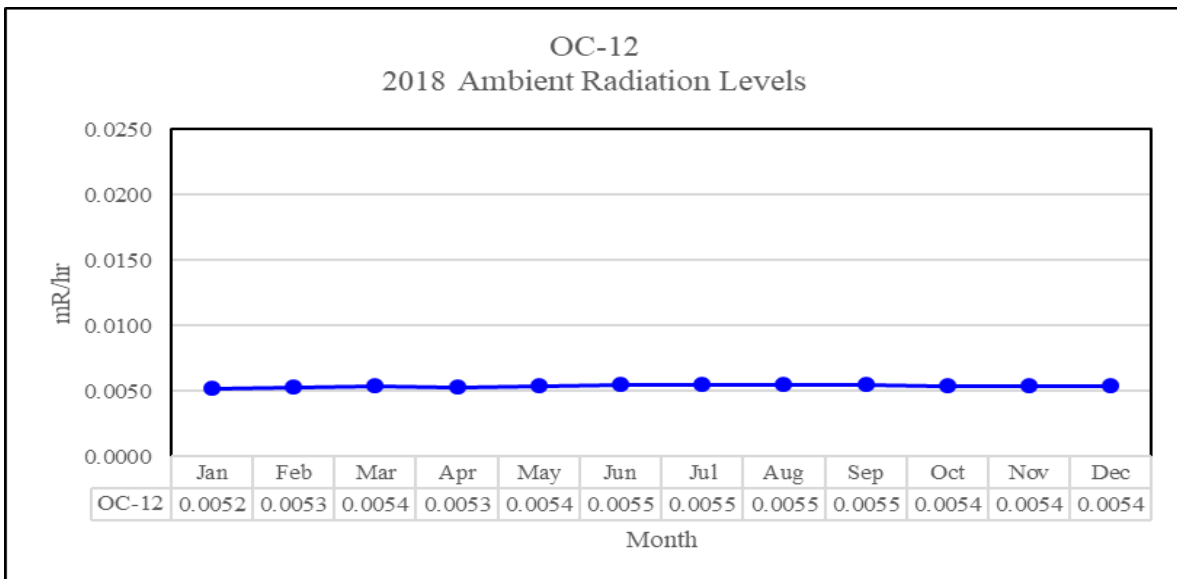
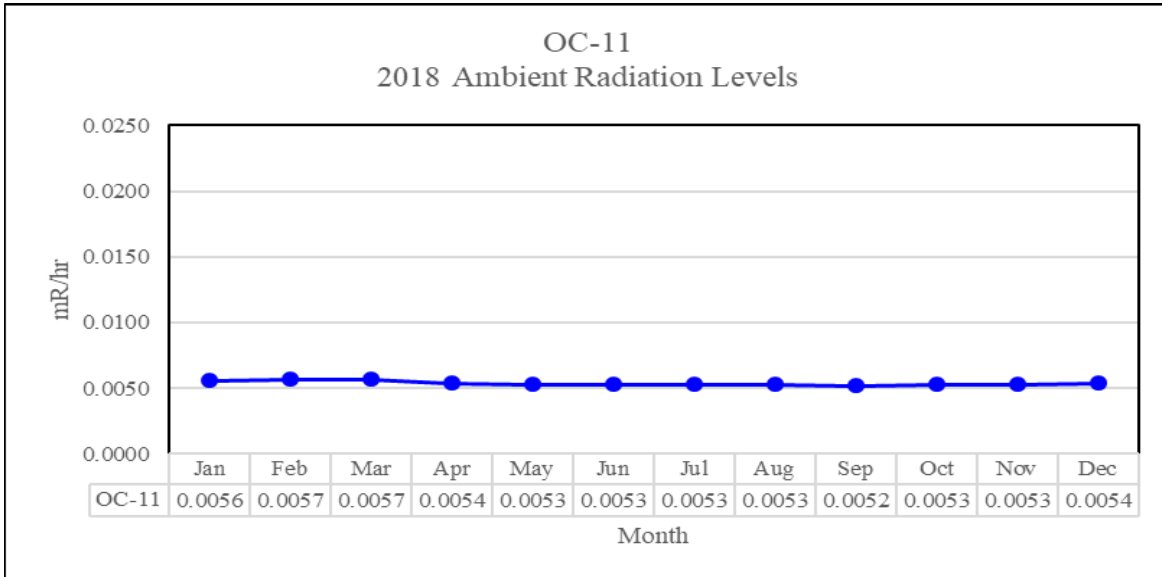
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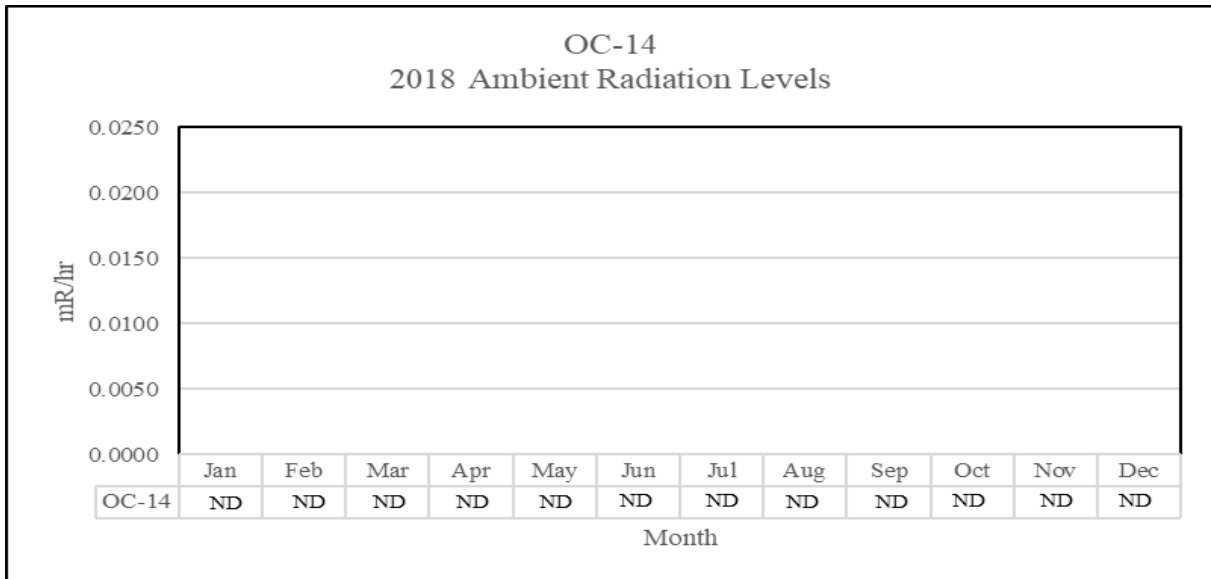
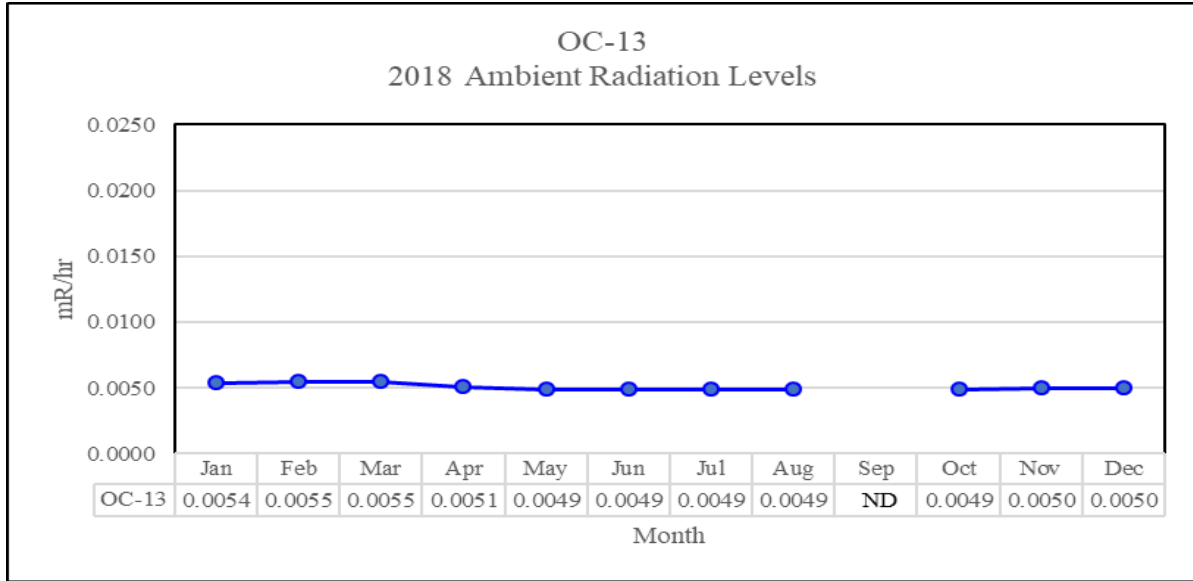
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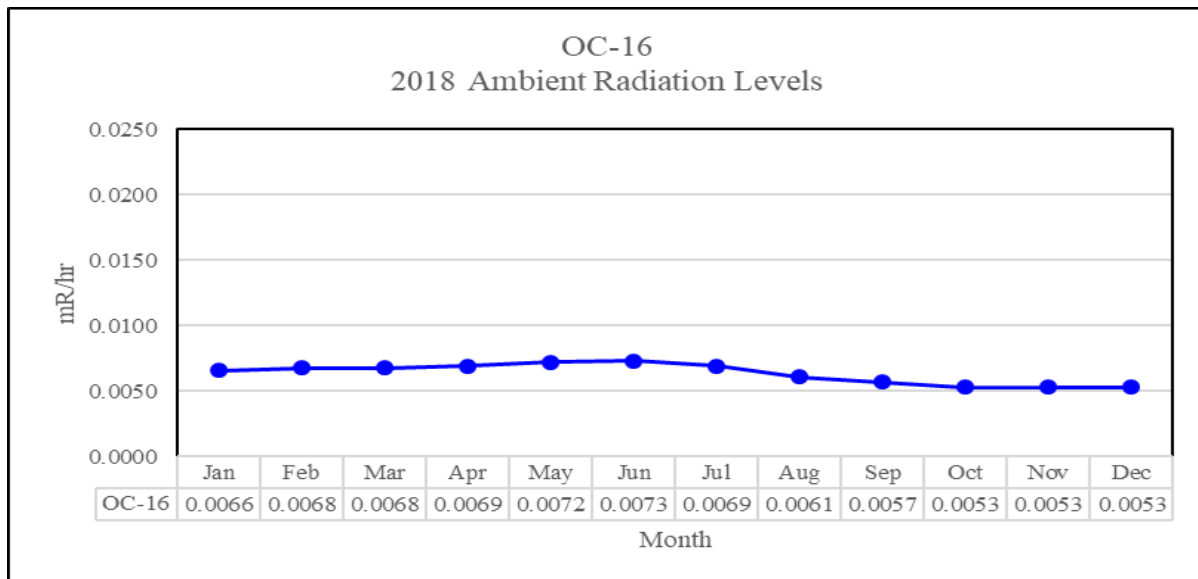
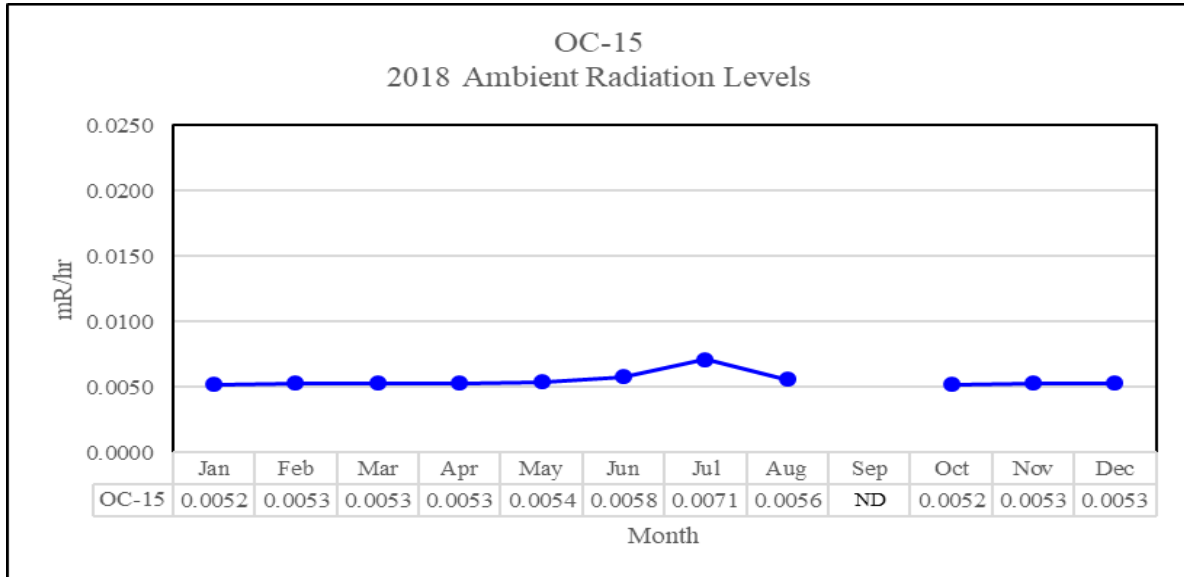
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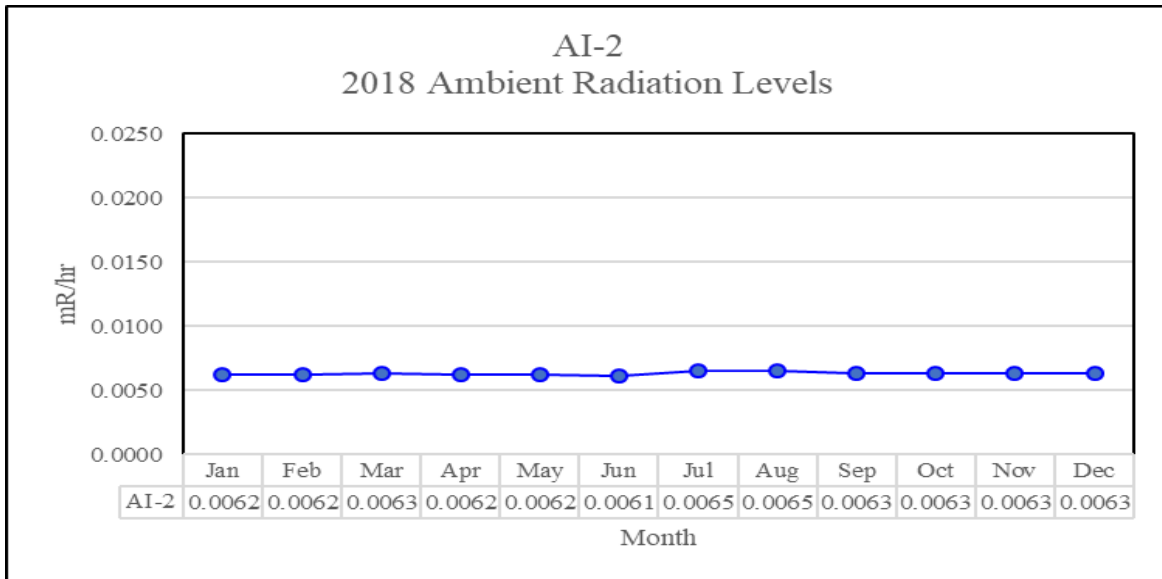
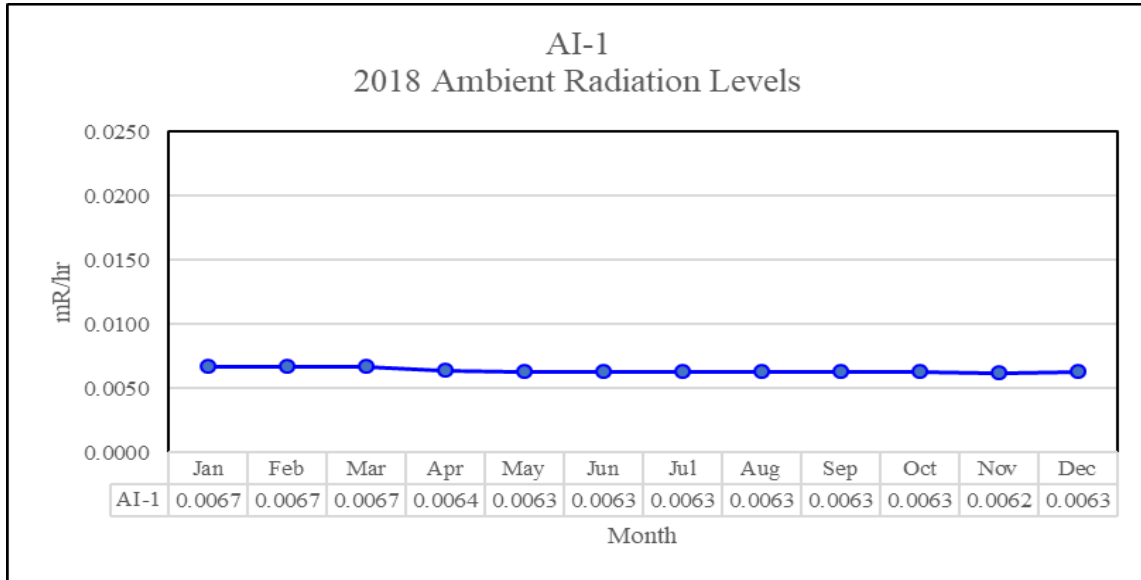
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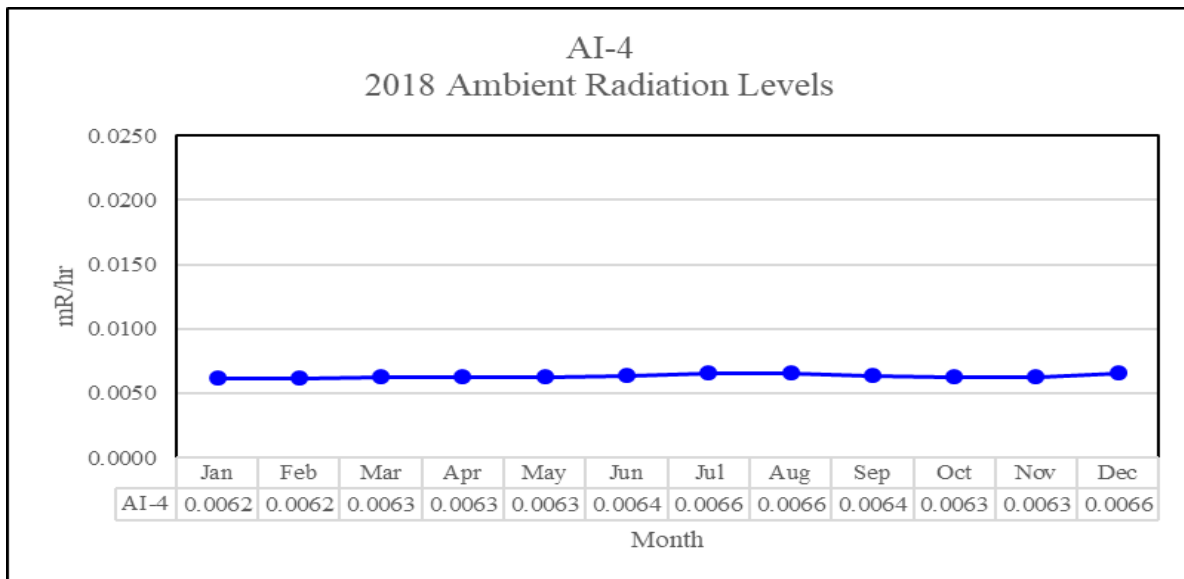
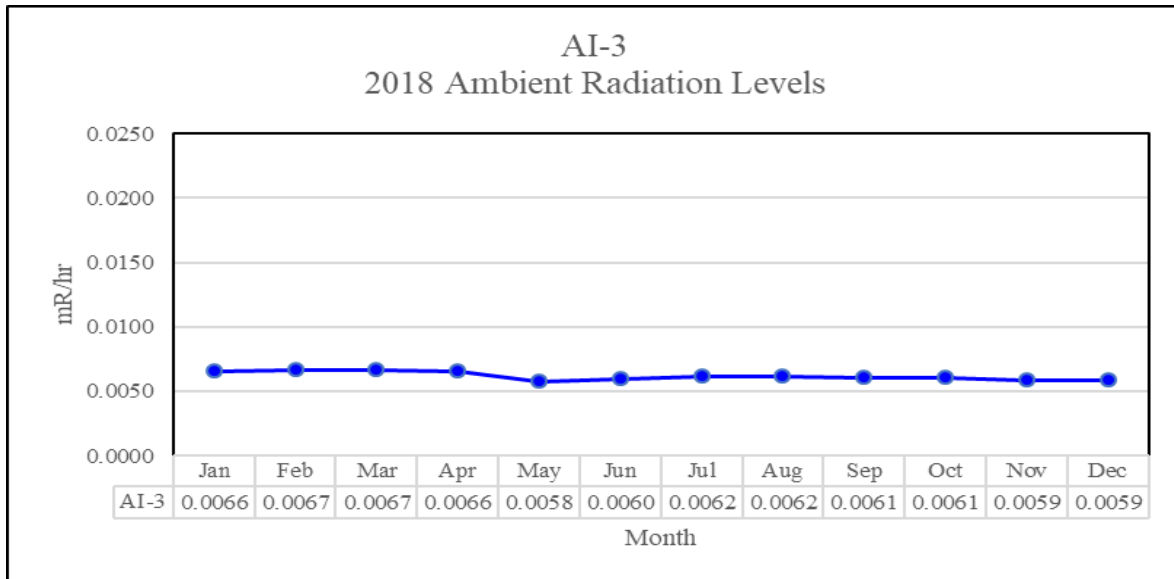
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**Salem/Hope Creek
Continuous Radiological Environmental Surveillance Telemetry (CREST) Data**



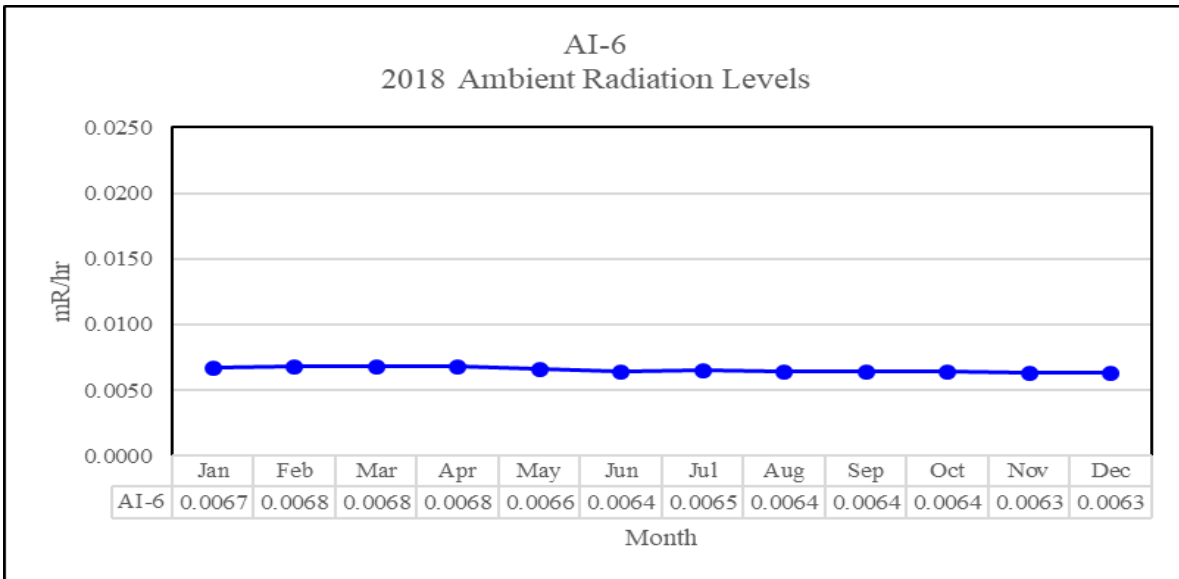
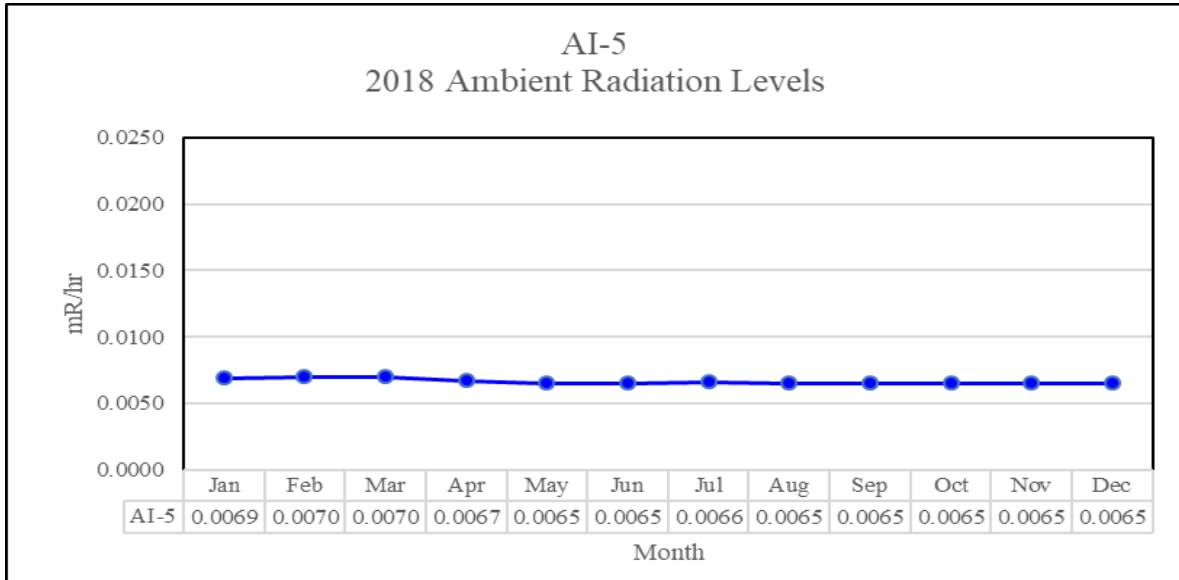
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**Salem/Hope Creek
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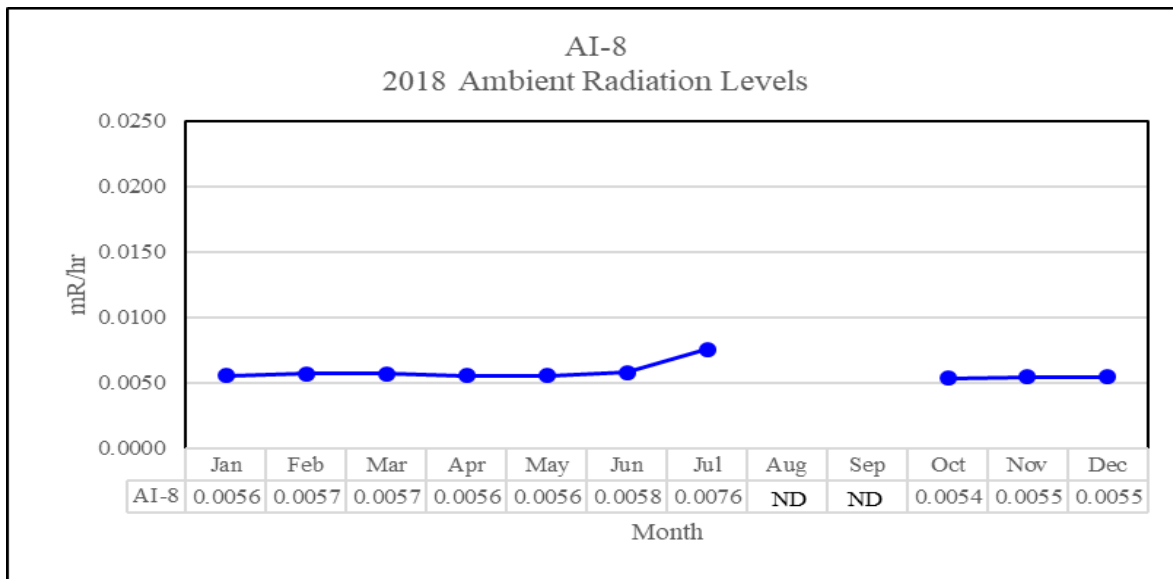
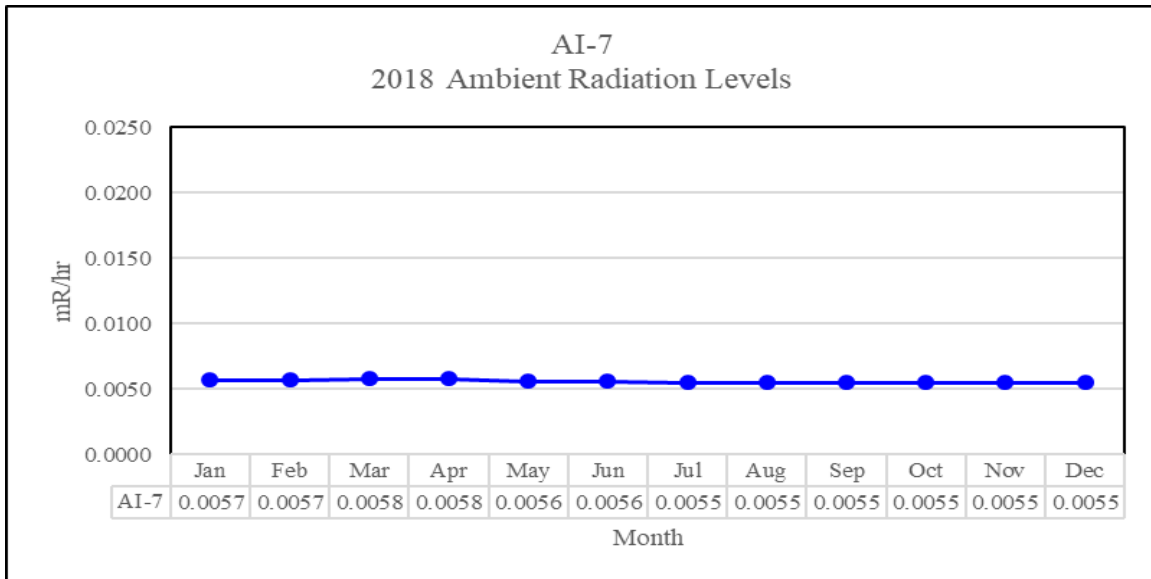
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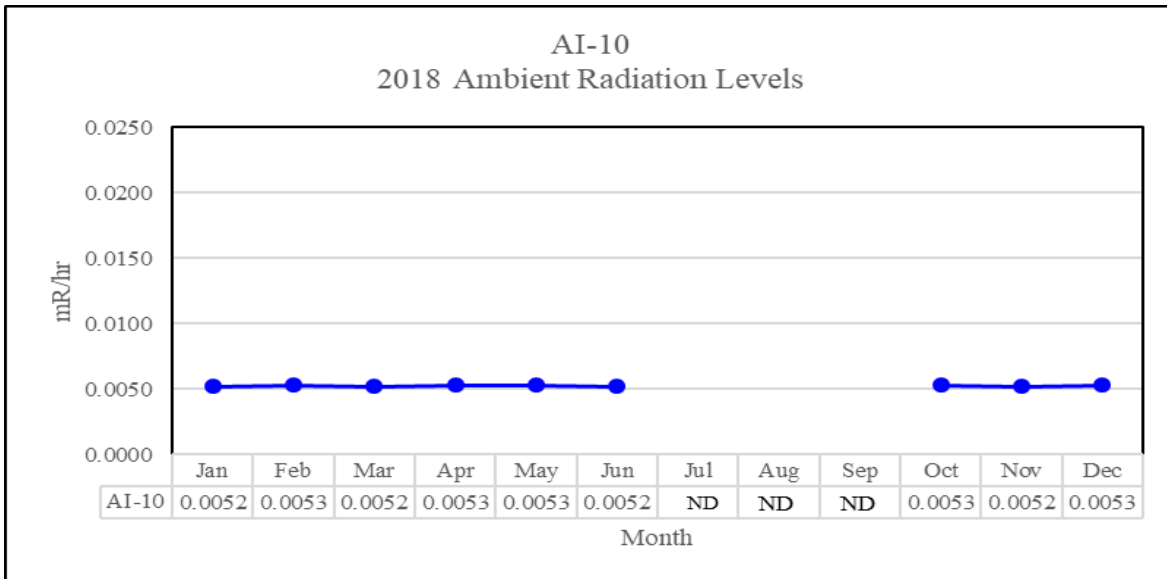
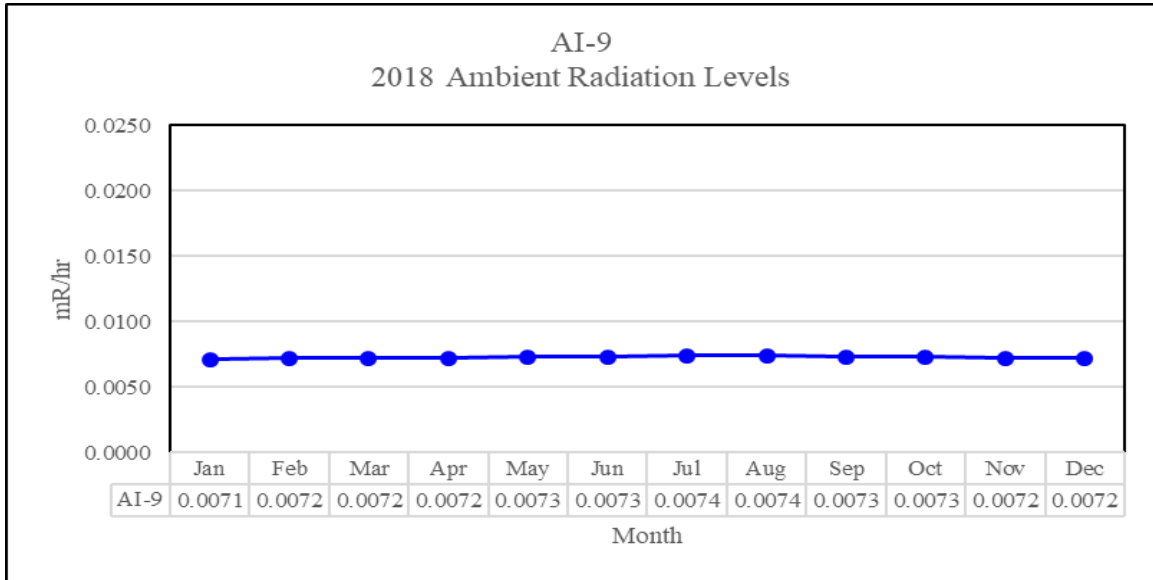
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