MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

# MICHIGAN

# RADIATION ENVIRONMENTAL MONITORING

# PROGRAM REPORT

# SUPPLEMENT 6

# 2014-2016

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**Prepared by**

**Michigan Department of Environment, Great Lakes and Energy**
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## Executive Summary

Recognizing that the use of nuclear energy to produce electricity could have an adverse impact on public health and the environment, the state of Michigan established the Michigan Radiation Environmental Monitoring Program (MREMP) in 1958 to monitor the environs near the nuclear power plant sites to assure that Michigan's citizens and environment are not adversely impacted. Environmental samples in the form of air particulates, air vapors, milk, surface water, and direct radiation are taken from various sites in Michigan and analyzed to determine if any radiological effects due to nuclear power plants can be detected.

Historically, sample results from all media have indicated elevated levels of radioactivity, but the vast majority of these elevated levels are attributable to past atmospheric testing of nuclear weapons. Analytical results that could be attributed to nuclear power plant operations have only been detected on-site at the plants and were within the allowable U.S. Nuclear Regulatory Commission (U.S. NRC) limits. No analytical results attributable to nuclear power plant operations have been detected off site at any of the plants (see *MREMP Report 1958-1996, MREMP Report Supplement 1 1997-1999, MREMP Report Supplement 2 2000-2001, MREMP Report Supplement 3 2002-2004, MREMP Report Supplement 4 2005-2007, and MREMP Report Supplement 5 2008-2013*).

This report (*MREMP Report Supplement 6, 2014-2016*) contains the results of radiation environmental monitoring for the years 2014-2016, extending by three years the previously reported data. Although a few samples were found to contain elevated levels of radioactivity attributable to nuclear power plant operations, these samples were collected within the nuclear plant site property and did not represent a regulatory, public health, or environmental concern. The influence of atmospheric fallout from past testing of nuclear weapons has not been apparent for many in years in environmental samples, and monitoring levels from all off-site samples now fluctuate in the range of natural background radiation.

The results of the MREMP for the years 2014-2016 indicate that no public health or environmental radiological impact was detected in the off-site environs of Michigan's nuclear power plants due to the operation of nuclear power reactors.

## Introduction

### Program History

In 1958 the Michigan Department of Health established the Michigan Radiation Environmental Monitoring Program (MREMP) to determine the impact of nuclear power plants on the environment and public health. Specific statutory authority for an environmental monitoring program was provided to the Michigan Department of Public Health in 1972 with the enactment of 1972 PA 305. Later, the Public Health Code

(1978 PA 368) provided this authority in Section 13518 of Part 135 of the Code. In April 1996 the MREMP was transferred to the Michigan Department of Environmental Quality (MDEQ) by Executive Order 1996-1, along with other radioactive material radiation protection programs. The MREMP monitoring program has been in continuous operation since its inception in 1958.

This report is the sixth supplement to the *Michigan Radiation Environmental Monitoring Program Report (MREMP Report)* 1958-1996 published in May 1998. *The MREMP Report Supplement 1 1997-1999* was published in August 2000; Supplement 2 was published in August 2002; Supplement 3 was published in August 2005 by the MDEQ, Supplement 4 was published in August 2008 by the MDEQ, and Supplement 5 was published in 2019 by EGLE. This Supplement 6 extends the monitoring period that began in 1958 through the years 2014 to 2016. As a sequel, this supplement report will focus on the 2014-2016 monitoring results and refer to the original report, and previous supplements, for discussions of historical trends and pre-operational baseline results.

## Nuclear Power Plants in Michigan

Big Rock Point

Consumers Energy Company's Big Rock Point plant, a boiling water reactor (BWR) near Charlevoix, was the first operational nuclear power plant in Michigan. The 240-megawatt thermal (MWt) plant achieved initial criticality on September 27, 1962 and commenced electrical power production before the end of the year. On August 29, 1997, which was the thirty-fifth anniversary of the Atomic Energy Commission issuance of an operating license to Big Rock Point, the plant was shut down for the final time. Site decommissioning activities began shortly after the final shut down and was completed in 2006. The Big Rock Point plant was under MREMP surveillance since July 1960.

Palisades

Located near South Haven, Michigan, is Entergy Nuclear Operations, Inc. Palisades plant, a 2530 MWt pressurized water reactor (PWR), that went into operation in 1971. The Palisades plant has been in essentially continuous operation since 1971 except for two lengthy periods: one in the mid-1970s and another in the fall of 1990, when extensive steam generator repair and/or steam generator replacement took place. MREMP surveillance of the plant was initiated in 1968.

D.C. Cook

The American Electric Power Company's D.C. Cook plant is a two-reactor facility located near Bridgman, Michigan. D.C. Cook I, a 3250 MWt PWR, commenced operation in early 1975 and has operated essentially continuously through September 1997. D.C. Cook II, a 3411 MWt PWR, commenced electrical power production in 1978 and, except for a steam generator replacement in 1988, has operated essentially continuously through September 1997. American Electric Power Company shut down both reactors of the D.C. Cook plant in September 1997 due to concerns raised regarding the long-term reliability of reactor and reactor containment cooling systems. Both reactors were restarted during 2000 (Unit II in June 2000 and Unit I in December 2000) and operated essentially continuously since their restart. MREMP surveillance of the D.C. Cook plant was initiated in 1971.

Fermi 2

Fermi 2, Michigan's newest nuclear power plant, is located on the same site as was the original Enrico Fermi nuclear power plant near Monroe, Michigan. The 3430 MWt BWR achieved initial criticality in June 1985 but, due to a variety of problems, did not start reliable electrical power production until November 1988. Fermi 2 experienced a routine operational history until Christmas Day in 1993, when a failure of one of the low-pressure turbines caused major damage to the turbine and the main generator. After a thirteen-month outage to repair the damaged nonnuclear plant components and clean up the affected areas of the plant, the plant was once again operational and has been in routine power production mode ever since. Since the Fermi 2 plant is adjacent to the Enrico Fermi plant, MREMP surveillance of the plant was

technically initiated in 1958. Monitoring at the plant site was scaled back in 1975, with the completion of the major portion of the original Enrico Fermi plant decommissioning and expanded in the fall of 1983 just prior to the scheduled initial date of operation for Fermi 2.

### Environmental Monitoring Phases

The purpose of the MREMP is to assess the environmental impact from operating nuclear power plants in Michigan and to determine any public health impact that may be the result of plant operations. This program also provides verification of the plant-operated effluent monitoring system for each nuclear plant, as well as its associated radiological environmental monitoring network, and serves as an in-place sampling network in the event of an accidental release. Atmospheric, terrestrial, aquatic, and direct radiation pathways are monitored to determine the potential impact of nuclear power plant operations on the environment and public health.

Pre-operational environmental samples are collected and analyzed to provide background data on natural radioactivity and/or man-made sources of radioactivity in the vicinity of a planned operational nuclear power plant. Data accumulated during the pre-operational period establishes a baseline with which to compare operational measurements. For all four nuclear power plant sites in Michigan, at least two years of data was collected during the pre-operational period. In addition to the pre-operational monitoring conducted in the environs of Michigan's four nuclear power plant sites, a background reference station is operated in Lansing, Michigan, for data comparison.

The operational phase of the radiological environmental monitoring program is a natural extension of the pre-operational monitoring program. Once the reactor becomes operational, environmental samples are collected from the network of sampling sites established for the pre-operational phase, and individual and cumulative measurement results are compared to baseline data to discern any trends that may be indicative of the impact of plant operations. Measurement results from each of the nuclear plant areas are also compared to the results from the Lansing reference station, as well as the results from the other plant environs to assure that data anomalies and/or trends are adequately assessed. The Palisades, D.C. Cook, and Fermi 2 plants are currently in this phase of monitoring.

The post-operational phase of the radiological environmental monitoring program is initiated at the conclusion of the operational phase. When the plant is shut down for decommissioning, environmental sampling continues at the existing locations. Individual and cumulative measurement results are evaluated to detect any trends that may be indicative of the impact of plant activities during the decommissioning. During this final phase of environmental monitoring, the number of samples and the frequency of sample collection are often reduced as the plant decommissioning nears completion. The Big Rock Point plant has essentially completed this phase of monitoring with only direct radiation monitoring continuing at the Interim Spent Fuel Storage Installation.

## Atmospheric Monitoring

### Sampling Network

The atmospheric monitoring network consists of three to five sampling stations in the vicinity of each of the three Michigan nuclear power plant sites and a background reference station in Lansing. At each station a highly efficient vacuum pump continuously draws ambient air, first through a particulate filter and then through a charcoal filter, to collect air particulates and air vapors, respectively. Particulate filters are analyzed for gross beta activity three days after the end of sample collection to allow for the decay of the radon daughter products, and charcoal filters are analyzed as soon as possible after the end of sample collection for the presence of radioactive iodine isotopes. Radiation atmospheric monitoring in Michigan was initiated in November 1958, with the first sampling station at the Fermi plant site. Air monitoring stations were added to the Fermi site vicinity as well as setting up multiple sampling stations in the vicinities of the

Big Rock Point (July 1960), Palisades (November 1968), and D.C. Cook (September 1971) plant sites. The background reference station in Lansing became operational in February 1961. Air monitoring stations were discontinued in the vicinity of the Big Rock Point site in September 2006, with the completion of the plant decommissioning project.

**Figure 1**

**Quarterly Average Air Particulate Activity**
**Fermi Nuclear Power Plant Site**

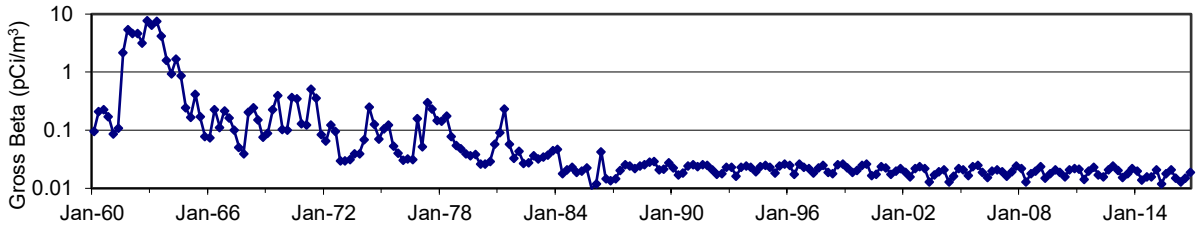



**Figure 2**

**Quarterly Average Air Particulate Activity**
**Lansing Background Reference Site**

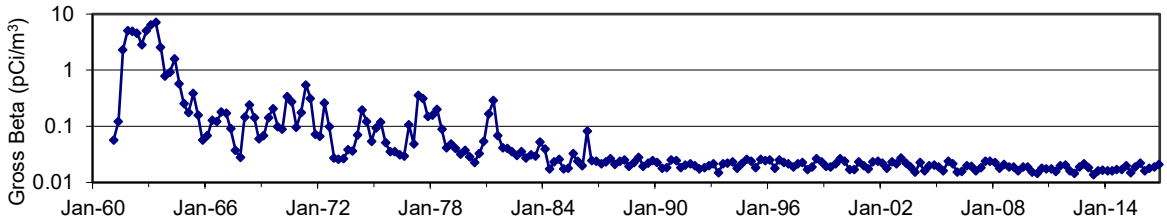



**Figure 3**

**Quarterly Average Air Particulate Activity**
**Palisades Nuclear Power Plant Site**

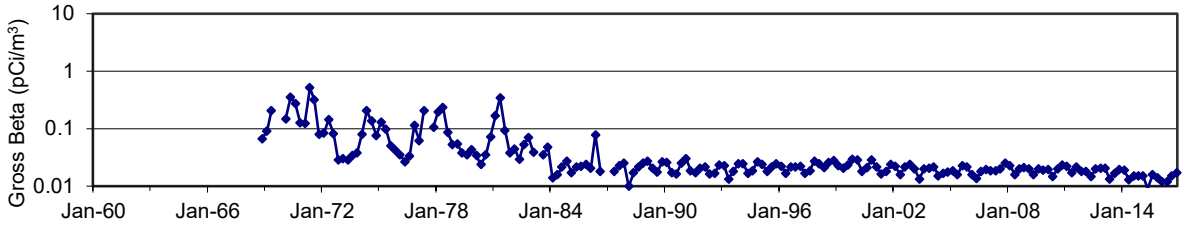
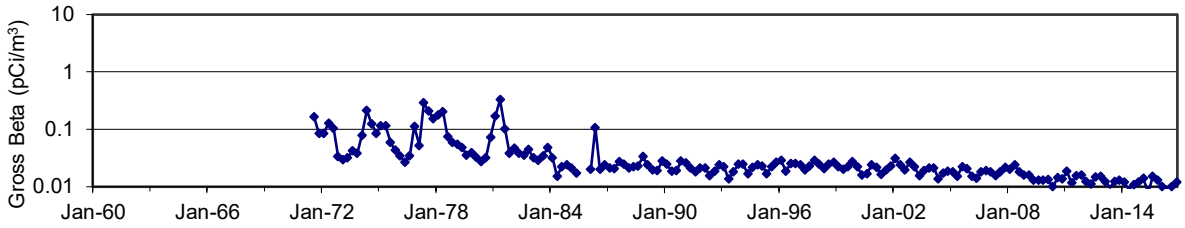


**Figure 4**

**Quarterly Average Air Particulate Activity**
**D.C. Cook Nuclear Power Plant Site**




## Atmospheric Monitoring 2014-2016

The air particulate monitoring results from the three nuclear power plant areas and the Lansing background reference station were very consistent with recent years. During the 2014-2016 monitoring period, air particulate levels remained at natural background levels, with no discernable increasing or decreasing trends. The air monitoring results in tabular form are presented in Appendix A.

### Palisades

Three atmospheric monitoring stations were operated in the environs of the Palisades plant during 2014-2016 period: one at the reactor site (AP4), the second is north of the plant in South Haven (AP1), and the third is southeast of the plant near Covert (AP3). There were no distinguishable peaks or trends in the gross beta results for all three stations during the three-year period.

### D.C. Cook

Five atmospheric monitoring stations were operated in the environs of the D.C. Cook plant during 2014-2016. The first is located at the reactor site (AC1), the second is south of the plant in Bridgman (AC2), the third is northeast of the plant in Stevensville (AC3), the fourth is at the west end of Livingston Road near the south boundary of the plant site (AC4), and the fifth is about three miles due east of the plant (AC5). There were no distinguishable peaks or trends in the gross beta results for all five stations during the 2014-2016 period.

### Fermi 2

Five atmospheric monitoring stations were operated in the environs of the Fermi 2 plant during 2014-2016. One is located at the reactor site (AF4), a second south of the plant on Pointe Aux Peaux Road (AF5), a third southwest of the plant on Nadeau Road (AF6), a fourth on Dixie Highway due west of the plant (AF7), and the fifth station at the Fix Farm, northwest of the plant on Post Road (AF8). There were no distinguishable peaks or trends in the gross beta results for all five stations during the 2014-2016 period.

### Lansing

One atmospheric monitoring station was operated as the reference site during 2014-2016. It is located in Lansing, MI in the outdoor environment surrounding the laboratory (AL1). There were no distinguishable peaks or trends in the gross beta results for this station during the 2014-2016 period.

In table 1 below, the minimum and maximum gross beta values have been tabulated with the units in picocuries per cubic meter of air ($pCi/m^3$).

Table 1

| | 2014 Min | 2014 Max | 2015 Min | 2015 Max | 2016 Min | 2016 Max |
|---|---|---|---|---|---|---|
| AF4 | 0.002 | 0.026 | 0.006 | 0.041 | 0.008 | 0.026 |
| AF5 | 0.009 | 0.031 | 0.008 | 0.036 | 0.008 | 0.025 |
| AF6 | 0.009 | 0.026 | 0.004 | 0.040 | 0.009 | 0.027 |
| AF7 | 0.003 | 0.032 | 0.008 | 0.039 | 0.007 | 0.031 |
| AF8 | 0.008 | 0.025 | 0.008 | 0.043 | 0.007 | 0.027 |
| AP1 | 0.006 | 0.027 | 0.008 | 0.041 | 0.009 | 0.034 |
| AP3 | 0.006 | 0.025 | 0.008 | 0.032 | 0.007 | 0.030 |
| AP4 | 0.006 | 0.027 | 0.006 | 0.031 | 0.008 | 0.033 |
| AC1 | 0.005 | 0.019 | 0.003 | 0.027 | 0.004 | 0.023 |
| AC2 | 0.008 | 0.038 | 0.011 | 0.043 | 0.009 | 0.043 |
| AC3 | 0.008 | 0.028 | 0.008 | 0.034 | 0.007 | 0.032 |
| AC4 | 0.007 | 0.024 | 0.008 | 0.034 | 0.008 | 0.038 |
| AC5 | 0.005 | 0.034 | 0.009 | 0.029 | 0.005 | 0.023 |
| AL1 | 0.005 | 0.028 | 0.010 | 0.040 | 0.011 | 0.039 |

## Terrestrial Monitoring

### Sampling Network

The terrestrial monitoring network consists of six milk sampling stations: two of which are located near the state's nuclear power plants, and the other four scattered around the state for geographical and population coverage. Sampling at the Lansing, Marquette, Detroit, Grand Rapids, and Monroe milk stations was initiated in late 1962 and the South Haven milk station was added in 1969. Bi-monthly samples are collected for the Lansing, Marquette, Monroe, and South Haven stations; and monthly samples are collected for the Detroit and Grand Rapids stations. Grand Rapids and Detroit milk samples were discontinued during 2014 due to lack of farms in the area. All samples are analyzed for gamma emitting radionuclides, with iodine-131 ($^{131}I$) and cesium-137 ($^{137}Cs$) of interest. Radionuclide activity results for milk are reported in units of picocuries per liter (pCi/l).

### Terrestrial Monitoring 2014-2016

Almost all the milk monitoring results for the 294 samples analyzed during the three-year period were less than the MDA levels. There was only one sample with $^{131}I$ at the detection threshold during the three-year period. None of the 294 milk samples had detectable levels of $^{137}Cs$. Milk produced in Michigan is now virtually free of these radionuclides from past atmospheric fallout. The milk monitoring results in tabular form are presented in Appendix B. Included in Appendix B are the monitoring results for potassium-40 ($^{40}K$), which is a naturally occurring radionuclide that is always present in milk.

## Aquatic Monitoring

### Sampling Network

The aquatic monitoring network consists of eight surface water sampling stations for the three operational Michigan nuclear plant sites and a background reference station in Lansing. A monthly grab sample is collected from the Palisades plant discharge line when the plant is operational. At the D.C. Cook plant, two monthly grab samples are collected from pre-discharge holding tanks for each reactor, when the reactors are operational. A monthly surface water grab sample is collected from Lake Erie in front of the Fermi plant, and four daily composite surface/drinking water sampling stations of the Detroit Edison Company are split with the MREMP on a monthly basis. Two monthly grab samples are collected from the Grand River for the Lansing reference site. All samples are analyzed for gamma emitting radionuclides, gross beta, and tritium activity.

### Aquatic Monitoring 2014-2016

Surface water results during 2014-2016 were generally in alignment with results from recent years except for a few tritium samples from the D.C. Cook power plant. Measured gross beta levels for all 2014-2016 surface water samples were in the normal range of background samples. Tritium levels over the three years were at normal background level except for a few samples from D.C. Cook. All elevated tritium levels are within allowable limits. Sample results can be seen in Appendix C.

## Direct Radiation Monitoring

### Sampling Network

The direct radiation monitoring network consists of 4 to 16 monitoring sites for each of the three operational power plant areas, the Interim Spent Fuel Storage Installation at Big Rock Point, and a background reference site in Lansing. The network of Thermoluminescent dosimeters (TLD) are exchanged and analyzed each calendar quarter by EGLE staff. This direct radiation monitoring network replaces the U.S. NRC network which was discontinued in 1997. Direct radiation monitoring results are reported in units of milliroentgens (mR) per quarter or, equivalently, mR per 90 days.

### Direct Radiation Monitoring 2014-2016

The U.S. NRC direct radiation monitoring program was initiated in the early 1980s around Michigan's four nuclear plant sites and was in operation through the end of 1997. A detailed discussion of historical direct radiation results and trends for the U.S. NRC network of monitoring sites was presented in the *MREMP Report 1958-1996*. These detailed discussions are not repeated in this report. During June and July of 1998, a replacement network of direct radiation monitoring sites was established around the four Michigan nuclear power plants along with a background reference site in Lansing, Michigan. The new network of monitoring sites around each of the four nuclear plants is very similar to the U.S. NRC network. A tabular presentation of the measurement results for 2014-2016 is presented in Appendix D. Direct radiation results during 2014-16 monitoring period were, on the average, consistent with previous monitoring years.

# Appendix A – Atmospheric Monitoring 2014

## Fermi 4

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/2/2014 | 0.024 | 0.002 | LT | 0.039 |
| 1/9/2014 | 0.021 | 0.002 | LT | 0.042 |
| 1/16/2014 | 0.022 | 0.002 | LT | 0.036 |
| 1/23/2014 | 0.019 | 0.002 | LT | 0.040 |
| 1/30/2014 | 0.016 | 0.002 | LT | 0.036 |
| 2/6/2014 | 0.025 | 0.002 | LT | 0.044 |
| 2/13/2014 | 0.018 | 0.002 | LT | 0.045 |
| 2/20/2014 | 0.021 | 0.002 | LT | 0.039 |
| 2/26/2014 | 0.020 | 0.002 | LT | 0.047 |
| 3/6/2014 | 0.026 | 0.002 | LT | 0.031 |
| 3/13/2014 | 0.018 | 0.002 | LT | 0.043 |
| 3/21/2014 | 0.013 | 0.002 | LT | 0.042 |
| 3/27/2014 | 0.021 | 0.003 | LT | 0.045 |
| 4/3/2014 | 0.018 | 0.002 | LT | 0.042 |
| 4/10/2014 | 0.019 | 0.002 | LT | 0.035 |
| 4/17/2014 | 0.017 | 0.002 | LT | 0.039 |
| 4/24/2014 | 0.018 | 0.002 | LT | 0.044 |
| 5/1/2014 | 0.011 | 0.002 | LT | 0.037 |
| 5/8/2014 | 0.009 | 0.002 | LT | 0.042 |
| 5/15/2014 | 0.014 | 0.002 | LT | 0.044 |
| 5/22/2014 | 0.014 | 0.002 | LT | 0.043 |
| 5/29/2014 | 0.012 | 0.002 | LT | 0.043 |
| 6/5/2014 | 0.011 | 0.002 | LT | 0.037 |
| 6/12/2014 | 0.011 | 0.002 | LT | 0.037 |
| 6/19/2014 | 0.013 | 0.002 | LT | 0.046 |
| 6/26/2014 | 0.013 | 0.002 | LT | 0.043 |
| 7/3/2014 | 0.012 | 0.002 | LT | 0.038 |
| 7/10/2014 | 0.015 | 0.002 | LT | 0.043 |
| 7/17/2014 | 0.016 | 0.002 | LT | 0.086 |
| 7/24/2014 | 0.018 | 0.002 | LT | 0.068 |
| 7/31/2014 | 0.014 | 0.002 | LT | 0.037 |
| 8/7/2014 | 0.021 | 0.002 | LT | 0.037 |
| 8/14/2014 | 0.015 | 0.002 | LT | 0.039 |
| 8/21/2014 | 0.018 | 0.002 | LT | 0.043 |
| 8/28/2014 | 0.016 | 0.002 | LT | 0.044 |
| 9/4/2014 | 0.019 | 0.002 | LT | 0.038 |
| 9/11/2014 | 0.016 | 0.002 | LT | 0.037 |
| 9/18/2014 | 0.013 | 0.002 | LT | 0.044 |
| 9/25/2014 | 0.017 | 0.002 | LT | 0.049 |
| 10/2/2014 | 0.018 | 0.002 | LT | 0.052 |
| 10/9/2014 | 0.018 | 0.002 | LT | 0.039 |
| 10/16/2014 | 0.016 | 0.002 | LT | 0.425 |
| 10/23/2014 | 0.010 | 0.002 | LT | 0.233 |
| 10/30/2014 | 0.020 | 0.002 | LT | 0.127 |
| 11/6/2014 | 0.017 | 0.002 | LT | 0.083 |
| 11/13/2014 | 0.014 | 0.002 | LT | 0.046 |
| 11/20/2014 | 0.002 | 0.002 | LT | 0.161 |
| 11/27/2014 | | | | |
| 12/4/2014 | | | | |
| 12/11/2014 | 0.023 | 0.002 | LT | 0.040 |
| 12/19/2014 | 0.007 | 0.001 | LT | 0.085 |
| 12/26/2014 | 0.016 | 0.002 | LT | 0.057 |

# Appendix A – Atmospheric Monitoring 2014

## Fermi 5

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/2/2014 | 0.023 | 0.002 | LT | 0.039 |
| 1/9/2014 | 0.022 | 0.002 | LT | 0.042 |
| 1/16/2014 | 0.021 | 0.002 | LT | 0.036 |
| 1/23/2014 | 0.019 | 0.002 | LT | 0.040 |
| 1/30/2014 | 0.018 | 0.002 | LT | 0.036 |
| 2/6/2014 | 0.026 | 0.002 | LT | 0.044 |
| 2/13/2014 | 0.020 | 0.002 | LT | 0.045 |
| 2/20/2014 | 0.031 | 0.003 | LT | 0.039 |
| 2/26/2014 | 0.025 | 0.003 | LT | 0.047 |
| 3/6/2014 | 0.028 | 0.002 | LT | 0.031 |
| 3/13/2014 | 0.014 | 0.002 | LT | 0.043 |
| 3/21/2014 | 0.013 | 0.002 | LT | 0.043 |
| 3/27/2014 | 0.025 | 0.003 | LT | 0.045 |
| 4/3/2014 | 0.016 | 0.002 | LT | 0.042 |
| 4/10/2014 | 0.016 | 0.002 | LT | 0.035 |
| 4/17/2014 | 0.022 | 0.002 | LT | 0.039 |
| 4/24/2014 | 0.020 | 0.002 | LT | 0.044 |
| 5/1/2014 | 0.014 | 0.002 | LT | 0.037 |
| 5/8/2014 | 0.010 | 0.002 | LT | 0.042 |
| 5/15/2014 | 0.015 | 0.002 | LT | 0.044 |
| 5/22/2014 | 0.015 | 0.002 | LT | 0.042 |
| 5/29/2014 | LT | 0.002 | LT | 0.086 |
| 6/5/2014 | 0.010 | 0.002 | LT | 0.037 |
| 6/12/2014 | 0.011 | 0.002 | LT | 0.037 |
| 6/19/2014 | 0.013 | 0.002 | LT | 0.046 |
| 6/26/2014 | 0.013 | 0.002 | LT | 0.043 |
| 7/3/2014 | 0.013 | 0.002 | LT | 0.038 |
| 7/10/2014 | 0.014 | 0.002 | LT | 0.043 |
| 7/17/2014 | 0.015 | 0.002 | LT | 0.086 |
| 7/24/2014 | 0.015 | 0.002 | LT | 0.068 |
| 7/31/2014 | 0.015 | 0.002 | LT | 0.038 |
| 8/7/2014 | 0.022 | 0.002 | LT | 0.038 |
| 8/14/2014 | 0.015 | 0.002 | LT | 0.039 |
| 8/21/2014 | 0.017 | 0.002 | LT | 0.043 |
| 8/28/2014 | 0.014 | 0.002 | LT | 0.044 |
| 9/4/2014 | 0.018 | 0.002 | LT | 0.038 |
| 9/11/2014 | 0.017 | 0.002 | LT | 0.037 |
| 9/18/2014 | LT | 0.002 | LT | 0.089 |
| 9/25/2014 | 0.015 | 0.002 | LT | 0.049 |
| 10/2/2014 | 0.017 | 0.002 | LT | 0.052 |
| 10/9/2014 | 0.017 | 0.002 | LT | 0.039 |
| 10/16/2014 | 0.013 | 0.002 | LT | 0.425 |
| 10/23/2014 | 0.009 | 0.002 | LT | 0.233 |
| 10/30/2014 | 0.017 | 0.002 | LT | 0.127 |
| 11/6/2014 | 0.014 | 0.002 | LT | 0.085 |
| 11/13/2014 | 0.013 | 0.002 | LT | 0.046 |
| 11/20/2014 | 0.018 | 0.002 | LT | 0.080 |
| 11/27/2014 | 0.020 | 0.002 | LT | 0.044 |
| 12/4/2014 | 0.021 | 0.002 | LT | 0.069 |
| 12/11/2014 | 0.025 | 0.002 | LT | 0.040 |
| 12/19/2014 | 0.025 | 0.002 | LT | 0.085 |
| 12/26/2014 | 0.018 | 0.002 | LT | 0.057 |

# Appendix A – Atmospheric Monitoring 2014

## Fermi 6

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/2/2014 | 0.021 | 0.002 | LT | 0.039 |
| 1/9/2014 | 0.016 | 0.002 | LT | 0.042 |
| 1/16/2014 | 0.018 | 0.002 | LT | 0.036 |
| 1/23/2014 | 0.018 | 0.002 | LT | 0.041 |
| 1/30/2014 | 0.014 | 0.002 | LT | 0.037 |
| 2/6/2014 | 0.021 | 0.002 | LT | 0.044 |
| 2/13/2014 | 0.018 | 0.002 | LT | 0.045 |
| 2/20/2014 | 0.020 | 0.002 | LT | 0.040 |
| 2/26/2014 | 0.020 | 0.002 | LT | 0.047 |
| 3/6/2014 | 0.026 | 0.002 | LT | 0.031 |
| 3/13/2014 | 0.023 | 0.002 | LT | 0.042 |
| 3/21/2014 | 0.014 | 0.002 | LT | 0.042 |
| 3/27/2014 | 0.022 | 0.003 | LT | 0.045 |
| 4/3/2014 | 0.017 | 0.002 | LT | 0.042 |
| 4/10/2014 | 0.017 | 0.002 | LT | 0.035 |
| 4/17/2014 | 0.017 | 0.002 | LT | 0.039 |
| 4/24/2014 | 0.019 | 0.002 | LT | 0.044 |
| 5/1/2014 | 0.012 | 0.002 | LT | 0.037 |
| 5/8/2014 | 0.009 | 0.002 | LT | 0.042 |
| 5/15/2014 | 0.014 | 0.002 | LT | 0.044 |
| 5/22/2014 | 0.014 | 0.002 | LT | 0.043 |
| 5/29/2014 | 0.009 | 0.002 | LT | 0.043 |
| 6/5/2014 | 0.011 | 0.002 | LT | 0.037 |
| 6/12/2014 | 0.010 | 0.002 | LT | 0.037 |
| 6/19/2014 | 0.011 | 0.002 | LT | 0.046 |
| 6/26/2014 | 0.012 | 0.002 | LT | 0.043 |
| 7/3/2014 | 0.012 | 0.002 | LT | 0.038 |
| 7/10/2014 | 0.015 | 0.002 | LT | 0.044 |
| 7/17/2014 | 0.014 | 0.002 | LT | 0.086 |
| 7/24/2014 | 0.019 | 0.002 | LT | 0.068 |
| 7/31/2014 | 0.014 | 0.002 | LT | 0.037 |
| 8/7/2014 | 0.020 | 0.002 | LT | 0.038 |
| 8/14/2014 | 0.014 | 0.002 | LT | 0.039 |
| 8/21/2014 | 0.016 | 0.002 | LT | 0.043 |
| 8/28/2014 | 0.013 | 0.002 | LT | 0.044 |
| 9/4/2014 | 0.017 | 0.002 | LT | 0.038 |
| 9/11/2014 | 0.016 | 0.002 | LT | 0.037 |
| 9/18/2014 | 0.010 | 0.002 | LT | 0.044 |
| 9/25/2014 | 0.013 | 0.002 | LT | 0.049 |
| 10/2/2014 | 0.015 | 0.002 | LT | 0.052 |
| 10/9/2014 | 0.016 | 0.002 | LT | 0.039 |
| 10/16/2014 | 0.012 | 0.002 | LT | 0.425 |
| 10/23/2014 | 0.009 | 0.002 | LT | 0.233 |
| 10/30/2014 | 0.017 | 0.002 | LT | 0.127 |
| 11/6/2014 | 0.012 | 0.002 | LT | 0.083 |
| 11/13/2014 | 0.012 | 0.002 | LT | 0.046 |
| 11/20/2014 | 0.017 | 0.002 | LT | 0.080 |
| 11/27/2014 | 0.020 | 0.002 | LT | 0.044 |
| 12/4/2014 | 0.021 | 0.002 | LT | 0.069 |
| 12/11/2014 | 0.020 | 0.002 | LT | 0.040 |
| 12/19/2014 | 0.024 | 0.002 | LT | 0.085 |
| 12/26/2014 | 0.016 | 0.002 | LT | 0.057 |

# Appendix A – Atmospheric Monitoring 2014

## Fermi 7

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/2/2014 | 0.020 | 0.002 | LT | 0.039 |
| 1/9/2014 | 0.017 | 0.002 | LT | 0.042 |
| 1/16/2014 | 0.016 | 0.002 | LT | 0.036 |
| 1/23/2014 | 0.018 | 0.002 | LT | 0.040 |
| 1/30/2014 | 0.016 | 0.002 | LT | 0.037 |
| 2/6/2014 | 0.021 | 0.002 | LT | 0.044 |
| 2/13/2014 | 0.018 | 0.002 | LT | 0.045 |
| 2/20/2014 | 0.019 | 0.002 | LT | 0.039 |
| 2/26/2014 | 0.020 | 0.002 | LT | 0.047 |
| 3/6/2014 | 0.023 | 0.002 | LT | 0.031 |
| 3/13/2014 | 0.021 | 0.002 | LT | 0.043 |
| 3/21/2014 | 0.012 | 0.002 | LT | 0.043 |
| 3/27/2014 | 0.020 | 0.002 | LT | 0.045 |
| 4/3/2014 | 0.032 | 0.004 | LT | 0.084 |
| 4/10/2014 | 0.030 | 0.004 | LT | 0.071 |
| 4/17/2014 | 0.016 | 0.002 | LT | 0.039 |
| 4/24/2014 | 0.016 | 0.002 | LT | 0.044 |
| 5/1/2014 | 0.011 | 0.002 | LT | 0.037 |
| 5/8/2014 | 0.009 | 0.002 | LT | 0.042 |
| 5/15/2014 | 0.012 | 0.002 | LT | 0.044 |
| 5/22/2014 | 0.016 | 0.002 | LT | 0.043 |
| 5/29/2014 | 0.011 | 0.002 | LT | 0.043 |
| 6/5/2014 | 0.012 | 0.002 | LT | 0.037 |
| 6/12/2014 | 0.003 | 0.002 | LT | 0.075 |
| 6/19/2014 | 0.013 | 0.003 | LT | 0.068 |
| 6/26/2014 | 0.013 | 0.002 | LT | 0.043 |
| 7/3/2014 | 0.013 | 0.002 | LT | 0.038 |
| 7/10/2014 | 0.015 | 0.002 | LT | 0.043 |
| 7/17/2014 | 0.016 | 0.002 | LT | 0.086 |
| 7/24/2014 | 0.018 | 0.002 | LT | 0.068 |
| 7/31/2014 | 0.014 | 0.002 | LT | 0.037 |
| 8/7/2014 | 0.024 | 0.002 | LT | 0.038 |
| 8/14/2014 | 0.013 | 0.002 | LT | 0.039 |
| 8/21/2014 | 0.016 | 0.002 | LT | 0.043 |
| 8/28/2014 | 0.015 | 0.002 | LT | 0.044 |
| 9/4/2014 | 0.019 | 0.002 | LT | 0.038 |
| 9/11/2014 | 0.017 | 0.002 | LT | 0.037 |
| 9/18/2014 | 0.011 | 0.002 | LT | 0.045 |
| 9/25/2014 | 0.016 | 0.002 | LT | 0.049 |
| 10/2/2014 | 0.019 | 0.002 | LT | 0.052 |
| 10/9/2014 | 0.018 | 0.002 | LT | 0.040 |
| 10/16/2014 | 0.010 | 0.002 | LT | 0.425 |
| 10/23/2014 | 0.009 | 0.002 | LT | 0.233 |
| 10/30/2014 | 0.019 | 0.002 | LT | 0.128 |
| 11/6/2014 | 0.015 | 0.002 | LT | 0.083 |
| 11/13/2014 | 0.012 | 0.002 | LT | 0.046 |
| 11/20/2014 | 0.018 | 0.002 | LT | 0.081 |
| 11/27/2014 | 0.019 | 0.002 | LT | 0.044 |
| 12/4/2014 | 0.022 | 0.002 | LT | 0.069 |
| 12/11/2014 | 0.022 | 0.002 | LT | 0.040 |
| 12/19/2014 | 0.027 | 0.002 | LT | 0.086 |
| 12/26/2014 | 0.014 | 0.002 | LT | 0.057 |

# Appendix A – Atmospheric Monitoring 2014

## Fermi 8

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/2/2014 | 0.023 | 0.002 | LT | 0.039 |
| 1/9/2014 | 0.020 | 0.002 | LT | 0.042 |
| 1/16/2014 | 0.020 | 0.002 | LT | 0.036 |
| 1/23/2014 | 0.018 | 0.002 | LT | 0.040 |
| 1/30/2014 | 0.017 | 0.002 | LT | 0.037 |
| 2/6/2014 | 0.021 | 0.002 | LT | 0.044 |
| 2/13/2014 | 0.020 | 0.002 | LT | 0.045 |
| 2/20/2014 | 0.024 | 0.002 | LT | 0.039 |
| 2/26/2014 | 0.021 | 0.002 | LT | 0.047 |
| 3/6/2014 | 0.025 | 0.002 | LT | 0.031 |
| 3/13/2014 | 0.019 | 0.002 | LT | 0.043 |
| 3/21/2014 | 0.013 | 0.002 | LT | 0.043 |
| 3/27/2014 | 0.021 | 0.003 | LT | 0.045 |
| 4/3/2014 | 0.018 | 0.002 | LT | 0.042 |
| 4/10/2014 | 0.017 | 0.002 | LT | 0.035 |
| 4/17/2014 | 0.017 | 0.002 | LT | 0.039 |
| 4/24/2014 | 0.020 | 0.002 | LT | 0.044 |
| 5/1/2014 | 0.011 | 0.002 | LT | 0.037 |
| 5/8/2014 | | | | |
| 5/15/2014 | 0.014 | 0.002 | LT | 0.044 |
| 5/22/2014 | 0.013 | 0.002 | LT | 0.043 |
| 5/29/2014 | 0.009 | 0.002 | LT | 0.043 |
| 6/5/2014 | 0.011 | 0.002 | LT | 0.037 |
| 6/12/2014 | 0.012 | 0.002 | LT | 0.038 |
| 6/19/2014 | 0.013 | 0.002 | LT | 0.046 |
| 6/26/2014 | 0.011 | 0.002 | LT | 0.043 |
| 7/3/2014 | 0.014 | 0.002 | LT | 0.038 |
| 7/10/2014 | 0.014 | 0.002 | LT | 0.043 |
| 7/17/2014 | 0.014 | 0.002 | LT | 0.086 |
| 7/24/2014 | 0.017 | 0.002 | LT | 0.068 |
| 7/31/2014 | 0.013 | 0.002 | LT | 0.038 |
| 8/7/2014 | 0.023 | 0.002 | LT | 0.038 |
| 8/14/2014 | 0.015 | 0.002 | LT | 0.038 |
| 8/21/2014 | 0.017 | 0.002 | LT | 0.044 |
| 8/28/2014 | 0.015 | 0.002 | LT | 0.044 |
| 9/4/2014 | 0.018 | 0.002 | LT | 0.038 |
| 9/11/2014 | 0.016 | 0.002 | LT | 0.037 |
| 9/18/2014 | 0.010 | 0.002 | LT | 0.045 |
| 9/25/2014 | 0.015 | 0.002 | LT | 0.050 |
| 10/2/2014 | 0.017 | 0.002 | LT | 0.052 |
| 10/9/2014 | 0.016 | 0.002 | LT | 0.040 |
| 10/16/2014 | 0.014 | 0.002 | LT | 0.426 |
| 10/23/2014 | 0.008 | 0.002 | LT | 0.234 |
| 10/30/2014 | 0.015 | 0.002 | LT | 0.128 |
| 11/6/2014 | 0.015 | 0.002 | LT | 0.084 |
| 11/13/2014 | 0.010 | 0.002 | LT | 0.046 |
| 11/20/2014 | 0.019 | 0.002 | LT | 0.081 |
| 11/27/2014 | 0.022 | 0.002 | LT | 0.044 |
| 12/4/2014 | 0.021 | 0.002 | LT | 0.069 |
| 12/11/2014 | 0.020 | 0.002 | LT | 0.040 |
| 12/19/2014 | 0.024 | 0.002 | LT | 0.086 |
| 12/26/2014 | 0.015 | 0.002 | LT | 0.057 |

# Appendix A – Atmospheric Monitoring 2014

## Palisades 1

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/8/2014 | 0.017 | 0.002 | LT | 0.023 |
| 1/13/2014 | 0.016 | 0.003 | LT | 0.044 |
| 1/20/2014 | 0.017 | 0.002 | LT | 0.031 |
| 1/27/2014 | 0.010 | 0.002 | LT | 0.029 |
| 2/3/2014 | 0.013 | 0.002 | LT | 0.027 |
| 2/10/2014 | 0.015 | 0.002 | LT | 0.032 |
| 2/16/2014 | 0.019 | 0.002 | LT | 0.040 |
| 2/24/2014 | 0.019 | 0.002 | LT | 0.031 |
| 3/3/2014 | 0.027 | 0.002 | LT | 0.031 |
| 3/10/2014 | 0.015 | 0.002 | LT | 0.031 |
| 3/17/2014 | 0.015 | 0.002 | LT | 0.032 |
| 3/24/2014 | 0.013 | 0.002 | LT | 0.031 |
| 3/31/2014 | 0.021 | 0.002 | LT | 0.030 |
| 4/7/2014 | 0.016 | 0.002 | LT | 0.033 |
| 4/14/2014 | 0.011 | 0.002 | LT | 0.031 |
| 4/21/2014 | 0.019 | 0.002 | LT | 0.037 |
| 4/28/2014 | 0.012 | 0.002 | LT | 0.032 |
| 5/5/2014 | 0.006 | 0.001 | LT | 0.032 |
| 5/12/2014 | 0.016 | 0.002 | LT | 0.031 |
| 5/19/2014 | 0.011 | 0.002 | LT | 0.032 |
| 5/25/2014 | 0.014 | 0.002 | LT | 0.040 |
| 6/2/2014 | 0.013 | 0.002 | LT | 0.027 |
| 6/9/2014 | 0.012 | 0.002 | LT | 0.029 |
| 6/15/2014 | 0.012 | 0.002 | LT | 0.064 |
| 6/23/2014 | 0.013 | 0.002 | LT | 0.026 |
| 6/30/2014 | 0.011 | 0.002 | LT | 0.031 |
| 7/5/2014 | 0.007 | 0.002 | LT | 0.058 |
| 7/14/2014 | 0.012 | 0.002 | LT | 0.027 |
| 7/20/2014 | 0.012 | 0.002 | LT | 0.076 |
| 7/28/2014 | 0.018 | 0.002 | LT | 0.044 |
| 8/4/2014 | 0.018 | 0.002 | LT | 0.033 |
| 8/11/2014 | 0.020 | 0.002 | LT | 0.029 |
| 8/17/2014 | 0.014 | 0.002 | LT | 0.060 |
| 8/25/2014 | 0.019 | 0.002 | LT | 0.029 |
| 9/1/2014 | 0.016 | 0.002 | LT | 0.061 |
| 9/8/2014 | 0.014 | 0.002 | LT | 0.036 |
| 9/15/2014 | 0.011 | 0.002 | LT | 0.034 |
| 9/22/2014 | 0.020 | 0.002 | LT | 0.035 |
| 9/29/2014 | 0.018 | 0.002 | LT | 0.059 |
| 10/6/2014 | 0.010 | 0.002 | LT | 0.044 |
| 10/13/2014 | 0.014 | 0.002 | LT | 0.032 |
| 10/20/2014 | 0.008 | 0.002 | LT | 0.322 |
| 10/27/2014 | 0.011 | 0.002 | LT | 0.177 |
| 11/3/2014 | 0.011 | 0.002 | LT | 0.111 |
| 11/10/2014 | 0.013 | 0.002 | LT | 0.061 |
| 11/17/2014 | 0.016 | 0.002 | LT | 0.033 |
| 11/24/2014 | 0.018 | 0.002 | LT | 0.051 |
| 12/1/2014 | 0.014 | 0.002 | LT | 0.030 |
| 12/8/2014 | 0.023 | 0.002 | LT | 0.053 |
| 12/14/2014 | 0.022 | 0.002 | LT | 0.035 |
| 12/22/2014 | 0.015 | 0.002 | LT | 0.046 |
| 12/29/2014 | 0.017 | 0.002 | LT | 0.066 |

# Appendix A – Atmospheric Monitoring 2014

## Palisades 3

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/8/2014 | 0.013 | 0.002 | LT | 0.023 |
| 1/13/2014 | 0.010 | 0.002 | LT | 0.044 |
| 1/20/2014 | 0.015 | 0.002 | LT | 0.031 |
| 1/27/2014 | 0.006 | 0.001 | LT | 0.030 |
| 2/3/2014 | 0.013 | 0.002 | LT | 0.027 |
| 2/10/2014 | 0.013 | 0.002 | LT | 0.031 |
| 2/16/2014 | 0.017 | 0.002 | LT | 0.041 |
| 2/24/2014 | 0.014 | 0.002 | LT | 0.031 |
| 3/3/2014 | 0.020 | 0.002 | LT | 0.031 |
| 3/10/2014 | 0.022 | 0.002 | LT | 0.031 |
| 3/17/2014 | 0.010 | 0.002 | LT | 0.032 |
| 3/24/2014 | 0.009 | 0.002 | LT | 0.031 |
| 3/31/2014 | 0.016 | 0.002 | LT | 0.030 |
| 4/7/2014 | 0.012 | 0.002 | LT | 0.033 |
| 4/14/2014 | 0.018 | 0.002 | LT | 0.031 |
| 4/21/2014 | 0.013 | 0.002 | LT | 0.037 |
| 4/28/2014 | 0.010 | 0.002 | LT | 0.032 |
| 5/5/2014 | 0.008 | 0.002 | LT | 0.032 |
| 5/12/2014 | 0.010 | 0.002 | LT | 0.031 |
| 5/19/2014 | 0.008 | 0.002 | LT | 0.031 |
| 5/25/2014 | 0.009 | 0.002 | LT | 0.040 |
| 6/2/2014 | 0.011 | 0.002 | LT | 0.027 |
| 6/9/2014 | 0.007 | 0.002 | LT | 0.029 |
| 6/15/2014 | 0.009 | 0.002 | LT | 0.064 |
| 6/23/2014 | 0.010 | 0.002 | LT | 0.026 |
| 6/30/2014 | 0.008 | 0.002 | LT | 0.031 |
| 7/5/2014 | 0.007 | 0.002 | LT | 0.058 |
| 7/14/2014 | 0.010 | 0.001 | LT | 0.027 |
| 7/20/2014 | 0.007 | 0.002 | LT | 0.076 |
| 7/28/2014 | 0.013 | 0.002 | LT | 0.044 |
| 8/4/2014 | 0.013 | 0.002 | LT | 0.033 |
| 8/11/2014 | 0.014 | 0.002 | LT | 0.029 |
| 8/17/2014 | 0.011 | 0.002 | LT | 0.060 |
| 8/25/2014 | 0.013 | 0.002 | LT | 0.028 |
| 9/1/2014 | 0.009 | 0.002 | LT | 0.061 |
| 9/8/2014 | 0.011 | 0.002 | LT | 0.036 |
| 9/15/2014 | 0.008 | 0.002 | LT | 0.034 |
| 9/22/2014 | 0.017 | 0.003 | LT | 0.070 |
| 9/29/2014 | 0.017 | 0.002 | LT | 0.061 |
| 10/6/2014 | 0.009 | 0.002 | LT | 0.044 |
| 10/13/2014 | 0.012 | 0.002 | LT | 0.032 |
| 10/20/2014 | 0.007 | 0.002 | LT | 0.323 |
| 10/27/2014 | 0.010 | 0.002 | LT | 0.177 |
| 11/3/2014 | 0.010 | 0.002 | LT | 0.111 |
| 11/10/2014 | 0.011 | 0.002 | LT | 0.061 |
| 11/17/2014 | 0.013 | 0.002 | LT | 0.033 |
| 11/24/2014 | 0.016 | 0.002 | LT | 0.051 |
| 12/1/2014 | 0.016 | 0.002 | LT | 0.030 |
| 12/8/2014 | 0.025 | 0.002 | LT | 0.053 |
| 12/14/2014 | 0.020 | 0.002 | LT | 0.035 |
| 12/22/2014 | 0.016 | 0.002 | LT | 0.046 |
| 12/29/2014 | 0.016 | 0.002 | LT | 0.066 |

# Appendix A – Atmospheric Monitoring 2014

## Palisades 4

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/8/2014 | 0.020 | 0.002 | LT | 0.023 |
| 1/13/2014 | 0.019 | 0.003 | LT | 0.044 |
| 1/20/2014 | 0.023 | 0.002 | LT | 0.031 |
| 1/27/2014 | 0.010 | 0.002 | LT | 0.030 |
| 2/3/2014 | 0.017 | 0.002 | LT | 0.027 |
| 2/10/2014 | 0.017 | 0.002 | LT | 0.032 |
| 2/16/2014 | 0.022 | 0.002 | LT | 0.041 |
| 2/24/2014 | 0.021 | 0.002 | LT | 0.031 |
| 3/3/2014 | 0.026 | 0.002 | LT | 0.030 |
| 3/10/2014 | 0.019 | 0.002 | LT | 0.031 |
| 3/17/2014 | 0.016 | 0.002 | LT | 0.032 |
| 3/24/2014 | 0.013 | 0.002 | LT | 0.031 |
| 3/31/2014 | 0.022 | 0.002 | LT | 0.059 |
| 4/7/2014 | 0.017 | 0.002 | LT | 0.033 |
| 4/14/2014 | LT | 0.001 | LT | 0.031 |
| 4/21/2014 | 0.019 | 0.002 | LT | 0.037 |
| 4/28/2014 | 0.011 | 0.002 | LT | 0.032 |
| 5/5/2014 | 0.008 | 0.002 | LT | 0.032 |
| 5/12/2014 | 0.012 | 0.002 | LT | 0.031 |
| 5/19/2014 | 0.011 | 0.002 | LT | 0.035 |
| 5/25/2014 | 0.014 | 0.002 | LT | 0.040 |
| 6/2/2014 | 0.015 | 0.002 | LT | 0.027 |
| 6/9/2014 | 0.012 | 0.002 | LT | 0.029 |
| 6/15/2014 | 0.012 | 0.002 | LT | 0.064 |
| 6/23/2014 | 0.011 | 0.002 | LT | 0.026 |
| 6/30/2014 | 0.012 | 0.002 | LT | 0.031 |
| 7/5/2014 | 0.009 | 0.002 | LT | 0.058 |
| 7/14/2014 | 0.012 | 0.001 | 0.031 | 0.027 |
| 7/20/2014 | 0.012 | 0.002 | LT | 0.077 |
| 7/28/2014 | 0.017 | 0.002 | LT | 0.044 |
| 8/4/2014 | 0.017 | 0.002 | LT | 0.033 |
| 8/11/2014 | 0.020 | 0.002 | LT | 0.029 |
| 8/17/2014 | 0.015 | 0.002 | LT | 0.059 |
| 8/25/2014 | 0.018 | 0.002 | LT | 0.028 |
| 9/1/2014 | 0.016 | 0.002 | LT | 0.061 |
| 9/8/2014 | 0.014 | 0.002 | LT | 0.036 |
| 9/15/2014 | 0.011 | 0.002 | LT | 0.034 |
| 9/22/2014 | 0.022 | 0.002 | LT | 0.035 |
| 9/29/2014 | 0.017 | 0.002 | LT | 0.059 |
| 10/6/2014 | 0.009 | 0.002 | LT | 0.044 |
| 10/13/2014 | 0.023 | 0.004 | LT | 0.064 |
| 10/20/2014 | 0.006 | 0.002 | LT | 0.397 |
| 10/27/2014 | 0.010 | 0.002 | LT | 0.177 |
| 11/3/2014 | 0.010 | 0.002 | LT | 0.111 |
| 11/10/2014 | 0.013 | 0.002 | LT | 0.061 |
| 11/17/2014 | 0.014 | 0.002 | LT | 0.033 |
| 11/24/2014 | 0.018 | 0.002 | LT | 0.051 |
| 12/1/2014 | 0.017 | 0.002 | LT | 0.030 |
| 12/8/2014 | 0.027 | 0.002 | LT | 0.053 |
| 12/14/2014 | 0.019 | 0.002 | LT | 0.035 |
| 12/22/2014 | 0.014 | 0.002 | LT | 0.046 |
| 12/29/2014 | 0.013 | 0.002 | LT | 0.066 |

# Appendix A – Atmospheric Monitoring 2014

## Cook 1

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/8/2014 | 0.015 | 0.002 | LT | 0.023 |
| 1/13/2014 | 0.011 | 0.002 | LT | 0.044 |
| 1/20/2014 | 0.010 | 0.002 | LT | 0.031 |
| 1/27/2014 | 0.008 | 0.002 | LT | 0.029 |
| 2/3/2014 | 0.013 | 0.002 | LT | 0.026 |
| 2/10/2014 | 0.012 | 0.002 | LT | 0.032 |
| 2/16/2014 | 0.016 | 0.002 | LT | 0.040 |
| 2/24/2014 | 0.014 | 0.002 | LT | 0.031 |
| 3/3/2014 | 0.019 | 0.002 | LT | 0.030 |
| 3/10/2014 | 0.011 | 0.002 | LT | 0.031 |
| 3/17/2014 | 0.011 | 0.002 | LT | 0.032 |
| 3/24/2014 | 0.009 | 0.002 | LT | 0.031 |
| 3/31/2014 | 0.013 | 0.002 | LT | 0.030 |
| 4/7/2014 | 0.010 | 0.002 | LT | 0.033 |
| 4/14/2014 | 0.011 | 0.002 | LT | 0.031 |
| 4/21/2014 | 0.013 | 0.002 | LT | 0.037 |
| 4/28/2014 | 0.008 | 0.002 | LT | 0.032 |
| 5/5/2014 | 0.006 | 0.001 | LT | 0.030 |
| 5/12/2014 | 0.010 | 0.002 | LT | 0.032 |
| 5/19/2014 | 0.007 | 0.001 | LT | 0.032 |
| 5/25/2014 | 0.009 | 0.002 | LT | 0.040 |
| 6/2/2014 | 0.011 | 0.002 | LT | 0.027 |
| 6/9/2014 | 0.008 | 0.002 | LT | 0.029 |
| 6/15/2014 | 0.008 | 0.002 | LT | 0.064 |
| 6/23/2014 | 0.008 | 0.002 | LT | 0.027 |
| 6/30/2014 | 0.008 | 0.002 | LT | 0.031 |
| 7/5/2014 | 0.005 | 0.002 | LT | 0.057 |
| 7/14/2014 | 0.011 | 0.001 | LT | 0.027 |
| 7/20/2014 | 0.008 | 0.002 | LT | 0.076 |
| 7/28/2014 | 0.013 | 0.002 | LT | 0.044 |
| 8/4/2014 | 0.014 | 0.002 | LT | 0.032 |
| 8/11/2014 | 0.014 | 0.002 | LT | 0.029 |
| 8/17/2014 | 0.009 | 0.002 | LT | 0.057 |
| 8/25/2014 | 0.013 | 0.002 | LT | 0.029 |
| 9/1/2014 | 0.010 | 0.002 | LT | 0.060 |
| 9/8/2014 | 0.013 | 0.002 | LT | 0.036 |
| 9/15/2014 | 0.008 | 0.002 | LT | 0.034 |
| 9/22/2014 | 0.015 | 0.002 | LT | 0.035 |
| 9/29/2014 | 0.012 | 0.002 | LT | 0.059 |
| 10/6/2014 | 0.008 | 0.002 | LT | 0.044 |
| 10/13/2014 | 0.009 | 0.002 | LT | 0.032 |
| 10/20/2014 | 0.006 | 0.002 | LT | 0.325 |
| 10/27/2014 | 0.010 | 0.002 | LT | 0.177 |
| 11/3/2014 | 0.008 | 0.002 | LT | 0.110 |
| 11/10/2014 | 0.013 | 0.002 | LT | 0.061 |
| 11/17/2014 | 0.011 | 0.002 | LT | 0.033 |
| 11/24/2014 | 0.016 | 0.002 | LT | 0.050 |
| 12/1/2014 | 0.015 | 0.002 | LT | 0.010 |
| 12/8/2014 | 0.017 | 0.002 | LT | 0.053 |
| 12/14/2014 | 0.016 | 0.002 | LT | 0.035 |
| 12/22/2014 | 0.013 | 0.002 | LT | 0.046 |
| 12/29/2014 | 0.013 | 0.002 | LT | 0.066 |

# Appendix A – Atmospheric Monitoring 2014

## Cook 2

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/8/2014 | 0.019 | 0.002 | LT | 0.023 |
| 1/13/2014 | 0.016 | 0.003 | LT | 0.044 |
| 1/20/2014 | 0.021 | 0.002 | LT | 0.031 |
| 1/27/2014 | 0.013 | 0.002 | LT | 0.029 |
| 2/3/2014 | 0.015 | 0.002 | LT | 0.026 |
| 2/10/2014 | 0.018 | 0.002 | LT | 0.032 |
| 2/16/2014 | 0.022 | 0.002 | LT | 0.041 |
| 2/24/2014 | 0.022 | 0.002 | LT | 0.031 |
| 3/3/2014 | 0.027 | 0.002 | LT | 0.030 |
| 3/10/2014 | 0.023 | 0.002 | LT | 0.031 |
| 3/17/2014 | 0.015 | 0.002 | LT | 0.032 |
| 3/24/2014 | 0.015 | 0.002 | LT | 0.031 |
| 3/31/2014 | 0.023 | 0.002 | LT | 0.030 |
| 4/7/2014 | 0.017 | 0.002 | LT | 0.033 |
| 4/14/2014 | 0.017 | 0.002 | LT | 0.031 |
| 4/21/2014 | 0.019 | 0.002 | LT | 0.037 |
| 4/28/2014 | 0.012 | 0.002 | LT | 0.032 |
| 5/5/2014 | 0.009 | 0.002 | LT | 0.030 |
| 5/12/2014 | 0.016 | 0.002 | LT | 0.032 |
| 5/19/2014 | 0.011 | 0.002 | LT | 0.032 |
| 5/25/2014 | 0.014 | 0.002 | LT | 0.040 |
| 6/2/2014 | 0.016 | 0.002 | LT | 0.027 |
| 6/9/2014 | 0.013 | 0.002 | LT | 0.030 |
| 6/15/2014 | 0.012 | 0.002 | LT | 0.064 |
| 6/23/2014 | 0.014 | 0.002 | LT | 0.027 |
| 6/30/2014 | 0.013 | 0.002 | LT | 0.031 |
| 7/5/2014 | 0.008 | 0.002 | LT | 0.058 |
| 7/14/2014 | 0.015 | 0.002 | LT | 0.027 |
| 7/20/2014 | 0.015 | 0.002 | LT | 0.075 |
| 7/28/2014 | 0.020 | 0.002 | LT | 0.044 |
| 8/4/2014 | | | | |
| 8/11/2014 | 0.038 | 0.003 | LT | 0.027 |
| 8/17/2014 | 0.014 | 0.002 | LT | 0.057 |
| 8/25/2014 | 0.024 | 0.002 | LT | 0.029 |
| 9/1/2014 | 0.017 | 0.002 | LT | 0.061 |
| 9/8/2014 | 0.020 | 0.002 | LT | 0.035 |
| 9/15/2014 | 0.012 | 0.002 | LT | 0.034 |
| 9/22/2014 | 0.023 | 0.002 | LT | 0.035 |
| 9/29/2014 | 0.023 | 0.002 | LT | 0.059 |
| 10/6/2014 | 0.012 | 0.002 | LT | 0.044 |
| 10/13/2014 | 0.016 | 0.002 | LT | 0.032 |
| 10/20/2014 | 0.009 | 0.002 | LT | 0.325 |
| 10/27/2014 | 0.015 | 0.002 | LT | 0.176 |
| 11/3/2014 | 0.016 | 0.002 | LT | 0.110 |
| 11/10/2014 | 0.015 | 0.002 | LT | 0.061 |
| 11/17/2014 | 0.017 | 0.002 | LT | 0.033 |
| 11/24/2014 | 0.022 | 0.002 | LT | 0.050 |
| 12/1/2014 | 0.020 | 0.002 | LT | 0.010 |
| 12/8/2014 | 0.031 | 0.003 | LT | 0.052 |
| 12/14/2014 | 0.028 | 0.003 | LT | 0.035 |
| 12/22/2014 | 0.019 | 0.002 | LT | 0.046 |
| 12/29/2014 | 0.019 | 0.002 | LT | 0.066 |

# Appendix A – Atmospheric Monitoring 2014

## Cook 3

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/8/2014 | 0.021 | 0.002 | LT | 0.023 |
| 1/13/2014 | 0.016 | 0.003 | LT | 0.044 |
| 1/20/2014 | 0.020 | 0.002 | LT | 0.031 |
| 1/27/2014 | 0.010 | 0.002 | LT | 0.029 |
| 2/3/2014 | 0.018 | 0.002 | LT | 0.027 |
| 2/10/2014 | 0.019 | 0.002 | LT | 0.032 |
| 2/16/2014 | 0.023 | 0.002 | LT | 0.040 |
| 2/24/2014 | 0.020 | 0.002 | LT | 0.031 |
| 3/3/2014 | 0.027 | 0.002 | LT | 0.030 |
| 3/10/2014 | 0.020 | 0.002 | LT | 0.031 |
| 3/17/2014 | 0.016 | 0.002 | LT | 0.032 |
| 3/24/2014 | 0.013 | 0.002 | LT | 0.031 |
| 3/31/2014 | 0.022 | 0.002 | LT | 0.030 |
| 4/7/2014 | 0.016 | 0.002 | LT | 0.033 |
| 4/14/2014 | 0.018 | 0.002 | LT | 0.031 |
| 4/21/2014 | 0.018 | 0.002 | LT | 0.037 |
| 4/28/2014 | 0.012 | 0.002 | LT | 0.032 |
| 5/5/2014 | 0.008 | 0.002 | LT | 0.030 |
| 5/12/2014 | 0.014 | 0.002 | LT | 0.032 |
| 5/19/2014 | 0.012 | 0.002 | LT | 0.032 |
| 5/25/2014 | 0.016 | 0.002 | LT | 0.040 |
| 6/2/2014 | 0.016 | 0.002 | LT | 0.027 |
| 6/9/2014 | 0.012 | 0.002 | LT | 0.030 |
| 6/15/2014 | 0.009 | 0.002 | LT | 0.064 |
| 6/23/2014 | 0.013 | 0.002 | LT | 0.027 |
| 6/30/2014 | 0.012 | 0.002 | LT | 0.031 |
| 7/5/2014 | 0.008 | 0.002 | LT | 0.057 |
| 7/14/2014 | 0.014 | 0.002 | LT | 0.027 |
| 7/20/2014 | 0.013 | 0.002 | LT | 0.076 |
| 7/28/2014 | 0.019 | 0.002 | LT | 0.044 |
| 8/4/2014 | 0.021 | 0.002 | LT | 0.032 |
| 8/11/2014 | 0.018 | 0.002 | LT | 0.029 |
| 8/17/2014 | 0.016 | 0.002 | LT | 0.056 |
| 8/25/2014 | 0.023 | 0.002 | LT | 0.029 |
| 9/1/2014 | 0.017 | 0.002 | LT | 0.061 |
| 9/8/2014 | 0.019 | 0.002 | LT | 0.036 |
| 9/15/2014 | 0.012 | 0.002 | LT | 0.034 |
| 9/22/2014 | 0.023 | 0.002 | LT | 0.035 |
| 9/29/2014 | 0.022 | 0.002 | LT | 0.059 |
| 10/6/2014 | 0.011 | 0.002 | LT | 0.044 |
| 10/13/2014 | 0.015 | 0.002 | LT | 0.032 |
| 10/20/2014 | 0.008 | 0.002 | LT | 0.326 |
| 10/27/2014 | 0.012 | 0.002 | LT | 0.177 |
| 11/3/2014 | 0.013 | 0.002 | LT | 0.111 |
| 11/10/2014 | 0.024 | 0.004 | LT | 0.122 |
| 11/17/2014 | 0.018 | 0.003 | LT | 0.066 |
| 11/24/2014 | | | | |
| 12/1/2014 | 0.019 | 0.002 | LT | 0.010 |
| 12/8/2014 | 0.028 | 0.002 | LT | 0.053 |
| 12/14/2014 | 0.023 | 0.002 | LT | 0.035 |
| 12/22/2014 | 0.017 | 0.002 | LT | 0.046 |
| 12/29/2014 | 0.018 | 0.002 | LT | 0.066 |

# Appendix A – Atmospheric Monitoring 2014

## Cook 4

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/8/2014 | 0.018 | 0.002 | LT | 0.023 |
| 1/13/2014 | 0.016 | 0.003 | LT | 0.044 |
| 1/20/2014 | 0.018 | 0.002 | LT | 0.031 |
| 1/27/2014 | 0.009 | 0.002 | LT | 0.029 |
| 2/3/2014 | 0.015 | 0.002 | LT | 0.026 |
| 2/10/2014 | 0.017 | 0.002 | LT | 0.032 |
| 2/16/2014 | 0.020 | 0.002 | LT | 0.040 |
| 2/24/2014 | 0.015 | 0.002 | LT | 0.031 |
| 3/3/2014 | 0.021 | 0.002 | LT | 0.030 |
| 3/10/2014 | 0.014 | 0.002 | LT | 0.031 |
| 3/17/2014 | 0.013 | 0.002 | LT | 0.032 |
| 3/24/2014 | 0.010 | 0.002 | LT | 0.031 |
| 3/31/2014 | 0.017 | 0.002 | LT | 0.030 |
| 4/7/2014 | LT | 0.001 | LT | 0.033 |
| 4/14/2014 | 0.015 | 0.002 | LT | 0.031 |
| 4/21/2014 | 0.017 | 0.002 | LT | 0.037 |
| 4/28/2014 | 0.010 | 0.002 | LT | 0.032 |
| 5/5/2014 | 0.010 | 0.002 | LT | 0.030 |
| 5/12/2014 | 0.013 | 0.002 | LT | 0.032 |
| 5/19/2014 | 0.008 | 0.002 | LT | 0.032 |
| 5/25/2014 | 0.013 | 0.002 | LT | 0.041 |
| 6/2/2014 | 0.012 | 0.002 | LT | 0.027 |
| 6/9/2014 | 0.011 | 0.002 | LT | 0.030 |
| 6/15/2014 | 0.012 | 0.002 | LT | 0.064 |
| 6/23/2014 | 0.011 | 0.002 | LT | 0.027 |
| 6/30/2014 | 0.010 | 0.002 | LT | 0.031 |
| 7/5/2014 | 0.007 | 0.002 | LT | 0.057 |
| 7/14/2014 | 0.014 | 0.002 | LT | 0.027 |
| 7/20/2014 | 0.011 | 0.002 | LT | 0.076 |
| 7/28/2014 | 0.016 | 0.002 | LT | 0.044 |
| 8/4/2014 | 0.015 | 0.002 | LT | 0.032 |
| 8/11/2014 | 0.016 | 0.002 | LT | 0.029 |
| 8/17/2014 | 0.013 | 0.002 | LT | 0.057 |
| 8/25/2014 | 0.019 | 0.002 | LT | 0.029 |
| 9/1/2014 | 0.011 | 0.002 | LT | 0.060 |
| 9/8/2014 | 0.015 | 0.002 | LT | 0.036 |
| 9/15/2014 | 0.010 | 0.002 | LT | 0.034 |
| 9/22/2014 | 0.020 | 0.002 | LT | 0.035 |
| 9/29/2014 | 0.018 | 0.002 | LT | 0.059 |
| 10/6/2014 | 0.010 | 0.002 | LT | 0.044 |
| 10/13/2014 | 0.014 | 0.002 | LT | 0.032 |
| 10/20/2014 | 0.007 | 0.002 | LT | 0.326 |
| 10/27/2014 | 0.012 | 0.002 | LT | 0.177 |
| 11/3/2014 | 0.011 | 0.002 | LT | 0.111 |
| 11/10/2014 | 0.014 | 0.002 | LT | 0.061 |
| 11/17/2014 | 0.012 | 0.002 | LT | 0.033 |
| 11/24/2014 | 0.018 | 0.003 | LT | 0.100 |
| 12/1/2014 | | | | |
| 12/8/2014 | | | | |
| 12/14/2014 | 0.024 | 0.002 | LT | 0.035 |
| 12/22/2014 | 0.018 | 0.002 | LT | 0.046 |
| 12/29/2014 | 0.018 | 0.002 | LT | 0.066 |

# Appendix A – Atmospheric Monitoring 2014

## Cook 5

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/8/2014 | 0.014 | 0.002 | LT | 0.023 |
| 1/13/2014 | 0.016 | 0.003 | LT | 0.044 |
| 1/20/2014 | 0.016 | 0.002 | LT | 0.031 |
| 1/27/2014 | 0.009 | 0.002 | LT | 0.029 |
| 2/3/2014 | 0.013 | 0.002 | LT | 0.027 |
| 2/10/2014 | 0.015 | 0.002 | LT | 0.032 |
| 2/16/2014 | 0.018 | 0.002 | LT | 0.040 |
| 2/24/2014 | 0.016 | 0.002 | LT | 0.031 |
| 3/3/2014 | 0.023 | 0.002 | LT | 0.030 |
| 3/10/2014 | 0.017 | 0.002 | LT | 0.031 |
| 3/17/2014 | 0.012 | 0.002 | LT | 0.035 |
| 3/24/2014 | 0.009 | 0.002 | LT | 0.031 |
| 3/31/2014 | 0.017 | 0.002 | LT | 0.030 |
| 4/7/2014 | 0.011 | 0.002 | LT | 0.033 |
| 4/14/2014 | 0.014 | 0.002 | LT | 0.031 |
| 4/21/2014 | 0.034 | 0.003 | LT | 0.037 |
| 4/28/2014 | 0.009 | 0.002 | LT | 0.032 |
| 5/5/2014 | 0.007 | 0.001 | LT | 0.030 |
| 5/12/2014 | 0.012 | 0.002 | LT | 0.032 |
| 5/19/2014 | 0.008 | 0.002 | LT | 0.032 |
| 5/25/2014 | 0.011 | 0.002 | LT | 0.040 |
| 6/2/2014 | 0.011 | 0.002 | LT | 0.027 |
| 6/9/2014 | 0.008 | 0.002 | LT | 0.030 |
| 6/15/2014 | 0.008 | 0.002 | LT | 0.064 |
| 6/23/2014 | 0.011 | 0.002 | LT | 0.027 |
| 6/30/2014 | 0.009 | 0.002 | LT | 0.031 |
| 7/5/2014 | 0.005 | 0.002 | LT | 0.057 |
| 7/14/2014 | 0.012 | 0.002 | LT | 0.027 |
| 7/20/2014 | 0.010 | 0.002 | LT | 0.076 |
| 7/28/2014 | 0.013 | 0.002 | LT | 0.044 |
| 8/4/2014 | 0.018 | 0.002 | LT | 0.032 |
| 8/11/2014 | 0.017 | 0.002 | LT | 0.029 |
| 8/17/2014 | 0.011 | 0.002 | LT | 0.057 |
| 8/25/2014 | 0.016 | 0.002 | LT | 0.029 |
| 9/1/2014 | 0.013 | 0.002 | LT | 0.061 |
| 9/8/2014 | 0.013 | 0.002 | LT | 0.036 |
| 9/15/2014 | 0.010 | 0.002 | LT | 0.034 |
| 9/22/2014 | 0.017 | 0.002 | LT | 0.035 |
| 9/29/2014 | 0.018 | 0.002 | LT | 0.059 |
| 10/6/2014 | 0.008 | 0.002 | LT | 0.044 |
| 10/13/2014 | 0.013 | 0.002 | LT | 0.032 |
| 10/20/2014 | 0.007 | 0.002 | LT | 0.326 |
| 10/27/2014 | 0.013 | 0.002 | LT | 0.177 |
| 11/3/2014 | 0.012 | 0.002 | LT | 0.111 |
| 11/10/2014 | 0.014 | 0.002 | LT | 0.061 |
| 11/17/2014 | 0.011 | 0.002 | LT | 0.033 |
| 11/24/2014 | 0.015 | 0.002 | LT | 0.050 |
| 12/1/2014 | 0.018 | 0.002 | LT | 0.010 |
| 12/8/2014 | 0.023 | 0.002 | LT | 0.053 |
| 12/14/2014 | 0.020 | 0.002 | LT | 0.035 |
| 12/22/2014 | 0.013 | 0.002 | LT | 0.046 |
| 12/29/2014 | 0.019 | 0.003 | LT | 0.132 |

# Appendix A – Atmospheric Monitoring 2014

## Lansing 1

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/7/2014 | 0.017 | 0.002 | LT | 0.023 |
| 1/13/2014 | 0.018 | 0.002 | LT | 0.037 |
| 1/21/2014 | 0.016 | 0.002 | LT | 0.021 |
| 1/27/2014 | 0.010 | 0.002 | LT | 0.033 |
| 2/3/2014 | 0.017 | 0.002 | LT | 0.026 |
| 2/10/2014 | 0.015 | 0.002 | LT | 0.031 |
| 2/18/2014 | 0.018 | 0.002 | LT | 0.026 |
| 2/24/2014 | 0.017 | 0.002 | LT | 0.037 |
| 3/3/2014 | 0.025 | 0.002 | LT | 0.028 |
| 3/10/2014 | 0.019 | 0.002 | LT | 0.026 |
| 3/17/2014 | 0.005 | 0.001 | LT | 0.031 |
| 3/24/2014 | 0.011 | 0.002 | LT | 0.030 |
| 3/31/2014 | 0.019 | 0.002 | LT | 0.026 |
| 4/7/2014 | 0.016 | 0.002 | LT | 0.031 |
| 4/14/2014 | 0.016 | 0.002 | LT | 0.026 |
| 4/21/2014 | 0.018 | 0.002 | LT | 0.028 |
| 4/28/2014 | 0.015 | 0.002 | LT | 0.031 |
| 5/5/2014 | 0.015 | 0.003 | LT | 0.053 |
| 5/12/2014 | | | | |
| 5/19/2014 | | | | |
| 5/27/2014 | | | | |
| 6/2/2014 | | | | |
| 6/9/2014 | 0.018 | 0.002 | LT | 0.033 |
| 6/16/2014 | 0.015 | 0.002 | LT | 0.027 |
| 6/23/2014 | 0.018 | 0.002 | LT | 0.028 |
| 6/30/2014 | 0.015 | 0.002 | LT | 0.031 |
| 7/7/2014 | 0.012 | 0.002 | LT | 0.028 |
| 7/14/2014 | 0.013 | 0.002 | LT | 0.031 |
| 7/21/2014 | 0.015 | 0.002 | LT | 0.024 |
| 7/28/2014 | 0.021 | 0.002 | LT | 0.051 |
| 8/4/2014 | 0.020 | 0.002 | LT | 0.027 |
| 8/11/2014 | 0.022 | 0.002 | LT | 0.028 |
| 8/18/2014 | 0.014 | 0.002 | LT | 0.028 |
| 8/25/2014 | 0.018 | 0.002 | LT | 0.032 |
| 9/2/2014 | 0.017 | 0.002 | LT | 0.026 |
| 9/8/2014 | 0.018 | 0.002 | LT | 0.032 |
| 9/15/2014 | 0.014 | 0.002 | LT | 0.027 |
| 9/22/2014 | 0.023 | 0.002 | LT | 0.032 |
| 9/29/2014 | 0.019 | 0.002 | LT | 0.036 |
| 10/6/2014 | 0.007 | 0.001 | LT | 0.024 |
| 10/13/2014 | 0.017 | 0.002 | LT | 0.029 |
| 10/20/2014 | 0.012 | 0.002 | LT | 0.307 |
| 10/27/2014 | 0.012 | 0.002 | LT | 0.168 |
| 11/3/2014 | 0.013 | 0.002 | LT | 0.091 |
| 11/10/2014 | 0.014 | 0.002 | LT | 0.051 |
| 11/17/2014 | 0.017 | 0.002 | LT | 0.028 |
| 11/24/2014 | 0.024 | 0.002 | LT | 0.051 |
| 12/1/2014 | 0.016 | 0.002 | LT | 0.028 |
| 12/8/2014 | 0.028 | 0.002 | LT | 0.054 |
| 12/15/2014 | 0.027 | 0.002 | LT | 0.029 |
| 12/22/2014 | 0.014 | 0.002 | LT | 0.052 |
| 12/29/2014 | 0.015 | 0.002 | LT | 0.028 |

# Appendix A – Atmospheric Monitoring 2015

## Fermi 4

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/1/2015 | 0.018 | 0.002 | LT | 0.042 |
| 1/8/2015 | 0.023 | 0.002 | LT | 0.049 |
| 1/15/2015 | 0.022 | 0.002 | LT | 0.042 |
| 1/22/2015 | 0.021 | 0.002 | LT | 0.046 |
| 1/29/2015 | 0.016 | 0.002 | LT | 0.045 |
| 2/5/2015 | 0.014 | 0.002 | LT | 0.040 |
| 2/12/2015 | 0.041 | 0.004 | LT | 0.219 |
| 2/19/2015 | 0.022 | 0.002 | LT | 0.068 |
| 2/26/2015 | 0.033 | 0.003 | LT | 0.103 |
| 3/5/2015 | 0.022 | 0.002 | LT | 0.067 |
| 3/12/2015 | 0.018 | 0.002 | LT | 0.048 |
| 3/19/2015 | 0.015 | 0.002 | LT | 0.114 |
| 3/26/2015 | 0.014 | 0.002 | LT | 0.058 |
| 4/2/2015 | 0.011 | 0.002 | LT | 0.042 |
| 4/9/2015 | 0.013 | 0.002 | LT | 0.042 |
| 4/16/2015 | 0.008 | 0.002 | LT | 0.035 |
| 4/23/2015 | 0.010 | 0.002 | LT | 0.047 |
| 4/30/2015 | 0.006 | 0.002 | LT | 0.037 |
| 5/7/2015 | 0.014 | 0.002 | LT | 0.038 |
| 5/14/2015 | 0.013 | 0.002 | LT | 0.146 |
| 5/21/2015 | 0.014 | 0.002 | LT | 0.110 |
| 5/28/2015 | 0.017 | 0.002 | LT | 0.059 |
| 6/4/2015 | 0.011 | 0.002 | LT | 0.038 |
| 6/11/2015 | 0.012 | 0.002 | LT | 0.055 |
| 6/17/2015 | 0.010 | 0.002 | LT | 0.077 |
| 6/25/2015 | 0.012 | 0.002 | LT | 0.660 |
| 7/2/2015 | 0.011 | 0.002 | LT | 0.441 |
| 7/9/2015 | 0.013 | 0.002 | LT | 0.000 |
| 7/16/2015 | 0.013 | 0.002 | LT | 0.179 |
| 7/22/2015 | 0.014 | 0.002 | LT | 0.151 |
| 7/30/2015 | 0.018 | 0.002 | LT | 0.057 |
| 8/5/2015 | 0.017 | 0.002 | LT | 0.065 |
| 8/13/2015 | 0.012 | 0.002 | LT | 0.036 |
| 8/20/2015 | 0.026 | 0.002 | LT | 0.043 |
| 8/27/2015 | 0.012 | 0.002 | LT | 0.058 |
| 9/3/2015 | 0.032 | 0.003 | LT | 0.036 |
| 9/10/2015 | 0.019 | 0.002 | LT | 0.037 |
| 9/17/2015 | 0.029 | 0.002 | LT | 0.040 |
| 9/24/2015 | 0.019 | 0.002 | LT | 0.043 |
| 10/1/2015 | 0.019 | 0.002 | LT | 0.380 |
| 10/8/2015 | 0.013 | 0.002 | LT | 0.192 |
| 10/15/2015 | 0.014 | 0.002 | LT | 0.115 |
| 10/22/2015 | 0.023 | 0.002 | LT | 0.421 |
| 10/29/2015 | 0.012 | 0.002 | LT | 0.114 |
| 11/5/2015 | 0.023 | 0.002 | LT | 0.069 |
| 11/12/2015 | 0.022 | 0.002 | LT | 0.049 |
| 11/19/2015 | 0.026 | 0.002 | LT | 0.128 |
| 11/27/2015 | 0.019 | 0.002 | LT | 0.060 |
| 12/3/2015 | 0.017 | 0.002 | LT | 2.175 |
| 12/10/2015 | 0.040 | 0.003 | LT | 1.351 |
| 12/17/2015 | 0.022 | 0.002 | LT | 0.786 |
| 12/24/2015 | 0.018 | 0.002 | LT | 8.141 |
| 12/31/2015 | 0.016 | 0.002 | LT | 4.959 |

# Appendix A – Atmospheric Monitoring 2015

## Fermi 5

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/1/2015 | 0.017 | 0.002 | LT | 0.068 |
| 1/8/2015 | 0.023 | 0.002 | LT | 0.049 |
| 1/15/2015 | 0.025 | 0.002 | LT | 0.041 |
| 1/22/2015 | 0.022 | 0.002 | LT | 0.046 |
| 1/29/2015 | 0.016 | 0.002 | LT | 0.045 |
| 2/5/2015 | 0.015 | 0.002 | LT | 0.040 |
| 2/12/2015 | 0.036 | 0.004 | LT | 0.218 |
| 2/19/2015 | 0.023 | 0.002 | LT | 0.068 |
| 2/26/2015 | 0.035 | 0.003 | LT | 0.103 |
| 3/5/2015 | 0.023 | 0.002 | LT | 0.067 |
| 3/12/2015 | 0.017 | 0.002 | LT | 0.048 |
| 3/19/2015 | 0.016 | 0.002 | LT | 0.113 |
| 3/26/2015 | 0.016 | 0.002 | LT | 0.059 |
| 4/2/2015 | 0.010 | 0.002 | LT | 0.042 |
| 4/9/2015 | 0.012 | 0.002 | LT | 0.042 |
| 4/16/2015 | 0.012 | 0.002 | LT | 0.036 |
| 4/23/2015 | 0.009 | 0.002 | LT | 0.047 |
| 4/30/2015 | 0.008 | 0.002 | LT | 0.037 |
| 5/7/2015 | 0.011 | 0.002 | LT | 0.038 |
| 5/14/2015 | 0.013 | 0.002 | LT | 0.146 |
| 5/21/2015 | 0.014 | 0.002 | LT | 0.110 |
| 5/28/2015 | 0.016 | 0.002 | LT | 0.059 |
| 6/4/2015 | 0.009 | 0.002 | LT | 0.038 |
| 6/11/2015 | 0.014 | 0.002 | LT | 0.055 |
| 6/17/2015 | 0.010 | 0.002 | LT | 0.077 |
| 6/25/2015 | 0.012 | 0.002 | LT | 0.659 |
| 7/2/2015 | 0.010 | 0.002 | LT | 0.440 |
| 7/9/2015 | 0.012 | 0.002 | LT | 0.000 |
| 7/16/2015 | 0.012 | 0.002 | LT | 0.179 |
| 7/22/2015 | 0.015 | 0.002 | LT | 0.151 |
| 7/30/2015 | 0.019 | 0.002 | LT | 0.057 |
| 8/5/2015 | 0.014 | 0.002 | LT | 0.065 |
| 8/13/2015 | 0.012 | 0.002 | LT | 0.036 |
| 8/20/2015 | 0.023 | 0.002 | LT | 0.043 |
| 8/27/2015 | 0.011 | 0.002 | LT | 0.058 |
| 9/3/2015 | 0.030 | 0.003 | LT | 0.036 |
| 9/10/2015 | 0.020 | 0.002 | LT | 0.036 |
| 9/17/2015 | 0.024 | 0.002 | LT | 0.040 |
| 9/24/2015 | 0.015 | 0.002 | LT | 0.043 |
| 10/1/2015 | 0.017 | 0.003 | LT | 0.765 |
| 10/8/2015 | 0.026 | 0.005 | LT | 0.661 |
| 10/15/2015 | 0.018 | 0.002 | LT | 0.115 |
| 10/22/2015 | 0.024 | 0.002 | LT | 0.421 |
| 10/29/2015 | 0.013 | 0.002 | LT | 0.114 |
| 11/5/2015 | 0.021 | 0.002 | LT | 0.069 |
| 11/12/2015 | 0.022 | 0.002 | LT | 0.048 |
| 11/19/2015 | 0.029 | 0.002 | LT | 0.128 |
| 11/27/2015 | 0.020 | 0.002 | LT | 0.060 |
| 12/3/2015 | 0.019 | 0.002 | LT | 2.170 |
| 12/10/2015 | 0.020 | 0.002 | LT | 1.350 |
| 12/17/2015 | 0.021 | 0.002 | LT | 0.786 |
| 12/24/2015 | 0.018 | 0.002 | LT | 8.139 |
| 12/31/2015 | 0.016 | 0.002 | LT | 4.950 |

# Appendix A – Atmospheric Monitoring 2015

## Fermi 6

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/1/2015 | 0.015 | 0.002 | LT | 0.042 |
| 1/8/2015 | 0.023 | 0.002 | LT | 0.049 |
| 1/15/2015 | 0.025 | 0.002 | LT | 0.041 |
| 1/22/2015 | 0.021 | 0.002 | LT | 0.046 |
| 1/29/2015 | 0.013 | 0.002 | LT | 0.045 |
| 2/5/2015 | 0.012 | 0.002 | LT | 0.040 |
| 2/12/2015 | 0.039 | 0.004 | LT | 0.218 |
| 2/19/2015 | 0.023 | 0.002 | LT | 0.068 |
| 2/26/2015 | 0.032 | 0.003 | LT | 0.103 |
| 3/5/2015 | 0.020 | 0.002 | LT | 0.067 |
| 3/12/2015 | 0.018 | 0.002 | LT | 0.048 |
| 3/19/2015 | 0.014 | 0.002 | LT | 0.114 |
| 3/26/2015 | 0.013 | 0.002 | LT | 0.058 |
| 4/2/2015 | 0.012 | 0.002 | LT | 0.042 |
| 4/9/2015 | 0.013 | 0.002 | LT | 0.042 |
| 4/16/2015 | 0.010 | 0.002 | LT | 0.035 |
| 4/23/2015 | 0.009 | 0.002 | LT | 0.047 |
| 4/30/2015 | 0.008 | 0.002 | LT | 0.037 |
| 5/7/2015 | 0.011 | 0.002 | LT | 0.038 |
| 5/14/2015 | 0.013 | 0.002 | LT | 0.146 |
| 5/21/2015 | 0.015 | 0.002 | LT | 0.110 |
| 5/28/2015 | 0.017 | 0.002 | LT | 0.059 |
| 6/4/2015 | 0.010 | 0.002 | LT | 0.038 |
| 6/11/2015 | 0.016 | 0.002 | LT | 0.055 |
| 6/17/2015 | 0.009 | 0.002 | LT | 0.072 |
| 6/25/2015 | 0.012 | 0.002 | LT | 0.659 |
| 7/2/2015 | 0.011 | 0.002 | LT | 0.440 |
| 7/9/2015 | 0.012 | 0.002 | LT | 0.000 |
| 7/16/2015 | 0.011 | 0.002 | LT | 0.179 |
| 7/22/2015 | 0.016 | 0.002 | LT | 0.154 |
| 7/30/2015 | 0.016 | 0.002 | LT | 0.058 |
| 8/5/2015 | 0.022 | 0.002 | LT | 0.065 |
| 8/13/2015 | 0.011 | 0.002 | LT | 0.036 |
| 8/20/2015 | 0.022 | 0.002 | LT | 0.043 |
| 8/27/2015 | 0.011 | 0.002 | LT | 0.058 |
| 9/3/2015 | 0.034 | 0.003 | LT | 0.036 |
| 9/10/2015 | 0.020 | 0.002 | LT | 0.036 |
| 9/17/2015 | 0.026 | 0.002 | LT | 0.040 |
| 9/24/2015 | 0.018 | 0.002 | LT | 0.043 |
| 10/1/2015 | 0.018 | 0.002 | LT | 0.380 |
| 10/8/2015 | 0.004 | 0.002 | LT | 0.383 |
| 10/15/2015 | 0.014 | 0.008 | LT | 0.796 |
| 10/22/2015 | 0.022 | 0.002 | LT | 0.421 |
| 10/29/2015 | 0.011 | 0.002 | LT | 0.114 |
| 11/5/2015 | 0.028 | 0.002 | LT | 0.069 |
| 11/12/2015 | 0.021 | 0.002 | LT | 0.048 |
| 11/19/2015 | 0.026 | 0.002 | LT | 0.128 |
| 11/27/2015 | 0.019 | 0.002 | LT | 0.060 |
| 12/3/2015 | 0.017 | 0.002 | LT | 2.171 |
| 12/10/2015 | 0.040 | 0.003 | LT | 1.350 |
| 12/17/2015 | 0.021 | 0.002 | LT | 0.786 |
| 12/24/2015 | 0.019 | 0.002 | LT | 8.138 |
| 12/31/2015 | 0.016 | 0.002 | LT | 4.948 |

# Appendix A – Atmospheric Monitoring 2015

## Fermi 7

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/1/2015 | 0.018 | 0.002 | LT | 0.042 |
| 1/8/2015 | 0.025 | 0.002 | LT | 0.049 |
| 1/15/2015 | 0.023 | 0.002 | LT | 0.042 |
| 1/22/2015 | 0.022 | 0.002 | LT | 0.046 |
| 1/29/2015 | 0.016 | 0.002 | LT | 0.045 |
| 2/5/2015 | 0.016 | 0.002 | LT | 0.040 |
| 2/12/2015 | 0.039 | 0.004 | LT | 0.219 |
| 2/19/2015 | 0.024 | 0.002 | LT | 0.068 |
| 2/26/2015 | 0.033 | 0.003 | LT | 0.103 |
| 3/5/2015 | 0.024 | 0.002 | LT | 0.067 |
| 3/12/2015 | 0.018 | 0.002 | LT | 0.048 |
| 3/19/2015 | 0.014 | 0.002 | LT | 0.114 |
| 3/26/2015 | 0.016 | 0.002 | LT | 0.059 |
| 4/2/2015 | 0.012 | 0.002 | LT | 0.042 |
| 4/9/2015 | 0.012 | 0.002 | LT | 0.042 |
| 4/16/2015 | 0.009 | 0.002 | LT | 0.035 |
| 4/23/2015 | 0.010 | 0.002 | LT | 0.047 |
| 4/30/2015 | 0.008 | 0.002 | LT | 0.037 |
| 5/7/2015 | 0.011 | 0.002 | LT | 0.038 |
| 5/14/2015 | 0.012 | 0.002 | LT | 0.147 |
| 5/21/2015 | 0.015 | 0.002 | LT | 0.110 |
| 5/28/2015 | 0.016 | 0.002 | LT | 0.059 |
| 6/4/2015 | 0.010 | 0.002 | LT | 0.038 |
| 6/11/2015 | 0.016 | 0.002 | LT | 0.056 |
| 6/17/2015 | 0.011 | 0.002 | LT | 0.073 |
| 6/25/2015 | 0.012 | 0.002 | LT | 0.660 |
| 7/2/2015 | 0.013 | 0.002 | LT | 0.443 |
| 7/9/2015 | 0.013 | 0.002 | LT | 0.000 |
| 7/16/2015 | 0.013 | 0.002 | LT | 0.179 |
| 7/22/2015 | 0.018 | 0.002 | LT | 0.151 |
| 7/30/2015 | 0.020 | 0.002 | LT | 0.057 |
| 8/5/2015 | 0.013 | 0.002 | LT | 0.065 |
| 8/13/2015 | 0.012 | 0.002 | LT | 0.036 |
| 8/20/2015 | 0.027 | 0.002 | LT | 0.043 |
| 8/27/2015 | 0.011 | 0.002 | LT | 0.058 |
| 9/3/2015 | 0.032 | 0.003 | LT | 0.036 |
| 9/10/2015 | 0.019 | 0.002 | LT | 0.037 |
| 9/17/2015 | 0.027 | 0.002 | LT | 0.040 |
| 9/24/2015 | 0.018 | 0.002 | LT | 0.043 |
| 10/1/2015 | 0.018 | 0.002 | LT | 0.381 |
| 10/8/2015 | 0.012 | 0.002 | LT | 0.192 |
| 10/15/2015 | 0.018 | 0.002 | LT | 0.115 |
| 10/22/2015 | 0.022 | 0.002 | LT | 0.422 |
| 10/29/2015 | 0.012 | 0.002 | LT | 0.115 |
| 11/5/2015 | 0.023 | 0.002 | LT | 0.069 |
| 11/12/2015 | 0.020 | 0.002 | LT | 0.049 |
| 11/19/2015 | 0.026 | 0.002 | LT | 0.128 |
| 11/27/2015 | 0.019 | 0.002 | LT | 0.060 |
| 12/3/2015 | 0.015 | 0.002 | LT | 2.174 |
| 12/10/2015 | 0.038 | 0.003 | LT | 1.354 |
| 12/17/2015 | 0.022 | 0.002 | LT | 0.788 |
| 12/24/2015 | 0.023 | 0.002 | LT | 8.154 |
| 12/31/2015 | 0.015 | 0.002 | LT | 4.959 |

# Appendix A – Atmospheric Monitoring 2015

## Fermi 8

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/1/2015 | 0.014 | 0.002 | LT | 0.042 |
| 1/8/2015 | 0.023 | 0.002 | LT | 0.049 |
| 1/15/2015 | 0.023 | 0.002 | LT | 0.042 |
| 1/22/2015 | 0.025 | 0.002 | LT | 0.046 |
| 1/29/2015 | 0.014 | 0.002 | LT | 0.045 |
| 2/5/2015 | 0.008 | 0.003 | LT | 0.081 |
| 2/12/2015 | 0.020 | 0.003 | LT | 0.220 |
| 2/19/2015 | 0.023 | 0.002 | LT | 0.068 |
| 2/26/2015 | 0.032 | 0.003 | LT | 0.104 |
| 3/5/2015 | 0.023 | 0.002 | LT | 0.067 |
| 3/12/2015 | 0.018 | 0.002 | LT | 0.048 |
| 3/19/2015 | 0.014 | 0.002 | LT | 0.114 |
| 3/26/2015 | 0.015 | 0.002 | LT | 0.059 |
| 4/2/2015 | 0.012 | 0.002 | LT | 0.042 |
| 4/9/2015 | 0.012 | 0.002 | LT | 0.042 |
| 4/16/2015 | 0.010 | 0.002 | LT | 0.035 |
| 4/23/2015 | 0.008 | 0.002 | LT | 0.047 |
| 4/30/2015 | 0.009 | 0.002 | LT | 0.037 |
| 5/7/2015 | 0.013 | 0.002 | LT | 0.038 |
| 5/14/2015 | 0.013 | 0.002 | LT | 0.147 |
| 5/21/2015 | 0.013 | 0.002 | LT | 0.111 |
| 5/28/2015 | 0.015 | 0.002 | LT | 0.059 |
| 6/4/2015 | 0.009 | 0.002 | LT | 0.038 |
| 6/11/2015 | 0.014 | 0.002 | LT | 0.056 |
| 6/17/2015 | 0.009 | 0.002 | LT | 0.073 |
| 6/25/2015 | 0.012 | 0.002 | LT | 0.662 |
| 7/2/2015 | 0.010 | 0.002 | LT | 0.444 |
| 7/9/2015 | 0.012 | 0.002 | LT | 0.000 |
| 7/16/2015 | 0.012 | 0.002 | LT | 0.180 |
| 7/22/2015 | 0.015 | 0.002 | LT | 0.150 |
| 7/30/2015 | 0.020 | 0.002 | LT | 0.057 |
| 8/5/2015 | 0.015 | 0.002 | LT | 0.065 |
| 8/13/2015 | 0.012 | 0.002 | LT | 0.036 |
| 8/20/2015 | 0.022 | 0.002 | LT | 0.043 |
| 8/27/2015 | 0.011 | 0.002 | LT | 0.059 |
| 9/3/2015 | 0.031 | 0.003 | LT | 0.036 |
| 9/10/2015 | 0.019 | 0.002 | LT | 0.037 |
| 9/17/2015 | 0.026 | 0.002 | LT | 0.040 |
| 9/24/2015 | 0.017 | 0.002 | LT | 0.043 |
| 10/1/2015 | 0.019 | 0.002 | LT | 0.382 |
| 10/8/2015 | 0.011 | 0.002 | LT | 0.192 |
| 10/15/2015 | 0.019 | 0.002 | LT | 0.115 |
| 10/22/2015 | 0.023 | 0.002 | LT | 0.423 |
| 10/29/2015 | 0.012 | 0.002 | LT | 0.115 |
| 11/5/2015 | 0.021 | 0.002 | LT | 0.069 |
| 11/12/2015 | 0.023 | 0.002 | LT | 0.049 |
| 11/19/2015 | 0.024 | 0.002 | LT | 0.129 |
| 11/27/2015 | 0.020 | 0.002 | LT | 0.060 |
| 12/3/2015 | 0.014 | 0.002 | LT | 2.172 |
| 12/10/2015 | 0.043 | 0.003 | LT | 1.361 |
| 12/17/2015 | 0.023 | 0.002 | LT | 0.789 |
| 12/24/2015 | 0.019 | 0.002 | LT | 8.170 |
| 12/31/2015 | 0.015 | 0.002 | LT | 4.979 |

# Appendix A – Atmospheric Monitoring 2015

## Palisades 1

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/5/2015 | 0.017 | 0.002 | LT | 0.033 |
| 1/12/2015 | 0.018 | 0.002 | LT | 0.034 |
| 1/19/2015 | 0.020 | 0.002 | LT | 0.030 |
| 1/27/2015 | 0.015 | 0.002 | LT | 0.027 |
| 2/2/2015 | 0.015 | 0.002 | LT | 0.036 |
| 2/9/2015 | 0.016 | 0.002 | LT | 0.035 |
| 2/16/2015 | 0.018 | 0.002 | LT | 0.091 |
| 2/23/2015 | 0.029 | 0.002 | LT | 0.041 |
| 3/2/2015 | 0.024 | 0.002 | LT | 0.091 |
| 3/9/2015 | 0.015 | 0.002 | LT | 0.056 |
| 3/16/2015 | 0.014 | 0.002 | LT | 0.034 |
| 3/23/2015 | 0.016 | 0.002 | LT | 0.083 |
| 3/30/2015 | 0.013 | 0.002 | LT | 0.047 |
| 4/6/2015 | 0.011 | 0.002 | LT | 0.031 |
| 4/13/2015 | 0.013 | 0.002 | LT | 0.036 |
| 4/20/2015 | 0.013 | 0.002 | LT | 0.034 |
| 4/27/2015 | 0.009 | 0.002 | LT | 0.031 |
| 5/4/2015 | 0.011 | 0.002 | LT | 0.028 |
| 5/11/2015 | 0.012 | 0.002 | LT | 0.028 |
| 5/18/2015 | 0.010 | 0.002 | LT | 0.058 |
| 5/27/2015 | 0.012 | 0.002 | LT | 0.363 |
| 6/1/2015 | 0.010 | 0.002 | LT | 0.069 |
| 6/8/2015 | 0.014 | 0.002 | LT | 0.036 |
| 6/15/2015 | 0.012 | 0.002 | LT | 0.047 |
| 6/22/2015 | 0.008 | 0.002 | LT | 0.048 |
| 6/27/2015 | 0.011 | 0.002 | LT | 1.133 |
| 7/6/2015 | 0.011 | 0.001 | LT | 0.309 |
| 7/13/2015 | 0.012 | 0.002 | LT | 0.194 |
| 7/20/2015 | 0.012 | 0.002 | LT | 0.142 |
| 7/27/2015 | 0.017 | 0.002 | LT | 0.086 |
| 8/3/2015 | 0.016 | 0.002 | LT | 0.047 |
| 8/10/2015 | 0.014 | 0.002 | LT | 0.030 |
| 8/17/2015 | 0.018 | 0.002 | LT | 0.032 |
| 8/24/2015 | 0.015 | 0.002 | LT | 0.040 |
| 8/31/2015 | 0.015 | 0.002 | LT | 0.044 |
| 9/8/2015 | 0.032 | 0.002 | LT | 0.020 |
| 9/14/2015 | 0.016 | 0.002 | LT | 0.032 |
| 9/21/2015 | 0.018 | 0.002 | LT | 0.029 |
| 9/28/2015 | 0.019 | 0.002 | LT | 0.034 |
| 10/5/2015 | 0.012 | 0.002 | LT | 0.250 |
| 10/12/2015 | 0.014 | 0.002 | LT | 0.154 |
| 10/19/2015 | 0.012 | 0.002 | LT | 0.113 |
| 10/26/2015 | 0.017 | 0.002 | LT | 0.099 |
| 11/2/2015 | 0.010 | 0.002 | LT | 0.074 |
| 11/9/2015 | 0.019 | 0.002 | LT | 0.048 |
| 11/16/2015 | 0.024 | 0.002 | LT | 0.037 |
| 11/23/2015 | 0.020 | 0.002 | LT | 0.103 |
| 11/30/2015 | 0.018 | 0.002 | LT | 0.061 |
| 12/7/2015 | 0.020 | 0.002 | LT | 1.667 |
| 12/14/2015 | 0.041 | 0.004 | LT | 2.278 |
| 12/21/2015 | 0.015 | 0.002 | LT | 0.680 |
| 12/29/2015 | 0.019 | 0.002 | LT | 5.344 |

# Appendix A – Atmospheric Monitoring 2015

## Palisades 3

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/5/2015 | 0.016 | 0.002 | LT | 0.033 |
| 1/12/2015 | 0.017 | 0.002 | LT | 0.034 |
| 1/19/2015 | 0.021 | 0.002 | LT | 0.030 |
| 1/27/2015 | 0.014 | 0.002 | LT | 0.027 |
| 2/2/2015 | 0.012 | 0.002 | LT | 0.036 |
| 2/9/2015 | 0.020 | 0.002 | LT | 0.035 |
| 2/16/2015 | 0.018 | 0.002 | LT | 0.091 |
| 2/23/2015 | 0.022 | 0.002 | LT | 0.041 |
| 3/2/2015 | 0.022 | 0.002 | LT | 0.091 |
| 3/9/2015 | 0.014 | 0.002 | LT | 0.056 |
| 3/16/2015 | 0.012 | 0.002 | LT | 0.034 |
| 3/23/2015 | 0.015 | 0.002 | LT | 0.083 |
| 3/30/2015 | 0.011 | 0.002 | LT | 0.047 |
| 4/6/2015 | 0.011 | 0.002 | LT | 0.031 |
| 4/13/2015 | 0.012 | 0.002 | LT | 0.036 |
| 4/20/2015 | 0.012 | 0.002 | LT | 0.034 |
| 4/27/2015 | 0.008 | 0.002 | LT | 0.031 |
| 5/4/2015 | 0.009 | 0.002 | LT | 0.028 |
| 5/11/2015 | 0.013 | 0.002 | LT | 0.028 |
| 5/18/2015 | 0.008 | 0.002 | LT | 0.058 |
| 5/27/2015 | 0.011 | 0.001 | LT | 0.363 |
| 6/1/2015 | 0.011 | 0.002 | LT | 0.069 |
| 6/8/2015 | 0.010 | 0.002 | LT | 0.036 |
| 6/15/2015 | 0.009 | 0.002 | LT | 0.047 |
| 6/22/2015 | 0.009 | 0.002 | LT | 0.048 |
| 6/27/2015 | 0.011 | 0.002 | LT | 1.132 |
| 7/6/2015 | 0.010 | 0.001 | LT | 0.309 |
| 7/13/2015 | 0.009 | 0.002 | LT | 0.193 |
| 7/20/2015 | 0.009 | 0.002 | LT | 0.142 |
| 7/27/2015 | 0.014 | 0.002 | LT | 0.083 |
| 8/3/2015 | 0.014 | 0.002 | LT | 0.046 |
| 8/10/2015 | 0.014 | 0.002 | LT | 0.030 |
| 8/17/2015 | 0.017 | 0.002 | LT | 0.032 |
| 8/24/2015 | 0.014 | 0.002 | LT | 0.040 |
| 8/31/2015 | 0.012 | 0.002 | LT | 0.044 |
| 9/8/2015 | 0.028 | 0.002 | LT | 0.020 |
| 9/14/2015 | 0.012 | 0.002 | LT | 0.032 |
| 9/21/2015 | 0.018 | 0.002 | LT | 0.029 |
| 9/28/2015 | 0.016 | 0.002 | LT | 0.034 |
| 10/5/2015 | 0.010 | 0.002 | LT | 0.250 |
| 10/12/2015 | 0.013 | 0.002 | LT | 0.154 |
| 10/19/2015 | 0.010 | 0.002 | LT | 0.112 |
| 10/26/2015 | 0.013 | 0.001 | LT | 0.098 |
| 11/2/2015 | 0.010 | 0.002 | LT | 0.075 |
| 11/9/2015 | 0.014 | 0.002 | LT | 0.048 |
| 11/16/2015 | 0.019 | 0.002 | LT | 0.037 |
| 11/23/2015 | 0.015 | 0.002 | LT | 0.103 |
| 11/30/2015 | 0.018 | 0.002 | LT | 0.061 |
| 12/7/2015 | 0.021 | 0.002 | LT | 1.665 |
| 12/14/2015 | 0.032 | 0.003 | LT | 1.138 |
| 12/21/2015 | 0.014 | 0.002 | LT | 0.651 |
| 12/29/2015 | 0.018 | 0.002 | LT | 5.338 |

# Appendix A – Atmospheric Monitoring 2015

## Palisades 4

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/5/2015 | 0.016 | 0.002 | LT | 0.033 |
| 1/12/2015 | 0.012 | 0.002 | LT | 0.034 |
| 1/19/2015 | 0.016 | 0.002 | LT | 0.030 |
| 1/27/2015 | 0.011 | 0.002 | LT | 0.027 |
| 2/2/2015 | 0.012 | 0.002 | LT | 0.036 |
| 2/9/2015 | 0.015 | 0.002 | LT | 0.035 |
| 2/16/2015 | 0.014 | 0.002 | LT | 0.091 |
| 2/23/2015 | 0.031 | 0.003 | LT | 0.041 |
| 3/2/2015 | 0.019 | 0.002 | LT | 0.091 |
| 3/9/2015 | 0.015 | 0.002 | LT | 0.057 |
| 3/16/2015 | 0.011 | 0.002 | LT | 0.034 |
| 3/23/2015 | 0.013 | 0.002 | LT | 0.079 |
| 3/30/2015 | 0.010 | 0.002 | LT | 0.047 |
| 4/6/2015 | 0.010 | 0.002 | LT | 0.031 |
| 4/13/2015 | 0.012 | 0.002 | LT | 0.036 |
| 4/20/2015 | 0.011 | 0.002 | LT | 0.034 |
| 4/27/2015 | 0.007 | 0.002 | LT | 0.031 |
| 5/4/2015 | 0.006 | 0.001 | LT | 0.029 |
| 5/11/2015 | 0.008 | 0.002 | LT | 0.028 |
| 5/18/2015 | 0.008 | 0.002 | LT | 0.058 |
| 5/27/2015 | 0.006 | 0.001 | LT | 0.363 |
| 6/1/2015 | 0.007 | 0.002 | LT | 0.069 |
| 6/8/2015 | 0.009 | 0.002 | LT | 0.036 |
| 6/15/2015 | 0.007 | 0.002 | LT | 0.047 |
| 6/22/2015 | 0.008 | 0.002 | LT | 0.048 |
| 6/27/2015 | 0.012 | 0.002 | LT | 1.134 |
| 7/6/2015 | 0.011 | 0.001 | LT | 0.309 |
| 7/13/2015 | 0.011 | 0.002 | LT | 0.194 |
| 7/20/2015 | 0.013 | 0.002 | LT | 0.142 |
| 7/27/2015 | 0.014 | 0.002 | LT | 0.086 |
| 8/3/2015 | 0.017 | 0.002 | LT | 0.047 |
| 8/10/2015 | 0.014 | 0.002 | LT | 0.030 |
| 8/17/2015 | 0.020 | 0.002 | LT | 0.032 |
| 8/24/2015 | 0.012 | 0.002 | LT | 0.040 |
| 8/31/2015 | 0.015 | 0.002 | LT | 0.044 |
| 9/8/2015 | 0.029 | 0.002 | LT | 0.020 |
| 9/14/2015 | 0.013 | 0.002 | LT | 0.032 |
| 9/21/2015 | 0.018 | 0.002 | LT | 0.029 |
| 9/28/2015 | 0.015 | 0.002 | LT | 0.034 |
| 10/5/2015 | 0.011 | 0.002 | LT | 0.250 |
| 10/12/2015 | 0.013 | 0.002 | LT | 0.154 |
| 10/19/2015 | 0.008 | 0.002 | LT | 0.113 |
| 10/26/2015 | 0.011 | 0.001 | LT | 0.098 |
| 11/2/2015 | 0.009 | 0.002 | LT | 0.075 |
| 11/9/2015 | 0.015 | 0.002 | LT | 0.048 |
| 11/16/2015 | 0.016 | 0.002 | LT | 0.037 |
| 11/23/2015 | 0.012 | 0.002 | LT | 0.103 |
| 11/30/2015 | 0.016 | 0.002 | LT | 0.061 |
| 12/7/2015 | 0.018 | 0.002 | LT | 1.668 |
| 12/14/2015 | 0.023 | 0.002 | LT | 1.141 |
| 12/21/2015 | 0.012 | 0.002 | LT | 0.652 |
| 12/29/2015 | 0.015 | 0.002 | LT | 5.347 |

# Appendix A – Atmospheric Monitoring 2015

## Cook 1

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/5/2015 | 0.015 | 0.002 | LT | 0.034 |
| 1/12/2015 | 0.014 | 0.002 | LT | 0.034 |
| 1/19/2015 | 0.016 | 0.002 | LT | 0.030 |
| 1/27/2015 | 0.010 | 0.002 | LT | 0.027 |
| 2/2/2015 | 0.010 | 0.002 | LT | 0.036 |
| 2/9/2015 | 0.016 | 0.002 | LT | 0.034 |
| 2/16/2015 | 0.014 | 0.002 | LT | 0.091 |
| 2/23/2015 | 0.025 | 0.002 | LT | 0.041 |
| 3/2/2015 | 0.018 | 0.002 | LT | 0.090 |
| 3/9/2015 | 0.012 | 0.002 | LT | 0.056 |
| 3/16/2015 | 0.010 | 0.002 | LT | 0.033 |
| 3/23/2015 | 0.012 | 0.002 | LT | 0.083 |
| 3/30/2015 | 0.009 | 0.002 | LT | 0.047 |
| 4/6/2015 | 0.008 | 0.002 | LT | 0.031 |
| 4/13/2015 | 0.010 | 0.002 | LT | 0.036 |
| 4/20/2015 | 0.009 | 0.002 | LT | 0.034 |
| 4/27/2015 | 0.006 | 0.001 | LT | 0.031 |
| 5/4/2015 | 0.008 | 0.002 | LT | 0.028 |
| 5/11/2015 | 0.009 | 0.002 | LT | 0.028 |
| 5/18/2015 | 0.008 | 0.002 | LT | 0.058 |
| 5/27/2015 | 0.007 | 0.001 | LT | 0.035 |
| 6/1/2015 | LT | 0.003 | LT | 0.137 |
| 6/8/2015 | 0.003 | 0.002 | LT | 0.071 |
| 6/15/2015 | | | | |
| 6/22/2015 | LT | 0.002 | LT | 0.096 |
| 6/27/2015 | | | | |
| 7/6/2015 | | | | |
| 7/13/2015 | | | | |
| 7/20/2015 | | | | |
| 7/27/2015 | 0.013 | 0.002 | LT | 0.085 |
| 8/3/2015 | 0.014 | 0.002 | LT | 0.046 |
| 8/10/2015 | 0.012 | 0.002 | LT | 0.029 |
| 8/17/2015 | 0.016 | 0.002 | LT | 0.032 |
| 8/23/2015 | 0.016 | 0.002 | LT | 0.050 |
| 8/30/2015 | 0.014 | 0.002 | LT | 0.056 |
| 9/8/2015 | 0.027 | 0.002 | LT | 0.020 |
| 9/14/2015 | 0.012 | 0.002 | LT | 0.031 |
| 9/21/2015 | 0.015 | 0.002 | LT | 0.028 |
| 9/28/2015 | 0.014 | 0.002 | LT | 0.034 |
| 10/5/2015 | 0.004 | 0.002 | LT | 0.498 |
| 10/12/2015 | | | | |
| 10/19/2015 | 0.011 | 0.002 | LT | 0.112 |
| 10/26/2015 | 0.016 | 0.002 | LT | 0.139 |
| 11/2/2015 | 0.008 | 0.002 | LT | 0.074 |
| 11/9/2015 | 0.010 | 0.002 | LT | 0.048 |
| 11/16/2015 | 0.015 | 0.002 | LT | 0.037 |
| 11/23/2015 | 0.009 | 0.002 | LT | 0.103 |
| 11/30/2015 | 0.012 | 0.002 | LT | 0.060 |
| 12/7/2015 | 0.015 | 0.002 | LT | 1.659 |
| 12/14/2015 | 0.023 | 0.002 | LT | 1.134 |
| 12/21/2015 | 0.012 | 0.002 | LT | 0.644 |
| 12/29/2015 | 0.013 | 0.002 | LT | 5.338 |

# Appendix A – Atmospheric Monitoring 2015

## Cook 2

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/5/2015 | 0.020 | 0.002 | LT | 0.034 |
| 1/12/2015 | 0.022 | 0.002 | LT | 0.034 |
| 1/19/2015 | 0.028 | 0.002 | LT | 0.030 |
| 1/27/2015 | 0.017 | 0.002 | LT | 0.027 |
| 2/2/2015 | 0.019 | 0.002 | LT | 0.036 |
| 2/9/2015 | 0.025 | 0.002 | LT | 0.034 |
| 2/16/2015 | 0.025 | 0.002 | LT | 0.090 |
| 2/23/2015 | 0.041 | 0.003 | LT | 0.040 |
| 3/2/2015 | 0.021 | 0.002 | LT | 0.091 |
| 3/9/2015 | 0.021 | 0.002 | LT | 0.056 |
| 3/16/2015 | 0.016 | 0.002 | LT | 0.033 |
| 3/23/2015 | 0.019 | 0.002 | LT | 0.083 |
| 3/30/2015 | 0.015 | 0.002 | LT | 0.047 |
| 4/6/2015 | 0.015 | 0.002 | LT | 0.031 |
| 4/13/2015 | 0.018 | 0.002 | LT | 0.036 |
| 4/20/2015 | 0.016 | 0.002 | LT | 0.034 |
| 4/27/2015 | 0.014 | 0.002 | LT | 0.031 |
| 5/4/2015 | 0.015 | 0.002 | LT | 0.028 |
| 5/11/2015 | 0.015 | 0.002 | LT | 0.028 |
| 5/18/2015 | 0.015 | 0.002 | LT | 0.058 |
| 5/27/2015 | 0.015 | 0.002 | LT | 0.035 |
| 6/1/2015 | 0.014 | 0.002 | LT | 0.068 |
| 6/8/2015 | 0.014 | 0.002 | LT | 0.035 |
| 6/15/2015 | 0.015 | 0.002 | LT | 0.046 |
| 6/22/2015 | 0.014 | 0.002 | LT | 0.048 |
| 6/27/2015 | 0.015 | 0.002 | LT | 1.124 |
| 7/6/2015 | 0.015 | 0.002 | LT | 0.304 |
| 7/13/2015 | 0.014 | 0.002 | LT | 0.195 |
| 7/20/2015 | 0.011 | 0.002 | LT | 0.140 |
| 7/27/2015 | 0.021 | 0.002 | LT | 0.086 |
| 8/3/2015 | 0.023 | 0.002 | LT | 0.046 |
| 8/10/2015 | 0.021 | 0.002 | LT | 0.029 |
| 8/17/2015 | 0.027 | 0.002 | LT | 0.032 |
| 8/23/2015 | 0.022 | 0.002 | LT | 0.050 |
| 8/30/2015 | 0.026 | 0.003 | LT | 0.056 |
| 9/8/2015 | 0.032 | 0.002 | LT | 0.020 |
| 9/14/2015 | 0.018 | 0.002 | LT | 0.031 |
| 9/21/2015 | 0.026 | 0.002 | LT | 0.028 |
| 9/28/2015 | 0.023 | 0.002 | LT | 0.034 |
| 10/5/2015 | 0.013 | 0.002 | LT | 0.248 |
| 10/12/2015 | 0.019 | 0.002 | LT | 0.153 |
| 10/19/2015 | 0.013 | 0.002 | LT | 0.111 |
| 10/26/2015 | 0.026 | 0.002 | LT | 0.139 |
| 11/2/2015 | 0.014 | 0.002 | LT | 0.074 |
| 11/9/2015 | 0.019 | 0.002 | LT | 0.048 |
| 11/16/2015 | 0.028 | 0.002 | LT | 0.037 |
| 11/23/2015 | 0.020 | 0.002 | LT | 0.102 |
| 11/30/2015 | 0.027 | 0.002 | LT | 0.060 |
| 12/7/2015 | 0.028 | 0.002 | LT | 1.654 |
| 12/14/2015 | 0.043 | 0.003 | LT | 1.131 |
| 12/21/2015 | 0.020 | 0.002 | LT | 0.653 |
| 12/29/2015 | 0.023 | 0.002 | LT | 5.274 |

# Appendix A – Atmospheric Monitoring 2015

## Cook 3

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/5/2015 | 0.013 | 0.002 | LT | 0.034 |
| 1/12/2015 | 0.019 | 0.002 | LT | 0.034 |
| 1/19/2015 | 0.023 | 0.002 | LT | 0.030 |
| 1/27/2015 | 0.012 | 0.002 | LT | 0.027 |
| 2/2/2015 | 0.015 | 0.002 | LT | 0.036 |
| 2/9/2015 | 0.020 | 0.002 | LT | 0.035 |
| 2/16/2015 | 0.018 | 0.002 | LT | 0.091 |
| 2/23/2015 | 0.030 | 0.003 | LT | 0.041 |
| 3/2/2015 | 0.025 | 0.002 | LT | 0.091 |
| 3/9/2015 | 0.018 | 0.002 | LT | 0.057 |
| 3/16/2015 | 0.014 | 0.002 | LT | 0.033 |
| 3/23/2015 | 0.016 | 0.002 | LT | 0.084 |
| 3/30/2015 | 0.014 | 0.002 | LT | 0.047 |
| 4/6/2015 | 0.012 | 0.002 | LT | 0.031 |
| 4/13/2015 | 0.015 | 0.002 | LT | 0.036 |
| 4/20/2015 | 0.014 | 0.002 | LT | 0.034 |
| 4/27/2015 | 0.009 | 0.002 | LT | 0.031 |
| 5/4/2015 | 0.008 | 0.002 | LT | 0.028 |
| 5/11/2015 | 0.013 | 0.002 | LT | 0.028 |
| 5/18/2015 | 0.010 | 0.002 | LT | 0.058 |
| 5/27/2015 | 0.012 | 0.002 | LT | 0.035 |
| 6/1/2015 | 0.011 | 0.002 | LT | 0.069 |
| 6/8/2015 | 0.011 | 0.002 | LT | 0.036 |
| 6/15/2015 | 0.013 | 0.002 | LT | 0.047 |
| 6/22/2015 | 0.011 | 0.002 | LT | 0.048 |
| 6/27/2015 | 0.012 | 0.002 | LT | 1.131 |
| 7/6/2015 | 0.013 | 0.002 | LT | 0.305 |
| 7/13/2015 | 0.012 | 0.002 | LT | 0.195 |
| 7/20/2015 | 0.012 | 0.002 | LT | 0.142 |
| 7/27/2015 | 0.018 | 0.002 | LT | 0.085 |
| 8/3/2015 | 0.008 | 0.002 | LT | 0.046 |
| 8/10/2015 | 0.016 | 0.002 | LT | 0.030 |
| 8/17/2015 | 0.022 | 0.002 | LT | 0.032 |
| 8/23/2015 | 0.018 | 0.002 | LT | 0.050 |
| 8/30/2015 | 0.021 | 0.002 | LT | 0.056 |
| 9/8/2015 | 0.034 | 0.002 | LT | 0.020 |
| 9/14/2015 | 0.016 | 0.002 | LT | 0.031 |
| 9/21/2015 | 0.021 | 0.002 | LT | 0.029 |
| 9/28/2015 | 0.011 | 0.002 | LT | 0.034 |
| 10/5/2015 | 0.009 | 0.002 | LT | 0.250 |
| 10/12/2015 | 0.016 | 0.002 | LT | 0.154 |
| 10/19/2015 | 0.010 | 0.002 | LT | 0.112 |
| 10/26/2015 | 0.019 | 0.002 | LT | 0.139 |
| 11/2/2015 | 0.010 | 0.002 | LT | 0.075 |
| 11/9/2015 | 0.015 | 0.002 | LT | 0.048 |
| 11/16/2015 | 0.020 | 0.002 | LT | 0.037 |
| 11/23/2015 | 0.016 | 0.002 | LT | 0.103 |
| 11/30/2015 | 0.016 | 0.002 | LT | 0.061 |
| 12/7/2015 | 0.020 | 0.002 | LT | 1.664 |
| 12/14/2015 | 0.034 | 0.003 | LT | 1.138 |
| 12/21/2015 | 0.014 | 0.002 | LT | 0.650 |
| 12/29/2015 | 0.017 | 0.002 | LT | 5.334 |

# Appendix A – Atmospheric Monitoring 2015

## Cook 4

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/5/2015 | 0.019 | 0.002 | LT | 0.034 |
| 1/12/2015 | 0.017 | 0.002 | LT | 0.034 |
| 1/19/2015 | 0.016 | 0.002 | LT | 0.030 |
| 1/27/2015 | 0.015 | 0.002 | LT | 0.027 |
| 2/2/2015 | 0.013 | 0.002 | LT | 0.036 |
| 2/9/2015 | 0.020 | 0.002 | LT | 0.034 |
| 2/16/2015 | 0.019 | 0.002 | LT | 0.091 |
| 2/23/2015 | 0.034 | 0.003 | LT | 0.040 |
| 3/2/2015 | 0.018 | 0.002 | LT | 0.091 |
| 3/9/2015 | 0.011 | 0.002 | LT | 0.057 |
| 3/16/2015 | 0.010 | 0.002 | LT | 0.033 |
| 3/23/2015 | 0.010 | 0.002 | LT | 0.083 |
| 3/30/2015 | 0.009 | 0.002 | LT | 0.047 |
| 4/6/2015 | 0.008 | 0.002 | LT | 0.031 |
| 4/13/2015 | 0.013 | 0.002 | LT | 0.036 |
| 4/20/2015 | 0.014 | 0.002 | LT | 0.034 |
| 4/27/2015 | 0.009 | 0.002 | LT | 0.031 |
| 5/4/2015 | 0.010 | 0.002 | LT | 0.028 |
| 5/11/2015 | 0.013 | 0.002 | LT | 0.028 |
| 5/18/2015 | 0.010 | 0.002 | LT | 0.058 |
| 5/27/2015 | 0.013 | 0.002 | LT | 0.035 |
| 6/1/2015 | 0.011 | 0.002 | LT | 0.068 |
| 6/8/2015 | 0.011 | 0.002 | LT | 0.036 |
| 6/15/2015 | 0.012 | 0.002 | LT | 0.047 |
| 6/22/2015 | 0.011 | 0.002 | LT | 0.048 |
| 6/27/2015 | 0.010 | 0.002 | LT | 1.128 |
| 7/6/2015 | 0.011 | 0.001 | LT | 0.304 |
| 7/13/2015 | 0.010 | 0.002 | LT | 0.194 |
| 7/20/2015 | 0.014 | 0.002 | LT | 0.141 |
| 7/27/2015 | 0.014 | 0.002 | LT | 0.086 |
| 8/3/2015 | LT | 0.001 | LT | 0.046 |
| 8/10/2015 | 0.014 | 0.002 | LT | 0.029 |
| 8/17/2015 | 0.013 | 0.002 | LT | 0.032 |
| 8/23/2015 | 0.015 | 0.002 | LT | 0.050 |
| 8/30/2015 | 0.017 | 0.002 | LT | 0.056 |
| 9/8/2015 | 0.027 | 0.002 | LT | 0.020 |
| 9/14/2015 | 0.012 | 0.002 | LT | 0.031 |
| 9/21/2015 | 0.016 | 0.002 | LT | 0.029 |
| 9/28/2015 | 0.015 | 0.002 | LT | 0.034 |
| 10/5/2015 | 0.008 | 0.002 | LT | 0.249 |
| 10/12/2015 | 0.013 | 0.002 | LT | 0.153 |
| 10/19/2015 | 0.010 | 0.002 | LT | 0.112 |
| 10/26/2015 | 0.017 | 0.002 | LT | 0.139 |
| 11/2/2015 | 0.010 | 0.002 | LT | 0.074 |
| 11/9/2015 | 0.015 | 0.002 | LT | 0.048 |
| 11/16/2015 | 0.018 | 0.002 | LT | 0.037 |
| 11/23/2015 | 0.011 | 0.002 | LT | 0.103 |
| 11/30/2015 | 0.016 | 0.002 | LT | 0.061 |
| 12/7/2015 | 0.020 | 0.002 | LT | 1.657 |
| 12/14/2015 | 0.026 | 0.002 | LT | 1.136 |
| 12/21/2015 | 0.012 | 0.002 | LT | 0.644 |
| 12/29/2015 | 0.017 | 0.002 | LT | 5.351 |

# Appendix A – Atmospheric Monitoring 2015

## Cook 5

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/5/2015 | | | | |
| 1/12/2015 | 0.013 | 0.002 | LT | 0.034 |
| 1/19/2015 | 0.020 | 0.002 | LT | 0.033 |
| 1/27/2015 | 0.013 | 0.002 | LT | 0.027 |
| 2/2/2015 | 0.013 | 0.002 | LT | 0.036 |
| 2/9/2015 | 0.017 | 0.002 | LT | 0.035 |
| 2/16/2015 | 0.017 | 0.002 | LT | 0.091 |
| 2/23/2015 | 0.027 | 0.002 | LT | 0.041 |
| 3/2/2015 | 0.020 | 0.002 | LT | 0.091 |
| 3/9/2015 | 0.016 | 0.002 | LT | 0.057 |
| 3/16/2015 | 0.012 | 0.002 | LT | 0.033 |
| 3/23/2015 | 0.013 | 0.002 | LT | 0.084 |
| 3/30/2015 | 0.013 | 0.002 | LT | 0.047 |
| 4/6/2015 | 0.010 | 0.002 | LT | 0.031 |
| 4/13/2015 | 0.014 | 0.002 | LT | 0.036 |
| 4/20/2015 | 0.012 | 0.002 | LT | 0.034 |
| 4/27/2015 | 0.009 | 0.002 | LT | 0.031 |
| 5/4/2015 | 0.011 | 0.002 | LT | 0.028 |
| 5/11/2015 | 0.012 | 0.002 | LT | 0.028 |
| 5/18/2015 | 0.009 | 0.002 | LT | 0.058 |
| 5/27/2015 | 0.012 | 0.002 | LT | 0.035 |
| 6/1/2015 | 0.011 | 0.002 | LT | 0.069 |
| 6/8/2015 | 0.012 | 0.002 | LT | 0.036 |
| 6/15/2015 | 0.013 | 0.002 | LT | 0.047 |
| 6/22/2015 | 0.010 | 0.002 | LT | 0.048 |
| 6/27/2015 | 0.010 | 0.002 | LT | 1.132 |
| 7/6/2015 | 0.011 | 0.001 | LT | 0.305 |
| 7/13/2015 | 0.020 | 0.003 | LT | 0.390 |
| 7/20/2015 | 0.029 | 0.004 | LT | 0.283 |
| 7/27/2015 | 0.015 | 0.002 | LT | 0.086 |
| 8/3/2015 | 0.016 | 0.002 | LT | 0.047 |
| 8/10/2015 | 0.017 | 0.002 | LT | 0.030 |
| 8/17/2015 | 0.019 | 0.002 | LT | 0.032 |
| 8/23/2015 | 0.018 | 0.002 | LT | 0.050 |
| 8/30/2015 | 0.019 | 0.002 | LT | 0.056 |
| 9/8/2015 | 0.027 | 0.002 | LT | 0.020 |
| 9/14/2015 | 0.015 | 0.002 | LT | 0.031 |
| 9/21/2015 | 0.018 | 0.002 | LT | 0.029 |
| 9/28/2015 | 0.015 | 0.002 | LT | 0.034 |
| 10/5/2015 | 0.009 | 0.002 | LT | 0.250 |
| 10/12/2015 | 0.013 | 0.002 | LT | 0.154 |
| 10/19/2015 | 0.009 | 0.002 | LT | 0.112 |
| 10/26/2015 | 0.019 | 0.002 | LT | 0.139 |
| 11/2/2015 | 0.010 | 0.002 | LT | 0.075 |
| 11/9/2015 | 0.015 | 0.002 | LT | 0.048 |
| 11/16/2015 | 0.018 | 0.002 | LT | 0.037 |
| 11/23/2015 | 0.015 | 0.002 | LT | 0.103 |
| 11/30/2015 | 0.020 | 0.002 | LT | 0.061 |
| 12/7/2015 | 0.024 | 0.002 | LT | 1.665 |
| 12/14/2015 | 0.029 | 0.003 | LT | 1.140 |
| 12/21/2015 | 0.012 | 0.002 | LT | 0.651 |
| 12/29/2015 | 0.015 | 0.002 | LT | 5.336 |

# Appendix A – Atmospheric Monitoring 2015

## Lansing 1

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/5/2015 | 0.019 | 0.002 | LT | 0.027 |
| 1/12/2015 | 0.019 | 0.002 | LT | 0.035 |
| 1/20/2015 | 0.021 | 0.002 | LT | 0.024 |
| 1/26/2015 | 0.014 | 0.002 | LT | 0.030 |
| 2/3/2015 | 0.015 | 0.002 | LT | 0.021 |
| 2/9/2015 | 0.023 | 0.003 | LT | 0.034 |
| 2/17/2015 | 0.025 | 0.002 | LT | 0.062 |
| 2/23/2015 | 0.040 | 0.003 | LT | 0.049 |
| 3/2/2015 | 0.029 | 0.002 | LT | 0.023 |
| 3/9/2015 | 0.015 | 0.002 | LT | 0.048 |
| 3/16/2015 | 0.014 | 0.002 | LT | 0.026 |
| 3/23/2015 | 0.011 | 0.002 | LT | 0.078 |
| 3/30/2015 | 0.014 | 0.002 | LT | 0.043 |
| 4/6/2015 | 0.013 | 0.002 | LT | 0.023 |
| 4/13/2015 | 0.019 | 0.002 | LT | 0.031 |
| 4/20/2015 | 0.015 | 0.002 | LT | 0.034 |
| 4/28/2015 | 0.010 | 0.002 | LT | 0.027 |
| 5/4/2015 | 0.014 | 0.002 | LT | 0.031 |
| 5/11/2015 | 0.017 | 0.002 | LT | 0.027 |
| 5/18/2015 | 0.013 | 0.002 | LT | 0.025 |
| 5/26/2015 | 0.025 | 0.002 | LT | 0.046 |
| 6/1/2015 | 0.014 | 0.002 | LT | 0.038 |
| 6/8/2015 | 0.015 | 0.002 | LT | 0.024 |
| 6/15/2015 | 0.012 | 0.002 | LT | 0.040 |
| 6/22/2015 | 0.011 | 0.002 | LT | 0.041 |
| 6/29/2015 | 0.011 | 0.002 | LT | 0.023 |
| 7/13/2015 | 0.011 | 0.002 | LT | 0.007 |
| 7/13/2015 | 0.016 | 0.002 | LT | 0.223 |
| 7/20/2015 | 0.013 | 0.002 | LT | 0.087 |
| 7/27/2015 | 0.020 | 0.002 | LT | 0.047 |
| 8/3/2015 | 0.019 | 0.002 | LT | 0.030 |
| 8/10/2015 | 0.016 | 0.002 | LT | 0.023 |
| 8/17/2015 | 0.023 | 0.002 | LT | 0.032 |
| 8/24/2015 | 0.021 | 0.002 | LT | 0.031 |
| 8/31/2015 | 0.015 | 0.002 | LT | 0.043 |
| 9/8/2015 | 0.028 | 0.002 | LT | 0.019 |
| 9/14/2015 | 0.019 | 0.002 | LT | 0.031 |
| 9/21/2015 | 0.024 | 0.002 | LT | 0.029 |
| 9/29/2015 | 0.021 | 0.002 | LT | 0.025 |
| 10/5/2015 | 0.011 | 0.002 | LT | 0.323 |
| 10/12/2015 | 0.018 | 0.002 | LT | 0.140 |
| 10/21/2015 | 0.010 | 0.001 | LT | 0.054 |
| 10/26/2015 | 0.032 | 0.003 | LT | 0.181 |
| 11/2/2015 | 0.012 | 0.002 | LT | 0.083 |
| 11/9/2015 | 0.020 | 0.002 | LT | 0.050 |
| 11/16/2015 | 0.022 | 0.002 | LT | 0.035 |
| 11/23/2015 | 0.026 | 0.002 | LT | 0.093 |
| 11/30/2015 | 0.024 | 0.002 | LT | 0.052 |
| 12/7/2015 | 0.030 | 0.003 | LT | 1.424 |
| 12/14/2015 | 0.040 | 0.003 | LT | 1.073 |
| 12/21/2015 | 0.018 | 0.002 | LT | 0.586 |
| 12/28/2015 | 0.023 | 0.002 | LT | 0.324 |

# Appendix A – Atmospheric Monitoring 2016

## Fermi 4

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/7/2016 | 0.024 | 0.002 | LT | 4.312 |
| 1/14/2016 | 0.022 | 0.002 | LT | 0.121 |
| 1/21/2016 | 0.020 | 0.002 | LT | 0.127 |
| 1/28/2016 | 0.015 | 0.002 | LT | 0.721 |
| 2/4/2016 | 0.013 | 0.002 | LT | 0.451 |
| 2/11/2016 | 0.015 | 0.002 | LT | 0.203 |
| 2/18/2016 | 0.014 | 0.002 | LT | 0.125 |
| 2/25/2016 | 0.009 | 0.002 | LT | 0.037 |
| 3/3/2016 | 0.015 | 0.002 | LT | 0.041 |
| 3/10/2016 | 0.014 | 0.002 | LT | 0.039 |
| 3/17/2016 | 0.010 | 0.002 | LT | 0.043 |
| 3/24/2016 | 0.012 | 0.002 | LT | 0.037 |
| 3/31/2016 | 0.014 | 0.002 | LT | 0.045 |
| 4/7/2016 | 0.015 | 0.002 | LT | 0.038 |
| 4/14/2016 | 0.011 | 0.002 | LT | 0.041 |
| 4/20/2016 | 0.017 | 0.002 | LT | 0.054 |
| 4/28/2016 | 0.013 | 0.002 | LT | 0.039 |
| 5/5/2016 | 0.008 | 0.002 | LT | 0.033 |
| 5/12/2016 | 0.013 | 0.002 | LT | 0.072 |
| 5/19/2016 | 0.012 | 0.002 | LT | 0.048 |
| 5/26/2016 | 0.017 | 0.002 | LT | 0.047 |
| 6/2/2016 | 0.014 | 0.002 | LT | 0.034 |
| 6/9/2016 | 0.011 | 0.002 | LT | 0.038 |
| 6/16/2016 | 0.013 | 0.002 | LT | 0.045 |
| 6/23/2016 | 0.014 | 0.002 | LT | 0.044 |
| 6/30/2016 | 0.012 | 0.002 | LT | 0.040 |
| 7/7/2016 | 0.018 | 0.002 | LT | 0.040 |
| 7/14/2016 | 0.015 | 0.002 | LT | 0.040 |
| 7/21/2016 | 0.012 | 0.002 | LT | 0.044 |
| 7/28/2016 | 0.017 | 0.002 | LT | 0.043 |
| 8/4/2016 | 0.015 | 0.002 | LT | 0.061 |
| 8/11/2016 | 0.017 | 0.002 | LT | 0.041 |
| 8/18/2016 | 0.011 | 0.002 | LT | 0.038 |
| 8/25/2016 | 0.015 | 0.002 | LT | 0.039 |
| 9/1/2016 | 0.013 | 0.002 | LT | 0.045 |
| 9/8/2016 | 0.016 | 0.002 | LT | 0.042 |
| 9/15/2016 | 0.013 | 0.002 | LT | 0.040 |
| 9/22/2016 | 0.020 | 0.002 | LT | 0.041 |
| 9/29/2016 | 0.019 | 0.002 | LT | 0.042 |
| 10/6/2016 | 0.017 | 0.002 | LT | 0.065 |
| 10/13/2016 | 0.016 | 0.002 | LT | 0.034 |
| 10/20/2016 | 0.018 | 0.002 | LT | 0.040 |
| 10/27/2016 | 0.010 | 0.002 | LT | 0.039 |
| 11/3/2016 | 0.020 | 0.002 | LT | 0.041 |
| 11/10/2016 | 0.022 | 0.002 | LT | 0.046 |
| 11/16/2016 | 0.021 | 0.002 | LT | 0.095 |
| 11/24/2016 | 0.026 | 0.002 | LT | 0.034 |
| 12/1/2016 | 0.021 | 0.002 | LT | 0.039 |
| 12/8/2016 | 0.014 | 0.002 | LT | 0.037 |
| 12/15/2016 | 0.019 | 0.002 | LT | 0.045 |
| 12/22/2016 | 0.023 | 0.002 | LT | 0.067 |

# Appendix A – Atmospheric Monitoring 2016

## Fermi 5

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/7/2016 | 0.025 | 0.002 | LT | 4.313 |
| 1/14/2016 | 0.022 | 0.002 | LT | 0.120 |
| 1/21/2016 | 0.021 | 0.002 | LT | 0.126 |
| 1/28/2016 | 0.019 | 0.002 | LT | 0.720 |
| 2/4/2016 | 0.017 | 0.002 | LT | 0.450 |
| 2/11/2016 | 0.015 | 0.002 | LT | 0.202 |
| 2/18/2016 | 0.016 | 0.002 | LT | 0.125 |
| 2/25/2016 | 0.012 | 0.002 | LT | 0.037 |
| 3/3/2016 | 0.015 | 0.002 | LT | 0.041 |
| 3/10/2016 | 0.013 | 0.002 | LT | 0.039 |
| 3/17/2016 | 0.009 | 0.002 | LT | 0.043 |
| 3/24/2016 | 0.013 | 0.002 | LT | 0.037 |
| 3/31/2016 | 0.013 | 0.002 | LT | 0.045 |
| 4/7/2016 | 0.015 | 0.002 | LT | 0.038 |
| 4/14/2016 | 0.013 | 0.002 | LT | 0.041 |
| 4/20/2016 | 0.018 | 0.002 | LT | 0.054 |
| 4/28/2016 | 0.013 | 0.002 | LT | 0.039 |
| 5/5/2016 | 0.008 | 0.002 | 0.033 | 0.033 |
| 5/12/2016 | 0.011 | 0.002 | LT | 0.072 |
| 5/19/2016 | 0.010 | 0.002 | LT | 0.049 |
| 5/26/2016 | 0.009 | 0.002 | LT | 0.047 |
| 6/2/2016 | 0.016 | 0.002 | LT | 0.034 |
| 6/9/2016 | 0.011 | 0.002 | LT | 0.037 |
| 6/16/2016 | 0.015 | 0.002 | LT | 0.045 |
| 6/23/2016 | 0.015 | 0.002 | LT | 0.044 |
| 6/30/2016 | 0.012 | 0.002 | LT | 0.040 |
| 7/7/2016 | 0.017 | 0.002 | LT | 0.040 |
| 7/14/2016 | 0.015 | 0.002 | LT | 0.040 |
| 7/21/2016 | 0.013 | 0.002 | LT | 0.044 |
| 7/28/2016 | 0.017 | 0.002 | LT | 0.043 |
| 8/4/2016 | 0.016 | 0.002 | LT | 0.062 |
| 8/11/2016 | 0.016 | 0.002 | LT | 0.041 |
| 8/18/2016 | 0.012 | 0.002 | LT | 0.037 |
| 8/25/2016 | 0.015 | 0.002 | LT | 0.039 |
| 9/1/2016 | 0.016 | 0.002 | LT | 0.048 |
| 9/8/2016 | 0.017 | 0.002 | LT | 0.042 |
| 9/15/2016 | 0.013 | 0.002 | LT | 0.040 |
| 9/22/2016 | 0.021 | 0.002 | LT | 0.041 |
| 9/29/2016 | 0.019 | 0.002 | LT | 0.042 |
| 10/6/2016 | 0.018 | 0.002 | LT | 0.065 |
| 10/13/2016 | 0.017 | 0.002 | LT | 0.034 |
| 10/20/2016 | 0.019 | 0.002 | LT | 0.040 |
| 10/27/2016 | 0.012 | 0.002 | LT | 0.039 |
| 11/3/2016 | 0.020 | 0.002 | LT | 0.041 |
| 11/10/2016 | 0.024 | 0.002 | LT | 0.046 |
| 11/16/2016 | 0.021 | 0.002 | LT | 0.095 |
| 11/24/2016 | 0.024 | 0.002 | LT | 0.034 |
| 12/1/2016 | 0.022 | 0.002 | LT | 0.039 |
| 12/8/2016 | 0.015 | 0.002 | LT | 0.037 |
| 12/15/2016 | 0.022 | 0.002 | LT | 0.044 |
| 12/22/2016 | 0.024 | 0.002 | LT | 0.067 |

# Appendix A – Atmospheric Monitoring 2016

## Fermi 6

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/7/2016 | 0.027 | 0.002 | LT | 4.314 |
| 1/14/2016 | 0.020 | 0.002 | LT | 0.120 |
| 1/21/2016 | 0.023 | 0.002 | LT | 0.126 |
| 1/28/2016 | 0.017 | 0.002 | LT | 0.721 |
| 2/4/2016 | 0.013 | 0.002 | LT | 0.450 |
| 2/11/2016 | 0.013 | 0.002 | LT | 0.202 |
| 2/18/2016 | 0.014 | 0.002 | LT | 0.125 |
| 2/25/2016 | 0.010 | 0.002 | LT | 0.037 |
| 3/3/2016 | 0.017 | 0.002 | LT | 0.041 |
| 3/10/2016 | 0.014 | 0.002 | LT | 0.039 |
| 3/17/2016 | 0.011 | 0.002 | LT | 0.043 |
| 3/24/2016 | 0.015 | 0.002 | LT | 0.037 |
| 3/31/2016 | 0.013 | 0.002 | LT | 0.046 |
| 4/7/2016 | 0.015 | 0.002 | LT | 0.037 |
| 4/14/2016 | 0.014 | 0.002 | LT | 0.041 |
| 4/20/2016 | 0.017 | 0.002 | LT | 0.054 |
| 4/28/2016 | 0.015 | 0.002 | LT | 0.039 |
| 5/5/2016 | 0.009 | 0.002 | LT | 0.033 |
| 5/12/2016 | 0.014 | 0.002 | LT | 0.072 |
| 5/19/2016 | 0.012 | 0.002 | LT | 0.049 |
| 5/26/2016 | 0.019 | 0.002 | LT | 0.047 |
| 6/2/2016 | 0.016 | 0.002 | LT | 0.034 |
| 6/9/2016 | 0.012 | 0.002 | LT | 0.038 |
| 6/16/2016 | 0.014 | 0.002 | LT | 0.045 |
| 6/23/2016 | 0.018 | 0.002 | LT | 0.044 |
| 6/30/2016 | 0.013 | 0.002 | LT | 0.040 |
| 7/7/2016 | 0.017 | 0.002 | LT | 0.040 |
| 7/14/2016 | 0.015 | 0.002 | LT | 0.040 |
| 7/21/2016 | 0.013 | 0.002 | LT | 0.044 |
| 7/28/2016 | 0.015 | 0.002 | LT | 0.043 |
| 8/4/2016 | 0.016 | 0.002 | LT | 0.061 |
| 8/11/2016 | 0.016 | 0.002 | LT | 0.041 |
| 8/18/2016 | 0.013 | 0.002 | LT | 0.037 |
| 8/25/2016 | 0.017 | 0.002 | LT | 0.039 |
| 9/1/2016 | 0.017 | 0.002 | LT | 0.045 |
| 9/8/2016 | 0.019 | 0.002 | LT | 0.042 |
| 9/15/2016 | 0.014 | 0.002 | LT | 0.040 |
| 9/22/2016 | 0.023 | 0.002 | LT | 0.041 |
| 9/29/2016 | 0.019 | 0.002 | LT | 0.042 |
| 10/6/2016 | 0.018 | 0.002 | LT | 0.065 |
| 10/13/2016 | 0.018 | 0.002 | LT | 0.034 |
| 10/20/2016 | 0.021 | 0.002 | LT | 0.040 |
| 10/27/2016 | 0.011 | 0.002 | LT | 0.039 |
| 11/3/2016 | 0.018 | 0.002 | LT | 0.041 |
| 11/10/2016 | 0.021 | 0.002 | LT | 0.046 |
| 11/16/2016 | 0.023 | 0.003 | LT | 0.095 |
| 11/24/2016 | 0.027 | 0.002 | LT | 0.034 |
| 12/1/2016 | 0.023 | 0.002 | LT | 0.039 |
| 12/8/2016 | 0.015 | 0.002 | LT | 0.037 |
| 12/15/2016 | 0.022 | 0.002 | LT | 0.044 |
| 12/22/2016 | 0.027 | 0.002 | LT | 0.067 |

# Appendix A – Atmospheric Monitoring 2016

## Fermi 7

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/7/2016 | 0.025 | 0.002 | LT | 4.323 |
| 1/14/2016 | 0.021 | 0.002 | LT | 0.121 |
| 1/21/2016 | 0.021 | 0.002 | LT | 0.127 |
| 1/28/2016 | 0.016 | 0.002 | LT | 0.722 |
| 2/4/2016 | 0.012 | 0.002 | LT | 0.451 |
| 2/11/2016 | 0.013 | 0.002 | LT | 0.203 |
| 2/18/2016 | 0.014 | 0.002 | LT | 0.126 |
| 2/25/2016 | 0.007 | 0.002 | LT | 0.037 |
| 3/3/2016 | 0.014 | 0.002 | LT | 0.041 |
| 3/10/2016 | 0.014 | 0.002 | LT | 0.039 |
| 3/17/2016 | 0.011 | 0.002 | LT | 0.043 |
| 3/24/2016 | 0.012 | 0.002 | LT | 0.037 |
| 3/31/2016 | 0.018 | 0.002 | LT | 0.045 |
| 4/7/2016 | 0.015 | 0.002 | LT | 0.038 |
| 4/14/2016 | 0.013 | 0.002 | LT | 0.041 |
| 4/20/2016 | 0.017 | 0.002 | LT | 0.054 |
| 4/28/2016 | 0.015 | 0.002 | LT | 0.039 |
| 5/5/2016 | 0.008 | 0.002 | LT | 0.033 |
| 5/12/2016 | 0.012 | 0.002 | LT | 0.072 |
| 5/19/2016 | 0.011 | 0.002 | LT | 0.049 |
| 5/26/2016 | 0.019 | 0.002 | LT | 0.047 |
| 6/2/2016 | 0.031 | 0.004 | LT | 0.069 |
| 6/9/2016 | | | | |
| 6/16/2016 | | | | |
| 6/23/2016 | | | | |
| 6/30/2016 | | | | |
| 7/7/2016 | | | | |
| 7/14/2016 | 0.015 | 0.002 | LT | 0.040 |
| 7/21/2016 | 0.012 | 0.002 | LT | 0.044 |
| 7/28/2016 | 0.017 | 0.002 | LT | 0.043 |
| 8/4/2016 | 0.016 | 0.002 | LT | 0.062 |
| 8/11/2016 | 0.017 | 0.002 | LT | 0.041 |
| 8/18/2016 | 0.013 | 0.002 | LT | 0.038 |
| 8/25/2016 | 0.016 | 0.002 | LT | 0.039 |
| 9/1/2016 | 0.016 | 0.002 | LT | 0.045 |
| 9/8/2016 | 0.018 | 0.002 | LT | 0.042 |
| 9/15/2016 | 0.013 | 0.002 | LT | 0.040 |
| 9/22/2016 | 0.023 | 0.002 | LT | 0.041 |
| 9/29/2016 | 0.021 | 0.002 | LT | 0.042 |
| 10/6/2016 | 0.019 | 0.002 | LT | 0.065 |
| 10/13/2016 | 0.017 | 0.002 | 0.061 | 0.039 |
| 10/20/2016 | 0.021 | 0.002 | LT | 0.040 |
| 10/27/2016 | 0.011 | 0.002 | LT | 0.039 |
| 11/3/2016 | 0.020 | 0.002 | LT | 0.041 |
| 11/10/2016 | 0.021 | 0.002 | LT | 0.047 |
| 11/16/2016 | 0.022 | 0.003 | LT | 0.095 |
| 11/24/2016 | 0.024 | 0.002 | LT | 0.034 |
| 12/1/2016 | 0.020 | 0.002 | LT | 0.039 |
| 12/8/2016 | 0.016 | 0.002 | LT | 0.037 |
| 12/15/2016 | 0.018 | 0.002 | LT | 0.045 |
| 12/22/2016 | 0.026 | 0.002 | LT | 0.067 |

# Appendix A – Atmospheric Monitoring 2016

## Fermi 8

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/7/2016 | 0.025 | 0.002 | LT | 4.327 |
| 1/14/2016 | 0.024 | 0.002 | LT | 0.121 |
| 1/21/2016 | 0.022 | 0.002 | LT | 0.127 |
| 1/28/2016 | 0.018 | 0.002 | LT | 0.723 |
| 2/4/2016 | 0.014 | 0.002 | LT | 0.452 |
| 2/11/2016 | 0.015 | 0.002 | LT | 0.203 |
| 2/18/2016 | 0.014 | 0.002 | LT | 0.126 |
| 2/25/2016 | 0.008 | 0.002 | LT | 0.037 |
| 3/3/2016 | 0.017 | 0.002 | LT | 0.041 |
| 3/10/2016 | 0.013 | 0.002 | LT | 0.039 |
| 3/17/2016 | 0.010 | 0.002 | LT | 0.043 |
| 3/24/2016 | 0.011 | 0.002 | LT | 0.037 |
| 3/31/2016 | 0.012 | 0.002 | LT | 0.045 |
| 4/7/2016 | 0.014 | 0.002 | LT | 0.038 |
| 4/14/2016 | 0.014 | 0.002 | LT | 0.041 |
| 4/20/2016 | 0.015 | 0.002 | LT | 0.054 |
| 4/28/2016 | 0.013 | 0.002 | LT | 0.039 |
| 5/5/2016 | 0.007 | 0.002 | 0.033 | 0.033 |
| 5/12/2016 | 0.012 | 0.002 | LT | 0.072 |
| 5/19/2016 | 0.008 | 0.002 | LT | 0.049 |
| 5/26/2016 | 0.016 | 0.002 | LT | 0.047 |
| 6/2/2016 | 0.014 | 0.002 | LT | 0.034 |
| 6/9/2016 | 0.011 | 0.002 | LT | 0.038 |
| 6/16/2016 | 0.012 | 0.002 | LT | 0.045 |
| 6/23/2016 | 0.016 | 0.002 | LT | 0.045 |
| 6/30/2016 | 0.013 | 0.002 | LT | 0.040 |
| 7/7/2016 | 0.014 | 0.002 | LT | 0.040 |
| 7/14/2016 | 0.016 | 0.002 | LT | 0.040 |
| 7/21/2016 | 0.012 | 0.002 | LT | 0.044 |
| 7/28/2016 | 0.016 | 0.002 | LT | 0.043 |
| 8/4/2016 | 0.014 | 0.002 | LT | 0.062 |
| 8/11/2016 | 0.017 | 0.002 | LT | 0.041 |
| 8/18/2016 | 0.013 | 0.002 | LT | 0.038 |
| 8/25/2016 | 0.015 | 0.002 | LT | 0.039 |
| 9/1/2016 | 0.015 | 0.002 | LT | 0.045 |
| 9/8/2016 | 0.017 | 0.002 | LT | 0.042 |
| 9/15/2016 | 0.013 | 0.002 | LT | 0.040 |
| 9/22/2016 | 0.023 | 0.002 | LT | 0.042 |
| 9/29/2016 | 0.021 | 0.002 | LT | 0.042 |
| 10/6/2016 | 0.020 | 0.002 | LT | 0.066 |
| 10/13/2016 | 0.017 | 0.002 | LT | 0.034 |
| 10/20/2016 | 0.021 | 0.002 | LT | 0.040 |
| 10/27/2016 | 0.010 | 0.002 | LT | 0.039 |
| 11/3/2016 | 0.022 | 0.002 | LT | 0.041 |
| 11/10/2016 | 0.023 | 0.002 | LT | 0.047 |
| 11/16/2016 | 0.021 | 0.002 | LT | 0.096 |
| 11/24/2016 | 0.027 | 0.002 | LT | 0.034 |
| 12/1/2016 | 0.024 | 0.002 | LT | 0.039 |
| 12/8/2016 | 0.014 | 0.002 | LT | 0.037 |
| 12/15/2016 | 0.021 | 0.002 | LT | 0.045 |
| 12/22/2016 | 0.026 | 0.002 | LT | 0.067 |

# Appendix A – Atmospheric Monitoring 2016

## Palisades 1

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/3/2016 | 0.029 | 0.003 | LT | 5.944 |
| 1/9/2016 | 0.014 | 0.002 | LT | 4.533 |
| 1/18/2016 | 0.021 | 0.002 | LT | 0.074 |
| 1/23/2016 | 0.015 | 0.002 | LT | 0.183 |
| 2/1/2016 | 0.015 | 0.002 | LT | 0.460 |
| 2/8/2016 | 0.014 | 0.002 | LT | 0.286 |
| 2/15/2016 | 0.011 | 0.002 | LT | 0.165 |
| 2/22/2016 | 0.014 | 0.002 | LT | 0.081 |
| 2/29/2016 | 0.015 | 0.002 | LT | 0.039 |
| 3/7/2016 | 0.013 | 0.002 | LT | 0.033 |
| 3/14/2016 | 0.013 | 0.002 | LT | 0.029 |
| 3/21/2016 | 0.011 | 0.002 | LT | 0.032 |
| 3/28/2016 | 0.015 | 0.002 | LT | 0.033 |
| 4/4/2016 | 0.011 | 0.002 | LT | 0.031 |
| 4/11/2016 | 0.014 | 0.002 | LT | 0.032 |
| 4/18/2016 | 0.014 | 0.002 | LT | 0.034 |
| 4/25/2016 | 0.017 | 0.002 | LT | 0.036 |
| 5/2/2016 | 0.013 | 0.002 | LT | 0.035 |
| 5/9/2016 | 0.009 | 0.002 | LT | 0.032 |
| 5/16/2016 | 0.011 | 0.002 | LT | 0.064 |
| 5/23/2016 | 0.015 | 0.002 | LT | 0.029 |
| 5/31/2016 | 0.021 | 0.002 | LT | 0.026 |
| 6/6/2016 | 0.012 | 0.002 | LT | 0.037 |
| 6/13/2016 | 0.014 | 0.002 | LT | 0.035 |
| 6/20/2016 | 0.016 | 0.002 | LT | 0.030 |
| 6/27/2016 | 0.014 | 0.002 | LT | 0.036 |
| 7/4/2016 | 0.011 | 0.002 | LT | 0.029 |
| 7/11/2016 | 0.017 | 0.002 | LT | 0.037 |
| 7/18/2016 | 0.013 | 0.002 | LT | 0.030 |
| 7/25/2016 | 0.018 | 0.002 | LT | 0.034 |
| 8/1/2016 | 0.014 | 0.002 | LT | 0.031 |
| 8/8/2016 | 0.015 | 0.002 | LT | 0.052 |
| 8/15/2016 | 0.015 | 0.002 | LT | 0.030 |
| 8/22/2016 | 0.013 | 0.002 | LT | 0.031 |
| 8/29/2016 | 0.013 | 0.002 | LT | 0.031 |
| 9/6/2016 | 0.014 | 0.002 | LT | 0.026 |
| 9/12/2016 | | | | |
| 9/19/2016 | 0.020 | 0.002 | LT | 0.033 |
| 9/26/2016 | 0.025 | 0.002 | LT | 0.033 |
| 10/3/2016 | 0.012 | 0.002 | LT | 0.033 |
| 10/10/2016 | 0.019 | 0.002 | LT | 0.046 |
| 10/17/2016 | 0.020 | 0.002 | LT | 0.030 |
| 10/24/2016 | 0.011 | 0.002 | LT | 0.034 |
| 10/31/2016 | 0.012 | 0.002 | LT | 0.032 |
| 11/7/2016 | 0.025 | 0.002 | LT | 0.033 |
| 11/14/2016 | 0.017 | 0.002 | LT | 0.034 |
| 11/21/2016 | 0.034 | 0.003 | LT | 0.050 |
| 11/28/2016 | 0.017 | 0.002 | LT | 0.033 |
| 12/5/2016 | 0.014 | 0.002 | LT | 0.033 |
| 12/12/2016 | 0.013 | 0.002 | LT | 0.033 |
| 12/19/2016 | 0.021 | 0.002 | LT | 0.031 |
| 12/26/2016 | 0.022 | 0.002 | LT | 0.048 |

# Appendix A – Atmospheric Monitoring 2016

## Palisades 3

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/3/2016 | 0.026 | 0.003 | LT | 5.938 |
| 1/9/2016 | 0.014 | 0.002 | LT | 4.528 |
| 1/18/2016 | 0.018 | 0.002 | LT | 0.073 |
| 1/23/2016 | 0.014 | 0.002 | LT | 0.183 |
| 2/1/2016 | 0.014 | 0.002 | LT | 0.460 |
| 2/8/2016 | 0.015 | 0.002 | LT | 0.286 |
| 2/15/2016 | 0.010 | 0.002 | LT | 0.165 |
| 2/22/2016 | 0.012 | 0.002 | 0.089 | 0.082 |
| 2/29/2016 | 0.015 | 0.002 | LT | 0.039 |
| 3/7/2016 | 0.012 | 0.002 | LT | 0.033 |
| 3/14/2016 | 0.012 | 0.002 | LT | 0.029 |
| 3/21/2016 | 0.009 | 0.002 | LT | 0.032 |
| 3/28/2016 | 0.016 | 0.002 | LT | 0.033 |
| 4/4/2016 | 0.011 | 0.002 | LT | 0.031 |
| 4/11/2016 | 0.012 | 0.002 | LT | 0.032 |
| 4/18/2016 | LT | 0.001 | LT | 0.034 |
| 4/25/2016 | 0.015 | 0.002 | LT | 0.036 |
| 5/2/2016 | 0.012 | 0.002 | LT | 0.035 |
| 5/9/2016 | 0.007 | 0.002 | LT | 0.032 |
| 5/16/2016 | 0.009 | 0.002 | LT | 0.064 |
| 5/23/2016 | 0.011 | 0.002 | LT | 0.029 |
| 5/31/2016 | 0.019 | 0.002 | LT | 0.026 |
| 6/6/2016 | 0.008 | 0.002 | LT | 0.037 |
| 6/13/2016 | 0.011 | 0.002 | LT | 0.034 |
| 6/20/2016 | 0.012 | 0.002 | LT | 0.030 |
| 6/27/2016 | 0.013 | 0.002 | LT | 0.036 |
| 7/4/2016 | 0.008 | 0.002 | LT | 0.029 |
| 7/11/2016 | 0.012 | 0.002 | LT | 0.037 |
| 7/18/2016 | 0.011 | 0.002 | LT | 0.030 |
| 7/25/2016 | 0.015 | 0.002 | LT | 0.034 |
| 8/1/2016 | 0.011 | 0.002 | LT | 0.031 |
| 8/8/2016 | 0.013 | 0.002 | LT | 0.052 |
| 8/15/2016 | 0.014 | 0.002 | LT | 0.030 |
| 8/22/2016 | 0.013 | 0.002 | LT | 0.031 |
| 8/29/2016 | 0.011 | 0.002 | LT | 0.031 |
| 9/6/2016 | 0.013 | 0.002 | LT | 0.026 |
| 9/12/2016 | 0.011 | 0.002 | LT | 0.036 |
| 9/19/2016 | 0.015 | 0.002 | LT | 0.033 |
| 9/26/2016 | 0.020 | 0.002 | LT | 0.033 |
| 10/3/2016 | 0.010 | 0.002 | LT | 0.033 |
| 10/10/2016 | 0.016 | 0.002 | LT | 0.046 |
| 10/17/2016 | 0.016 | 0.002 | LT | 0.030 |
| 10/24/2016 | 0.010 | 0.002 | LT | 0.034 |
| 10/31/2016 | 0.012 | 0.002 | LT | 0.032 |
| 11/7/2016 | 0.020 | 0.002 | LT | 0.033 |
| 11/14/2016 | 0.015 | 0.002 | LT | 0.034 |
| 11/21/2016 | 0.030 | 0.003 | LT | 0.050 |
| 11/28/2016 | 0.015 | 0.002 | LT | 0.033 |
| 12/5/2016 | 0.013 | 0.002 | LT | 0.033 |
| 12/12/2016 | 0.012 | 0.002 | LT | 0.033 |
| 12/19/2016 | 0.019 | 0.002 | LT | 0.031 |
| 12/26/2016 | 0.020 | 0.002 | LT | 0.048 |

# Appendix A – Atmospheric Monitoring 2016

## Palisades 4

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/3/2016 | 0.020 | 0.003 | LT | 5.947 |
| 1/9/2016 | 0.011 | 0.002 | LT | 4.535 |
| 1/18/2016 | 0.015 | 0.002 | LT | 0.074 |
| 1/23/2016 | 0.012 | 0.002 | LT | 0.183 |
| 2/1/2016 | 0.011 | 0.001 | LT | 0.461 |
| 2/8/2016 | 0.012 | 0.002 | LT | 0.286 |
| 2/15/2016 | 0.009 | 0.002 | LT | 0.165 |
| 2/22/2016 | 0.012 | 0.002 | LT | 0.081 |
| 2/29/2016 | 0.010 | 0.002 | LT | 0.039 |
| 3/7/2016 | 0.011 | 0.002 | LT | 0.033 |
| 3/14/2016 | 0.013 | 0.002 | LT | 0.029 |
| 3/21/2016 | 0.008 | 0.002 | LT | 0.032 |
| 3/28/2016 | 0.013 | 0.002 | 0.035 | 0.033 |
| 4/4/2016 | 0.010 | 0.002 | LT | 0.031 |
| 4/11/2016 | 0.012 | 0.002 | LT | 0.032 |
| 4/18/2016 | 0.015 | 0.002 | LT | 0.034 |
| 4/25/2016 | 0.014 | 0.002 | LT | 0.036 |
| 5/2/2016 | 0.011 | 0.002 | LT | 0.035 |
| 5/9/2016 | 0.008 | 0.002 | LT | 0.032 |
| 5/16/2016 | 0.010 | 0.002 | LT | 0.064 |
| 5/23/2016 | 0.013 | 0.002 | LT | 0.029 |
| 5/31/2016 | 0.020 | 0.002 | LT | 0.026 |
| 6/6/2016 | 0.013 | 0.002 | LT | 0.037 |
| 6/13/2016 | 0.012 | 0.002 | LT | 0.035 |
| 6/20/2016 | 0.012 | 0.002 | LT | 0.030 |
| 6/27/2016 | 0.012 | 0.002 | LT | 0.036 |
| 7/4/2016 | 0.010 | 0.002 | LT | 0.029 |
| 7/11/2016 | 0.015 | 0.002 | LT | 0.037 |
| 7/18/2016 | 0.012 | 0.002 | LT | 0.030 |
| 7/25/2016 | 0.017 | 0.002 | LT | 0.034 |
| 8/1/2016 | 0.014 | 0.002 | LT | 0.031 |
| 8/8/2016 | 0.013 | 0.002 | LT | 0.052 |
| 8/15/2016 | 0.016 | 0.002 | LT | 0.030 |
| 8/22/2016 | 0.013 | 0.002 | LT | 0.031 |
| 8/29/2016 | 0.019 | 0.002 | LT | 0.031 |
| 9/6/2016 | 0.014 | 0.002 | LT | 0.026 |
| 9/12/2016 | 0.012 | 0.002 | LT | 0.037 |
| 9/19/2016 | 0.016 | 0.002 | LT | 0.033 |
| 9/26/2016 | 0.023 | 0.002 | LT | 0.033 |
| 10/3/2016 | 0.012 | 0.002 | LT | 0.033 |
| 10/10/2016 | 0.019 | 0.002 | LT | 0.046 |
| 10/17/2016 | 0.018 | 0.002 | LT | 0.030 |
| 10/24/2016 | 0.012 | 0.002 | LT | 0.034 |
| 10/31/2016 | 0.012 | 0.002 | LT | 0.032 |
| 11/7/2016 | 0.022 | 0.002 | LT | 0.033 |
| 11/14/2016 | 0.016 | 0.002 | LT | 0.034 |
| 11/21/2016 | 0.033 | 0.003 | LT | 0.050 |
| 11/28/2016 | 0.016 | 0.002 | LT | 0.033 |
| 12/5/2016 | 0.015 | 0.002 | LT | 0.033 |
| 12/12/2016 | 0.012 | 0.002 | LT | 0.033 |
| 12/19/2016 | 0.018 | 0.002 | LT | 0.031 |
| 12/26/2016 | 0.019 | 0.002 | LT | 0.048 |

# Appendix A – Atmospheric Monitoring 2016

## Cook 1

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/3/2016 | 0.020 | 0.003 | LT | 5.862 |
| 1/9/2016 | 0.009 | 0.002 | LT | 4.534 |
| 1/18/2016 | 0.015 | 0.002 | LT | 0.073 |
| 1/23/2016 | 0.012 | 0.002 | LT | 0.182 |
| 2/1/2016 | 0.012 | 0.001 | LT | 0.459 |
| 2/8/2016 | 0.011 | 0.002 | LT | 0.284 |
| 2/15/2016 | 0.008 | 0.002 | LT | 0.164 |
| 2/22/2016 | 0.007 | 0.001 | LT | 0.080 |
| 2/29/2016 | 0.010 | 0.002 | LT | 0.038 |
| 3/7/2016 | 0.008 | 0.002 | LT | 0.033 |
| 3/14/2016 | 0.007 | 0.002 | LT | 0.029 |
| 3/21/2016 | 0.004 | 0.001 | LT | 0.032 |
| 3/28/2016 | 0.008 | 0.002 | LT | 0.030 |
| 4/4/2016 | 0.009 | 0.002 | LT | 0.032 |
| 4/11/2016 | 0.007 | 0.002 | LT | 0.032 |
| 4/18/2016 | 0.010 | 0.002 | LT | 0.034 |
| 4/25/2016 | 0.008 | 0.002 | LT | 0.035 |
| 5/2/2016 | 0.008 | 0.002 | LT | 0.035 |
| 5/9/2016 | 0.005 | 0.001 | LT | 0.032 |
| 5/16/2016 | 0.005 | 0.001 | LT | 0.064 |
| 5/23/2016 | 0.009 | 0.002 | LT | 0.029 |
| 5/31/2016 | 0.014 | 0.002 | LT | 0.026 |
| 6/6/2016 | 0.008 | 0.002 | LT | 0.037 |
| 6/13/2016 | 0.010 | 0.002 | LT | 0.034 |
| 6/20/2016 | 0.009 | 0.002 | LT | 0.030 |
| 6/27/2016 | 0.010 | 0.002 | LT | 0.035 |
| 7/4/2016 | 0.008 | 0.002 | LT | 0.029 |
| 7/11/2016 | 0.010 | 0.002 | LT | 0.037 |
| 7/18/2016 | 0.007 | 0.002 | LT | 0.030 |
| 7/25/2016 | 0.010 | 0.002 | LT | 0.034 |
| 8/1/2016 | 0.007 | 0.002 | LT | 0.031 |
| 8/8/2016 | 0.009 | 0.002 | LT | 0.052 |
| 8/15/2016 | 0.011 | 0.002 | LT | 0.030 |
| 8/22/2016 | 0.009 | 0.002 | LT | 0.031 |
| 8/29/2016 | 0.009 | 0.002 | LT | 0.031 |
| 9/6/2016 | 0.010 | 0.002 | LT | 0.026 |
| 9/12/2016 | 0.010 | 0.002 | LT | 0.040 |
| 9/19/2016 | 0.013 | 0.002 | LT | 0.033 |
| 9/26/2016 | 0.016 | 0.002 | LT | 0.032 |
| 10/3/2016 | 0.008 | 0.002 | LT | 0.033 |
| 10/10/2016 | 0.014 | 0.002 | LT | 0.046 |
| 10/17/2016 | 0.015 | 0.002 | LT | 0.030 |
| 10/24/2016 | 0.009 | 0.002 | LT | 0.033 |
| 10/31/2016 | 0.007 | 0.002 | LT | 0.032 |
| 11/7/2016 | 0.012 | 0.002 | LT | 0.033 |
| 11/14/2016 | 0.010 | 0.002 | LT | 0.034 |
| 11/21/2016 | 0.023 | 0.002 | LT | 0.050 |
| 11/28/2016 | 0.012 | 0.002 | LT | 0.033 |
| 12/5/2016 | 0.011 | 0.002 | LT | 0.032 |
| 12/12/2016 | 0.009 | 0.002 | LT | 0.033 |
| 12/19/2016 | 0.014 | 0.002 | LT | 0.031 |
| 12/26/2016 | 0.016 | 0.002 | LT | 0.048 |

# Appendix A – Atmospheric Monitoring 2016

## Cook 2

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/3/2016 | 0.033 | 0.003 | LT | 5.948 |
| 1/9/2016 | 0.018 | 0.002 | LT | 4.449 |
| 1/18/2016 | 0.027 | 0.002 | LT | 0.073 |
| 1/23/2016 | 0.024 | 0.003 | LT | 0.181 |
| 2/1/2016 | 0.020 | 0.002 | LT | 0.458 |
| 2/8/2016 | 0.018 | 0.002 | LT | 0.285 |
| 2/15/2016 | 0.017 | 0.002 | LT | 0.163 |
| 2/22/2016 | 0.016 | 0.002 | LT | 0.081 |
| 2/29/2016 | 0.018 | 0.002 | LT | 0.038 |
| 3/7/2016 | 0.016 | 0.002 | LT | 0.033 |
| 3/14/2016 | 0.017 | 0.002 | LT | 0.029 |
| 3/21/2016 | 0.009 | 0.002 | LT | 0.032 |
| 3/28/2016 | 0.020 | 0.002 | LT | 0.030 |
| 4/4/2016 | 0.019 | 0.002 | LT | 0.032 |
| 4/11/2016 | 0.016 | 0.002 | LT | 0.032 |
| 4/18/2016 | 0.018 | 0.002 | LT | 0.034 |
| 4/25/2016 | 0.018 | 0.002 | LT | 0.035 |
| 5/2/2016 | 0.015 | 0.002 | LT | 0.035 |
| 5/9/2016 | 0.009 | 0.002 | LT | 0.032 |
| 5/16/2016 | 0.013 | 0.002 | LT | 0.063 |
| 5/23/2016 | 0.014 | 0.002 | LT | 0.028 |
| 5/31/2016 | 0.024 | 0.002 | LT | 0.026 |
| 6/6/2016 | 0.017 | 0.002 | LT | 0.037 |
| 6/13/2016 | 0.015 | 0.002 | LT | 0.034 |
| 6/20/2016 | 0.016 | 0.002 | LT | 0.030 |
| 6/27/2016 | LT | 0.001 | LT | 0.035 |
| 7/4/2016 | 0.012 | 0.002 | LT | 0.029 |
| 7/11/2016 | 0.015 | 0.002 | LT | 0.037 |
| 7/18/2016 | 0.015 | 0.002 | LT | 0.030 |
| 7/25/2016 | 0.019 | 0.002 | LT | 0.034 |
| 8/1/2016 | 0.017 | 0.002 | LT | 0.031 |
| 8/8/2016 | 0.021 | 0.003 | LT | 0.104 |
| 8/15/2016 | | | | |
| 8/22/2016 | 0.012 | 0.002 | LT | 0.031 |
| 8/29/2016 | 0.018 | 0.002 | LT | 0.031 |
| 9/6/2016 | 0.018 | 0.002 | LT | 0.026 |
| 9/12/2016 | 0.016 | 0.002 | LT | 0.039 |
| 9/19/2016 | 0.023 | 0.002 | LT | 0.033 |
| 9/26/2016 | 0.032 | 0.003 | LT | 0.032 |
| 10/3/2016 | 0.013 | 0.002 | LT | 0.033 |
| 10/10/2016 | 0.022 | 0.002 | LT | 0.046 |
| 10/17/2016 | 0.023 | 0.002 | LT | 0.030 |
| 10/24/2016 | 0.016 | 0.002 | LT | 0.033 |
| 10/31/2016 | 0.016 | 0.002 | LT | 0.032 |
| 11/7/2016 | 0.031 | 0.003 | LT | 0.033 |
| 11/14/2016 | 0.022 | 0.002 | LT | 0.034 |
| 11/21/2016 | 0.043 | 0.003 | LT | 0.050 |
| 11/28/2016 | 0.023 | 0.002 | LT | 0.033 |
| 12/5/2016 | 0.021 | 0.002 | LT | 0.033 |
| 12/12/2016 | 0.015 | 0.002 | LT | 0.033 |
| 12/19/2016 | 0.029 | 0.002 | LT | 0.031 |
| 12/26/2016 | 0.029 | 0.003 | LT | 0.048 |

# Appendix A – Atmospheric Monitoring 2016

## Cook 3

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/3/2016 | 0.026 | 0.003 | LT | 5.932 |
| 1/9/2016 | 0.013 | 0.002 | LT | 4.565 |
| 1/18/2016 | 0.020 | 0.002 | LT | 0.073 |
| 1/23/2016 | 0.016 | 0.003 | LT | 0.182 |
| 2/1/2016 | 0.015 | 0.002 | LT | 0.461 |
| 2/8/2016 | 0.014 | 0.002 | LT | 0.285 |
| 2/15/2016 | 0.011 | 0.002 | LT | 0.164 |
| 2/22/2016 | 0.011 | 0.002 | LT | 0.081 |
| 2/29/2016 | 0.013 | 0.002 | LT | 0.038 |
| 3/7/2016 | 0.010 | 0.002 | LT | 0.033 |
| 3/14/2016 | 0.013 | 0.002 | LT | 0.029 |
| 3/21/2016 | 0.007 | 0.002 | LT | 0.032 |
| 3/28/2016 | 0.013 | 0.002 | LT | 0.030 |
| 4/4/2016 | 0.013 | 0.002 | LT | 0.032 |
| 4/11/2016 | 0.012 | 0.002 | LT | 0.032 |
| 4/18/2016 | 0.015 | 0.002 | LT | 0.034 |
| 4/25/2016 | 0.014 | 0.002 | LT | 0.035 |
| 5/2/2016 | 0.011 | 0.002 | LT | 0.036 |
| 5/9/2016 | 0.008 | 0.002 | LT | 0.032 |
| 5/16/2016 | 0.008 | 0.002 | LT | 0.064 |
| 5/23/2016 | 0.013 | 0.002 | LT | 0.029 |
| 5/31/2016 | 0.020 | 0.002 | LT | 0.026 |
| 6/6/2016 | 0.012 | 0.002 | LT | 0.037 |
| 6/13/2016 | 0.012 | 0.002 | LT | 0.034 |
| 6/20/2016 | 0.013 | 0.002 | LT | 0.030 |
| 6/27/2016 | 0.011 | 0.002 | LT | 0.036 |
| 7/4/2016 | 0.009 | 0.002 | LT | 0.029 |
| 7/11/2016 | 0.013 | 0.002 | LT | 0.037 |
| 7/18/2016 | 0.009 | 0.002 | LT | 0.030 |
| 7/25/2016 | 0.015 | 0.002 | LT | 0.034 |
| 8/1/2016 | 0.012 | 0.002 | LT | 0.031 |
| 8/8/2016 | 0.014 | 0.002 | LT | 0.052 |
| 8/15/2016 | 0.011 | 0.002 | LT | 0.030 |
| 8/22/2016 | 0.009 | 0.002 | LT | 0.031 |
| 8/29/2016 | 0.012 | 0.002 | LT | 0.031 |
| 9/6/2016 | 0.014 | 0.002 | LT | 0.026 |
| 9/12/2016 | 0.013 | 0.002 | LT | 0.040 |
| 9/19/2016 | 0.020 | 0.002 | LT | 0.033 |
| 9/26/2016 | 0.025 | 0.002 | LT | 0.033 |
| 10/3/2016 | 0.010 | 0.002 | LT | 0.033 |
| 10/10/2016 | 0.009 | 0.002 | LT | 0.046 |
| 10/17/2016 | 0.022 | 0.002 | LT | 0.030 |
| 10/24/2016 | 0.011 | 0.002 | LT | 0.033 |
| 10/31/2016 | 0.012 | 0.002 | LT | 0.032 |
| 11/7/2016 | 0.022 | 0.002 | LT | 0.033 |
| 11/14/2016 | 0.018 | 0.002 | LT | 0.034 |
| 11/21/2016 | 0.032 | 0.003 | LT | 0.050 |
| 11/28/2016 | 0.016 | 0.002 | LT | 0.033 |
| 12/5/2016 | 0.012 | 0.002 | LT | 0.033 |
| 12/12/2016 | 0.013 | 0.002 | LT | 0.033 |
| 12/19/2016 | 0.019 | 0.002 | LT | 0.031 |
| 12/26/2016 | 0.021 | 0.002 | LT | 0.048 |

# Appendix A – Atmospheric Monitoring 2016

## Cook 4

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/3/2016 | 0.020 | 0.003 | LT | 5.869 |
| 1/9/2016 | 0.012 | 0.002 | LT | 4.527 |
| 1/18/2016 | 0.021 | 0.002 | LT | 0.073 |
| 1/23/2016 | 0.014 | 0.002 | LT | 0.182 |
| 2/1/2016 | 0.012 | 0.001 | LT | 0.459 |
| 2/8/2016 | 0.015 | 0.002 | LT | 0.285 |
| 2/15/2016 | 0.013 | 0.002 | LT | 0.164 |
| 2/22/2016 | 0.011 | 0.002 | LT | 0.080 |
| 2/29/2016 | 0.012 | 0.002 | LT | 0.039 |
| 3/7/2016 | 0.011 | 0.002 | LT | 0.033 |
| 3/14/2016 | 0.011 | 0.002 | LT | 0.029 |
| 3/21/2016 | 0.008 | 0.002 | LT | 0.032 |
| 3/28/2016 | 0.012 | 0.002 | LT | 0.030 |
| 4/4/2016 | 0.012 | 0.002 | LT | 0.032 |
| 4/11/2016 | 0.011 | 0.002 | LT | 0.032 |
| 4/18/2016 | 0.014 | 0.002 | LT | 0.034 |
| 4/25/2016 | 0.014 | 0.002 | LT | 0.035 |
| 5/2/2016 | 0.010 | 0.002 | LT | 0.035 |
| 5/9/2016 | 0.008 | 0.002 | LT | 0.032 |
| 5/16/2016 | 0.008 | 0.002 | LT | 0.064 |
| 5/23/2016 | 0.012 | 0.002 | LT | 0.029 |
| 5/31/2016 | 0.018 | 0.002 | LT | 0.026 |
| 6/6/2016 | 0.011 | 0.002 | LT | 0.037 |
| 6/13/2016 | 0.011 | 0.002 | LT | 0.036 |
| 6/20/2016 | 0.011 | 0.002 | LT | 0.031 |
| 6/27/2016 | 0.014 | 0.002 | LT | 0.037 |
| 7/4/2016 | 0.010 | 0.002 | LT | 0.030 |
| 7/11/2016 | 0.015 | 0.002 | LT | 0.039 |
| 7/18/2016 | 0.012 | 0.002 | LT | 0.030 |
| 7/25/2016 | 0.013 | 0.002 | LT | 0.035 |
| 8/1/2016 | 0.011 | 0.002 | LT | 0.031 |
| 8/8/2016 | 0.014 | 0.002 | LT | 0.053 |
| 8/15/2016 | 0.014 | 0.002 | LT | 0.031 |
| 8/22/2016 | 0.009 | 0.002 | LT | 0.032 |
| 8/29/2016 | 0.012 | 0.002 | LT | 0.032 |
| 9/6/2016 | 0.013 | 0.002 | LT | 0.027 |
| 9/12/2016 | 0.011 | 0.002 | LT | 0.040 |
| 9/19/2016 | 0.016 | 0.002 | LT | 0.033 |
| 9/26/2016 | 0.021 | 0.002 | LT | 0.033 |
| 10/3/2016 | 0.009 | 0.002 | LT | 0.033 |
| 10/10/2016 | 0.016 | 0.002 | LT | 0.046 |
| 10/17/2016 | 0.021 | 0.002 | LT | 0.030 |
| 10/24/2016 | 0.013 | 0.002 | LT | 0.033 |
| 10/31/2016 | 0.013 | 0.002 | LT | 0.032 |
| 11/7/2016 | 0.016 | 0.002 | LT | 0.033 |
| 11/14/2016 | 0.017 | 0.002 | LT | 0.035 |
| 11/21/2016 | 0.038 | 0.003 | LT | 0.050 |
| 11/28/2016 | 0.019 | 0.002 | LT | 0.033 |
| 12/5/2016 | 0.019 | 0.002 | LT | 0.032 |
| 12/12/2016 | 0.013 | 0.002 | LT | 0.033 |
| 12/19/2016 | 0.021 | 0.002 | LT | 0.031 |
| 12/26/2016 | 0.026 | 0.002 | LT | 0.048 |

# Appendix A – Atmospheric Monitoring 2016

## Cook 5

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/3/2016 | 0.019 | 0.003 | LT | 5.935 |
| 1/9/2016 | 0.012 | 0.002 | LT | 4.526 |
| 1/18/2016 | 0.017 | 0.002 | LT | 0.073 |
| 1/23/2016 | 0.014 | 0.002 | LT | 0.183 |
| 2/1/2016 | 0.015 | 0.002 | LT | 0.461 |
| 2/8/2016 | 0.013 | 0.002 | LT | 0.285 |
| 2/15/2016 | 0.009 | 0.002 | LT | 0.164 |
| 2/22/2016 | 0.011 | 0.002 | LT | 0.081 |
| 2/29/2016 | 0.011 | 0.002 | LT | 0.038 |
| 3/7/2016 | 0.011 | 0.002 | LT | 0.033 |
| 3/14/2016 | 0.010 | 0.002 | LT | 0.029 |
| 3/21/2016 | 0.007 | 0.002 | LT | 0.032 |
| 3/28/2016 | 0.010 | 0.002 | LT | 0.030 |
| 4/4/2016 | 0.013 | 0.002 | LT | 0.032 |
| 4/11/2016 | 0.011 | 0.002 | LT | 0.032 |
| 4/18/2016 | 0.016 | 0.002 | LT | 0.034 |
| 4/25/2016 | 0.013 | 0.002 | LT | 0.035 |
| 5/2/2016 | 0.007 | 0.002 | LT | 0.036 |
| 5/9/2016 | 0.006 | 0.001 | LT | 0.032 |
| 5/16/2016 | 0.006 | 0.001 | LT | 0.064 |
| 5/23/2016 | 0.008 | 0.002 | LT | 0.029 |
| 5/31/2016 | 0.016 | 0.002 | LT | 0.026 |
| 6/6/2016 | 0.010 | 0.002 | LT | 0.037 |
| 6/13/2016 | 0.010 | 0.002 | LT | 0.035 |
| 6/20/2016 | 0.010 | 0.002 | LT | 0.031 |
| 6/27/2016 | 0.011 | 0.002 | LT | 0.036 |
| 7/4/2016 | 0.009 | 0.002 | LT | 0.030 |
| 7/11/2016 | 0.011 | 0.002 | LT | 0.038 |
| 7/18/2016 | 0.008 | 0.002 | LT | 0.031 |
| 7/25/2016 | 0.013 | 0.002 | LT | 0.035 |
| 8/1/2016 | 0.012 | 0.002 | LT | 0.032 |
| 8/8/2016 | 0.012 | 0.002 | LT | 0.053 |
| 8/15/2016 | 0.011 | 0.002 | LT | 0.031 |
| 8/22/2016 | 0.009 | 0.002 | LT | 0.032 |
| 8/29/2016 | 0.009 | 0.002 | LT | 0.032 |
| 9/6/2016 | 0.011 | 0.002 | LT | 0.027 |
| 9/12/2016 | 0.010 | 0.002 | LT | 0.041 |
| 9/19/2016 | 0.011 | 0.002 | LT | 0.033 |
| 9/26/2016 | 0.016 | 0.002 | LT | 0.033 |
| 10/3/2016 | 0.006 | 0.001 | LT | 0.034 |
| 10/10/2016 | 0.011 | 0.002 | LT | 0.047 |
| 10/17/2016 | 0.012 | 0.002 | LT | 0.031 |
| 10/24/2016 | 0.009 | 0.002 | LT | 0.034 |
| 10/31/2016 | 0.007 | 0.002 | LT | 0.033 |
| 11/7/2016 | 0.023 | 0.002 | LT | 0.034 |
| 11/14/2016 | 0.013 | 0.002 | LT | 0.034 |
| 11/21/2016 | 0.022 | 0.002 | LT | 0.050 |
| 11/28/2016 | 0.012 | 0.002 | LT | 0.033 |
| 12/5/2016 | 0.008 | 0.002 | LT | 0.033 |
| 12/12/2016 | 0.005 | 0.001 | LT | 0.033 |
| 12/19/2016 | 0.009 | 0.002 | LT | 0.031 |
| 12/26/2016 | 0.012 | 0.002 | LT | 0.048 |

# Appendix A – Atmospheric Monitoring 2016

## Lansing 1

| Collection Date | Gross beta (pCi/m3) | Beta Error (pCi/m3) | I 131 (pCi/m3) | I 131 Error (pCi/m3) |
|---|---|---|---|---|
| 1/4/2016 | 0.024 | 0.002 | LT | 0.175 |
| 1/11/2016 | 0.022 | 0.002 | LT | 0.096 |
| 1/19/2016 | 0.020 | 0.002 | LT | 0.042 |
| 1/25/2016 | 0.017 | 0.002 | LT | 0.107 |
| 2/1/2016 | 0.018 | 0.002 | LT | 0.526 |
| 2/8/2016 | 0.017 | 0.002 | LT | 0.312 |
| 2/16/2016 | 0.011 | 0.002 | LT | 0.066 |
| 2/22/2016 | 0.014 | 0.002 | LT | 0.052 |
| 2/29/2016 | 0.014 | 0.002 | LT | 0.025 |
| 3/7/2016 | 0.013 | 0.002 | LT | 0.025 |
| 3/14/2016 | 0.018 | 0.002 | LT | 0.029 |
| 3/21/2016 | 0.011 | 0.002 | LT | 0.032 |
| 3/28/2016 | 0.015 | 0.002 | LT | 0.027 |
| 4/4/2016 | 0.017 | 0.002 | LT | 0.031 |
| 4/11/2016 | 0.016 | 0.002 | LT | 0.028 |
| 4/18/2016 | 0.020 | 0.002 | LT | 0.030 |
| 4/26/2016 | 0.019 | 0.002 | LT | 0.024 |
| 5/2/2016 | 0.016 | 0.002 | LT | 0.038 |
| 5/9/2016 | 0.013 | 0.002 | LT | 0.024 |
| 5/16/2016 | 0.012 | 0.002 | LT | 0.052 |
| 5/23/2016 | 0.019 | 0.002 | LT | 0.035 |
| 5/31/2016 | 0.030 | 0.002 | LT | 0.027 |
| 6/6/2016 | 0.015 | 0.002 | LT | 0.029 |
| 6/13/2016 | 0.016 | 0.002 | LT | 0.027 |
| 6/20/2016 | 0.019 | 0.002 | LT | 0.033 |
| 6/27/2016 | 0.017 | 0.002 | LT | 0.032 |
| 7/5/2016 | 0.023 | 0.002 | LT | 0.024 |
| 7/11/2016 | 0.017 | 0.002 | LT | 0.034 |
| 7/18/2016 | 0.017 | 0.002 | LT | 0.029 |
| 7/25/2016 | 0.019 | 0.002 | LT | 0.032 |
| 8/1/2016 | 0.016 | 0.002 | LT | 0.031 |
| 8/8/2016 | 0.019 | 0.002 | LT | 0.045 |
| 8/15/2016 | 0.018 | 0.002 | LT | 0.028 |
| 8/22/2016 | 0.017 | 0.002 | LT | 0.028 |
| 8/29/2016 | 0.018 | 0.002 | LT | 0.028 |
| 9/6/2016 | 0.019 | 0.002 | LT | 0.027 |
| 9/12/2016 | 0.014 | 0.002 | LT | 0.038 |
| 9/19/2016 | 0.021 | 0.002 | LT | 0.032 |
| 9/26/2016 | 0.028 | 0.002 | LT | 0.030 |
| 10/3/2016 | 0.015 | 0.002 | LT | 0.030 |
| 10/10/2016 | 0.021 | 0.002 | LT | 0.047 |
| 10/17/2016 | 0.020 | 0.002 | LT | 0.025 |
| 10/24/2016 | 0.014 | 0.002 | LT | 0.029 |
| 10/31/2016 | 0.012 | 0.002 | LT | 0.028 |
| 11/7/2016 | 0.025 | 0.002 | LT | 0.030 |
| 11/14/2016 | 0.021 | 0.002 | LT | 0.034 |
| 11/21/2016 | 0.039 | 0.003 | LT | 0.051 |
| 11/28/2016 | 0.018 | 0.002 | LT | 0.028 |
| 12/5/2016 | 0.020 | 0.002 | LT | 0.029 |
| 12/12/2016 | 0.014 | 0.002 | LT | 0.027 |
| 12/19/2016 | 0.022 | 0.002 | LT | 0.032 |
| 12/22/2016 | 0.034 | 0.004 | LT | 0.155 |

# Appendix B – Terrestrial Monitoring 2014

## Lansing

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/13/2014** | LT 3 | LT 3 | 1468 ± 83 |
| **1/27/2014** | LT 3 | LT 3 | 1340 ± 84 |
| **2/10/2014** | LT 3 | LT 3 | 1446 ± 83 |
| **2/24/2014** | LT 3 | LT 3 | 1514 ± 83 |
| **3/10/2014** | LT 2 | LT 2 | 1134 ± 68 |
| **3/24/2014** | LT 3 | LT 3 | 1444 ± 87 |
| **4/14/2014** | LT 3 | LT 3 | 1295 ± 72 |
| **4/28/2014** | LT 3 | LT 3 | 1423 ± 82 |
| **5/12/2014** | LT 2 | LT 2 | 1227 ± 70 |
| **5/27/2014** | LT 2 | LT 2 | 1180 ± 70 |
| **6/9/2014** | LT 2 | LT 2 | 1229 ± 71 |
| **6/23/2014** | LT 3 | LT 3 | 1260 ± 73 |
| **7/14/2014** | LT 2 | LT 2 | 1163 ± 70 |
| **7/28/2014** | LT 3 | LT 2 | 1153 ± 70 |
| **8/11/2014** | LT 2 | LT 3 | 1211 ± 71 |
| **8/25/2014** | LT 2 | LT 3 | 1218 ± 70 |
| **9/8/2014** | LT 2 | LT 2 | 1234 ± 71 |
| **9/22/2014** | LT 3 | LT 2 | 1196 ± 69 |
| **10/13/2014** | LT 2 | LT 2 | 1272 ± 72 |
| **10/27/2014** | LT 6 | LT 2 | 1155 ± 71 |
| **11/10/2014** | LT 4 | LT 3 | 1466 ± 86 |
| **12/8/2014** | LT 3 | LT 3 | 1371 ± 84 |
| **12/22/2014** | LT 2 | LT 3 | 1299 ± 70 |

## Detroit

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/21/2014** | LT 3 | LT 3 | 1451 ± 82 |
| **2/11/2014** | LT 3 | LT 4 | 1436 ± 82 |
| **3/11/2014** | LT 3 | LT 2 | 1466 ± 82 |
| **4/1/2014** | LT 3 | LT 3 | 1188 ± 70 |
| **7/28/2014** | LT 3 | LT 3 | 1280 ± 72 |

## Grand Rapids

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **3/27/2014** | LT 3 | LT 2 | 1270 ± 71 |
| **4/10/2014** | LT 5 | LT 3 | 1436 ± 88 |
| **5/30/2014** | LT 3 | LT 3 | 1211 ± 71 |
| **8/1/2014** | LT 3 | LT 2 | 1188 ± 70 |
| **9/19/2014** | LT 4 | LT 3 | 1445 ± 79 |
| **10/30/2014** | LT 8 | LT 3 | 1509 ± 80 |

# Appendix B – Terrestrial Monitoring 2014

## Marquette

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| 1/9/2014 | LT 4 | LT 3 | 1285 ± 71 |
| 1/22/2014 | LT 4 | LT 3 | 1501 ± 84 |
| 2/6/2014 | LT 4 | LT 3 | 1432 ± 83 |
| 2/20/2014 | LT 4 | LT 3 | 1171 ± 69 |
| 3/5/2014 | LT 4 | LT 3 | 1407 ± 82 |
| 3/18/2014 | LT 5 | LT 3 | 1492 ± 84 |
| 4/9/2014 | LT 3 | LT 2 | 1210 ± 70 |
| 4/28/2014 | LT 3 | LT 3 | 1338 ± 70 |
| 5/8/2014 | LT 4 | LT 3 | 1240 ± 71 |
| 5/20/2014 | LT 3 | LT 2 | 1210 ± 70 |
| 6/11/2014 | LT 3 | LT 3 | 1230 ± 71 |
| 6/26/2014 | LT 4 | LT 2 | 1197 ± 71 |
| 7/10/2014 | LT 3 | LT 3 | 1144 ± 70 |
| 7/23/2014 | LT 4 | LT 3 | 1584 ± 82 |
| 8/14/2014 | LT 4 | LT 3 | 1150 ± 69 |
| 8/28/2014 | LT 4 | LT 3 | 1292 ± 75 |
| 9/9/2014 | LT 3 | LT 2 | 1301 ± 73 |
| 9/24/2014 | LT 3 | LT 3 | 1230 ± 71 |
| 10/7/2014 | LT 3 | LT 3 | 1472 ± 80 |
| 10/22/2014 | LT 11 | LT 3 | 1419 ± 79 |
| 11/3/2014 | LT 5 | LT 3 | 1234 ± 71 |
| 11/18/2014 | LT 3 | LT 3 | 1544 ± 81 |
| 12/8/2014 | LT 3 | LT 3 | 1199 ± 70 |
| 12/22/2014 | LT 3 | LT 2 | 1169 ± 70 |

## Monroe

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| 1/2/2014 | LT 4 | LT 3 | 1265 ± 78 |
| 1/19/2014 | LT 3 | LT 3 | 1184 ± 78 |
| 1/30/2014 | LT 5 | LT 3 | 1245 ± 78 |
| 2/13/2014 | LT 4 | LT 3 | 1274 ± 79 |
| 2/26/2014 | LT 4 | LT 3 | 1226 ± 77 |
| 3/13/2014 | LT 4 | LT 3 | 1318 ± 79 |
| 3/27/2014 | LT 4 | LT 3 | 1088 ± 67 |
| 4/10/2014 | LT 3 | LT 2 | 1073 ± 67 |
| 4/24/2014 | LT 4 | LT 3 | 1293 ± 79 |
| 5/8/2014 | LT 4 | LT 2 | 963 ± 65 |
| 5/22/2014 | LT 4 | LT 2 | 1188 ± 70 |
| 6/3/2014 | LT 3 | LT 3 | 1121 ± 68 |
| 7/3/2014 | LT 4 | LT 2 | 947 ± 65 |
| 7/15/2014 | LT 4 | LT 2 | 993 ± 65 |
| 7/31/2014 | LT 4 | LT 2 | 1178 ± 70 |
| 8/14/2014 | LT 4 | LT 3 | 1224 ± 70 |
| 8/28/2014 | LT 5 | LT 3 | 1194 ± 73 |
| 9/11/2014 | LT 4 | LT 2 | 974 ± 65 |
| 9/25/2014 | LT 5 | LT 3 | 1442 ± 80 |
| 10/9/2014 | LT 5 | LT 3 | 1345 ± 78 |
| 10/23/2014 | LT 11 | LT 3 | 1286 ± 81 |
| 11/6/2014 | LT 7 | LT 3 | 1292 ± 76 |
| 11/20/2014 | LT 8 | LT 3 | 1238 ± 75 |

# Appendix B – Terrestrial Monitoring 2014

| | | | |
|---|---|---|---|
| **12/4/2014** | LT 5 | LT 3 | 1271 ± 76 |
| **12/19/2014** | LT 10 | LT 3 | 1051 ± 74 |

**South Haven**

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/8/2014** | LT 3 | LT 3 | 1293 ± 80 |
| **1/20/2014** | LT 3 | LT 3 | 1100 ± 74 |
| **2/4/2014** | LT 3 | LT 3 | 1371 ± 84 |
| **2/24/2014** | LT 3 | LT 3 | 1366 ± 82 |
| **3/10/2014** | LT 3 | LT 3 | 1333 ± 80 |
| **3/25/2014** | LT 3 | LT 3 | 1296 ± 79 |
| **4/8/2014** | LT 3 | LT 2 | 1051 ± 66 |
| **4/21/2014** | LT 3 | LT 2 | 1109 ± 68 |
| **5/5/2014** | LT 3 | LT 2 | 1142 ± 69 |
| **6/15/2014** | LT 3 | LT 2 | 1160 ± 70 |
| **7/1/2014** | LT 3 | LT 3 | 963 ± 65 |
| **7/15/2014** | LT 3 | LT 2 | 1233 ± 70 |
| **8/5/2014** | LT 3 | LT 2 | 1173 ± 71 |
| **8/18/2014** | LT 3 | LT 2 | 1185 ± 70 |
| **9/2/2014** | LT 6 | LT 3 | 1522 ± 81 |
| **9/29/2014** | LT 3 | LT 3 | 1323 ± 72 |
| **10/14/2014** | LT 3 | LT 2 | 1148 ± 70 |
| **10/21/2014** | LT 12 | LT 3 | 1338 ± 84 |
| **11/11/2014** | LT 5 | LT 3 | 1179 ± 74 |
| **11/25/2014** | LT 4 | LT 3 | 1116 ± 71 |
| **12/15/2014** | LT 4 | LT 3 | 1285 ± 79 |
| **12/30/2014** | LT 3 | LT 2 | 1058 ± 66 |

# Appendix B – Terrestrial Monitoring 2015

## Lansing

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/5/2015** | LT 2 | LT 2 | 1282 ± 72 |
| **1/12/2015** | LT 3 | LT 3 | 1179 ± 71 |
| **1/26/2015** | LT 3 | LT 3 | 1466 ± 82 |
| **2/9/2015** | LT 3 | LT 3 | 1419 ± 82 |
| **2/23/2015** | LT 2 | LT 3 | 1235 ± 70 |
| **3/9/2015** | LT 3 | LT 3 | 1459 ± 82 |
| **4/2/2015** | LT 3 | LT 3 | 1345 ± 80 |
| **4/13/2015** | LT 3 | LT 3 | 1496 ± 83 |
| **4/27/2015** | LT 3 | LT 3 | 1197 ± 71 |
| **5/11/2015** | LT 3 | LT 3 | 1441 ± 82 |
| **5/26/2015** | LT 2 | LT 3 | 1167 ± 70 |
| **6/8/2015** | LT 3 | LT 3 | 1224 ± 70 |
| **6/22/2015** | LT 3 | LT 3 | 1343 ± 81 |
| **7/2/2015** | LT 6 | LT 3 | 1404 ± 86 |
| **7/14/2015** | LT 2 | LT 2 | 1196 ± 70 |
| **7/27/2015** | LT 3 | LT 3 | 1228 ± 71 |
| **8/10/2015** | LT 2 | LT 2 | 1187 ± 70 |
| **8/24/2015** | LT 2 | LT 2 | 1117 ± 68 |
| **9/14/2015** | LT 3 | LT 3 | 1245 ± 78 |
| **9/28/2015** | LT 3 | LT 3 | 1219 ± 71 |
| **10/12/2015** | LT 3 | LT 3 | 1380 ± 81 |
| **10/28/2015** | LT 2 | LT 2 | 1187 ± 69 |
| **11/9/2015** | LT 3 | LT 3 | 1379 ± 81 |
| **11/23/2015** | LT 4 | LT 2 | 1210 ± 71 |
| **12/14/2015** | LT 3 | LT 3 | 1380 ± 82 |
| **12/28/2015** | LT 10 | LT 3 | 1446 ± 83 |

## Marquette

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/8/2015** | LT 4 | LT 3 | 1461 ± 82 |
| **1/23/2015** | LT 4 | LT 3 | 1394 ± 82 |
| **2/2/2015** | LT 3 | LT 3 | 1390 ± 81 |
| **2/18/2015** | LT 4 | LT 3 | 1392 ± 81 |
| **3/11/2015** | LT 4 | LT 3 | 1246 ± 72 |
| **3/23/2015** | LT 6 | LT 3 | 1248 ± 71 |
| **4/7/2015** | LT 4 | LT 3 | 1424 ± 82 |
| **4/22/2015** | LT 5 | LT 3 | 1432 ± 82 |
| **5/5/2015** | LT 3 | LT 2 | 1226 ± 70 |
| **5/19/2015** | LT 3 | LT 3 | 1200 ± 70 |
| **6/4/2015** | LT 4 | LT 3 | 1364 ± 73 |
| **6/24/2015** | LT 3 | LT 3 | 1411 ± 81 |
| **7/22/2015** | LT 4 | LT 3 | 1245 ± 71 |
| **9/10/2015** | LT 4 | LT 3 | 1382 ± 80 |
| **9/23/2015** | LT 5 | LT 3 | 1424 ± 81 |
| **10/5/2015** | LT 4 | LT 3 | 1451 ± 82 |
| **10/21/2015** | LT 6 | LT 3 | 1425 ± 83 |
| **11/3/2015** | LT 4 | LT 3 | 1364 ± 80 |
| **11/17/2015** | LT 3 | LT 2 | 1248 ± 71 |
| **12/3/2015** | LT 4 | LT 3 | 1370 ± 81 |
| **12/15/2015** | LT 3 | LT 3 | 1392 ± 81 |

# Appendix B – Terrestrial Monitoring 2015

## Monroe

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/1/2015** | LT 4 | LT 3 | 1264 ± 79 |
| **1/15/2015** | LT 8 | LT 3 | 1229 ± 77 |
| **1/29/2015** | LT 5 | LT 3 | 1129 ± 75 |
| **2/12/2015** | LT 4 | LT 2 | 1121 ± 67 |
| **2/26/2015** | LT 4 | LT 2 | 1023 ± 66 |
| **3/12/2015** | LT 5 | LT 3 | 1278 ± 78 |
| **3/26/2015** | LT 5 | LT 3 | 1304 ± 79 |
| **4/9/2015** | LT 4 | LT 3 | 1055 ± 66 |
| **4/23/2015** | LT 5 | LT 3 | 1263 ± 78 |
| **5/7/2015** | LT 4 | LT 3 | 1149 ± 76 |
| **5/21/2015** | LT 5 | LT 3 | 1185 ± 77 |
| **6/4/2015** | LT 5 | LT 3 | 1288 ± 79 |
| **6/17/2015** | LT 5 | LT 3 | 1007 ± 72 |
| **7/2/2015** | LT 4 | LT 3 | 789 ± 60 |
| **7/16/2015** | LT 11 | LT 2 | 787 ± 60 |
| **8/4/2015** | LT 3 | LT 3 | 1329 ± 77 |
| **8/13/2015** | LT 4 | LT 2 | 1140 ± 68 |
| **8/27/2015** | LT 5 | LT 3 | 1270 ± 79 |
| **9/10/2015** | LT 4 | LT 3 | 1058 ± 75 |
| **10/8/2015** | LT 5 | LT 3 | 1119 ± 75 |
| **10/22/2015** | LT 4 | LT 2 | 916 ± 63 |
| **11/5/2015** | LT 5 | LT 3 | 1269 ± 79 |
| **11/19/2015** | LT 7 | LT 3 | 1042 ± 73 |
| **12/7/2015** | LT 3 | LT 3 | 1003 ± 72 |
| **12/17/2015** | LT 18 | LT 3 | 1247 ± 78 |
| **12/31/2015** | LT 7 | LT 3 | 985 ± 77 |

## South Haven

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/13/2015** | LT 2 | LT 2 | 1166 ± 67 |
| **2/2/2015** | LT 3 | LT 2 | 1022 ± 66 |
| **2/16/2015** | LT 3 | LT 2 | 1023 ± 67 |
| **3/2/2015** | LT 3 | LT 3 | 1058 ± 74 |
| **3/17/2015** | LT 3 | LT 3 | 1200 ± 70 |
| **3/31/2015** | LT 4 | LT 3 | 1464 ± 87 |
| **4/14/2015** | LT 3 | LT 3 | 1338 ± 79 |
| **4/28/2015** | LT 3 | LT 2 | 1064 ± 67 |
| **5/12/2015** | LT 3 | LT 2 | 1235 ± 71 |
| **5/27/2015** | LT 3 | LT 3 | 1231 ± 77 |
| **6/8/2015** | LT 3 | LT 2 | 925 ± 63 |
| **6/23/2015** | LT 3 | LT 2 | 1000 ± 64 |
| **7/7/2015** | LT 3 | LT 2 | 955 ± 64 |
| **7/8/2015** | LT 3 | LT 3 | 1381 ± 86 |
| **7/21/2015** | LT 10 | LT 3 | 1174 ± 81 |
| **8/3/2015** | LT 4 | LT 3 | 1441 ± 88 |
| **8/17/2015** | LT 4 | LT 3 | 1000 ± 71 |
| **9/8/2015** | LT 3 | LT 3 | 1381 ± 80 |
| **9/22/2015** | LT 3 | LT 3 | 1149 ± 75 |
| **10/12/2015** | LT 3 | LT 2 | 1060 ± 67 |
| **11/2/2015** | LT 3 | LT 3 | 1247 ± 78 |
| **11/17/2015** | LT 4 | LT 3 | 1263 ± 80 |
| **12/1/2015** | LT 3 | LT 3 | 1188 ± 70 |
| **12/22/2015** | LT 10 | LT 3 | 1013 ± 65 |

# Appendix B – Terrestrial Monitoring 2016

## Lansing

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/11/2016** | LT3 | LT2 | 1238 ± 71 |
| **1/25/2016** | LT3 | LT3 | 1363 ± 81 |
| **2/8/2016** | LT3 | LT2 | 1176 ± 69 |
| **2/22/2016** | LT3 | LT3 | 1434 ± 86 |
| **3/14/2016** | LT2 | LT3 | 1159 ± 70 |
| **3/28/2016** | LT2 | LT2 | 1440 ± 58 |
| **4/11/2016** | LT3 | LT3 | 1469 ± 82 |
| **4/25/2016** | LT3 | LT3 | 1457 ± 82 |
| **5/9/2016** | LT3 | LT3 | 1407 ± 81 |
| **5/23/2016** | LT3 | LT3 | 1406 ± 81 |
| **6/13/2016** | LT2 | LT2 | 1188 ± 70 |
| **6/27/2016** | LT2 | LT2 | 1336 ± 72 |
| **7/11/2016** | LT3 | LT3 | 1406 ± 81 |
| **7/25/2016** | LT3 | LT3 | 1351 ± 81 |
| **8/11/2016** | LT2 | LT3 | 1258 ± 71 |
| **8/22/2016** | LT3 | LT3 | 1463 ± 82 |
| **9/12/2016** | LT3 | LT3 | 1429 ± 82 |
| **9/26/2016** | LT2 | LT2 | 1282 ± 72 |
| **10/10/2016** | LT3 | LT3 | 1414 ± 81 |
| **10/24/2016** | LT3 | LT3 | 1366 ± 82 |
| **11/14/2016** | LT3 | LT3 | 1355 ± 82 |
| **11/28/2016** | LT3 | LT3 | 1396 ± 83 |
| **12/5/2016** | LT3 | LT3 | 1351 ± 80 |
| **12/19/2016** | LT3 | LT3 | 1414 ± 81 |

## Marquette

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/19/2016** | LT3 | LT2 | 1225 ± 71 |
| **1/22/2016** | LT5 | LT3 | 1431 ± 82 |
| **2/3/2016** | LT4 | LT3 | 1396 ± 81 |
| **2/17/2016** | LT4 | LT3 | 1169 ± 69 |
| **3/9/2016** | LT4 | LT3 | 1423 ± 80 |
| **3/30/2016** | LT4 | LT3 | 1419 ± 82 |
| **4/15/2016** | LT4 | LT3 | 1404 ± 81 |
| **4/28/2016** | LT4 | LT3 | 1399 ± 81 |
| **5/6/2016** | LT4 | LT3 | 1380 ± 80 |
| **5/25/2016** | LT3 | LT3 | 1393 ± 86 |
| **6/8/2016** | LT3 | LT3 | 1326 ± 79 |
| **6/22/2016** | LT4 | LT3 | 1341 ± 80 |
| **7/11/2016** | LT3 | LT3 | 1424 ± 81 |
| **7/25/2016** | LT3 | LT3 | 1478 ± 82 |
| **8/3/2016** | LT3 | LT3 | 1369 ± 82 |
| **8/24/2016** | LT4 | LT3 | 1393 ± 82 |
| **9/7/2016** | LT3 | LT3 | 1424 ± 81 |
| **9/21/2016** | LT4 | LT3 | 1409 ± 81 |
| **10/11/2016** | LT4 | LT2 | 1242 ± 71 |
| **10/26/2016** | LT3 | LT3 | 1407 ± 81 |
| **11/2/2016** | LT3 | LT3 | 1372 ± 82 |
| **11/16/2016** | LT3 | LT3 | 1354 ± 80 |
| **12/7/2016** | LT4 | LT3 | 1312 ± 80 |
| **12/14/2016** | LT4 | LT3 | 1369 ± 82 |

# Appendix B – Terrestrial Monitoring 2016

## Monroe

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/14/2016** | LT5 | LT3 | 1175 ± 76 |
| **1/28/2016** | LT6 | LT4 | 1376 ± 97 |
| **2/11/2016** | LT5 | LT3 | 1328 ± 79 |
| **3/9/2016** | LT5 | LT3 | 1095 ± 68 |
| **3/24/2016** | LT5 | LT3 | 1169 ± 75 |
| **4/7/2016** | LT5 | LT3 | 1131 ± 75 |
| **4/21/2016** | LT5 | LT3 | 1403 ± 80 |
| **5/5/2016** | LT5 | LT3 | 1131 ± 76 |
| **5/19/2016** | LT5 | LT3 | 968 ± 71 |
| **6/2/2016** | LT4 | LT3 | 1221 ± 78 |
| **6/17/2016** | LT3 | LT3 | 1275 ± 79 |
| **6/30/2016** | LT5 | LT3 | 1291 ± 80 |
| **7/14/2016** | LT5 | LT3 | 1202 ± 77 |
| **7/28/2016** | LT5 | LT3 | 1171 ± 76 |
| **8/12/2016** | LT4 | LT3 | 1190 ± 76 |
| **8/25/2016** | LT5 | LT3 | 1109 ± 75 |
| **9/11/2016** | LT4 | LT3 | 1019 ± 73 |
| **9/22/2016** | LT5 | LT3 | 1096 ± 74 |
| **10/10/2016** | LT5 | LT3 | 1147 ± 76 |
| **10/20/2016** | LT5 | LT3 | 1161 ± 76 |
| **11/17/2016** | LT5 | LT3 | 1377 ± 81 |
| **12/1/2016** | LT5 | LT3 | 1238 ± 78 |
| **12/15/2016** | LT5 | LT3 | 1310 ± 80 |
| **12/30/2016** | 4 ± 4 | LT3 | 1245 ± 78 |

## South Haven

| Collection Date | I-131 (pCi/l) | Cs-137 (pCi/l) | K-40 (pCi/l) |
|---|---|---|---|
| **1/11/2016** | LT3 | LT3 | 1114 ± 75 |
| **1/25/2016** | LT3 | LT4 | 1082 ± 67 |
| **2/16/2016** | LT3 | LT3 | 1201 ± 69 |
| **3/1/2016** | LT3 | LT3 | 1389 ± 78 |
| **3/22/2016** | LT2 | LT3 | 1198 ± 54 |
| **4/12/2016** | LT3 | LT3 | 1222 ± 71 |
| **4/26/2016** | LT3 | LT3 | 1003 ± 65 |
| **5/10/2016** | LT3 | LT3 | 1280 ± 72 |
| **5/24/2016** | LT3 | LT3 | 1285 ± 72 |
| **6/7/2016** | LT3 | LT3 | 1178 ± 70 |
| **6/21/2016** | LT3 | LT3 | 1146 ± 67 |
| **7/5/2016** | LT3 | LT3 | 1030 ± 72 |
| **7/19/2016** | LT2 | LT3 | 1228 ± 70 |
| **8/9/2016** | LT3 | LT3 | 1295 ± 79 |
| **8/23/2016** | LT3 | LT3 | 1362 ± 81 |
| **9/6/2016** | LT3 | LT3 | 1359 ± 81 |
| **9/20/2016** | LT3 | LT3 | 1346 ± 80 |
| **10/4/2016** | LT3 | LT3 | 1105 ± 76 |
| **10/18/2016** | LT3 | LT3 | 1222 ± 77 |
| **11/1/2016** | LT3 | LT3 | 1177 ± 77 |
| **11/15/2016** | LT3 | LT3 | 1397 ± 82 |
| **11/29/2016** | LT3 | LT3 | 1033 ± 78 |
| **12/20/2016** | LT3 | LT3 | 1195 ± 71 |

# Appendix C – Aquatic Monitoring 2014

## Lansing

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/13/14 | 5 ± 2 | LT 100 |
| 01/27/14 | LT 3 | LT 100 |
| 02/10/14 | LT 3 | LT 100 |
| 02/24/14 | LT 1 | LT 100 |
| 03/10/14 | 4 ± 3 | LT 100 |
| 03/24/14 | 8 ± 4 | LT 100 |
| 04/04/14 | LT 3 | LT 100 |
| 04/28/14 | 4 ± 2 | LT 100 |
| 05/12/14 | 6 ± 4 | LT 100 |
| 05/27/14 | LT 3 | LT 100 |
| 06/09/14 | 4 ± 3 | LT 100 |
| 06/23/14 | LT 3 | LT 100 |
| 07/14/14 | 3 ± 1 | LT 100 |
| 07/28/14 | 2 ± 1 | LT 100 |
| 08/12/14 | 4 ± 2 | LT 100 |
| 08/25/14 | 6 ± 2 | LT 100 |
| 09/08/14 | 3 ± 1 | LT 100 |
| 09/22/14 | 6 ± 2 | LT 100 |
| 10/13/14 | 3 ± 2 | LT 100 |
| 10/27/14 | 4 ± 2 | LT 100 |
| 11/10/14 | 4 ± 2 | LT 100 |
| 12/08/14 | 3 ± 1 | LT 100 |
| 12//22/14 | 4 ± 2 | LT 100 |

## Palisades

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 02/28/14 | 2 ± 1 | LT 100 |
| 03/24/14 | 3 ± 1 | LT 100 |
| 04/17/14 | 2 ± 1 | LT 100 |
| 05/23/14 | LT 2 | LT 100 |
| 06/29/14 | 2 ± 1 | LT 100 |
| 07/16/14 | LT 1 | LT 100 |
| 08/25/14 | 2 ± 1 | LT 100 |
| 09/23/14 | 2 ± 1 | LT 100 |
| 10/25/14 | 2 ± 1 | LT 100 |

## DC Cook—SC-3

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/09/14 | 3 ± 1 | LT 100 |
| 02/05/14 | LT 1 | LT 100 |
| 03/04/14 | 2 ± 1 | 10600 ± 200 |
| 04/02/14 | LT 1 | LT 100 |
| 05/06/14 | LT 1 | LT 100 |
| 06/03/14 | 3 ± 1 | 100 ± 100 |
| 07/02/14 | 2 ± 2 | LT 100 |
| 08/04/14 | 2 ± 1 | 600 ± 100 |
| 09/15/14 | 3 ± 1 | 200 ± 100 |
| 10/08/14 | 2 ± 1 | 300 ± 100 |
| 11/04/14 | 2 ± 1 | |
| 12/05/14 | 3 ± 1 | 6700 ± 200 |

# Appendix C – Aquatic Monitoring 2014

## DC Cook—SC-3a

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/09/14 | 1 ± 1 | 100 ± 100 |
| 02/05/14 | LT 1 | LT 100 |
| 03/04/14 | 2 ± 1 | 14400 ± 200 |
| 04/02/14 | LT 1 | LT 100 |
| 05/06/14 | LT 1 | 100 ± 100 |
| 06/03/14 | 2 ± 1 | 100 ± 100 |
| 07/02/14 | LT 1 | 100 ± 100 |
| 08/04/14 | 1 ± 1 | 400 ± 100 |
| 09/15/14 | 2 ± 1 | 200 ± 100 |
| 10/08/14 | 1 ± 1 | 300 ± 100 |
| 11/04/14 | 2 ± 1 | |
| 12/05/14 | 2 ± 1 | 900 ± 100 |

## Fermi 2-SF 9

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 04/03/14 | 1 ± 1 | LT 100 |
| 05/08/14 | 3 ± 1 | LT 100 |
| 06/05/14 | 2 ± 1 | LT 100 |
| 07/03/14 | 3 ± 1 | LT 100 |
| 08/07/14 | 2 ± 1 | LT 100 |
| 09/14/14 | 2 ± 1 | LT 100 |
| 10/02/14 | 8 ± 2 | LT 100 |
| 11/06/14 | 4 ± 1 | LT 100 |
| 12/04/14 | 2 ± 1 | LT 100 |

## Fermi 2-SF 13

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/28/14 | LT 1 | LT 100 |
| 02/25/14 | 2 ± 1 | LT 100 |
| 03/25/14 | 2 ± 1 | LT 100 |
| 04/20/14 | 2 ± 1 | LT 100 |
| 05/27/14 | LT 1 | LT 100 |
| 06/24/14 | 2 ± 1 | 200 ± 100 |
| 07/29/14 | 2 ± 1 | 100 ± 100 |
| 08/26/14 | 3 ± 1 | LT 100 |
| 09/30/14 | 3 ± 1 | LT 100 |
| 10/28/14 | 1 ± 1 | LT 100 |
| 11/25/14 | 2 ± 1 | |
| 12/29/14 | 3 ± 1 | LT 100 |

# Appendix C – Aquatic Monitoring 2014

## Fermi 2-SF 14

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/28/14 | LT 1 | LT 100 |
| 02/25/14 | 2 ± 1 | LT 100 |
| 03/25/14 | 2 ± 1 | LT 100 |
| 04/20/14 | 2 ± 1 | LT 100 |
| 05/27/14 | LT 1 | 200 ± 100 |
| 06/24/14 | 2 ± 1 | LT 100 |
| 07/29/14 | 2 ± 1 | LT 100 |
| 08/26/14 | 2 ± 1 | LT 100 |
| 09/30/14 | 2 ± 1 | LT 100 |
| 10/28/14 | 2 ± 1 | LT 100 |
| 11/25/14 | 2 ± 1 | LT 100 |
| 12/29/14 | LT 1 | LT 100 |

## Fermi 2-SF 15

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/28/14 | 2 ± 1 | LT 100 |
| 02/25/14 | 1 ± 1 | LT 100 |
| 03/25/14 | LT 1 | LT 100 |
| 04/20/14 | LT 1 | 100 ± 100 |
| 05/27/14 | LT 1 | LT 100 |
| 06/24/14 | 2 ± 1 | LT 100 |
| 07/29/14 | LT 1 | LT 100 |
| 08/26/14 | LT 1 | LT 100 |
| 09/30/14 | 1 ± 1 | 100 ± 100 |
| 10/28/14 | LT 1 | 200 ± 100 |
| 11/25/14 | LT 1 | LT 100 |
| 12/29/14 | LT 1 | LT 100 |

## Fermi 2-SF 16

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/28/14 | LT 1 | LT 100 |
| 02/25/14 | 2 ± 1 | LT 100 |
| 03/25/14 | LT 1 | LT 100 |
| 04/20/14 | 2 ± 1 | 100 ± 100 |
| 05/27/14 | 3 ± 1 | LT 100 |
| 06/24/14 | 2 ± 1 | LT 100 |
| 07/29/14 | 2 ± 1 | LT 100 |
| 08/26/14 | 3 ± 1 | LT 100 |
| 09/30/14 | 3 ± 1 | LT 100 |
| 10/28/14 | 2 ± 1 | 200 ± 100 |
| 11/25/14 | 3 ± 1 | LT 100 |
| 12/19/14 | 2 ± 1 | LT 100 |

# Appendix C – Aquatic Monitoring 2015

## Lansing

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 1/12/15 | 4 ± 3 | LT 100 |
| 1/26/15 | LT 3 | LT 100 |
| 2/9/15 | 4 ± 1 | LT 100 |
| 3/9/15 | 4 ± 1 | LT 100 |
| 4/2/15 | 3 ± 2 | LT 100 |
| 4/13/15 | 2 ± 2 | LT 100 |
| 4/28/15 | 2 ± 1 | LT 100 |
| 5/11/15 | 3 ± 1 | LT 100 |
| 5/27/15 | 3 ± 2 | LT 100 |
| 6/8/15 | 3 ± 2 | LT 100 |
| 6/23/15 | 3 ± 1 | LT 100 |
| 7/8/15 | 4 ± 1 | LT 100 |
| 7/13/15 | 3 ± 1 | LT 100 |
| 7/23/15 | 3 ± 1 | 100 ± 100 |
| 8/10/15 | 4 ± 2 | LT 100 |
| 9/14/15 | 4 ± 2 | LT 100 |
| 9/29/15 | 3 ± 2 | LT 100 |
| 10/12/15 | 4 ± 1 | LT 100 |
| 10/29/15 | 3 ± 1 | LT 100 |
| 11/9/15 | 3 ± 1 | LT 100 |
| 12/14/15 | 4 ± 2 | LT 100 |

## Palisades

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 10/29/15 | 1 ± 1 | LT 100 |
| 11/30/15 | 2 ± 1 | LT 100 |
| 12/30/15 | 3 ± 1 | LT 100 |

## DC Cook-SC-3

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/30/15 | 2 ± 1 | LT 100 |
| 02/26/15 | 2 ± 1 | 100 ± 100 |
| 03/30/15 | 1 ± 1 | 100 ± 100 |
| 04/13/15 | LT 1 | LT 100 |
| 05/20/15 | LT 1 | LT 100 |
| 06/11/15 | 3 ± 1 | LT 100 |
| 07/01/15 | 2 ± 2 | LT 100 |
| 08/17/15 | 2 ± 1 | LT 100 |
| 09/29/15 | 1 ± 1 | LT 100 |
| 10/27/15 | 2 ± 1 | LT 100 |
| 11/24/15 | 2 ± 1 | LT 100 |
| 12/29/15 | 2 ± 1 | LT 100 |

## DC Cook-SC-3a

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/30/15 | 2 ± 1 | LT 100 |
| 02/26/15 | 3 ± 1 | 200 ± 100 |
| 03/30/15 | 2 ± 1 | LT 100 |

| | | |
|---|---|---|
| 04/13/15 | 2 ± 1 | LT 100 |
| 05/20/15 | 2 ± 1 | LT 100 |
| 06/11/15 | 3 ± 1 | LT 100 |
| 07/01/15 | 2 ± 1 | 100 ± 100 |
| 08/17/15 | 2 ± 1 | LT 100 |
| 09/29/15 | 1 ± 1 | LT 100 |

**Fermi 2-SF-9**

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 04/02/15 | 2 ± 1 | LT 100 |
| 05/07/15 | 2 ± 1 | LT 100 |
| 06/04/15 | 5 ± 2 | LT 100 |
| 07/02/15 | 4 ± 1 | LT 100 |
| 08/13/15 | 2 ± 1 | 100 ± 100 |
| 09/17/15 | 2 ± 1 | 200 ± 100 |
| 10/08/15 | 3 ± 1 | LT 100 |
| 11/05/15 | LT 1 | LT 100 |
| 12/31/15 | 3 ± 1 | LT 100 |

**Fermi 2-SF-13**

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/27/15 | 2 ± 1 | LT 100 |
| 02/23/15 | 3 ± 1 | 100 ± 100 |
| 03/31/15 | 2 ± 1 | 100 ± 100 |
| 04/28/15 | 2 ± 1 | 100 ± 100 |
| 05/26/15 | 2 ± 1 | 100 ± 100 |
| 06/30/15 | 2 ± 1 | 100 ± 100 |
| 07/28/15 | 1 ± 1 | LT 100 |
| 08/25/15 | 2 ± 1 | LT 100 |
| 09/29/15 | 3 ± 1 | 100 ± 100 |
| 10/29/15 | 2 ± 1 | LT 100 |
| 11/24/15 | 2 ± 1 | 100 ± 100 |
| 12/29/15 | 2 ± 1 | LT 100 |

**Fermi 2-SF 14**

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/27/15 | 1 ± 1 | 100 ± 100 |
| 02/23/15 | 2 ± 1 | 100 ± 100 |
| 03/31/15 | 2 ± 1 | LT 100 |
| 04/28/15 | 2 ± 1 | LT 100 |
| 05/26/15 | 1 ± 1 | 100 ± 100 |
| 06/30/15 | 2 ± 1 | LT 100 |
| 07/28/15 | 2 ± 1 | LT 100 |
| 08/25/15 | 2 ± 1 | 100 ± 100 |
| 09/29/15 | 1 ± 1 | LT 100 |
| 10/29/15 | LT 1 | 100 ± 100 |
| 11/24/15 | 1 ± 1 | 100 ± 100 |

| | | |
|---|---|---|
| 12/29/15 | 2 ± 1 | LT 100 |

**Fermi 2-SF 15**

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/27/15 | 2 ± 1 | LT 100 |
| 02/23/15 | 3 ± 1 | 100 ± 100 |
| 03/31/15 | 2 ± 1 | 100 ± 100 |
| 04/28/15 | 2 ± 1 | LT 100 |
| 05/26/15 | LT 1 | LT 100 |
| 06/30/15 | LT 1 | LT 100 |
| 07/28/15 | 2 ± 1 | 100 ± 100 |
| 08/25/15 | 2 ± 1 | LT 100 |
| 09/29/15 | LT 1 | LT 100 |
| 10/29/15 | 1 ± 1 | 100 ± 100 |
| 11/24/15 | 1 ± 1 | 200 ± 100 |
| 12/29/15 | 1 ± 1 | LT 100 |

**Fermi 2-SF 16**

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 01/27/15 | 2 ± 2 | 100 ± 100 |
| 02/23/15 | 2 ± 1 | 100 ± 100 |
| 03/31/15 | 3 ± 1 | 100 ± 100 |
| 04/28/15 | 3 ± 1 | LT 100 |
| 05/26/15 | 3 ± 1 | LT 100 |
| 06/30/15 | 4 ± 1 | LT 100 |
| 07/28/15 | 2 ± 1 | LT 100 |
| 08/25/15 | 2 ± 1 | LT 100 |
| 09/29/15 | 2 ± 1 | LT 100 |
| 10/29/15 | 2 ± 1 | LT 100 |
| 11/24/15 | LT 1 | 200 ± 100 |
| 12/29/15 | 2 ± 1 | LT 100 |

# Appendix C – Aquatic Monitoring 2016

## Lansing

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 1/4/16 | 4 ± 2 | LT 100 |
| 1/11/16 | 5 ± 2 | LT 100 |
| 1/25/16 | 2 ± 1 | LT 100 |
| 2/8/16 | 3 ± 1 | LT 100 |
| 2/22/16 | 3 ± 1 | LT 100 |
| 3/14/16 | 3 ± 1 | LT 100 |
| 3/28/16 | 3 ± 1 | LT 100 |
| 4/11/16 | 4 ± 2 | LT 100 |
| 4/25/16 | 3 ± 2 | LT 100 |
| 5/9/16 | 3 ± 2 | LT 100 |
| 5/23/16 | 3 ± 2 | LT 100 |
| 6/13/16 | 3 ± 1 | LT 100 |
| 6/27/16 | 4 ± 2 | LT 100 |
| 7/11/16 | 4 ± 1 | LT 100 |
| 7/25/16 | 6 ± 2 | LT 100 |
| 8/11/16 | 7 ± 2 | LT 100 |
| 8/22/16 | 5 ± 2 | LT 100 |
| 9/12/16 | 5 ± 2 | LT 100 |
| 9/26/16 | 4 ± 2 | LT 100 |
| 10/10/16 | 3 ± 2 | LT 100 |
| 10/24/16 | 5 ± 2 | LT 100 |
| 11/14/16 | 3 ± 1 | LT 100 |
| 11/28/16 | 3 ± 1 | LT 100 |
| 12/5/16 | 2 ± 1 | 100 ± 100 |
| 12/19/16 | 3 ± 1 | LT 100 |

## Palisades

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 1/28/16 | LT 2 | LT 100 |
| 2/29/16 | 3 ± 1 | LT 100 |
| 3/31/16 | 3 ± 1 | LT 100 |
| 4/26/16 | 2 ± 1 | 100 ± 100 |
| 5/31/16 | 2 ± 2 | LT 100 |
| 6/30/16 | 3 ± 2 | LT 100 |
| 8/31/16 | 2 ± 1 | LT 100 |
| 9/29/16 | 1 ± 1 | LT 100 |
| 10/31/16 | 1 ± 2 | 100 ± 100 |
| 11/30/16 | 2 ± 2 | LT 100 |
| 12/29/16 | 2 ± 1 | LT 100 |

# Appendix C – Aquatic Monitoring 2016

## DC Cook-SC-3

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 1/29/16 | LT 1 | LT 100 |
| 2/24/16 | 2 ± 1 | LT 100 |
| 3/31/16 | 3 ± 1 | 100 ± 100 |
| 4/26/16 | 2 ± 1 | 100 ± 100 |
| 5/26/16 | 2 ± 1 | 100 ± 100 |
| 6/28/16 | 3 ± 1 | 200 ± 100 |
| 8/31/16 | 2 ± 1 | 1200 ± 100 |
| 9/27/16 | LT 1 | LT 100 |
| 10/29/16 | 3 ± 1 | 100 ± 100 |
| 11/26/16 | 1 ± 1 | LT 100 |
| 12/27/16 | 2 ± 1 | 200 ± 100 |

## DC Cook-SC-3a

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 1/29/16 | 5 ± 2 | LT 100 |
| 2/24/16 | LT 1 | LT 100 |
| 3/31/16 | 3 ± 1 | LT 100 |
| 4/26/16 | 2 ± 1 | 200 ± 100 |
| 5/26/16 | 3 ± 1 | LT 100 |
| 6/28/16 | 2 ± 1 | 300 ± 100 |
| 8/31/16 | 2 ± 1 | 2000 ± 100 |
| 10/29/16 | 2 ± 1 | 200 ± 100 |
| 11/26/16 | 2 ± 1 | LT 100 |
| 12/27/16 | 3 ± 1 | LT 100 |

## Fermi 2 SF-9

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 3/9/16 | 3 ± 1 | LT 100 |
| 3/31/16 | 1 ± 1 | 100 ± 100 |
| 5/5/16 | 3 ± 1 | 100 ± 100 |
| 6/1/16 | 3 ± 1 | 100 ± 100 |
| 9/1/16 | 3 ± 1 | LT 100 |
| 10/6/16 | 2 ± 1 | 100 ± 100 |
| 11/3/16 | 2 ± 1 | LT 100 |
| 12/1/16 | 2 ± 1 | 100 ± 100 |

# Appendix C – Aquatic Monitoring 2016

### Fermi 2-SF-13

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 1/26/16 | 2 ± 1 | LT 100 |
| 2/23/16 | 3 ± 1 | LT 100 |
| 3/29/16 | 2 ± 1 | 100 ± 100 |
| 4/26/16 | 2 ± 1 | LT 100 |
| 5/31/16 | 2 ± 1 | 100 ± 100 |
| 6/28/16 | 2 ± 1 | LT 100 |
| 7/25/16 | 1 ± 1 | 100 ± 100 |
| 8/22/16 | LT 1 | 100 ± 100 |
| 9/27/16 | 3 ± 1 | 100 ± 100 |
| 10/25/16 | 2 ± 1 | 200 ± 100 |
| 11/29/16 | 2 ± 1 | 100 ± 100 |
| 12/27/16 | 2 ± 1 | 100 ± 100 |

### Fermi 2-SF 14

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 1/26/16 | 2 ± 1 | 100 ± 100 |
| 2/23/16 | 2 ± 1 | LT 100 |
| 3/29/16 | 2 ± 1 | LT 100 |
| 4/26/16 | 2 ± 1 | 100 ± 100 |
| 5/31/16 | LT 1 | 100 ± 100 |
| 6/28/16 | 2 ± 1 | LT 100 |
| 7/25/16 | 1 ± 1 | LT 100 |
| 8/22/16 | 2 ± 1 | LT 100 |
| 9/27/16 | 1 ± 1 | 100 ± 100 |
| 10/25/16 | 2 ± 1 | 100 ± 100 |
| 11/29/16 | 2 ± 1 | LT 100 |
| 12/27/16 | LT 1 | 100 ± 100 |

### Fermi 2-SF 15

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 1/26/16 | 2 ± 1 | LT 100 |
| 2/23/16 | 1 ± 1 | LT 100 |
| 3/29/16 | 1 ± 1 | 100 ± 100 |
| 4/26/16 | 2 ± 1 | 100 ± 100 |
| 5/31/16 | 2 ± 1 | 100 ± 100 |
| 6/28/16 | LT 1 | 100 ± 100 |
| 7/25/16 | 1 ± 1 | LT 100 |
| 8/22/16 | LT 1 | LT 100 |
| 9/27/16 | 3 ± 1 | 100 ± 100 |
| 10/25/16 | 2 ± 1 | 200 ± 100 |
| 11/29/16 | LT 1 | 100 ± 100 |
| 12/27/16 | 1 ± 1 | LT 100 |

# Appendix C – Aquatic Monitoring 2016

**Fermi 2-SF 16**

| Collection Date | Gross Beta (pCi/l) | Tritium (pCi/l) |
|---|---|---|
| 1/26/16 | LT 2 | 100 ± 100 |
| 2/23/16 | 3 ± 1 | LT 100 |
| 3/29/16 | 3 ± 1 | LT 100 |
| 4/26/16 | 3 ± 1 | 100 ± 100 |
| 5/31/16 | 2 ± 1 | 100 ± 100 |
| 6/28/16 | 2 ± 1 | LT 100 |
| 7/25/16 | 2 ± 1 | 100 ± 100 |
| 8/22/16 | 3 ± 1 | 100 ± 100 |
| 9/27/16 | 3 ± 1 | 100 ± 100 |
| 10/25/16 | 2 ± 1 | 200 ± 100 |
| 11/29/16 | 2 ± 1 | LT 100 |
| 12/27/16 | 1 ± 1 | 100 ± 100 |

# Appendix D – Direct Radiation Monitoring 2014

## Big Rock

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 Days) | Third Quarter (mR/90 Days) | Fourth Quarter (mR/90 Days) |
|---|---|---|---|---|
| **ISFSI-NW** | 8.8 ± 0.3 | 12.2 ± 0.6 | 11.3 ± 1.0 | 12.5 ± 0.6 |
| **ISFSI-NE** | 11.1 ± 0.4 | 11.9 ± 0.6 | 11.5 ± 1.0 | 11.6 ± 0.6 |
| **ISFSI-SW** | 11.0 ± 0.4 | 13.9 ± 0.7 | 14.3 ± 1.0 | 14.6 ± 0.6 |
| **ISFSI-SE** | 12.9 ± 0.4 | 15.2 ± 0.7 | 15.1 ± 1.1 | 16.0 ± 0.7 |

## Palisades

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 Days) | Third Quarter (mR/90 Days) | Fourth Quarter (mR/90 Days) |
|---|---|---|---|---|
| **DP-RS** | 41.0 * | 18.6 ± 0.8 | 15.5 ± 1.1 | 18.0 ± 0.7 |
| **DP-01** | 14.6 ± 0.5 | 14.2 ± 0.7 | 16.8 ± 1.1 | 15.3 ± 0.6 |
| **DP-02** | 14.4 ± 0.5 | 14.4 ± 0.7 | 15.6 ± 1.1 | 13.9 ± 0.6 |
| **DP-03** | 14.0 ± 0.5 | 16.2 ± 0.8 | 14.6 ± 1.0 | 15.7 ± 0.6 |
| **DP-04** | 14.0 ± 0.5 | 14.7 ± 0.7 | 15.1 ± 1.1 | 15.6 ± 0.6 |
| **DP-05** | 13.1 ± 0.5 | 14.5 ± 0.7 | 16.7 ± 1.1 | 14.7 ± 0.6 |
| **DP-06** | 12.1 ± 0.5 | 13.7 ± 0.7 | 13.2 ± 1.0 | 15.4 ± 0.6 |
| **DP-07** | 38.0 * | 16.4 ± 0.8 | 15.3 ± 1.1 | 15.1 ± 0.6 |
| **DP-08** | 14.1 ± 0.5 | 20.5 ± 0.9 | 16.1 ± 1.1 | 17.0 ± 0.6 |
| **DP-09** | 13.2 ± 0.5 | 14.0 ± 0.7 | 15.4 ± 1.1 | 13.5 ± 0.6 |
| **DP-10** | 15.8 ± 0.5 | 13.8 ± 0.7 | 16.7 ± 1.1 | 12.6 ± 0.5 |
| **DP-11** | 16.1 ± 0.5 | 18.2 ± 0.8 | 19.3 ± 1.2 | 16.5 ± 0.6 |
| **DP-12** | 15.5 ± 0.5 | 13.6 ± 0.7 | 16.5 ± 1.1 | 15.5 ± 0.6 |
| **DP-13** | 13.8 ± 0.5 | 16.0 ± 0.7 | 15.3 ± 1.1 | 15.5 ± 0.6 |
| **DP-14** | 19.2 ± 0.6 | 16.4 ± 0.8 | 17.6 ± 1.1 | 17.3 ± 0.7 |

* - Results are suspect due to insufficient background subtraction.

## Cook

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 Days) | Third Quarter (mR/90 Days) | Fourth Quarter (mR/90 Days) |
|---|---|---|---|---|
| **DC-RS** | 14.1 ± 0.5 | 14.6 ± 0.8 | 15.2 ± 1.1 | 15.2 ± 0.6 |
| **DC-01** | 11.1 ± 0.5 | 13.5 ± 0.8 | 13.6 ± 1.1 | 13.7 ± 0.6 |
| **DC-02** | 14.2 ± 0.5 | 12.6 ± 0.8 | 14.9 ± 1.1 | 13.6 ± 0.6 |
| **DC-03** | 12.8 ± 0.5 | 12.9 ± 0.8 | 14.5 ± 1.1 | 13.6 ± 0.6 |
| **DC-04** | 13.8 ± 0.5 | 16.0 ± 0.8 | 15.7 ± 1.1 | 15.7 ± 0.7 |
| **DC-05** | 13.5 ± 0.5 | 14.2 ± 0.8 | LOST | 13.0 ± 0.6 |
| **DC-06** | 13.0 ± 0.5 | 15.7 ± 0.8 | 14.8 ± 1.1 | 15.3 ± 0.6 |
| **DC-07** | 14.2 ± 0.5 | 14.1 ± 0.8 | 16.6 ± 1.2 | 14.4 ± 0.6 |
| **DC-08** | 12.3 ± 0.5 | 14.2 ± 0.8 | 17.9 ± 1.2 | 14.2 ± 0.6 |
| **DC-09** | 16.9 ± 0.6 | 20.8 ± 1.0 | 19.2 ± 1.2 | 21.1 ± 0.8 |
| **DC-10** | 16.9 ± 0.6 | 15.1 ± 0.8 | 20.8 ± 1.3 | 16.1 ± 0.7 |
| **DC-11** | 12.9 ± 0.5 | 13.8 ± 0.8 | 16.3 ± 1.2 | 14.7 ± 0.6 |
| **DC-12** | 11.5 ± 0.5 | 17.5 ± 0.9 | 13.1 ± 1.1 | 12.4 ± 0.6 |
| **DC-13** | 12.2 ± 0.5 | 18.5 ± 0.9 | LOST | 18.7 ± 0.7 |
| **DC-14** | 13.8 ± 0.5 | LOST | 15.6 ± 1.1 | 16.3 ± 0.7 |

# Appendix D – Direct Radiation Monitoring 2014

## Fermi

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 Days) | Third Quarter (mR/90 Days) | Fourth Quarter (mR/90 Days) |
|---|---|---|---|---|
| **DF-RS** | 17.0 ± 0.5 | 17.3 ± 0.8 | 20.6 ± 1.2 | 17.9 ± 0.7 |
| **DF-01** | 16.0 ± 0.5 | 16.0 ± 0.7 | 18.8 ± 1.1 | 17.5 ± 0.6 |
| **DF-02** | 14.0 ± 0.5 | 16.4 ± 0.8 | 17.9 ± 1.1 | 17.4 ± 0.6 |
| **DF-03** | 16.0 ± 0.5 | 15.1 ± 0.7 | 19.6 ± 1.1 | 15.9 ± 0.6 |
| **DF-04** | 16.7 ± 0.5 | 15.9 ± 0.7 | 19.2 ± 1.1 | 17.6 ± 0.6 |
| **DF-05** | 15.6 ± 0.5 | 17.7 ± 0.8 | 19.7 ± 1.2 | 18.7 ± 0.7 |
| **DF-06** | 17.9 ± 0.5 | 19.6 ± 0.8 | LOST | 20.5 ± 0.7 |
| **DF-07** | 15.0 ± 0.5 | 18.7 ± 0.8 | 20.1 ± 1.2 | 19.4 ± 0.7 |
| **DF-08** | 17.2 ± 0.5 | 17.3 ± 0.8 | 20.0 ± 1.2 | 18.8 ± 0.7 |
| **DF-09** | 19.5 ± 0.5 | 18.9 ± 0.8 | 23.9 ± 1.3 | 20.7 ± 0.7 |
| **DF-10** | 16.1 ± 0.5 | 16.4 ± 0.8 | 19.4 ± 1.1 | 17.1 ± 0.6 |
| **DF-11** | 14.3 ± 0.5 | 17.8 ± 0.8 | 15.9 ± 1.0 | 18.4 ± 0.7 |
| **DF-12** | 13.9 ± 0.4 | 18.8 ± 0.8 | 20.4 ± 1.2 | 21.0 ± 0.7 |
| **DF-13** | 16.8 ± 0.5 | 19.0 ± 0.8 | 19.0 ± 1.1 | 19.4 ± 0.7 |
| **DF-14** | 17.1 ± 0.5 | 19.5 ± 0.8 | 22.0 ± 1.2 | 20.8 ± 0.7 |
| **DF-15** | 15.7 ± 0.5 | 16.9 ± 0.8 | 17.0 ± 1.1 | 17.4 ± 0.6 |

## Lansing

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 Days) | Third Quarter (mR/90 Days) | Fourth Quarter (mR/90 Days) |
|---|---|---|---|---|
| **DL-0** | 10.1 ± 0.3 | 9.6 ± 0.3 | 10.3 ± 0.3 | 9.9 ± 0.3 |
| **DL-0** | 8.0 ± 0.2 | 7.6 ± 0.2 | 7.9 ± 0.2 | 9.4 ± 0.3 |
| **DL-0** | 8.9 ± 0.3 | 8.3 ± 0.2 | 8.6 ± 0.3 | 9.4 ± 0.3 |
| **DL-1** | 18.8 ± 0.6 | 20.3 ± 0.6 | 19.6 ± 0.6 | 21.1 ± 0.6 |
| **DL-1** | 19.8 ± 0.6 | 21.0 ± 0.6 | 20.3 ± 0.6 | 24.4 ± 0.7 |
| **DL-1** | 19.3 ± 0.6 | 19.4 ± 0.6 | 20.7 ± 0.6 | 21.6 ± 0.6 |

# Appendix D – Direct Radiation Monitoring 2015

## Big Rock

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 days) | Third Quarter (mR/90 days) | Fourth Quarter (mR/90 days) |
|---|---|---|---|---|
| **ISFSI – NW** | 10.3 ± 0.7 | 11.7 ± 0.8 | 11.5 ± 0.5 | 13.6 ± 0.9 |
| **ISFSI – NE** | 10.9 ± 0.7 | 12.4 ±0.8 | 11.5 ± 0.5 | 13.2 ± 0.8 |
| **ISFSI – SW** | 11.9 ± 0.7 | 13.5 ± 0.8 | 15.0 ± 0.6 | 16.3 ± 0.9 |
| **ISFSI – SE** | 13.2 ± 0.7 | 15.4 ± 0.8 | 16.1 ± 0.6 | 17.4 ± 0.9 |

## Palisades Plant

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 days) | Third Quarter (mR/90 days) | Fourth Quarter (mR/90 days) |
|---|---|---|---|---|
| **DP-RS** | 10.9 ± 0.7 | 15.3 ± 0.9 | 15.4 ± 0.9 | 15.5 ± 0.8 |
| **DP-1** | 14.9 ± 0.8 | 13.1 ± 0.8 | 17.1 ± 0.9 | 16.0 ± 0.8 |
| **DP-2** | 13.5 ± 0.8 | 21.5 ± 1.1 | 17.0 ± 0.9 | 14.7 ± 0.8 |
| **DP-3** | 14.0 ± 0.8 | 14.4 ± 0.9 | 15.5 ± 0.9 | 15.6 ± 0.8 |
| **DP-4** | 16.1 ± 0.8 | 14.9 ± 0.9 | 16.0 ± 0.9 | 14.5 ± 0.7 |
| **DP-5** | 16.0 ± 0.8 | 14.1 ± 0.9 | 15.5 ± 0.9 | LOST |
| **DP-6** | 13.9 ± 0.8 | 12.7 ± 0.8 | 13.9 ± 0.9 | 14.6 ± 0.7 |
| **DP-7** | 15.9 ± 0.8 | 14.3 ± 0.9 | 15.4 ± 0.9 | 15.5 ± 0.8 |
| **DP-8** | 16.5 ± 0.8 | 16.0 ± 0.9 | 17.0 ± 0.9 | 16.5 ± 0.8 |
| **DP-9** | 15.1 ± 0.8 | 13.4 ± 0.8 | 16.3 ± 0.9 | 14.7 ± 0.8 |
| **DP-10** | 16.3 ± 0.8 | 12.6 ± 0.8 | 16.1 ± 0.9 | 14.0 ± 0.7 |
| **DP-11** | 18.3 ± 0.9 | 17.0 ± 0.9 | 19.7 ± 1.0 | 16.9 ± 0.8 |
| **DP-12** | 16.1 ± 0.8 | 14.5 ± 0.9 | 17.1 ± 0.9 | 15.0 ± 0.8 |
| **DP-13** | 15.2 ± 0.8 | 14.8 ± 0.9 | 16.6 ± 0.9 | 15.7 ± 0.8 |
| **DP-14** | 16.6 ± 0.9 | 16.1 ± 0.9 | 18.8 ± 1.0 | 16.2 ± 0.8 |

## D. C. Cook Plant

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 days) | Third Quarter (mR/90 days) | Fourth Quarter (mR/90 days) |
|---|---|---|---|---|
| **DC-RS** | 14.2 ± 0.9 | 14.3 ± 0.9 | 15.4 ± 1.0 | 15.1 ± 0.8 |
| **DC-1** | 11.6 ± 0.9 | 12.8 ± 0.9 | 14.0 ± 0.9 | 13.5 ± 0.8 |
| **DC-2** | 13.0 ± 0.9 | 13.5 ± 0.9 | 14.9 ± 1.0 | 13.4 ± 0.8 |
| **DC-3** | 12.8 ± 0.9 | 12.7 ± 0.9 | 14.6 ± 1.0 | 13.7 ± 0.8 |
| **DC-4** | 13.4 ± 0.9 | 15.9 ± 0.9 | 16.9 ± 1.0 | 16.6 ± 0.8 |
| **DC-5** | 11.8 ± 0.9 | 12.6 ± 0.8 | 15.0 ± 1.0 | 12.7 ± 0.8 |
| **DC-6** | 13.0 ± 0.9 | 14.9 ± 0.9 | 14.1 ± 0.9 | 18.1 ± 0.9 |
| **DC-7** | 13.9 ± 0.9 | 13.9 ± 0.9 | 16.9 ± 1.0 | 13.8 ± 0.8 |
| **DC-8** | 12.3 ± 0.9 | 13.6 ± 0.9 | 14.0 ± 0.9 | 14.8 ± 0.8 |
| **DC-9** | 16.2 ± 1.0 | 20.0 ± 1.1 | 21.2 ± 1.2 | 20.2 ± 0.9 |
| **DC-10** | 16.7 ± 1.0 | 15.8 ± 0.9 | 20.4 ± 1.1 | 16.4 ± 0.8 |
| **DC-11** | 13.7 ± 0.9 | LOST | 16.7 ± 1.0 | 24.4 * |
| **DC-12** | 11.1 ± 0.9 | 12.1 ± 0.8 | 13.7 ± 0.9 | 12.2 ± 0.7 |
| **DC-13** | 11.0 ± 0.9 | 18.3 ± 1.0 | 15.3 ± 1.0 | 22.4 ± 1.0 |
| **DC-14** | 15.3 ± 1.0 | 14.9 ± 0.9 | 15.6 ± 1.0 | 15.2 ± 0.8 |

* - Results are suspect due to insufficient background subtraction.

# Appendix D – Direct Radiation Monitoring 2015

## Fermi 2 Plant

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 days) | Third Quarter (mR/90 days) | Fourth Quarter (mR/90 days) |
|---|---|---|---|---|
| **DF-RS** | 20.7 ± 0.9 | 17.3 ± 0.9 | 22.2 ± 1.1 | 15.5 ± 0.8 |
| **DF-1** | 16.9 ± 0.8 | 16.5 ± 0.9 | 19.3 ± 1.0 | 15.4 ± 0.8 |
| **DF-2** | 16.3 ± 0.8 | 17.1 ± 0.9 | 19.0 ± 1.0 | 14.7 ± 0.8 |
| **DF-3** | 18.6 ± 0.9 | 15.3 ± 0.9 | 19.5 ± 1.0 | 13.5 ± 0.8 |
| **DF-4** | 16.7 ± 0.8 | LOST | 20.3 ± 1.0 | 18.1 ± 0.9 |
| **DF-5** | 18.0 ± 0.8 | 18.8 ± 0.9 | 22.1 ± 1.1 | 15.6 ± 0.8 |
| **DF-6** | 21.4 ± 0.9 | 19.2 ± 1.0 | 25.2 ± 1.2 | 16.7 ± 0.9 |
| **DF-7** | 19.5 ± 0.9 | 18.8 ± 0.9 | 20.0 ± 1.0 | 16.3 ± 0.8 |
| **DF-8** | 18.4 ± 0.9 | 17.4 ± 0.9 | 21.1 ± 1.0 | 14.7 ± 0.8 |
| **DF-9** | 20.7 ± 0.9 | 19.0 ± 1.0 | 24.0 ± 1.1 | 16.7 ± 0.8 |
| **DF-10** | 17.5 ± 0.8 | 16.8 ± 0.9 | 19.9 ± 1.0 | 14.0 ± 0.8 |
| **DF-11** | 15.0 ± 0.8 | 16.9 ± 0.9 | 17.6 ± 0.9 | 15.2 ± 0.8 |
| **DF-12** | 17.4 ± 0.8 | 19.0 ± 1.0 | 21.4 ± 1.0 | 17.2 ± 0.9 |
| **DF-13** | 17.5 ± 0.8 | 18.6 ± 0.9 | 20.3 ± 1.0 | 16.9 ± 0.9 |
| **DF-14** | 19.6 ± 0.9 | 20.4 ± 1.0 | 23.3 ± 1.1 | 18.5 ± 0.9 |
| **DF-15** | 16.8 ± 0.8 | 17.0 ± 0.9 | 19.5 ± 1.0 | 13.9 ± 0.8 |

## Lansing Background Reference

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 days) | Third Quarter (mR/90 days) | Fourth Quarter (mR/90 days) |
|---|---|---|---|---|
| **DL-0** | 11.3 ± 0.3 | 10.2 ± 0.3 | 9.8 ± 0.3 | 10.1 ± 0.3 |
| **DL-0** | 9.0 ± 0.3 | 7.9 ± 0.2 | 7.8 ± 0.2 | 7.9 ± 0.2 |
| **DL-0** | 10.1 ± 0.3 | 8.1 ± 0.2 | 8.5 ± 0.3 | 9.2 ± 0.3 |
| **DL-1** | 21.8 ± 0.7 | 19.7 ± 0.6 | 20.5 ± 0.6 | 19.2 ± 0.6 |
| **DL-1** | 22.6 ± 0.7 | 20.5 ± 0.6 | 20.5 ± 0.6 | 20.6 ± 0.6 |
| **DL-1** | 21.2 ± 0.6 | 20.0 ± 0.6 | 20.1 ± 0.6 | 18.3 ± 0.5 |

# Appendix D – Direct Radiation Monitoring 2016

## Big Rock

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 days) | Third Quarter (mR/90 days) | Fourth Quarter (mR/90 days) |
|---|---|---|---|---|
| **ISFSI – NW** | 11.5 ± 0.6 | 11.0 ± 0.7 | 10.7 ± 0.6 | 13.2 ± 0.7 |
| **ISFSI – NE** | 11.0 ± 0.6 | 11.9 ± 0.7 | 11.0 ± 0.6 | 13.1 ± 0.7 |
| **ISFSI – SW** | 13.7 ± 0.6 | 13.9 ± 0.7 | 13.6 ± 0.7 | 14.8 ± 0.7 |
| **ISFSI – SE** | 15.0 ± 0.7 | 16.0 ± 0.8 | 14.8 ± 0.7 | 15.7 ± 0.7 |

## Palisades Plant

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 days) | Third Quarter (mR/90 days) | Fourth Quarter (mR/90 days) |
|---|---|---|---|---|
| **DP-RS** | 14.1 ± 0.5 | 12.1 ± 0.8 | 13.6 ± 0.7 | 16.6 ± 0.8 |
| **DP-1** | 15.2 ± 0.6 | 12.2 ± 0.8 | 15.6 ± 0.8 | 15.6 ± 0.8 |
| **DP-2** | 13.9 ± 0.5 | 12.8 ± 0.8 | 14.2 ± 0.7 | 15.4 ± 0.8 |
| **DP-3** | 15.4 ± 0.6 | 12.8 ± 0.8 | 12.9 ± 0.7 | 15.3 ± 0.8 |
| **DP-4** | 14.5 ± 0.5 | 13.4 ± 0.8 | 16.0 ± 0.8 | 15.3 ± 0.8 |
| **DP-5** | 29.9 * | 12.8 ± 0.8 | 18.0 ± 0.8 | 15.7 ± 0.8 |
| **DP-6** | 11.9 ± 0.5 | 12.2 ± 0.8 | 12.5 ± 0.7 | 15.5 ± 0.8 |
| **DP-7** | 13.9 ± 0.5 | 13.2 ± 0.8 | 14.5 ± 0.7 | 15.1 ± 0.8 |
| **DP-8** | 15.1 ± 0.6 | 15.4 ± 0.9 | 15.4 ± 0.7 | 17.7 ± 0.8 |
| **DP-9** | 14.2 ± 0.5 | 11.8 ± 0.8 | 14.7 ± 0.7 | 14.8 ± 0.8 |
| **DP-10** | 16.4 ± 0.6 | 12.1 ± 0.8 | 15.2 ± 0.7 | 14.4 ± 0.7 |
| **DP-11** | 17.5 ± 0.6 | 15.3 ± 0.9 | 17.5 ± 0.8 | 18.1 ± 0.8 |
| **DP-12** | 15.4 ± 0.6 | 14.2 ± 0.9 | 16.0 ± 0.8 | 15.6 ± 0.8 |
| **DP-13** | 14.9 ± 0.6 | 14.5 ± 0.9 | 14.5 ± 0.7 | 17.2 ± 0.8 |
| **DP-14** | 16.4 ± 0.6 | 14.9 ± 0.9 | 18.2 ± 0.8 | 17.0 ± 0.8 |

* - Results are suspect due to insufficient background subtraction.

## D. C. Cook Plant

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 days) | Third Quarter (mR/90 days) | Fourth Quarter (mR/90 days) |
|---|---|---|---|---|
| **DC-RS** | 14.3 ± 0.6 | 14.5 ± 0.9 | 15.0 ± 0.8 | 15.5 ± 0.8 |
| **DC-1** | 13.3 ± 0.6 | 13.9 ± 0.9 | 12.4 ± 0.8 | 15.0 ± 0.8 |
| **DC-2** | 13.7 ± 0.6 | 12.1 ± 0.8 | 13.9 ± 0.8 | 13.6 ± 0.8 |
| **DC-3** | 14.0 ± 0.6 | 12.4 ± 0.8 | 14.1 ± 0.8 | 13.9 ± 0.8 |
| **DC-4** | 15.2 ± 0.6 | 15.4 ± 0.9 | 15.8 ± 0.8 | 17.2 ± 0.9 |
| **DC-5** | 12.6 ± 0.5 | 12.0 ± 0.8 | 13.3 ± 0.8 | 14.5 ± 0.8 |
| **DC-6** | 13.2 ± 0.6 | 14.2 ± 0.9 | 13.6 ± 0.8 | 15.7 ± 0.8 |
| **DC-7** | 14.4 ± 0.6 | 13.7 ± 0.9 | 15.0 ± 0.8 | 14.8 ± 0.8 |
| **DC-8** | 13.2 ± 0.6 | 13.6 ± 0.9 | 12.1 ± 0.7 | 14.5 ± 0.8 |
| **DC-9** | 18.5 ± 0.7 | 20.5 ± 1.0 | 19.3 ± 0.9 | 20.6 ± 1.0 |
| **DC-10** | 19.0 ± 0.7 | 15.7 ± 0.9 | 20.2 ± 0.9 | 16.9 ± 0.9 |
| **DC-11** | 16.0 ± 0.6 | 15.6 ± 0.9 | 15.7 ± 0.8 | 17.5 ± 0.9 |
| **DC-12** | 12.8 ± 0.6 | 12.6 ± 0.8 | 12.3 ± 0.8 | 13.1 ± 0.8 |
| **DC-13** | 14.4 ± 0.6 | 18.1 ± 1.0 | 14.9 ± 0.8 | 20.5 ± 1.0 |
| **DC-14** | 14.2 ± 0.6 | 15.6 ± 0.9 | 15.9 ± 0.8 | 15.8 ± 0.9 |

# Appendix D – Direct Radiation Monitoring 2016

## Fermi 2 Plant

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 days) | Third Quarter (mR/90 days) | Fourth Quarter (mR/90 days) |
|---|---|---|---|---|
| **DF-RS** | 19.0 ± 0.6 | 18.1 ± 0.9 | 20.5 ± 0.8 | 18.3 ± 0.9 |
| **DF-1** | 17.7 ± 0.6 | 16.6 ± 0.8 | 19.1 ± 0.8 | 17.1 ± 0.8 |
| **DF-2** | 16.1 ± 0.6 | 16.1 ± 0.8 | 18.5 ± 0.8 | 16.6 ± 0.8 |
| **DF-3** | 19.1 ± 0.6 | 15.0 ± 0.8 | 19.6 ± 0.8 | 15.8 ± 0.8 |
| **DF-4** | 17.5 ± 0.6 | 18.7 ± 0.9 | 20.0 ± 0.8 | 18.3 ± 0.9 |
| **DF-5** | LOST | 17.8 ± 0.9 | LOST | 17.8 ± 0.9 |
| **DF-6** | 21.4 ± 0.6 | 20.2 ± 0.9 | 24.0 ± 0.9 | 20.5 ± 0.9 |
| **DF-7** | 22.1 ± 0.7 | 18.6 ± 0.9 | 21.2 ± 0.9 | 18.2 ± 0.9 |
| **DF-8** | 18.2 ± 0.6 | 16.9 ± 0.8 | 19.7 ± 0.8 | 17.9 ± 0.9 |
| **DF-9** | 21.6 ± 0.7 | 19.8 ± 0.9 | 25.2 ± 1.0 | 19.5 ± 0.9 |
| **DF-10** | 18.1 ± 0.6 | 17.1 ± 0.8 | 19.5 ± 0.8 | 16.4 ± 0.8 |
| **DF-11** | 15.5 ± 0.5 | 16.9 ± 0.8 | 17.6 ± 0.8 | 15.9 ± 0.8 |
| **DF-12** | 19.0 ± 0.6 | 19.3 ± 0.9 | 20.9 ± 0.8 | 18.9 ± 0.9 |
| **DF-13** | 18.7 ± 0.6 | 19.3 ± 0.9 | 19.9 ± 0.8 | 17.9 ± 0.9 |
| **DF-14** | 21.1 ± 0.6 | 20.9 ± 1.0 | 22.1 ± 0.9 | 19.8 ± 0.9 |
| **DF-15** | 16.5 ± 0.6 | 17.4 ± 0.8 | 18.0 ± 0.8 | 16.8 ± 0.8 |

## Lansing Background Reference

| DEQ Station Number | First Quarter (mR/90 days) | Second Quarter (mR/90 days) | Third Quarter (mR/90 days) | Fourth Quarter (mR/90 days) |
|---|---|---|---|---|
| **DL-0** | 9.7 ± 0.3 | 9.6 ± 0.3 | 9.1 ± 0.3 | 9.1 ± 0.3 |
| **DL-0** | 8.1 ± 0.2 | 8.0 ± 0.2 | 7.5 ± 0.2 | 7.5 ± 0.2 |
| **DL-0** | 9.2 ± 0.3 | 8.4 ± 0.3 | 7.7 ± 0.2 | 8.2 ± 0.2 |
| **DL-1** | 19.6 ± 0.6 | 19.2 ± 0.6 | 18.4 ± 0.6 | 19.2 ± 0.6 |
| **DL-1** | 20.3 ± 0.6 | 19.7 ± 0.6 | 19.6 ± 0.6 | 19.2 ± 0.6 |
| **DL-1** | 20.2 ± 0.6 | 19.1 ± 0.6 | 18.0 ± 0.5 | 19.2 ± 0.6 |