

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/05/16	-	01/19/16	< 0.010
01/19/16	-	02/02/16	< 0.007
02/02/16	-	02/16/16	< 0.009
02/16/16	-	03/01/16	No Data ¹
03/01/16	-	03/15/16	< 0.011
03/15/16	-	03/29/16	< 0.007
03/29/16	-	04/12/16	< 0.008
04/12/16	-	04/26/16	< 0.005
04/26/16	-	05/10/16	< 0.016
05/10/16	-	05/24/16	< 0.005
05/24/16	-	06/07/16	< 0.005
06/07/16	-	06/21/16	< 0.008
06/21/16	-	07/06/16	< 0.012
07/06/16	-	07/19/16	< 0.014
07/19/16	-	08/02/16	< 0.018
08/02/16	-	08/16/16	< 0.011
08/16/16	-	08/30/16	< 0.011
08/30/16	-	09/13/16	< 0.010
09/13/16	-	09/28/16	< 0.004
09/28/16	-	10/11/16	< 0.007
10/11/16	-	10/25/16	< 0.008
10/25/16	-	11/07/16	< 0.007
11/07/16	-	11/22/16	< 0.009
11/22/16	-	12/06/16	< 0.001
12/06/16	-	12/20/16	< 0.007
12/20/16	-	01/04/17	< 0.015

Results in picoCuries per cubic meter (pCi/m³)

¹ Air sampler pump found not running due to a loss of electrical power

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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>
01/05/16	-	01/19/16	< 0.008
01/19/16	-	02/02/16	< 0.010
02/02/16	-	02/16/16	< 0.011
02/16/16	-	03/01/16	< 0.008
03/01/16	-	03/15/16	< 0.007
03/15/16	-	03/29/16	< 0.012
03/29/16	-	04/12/16	< 0.009
04/12/16	-	04/26/16	< 0.012
04/26/16	-	05/10/16	< 0.014
05/10/16	-	05/23/16	< 0.008
05/23/16	-	06/07/16	< 0.006
06/07/16	-	06/21/16	< 0.013
06/21/16	-	07/06/16	< 0.012
07/06/16	-	07/19/16	< 0.017
07/19/16	-	08/02/16	< 0.012
08/02/16	-	08/16/16	< 0.008
08/16/16	-	08/30/16	< 0.007
08/30/16	-	09/13/16	< 0.018
09/13/16	-	09/27/16	< 0.010
09/27/16	-	10/10/16	< 0.009
10/10/16	-	10/25/16	< 0.006
10/25/16	-	11/08/16	< 0.009
11/08/16	-	11/22/16	< 0.007
11/22/16	-	12/06/16	< 0.011
12/06/16	-	12/20/16	< 0.006
12/20/16	-	01/04/17	< 0.012

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>
01/05/16	-	01/19/16	< 0.013
01/19/16	-	02/02/16	< 0.008
02/02/16	-	02/16/16	< 0.008
02/16/16	-	03/01/16	< 0.007
03/01/16	-	03/15/16	< 0.009
03/15/16	-	03/29/16	< 0.007
03/29/16	-	04/12/16	< 0.009
04/12/16	-	04/26/16	< 0.010
04/26/16	-	05/10/16	< 0.009
05/10/16	-	05/23/16	< 0.012
05/23/16	-	06/07/16	< 0.010
06/07/16	-	06/21/16	< 0.008
06/21/16	-	07/06/16	< 0.012
07/06/16	-	07/19/16	< 0.009
07/19/16	-	08/02/16	< 0.014
08/02/16	-	08/16/16	< 0.011
08/16/16	-	08/30/16	< 0.007
08/30/16	-	09/13/16	< 0.008
09/13/16	-	09/27/16	< 0.012
09/27/16	-	10/10/16	< 0.011
10/10/16	-	10/25/16	< 0.007
10/25/16	-	11/08/16	< 0.011
11/08/16	-	11/22/16	< 0.009
11/22/16	-	12/06/16	< 0.007
12/06/16	-	12/20/16	< 0.007
12/20/16	-	01/04/17	< 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**

Sands Point Harbor (OCAI02)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
01/05/16	-	01/19/16	< 0.013
01/19/16	-	02/02/16	< 0.009
02/02/16	-	02/16/16	< 0.013
02/16/16	-	03/01/16	< 0.011
03/01/16	-	03/15/16	< 0.011
03/15/16	-	03/29/16	< 0.009
03/29/16	-	04/12/16	< 0.008
04/12/16	-	04/26/16	< 0.013
04/26/16	-	05/10/16	< 0.015
05/10/16	-	05/23/16	< 0.006
05/23/16	-	06/07/16	< 0.011
06/07/16	-	06/21/16	< 0.009
06/21/16	-	07/06/16	< 0.010
07/06/16	-	07/19/16	< 0.013
07/19/16	-	08/02/16	< 0.018
08/02/16	-	08/16/16	< 0.008
08/16/16	-	08/30/16	< 0.004
08/30/16	-	09/13/16	< 0.008
09/13/16	-	09/27/16	< 0.015
09/27/16	-	10/10/16	< 0.022
10/10/16	-	10/25/16	< 0.013
10/25/16	-	11/08/16	< 0.007
11/08/16	-	11/22/16	< 0.009
11/22/16	-	12/06/16	< 0.010
12/06/16	-	12/20/16	< 0.005
12/20/16	-	01/04/17	< 0.014

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**

Forked River Marina (OCAI03)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
01/05/16	-	01/19/16	< 0.006
01/19/16	-	02/02/16	< 0.009
02/02/16	-	02/16/16	< 0.009
02/16/16	-	03/01/16	< 0.008
03/01/16	-	03/15/16	< 0.012
03/15/16	-	03/29/16	< 0.011
03/29/16	-	04/12/16	< 0.013
04/12/16	-	04/26/16	< 0.010
04/26/16	-	05/10/16	< 0.013
05/10/16	-	05/23/16	< 0.008
05/23/16	-	06/07/16	< 0.005
06/07/16	-	06/21/16	< 0.008
06/21/16	-	07/06/16	< 0.010
07/06/16	-	07/19/16	< 0.011
07/19/16	-	08/02/16	< 0.019
08/02/16	-	08/16/16	< 0.006
08/16/16	-	08/30/16	< 0.003
08/30/16	-	09/13/16	< 0.015
09/13/16	-	09/27/16	< 0.004
09/27/16	-	10/10/16	< 0.008
10/10/16	-	10/25/16	< 0.006
10/25/16	-	11/08/16	< 0.008
11/08/16	-	11/22/16	< 0.010
11/22/16	-	12/06/16	< 0.007
12/06/16	-	12/20/16	< 0.007
12/20/16	-	01/04/17	< 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**

Lacey Township Recreation Building (OCAI04)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
01/05/16	-	01/19/16	< 0.010
01/19/16	-	02/02/16	< 0.008
02/02/16	-	02/16/16	< 0.017
02/16/16	-	03/01/16	< 0.010
03/01/16	-	03/15/16	< 0.017
03/15/16	-	03/29/16	< 0.016
03/29/16	-	04/12/16	< 0.005
04/12/16	-	04/26/16	< 0.009
04/26/16	-	05/10/16	< 0.012
05/10/16	-	05/23/16	< 0.011
05/23/16	-	06/07/16	< 0.013
06/07/16	-	06/21/16	< 0.012
06/21/16	-	07/06/16	< 0.018
07/06/16	-	07/19/16	< 0.009
07/19/16	-	08/02/16	< 0.013
08/02/16	-	08/16/16	< 0.013
08/16/16	-	08/30/16	< 0.009
08/30/16	-	09/13/16	< 0.010
09/13/16	-	09/27/16	< 0.009
09/27/16	-	10/10/16	< 0.013
10/10/16	-	10/25/16	< 0.011
10/25/16	-	11/08/16	< 0.013
11/08/16	-	11/22/16	< 0.004
11/22/16	-	12/06/16	< 0.008
12/06/16	-	12/20/16	< 0.011
12/20/16	-	01/04/17	< 0.006

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>
01/05/16	-	01/19/16	< 0.008
01/19/16	-	02/02/16	< 0.014
02/02/16	-	02/16/16	< 0.010
02/16/16	-	03/01/16	< 0.014
03/01/16	-	03/15/16	< 0.009
03/15/16	-	03/29/16	< 0.012
03/29/16	-	04/12/16	< 0.010
04/12/16	-	04/26/16	< 0.013
04/26/16	-	05/10/16	< 0.010
05/10/16	-	05/23/16	< 0.016
05/23/16	-	06/07/16	< 0.009
06/07/16	-	06/21/16	< 0.005
06/21/16	-	07/06/16	< 0.004
07/06/16	-	07/19/16	< 0.010
07/19/16	-	08/02/16	< 0.015
08/02/16	-	08/16/16	< 0.009
08/16/16	-	08/30/16	< 0.006
08/30/16	-	09/13/16	< 0.009
09/13/16	-	09/27/16	< 0.007
09/27/16	-	10/10/16	< 0.008
10/10/16	-	10/25/16	< 0.006
10/25/16	-	11/08/16	< 0.008
11/08/16	-	11/22/16	< 0.011
11/22/16	-	12/06/16	< 0.006
12/06/16	-	12/20/16	< 0.012
12/20/16	-	01/04/17	< 0.008

Results in picoCuries per cubic meter (pCi/m³)

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

Finninger Farm, OC Dredge Site (OCAI06)

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
01/06/16	-	01/13/16	< 0.020
01/13/16	-	01/21/16	< 0.018
01/21/16	-	01/28/16	< 0.043
01/28/16	-	02/03/16	< 0.044
02/03/16	-	02/10/16	< 0.042
02/10/16	-	02/17/16	< 0.034
02/17/16	-	02/23/16	< 0.039
02/23/16	-	03/02/16	< 0.042
03/02/16	-	03/11/16	No Data ²
03/11/16	-	03/16/16	< 0.058
03/16/16	-	03/24/16	< 0.043
03/24/16	-	03/30/16	< 0.046
03/30/16	-	04/07/16	< 0.036
04/07/15	-	04/13/16	< 0.037
04/13/16	-	04/21/16	< 0.029
04/21/16	-	04/27/16	< 0.038
04/27/16	-	05/04/16	< 0.047
05/04/16	-	05/11/16	< 0.041
05/11/16	-	05/18/16	< 0.046
05/18/16	-	05/24/16	< 0.049
05/24/16	-	06/01/16	< 0.046
06/01/16	-	06/08/16	< 0.032
06/08/16	-	06/15/16	< 0.032
06/15/16	-	06/22/16	< 0.045
06/22/16	-	06/29/16	< 0.034
06/29/16	-	07/06/16	< 0.028

Results in picoCuries per cubic meter (pCi/m³)

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

² No sample result due to maintenance issues with equipment

**New Jersey Department of Environmental Protection
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**Oyster Creek
Results of Analyses for Iodine-131 in Weekly* Samples**

Finninger Farm, OC Dredge Site (OCAI06) - continued

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
07/06/16	-	07/13/16	< 0.043
07/13/16	-	07/20/16	< 0.037
07/20/16	-	07/27/16	< 0.035
07/27/16	-	08/03/16	< 0.031
08/03/16	-	08/10/16	< 0.045
08/10/16	-	08/17/16	< 0.064
08/17/16	-	08/24/16	< 0.021
08/24/16	-	08/31/16	< 0.029
08/31/16	-	09/07/16	< 0.032
09/07/16	-	09/14/16	< 0.034
09/14/16	-	09/21/16	< 0.030
09/21/16	-	09/27/16	< 0.024
09/27/16	-	10/04/16	< 0.028
10/04/16	-	10/12/16	< 0.044
10/12/16	-	10/20/16	< 0.037
10/20/16	-	10/26/16	< 0.041
10/26/16	-	11/02/16	< 0.038
11/02/16	-	11/09/16	< 0.013
11/09/16	-	11/16/16	< 0.050
11/16/16	-	11/22/16	< 0.021
11/22/16	-	11/30/16	< 0.026
11/30/16	-	12/07/16	< 0.038
12/07/16	-	12/14/16	< 0.039
12/14/16	-	12/20/16	< 0.011
12/20/16	-	12/28/16	< 0.028
12/28/16	-	01/04/17	< 0.046

Results in picoCuries per cubic meter (pCi/m³)

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

**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>
01/05/16	-	01/19/16	< 0.008
01/19/16	-	02/02/16	< 0.010
02/02/16	-	02/16/16	< 0.008
02/16/16	-	03/01/16	< 0.003
03/01/16	-	03/15/16	< 0.010
03/15/16	-	03/29/16	< 0.009
03/29/16	-	04/12/16	< 0.007
04/12/16	-	04/26/16	< 0.014
04/26/16	-	05/10/16	< 0.006
05/10/16	-	05/23/16	< 0.012
05/23/16	-	06/07/16	< 0.007
06/07/16	-	06/21/16	< 0.012
06/21/16	-	07/06/16	< 0.009
07/06/16	-	07/19/16	< 0.012
07/19/16	-	08/02/16	< 0.013
08/02/16	-	08/16/16	< 0.011
08/16/16	-	08/30/16	< 0.010
08/30/16	-	09/13/16	< 0.015
09/13/16	-	09/27/16	< 0.005
09/27/16	-	10/10/16	< 0.008
10/10/16	-	10/25/16	< 0.007
10/25/16	-	11/08/16	< 0.011
11/08/16	-	11/22/16	< 0.008
11/22/16	-	12/06/16	< 0.005
12/06/16	-	12/20/16	< 0.005
12/20/16	-	01/04/17	< 0.008

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>
01/22/16	-	02/02/16	< 0.019
02/02/16	-	02/16/16	< 0.008
02/16/16	-	03/01/16	< 0.010
03/01/16	-	03/15/16	< 0.012
03/15/16	-	03/29/16	< 0.008
03/29/16	-	04/12/16	< 0.009
04/12/16	-	04/26/16	< 0.012
04/26/16	-	05/10/16	< 0.011
05/10/16	-	05/23/16	< 0.012
05/23/16	-	06/07/16	< 0.011
06/07/16	-	06/21/16	< 0.009
06/21/16	-	07/06/16	< 0.007
07/06/16	-	07/19/16	< 0.006
07/19/16	-	08/02/16	< 0.015
08/02/16	-	08/16/16	< 0.013
08/16/16	-	08/30/16	< 0.009
08/30/16	-	09/13/16	< 0.012
09/13/16	-	09/27/16	< 0.002
09/27/16	-	10/10/16	< 0.013
10/10/16	-	10/25/16	< 0.005
10/25/16	-	11/08/16	< 0.006
11/08/16	-	11/22/16	< 0.011
11/22/16	-	12/06/16	< 0.005
12/06/16	-	12/20/16	< 0.006
12/20/16	-	01/04/17	< 0.007

Results in picoCuries per cubic meter (pCi/m³)

* The air sampler was added to the ESMP in 2016 and declared operational on January 22, 2016

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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>
01/05/16	-	01/19/16	< 0.010
01/19/16	-	02/02/16	< 0.014
02/02/16	-	02/16/16	< 0.014
02/16/16	-	03/01/16	< 0.011
03/01/16	-	03/15/16	< 0.006
03/15/16	-	03/29/16	< 0.013
03/29/16	-	04/12/16	< 0.008
04/12/16	-	04/26/16	< 0.019
04/26/16	-	05/10/16	< 0.010
05/10/16	-	05/24/16	< 0.006
05/24/16	-	06/07/16	< 0.012
06/07/16	-	06/21/16	< 0.008
06/21/16	-	07/06/16	< 0.009
07/06/16	-	07/19/16	< 0.007
07/19/16	-	08/02/16	< 0.018
08/02/16	-	08/16/16	< 0.008
08/16/16	-	08/30/16	< 0.006
08/30/16	-	09/13/16	< 0.022
09/13/16	-	09/27/16	< 0.010
09/27/16	-	10/10/16	< 0.012
10/10/16	-	10/25/16	< 0.009
10/25/16	-	11/08/16	< 0.009
11/08/16	-	11/22/16	< 0.006
11/22/16	-	12/06/16	< 0.010
12/06/16	-	12/20/16	< 0.007
12/21/16 ³	-	01/04/16	< 0.012

Results in picoCuries per cubic meter (pCi/m³)

³ Unit found out of service on 12/20/16 and restarted on 12/21/16

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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>
01/05/16	-	01/19/16	< 0.011
01/19/16	-	02/02/16	< 0.013
02/02/16	-	02/16/16	< 0.008
02/16/16	-	03/01/16	< 0.004
03/01/16	-	03/15/16	< 0.009
03/15/16	-	03/29/16	< 0.009
03/29/16	-	04/12/16	< 0.011
04/12/16	-	04/26/16	< 0.016
04/26/16	-	05/10/16	< 0.010
05/10/16	-	05/24/16	< 0.006
05/24/16	-	06/07/16	< 0.009
06/07/16	-	06/21/16	< 0.012
06/21/16	-	07/06/16	< 0.017
07/06/16	-	07/19/16	< 0.010
07/19/16	-	08/02/16	< 0.017
08/02/16	-	08/16/16	< 0.015
08/16/16	-	08/30/16	< 0.008
08/30/16	-	09/13/16	< 0.012
09/13/16	-	09/27/16	< 0.009
09/27/16	-	10/10/16	< 0.016
10/10/16	-	10/25/16	< 0.008
10/25/16	-	11/08/16	< 0.009
11/08/16	-	11/22/16	< 0.006
11/22/16	-	12/06/16	< 0.004
12/06/16	-	12/20/16	< 0.005
12/20/16	-	01/04/17	< 0.011

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/05/16	-	01/19/16	< 0.012
01/19/16	-	02/02/16	< 0.009
02/02/16	-	02/16/16	< 0.008
02/16/16	-	03/01/16	< 0.009
03/01/16	-	03/15/16	< 0.009
03/15/16	-	03/29/16	< 0.008
03/29/16	-	04/12/16	< 0.010
04/12/16	-	04/26/16	< 0.012
04/26/16	-	05/10/16	< 0.011
05/10/16	-	05/24/16	< 0.015
05/24/16	-	06/07/16	< 0.011
06/07/16	-	06/21/16	< 0.015
06/21/16	-	07/06/16	< 0.007
07/06/16	-	07/19/16	< 0.010
07/19/16	-	08/02/16	< 0.018
08/02/16	-	08/16/16	< 0.008
08/16/16	-	08/30/16	< 0.011
08/30/16	-	09/13/16	< 0.012
09/13/16	-	09/27/16	< 0.008
09/27/16	-	10/10/16	< 0.011
10/10/16	-	10/25/16	< 0.008
10/25/16	-	11/08/16	< 0.010
11/08/16	-	11/22/16	< 0.012
11/22/16	-	12/06/16	< 0.006
12/06/16	-	12/20/16	< 0.006
12/20/16	-	01/04/17	< 0.012

Results in picoCuries per cubic meter (pCi/m³)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

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

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

<u>Collection Period</u>			<u>I-131</u> <u>(pCi/m³)</u>
12/07/16	-	12/20/16	< 0.006
12/20/16	-	01/04/17	< 0.010

Results in picoCuries per cubic meter (pCi/m³)

* Sample location was added to the ESMP in 2016 and declared operational on December 7, 2016

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/05/16	-	01/19/16	0.025 ± 0.002
01/19/16	-	02/02/16	0.018 ± 0.002
02/02/16	-	02/16/16	0.015 ± 0.002
02/16/16	-	03/01/16	No Data ⁴
03/01/16	-	03/15/16	0.018 ± 0.002
03/15/16	-	03/29/16	0.016 ± 0.002
03/29/16	-	04/12/16	0.021 ± 0.002
04/12/16	-	04/26/16	0.023 ± 0.002
04/26/16	-	05/10/16	0.011 ± 0.001
05/10/16	-	05/24/16	0.020 ± 0.002
05/24/16	-	06/07/16	0.022 ± 0.002
06/07/16	-	06/21/16	0.018 ± 0.002
06/21/16	-	07/06/16	0.020 ± 0.002
07/06/16	-	07/19/16	0.023 ± 0.002
07/19/16	-	08/02/16	0.023 ± 0.002
08/02/16	-	08/16/16	0.019 ± 0.002
08/16/16	-	08/30/16	0.024 ± 0.002
08/30/16	-	09/13/16	0.023 ± 0.002
09/13/16	-	09/28/16	0.023 ± 0.002
09/28/16	-	10/11/16	0.017 ± 0.002
10/11/16	-	10/25/16	0.025 ± 0.002
10/25/16	-	11/07/16	0.023 ± 0.002
11/07/16	-	11/22/16	0.028 ± 0.002
11/22/16	-	12/06/16	0.025 ± 0.002
12/06/16	-	12/20/16	0.026 ± 0.002
12/20/16	-	01/04/17	0.024 ± 0.002

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

⁴ Air sampler pump found not running due to a loss of electrical power.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/05/16	-	01/19/16	0.022 ± 0.002
01/19/16	-	02/02/16	0.017 ± 0.002
02/02/16	-	02/16/16	0.014 ± 0.001
02/16/16	-	03/01/16	0.018 ± 0.002
03/01/16	-	03/15/16	0.019 ± 0.002
03/15/16	-	03/29/16	0.015 ± 0.002
03/29/16	-	04/12/16	0.021 ± 0.002
04/12/16	-	04/26/16	0.022 ± 0.002
04/26/16	-	05/10/16	0.010 ± 0.001
05/10/16	-	05/23/16	0.017 ± 0.002
05/23/16	-	06/07/16	0.020 ± 0.002
06/07/16	-	06/21/16	0.018 ± 0.002
06/21/16	-	07/06/16	0.021 ± 0.002
07/06/16	-	07/19/16	0.023 ± 0.002
07/19/16	-	08/02/16	0.024 ± 0.002
08/02/16	-	08/16/16	0.017 ± 0.002
08/16/16	-	08/30/16	0.022 ± 0.002
08/30/16	-	09/13/16	0.024 ± 0.002
09/13/16	-	09/27/16	0.018 ± 0.002
09/27/16	-	10/10/16	0.014 ± 0.002
10/10/16	-	10/25/16	0.020 ± 0.002
10/25/16	-	11/08/16	0.021 ± 0.002
11/08/16	-	11/22/16	0.029 ± 0.002
11/22/16	-	12/06/16	0.026 ± 0.002
12/06/16	-	12/20/16	0.024 ± 0.002
12/20/16	-	01/04/17	0.026 ± 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
2016 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>
01/05/16	-	01/19/16	0.022 ± 0.002
01/19/16	-	02/02/16	0.020 ± 0.002
02/02/16	-	02/16/16	0.015 ± 0.002
02/16/16	-	03/01/16	0.018 ± 0.002
03/01/16	-	03/15/16	0.018 ± 0.002
03/15/16	-	03/29/16	0.016 ± 0.002
03/29/16	-	04/12/16	0.019 ± 0.002
04/12/16	-	04/26/16	0.024 ± 0.002
04/26/16	-	05/10/16	0.010 ± 0.001
05/10/16	-	05/23/16	0.021 ± 0.002
05/23/16	-	06/07/16	0.021 ± 0.002
06/07/16	-	06/21/16	0.019 ± 0.002
06/21/16	-	07/06/16	0.020 ± 0.002
07/06/16	-	07/19/16	0.023 ± 0.002
07/19/16	-	08/02/16	0.024 ± 0.002
08/02/16	-	08/16/16	0.019 ± 0.002
08/16/16	-	08/30/16	0.020 ± 0.002
08/30/16	-	09/13/16	0.026 ± 0.002
09/13/16	-	09/27/16	0.018 ± 0.002
09/27/16	-	10/10/16	0.015 ± 0.002
10/10/16	-	10/25/16	0.022 ± 0.002
10/25/16	-	11/08/16	0.023 ± 0.002
11/08/16	-	11/22/16	0.028 ± 0.002
11/22/16	-	12/06/16	0.025 ± 0.002
12/06/16	-	12/20/16	0.027 ± 0.002
12/20/16	-	01/04/17	0.027 ± 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
2016 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>
01/05/16	-	01/19/16	0.027 ± 0.002
01/19/16	-	02/02/16	0.019 ± 0.002
02/02/16	-	02/16/16	0.015 ± 0.002
02/16/16	-	03/01/16	0.021 ± 0.002
03/01/16	-	03/15/16	0.019 ± 0.002
03/15/16	-	03/29/16	0.016 ± 0.002
03/29/16	-	04/12/16	0.023 ± 0.002
04/12/16	-	04/26/16	0.023 ± 0.002
04/26/16	-	05/10/16	0.009 ± 0.001
05/10/16	-	05/23/16	0.020 ± 0.002
05/23/16	-	06/07/16	0.019 ± 0.002
06/07/16	-	06/21/16	0.016 ± 0.002
06/21/16	-	07/06/16	0.023 ± 0.002
07/06/16	-	07/19/16	0.023 ± 0.002
07/19/16	-	08/02/16	0.022 ± 0.002
08/02/16	-	08/16/16	0.018 ± 0.002
08/16/16	-	08/30/16	0.021 ± 0.002
08/30/16	-	09/13/16	0.028 ± 0.002
09/13/16	-	09/27/16	0.019 ± 0.002
09/27/16	-	10/10/16	0.014 ± 0.002
10/10/16	-	10/25/16	0.022 ± 0.002
10/25/16	-	11/08/16	0.022 ± 0.002
11/08/16	-	11/22/16	0.030 ± 0.002
11/22/16	-	12/06/16	0.027 ± 0.002
12/06/16	-	12/20/16	0.029 ± 0.002
12/20/16	-	01/04/17	0.025 ± 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
2016 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>
01/05/16	-	01/19/16	0.027 ± 0.002
01/19/16	-	02/02/16	0.019 ± 0.002
02/02/16	-	02/16/16	0.017 ± 0.002
02/16/16	-	03/01/16	0.017 ± 0.002
03/01/16	-	03/15/16	0.018 ± 0.002
03/15/16	-	03/29/16	0.015 ± 0.001
03/29/16	-	04/12/16	0.021 ± 0.002
04/12/16	-	04/26/16	0.022 ± 0.002
04/26/16	-	05/10/16	0.010 ± 0.001
05/10/16	-	05/23/16	0.018 ± 0.002
05/23/16	-	06/07/16	0.017 ± 0.001
06/07/16	-	06/21/16	0.017 ± 0.002
06/21/16	-	07/06/16	0.023 ± 0.002
07/06/16	-	07/19/16	0.022 ± 0.002
07/19/16	-	08/02/16	0.022 ± 0.002
08/02/16	-	08/16/16	0.017 ± 0.002
08/16/16	-	08/30/16	0.022 ± 0.002
08/30/16	-	09/13/16	0.024 ± 0.002
09/13/16	-	09/27/16	0.019 ± 0.002
09/27/16	-	10/10/16	0.016 ± 0.002
10/10/16	-	10/25/16	0.021 ± 0.002
10/25/16	-	11/08/16	0.022 ± 0.002
11/08/16	-	11/22/16	0.032 ± 0.002
11/22/16	-	12/06/16	0.026 ± 0.002
12/06/16	-	12/20/16	0.024 ± 0.002
12/20/16	-	01/04/17	0.024 ± 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
2016 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>
01/05/16	-	01/19/16	0.025 ± 0.002
01/19/16	-	02/02/16	0.020 ± 0.002
02/02/16	-	02/16/16	0.015 ± 0.002
02/16/16	-	03/01/16	0.019 ± 0.002
03/01/16	-	03/15/16	0.017 ± 0.002
03/15/16	-	03/29/16	0.016 ± 0.002
03/29/16	-	04/12/16	0.019 ± 0.002
04/12/16	-	04/26/16	0.024 ± 0.002
04/26/16	-	05/10/16	0.012 ± 0.001
05/10/16	-	05/23/16	0.019 ± 0.002
05/23/16	-	06/07/16	0.021 ± 0.002
06/07/16	-	06/21/16	0.018 ± 0.002
06/21/16	-	07/06/16	0.022 ± 0.002
07/06/16	-	07/19/16	0.021 ± 0.002
07/19/16	-	08/02/16	0.027 ± 0.002
08/02/16	-	08/16/16	0.019 ± 0.002
08/16/16	-	08/30/16	0.024 ± 0.002
08/30/16	-	09/13/16	0.025 ± 0.002
09/13/16	-	09/27/16	0.020 ± 0.002
09/27/16	-	10/10/16	0.016 ± 0.002
10/10/16	-	10/25/16	0.022 ± 0.002
10/25/16	-	11/08/16	0.024 ± 0.002
11/08/16	-	11/22/16	0.027 ± 0.002
11/22/16	-	12/06/16	0.026 ± 0.002
12/06/16	-	12/20/16	0.028 ± 0.002
12/20/16	-	01/04/17	0.029 ± 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
2016 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>
01/05/16	-	01/19/16	0.024 ± 0.002
01/19/16	-	02/02/16	0.020 ± 0.002
02/02/16	-	02/16/16	0.017 ± 0.002
02/16/16	-	03/01/16	0.019 ± 0.002
03/01/16	-	03/15/16	0.019 ± 0.002
03/15/16	-	03/29/16	0.015 ± 0.002
03/29/16	-	04/12/16	0.020 ± 0.002
04/12/16	-	04/26/16	0.023 ± 0.002
04/26/16	-	05/10/16	0.010 ± 0.001
05/10/16	-	05/23/16	0.020 ± 0.002
05/23/16	-	06/07/16	0.019 ± 0.002
06/07/16	-	06/21/16	0.017 ± 0.002
06/21/16	-	07/06/16	0.022 ± 0.002
07/06/16	-	07/19/16	0.021 ± 0.002
07/19/16	-	08/02/16	0.023 ± 0.002
08/02/16	-	08/16/16	0.017 ± 0.012
08/16/16	-	08/30/16	0.021 ± 0.002
08/30/16	-	09/13/16	0.024 ± 0.002
09/13/16	-	09/27/16	0.019 ± 0.002
09/27/16	-	10/10/16	0.015 ± 0.002
10/10/16	-	10/25/16	0.022 ± 0.002
10/25/16	-	11/08/16	0.021 ± 0.002
11/08/16	-	11/22/16	0.025 ± 0.002
11/22/16	-	12/06/16	0.026 ± 0.002
12/06/16	-	12/20/16	0.026 ± 0.002
12/20/16	-	01/04/17	0.023 ± 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
2016 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>
01/06/16	-	01/13/16	0.019 ± 0.004
01/13/16	-	01/21/16	0.028 ± 0.004
01/21/16	-	01/28/16	0.016 ± 0.004
01/28/16	-	02/03/16	0.017 ± 0.004
02/03/16	-	02/10/16	0.011 ± 0.003
02/10/16	-	02/17/16	0.015 ± 0.004
02/17/16	-	02/23/16	0.027 ± 0.005
02/23/16	-	03/02/16	0.005 ± 0.002
03/02/16	-	03/11/16	No Data ⁵
03/11/16	-	03/16/16	0.010 ± 0.004
03/16/16	-	03/24/16	0.015 ± 0.003
03/24/16	-	03/30/16	0.024 ± 0.005
03/30/16	-	04/07/16	0.023 ± 0.004
04/07/16	-	04/13/16	0.024 ± 0.005
04/13/16	-	04/21/16	0.026 ± 0.004
04/21/16	-	04/27/16	0.028 ± 0.005
04/27/16	-	05/04/16	0.015 ± 0.004
05/04/16	-	05/11/16	0.012 ± 0.003
05/11/16	-	05/18/16	0.022 ± 0.004
05/18/16	-	05/24/16	0.024 ± 0.005
05/24/16	-	06/01/16	0.027 ± 0.004
06/01/16	-	06/08/16	0.018 ± 0.004
06/08/16	-	06/15/16	0.027 ± 0.005
06/15/16	-	06/22/16	0.025 ± 0.005
06/22/16	-	06/29/16	0.033 ± 0.005
06/29/16	-	07/06/16	0.020 ± 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

⁵ No sample result due to maintenance issues with equipment

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
07/06/16	-	07/13/16	0.020 ± 0.004
07/13/16	-	07/20/16	0.023 ± 0.004
07/20/16	-	07/27/16	0.029 ± 0.005
07/27/16	-	08/03/16	0.026 ± 0.005
08/03/16	-	08/10/16	0.023 ± 0.004
08/10/16	-	08/17/16	0.021 ± 0.004
08/17/16	-	08/24/16	0.029 ± 0.005
08/24/16	-	08/31/16	0.028 ± 0.005
08/31/16	-	09/07/16	0.028 ± 0.005
09/07/16	-	09/14/16	0.036 ± 0.005
09/14/16	-	09/21/16	0.017 ± 0.004
09/21/16	-	09/27/16	0.022 ± 0.005
09/27/16	-	10/04/16	0.017 ± 0.004
10/04/16	-	10/12/16	0.014 ± 0.003
10/12/16	-	10/20/16	0.028 ± 0.005
10/20/16	-	10/26/16	0.016 ± 0.004
10/26/16	-	11/02/16	0.030 ± 0.005
11/02/16	-	11/09/16	0.026 ± 0.005
11/09/16	-	11/16/16	0.030 ± 0.005
11/16/16	-	11/22/16	0.026 ± 0.005
11/22/16	-	11/30/16	0.032 ± 0.005
11/30/16	-	12/07/16	0.023 ± 0.005
12/07/16	-	12/14/16	0.029 ± 0.005
12/14/16	-	12/20/16	0.020 ± 0.005
12/20/16	-	12/28/16	0.030 ± 0.005
12/28/16	-	01/04/17	0.020 ± 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

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/05/16	-	01/19/16	0.025 ± 0.002
01/19/16	-	02/02/16	0.018 ± 0.002
02/02/16	-	02/16/16	0.018 ± 0.002
02/16/16	-	03/01/16	0.020 ± 0.002
03/01/16	-	03/15/16	0.017 ± 0.002
03/15/16	-	03/29/16	0.015 ± 0.001
03/29/16	-	04/12/16	0.020 ± 0.002
04/12/16	-	04/26/16	0.024 ± 0.002
04/26/16	-	05/10/16	0.008 ± 0.001
05/10/16	-	05/23/16	0.018 ± 0.002
05/23/16	-	06/07/16	0.020 ± 0.002
06/07/16	-	06/21/16	0.016 ± 0.002
06/21/16	-	07/06/16	0.021 ± 0.002
07/06/16	-	07/19/16	0.021 ± 0.002
07/19/16	-	08/02/16	0.024 ± 0.002
08/02/16	-	08/16/16	0.017 ± 0.002
08/16/16	-	08/30/16	0.021 ± 0.002
08/30/16	-	09/13/16	0.025 ± 0.002
09/13/16	-	09/27/16	0.019 ± 0.002
09/27/16	-	10/10/16	0.017 ± 0.002
10/10/16	-	10/25/16	0.025 ± 0.002
10/25/16	-	11/08/16	0.022 ± 0.002
11/08/16	-	11/22/16	0.030 ± 0.002
11/22/16	-	12/06/16	0.027 ± 0.002
12/06/16	-	12/20/16	0.023 ± 0.002
12/20/16	-	01/04/17	0.023 ± 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
2016 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>
01/22/16	-	02/02/16	0.020 ± 0.002
02/02/16	-	02/16/16	0.017 ± 0.002
02/16/16	-	03/01/16	0.019 ± 0.002
03/01/16	-	03/15/16	0.019 ± 0.002
03/15/16	-	03/29/16	0.015 ± 0.002
03/29/16	-	04/12/16	0.019 ± 0.002
04/12/16	-	04/26/16	0.024 ± 0.002
04/26/16	-	05/10/16	0.011 ± 0.001
05/10/16	-	05/23/16	0.020 ± 0.002
05/23/16	-	06/07/16	0.019 ± 0.002
06/07/16	-	06/21/16	0.017 ± 0.002
06/21/16	-	07/06/16	0.022 ± 0.002
07/06/16	-	07/19/16	0.021 ± 0.002
07/19/16	-	08/02/16	0.022 ± 0.002
08/02/16	-	08/16/16	0.018 ± 0.002
08/16/16	-	08/30/16	0.025 ± 0.002
08/30/16	-	09/13/16	0.024 ± 0.002
09/13/16	-	09/27/16	0.018 ± 0.002
09/27/16	-	10/10/16	0.014 ± 0.002
10/10/16	-	10/25/16	0.024 ± 0.002
10/25/16	-	11/08/16	0.021 ± 0.002
11/08/16	-	11/22/16	0.029 ± 0.002
11/22/16	-	12/06/16	0.025 ± 0.002
12/06/16	-	12/20/16	0.026 ± 0.002
12/20/16	-	01/04/17	0.027 ± 0.002

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

* The air sampler was added to the ESMP in 2016 and declared operational on January 22, 2016

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/05/16	-	01/19/16	0.026 ± 0.002
01/19/16	-	02/02/16	0.024 ± 0.002
02/02/16	-	02/16/16	0.017 ± 0.002
02/16/16	-	03/01/16	0.018 ± 0.002
03/01/16	-	03/15/16	0.018 ± 0.002
03/15/16	-	03/29/16	0.018 ± 0.002
03/29/16	-	04/12/16	0.023 ± 0.002
04/12/16	-	04/26/16	0.023 ± 0.002
04/26/16	-	05/10/16	0.012 ± 0.001
05/10/16	-	05/24/16	0.020 ± 0.002
05/24/16	-	06/07/16	0.021 ± 0.002
06/07/16	-	06/21/16	0.020 ± 0.002
06/21/16	-	07/06/16	0.020 ± 0.002
07/06/16	-	07/19/16	0.027 ± 0.002
07/19/16	-	08/02/16	0.029 ± 0.002
08/02/16	-	08/16/16	0.019 ± 0.002
08/16/16	-	08/30/16	0.023 ± 0.002
08/30/16	-	09/13/16	0.029 ± 0.002
09/13/16	-	09/27/16	0.025 ± 0.002
09/27/16	-	10/10/16	0.017 ± 0.002
10/10/16	-	10/25/16	0.025 ± 0.002
10/25/16	-	11/08/16	0.023 ± 0.002
11/08/16	-	11/22/16	0.032 ± 0.002
11/22/16	-	12/06/16	0.026 ± 0.002
12/06/16	-	12/20/16	0.028 ± 0.002
12/21/16 ⁶	-	01/04/17	0.027 ± 0.002

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

⁶ Unit found out of service on 12/20/16 and restarted on 12/21/16.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/05/16	-	01/19/16	0.025 ± 0.002
01/19/16	-	02/02/16	0.022 ± 0.002
02/02/16	-	02/16/16	0.017 ± 0.002
02/16/16	-	03/01/16	0.019 ± 0.002
03/01/16	-	03/15/16	0.019 ± 0.002
03/15/16	-	03/29/16	0.017 ± 0.002
03/29/16	-	04/12/16	0.020 ± 0.002
04/12/16	-	04/26/16	0.023 ± 0.002
04/26/16	-	05/10/16	0.013 ± 0.001
05/10/16	-	05/24/16	0.019 ± 0.002
05/24/16	-	06/07/16	0.021 ± 0.002
06/07/16	-	06/21/16	0.019 ± 0.002
06/21/16	-	07/06/16	0.021 ± 0.002
07/06/16	-	07/19/16	0.024 ± 0.002
07/19/16	-	08/02/16	0.029 ± 0.002
08/02/16	-	08/16/16	0.018 ± 0.002
08/16/16	-	08/30/16	0.025 ± 0.002
08/30/16	-	09/13/16	0.027 ± 0.002
09/13/16	-	09/27/16	0.023 ± 0.002
09/27/16	-	10/10/16	0.017 ± 0.002
10/10/16	-	10/25/16	0.023 ± 0.002
10/25/16	-	11/08/16	0.023 ± 0.002
11/08/16	-	11/22/16	0.030 ± 0.002
11/22/16	-	12/06/16	0.028 ± 0.002
12/06/16	-	12/20/16	0.029 ± 0.002
12/20/16	-	01/04/17	0.025 ± 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
2016 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>
01/05/16	-	01/19/16	0.028 ± 0.002
01/19/16	-	02/02/16	0.022 ± 0.002
02/02/16	-	02/16/16	0.015 ± 0.002
02/16/16	-	03/01/16	0.019 ± 0.002
03/01/16	-	03/15/16	0.020 ± 0.002
03/15/16	-	03/29/16	0.015 ± 0.002
03/29/16	-	04/12/16	0.021 ± 0.002
04/12/16	-	04/26/16	0.022 ± 0.002
04/26/16	-	05/10/16	0.012 ± 0.001
05/10/16	-	05/24/16	0.020 ± 0.002
05/24/16	-	06/07/16	0.022 ± 0.002
06/07/16	-	06/21/16	0.019 ± 0.002
06/21/16	-	07/06/16	0.022 ± 0.002
07/06/16	-	07/19/16	0.026 ± 0.002
07/19/16	-	08/02/16	0.028 ± 0.002
08/02/16	-	08/16/16	0.019 ± 0.002
08/16/16	-	08/30/16	0.023 ± 0.002
08/30/16	-	09/13/16	0.026 ± 0.002
09/13/16	-	09/27/16	0.022 ± 0.002
09/27/16	-	10/10/16	0.015 ± 0.002
10/10/16	-	10/25/16	0.023 ± 0.002
10/25/16	-	11/08/16	0.024 ± 0.002
11/08/16	-	11/22/16	0.031 ± 0.002
11/22/16	-	12/06/16	0.028 ± 0.002
12/06/16	-	12/20/16	0.026 ± 0.002
12/20/16	-	01/04/17	0.026 ± 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
2016 Radiological Environmental Monitoring Program**

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

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

<u>Collection Period</u>			<u>Particulate Gross Beta</u> <u>(pCi/m³)</u>
12/07/16	-	12/20/16	0.032 ± 0.002
12/20/16	-	01/04/17	0.026 ± 0.002

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

* The air sampler was added to the ESMP in 2016 and declared operational on December 7, 2016

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

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

BNE Office (COAP01)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	-	03/29/16	< 0.5	< 0.4	< 0.4	82 ± 17	< 41.2	< 11.5
03/29/16	-	06/21/16	< 0.1	< 0.3	< 0.5	141 ± 23	< 46.1	< 21.7
06/21/16	-	09/28/16	< 0.3	< 0.6	< 0.4	130 ± 19	< 59.9	< 23.1
09/28/16	-	12/20/16	< 0.3	< 0.3	< 0.3	94 ± 12	< 34.4	< 22.1

Brendan T. Byrne State Forest (COAP02)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	-	03/29/16	< 0.2	< 0.4	< 0.3	84 ± 18	< 33.6	< 10.5
03/29/16	-	06/21/16	< 0.3	< 0.4	< 0.3	145 ± 22	< 53.2	< 24.7
06/21/16	-	09/27/16	< 0.2	< 0.4	< 0.2	116 ± 18	< 44.6	< 16.4
09/27/16	-	12/20/16	< 0.3	< 0.3	< 0.3	96 ± 11	< 28.6	< 16.0

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

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

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

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

Waretown Municipal Building (OCAP01)

<u>Collection Period</u>		<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	- 03/29/16	< 0.6	< 0.4	< 0.4	108 ± 20	< 38.2	< 25.5
03/29/16	- 06/21/16	< 0.3	< 0.3	< 0.4	146 ± 22	< 57.2	< 20.8
06/21/16	- 09/27/16	< 0.4	< 0.6	< 0.4	105 ± 21	< 45.2	< 12.7
09/27/16	- 12/20/16	< 0.3	< 0.2	< 0.3	91 ± 13	< 28.4	< 14.9

Sands Point Harbor (OCAP02)

<u>Collection Period</u>		<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	- 03/29/16	< 0.4	< 0.4	< 0.3	89 ± 17	< 37.1	< 13.2
03/29/16	- 06/21/16	< 0.5	< 0.5	< 0.4	152 ± 22	< 58.1	< 24.4
06/21/16	- 09/27/16	< 0.3	< 0.3	< 0.3	120 ± 16	< 67.3	< 19.0
09/27/16	- 12/20/16	< 0.3	< 0.3	< 0.2	88 ± 12	< 29.3	< 12.8

Forked River Marina (OCAP03)

<u>Collection Period</u>		<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	- 03/29/16	< 0.3	< 0.3	< 0.3	75 ± 18	< 28.5	< 12.7
03/29/16	- 06/21/16	< 0.5	< 0.4	< 0.3	148 ± 22	< 44.7	< 22.9
06/21/16	- 09/27/16	< 0.2	< 0.2	< 0.2	118 ± 13	< 50.4	< 19.2
09/27/16	- 12/20/16	< 0.3	< 0.3	< 0.3	101 ± 11	< 29.0	< 16.1

Lacey Township Recreation Building (OCAP04)

<u>Collection Period</u>		<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	- 03/29/16	< 0.6	< 0.4	< 0.4	82 ± 18	< 38.6	< 12.0
03/29/16	- 06/21/16	< 0.4	< 0.5	< 0.4	147 ± 23	< 54.9	< 25.7
06/21/16	- 09/27/16	< 0.3	< 0.2	< 0.3	131 ± 19	< 53.6	< 24.5
09/27/16	- 12/20/16	< 0.4	< 0.3	< 0.4	108 ± 13	< 34.6	< 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
2016 Radiological Environmental Monitoring Program**

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

Jersey Central Power and Light Substation (OCAP05)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	-	03/29/16	< 0.4	< 0.4	< 0.3	90 ± 17	< 48.8	< 14.1
03/29/16	-	06/21/16	< 0.6	< 0.5	< 0.4	139 ± 25	< 31.9	< 27.1
06/21/16	-	09/27/16	< 0.5	< 0.3	< 0.3	116 ± 20	< 33.8	< 20.0
09/27/16	-	12/20/16	< 0.3	< 0.3	< 0.2	97 ± 13	< 32.2	< 20.2

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>
12/29/15	-	03/30/16	< 1.0	< 1.2	< 0.8	86 ± 26	< 99.2	< 40.9
03/30/16	-	06/29/16	< 0.8	< 0.9	< 0.5	143 ± 36	< 125.0	< 68.2
06/29/16	-	09/27/16	< 1.0	< 0.8	< 0.6	87 ± 30	< 132.0	< 56.2
09/27/16	-	12/28/16	< 0.8	< 0.7	< 0.6	89 ± 21	< 45.1	< 52.3

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

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	-	03/29/16	< 0.5	< 0.3	< 0.4	101 ± 19	< 27.2	< 7.2
03/29/16	-	06/21/16	< 0.5	< 0.4	< 0.3	145 ± 22	< 58.1	< 24.0
06/21/16	-	09/27/16	< 0.5	< 0.5	< 0.5	118 ± 18	< 58.6	< 14.1
09/27/16	-	12/20/16	< 0.2	< 0.2	< 0.2	92 ± 12	< 34.5	< 13.5

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

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
01/22/16	-	03/29/16	< 0.4	< 0.7	< 0.4	98 ± 19	< 44.0	< 12.8
03/29/16	-	06/21/16	< 0.4	< 0.4	< 0.4	150 ± 24	< 43.7	< 29.6
06/21/16	-	09/27/16	< 0.6	< 0.3	< 0.4	123 ± 22	< 56.5	< 24.4
09/27/16	-	12/20/16	< 0.3	< 0.2	< 0.2	95 ± 13	< 24.1	< 22.2

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.

* The air sampler was added to the ESMP in 2016 and declared operational on January 22, 2016

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

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

Fort Elfsborg Road (AIAP01)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	-	03/29/16	< 0.4	< 0.4	< 0.4	96 ± 17	< 28.3	< 10.4
03/29/16	-	06/21/16	< 0.5	< 0.6	< 0.4	148 ± 22	< 44.8	< 23.0
06/21/16	-	09/27/16	< 0.4	< 0.3	< 0.3	137 ± 20	< 64.2	< 14.7
09/27/16	-	12/20/16	< 0.3	< 0.4	< 0.3	96 ± 11	< 31.6	< 13.9

Plant Access Road (AIAP02)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	-	03/29/16	< 0.3	< 0.5	< 0.4	104 ± 20	< 49.3	< 9.2
03/29/16	-	06/21/16	< 0.4	< 0.5	< 0.3	142 ± 23	< 41.5	< 28.3
06/21/16	-	09/27/16	< 0.3	< 0.3	< 0.2	115 ± 17	< 42.0	< 18.7
09/27/16	-	12/20/16	< 0.4	< 0.3	< 0.2	100 ± 13	< 28.3	< 16.4

Lower Alloways Creek School (AIAP03)

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/22/15	-	03/29/16	< 0.4	< 0.4	< 0.2	84 ± 19	< 33.9	< 10.9
03/29/16	-	06/21/16	< 0.7	< 0.5	< 0.3	156 ± 24	< 34.4	< 18.3
06/21/16	-	09/27/16	< 0.4	< 0.4	< 0.3	112 ± 19	< 48.8	< 18.5
09/27/16	-	12/20/16	< 0.4	< 0.3	< 0.3	102 ± 16	< 35.8	< 28.8

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

<u>Collection Period</u>			<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Be-7</u>	<u>Sr-89</u>	<u>Sr-90</u>
12/07/16	-	12/20/16	< 2.2	< 1.1	< 1.3	101 ± 25	< 94.0	< 78.9

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.

* The air sampler was added to the ESMP in 2016 and declared operational on December 7, 2016

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
04/18/16 - Clams	< 5	< 7	< 6	< 5	1,800 ± 213	< 455	< 632
09/26/16 - Clams	< 4	< 3	< 4	< 3	1,760 ± 128	< 263	< 228

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>
04/18/16 - Clams	< 5	< 6	< 7	< 5	2,010 ± 233	< 432	< 385
04/19/16 – Amer. Eel	< 7	< 8	< 8	< 7	2,370 ± 309	< 460	< 648
09/26/16 - Clams	< 6	< 7	< 6	< 5	1,620 ± 177	< 267	< 312

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>
04/20/16 - Clams	< 7	< 7	< 8	< 7	1,960 ± 259	< 432	< 399
09/28/16 - Clams	< 5	< 5	< 5	< 5	1,730 ± 177	< 277	< 273
09/28/16 - Bluefish	< 6	< 6	< 6	< 6	3,560 ± 363	< 303	< 265

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>
04/19/16 – Striped Bass	< 7	< 7	< 8	< 6	3,670 ± 364	< 369	< 306
04/19/16 - Bluefish	< 7	< 7	< 8	< 7	3,490 ± 361	< 385	< 383
09/25/16 – Crab	< 4	< 4	< 3	< 3	2,300 ± 225	< 287	< 314
09/27/16 – Striped Bass	< 5	< 6	< 5	< 5	3,810 ± 281	< 265	< 349
09/27/16 – Bluefish	< 3	< 3	< 3	< 3	3,610 ± 230	< 397	< 364

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
2016 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>
07/28/16 - Crab	< 7	< 9	< 9	< 7	2,990 ± 253	No	Data ⁷
08/23/16 - Crab	< 5	< 4	< 4	< 4	3,640 ± 226	< 143	< 130

Delaware River – West Bank Upstream (AIFS02)

<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
04/25/16 – Striped Bass	< 5	< 5	< 5	< 4	4,250 ± 379	< 440	< 431
07/28/16 – Crab	< 8	< 8	< 8	< 8	3,540 ± 307	No	Data ⁷
08/24/16 – Crab	< 3	< 3	< 3	< 3	3,190 ± 195	< 139	< 98
10/25/16 – Striped Bass	< 8	< 8	< 9	< 12	4,210 ± 411	< 719	< 705

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>
10/26/16 – Striped Bass	< 10	< 12	< 8	< 11	4,370 ± 520	< 583	< 598

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>
06/14/16 – Oysters	< 3	< 4	< 3	< 3	1,580 ± 158	< 147	< 124
10/14/16 - Oysters	< 2	< 3	< 3	< 3	1,380 ± 99	< 568	< 945

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>
06/14/16 – Oysters	< 5	< 6	< 6	< 5	2,380 ± 173	< 158	< 220
10/17/16 – Oysters	< 2	< 2	< 2	< 2	1,340 ± 98	< 602	< 494

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 Strontium 89/90 analysis results were unavailable due to insufficient sample volume.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
04/18/16	< 156	< 15	< 18	< 20	< 17	< 18	774 ± 258
09/26/16	200 ± 123	< 12	< 12	< 19	< 13	< 14	6,860 ± 744

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>
04/18/16	264 ± 151	< 13	< 5	< 7	26 ± 5	< 6	6,070 ± 669
09/26/16	183 ± 86	< 7	< 7	< 13	14 ± 9	< 8	4,290 ± 445

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>
04/20/16	< 317	< 29	< 11	< 14	< 10	< 13	16,700 ± 1,570
09/26/16	< 157	< 16	< 19	< 29	< 22	< 19	17,300 ± 1,130

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>
04/18/16	< 153	< 15	< 17	< 19	< 17	< 16	1,440 ± 287
09/26/16	128 ± 76	< 5	< 6	< 9	< 7	< 7	1,550 ± 163

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
2016 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>
07/07/16	353 ± 145	< 17	< 16	< 20	< 17	< 16	3,240 ± 379
11/21/16	< 60	< 6	< 7	< 9	< 7	< 7	5,300 ± 359

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

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/05/16	< 106	< 12	< 12	< 14	< 13	< 12	3,240 ± 264
11/15/16	< 89	< 10	< 11	< 13	< 11	< 11	4,670 ± 556

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

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/05/16	< 191	< 21	< 23	< 26	< 22	< 21	9,670 ± 693
11/15/16	< 161	< 17	< 16	< 22	< 16	< 14	9,970 ± 1,020

Delaware River Near South Storm Drain Discharge Line (AIAQ04)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/05/16	< 162	< 17	< 15	< 24	< 18	< 16	4,530 ± 383
11/15/16	< 138	< 13	< 16	< 23	< 15	< 13	5,530 ± 638

West Bank of Delaware River – Upstream (AIAQ05)

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/05/16	< 138	< 17	< 16	< 20	< 16	< 16	14,700 ± 1,500
11/15/16	< 171	< 17	< 17	< 25	< 17	< 16	16,300 ± 1,020

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

<u>Collection Date</u>	<u>Be-7</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>Mn-54</u>	<u>K-40</u>
07/05/16	121 ± 96	< 12	< 11	< 14	20 ± 8	< 10	11,300 ± 1,040
11/15/16	< 138	< 14	< 15	< 22	< 15	< 15	11,300 ± 741

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
2016 Radiological Environmental Monitoring Program**

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

Oyster Creek Onsite Garden - ESE (OCVE01)

<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	06/28/16	< 9	< 12	< 11	< 10	2,170 ± 292
Collards	06/28/16	< 8	< 9	< 8	< 9	2,730 ± 255
Cabbage	07/27/16	< 7	< 7	< 8	< 7	2,350 ± 201
Collards	07/27/16	< 12	< 11	< 11	< 10	3,090 ± 265
Kale	07/27/16	< 9	< 9	< 10	< 9	3,230 ± 267
Cabbage	08/24/16	< 6	< 6	< 6	< 6	1,200 ± 176
Collards	08/24/16	< 5	< 6	< 6	< 6	2,210 ± 255
Kale	08/24/16	< 7	< 9	< 9	< 7	2,900 ± 256
Cabbage	09/20/16	< 13	< 18	< 21	< 15	856 ± 286
Collards	09/20/16	< 12	< 14	< 16	< 17	1,930 ± 389
Kale	09/20/16	< 22	< 32	< 35	< 26	2,490 ± 557
Cabbage	10/19/16	< 7	< 7	< 8	< 7	1,900 ± 198
Collards	10/19/16	< 10	< 7	< 13	< 10	2,870 ± 346
Kale	10/19/16	< 12	< 13	< 12	< 11	3,340 ± 376

Private Farm – NW (OCVE02)

<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	06/28/16	< 8	< 9	< 9	< 8	2,420 ± 292
Collards	06/28/16	< 8	< 9	< 9	< 8	3,920 ± 405
Kale	06/28/16	< 10	< 10	< 12	< 12	3,460 ± 295
Cabbage	07/27/16	< 8	< 8	< 8	< 8	2,610 ± 302
Collards	07/27/16	< 9	< 8	< 9	< 8	3,600 ± 267
Kale	07/27/16	< 12	< 13	< 14	< 12	3,950 ± 448
Cabbage	08/24/16	< 6	< 7	< 7	< 6	2,230 ± 209
Collards	08/24/16	< 5	< 6	< 6	< 5	2,220 ± 205
Kale	08/24/16	< 6	< 6	< 6	< 6	3,510 ± 365
Cabbage	09/20/16	< 17	< 16	< 17	< 24	2,170 ± 435
Collards	09/20/16	< 15	< 20	< 16	< 14	3,320 ± 444
Kale	09/20/16	< 15	< 14	< 16	< 16	3,500 ± 427
Cabbage	10/19/16	< 14	< 16	< 18	< 13	2,050 ± 288
Collards	10/19/16	< 10	< 9	< 11	< 10	3,440 ± 361
Kale	10/19/16	< 18	< 19	< 21	< 19	3,640 ± 561

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
2016 Radiological Environmental Monitoring Program**

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

Oyster Creek Onsite Garden - SE (OCVE03)

<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	06/28/16	< 8	< 9	< 9	< 8	2,990 ± 336
Cabbage	07/27/16	< 11	< 9	< 11	< 10	3,670 ± 312
Collards	07/27/16	< 7	< 7	< 8	< 7	3,280 ± 342
Cabbage	08/24/16	< 7	< 8	< 9	< 7	2,960 ± 380
Cabbage	09/20/16	< 16	< 22	< 17	< 20	2,490 ± 547
Collards	09/20/16	< 12	< 16	< 10	< 13	2,930 ± 471
Collards	10/19/16	< 5	< 6	< 6	< 5	2,830 ± 222

Oyster Creek Onsite Garden - E (OCVE07)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Cabbage	06/28/16	< 8	< 8	< 9	19 ± 12	1,460 ± 214
Collards	06/28/16	< 9	< 10	< 10	26 ± 10	2,110 ± 285
Cabbage	07/27/16	< 10	< 10	< 10	19 ± 16	1,390 ± 220
Collards	07/27/16	< 9	< 10	< 10	19 ± 11	3,130 ± 264
Kale	07/27/16	< 9	< 9	< 9	36 ± 9	3,360 ± 428
Cabbage	08/24/16	< 5	< 5	< 5	< 6	896 ± 122
Collards	08/24/16	< 9	< 9	< 9	16 ± 11	2,120 ± 313
Kale	08/24/16	< 8	< 9	< 9	28 ± 10	2,890 ± 281
Cabbage	09/20/16	< 17	< 20	< 17	< 15	1,720 ± 393
Collards	09/20/16	< 20	< 18	< 17	< 19	3,040 ± 465
Kale	09/20/16	< 24	< 31	< 30	< 32	2,160 ± 450
Cabbage	10/19/16	< 16	< 12	< 14	< 17	2,720 ± 390
Collards	10/19/16	< 17	< 17	< 15	< 21	3,020 ± 483
Kale	10/19/16	< 21	< 17	< 21	< 27	4,070 ± 540

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
2016 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>
Asparagus	05/16/16	< 7	< 8	< 8	< 8	2,270 ± 260
Corn	08/01/16	< 6	< 7	< 7	< 6	1,910 ± 239

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>
Corn	07/26/16	< 6	< 6	< 6	< 6	1,950 ± 220
Cabbage	07/26/16	< 8	< 8	< 9	< 9	2,230 ± 192
Peppers	07/26/16	< 6	< 5	< 6	< 6	1,830 ± 200
Tomato	07/26/16	< 5	< 6	< 5	< 5	1,840 ± 196

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>
Cabbage	08/31/16	< 8	< 9	< 9	< 10	1,980 ± 231
Cabbage	10/31/16	< 27	< 28	< 20	< 26	3,030 ± 629

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	07/25/16	< 11	< 10	< 11	< 11	5,050 ± 352
Cabbage	08/31/16	< 11	< 13	< 12	< 13	2,420 ± 345

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
2016 Radiological Environmental Monitoring Program**

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

Private Farm – NNE (AIVE18)

<u>Sample</u>	<u>Collection Date</u>	<u>Co-58</u>	<u>Co-60</u>	<u>Cs-134</u>	<u>Cs-137</u>	<u>K-40</u>
Asparagus	05/02/16	< 6	< 7	< 7	< 6	2,500 ± 265

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	08/24/16	< 7	< 7	< 7	< 7	1,490 ± 203
Tomato	08/24/16	< 7	< 6	< 6	< 7	2,130 ± 202

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>
Collards	10/31/16	< 25	< 23	< 28	< 24	3,790 ± 620
Cabbage	11/30/16	< 12	< 14	< 12	< 12	3,680 ± 388

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>
Peach	08/01/16	< 8	< 10	< 9	< 9	2,320 ± 295

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
2016 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>
02/29/16	< 2.55	< 0.53	1,900 ± 176	< 0.81	< 0.99
06/06/16	< 2.63	< 0.68	1,480 ± 141	< 0.99	< 0.82
09/26/16	< 1.62	< 0.32	1,230 ± 81	< 1.24 ⁸	< 1.34
12/05/16	< 1.75	< 0.54	1,490 ± 95	< 0.88	< 0.90

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
2016 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>
01/04/16	< 1.70	< 0.48	1,450 ± 132	< 0.85	< 0.89
02/08/16	< 2.27	< 0.77	1,900 ± 177	< 0.88	< 0.97
03/07/16	< 2.39	< 0.39	1,390 ± 135	< 0.93	< 0.65
04/04/16	< 2.65	< 0.71	1,470 ± 140	< 0.88	< 0.90
05/02/16	< 2.44	< 0.61	1,330 ± 128	< 0.92	< 0.84
06/07/16	< 2.14	< 0.62	1,410 ± 136	< 0.79	< 0.83
07/13/16	< 2.31	< 0.52	1,490 ± 138	< 0.44	< 0.62
08/08/16	< 2.42	< 0.66	1,300 ± 92	< 0.72	< 0.74
08/21/16	< 1.53	< 0.44	1,320 ± 134	< 0.86	< 1.00
09/06/16	< 2.60	< 0.59	1,390 ± 109	< 0.87	< 0.79
10/03/16	< 1.61	< 0.71	1,180 ± 80	< 0.63	< 0.79
11/15/16	< 1.80	< 0.45	1,390 ± 94	< 0.67	< 0.91
12/05/16	< 1.69	< 0.46	1,280 ± 85	< 0.91	< 0.64

Private Farm – NE (AIMI02)

<u>Collection Date</u>	<u>Cs-137</u>	<u>I-131</u>	<u>K-40</u>	<u>Sr-89</u>	<u>Sr-90</u>
01/04/16	< 1.62	< 0.52	1,350 ± 135	< 0.78	< 0.85
02/08/16	< 2.33	< 0.53	1,540 ± 150	< 0.99	< 0.95
03/07/16	< 2.07	< 0.42	1,280 ± 122	< 0.92	< 0.95
04/04/16	< 1.92	< 0.81	1,730 ± 158	< 0.94	< 0.72
05/02/16	< 2.22	< 0.56	1,390 ± 133	< 0.94	< 0.79
06/08/16	< 2.15	< 0.63	1,390 ± 130	< 0.66	< 0.85
07/13/16	< 2.14	< 0.59	1,370 ± 138	< 0.82	< 0.57
08/08/16	< 2.47	< 0.62	1,350 ± 131	< 0.83	< 0.57
08/21/16	< 2.42	< 0.49	1,140 ± 94	< 0.78	< 0.74
09/06/16	< 1.74	< 1.02*	1,270 ± 130	< 0.99	< 0.79
10/03/16	< 1.97	< 0.63	1,230 ± 92	< 0.63	< 0.75
11/15/16	< 1.99	< 0.52	1,300 ± 91	< 0.75	< 0.86
12/05/16	< 1.89	< 0.52	1,210 ± 81	< 0.75	< 0.64

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
2016 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>
01/04/16	< 1.59	< 0.54	1,360 ± 125	< 0.81	< 0.86
02/08/16	< 2.08	< 0.61	1,360 ± 130	< 0.81	< 0.90
03/07/16	< 2.01	< 0.53	1,540 ± 144	< 0.94	< 0.62
04/04/16	< 2.04	< 0.59	1,780 ± 162	< 0.91	< 0.89
05/02/16	< 2.15	< 0.65	1,450 ± 137	< 0.92	< 0.87
06/06/16	< 2.05	< 0.61	1,400 ± 132	< 0.89	< 0.87
07/13/16	< 2.43	< 0.46	1,450 ± 138	< 0.44	< 0.89
08/08/16	< 1.99	< 0.59	1,410 ± 133	< 0.97	< 0.99
08/21/16	< 1.51	< 0.42	1,350 ± 128	< 0.76	< 0.90
09/06/16	< 2.20	< 0.61	1,420 ± 92	< 0.99	< 0.91
10/03/16	< 1.69	< 0.59	1,320 ± 89	< 0.77	< 0.76
11/15/16	< 1.70	< 0.42	1,370 ± 93	< 0.88	< 0.86
12/05/16	< 1.61	< 0.46	1,270 ± 83	< 0.94	< 0.45

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
2016 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>
04/18/16	< 1.54	< 1.79	< 1.60	< 1.65	< 181	< 0.89
09/26/16	< 1.60	< 1.61	< 1.65	< 1.50	< 240	< 0.93

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>
01/07/16 – 01/28/16	< 1.46	< 1.59	< 1.48	< 1.47	< 202	< 0.95
02/04/16 – 02/24/16	< 2.03	< 1.93	< 2.26	< 2.06	< 175	< 0.77
03/03/16 – 03/31/16	< 1.56	< 1.64	< 1.47	< 1.53	< 204	< 0.68
04/08/16 – 04/27/16	< 1.44	< 1.64	< 1.50	< 1.41	< 218	< 0.97
05/04/16 – 05/24/16	< 1.55	< 1.51	< 1.54	< 1.51	< 239	< 0.84
06/02/16 – 06/29/16	< 1.74	< 1.59	< 1.74	< 1.68	< 220	< 0.80
07/08/16 – 07/27/16	< 1.75	< 1.93	< 1.83	< 1.68	< 194	< 0.97
08/05/16 – 08/31/16	< 1.18	< 1.06	< 1.27	< 1.16	< 207	< 0.86
09/09/16 – 09/26/16	< 1.73	< 1.57	< 1.82	< 1.71	< 229	< 0.76
10/04/16 – 10/26/16	< 1.19	< 1.41	< 1.19	< 1.13	< 203	< 0.86
11/03/16 – 11/30/16	< 1.39	< 1.20	< 1.48	< 1.32	< 242	< 0.94
12/09/16 – 12/28/16	< 1.35	< 1.75	< 1.50	< 1.48	< 208	< 0.51

Results in picoCuries per Liter (pCi/L)

* Samples are collected as a semi-annual grab sample

** Samples are collected as a weekly grab and composited for a monthly sample

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

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

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>
04/18/16	< 1.71	< 1.83	< 1.75	< 1.72	< 184	< 0.71
09/26/16	< 1.71	< 1.67	< 1.70	< 1.79	< 234	< 0.84

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>
01/07/16 – 01/28/16	< 1.57	< 1.65	< 1.57	< 1.45	< 195	< 0.97
02/03/16 – 02/23/16	< 1.88	< 2.10	< 2.12	< 1.86	< 177	< 0.66
03/03/16 – 03/30/16	< 1.83	< 1.76	< 1.76	< 1.70	< 204	< 0.89
04/07/16 – 04/28/16	< 1.41	< 1.42	< 1.54	< 1.55	< 225	< 0.75
05/04/16 – 05/24/16	< 1.95	< 1.87	< 2.18	< 1.95	< 240	< 0.89
06/02/16 – 06/29/16	< 2.14	< 1.92	< 1.99	< 1.86	< 238	< 0.80
07/08/16 – 07/28/16	< 1.58	< 1.58	< 1.60	< 1.50	< 192	< 0.89
08/05/16 – 08/31/16	< 1.57	< 1.65	< 1.59	< 1.46	< 206	< 0.88
09/09/16 – 09/26/16	< 1.62	< 1.44	< 1.62	< 1.55	< 232	< 0.74
10/04/16 – 10/26/16	< 1.20	< 1.20	< 1.35	< 1.28	< 195	< 0.82
11/03/16 – 11/30/16	< 1.35	< 1.36	< 1.48	< 1.42	< 237	< 0.93
12/09/16 – 12/28/16	< 1.74	< 1.64	< 1.85	< 1.61	< 204	< 0.56

Results in picoCuries per Liter (pCi/L)

* Samples are collected as a semi-annual grab sample

** Samples are collected as a weekly grab and composited for a monthly sample

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/06/16	< 2.52	< 2.69	< 3.12	< 2.77	< 208	< 0.88
01/20/16	< 1.55	< 1.74	< 1.64	< 1.72	< 228	< 0.97
02/02/16	< 2.15	< 2.17	< 2.45	< 2.36	< 248	< 0.91
02/17/16	< 1.65	< 1.64	< 1.70	< 1.61	< 236	< 0.87
03/08/16	< 1.89	< 2.34	< 2.09	< 2.02	< 222	< 0.82
03/22/16	< 1.62	< 1.80	< 1.81	< 1.78	< 193	< 0.83
04/10/16	< 1.66	< 1.81	< 1.74	< 1.74	2,980 ± 617 ⁸	< 0.87
04/21/16	< 1.78	< 1.83	< 2.06	< 2.05	2,340 ± 500 ⁸	< 0.74
05/03/16	< 1.35	< 1.40	< 1.51	< 1.47	< 245	< 0.80
05/17/16	< 2.02	< 2.26	< 2.27	< 1.96	< 293	< 0.45
06/06/16	< 1.57	< 1.69	< 1.81	< 1.72	< 221	< 0.75
06/25/16	< 1.88	< 2.31	< 2.38	< 2.17	< 223	< 0.85
07/08/16	< 2.49	< 2.77	< 2.93	< 2.63	< 223	< 0.62
07/20/16	< 1.79	< 1.94	< 1.90	< 1.87	< 230	< 0.74
08/03/16	< 1.53	< 1.44	< 1.68	< 1.96	1,040 ± 256 ⁸	< 0.86
08/19/16	< 1.25	< 1.30	< 1.41	< 1.42	< 237	< 0.84
09/07/16	< 1.42	< 1.63	< 1.59	< 1.57	< 259	< 0.93
09/23/16	< 1.16	< 1.37	< 1.33	< 1.15	< 263	< 0.80
10/06/16	< 1.27	< 1.33	< 1.58	< 1.37	< 234	< 0.58
10/21/16	< 1.22	< 1.53	< 1.57	< 1.55	< 241	< 0.90
11/07/16	< 1.50	< 1.30	< 1.35	< 1.17	< 206	< 0.92
11/23/16	< 1.41	< 1.39	< 1.40	< 1.24	< 211	< 0.77
12/06/16	< 1.40	< 1.45	< 1.65	< 1.68	< 218	< 0.81
12/19/16	< 1.54	< 1.94	< 1.62	< 1.41	< 199	< 0.71

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

⁸ 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 2,980 pCi/L, 2,340 pCi/L, and 1,040 pCi/L are approximately 15, 12, and 5 percent respectively of the applicable limit.

**New Jersey Department of Environmental Protection
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**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>
01/06/16	< 1.80	< 2.17	< 1.86	< 1.88	< 210	< 0.86
01/20/16	< 1.54	< 1.86	< 1.89	< 1.91	< 224	< 0.87
02/02/16	< 1.80	< 2.09	< 2.09	< 1.88	< 237	< 0.86
02/17/16	< 1.60	< 1.77	< 1.78	< 1.76	< 229	< 0.86
03/08/16	< 1.57	< 1.82	< 1.74	< 1.74	< 223	< 0.83
03/22/16	< 1.72	< 1.63	< 1.89	< 1.81	< 191	< 0.78
04/10/16	< 2.24	< 2.12	< 2.75	< 2.54	< 279	< 0.84
04/21/16	< 1.59	< 1.72	< 1.66	< 1.67	< 213	< 0.57
05/03/16	< 1.59	< 1.73	< 1.74	< 1.77	< 244	< 0.91
05/17/16	< 1.61	< 1.70	< 1.71	< 1.67	< 283	< 0.44
06/06/16	< 1.72	< 1.82	< 1.77	< 2.19	< 224	< 0.83
06/25/16	< 2.02	< 1.75	< 2.20	< 2.04	< 224	< 0.84
07/08/16	< 1.62	< 1.50	< 1.58	< 1.53	< 222	< 0.58
07/20/16	< 1.68	< 1.82	< 1.67	< 1.79	< 233	< 0.58
08/03/16	< 1.69	< 1.73	< 1.83	< 1.89	< 195	< 0.87
08/19/16	< 1.28	< 1.32	< 1.36	< 1.42	< 232	< 0.82
09/07/16	< 1.63	< 1.86	< 1.96	< 1.80	< 262	< 0.92
09/23/16	< 1.18	< 1.16	< 1.26	< 1.15	< 252	< 0.87
10/06/16	< 1.68	< 1.64	< 1.66	< 1.63	< 233	< 0.56
10/21/16	< 1.52	< 1.47	< 1.51	< 1.41	< 239	< 0.83
11/07/16	< 1.86	< 1.71	< 1.91	< 1.96	< 202	< 0.92
11/23/16	< 1.40	< 1.38	< 1.57	< 1.43	< 208	< 0.75
12/06/16	< 1.42	< 1.84	< 1.66	< 1.58	< 212	< 0.86
12/19/16	< 1.78	< 1.89	< 1.89	< 2.14	< 197	< 0.58

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/06/16	< 1.71	< 1.65	< 1.87	< 1.73	< 210	< 0.77
01/20/16	< 2.03	< 2.07	< 2.40	< 2.03	< 228	< 0.86
02/02/16	< 2.06	< 2.36	< 2.43	< 2.18	< 246	< 0.87
02/17/16	< 1.67	< 2.30	< 2.44	< 2.05	< 235	< 0.79
03/08/16	< 1.68	< 1.84	< 1.67	< 1.79	< 224	< 0.83
03/22/16	< 2.18	< 2.36	< 2.08	< 2.26	< 215	< 0.83
04/10/16	< 1.92	< 2.39	< 2.29	< 2.28	< 270	< 0.82
04/21/16	< 1.61	< 2.13	< 1.97	< 1.75	< 204	< 0.99
05/03/16	< 1.47	< 1.52	< 1.59	< 1.51	< 257	< 0.83
05/17/16	< 1.89	< 2.07	< 1.84	< 2.00	< 287	< 0.68
06/06/16	< 2.04	< 2.06	< 2.25	< 2.15	< 218	< 0.91
06/25/16	< 2.29	< 2.81	< 2.52	< 2.72	< 221	< 0.79
07/08/16	< 2.63	< 2.53	< 2.68	< 2.73	< 231	< 0.56
07/20/16	< 1.85	< 2.05	< 2.17	< 2.09	< 232	< 0.82
08/03/16	< 1.43	< 1.32	< 1.53	< 1.49	< 195	< 0.87
08/19/16	< 1.31	< 1.36	< 1.42	< 1.39	< 232	< 0.84
09/07/16	< 1.62	< 1.73	< 1.68	< 1.71	< 257	< 0.88
09/23/16	< 1.14	< 1.47	< 1.46	< 1.40	< 269	< 0.86
10/06/16	< 1.18	< 1.43	< 1.53	< 1.33	< 237	< 0.77
10/21/16	< 1.70	< 1.55	< 1.56	< 1.60	< 233	< 0.80
11/07/16	< 1.28	< 1.27	< 1.28	< 1.32	< 202	< 0.96
11/23/16	< 1.40	< 1.25	< 1.43	< 1.92	< 210	< 0.90
12/06/16	< 1.37	< 1.37	< 1.62	< 1.60	< 218	< 0.86
12/19/16	< 1.36	< 1.12	< 1.36	< 1.22	< 207	< 0.81

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/27/16	< 2.07	< 2.22	< 2.14	< 2.13	< 199	< 0.74
04/26/16	< 2.03	< 2.23	< 2.25	< 2.30	< 207	< 0.73
07/20/16	< 1.58	< 1.77	< 1.86	< 1.72	< 257	< 0.83
10/20/16	< 1.52	< 1.80	< 1.96	< 1.74	< 215	< 0.90

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>
01/27/16	< 1.96	< 1.84	< 1.79	< 1.96	< 198	< 0.87
05/04/16	< 1.45	< 1.92	< 1.78	< 1.75	< 246	< 0.81
07/20/16	< 2.22	< 1.80	< 2.16	< 2.14	< 256	< 0.89
10/20/16	< 1.45	< 1.66	< 1.54	< 1.41	< 217	< 0.88

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>
01/27/16	< 1.77	< 1.80	< 1.83	< 1.60	< 200	< 0.88
04/27/16	< 1.89	< 2.14	< 2.06	< 2.05	< 203	< 0.65
07/20/16	< 1.56	< 1.78	< 1.93	< 1.84	< 264	< 0.88
10/20/16	< 1.43	< 1.71	< 1.69	< 1.53	< 216	< 0.91

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>
01/27/16	< 1.62	< 1.64	< 1.90	< 2.31	< 198	< 0.73
04/27/16	< 1.64	< 1.75	< 1.73	< 2.22	< 205	< 0.84
07/20/16	< 2.05	< 1.90	< 2.16	< 1.93	< 243	< 0.85
10/20/16	< 1.52	< 1.65	< 1.84	< 1.84	< 218	< 0.87

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
01/27/16	< 1.70	< 1.60	< 1.80	< 1.85	< 202	< 0.90
04/27/16	< 1.50	< 1.45	< 1.64	< 1.51	< 207	< 0.51
07/20/16	< 1.61	< 1.67	< 1.71	< 1.83	< 268	< 0.89
10/20/16	< 1.43	< 1.52	< 1.66	< 2.09	< 219	< 0.89

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>
01/27/16	< 1.79	< 1.84	< 1.78	< 1.79	< 205	< 0.74
04/27/16	< 1.70	< 1.87	< 1.88	< 1.73	< 204	< 0.87
07/20/16	< 1.74	< 1.62	< 1.75	< 1.71	< 261	< 0.83
10/20/16	< 1.77	< 1.81	< 1.99	< 1.73	< 221	< 0.91

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>
02/02/16	< 1.72	< 1.73	< 1.87	< 2.01	< 237	< 0.86
04/27/16	< 1.88	< 1.87	< 2.07	< 1.82	< 200	< 0.68
07/20/16	< 1.58	< 1.78	< 1.87	< 1.72	< 254	< 0.88
10/20/16	< 1.38	< 1.40	< 1.50	< 1.41	< 208	< 0.89

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>
01/27/16	< 2.13	< 2.18	< 2.24	< 2.18	< 203	< 0.88
04/27/16	< 1.73	< 1.78	< 1.74	< 1.56	< 205	< 0.77
07/20/16	< 1.59	< 1.69	< 1.68	< 1.64	< 261	< 0.89
10/20/16	< 1.36	< 1.37	< 1.55	< 1.57	< 219	< 0.85

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>
01/27/16	< 2.16	< 2.37	< 2.34	< 2.22	< 194	< 0.91
04/27/16	< 1.42	< 1.53	< 1.59	< 1.51	< 204	< 0.74
07/20/16	< 1.86	< 1.82	< 2.08	< 1.96	< 248	< 0.86
10/20/16	< 1.39	< 1.41	< 1.58	< 1.41	< 215	< 0.88

Results in picoCuries per Liter (pCi/L)

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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	11.7	5.3	10.9	4.0	13.6	5.2	19.7	3.2
CO02	Brendan T. Byrne State Forest, New Lisbon, NJ	8.2	9.2	7.8	6.3	7.4	4.3	14.5	1.9

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
2016 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	7.5	9.6	8.2	6.5	7.7	1.7	12.6	7.9
2	Ocean Twp. Municipal Building	11.0	9.1	9.2	2.8	8.5	3.7	14.9	3.4
3	Sewage Pumping Station, Forked River	8.9	8.0	9.9	0.3	8.0	6.8	14.9	0.8
4	Twin River Station, Forked River	7.6	5.4	7.3	4.5	9.1	6.4	13.2	3.9
5	Sewage Pumping Station, Ocean Twp.	8.3	2.3	9.0	2.9	11.4	4.0	14.0	2.3
6	Oyster Creek, Gate #2, Forked River	8.5	4.6	9.7	6.5	12.9	6.5	14.8	1.8
7	Finninger Farm, Forked River	7.3	2.7	8.3	6.5	10.0	4.3	12.4	2.9
8	Ocean Co. Memorial Cemetery, Waretown	7.2	3.3	8.6	3.3	10.0	4.3	12.6	2.1
9	Oyster Creek Building 17, Forked River	8.0	4.4	9.9	2.3	9.1	*	12.9	5.7
10	Sheffield & Derby Rd, Forked River	7.9	5.1	9.1	2.1	9.7	13.7	13.0	2.9
11	Lakeside Drive, Forked River	8.3	6.8	10.0	4.2	9.6	4.5	14.1	3.0
12	Forked River Game Farm, Forked River	8.7	5.0	9.4	7.0	11.0	4.9	12.8	4.6

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)

* CV cannot be determined from one (1) element

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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	8.4	1.4	8.6	4.5	10.3	6.4	12.0	3.7
14	Sands Pt. Park, Dock Ave., Waretown	9.4	6.9	10.2	2.2	11.9	1.6	13.8	2.4
15	Recreation Center, Waretown	6.0	5.1	9.3	1.9	9.7	5.3	11.7	10.8
16	North Access Rd., Forked River	9.6	3.3	12.5	5.4	12.1	3.5	11.9	5.0
20	Third Avenue, Barnegat Light	7.4	**	8.1	3.6	8.4	5.9	11.9	1.4
21	Rose Hill Road & Barnegat Blvd	7.8	1.6	9.8	4.0	9.2	3.7	11.6	3.8
22	Bay Way & Clairmore Avenue	8.1	**	10.3	3.2	9.4	7.9	11.5	6.7
23	Island Beach State Park, Parking Lot A5	6.9	2.4	9.1	1.9	7.4	**	10.3	2.7
24	Forked River Site Access Rd. (N)*	10.1	6.3	13.3	4.2	10.7	9.6	15.0	5.2
25	Forked River Site Access Rd. (NNW)*	11.5	1.9	16.9	7.7	13.1	6.4	16.4	9.6
26	Forked River Site Access Rd. (NW)*	11.4	1.5	15.4	3.6	13.1	2.3	14.0	2.0
27	Southern Area Stores Fence, FR Site*	13.4	6.1	23.8	2.4	17.8	5.7	19.5	3.8

Results are reported in units of milliroentgens (mR).

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

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

* TLD Stations 24 through 27 were added to the ESMP during 2016. Initial deployment was during the first quarter of 2016.

** CV cannot be determined from one (1) element

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

**Oyster Creek
Thermoluminescent Dosimetry Data
Quarterly Results**

Station	Location	<u>1st Quarter</u>		<u>2nd Quarter</u>		<u>3rd Quarter</u>		<u>4th Quarter</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
28	Southern Area Stores, FR Site (WSW)*	12.3	16.5	23.5	10.8	16.7	2.5	18.8	1.9
29	Southern Area Stores Access Rd (SSW)*	8.0	9.1	17.5	2.0	12.6	1.3	13.8	4.8
30	Southern Area Stores Access Road (S)*	8.5	6.6	17.5	1.1	11.5	8.9	14.1	2.9
31	Southern Area Stores Access Road (SSE)*	7.9	20.3	13.9	1.5	10.9	6.0	14.1	6.2
32	U.S. Route 9 (ESE) Forked River, NJ*	5.5	2.7	10.3	6.2	7.7	5.9	11.6	3.4
33	U.S. Route 9 (NE) Forked River, NJ*	5.7	3.8	10.1	3.3	7.4	1.6	11.9	4.5
34	Garden St Pkwy Svc. Forked River, NJ*	6.4	9.2	11.5	5.6	8.6	7.6	12.7	4.1
35	U.S. Route 9 & Harbor Inn Rd, Bayville, NJ*	7.9	17.5	11.3	3.8	8.4	1.5	12.0	4.5
36	Orlando Dr. & Penguin Ct., Forked River, NJ*	8.8	9.4	10.4	3.9	**	**	11.5	5.1
37	Bay Pkwy, Sands Point, Waretown, NJ*	8.3	4.9	9.5	7.1	9.8	3.3	10.8	3.4
38	Hightide & Bonita Dr., Waretown, NJ*	9.8	3.6	11.7	3.8	10.0	1.7	12.8	2.1
39	Brook & School St. Barnegat, NJ*	8.5	13.9	10.9	2.1	9.2	2.0	11.9	9.6

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).

* TLD Stations 28 through 39 were added to the ESMP during 2016. Initial deployment was during the first quarter of 2016.

** TLD badges were lost

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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*	8.7	5.2	10.0	1.9	9.3	**	12.9	2.2
41	County Rt. 532, Waretown, NJ*	6.5	13.6	7.7	11.7	9.8	2.2	11.2	4.9
42	Lacey Rd. WEST, Forked River, NJ*	7.3	2.3	11.6	7.3	12.7	10.0	13.1	2.4
43	U.S. Route 9 (E) Forked River, NJ*	7.8	14.7	10.2	14.3	11.5	3.9	12.3	4.4

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)

* TLD Stations 40 through 43 were added to the ESMP during 2016. Initial deployment was during the first quarter of 2016.

** CV cannot be determined from one (1) element

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

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

Station	Location	<u>1st Quarter</u>		<u>2nd Quarter</u>		<u>3rd Quarter</u>		<u>4th Quarter</u>	
		<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>	<u>Result</u>	<u>%CV</u>
1	Access Road – Security Checkpoint	10.4	2.2	7.9	0.5	11.8	5.1	11.9	6.8
2	Poplar Road, Lower Alloways	10.4	7.0	9.7	3.7	12.8	3.4	12.7	6.4
3	Money and Eagle Island Road	11.5	1.6	10.5	4.9	13.5	5.8	13.6	6.5
4	Ft. Elfsborg / Hancocks – East	12.2	1.0	10.0	6.9	14.5	6.6	13.9	2.5
5	Ft. Elfsborg / Hancocks – West	13.2	6.8	15.9	**	18.7	2.1	21.8	8.0
6	Stathems Neck Road	11.1	3.2	5.0	2.5	13.0	2.7	16.7	3.2
7	Stow Neck Road Lower Alloways	9.3	4.1	3.5	15.4	10.4	4.3	14.0	1.8
8	Alloways Creek Neck Road - Middle	9.0	2.7	2.4	12.9	11.0	2.7	14.9	1.4
9	Alloways Creek Neck Road - North	12.0	3.0	9.2	6.7	15.1	3.4	19.3	2.6
10	Abbotts Farm Road	9.0	**	6.8	4.4	9.6	3.6	14.7	1.0
11	PSEG Education Center/EOF	8.7	2.6	8.5	5.6	11.2	3.0	17.6	2.3

Results are reported in units of milliroentgens (mR)

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

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

** CV cannot be determined from one (1) element

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>
12	Onsite Access Rd N Sector*	10.5	11.4	13.0	8.6	14.0	4.4	19.5	2.8
13	Onsite Laydown Area - NNE Sector*	8.7	3.8	11.4	2.6	9.9	4.4	18.2	3.5
14	Onsite Utility Pole NE Sector*	7.8	16.6	11.1	6.6	10.1	2.0	16.0	1.3
15	Onsite Hope Creek Road – ENE Sector*	9.6	1.0	12.6	2.9	10.0	5.7	16.8	3.2
16	Onsite Parking Lot ESE Sector*	11.6	9.0	14.8	12.2	12.0	4.6	20.4	6.7
18	Bayside Road Bayside, NJ*	10.7	3.6	12.3	2.8	8.6	4.4	17.2	1.3

Results are reported in units of milliroentgens (mR)

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

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

* TLD Stations 12 through 16 and Station 18 were added to the ESMP during 2016. Initial deployment was during the first quarter of 2016. Station 17 has currently not been established.

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>Global</u>		<u>NJDEP</u>		<u>Global</u>		<u>NJDEP</u>		<u>Global</u>		<u>NJDEP</u>		<u>Global</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	8.3	2.3	10.9	6.5	9.0	2.9	10.1	0.0	11.4	4.0	10.7	3.5	14.0	2.3	10.3	2.6
7	Finninger Farm, OCNGS Forked River	7.3	2.7	9.6	8.7	8.3	6.5	8.6	4.1	10.0	4.3	9.3	6.1	12.4	2.9	8.8	3.6
13	Restrooms, Lakeside Dr. Forked River	8.4	1.4	9.5	2.6	8.6	4.5	9.1	0.0	10.3	6.4	10.0	4.5	12.0	3.7	10.0	5.4
21	Rose Hill and Barnegat Rd Barnegat Twp.	7.8	1.6	10.0	4.6	9.8	4.0	9.9	2.8	9.2	3.7	10.4	3.8	11.6	3.8	9.6	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
2016 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>Global</u>		<u>NJDEP</u>		<u>Global</u>		<u>NJDEP</u>		<u>Global</u>		<u>NJDEP</u>		<u>Global</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	10.4	2.2	10.8	6.6	7.9	0.5	9.9	5.1	11.8	5.1	11.8	2.6	11.9	6.8	11.7	3.0
2	Poplar Road, Lower Alloways	10.4	7.0	12.4	7.9	9.7	3.7	11.0	4.4	12.8	3.4	12.5	5.1	12.7	6.4	12.0	2.9
3	Money and Eagle Island Roads	11.5	1.6	12.2	4.5	10.5	4.9	13.0	3.5	13.5	5.8	13.7	2.9	13.6	6.5	13.7	2.8
5	Ft. Elfsborg/ Hancocks - West	13.2	6.8	15.8	3.5	15.9	**	15.8	2.0	18.7	2.1	17.8	3.5	21.8	8.0	17.5	2.3

Results are reported in units of milliroentgens (mR)

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

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

** CV cannot be determined from one (1) element

**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 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>Global</u>		<u>NJDEP</u>		<u>Global</u>		<u>NJDEP</u>		<u>Global</u>		<u>NJDEP</u>		<u>Global</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	9.3	4.1	10.1	4.2	3.5	15.4	9.2	2.9	10.4	4.3	10.7	3.5	14.0	1.8	11.0	4.9
9	Alloways Creek Neck Road - North	12.0	3.0	11.9	2.6	9.2	6.7	12.4	5.1	15.1	3.4	13.8	5.5	19.3	2.6	13.4	2.1
11	PSEG Ed. Center/EOF Salem City	8.7	2.6	11.3	3.7	8.5	5.6	11.9	4.5	11.2	3.0	12.8	2.4	17.6	2.3	12.8	3.0

Results are reported in units of milliroentgens (mR)

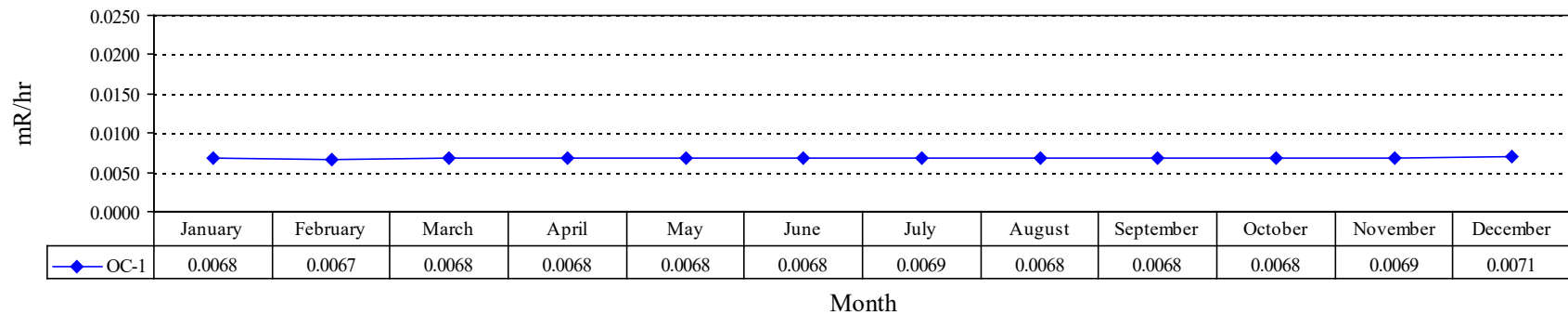
CV is the coefficient of variation; the ratio of the standard deviation to the mean, and is normally reported as a percentage

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

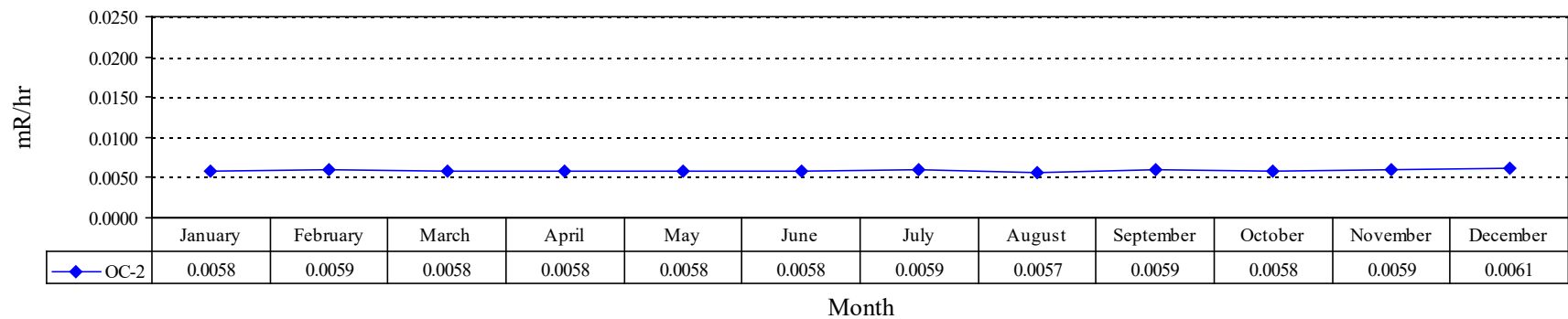
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2016 Radiological Environmental Monitoring Program**

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

**OC 1
2016 Ambient Radiation Levels**



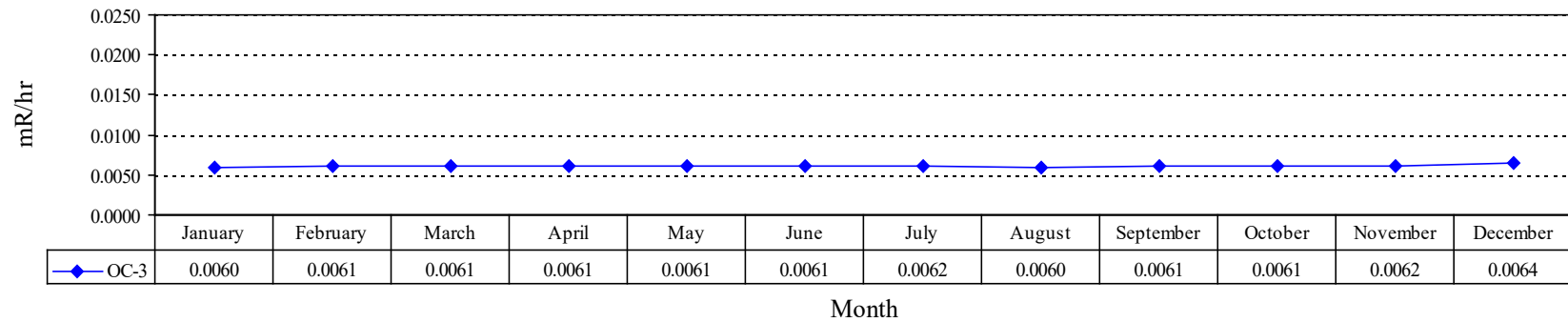
**OC 2
2016 Ambient Radiation Levels**



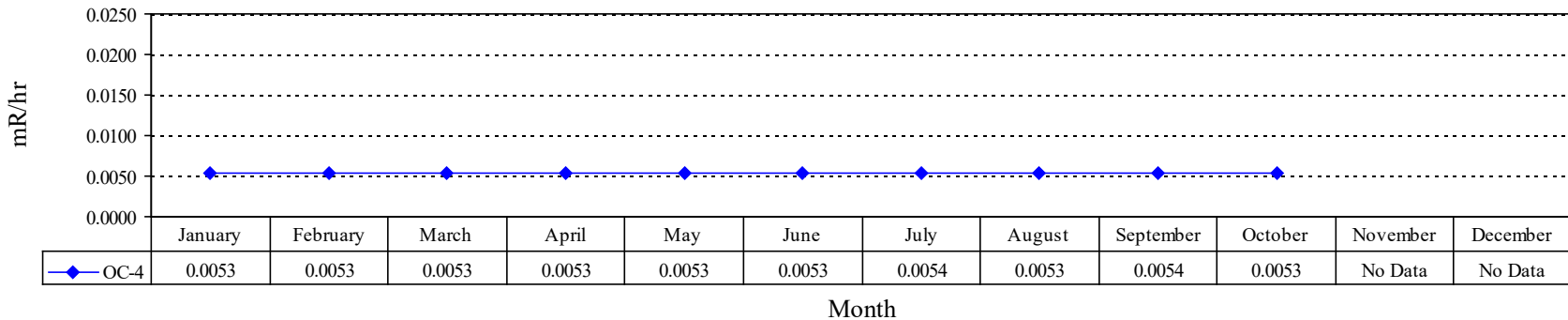
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2016 Radiological Environmental Monitoring Program**

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

**OC 3
2016 Ambient Radiation Levels**



**OC 04
2016 Ambient Radiation Levels**

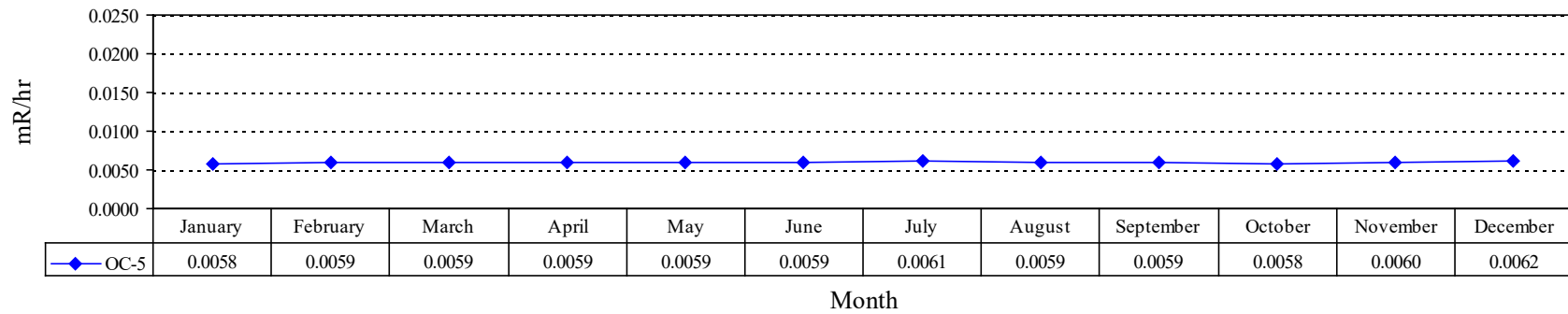


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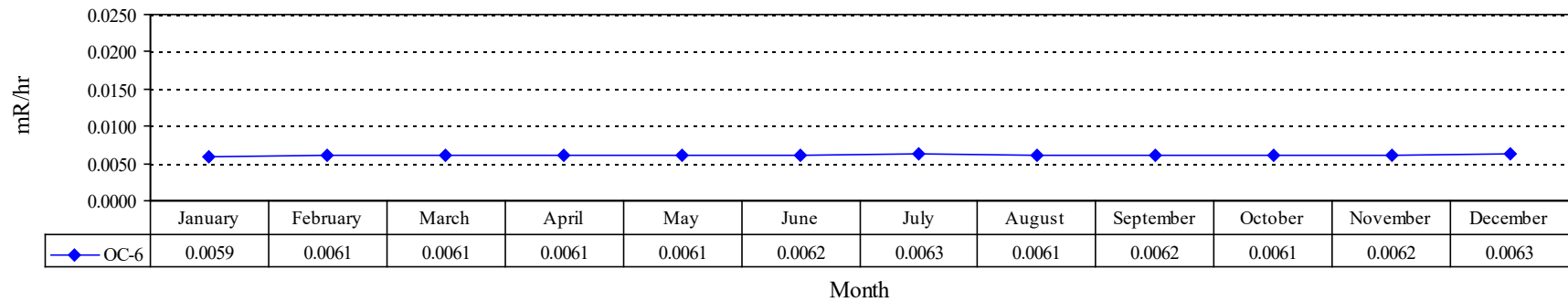
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Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

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

**OC 5
2016 Ambient Radiation Levels**



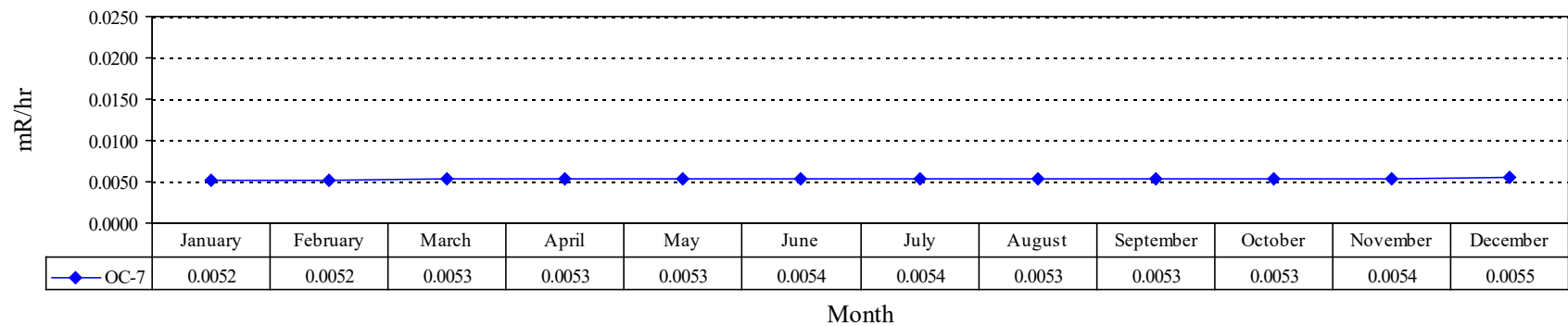
**OC 6
2016 Ambient Radiation Levels**



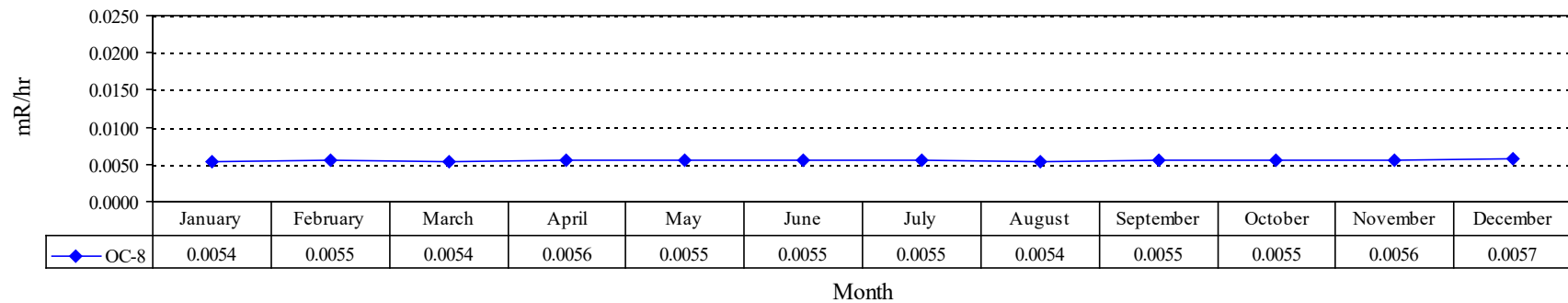
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2016 Radiological Environmental Monitoring Program**

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

**OC 7
2016 Ambient Radiation Levels**



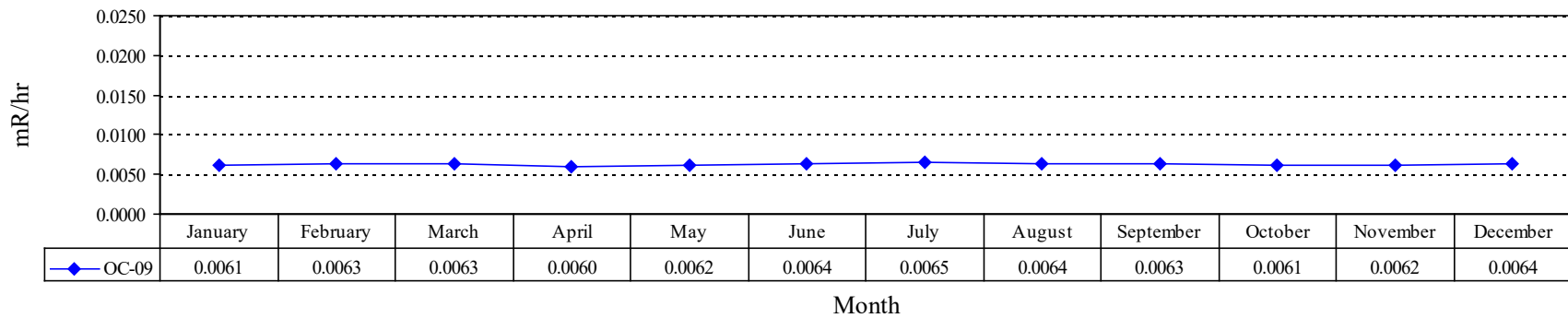
**OC 8
2016 Ambient Radiation Levels**



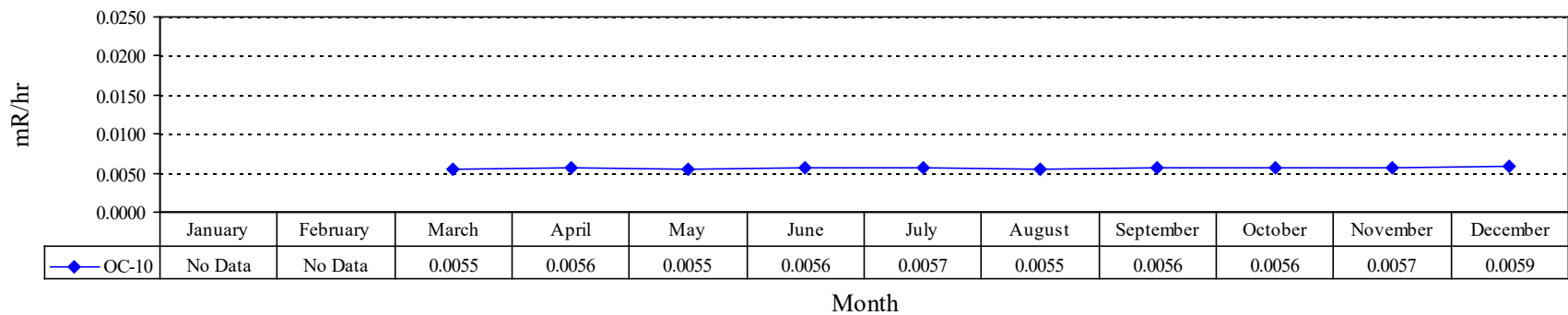
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2016 Radiological Environmental Monitoring Program**

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

**OC 9
2016 Ambient Radiation Levels**



**OC 10
2016 Ambient Radiation Levels**

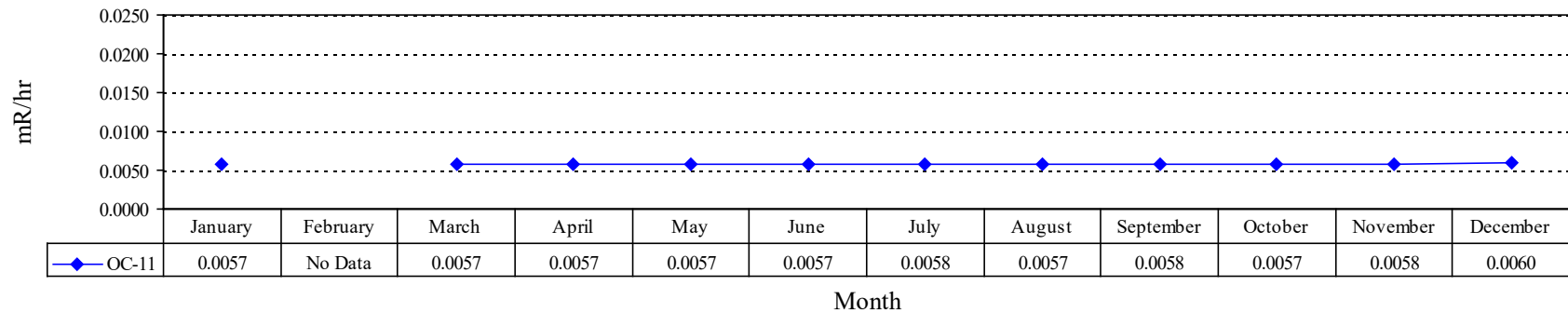


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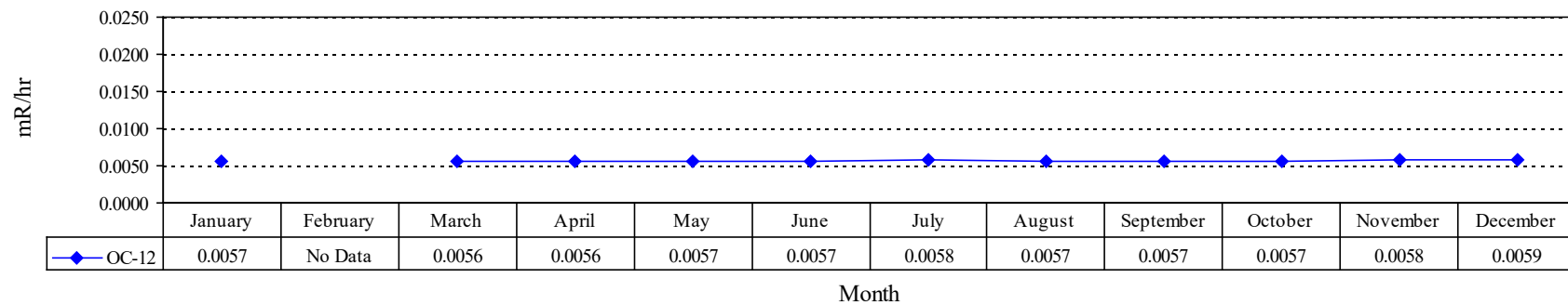
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Oyster Creek – Continuous Radiological Environmental Surveillance Telemetry (CREST) Data

**OC 11
2016 Ambient Radiation Levels**



**OC 12
2016 Ambient Radiation Levels**

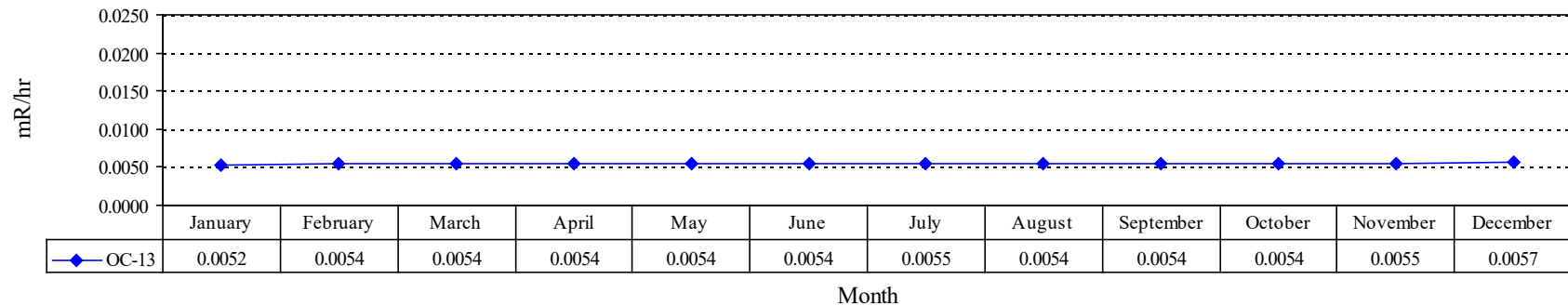


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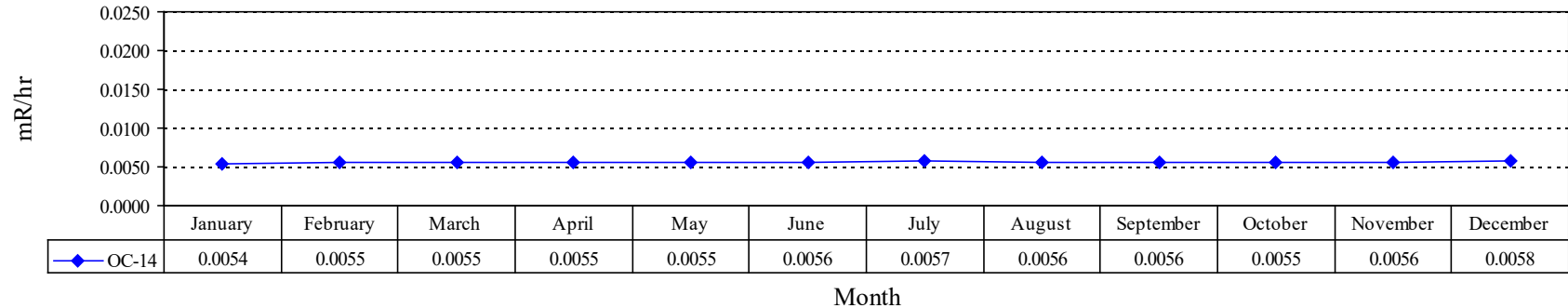
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2016 Radiological Environmental Monitoring Program**

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

**OC 13
2016 Ambient Radiation Levels**



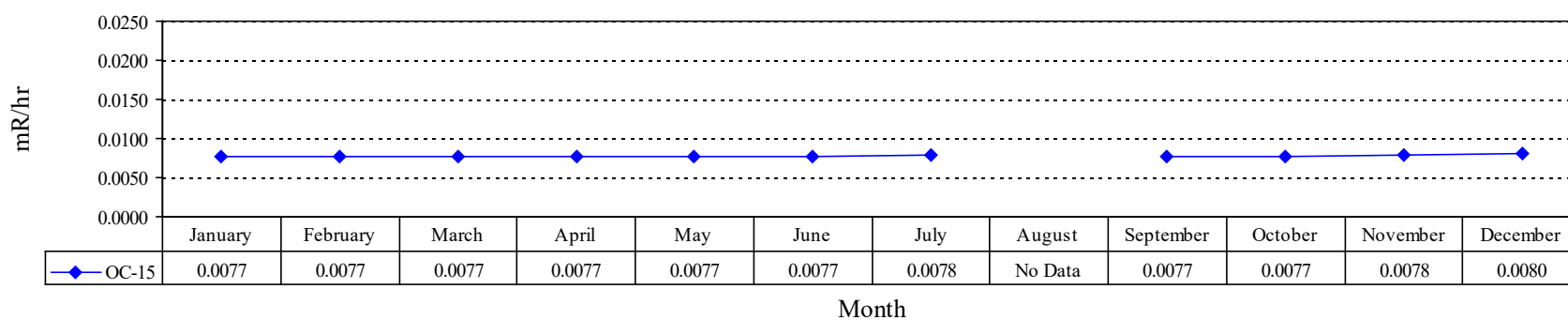
**OC 14
2016 Ambient Radiation Levels**



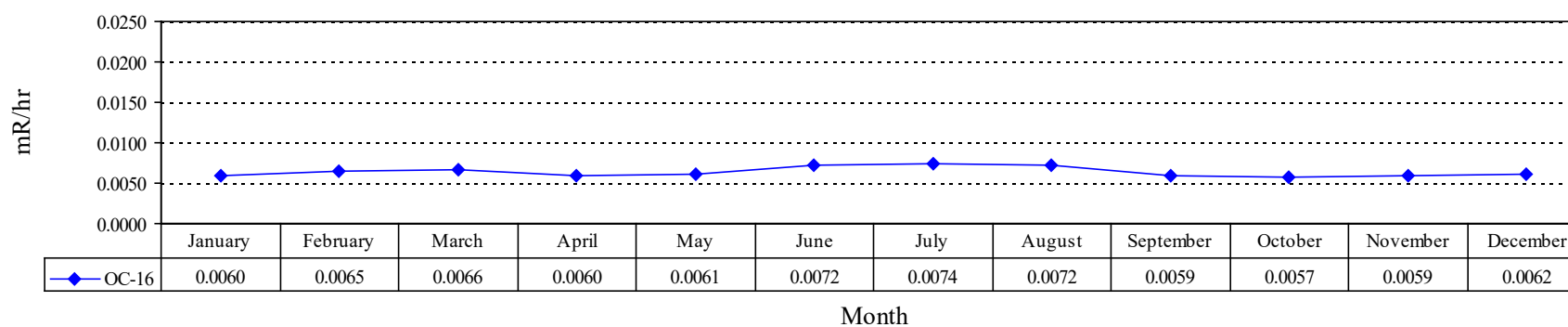
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Oyster Creek – Continuous Radiological Environmental Surveillance Telemetry (CREST) Data

**OC 15
2016 Ambient Radiation Levels**



**OC 16
2016 Ambient Radiation Levels**

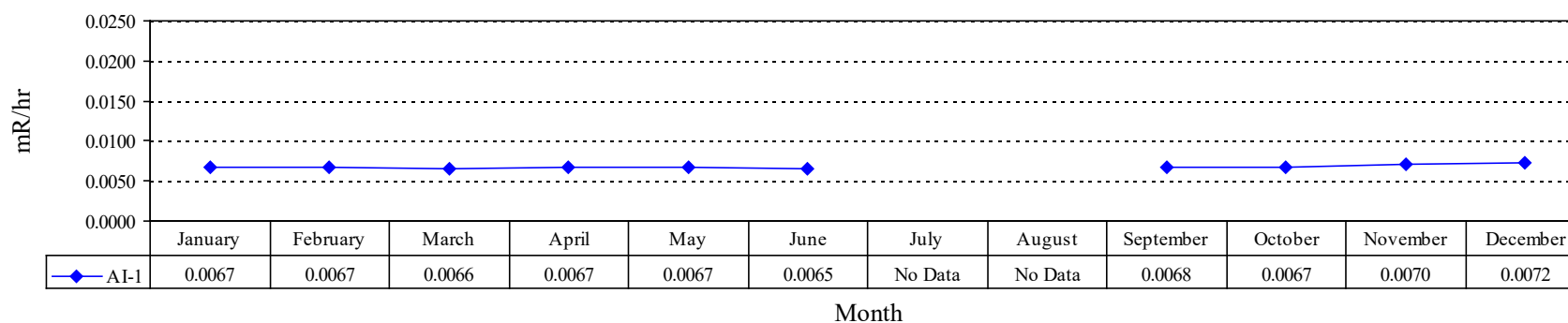


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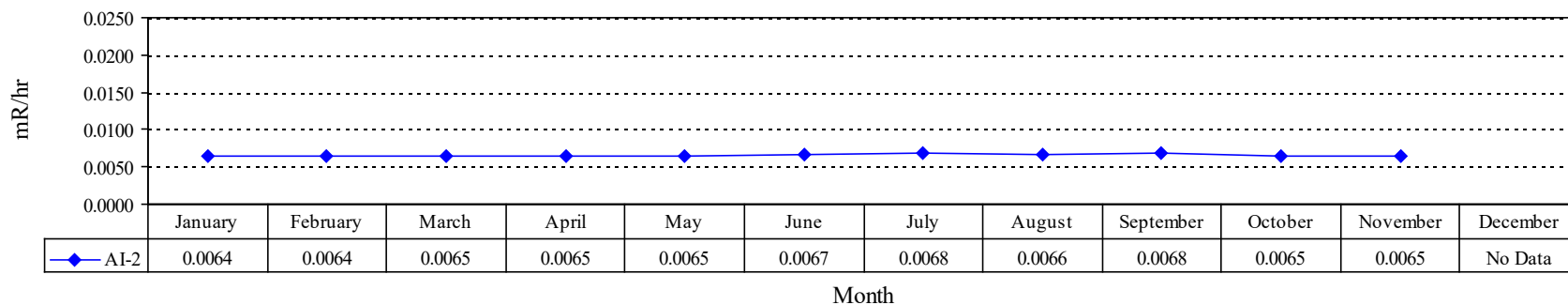
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

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

**AI 1
2016 Ambient Radiation Levels**



**AI 2
2016 Ambient Radiation Levels**

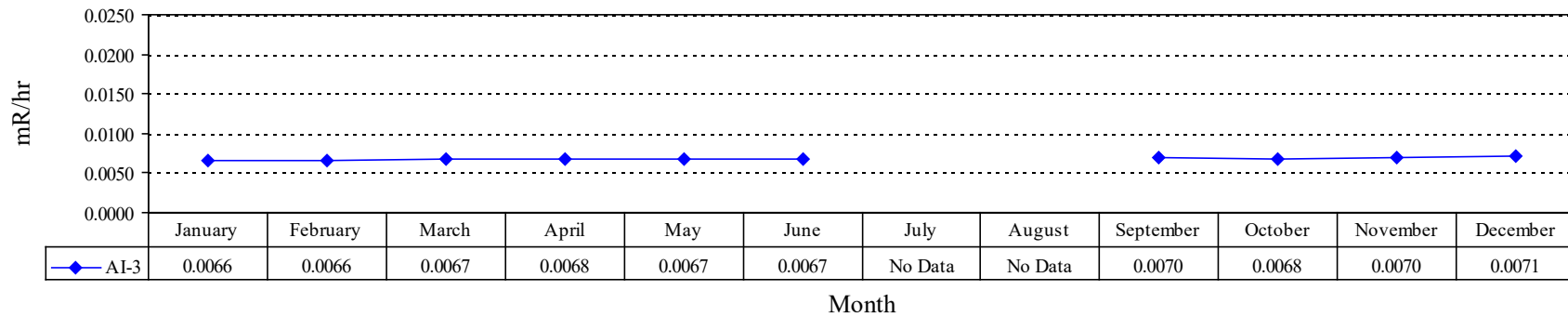


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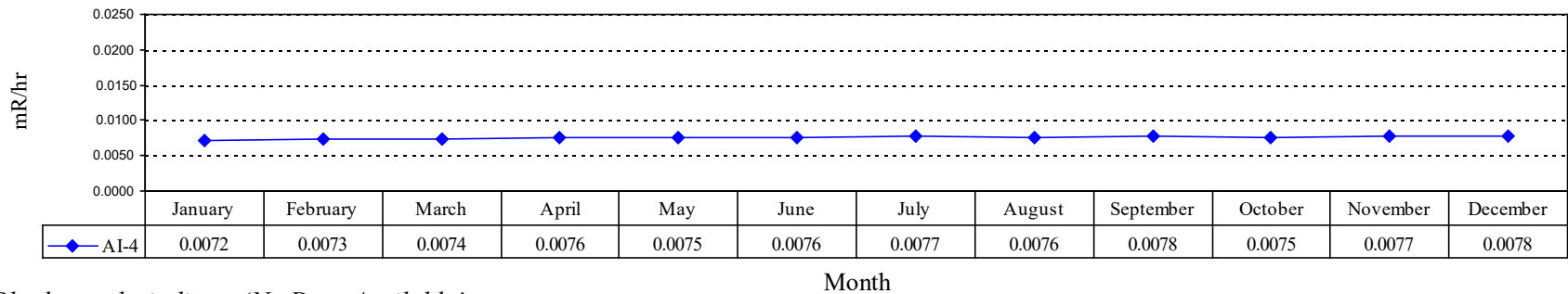
**New Jersey Department of Environmental Protection
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2016 Radiological Environmental Monitoring Program**

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

**AI 3
2016 Ambient Radiation Levels**



**AI 4
2016 Ambient Radiation Levels**

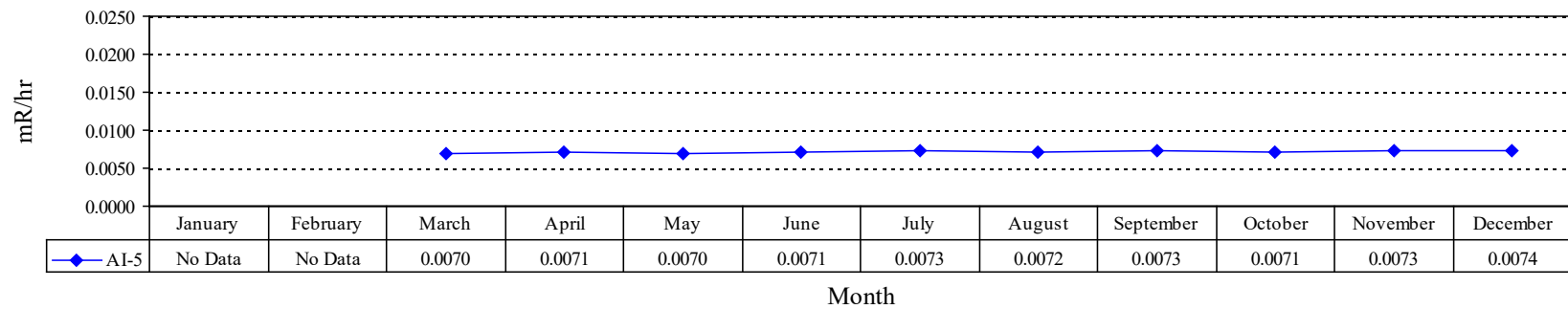


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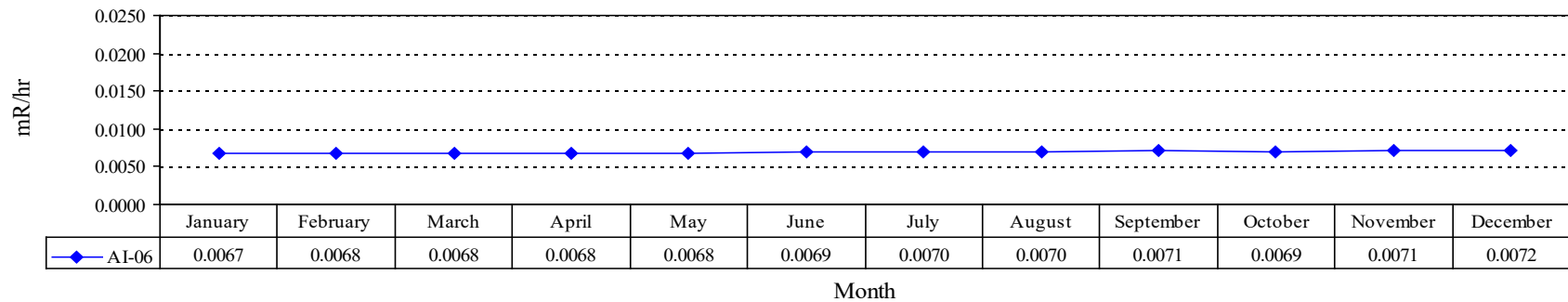
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Salem/Hope Creek – Continuous Radiological Environmental Surveillance Telemetry (CREST) Data

**AI 5
2016 Ambient Radiation Levels**



**AI 6
2016 Ambient Radiation Levels**

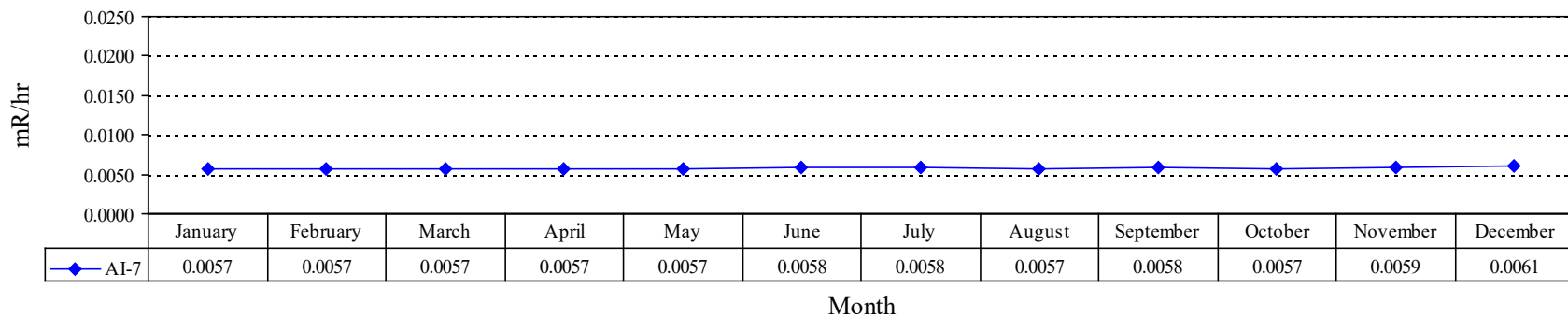


Blank months indicate 'No Data Available'

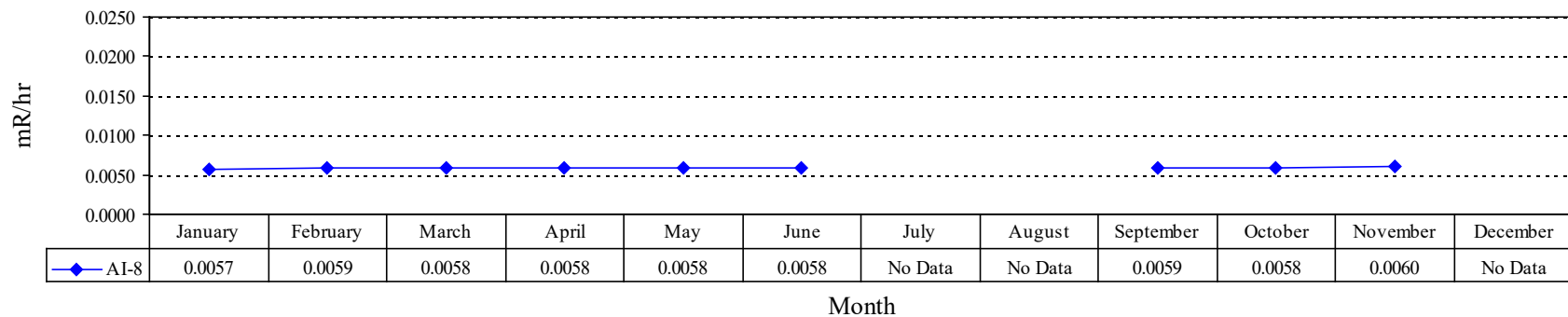
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

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

**AI 7
2016 Ambient Radiation Levels**



**AI 8
2016 Ambient Radiation Levels**

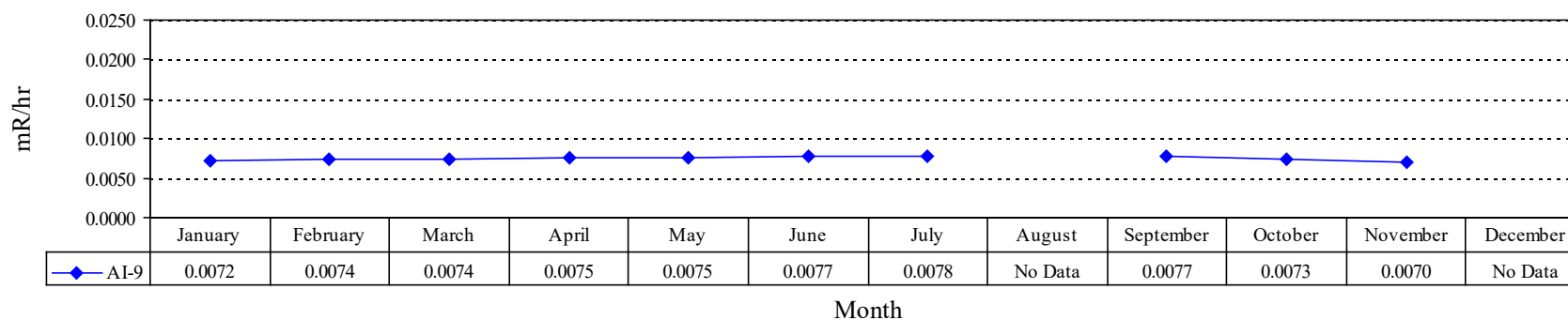


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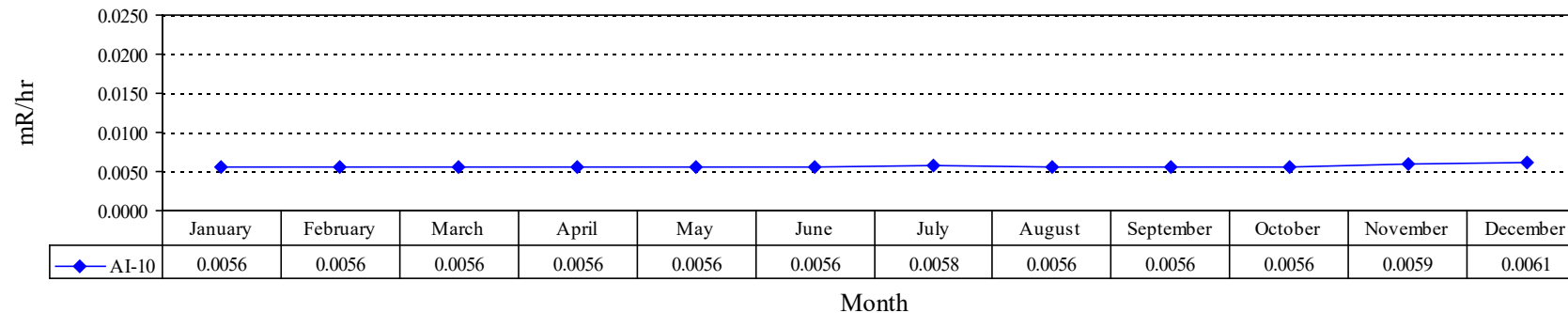
**New Jersey Department of Environmental Protection
Bureau of Nuclear Engineering
2016 Radiological Environmental Monitoring Program**

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

**AI 9
2016 Ambient Radiation Levels**



**AI 10
2016 Ambient Radiation Levels**



Blank months indicate 'No Data Available'