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Portsmouth/Paducah Project Office
1017 Majestic Drive, Suite 200
Lexington, Kentucky 40513
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September 9, 2020

Ms. Melissa Duff, Director
Division for Air Quality
Kentucky Department for Environmental Protection
300 Sower Boulevard, 2nd Floor
Frankfort, Kentucky 40601-1403

PPPO-02-10007677-20

Mr. Jonathan Edwards
U.S. Environmental Protection Agency
Office of Air and Radiation
Headquarters 6608T
1200 Pennsylvania Avenue, Northwest
Washington, DC 20460

Mr. Ken Mitchell, Acting Director
Air and Radiation Division
U.S. Environmental Protection Agency, Region 4
61 Forsythe, SW
Atlanta, Georgia 30303-3104

Dear Ms. Duff, Mr. Edwards, and Mr. Mitchell:

TRANSMITTAL OF ERRATA PAGES AND COMPLETE CORRECTED DOCUMENTS FOR THE NATIONAL EMISSIONS STANDARDS FOR HAZARDOUS AIR POLLUTANTS ANNUAL REPORT FOR 2016 U.S. DEPARTMENT OF ENERGY RADIOLOGICAL EMISSIONS AT THE PADUCAH GASEOUS DIFFUSION PLANT, FPDP-RPT-0089

Reference: Letter from J. Woodard to S. Alteri, B. Banister, and J. Walsh, "Submittal of the National Emissions Standards for Hazardous Air Pollutants Annual Report for 2016 U.S. Department of Energy Radiological Emissions at the Paducah Gaseous Diffusion Plant, FPDP-RPT-0089," (PPPO-02-4242849-17A), dated June 28, 2017

An error was found in the reporting of the ambient air monitoring data for the National Emissions Standards for Hazardous Air Pollutants (NESHAP) Annual Report for 2016, submitted on June 28, 2017. An errata was developed to correct this error. The isotopic data for the ambient air monitoring stations were used for fiscal year 2016 rather than calendar year 2016 (i.e., every quarter was assigned incorrectly to the previous sampling period). This reporting error does not change the reported dose for the Paducah Site because the annual average for the sum of fractions for the ambient air monitoring data was still less than 1 millirem per year

(mrem/yr) after the correction. The Paducah Site demonstrated compliance with the 10 mrem/yr standard; therefore, no further investigations or evaluations were required. Enclosed are the certification page, clean and redline errata, and the complete corrected document.

If you have any questions or require additional information, please contact Gilbert Whitehurst at (740) 897-2948.

Sincerely,

Jennifer Woodard

Jennifer Woodard
Paducah Site Lead
Portsmouth/Paducah Project Office

Enclosures:
1. Certification Page
2. Errata Sheet for the NESHAP Annual Report for 2016
3. Errata pages for the NESHAP Annual Report for 2016—Redline
4. NESHAP Annual Report for 2016—Complete Corrected Document—Clean

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FPDP-RPT-0089 Errata

National Emissions Standards for Hazardous Air Pollutants Annual Report for 2016 U.S. Department of Energy Radiological Emissions at the Paducah Gaseous Diffusion Plant

FOUR RIVERS NUCLEAR PARTNERSHIP, LLC

This document is approved for public release per review by:

_____ _____

FRNP Classification Support Date

FPDP-RPT-0089 Errata

National Emissions Standards for Hazardous Air Pollutants Annual Report for 2016 U.S. Department of Energy Radiological Emissions at the Paducah Gaseous Diffusion Plant

Date Issued—June 2017

Errata Issued—August 2020

U.S. DEPARTMENT OF ENERGY
Office of Environmental Management

Prepared by
Four Rivers Nuclear Partnership, LLC,
managing the
Deactivation and Remediation Project at the
Paducah Gaseous Diffusion Plant
under Contract DE-EM0004895

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TABLES

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ACRONYMS

CAP-88	Clean Air Act Assessment Package-1988
CFR	*Code of Federal Regulations*
DAC	derived air concentration
DOE	U.S. Department of Energy
EDE	effective dose equivalent
EPA	U.S. Environmental Protection Agency
FGR	Federal Guidance Report
HEPA	high-efficiency particulate air
KAR	*Kentucky Administrative Regulations*
NESHAP	National Emission Standards for Hazardous Air Pollutants
PGDP	Paducah Gaseous Diffusion Plant
SX	seal exhaust
WA	wet air

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EXECUTIVE SUMMARY

The Kentucky Division for Air Quality regulates air emissions of radionuclides, other than radon, from U.S. Department of Energy (DOE) Paducah Site under 401 *KAR* 57:002 and 40 *CFR* Part 61, Subparts A and H, regulations. Submission of this report fulfills the annual reporting requirements of 40 *CFR* § 61.94.

Paducah Site radionuclide emissions include emissions from the depleted uranium hexafluoride (DUF_6) conversion facility, which began operations in 2011. The DUF_6 facility converts the material generated by the uranium enrichment process to a more stable uranium oxide compound. Other emission sources include deactivation of the Paducah Gaseous Diffusion Plant activities, waste management facilities, inactive buildings, and environmental restoration operations.

DOE emissions were used to estimate the Paducah Site dose to the public. The dose to the public is calculated using the computer modeling program (CAP-88) specified in 40 *CFR* § 61.93. Inputs to the computer program are obtained through continuous monitoring, engineering estimates, emission factors, and other U.S. Environmental Protection Agency-approved methods. This report meets the annual reporting requirements and establishes the total annual effective dose equivalent to the maximally exposed member of the public from Paducah Site emissions to be 0.00013 mrem for calendar year 2016. This is well below the annual limit of 10 mrem per year set forth in 40 *CFR* § 61.94.

The errata contained in this report correct the ambient air data in Tables A.1 and A.2 only. The data and associated calculations provided in the errata do not exceed 40 *CFR* Part 61, Appendix E, Table 2, concentrations. The errata do not affect the calculated dose noted in the original 2016 NESHAP report.

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1. FACILITY DESCRIPTION

Site Name: Paducah Site

Location: Paducah, Kentucky

Owner: U.S. Department of Energy
Portsmouth/Paducah Project Office
5501 Hobbs Road
Kevil, Kentucky 42053
Jennifer Woodard, Paducah Site Lead
(270) 441-6825

Operators: Fluor Federal Services, Inc.
5511 Hobbs Road
Kevil, Kentucky 42053
Bobby D. Smith, Program Manager
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Mid-America Conversion Services, LLC
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Lexington, Kentucky 40513
Alan Parker, President and Project Manager
(859) 685-2060

2. INTRODUCTION

The U.S. Department of Energy (DOE) owns the Paducah Site, which has radionuclide air emissions. The site was established to enrich uranium and was known as the Paducah Gaseous Diffusion Plant (PGDP). When enrichment activities ceased in 2014, DOE subsequently began deactivation of the enrichment facilities, and the entire DOE-owned area was identified as the Paducah Site.

Paducah Site emissions include emissions from deactivation activities, waste management facilities, inactive buildings, environmental restoration operations, and the depleted uranium hexafluoride (DUF_6) conversion facility. The DUF_6 facility, which began operations in 2011, converts material generated by the enrichment process to a more stable uranium oxide compound.

Emissions from all of these sources were analyzed together and used to calculate the resultant dose.

3. SITE DESCRIPTION

The Paducah Site was established based on the need to construct and operate PGDP. The Paducah Site, consisting of approximately 3,500 acres, is located in western McCracken County, 10 miles west of Paducah, Kentucky, and 3.5 miles south of the Ohio River. Roughly 650 acres of the site are enclosed within a fenced security area. An uninhabited buffer zone of at least 400 yards surrounds the entire fenced

area. During World War II, Kentucky Ordnance Works, a trinitrotoluene production facility, was operated in an area southwest of the plant on what is now a wildlife management area, not on the Paducah Site.

Construction of the PGDP facility began in 1951. The plant was fully operational by 1955, supplying enriched uranium for commercial reactors and defense uses. Enriched uranium is defined as uranium in which the concentration of the fissionable uranium-235 (U-235) isotope has been increased from its natural assay. Natural uranium is primarily uranium-238 (U-238), with about 0.71% U-235 and 0.0055% uranium-234 (U-234). Uranium mills process the ores to produce concentrated uranium oxide [triuranium octoxide (U_3O_8)], which then is converted commercially to uranium hexafluoride (UF_6). The UF_6 then was sent to PGDP for enrichment. In 2011, DOE began operation of a facility to convert the stored DUF_6, the depleted material remaining after enrichment, to a more stable uranium oxide, primarily U_3O_8.

The radioactive materials used at PGDP are associated with enrichment of the uranium isotope U-235 by utilizing a gaseous diffusion process. During enriching operations from 1953 to 1975, UF_6 feed material derived from recycled uranium (called "reactor tails") from government reactors and "work for others" material also was used intermittently in addition to the UF_6 processed from uranium ore, which typically was used. Reactor tails were the spent fuel from nuclear reactors that is depleted in U-235 content that had been reprocessed to remove most of the fission products. The reactor fuel assemblies were processed at other DOE facilities (where most of the fission products were removed), and the enriched uranium and the remaining fission products were fed into the PGDP cascade system in the chemical form of UF_6. Use of the reactor tails resulted in the introduction of technetium-99 (Tc-99), a fission by-product, and transuranics, most notably neptunium-237 (Np-237) and plutonium-239 (Pu-239), into the cascade.

The West Kentucky Wildlife Management Area and lightly populated farmlands are in the immediate environs of PGDP. Based on population data from the 2010 census, the population within a 50-mile radius is approximately 534,000 persons. Of these, 89,000 live within 10 miles of the plant and 104,000 live within 20 miles of the plant. The unincorporated communities of Grahamville and Heath are 1.24 and 1.86 miles east of the plant, respectively. Portions of 28 counties—11 of which are in Kentucky, 4 in Missouri, 10 in Illinois, and 3 in Tennessee—are located within the 50-mile radius of the plant. Larger cities in the region include Paducah, Kentucky, located 10 air miles east of the plant; Cape Girardeau, Missouri, located 40 air miles to the west; and Metropolis, Illinois, located 6 air miles to the northeast. The nearest neighbor residences in each direction are observed and entered into the dose modeling software. The results of the dose modeling are presented in Section 6.

Paducah is located in the humid continental zone. Summers generally are dry; precipitation occurs mainly in the spring and fall. Winters are characterized by moderately cold days; the average temperature during the coldest month, January, is about 35°F. Summers are warm and humid; the average temperature in July is 79°F. Yearly precipitation averages about 44 inches. The prevailing wind direction is south to southwest.

4. PADUCAH SITE SOURCE HANDLING AND PROCESSING DESCRIPTION

Radioactive material handling and processing that occurred last year, 2016, included conversion of DUF_6 to uranium oxides, cleanout of the uranium enrichment processes, environmental remediation of hazardous and radioactive materials, and management of radioactive waste.

The point sources from shutdown and clean out of the enrichment processes are grouped as described in the following sections. Some of these activities will be reduced or may cease as deactivation of the enrichment facilities progresses.

4.1 DEPLETED URANIUM HEXAFLUORIDE CONVERSION FACILITY

The DUF_6 conversion facility has operated since 2011. The facility converts DUF_6 stored in cylinders to a more stable uranium oxide powder. The form of uranium oxide is primarily U_3O_8. Multiple prefilters and primary high-efficiency particulate air (HEPA) filter banks within the facility heating, ventilation, and air-conditioning system control particulate emissions of oxide powder. Prior to atmospheric venting of process off gas through the stack, air passes through a secondary set of HEPA filter banks. The conversion building also is maintained at negative pressure to help eliminate the possibility of fugitive emissions. Radioactive emissions from the conversion operations are monitored continuously.

4.2 DEACTIVATION OF THE PADUCAH GASEOUS DIFFUSION PLANT

The emission point sources previously analyzed for operation of PGDP also were emission sources for deactivation. These deactivation sources are grouped in the same manner as the enrichment source grouping. Groups no longer included were removed because their sources have been deactivated. The sources were grouped based on similar emissions, controls, and location.

4.2.1 Group A—the C-400 Group

This grouping includes all of the C-400 sources. Deactivation of the C-400 facility began in 2016.

4.2.1.1 C-400 laundry

The C-400 laundry washes and dries protective clothing used to prevent skin contamination on personnel working in radiological areas. The driers are equipped with lint filters. Emissions from the laundry are estimated using data from health physics lint filter surveys. Alpha radiation is assumed to be 10% Np-237 and 90% uranium. Beta emissions are assumed to be Tc-99. The emission factor for cloth filters in 40 *CFR* Part 61, Appendix D, is used to estimate the emissions. The C-400 laundry was removed from service in June 2016. The source was not operational during 2016; therefore, it is not included in the summary tables.

4.2.2 Group D—C-709/C-710 Laboratory Hoods

The C-709/C-710 laboratories are the main facilities for sample analysis and research at the Paducah Site. Laboratory hoods and canopies in the C-709/C-710 Buildings that were used for radiological activities during the year. The radionuclides involved in analyses consist primarily of uranium, with a slight potential for emissions of Tc-99, Np-237, Pu-239, and the thorium daughter products of uranium.

Four methods, depending on the type of operation occurring in the hood or radiological area in which each hood is located, are used to estimate emissions.

1. Estimation of the maximum quantity of uranium lost based on laboratory methods. (If an American Society for Testing and Materials analytical method specifies a maximum 1.6% mass loss during analysis, all samples analyzed using the method were assumed to lose 1.6% of the uranium in the sample.)

2. 40 *CFR* Part 61, Appendix D, emission factors.

3. Chemical trap efficiencies and uranium throughput information.

4. Knowledge of analytical or sample preparation process.

All methods use the total inventory of uranium processed in the hood or radiological area as the basis for the emission estimate.

4.2.3 Group E—C-310 Stack

The C-310 stack is located near the southwest corner of the C-310 Product Withdrawal Building. It was the primary emission point of potential radionuclide air emissions during uranium enrichment operations. The effluent is routed through alumina traps prior to being emitted via the C-310 stack. The stack was inactive in 2016, but is included because there may be emissions in the future as a result of deactivation.

The cylinder burp facility, located on the east side of C-310, is used to vent low molecular weight gases from product cylinders. This facility is a potential source of uranium, Tc-99, and transuranics. The effluent from the burp facility is routed through a bank of sodium fluoride (NaF) traps prior to being emitted from the C-310 stack. There are two banks of chemical traps associated with this system. Each bank has five primary and two secondary traps. Uranium is recovered from the NaF traps and returned to the enrichment cascade.

When in use, emissions from the C-310 stack were based on results from the continuous potassium hydroxide bubbler stack sampling system approved by the U.S. Environmental Protection Agency (EPA) in 1992. The continuous sampling system consists of a series of three caustic (potassium hydroxide solution) scrubbers and a sample flow totalizer. Stack flow is determined using periodic confirmatory methods as approved by EPA. Normally the first bubbler in the C-310 purge and vent sample train is changed daily. Samples are sent to the laboratory for analysis, and monthly and quarterly composite samples are prepared from the daily samples.

As part of the quality assurance/quality control requirements for the C-310 stack sampler, a range for the sample flow has been established.

4.2.4 Group F—Seal Exhaust/Wet Air Group

The seal exhaust (SX) and wet air (WA) systems have been evaluated for air emissions. It was determined the alumina traps, which are designed to protect pump oil and not to control emissions, are not pollution control devices under 40 *CFR* Part 61, Subpart H. The determination was forwarded to EPA January 28, 1994.

4.2.4.1 Seal exhaust systems

Emissions from the seal exhaust systems are routed through alumina traps and pump oil prior to venting. Seals on the UF_6 compressors are supplied with an intricate array of air pressures to minimize releases during seal failure. A seal failure allows UF_6 to enter the seal exhaust system. If UF_6 reaches the pump by virtue of trap breakthrough, it reacts with the pump oil creating a thick sludge that quickly causes pump failure. In turn, pump failure limits the amount that can be emitted. Although the pump oil serves as an excellent uranium emission control device due to the reaction between UF_6 and pump oil, no credit is taken for it as a pollution control device.

There is one SX vent per cascade building, one on the C-310 Product Withdrawal Building, and one on the C-315 Tails Withdrawal Building. The locations of the six SX systems are as follows:

- C-310 Product Withdrawal Building
- C-315 Tails Withdrawal Building
- C-331 Process Building
- C-333 Process Building
- C-335 Process Building
- C-337 Process Building

Periodic confirmatory measurements are made on each type of SX/WA system to verify low emissions. Emissions from these systems originally were estimated based on results of a modified 40 *CFR* Part 60 Method 5 stack sampling performed in 2012.

4.2.4.2 Wet air exhaust systems

When maintenance is required on process equipment, it is evacuated to other sections of the cascade or surge drums. The equipment is swept in a series of purges with dry plant air. After maintenance, the system is closed, and the ambient (wet) air is pumped from the system by the WA pumps. During dry air purges and WA evacuations, air is routed through alumina traps for uranium trapping to protect the WA pump oil and then to an exhaust vent. In process buildings C-310, C-335, and C-337, the exhaust vent is shared with the seal exhaust system for those buildings. As discussed under SX systems, emissions from the WA exhaust systems are estimated based on the most recent Method 5 stack sampling results. The following are the locations of the five wet air exhaust systems.

- C-310 Product Withdrawal Building (same as SX)
- C-331 Process Building
- C-333 Process Building
- C-335 Process Building (same as SX)
- C-337 Process Building (same as SX)

4.2.4.3 CFC-114/UF_6 separation system

The CFC-114/UF_6 separation system is located in C-335 and is used to freeze out UF_6 from process gas that has been significantly contaminated with CFC-114 coolant. Such mixtures usually result from equipment failure, but also may result from abnormal cascade operation. Surge drums are used to store these mixtures until they can be separated. The primary purpose of the CFC-114/UF_6 separation system is to remove the coolant and return the UF_6 to the cascade.

The separation system operates by freezing out the UF_6 from the process gas. To freeze out the UF_6, the UF_6/CFC-114 mixture is transferred from the surge drum through a refrigerated set of favorable geometry cold traps. The gas stream then passes through NaF traps and alumina traps to absorb any residual UF_6. Typically the gas stream flows through the alumina traps, although these traps can be bypassed. The trap discharge is connected to the SX/WA pump system and to atmosphere through the existing common discharge header. The UF_6 is sublimed back to cascade after the processing of the contaminated gas has been completed.

To improve nuclear criticality safety, modification of the CFC-114/UF_6 separation system was made, and initial baseline emissions testing completed in 2004. The modification reduced potential radionuclide emissions. The CFC-114/UF_6 separation system has been inactive since 2014.

4.2.4.4 Cylinder valve connection activities

Activities involving connection and disconnection to UF_6 cylinders include cold pressure checks, sampling activities, withdrawals and feeding activities, and cylinder burping. The cylinder valves are connected to the associated process via a "pigtail." Pigtails consist of a single length of copper tubing and threaded couplings. Pigtail disconnection procedures require a series of purges to ensure that no UF_6 remains in the pigtail prior to disconnection. Although adherence to these procedures minimizes UF_6 emissions, rarely a small amount of UF_6 may be released during disconnection of the pigtails. Equipment containing a HEPA filter is used to minimize emissions. No credit is taken for the HEPA pollution control equipment. The following are the locations of the pigtail systems using HEPA filter equipment.

- C-310 Product Withdrawal Building
- C-315 Tails Withdrawal Building
- C-333-A Feed Facility
- C-337-A Feed Facility
- C-360 Transfer Facility (Group H)

Emissions are based on the number of pigtail disconnections in each facility. An assumed quantity of UF_6 in each pigtail, based on engineering calculations, is multiplied by the number of disconnections to determine emissions. There were no pigtail disconnections during 2016.

4.2.4.5 Building ventilation

Radiological areas within the cascade buildings at PGDP are established under health physics procedures, DOE orders, and 10 *CFR* Part 835. Airborne radioactivity from these radiological areas conbtributes to Group F emissions. Emissions from airborne radiological areas are analyzed and included as a building ventilation source if the ambient building air radioactivity concentration is greater than 10% of a derived air concentration (DAC). No radiological area concentrations were greater than 10% of the DAC during 2016.

Airborne radiological contamination areas are evaluated by the following methodology. The areas are monitored by health physics using low-volume air samplers. The samplers use a low-volume pump (approximately 20 to 40 liters per minute) to draw building air through a filter. Typically, the samplers run 24 hours per day, and the filters are changed on a 2-, 3-, 4-, or 5-day basis, depending on filter loading and weekend/holiday schedules. After sample collection, the filters are counted for radioactivity concentrations.

Building ventilation sources from C-315, C-331, C-333, C-333-A, C-335, C-337, C-337-A, and C-720 are grouped with the SX/WA group. Building ventilation sources from C-310, C-360, C-400, and C-709/C-710 are grouped with their respective building emissions. Alpha and beta results from health physics air sampling are evaluated based on the most restrictive DAC applicable, listed in 10 *CFR* Part 20. For alpha emissions, Np-237 is used. For beta emissions, Tc-99 is used.

4.3 ENVIRONMENTAL RESTORATION ACTIVITIES

DOE had two point sources for restoration activities.

4.3.1 Northwest Plume Interim Remedial Action Project

On September 1, 1995, DOE began operation of a treatment system designed to remove trichloroethene (TCE) and Tc-99 from contaminated groundwater at PGDP. The facility, C-612, is located at the northwest corner of the PGDP site security area. The facility consists of an air stripper to remove volatile organics.

Historical sampling has shown very little change in the concentration of Tc-99 in the water when it passes through the air stripper. Emissions of Tc-99 were estimated using 40 *CFR* Part 61, Subpart H, Appendix D, emission factors and the analysis of the groundwater. The exhaust from the air stripper is passed through a carbon adsorption unit prior to release to the atmosphere. Historical data have shown that Tc-99 is not retained in the carbon; therefore, no reduction in Tc-99 emissions due to use of the adsorption unit was assumed. The results of the analysis of the estimated emissions are reported in Section 6.

4.3.2 Northeast Plume Containment System

DOE began normal operation of the Northeast Plume Containment System (C-614 Northeast Plume Treatment System), a second treatment system, on February 28, 1997, as an interim remedial action also to treat contaminated groundwater. The C-614 system extracts contaminated groundwater and pumps it to an air stripper for removal of TCE. Initially, the contaminated groundwater did not contain radionuclides; however, low concentration Tc-99 was detected in the groundwater and, consequently, could have been emitted to the air since 2005. Emissions of Tc-99 were estimated using 40 *CFR* Part 61, Subpart H, Appendix D, emission factors and the analysis of the groundwater. The results of the analysis of the estimated emissions are reported in Section 6.

4.4 FUGITIVE AND DIFFUSE SOURCES

Diffuse/fugitive emission sources include any source that is distributed spatially, diffuse in nature, or not emitted with forced air from a stack, vent, or other confined conduit. In this case, radionuclides are transported entirely by diffusion and/or thermally driven air currents. Typical examples of diffuse/fugitive emissions include emissions from building breathing; resuspension of contaminated soils, debris, or other materials; unventilated tanks; ponds, lakes, and streams; wastewater treatment systems; outdoor storage and processing areas; and leaks in piping, valves, or other process equipment. DOE has identified many potential fugitive and diffuse emission sources such as inactive facilities, building roofs, scrap metal storage yards, landfills, cylinder yards, and various contamination areas. Specific activities that could generate fugitive emissions include transport and disposal of waste, demolition of contaminated facilities such as the C-410 Building (demolished in 2014), decontamination of contaminated equipment, and most environmental remediation activities such as soil excavation during the Solid Waste Management Area 4 remedial investigation (one-time activity during 2016) and disturbance of soil during downposting of radiologically contaminated areas (one-time activity during 2016). The use of ambient air monitors to evaluate emissions from fugitive and diffuse sources is described in Section 9.

5. WAIVER OF CONSTRUCTION AND MODIFICATION ACTIVITIES

No construction or modification activities occurred in this reporting period that were waived under 40 *CFR* § 61.96.

6. SOURCE CHARACTERISTICS AND AIR EMISSIONS DATA

Tables 1 through 4 contain specific emission information for each Paducah Site emission point. Table 1 lists the emission points and efficiency of control devices, as required by 40 *CFR* § 61.94 (b) (4) and (5). It is assumed that control for the Northwest Plume Treatment System has 0% efficiency because no credit is taken for any Tc-99 removal as a result of carbon filtration. Table 2 lists the distances from each emission point to receptors of concern, as listed in 40 *CFR* § 61.94 (b) (6). Table 3 contains emission point information required to estimate the resulting potential exposure, as required by 40 *CFR* § 61.94 (b) (7). Table 4 contains a list of Paducah Site radioactive materials, as required by 40 *CFR* § 61.94 (b) (2), their emission rates, and total Paducah Site emissions by nuclide.

Table 1. Emission Point Effluent Controls and Efficiencies

Emission Points	Type Control	Efficiency %	Distance (m) and Direction to Nearest Receptor
Group D C-709/710 Laboratory Hoods	None	0	1,960 ESE
Group E C-310 Stack	NaF Trap	99.9	1,740 ESE
	Alumina Trap	98.6	
Group F SX/WA Group	Alumina Traps	98.6	1,490 ESE
Group F Cylinder Valve Disconnections	HEPA Filter	99	1,490 ESE
Group F Building Ventilation	None	0	1,490 ESE
Northwest Plume Treatment System	Carbon	0	1,080 NNE
Northeast Plume Treatment System	None	0	973 SE
DUF_6 Conversion Facility	HEPA	99.9	2,155 E

NOTE: The building ventilation and cylinder valve connection activities not serviced by a stack are grouped with the SX/WA Group or respective building.

Table 2. Distances to Selected Receptors

Emission Points	Distances (m) to Selected Receptors		
	Nearest Farm	Nearest Business	Nearest School
Group D	1,960	2,705	3,900
Group E	1,740	2,705	3,840
Group F	1,490	2,438	3,840
Northwest Plume Treatment System	1,100	2,550	5,150
Northeast Plume Treatment System	1,330	1,800	3,660
DUF_6 Conversion Facility	2,550	3,250	3,400

Table 3. Characteristics of Stacks, Vents, or Other Emission Points that Emit Radionuclides

Emission Points	Type	Height (m)	Diameter (m)	Gas Exit Velocity (m/s)	Gas Exit Temp. (°C)	Distance (m) & Direction to Maximally Exposed Individual for Each Source
Group D	Point	7.09	N/A	0	Ambient	2,370 N
Group E	Point	61.0	0.3	0	21.7	3,040 NNE
Group F	Point	21.0	N/A	0	Ambient	2,350 N
Northwest Plume Treatment System	Point	7.0	0.36	9.45	Ambient	1,080 NNE
Northeast Plume Treatment System	Point	5.94	0.19	10.76	Ambient	987 SE
DUF_6 Conversion Facility	Point	21.95	1.067	16.19	33.9	2,171 S

Table 4. Radionuclide Materials and Emissions Data (Curies)

Nuclide	Group D C-709/710 Lab	Group E C-310 Stack	Group F Seal Exhaust/ Wet Air	Northwest Plume	Northeast Plume	DUF_6 Conversion Facility	Total Site Emissions
U-234	1.54E-04	0	9.19E-07	0	0	5.46E-07	1.55E-04
U-235	5.35E-06	0	3.19E-08	0	0	2.50E-08	5.41E-06
U-238	1.43E-05	0	2.44E-05	0	0	1.34E-06	4.00E-05
Tc-99	0	0	1.08E-06	9.59E-05	6.37E-06	0	1.03E-04
Th-230	0	0	4.42E-09	0	0	0	4.42E-09
Th-231	0	0	0	0	0	6.84E-08	6.84E-08
Th-234	0	0	0	0	0	6.24E-06	6.24E-06
Np-237	0	0	0	0	0	0	0
Pu-239	0	0	0	0	0	0	0
Pa-234m	0	0	0	0	0	6.24E-06	6.24E-06
Total Curies/ Year	**1.74E-04**	**0**	**2.64E-05**	**9.59E-05**	**6.37E-06**	**1.45E-05**	**3.16E-04**

7. DOSE ASSESSMENT

7.1 DESCRIPTION OF DOSE MODEL

The radiation dose calculations were performed using the Clean Air Act Assessment Package-1988 (CAP-88) PC, Version 4. The CAP-88 model is a set of computer programs, databases, and associated utility programs for estimation of dose and risk from radionuclide emissions to air. CAP-88 is composed of modified versions of the AIRDOS-EPA and DARTAB computer codes. CAP-88-PC contains EPA's version of the AIRDOS-EPA computer code, which implements a steady-state, Gaussian plume, atmospheric dispersion model to calculate environmental concentrations of released radionuclides and then food chain models are used to calculate human exposures, both internal and external, to the environmental concentrations.

CAP-88-PC, Version 4, incorporates age-dependent dose factors from DCFPAK-2.2 combined with factors and method of Federal Guidance Report (FGR) 13. The FGR 13 dose factors are based on the methods in 1996 Publication 72 of the International Commission on Radiological Protection. The dose factors are used to calculate effective doses. The effective dose is the weighted sum of equivalent doses to 12 specific tissues and organs, plus a general category that accounts for the remaining organs and tissues.

7.2 SUMMARY OF INPUT PARAMETERS

Default input parameters are used except for those provided in Section 6 and immediately below.

Meteorological input information is from the National Weather Service at Paducah, except for the on-site joint frequency distribution information. The 2016 annual precipitation and average air temperature from the National Climatic Data Center "Climate at a Glance" database were used to account for current rainfall and air temperatures. The rainfall rate in 2016 (133.4 cm) was slightly less than the 1971–2000 average rainfall (149.8 cm). The mixing height of 542 m is based on evaluation of 2014 National Weather Service data for the Paducah area by K. Birdwell (ORNL meteorologist) (ORNL 2015). The mixing height from 2014 was used for the 2016 CAP-88 runs. Typically, mixing heights do not vary much from year-to-year; however, they can vary more over a period of years.

Joint frequency distribution:	Five-year stability array (STAR) distribution from 60-m station on PGDP meteorological tower for the years 1988 through 1992.
Rainfall rate:	133.40 cm/year
Average air temperature:	15.72°C
Average mixing layer height:	542 m

Fraction of foodstuffs from (rural default values):

	Local Area	50-Mile Radius	Beyond 50 Miles
Vegetables and produce:	0.700	0.300	0.000
Meat:	0.400	0.600	0.000
Milk:	0.440	0.560	0.000

7.3 DOSE ESTIMATE

Effective dose equivalent (EDE) to maximally exposed individual for each individual point source and the Paducah Site is provided in Table 5.

Table 5. Dose Analysis

Emission Sources*	EDE to the Maximum Exposed Individual for Each Source (mrem)	EDE to the Maximum Exposed Individual for the Plant (mrem)
Group D—C-709/C-710 Laboratory Hoods	4.9E-05	4.9E-05
Group F—SX/WA Group	1.3E-05	1.3E-05
Northwest Plume Treatment System	6.7E-05	6.7E-05
Northeast Plume Treatment System	3.2E-06	1.2E-06
DUF_6 Conversion Facility	8.6E-07	5.5E-07
Total from All Sources		**1.3E-04**

The maximally exposed individual from all plant emissions is located 1,080 m north-northeast of Northwest Plume Treatment System.

U.S. Census (2010) counts at the block level. These population counts were joined to their respective Census blocks, and then incorporated into a dasymetric computer model to distribute the counts spatially within each block. A dasymetric model uses a likelihood dataset (i.e., where the people are most likely to be located) to distribute the population mathematically. This likelihood dataset incorporated such things as land cover, distance to roads, building height, etc. The result was a 3-arc, second gridded population database. This grid was intersected with the sector-annuli rose to tabulate the final population counts. The resulting population data then were converted into a population data file by CAP-88 PC, Version 4. Based on population data from the 2010 census, the total collective EDE to the 50-mile population (approximately 534,000 persons) was 0.00091 person-rem.

8. UNPLANNED RELEASES

There were no DOE unplanned radioactive airborne releases in 2016.

9. AMBIENT AIR MONITORING

In accordance with the *National Emission Standards for Hazardous Air Pollutants Management Plan for Emission of Radionuclides for the U.S. Department of Energy Operations at the Paducah Site, Paducah, Kentucky*, PAD-REG-1017, November 2013, DOE used ambient air monitoring data to verify insignificant levels of radionuclides in off-site ambient air. Ambient air stations collect radionuclide samples at sites surrounding the plant. The ambient air monitors capture airborne radionuclides emitted from all sources, including fugitive and diffuse sources. The locations of the ambient air monitoring stations are shown in Figure 1.

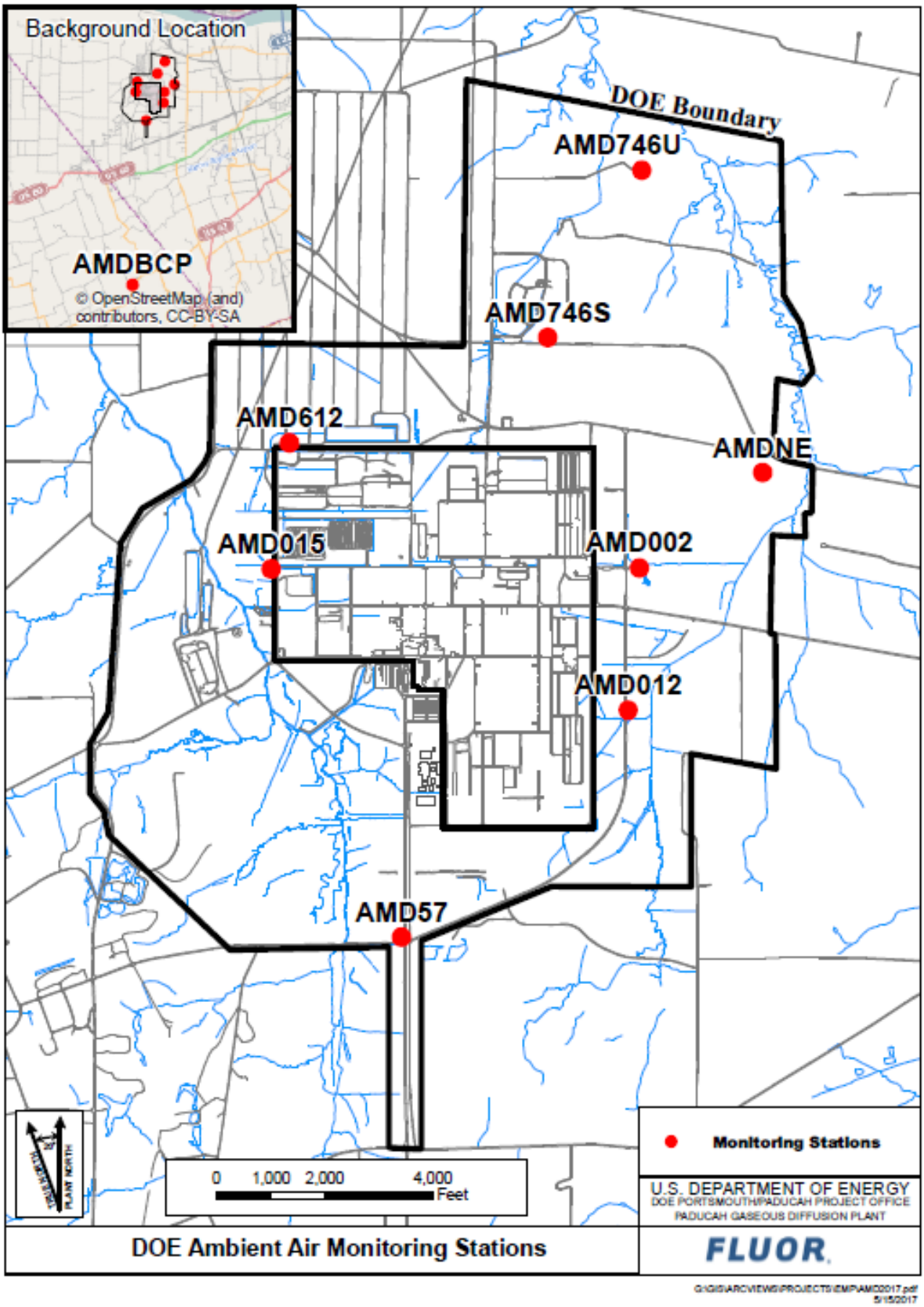

Figure 1. Location of Paducah Site Ambient Air Monitoring Stations

The ambient air monitoring stations operate continuously, drawing air through a filter paper to capture particles that may be radioactive. Filter paper is changed weekly; composited filter papers for a three-month period are measured for radioactivity by a laboratory.

The analyses of ambient air monitoring results indicate that plant-derived radionuclides were not detected in concentrations greater than 40 *CFR* Part 61, Appendix E, Table 2, concentrations. The actual results of each air monitoring station are listed in the appendix of this report.

10. STATUS OF 40 *CFR* PART 61, SUBPART H, COMPLIANCE

DOE remains in compliance with 40 *CFR* Part 61, Subpart H. Kentucky Division for Air Quality has received a delegation of authority to administer the National Emission Standards for Hazardous Air Pollutants (NESHAP) program. An update to the NESHAP Management Plan was approved by EPA Region 4 on February 6, 2014.

Ambient air monitors measure radionuclide emissions from Paducah Site point sources, fugitive air emission sources, and background levels of radionuclides. In accordance with the NESHAP Management Plan, ambient air monitors are used to confirm that radiological emissions from the site produce a dose less than the levels allowed by 40 *CFR* Part 61, Subpart H.

11. REFERENCE

ORNL 2015. E-mail from P. Scofield, Oak Ridge National Laboratory, to S. Knaus, Fluor Federal Services, Inc., Paducah Deactivation Project, “2014 RadNeshaps Report and Tables,” May 11.

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APPENDIX

AMBIENT AIR MONITORING

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Table A.1. Air Monitoring Calculations for 2016

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
1st Quarter January through March											
	Quarter Air Flow	7455	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD002	Q2AMD0022-16	22-Apr-16	Americium-241	-4.77	pCi/sample	-6.40E-04	-6.40E-16	1.90E-15	-3.37E-01	U	
AMD002	Q2AMD0022-16	22-Apr-16	Neptunium-237	-0.492	pCi/sample	-6.60E-05	-6.60E-17	1.20E-15	-5.50E-02	U	
AMD002	Q2AMD0022-16	22-Apr-16	Plutonium-238	-0.151	pCi/Sample	-2.03E-05	-2.03E-17	2.10E-15	-9.65E-03	U	
AMD002	Q2AMD0022-16	22-Apr-16	Plutonium-239/240	-0.151	pCi/Sample	-2.03E-05	-2.03E-17	2.00E-15	-1.01E-02	U	
AMD002	Q2AMD0022-16	22-Apr-16	Technetium-99	42.7	pCi/Sample	5.73E-03	5.73E-15	1.40E-13	4.09E-02		
AMD002	Q2AMD0022-16	22-Apr-16	Thorium-234	-11.7	pCi/sample	-1.57E-03	-1.57E-15	2.20E-12	-7.13E-04	U	
AMD002	Q2AMD0022-16	22-Apr-16	Uranium-234	1.91	pCi/Sample	2.56E-04	2.56E-16	7.70E-15	3.33E-02		
AMD002	Q2AMD0022-16	22-Apr-16	Uranium-235	0.226	pCi/Sample	3.03E-05	3.03E-17	7.10E-15	4.27E-03		
AMD002	Q2AMD0022-16	22-Apr-16	Uranium-238	1.86	pCi/Sample	2.49E-04	2.49E-16	8.30E-15	3.01E-02		
						Sum of the Fractions of the Standard			-3.04E-01		
	Quarter Air Flow	7455	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD012	Q2AMD0122-16	22-Apr-16	Americium-241	-0.063	pCi/sample	-8.45E-06	-8.45E-18	1.90E-15	-4.45E-03	U	
AMD012	Q2AMD0122-16	22-Apr-16	Neptunium-237	-0.684	pCi/sample	-9.18E-05	-9.18E-17	1.20E-15	-7.65E-02	U	
AMD012	Q2AMD0122-16	22-Apr-16	Plutonium-238	-0.0469	pCi/Sample	-6.29E-06	-6.29E-18	2.10E-15	-3.00E-03	U	
AMD012	Q2AMD0122-16	22-Apr-16	Plutonium-239/240	-0.0703	pCi/Sample	-9.43E-06	-9.43E-18	2.00E-15	-4.71E-03	U	
AMD012	Q2AMD0122-16	22-Apr-16	Technetium-99	34.4	pCi/Sample	4.61E-03	4.61E-15	1.40E-13	3.30E-02	U	
AMD012	Q2AMD0122-16	22-Apr-16	Thorium-234	-138	pCi/sample	-1.85E-02	-1.85E-14	2.20E-12	-8.41E-03	U	
AMD012	Q2AMD0122-16	22-Apr-16	Uranium-234	1.23	pCi/Sample	1.65E-04	1.65E-16	7.70E-15	2.14E-02		
AMD012	Q2AMD0122-16	22-Apr-16	Uranium-235	0.214	pCi/Sample	2.87E-05	2.87E-17	7.10E-15	4.04E-03	U	
AMD012	Q2AMD0122-16	22-Apr-16	Uranium-238	2.12	pCi/Sample	2.84E-04	2.84E-16	8.30E-15	3.43E-02		
						Sum of the Fractions of the Standard			-4.34E-03		
	Quarter Air Flow	7453	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD015	Q2AMD0152-16	22-Apr-16	Americium-241	-1.55	pCi/sample	-2.08E-04	-2.08E-16	1.90E-15	-1.09E-01	U	
AMD015	Q2AMD0152-16	22-Apr-16	Neptunium-237	-0.382	pCi/sample	-5.13E-05	-5.13E-17	1.20E-15	-4.27E-02	U	
AMD015	Q2AMD0152-16	22-Apr-16	Plutonium-238	0	pCi/Sample	0.00E+00	0.00E+00	2.10E-15	0.00E+00	U	
AMD015	Q2AMD0152-16	22-Apr-16	Plutonium-239/240	0.259	pCi/Sample	3.48E-05	3.48E-17	2.00E-15	1.74E-02	U	
AMD015	Q2AMD0152-16	22-Apr-16	Technetium-99	41.2	pCi/Sample	5.53E-03	5.53E-15	1.40E-13	3.95E-02	U	
AMD015	Q2AMD0152-16	22-Apr-16	Thorium-234	-46.3	pCi/sample	-6.21E-03	-6.21E-15	2.20E-12	-2.82E-03	U	
AMD015	Q2AMD0152-16	22-Apr-16	Uranium-234	2.23	pCi/Sample	2.99E-04	2.99E-16	7.70E-15	3.89E-02		
AMD015	Q2AMD0152-16	22-Apr-16	Uranium-235	0.194	pCi/Sample	2.60E-05	2.60E-17	7.10E-15	3.67E-03	U	
AMD015	Q2AMD0152-16	22-Apr-16	Uranium-238	2.12	pCi/Sample	2.84E-04	2.84E-16	8.30E-15	3.43E-02		
						Sum of the Fractions of the Standard			-2.13E-02		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
	Quarter Air Flow	7454	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD57	Q2AMD572-16	22-Apr-16	Americium-241	4.66	pCi/sample	6.25E-04	6.25E-16	1.90E-15	3.29E-01	U	
AMD57	Q2AMD572-16	22-Apr-16	Neptunium-237	-0.606	pCi/sample	-8.13E-05	-8.13E-17	1.20E-15	-6.77E-02	U	
AMD57	Q2AMD572-16	22-Apr-16	Plutonium-238	-0.04	pCi/Sample	-5.37E-06	-5.37E-18	2.10E-15	-2.56E-03	U	
AMD57	Q2AMD572-16	22-Apr-16	Plutonium-239/240	0.0633	pCi/Sample	8.49E-06	8.49E-18	2.00E-15	4.25E-03	U	
AMD57	Q2AMD572-16	22-Apr-16	Technetium-99	25.9	pCi/Sample	3.47E-03	3.47E-15	1.40E-13	2.48E-02	U	
AMD57	Q2AMD572-16	22-Apr-16	Thorium-234	38.1	pCi/sample	5.11E-03	5.11E-15	2.20E-12	2.32E-03	U	
AMD57	Q2AMD572-16	22-Apr-16	Uranium-234	1.97	pCi/Sample	2.64E-04	2.64E-16	7.70E-15	3.43E-02		
AMD57	Q2AMD572-16	22-Apr-16	Uranium-235	0.351	pCi/Sample	4.71E-05	4.71E-17	7.10E-15	6.63E-03	U	
AMD57	Q2AMD572-16	22-Apr-16	Uranium-238	1.86	pCi/Sample	2.50E-04	2.50E-16	8.30E-15	3.01E-02		
						Sum of the Fractions of the Standard			3.61E-01		
	Quarter Air Flow	7299	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD612	Q2AMD6122-16	22-Apr-16	Americium-241	-1.57	pCi/sample	-2.15E-04	-2.15E-16	1.90E-15	-1.13E-01	U	
AMD612	Q2AMD6122-16	22-Apr-16	Neptunium-237	-0.16	pCi/sample	-2.19E-05	-2.19E-17	1.20E-15	-1.83E-02	U	
AMD612	Q2AMD6122-16	22-Apr-16	Plutonium-238	-0.0425	pCi/Sample	-5.82E-06	-5.82E-18	2.10E-15	-2.77E-03	U	
AMD612	Q2AMD6122-16	22-Apr-16	Plutonium-239/240	0.046	pCi/Sample	6.30E-06	6.30E-18	2.00E-15	3.15E-03	U	
AMD612	Q2AMD6122-16	22-Apr-16	Technetium-99	26.1	pCi/Sample	3.58E-03	3.58E-15	1.40E-13	2.55E-02	U	
AMD612	Q2AMD6122-16	22-Apr-16	Thorium-234	-9.87	pCi/sample	-1.35E-03	-1.35E-15	2.20E-12	-6.15E-04	U	
AMD612	Q2AMD6122-16	22-Apr-16	Uranium-234	2.39	pCi/Sample	3.27E-04	3.27E-16	7.70E-15	4.25E-02		
AMD612	Q2AMD6122-16	22-Apr-16	Uranium-235	0.151	pCi/Sample	2.07E-05	2.07E-17	7.10E-15	2.91E-03	U	
AMD612	Q2AMD6122-16	22-Apr-16	Uranium-238	1.89	pCi/Sample	2.59E-04	2.59E-16	8.30E-15	3.12E-02		
						Sum of the Fractions of the Standard			-2.95E-02		
	Quarter Air Flow	7448	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD746S	Q2AMD746S2-16	22-Apr-16	Americium-241	-0.0975	pCi/sample	-1.31E-05	-1.31E-17	1.90E-15	-6.89E-03	U	
AMD746S	Q2AMD746S2-16	22-Apr-16	Neptunium-237	-0.985	pCi/sample	-1.32E-04	-1.32E-16	1.20E-15	-1.10E-01	U	
AMD746S	Q2AMD746S2-16	22-Apr-16	Plutonium-238	0.065	pCi/Sample	8.73E-06	8.73E-18	2.10E-15	4.16E-03	U	
AMD746S	Q2AMD746S2-16	22-Apr-16	Plutonium-239/240	0.00342	pCi/Sample	4.59E-07	4.59E-19	2.00E-15	2.30E-04	U	
AMD746S	Q2AMD746S2-16	22-Apr-16	Technetium-99	27.3	pCi/Sample	3.67E-03	3.67E-15	1.40E-13	2.62E-02	U	
AMD746S	Q2AMD746S2-16	22-Apr-16	Thorium-234	0.64	pCi/sample	8.59E-05	8.59E-17	2.20E-12	3.91E-05	U	
AMD746S	Q2AMD746S2-16	22-Apr-16	Uranium-234	1.58	pCi/Sample	2.12E-04	2.12E-16	7.70E-15	2.76E-02		
AMD746S	Q2AMD746S2-16	22-Apr-16	Uranium-235	0.428	pCi/Sample	5.75E-05	5.75E-17	7.10E-15	8.09E-03		
AMD746S	Q2AMD746S2-16	22-Apr-16	Uranium-238	1.79	pCi/Sample	2.40E-04	2.40E-16	8.30E-15	2.90E-02		
						Sum of the Fractions of the Standard			-2.19E-02		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
	Quarter Air Flow	7430	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD746U	Q2AMD746U2-16	22-Apr-16	Americium-241	0.408	pCi/sample	5.49E-05	5.49E-17	1.90E-15	2.89E-02	U	
AMD746U	Q2AMD746U2-16	22-Apr-16	Neptunium-237	0.338	pCi/sample	4.55E-05	4.55E-17	1.20E-15	3.79E-02	U	
AMD746U	Q2AMD746U2-16	22-Apr-16	Plutonium-238	-0.0691	pCi/Sample	-9.30E-06	-9.30E-18	2.10E-15	-4.43E-03	U	
AMD746U	Q2AMD746U2-16	22-Apr-16	Plutonium-239/240	0.0537	pCi/Sample	7.23E-06	7.23E-18	2.00E-15	3.61E-03	U	
AMD746U	Q2AMD746U2-16	22-Apr-16	Technetium-99	23.2	pCi/Sample	3.12E-03	3.12E-15	1.40E-13	2.23E-02	U	
AMD746U	Q2AMD746U2-16	22-Apr-16	Thorium-234	21.4	pCi/sample	2.88E-03	2.88E-15	2.20E-12	1.31E-03	U	
AMD746U	Q2AMD746U2-16	22-Apr-16	Uranium-234	1.51	pCi/Sample	2.03E-04	2.03E-16	7.70E-15	2.64E-02		
AMD746U	Q2AMD746U2-16	22-Apr-16	Uranium-235	0.104	pCi/Sample	1.40E-05	1.40E-17	7.10E-15	1.97E-03	U	
AMD746U	Q2AMD746U2-16	22-Apr-16	Uranium-238	1.09	pCi/Sample	1.47E-04	1.47E-16	8.30E-15	1.77E-02		
						Sum of the Fractions of the Standard			1.36E-01		
	Quarter Air Flow	7454	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMDBCP	Q2AMDBCP2-16	22-Apr-16	Americium-241	1.31	pCi/sample	1.76E-04	1.76E-16	1.90E-15	9.25E-02	U	
AMDBCP	Q2AMDBCP2-16	22-Apr-16	Neptunium-237	-0.598	pCi/sample	-8.02E-05	-8.02E-17	1.20E-15	-6.69E-02	U	
AMDBCP	Q2AMDBCP2-16	22-Apr-16	Plutonium-238	-0.0238	pCi/Sample	-3.19E-06	-3.19E-18	2.10E-15	-1.52E-03	U	
AMDBCP	Q2AMDBCP2-16	22-Apr-16	Plutonium-239/240	0.00396	pCi/Sample	5.31E-07	5.31E-19	2.00E-15	2.66E-04	U	
AMDBCP	Q2AMDBCP2-16	22-Apr-16	Technetium-99	34.7	pCi/Sample	4.66E-03	4.66E-15	1.40E-13	3.33E-02	U	
AMDBCP	Q2AMDBCP2-16	22-Apr-16	Thorium-234	-10.7	pCi/sample	-1.44E-03	-1.44E-15	2.20E-12	-6.52E-04	U	
AMDBCP	Q2AMDBCP2-16	22-Apr-16	Uranium-234	1.55	pCi/Sample	2.08E-04	2.08E-16	7.70E-15	2.70E-02		
AMDBCP	Q2AMDBCP2-16	22-Apr-16	Uranium-235	0.135	pCi/Sample	1.81E-05	1.81E-17	7.10E-15	2.55E-03	U	
AMDBCP	Q2AMDBCP2-16	22-Apr-16	Uranium-238	1.19	pCi/Sample	1.60E-04	1.60E-16	8.30E-15	1.92E-02		
						Sum of the Fractions of the Standard			1.06E-01		
	Quarter Air Flow	7302	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMDNE	Q2AMDNE2-16	22-Apr-16	Americium-241	1.37	pCi/sample	1.88E-04	1.88E-16	1.90E-15	9.87E-02	U	
AMDNE	Q2AMDNE2-16	22-Apr-16	Neptunium-237	0.992	pCi/sample	1.36E-04	1.36E-16	1.20E-15	1.13E-01	U	
AMDNE	Q2AMDNE2-16	22-Apr-16	Plutonium-238	0.134	pCi/Sample	1.84E-05	1.84E-17	2.10E-15	8.74E-03	U	
AMDNE	Q2AMDNE2-16	22-Apr-16	Plutonium-239/240	-0.0846	pCi/Sample	-1.16E-05	-1.16E-17	2.00E-15	-5.79E-03	U	
AMDNE	Q2AMDNE2-16	22-Apr-16	Technetium-99	32.6	pCi/Sample	4.46E-03	4.46E-15	1.40E-13	3.19E-02	U	
AMDNE	Q2AMDNE2-16	22-Apr-16	Thorium-234	24	pCi/sample	3.29E-03	3.29E-15	2.20E-12	1.49E-03	U	
AMDNE	Q2AMDNE2-16	22-Apr-16	Uranium-234	1.46	pCi/Sample	2.00E-04	2.00E-16	7.70E-15	2.60E-02		
AMDNE	Q2AMDNE2-16	22-Apr-16	Uranium-235	0.0382	pCi/Sample	5.23E-06	5.23E-18	7.10E-15	7.37E-04	U	
AMDNE	Q2AMDNE2-16	22-Apr-16	Uranium-238	1.46	pCi/Sample	2.00E-04	2.00E-16	8.30E-15	2.41E-02		
						Sum of the Fractions of the Standard			2.99E-01		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
2nd Quarter April through June											
	Quarter Air Flow	7407	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD002	Q3AMD0023-16	29-Jul-16	Americium-241	9.5	pCi/sample	1.28E-03	1.28E-15	1.90E-15	6.75E-01	U	
AMD002	Q3AMD0023-16	29-Jul-16	Neptunium-237	-0.322	pCi/sample	-4.35E-05	-4.35E-17	1.20E-15	-3.62E-02	U	
AMD002	Q3AMD0023-16	29-Jul-16	Plutonium-238	0.0608	pCi/Sample	8.21E-06	8.21E-18	2.10E-15	3.91E-03	U	
AMD002	Q3AMD0023-16	29-Jul-16	Plutonium-239/240	0.0462	pCi/Sample	6.24E-06	6.24E-18	2.00E-15	3.12E-03	U	
AMD002	Q3AMD0023-16	29-Jul-16	Technetium-99	-31.6	pCi/Sample	-4.27E-03	-4.27E-15	1.40E-13	-3.05E-02	U	
AMD002	Q3AMD0023-16	29-Jul-16	Thorium-234	92.8	pCi/sample	1.25E-02	1.25E-14	2.20E-12	5.69E-03	U	
AMD002	Q3AMD0023-16	29-Jul-16	Uranium-234	1.9	pCi/Sample	2.57E-04	2.57E-16	7.70E-15	3.33E-02		
AMD002	Q3AMD0023-16	29-Jul-16	Uranium-235	0.0512	pCi/Sample	6.91E-06	6.91E-18	7.10E-15	9.74E-04	U	
AMD002	Q3AMD0023-16	29-Jul-16	Uranium-238	1.72	pCi/Sample	2.32E-04	2.32E-16	8.30E-15	2.80E-02		
						Sum of the Fractions of the Standard			6.83E-01		
	Quarter Air Flow	7406	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD012	Q3AMD0123-16	29-Jul-16	Americium-241	-6.82	pCi/sample	-9.21E-04	-9.21E-16	1.90E-15	-4.85E-01	U	
AMD012	Q3AMD0123-16	29-Jul-16	Neptunium-237	1.37	pCi/sample	1.85E-04	1.85E-16	1.20E-15	1.54E-01	U	
AMD012	Q3AMD0123-16	29-Jul-16	Plutonium-238	0.145	pCi/Sample	1.96E-05	1.96E-17	2.10E-15	9.32E-03	U	
AMD012	Q3AMD0123-16	29-Jul-16	Plutonium-239/240	0.286	pCi/Sample	3.86E-05	3.86E-17	2.00E-15	1.93E-02	U	
AMD012	Q3AMD0123-16	29-Jul-16	Technetium-99	-21.3	pCi/Sample	-2.88E-03	-2.88E-15	1.40E-13	-2.05E-02	U	
AMD012	Q3AMD0123-16	29-Jul-16	Thorium-234	6.68	pCi/sample	9.02E-04	9.02E-16	2.20E-12	4.10E-04	U	
AMD012	Q3AMD0123-16	29-Jul-16	Uranium-234	1.96	pCi/Sample	2.65E-04	2.65E-16	7.70E-15	3.44E-02		
AMD012	Q3AMD0123-16	29-Jul-16	Uranium-235	-0.0202	pCi/Sample	-2.73E-06	-2.73E-18	7.10E-15	-3.84E-04	U	
AMD012	Q3AMD0123-16	29-Jul-16	Uranium-238	2.04	pCi/Sample	2.75E-04	2.75E-16	8.30E-15	3.32E-02		
						Sum of the Fractions of the Standard			-2.55E-01		
	Quarter Air Flow	7402	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD015	Q3AMD0153-16	29-Jul-16	Americium-241	-0.754	pCi/sample	-1.02E-04	-1.02E-16	1.90E-15	-5.36E-02	U	
AMD015	Q3AMD0153-16	29-Jul-16	Neptunium-237	-0.0322	pCi/sample	-4.35E-06	-4.35E-18	1.20E-15	-3.63E-03	U	
AMD015	Q3AMD0153-16	29-Jul-16	Plutonium-238	0.03	pCi/Sample	4.05E-06	4.05E-18	2.10E-15	1.93E-03	U	
AMD015	Q3AMD0153-16	29-Jul-16	Plutonium-239/240	0.0873	pCi/Sample	1.18E-05	1.18E-17	2.00E-15	5.90E-03	U	
AMD015	Q3AMD0153-16	29-Jul-16	Technetium-99	-9.6	pCi/Sample	-1.30E-03	-1.30E-15	1.40E-13	-9.26E-03	U	
AMD015	Q3AMD0153-16	29-Jul-16	Thorium-234	1.38	pCi/sample	1.86E-04	1.86E-16	2.20E-12	8.47E-05	U	
AMD015	Q3AMD0153-16	29-Jul-16	Uranium-234	1.88	pCi/Sample	2.54E-04	2.54E-16	7.70E-15	3.30E-02		
AMD015	Q3AMD0153-16	29-Jul-16	Uranium-235	0.347	pCi/Sample	4.69E-05	4.69E-17	7.10E-15	6.60E-03		
AMD015	Q3AMD0153-16	29-Jul-16	Uranium-238	2.16	pCi/Sample	2.92E-04	2.92E-16	8.30E-15	3.52E-02		
						Sum of the Fractions of the Standard			1.62E-02		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
	Quarter Air Flow	7404	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD57	Q3AMD573-16	29-Jul-16	Americium-241	2.46	pCi/sample	3.32E-04	3.32E-16	1.90E-15	1.75E-01	U	
AMD57	Q3AMD573-16	29-Jul-16	Neptunium-237	0.568	pCi/sample	7.67E-05	7.67E-17	1.20E-15	6.39E-02	U	
AMD57	Q3AMD573-16	29-Jul-16	Plutonium-238	-0.0251	pCi/Sample	-3.39E-06	-3.39E-18	2.10E-15	-1.61E-03	U	
AMD57	Q3AMD573-16	29-Jul-16	Plutonium-239/240	-0.0377	pCi/Sample	-5.09E-06	-5.09E-18	2.00E-15	-2.55E-03	U	
AMD57	Q3AMD573-16	29-Jul-16	Technetium-99	-9.2	pCi/Sample	-1.24E-03	-1.24E-15	1.40E-13	-8.88E-03	U	
AMD57	Q3AMD573-16	29-Jul-16	Thorium-234	14.7	pCi/sample	1.99E-03	1.99E-15	2.20E-12	9.02E-04	U	
AMD57	Q3AMD573-16	29-Jul-16	Uranium-234	2.29	pCi/Sample	3.09E-04	3.09E-16	7.70E-15	4.02E-02		
AMD57	Q3AMD573-16	29-Jul-16	Uranium-235	0.206	pCi/Sample	2.78E-05	2.78E-17	7.10E-15	3.92E-03	U	
AMD57	Q3AMD573-16	29-Jul-16	Uranium-238	1.48	pCi/Sample	2.00E-04	2.00E-16	8.30E-15	2.41E-02		
						Sum of the Fractions of the Standard			2.95E-01		
	Quarter Air Flow	7422	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD612	Q3AMD6123-16	29-Jul-16	Americium-241	1.69	pCi/sample	2.28E-04	2.28E-16	1.90E-15	1.20E-01	U	
AMD612	Q3AMD6123-16	29-Jul-16	Neptunium-237	2.91	pCi/sample	3.92E-04	3.92E-16	1.20E-15	3.27E-01	U	
AMD612	Q3AMD6123-16	29-Jul-16	Plutonium-238	-0.0461	pCi/Sample	-6.21E-06	-6.21E-18	2.10E-15	-2.96E-03	U	
AMD612	Q3AMD6123-16	29-Jul-16	Plutonium-239/240	-0.0614	pCi/Sample	-8.27E-06	-8.27E-18	2.00E-15	-4.14E-03	U	
AMD612	Q3AMD6123-16	29-Jul-16	Technetium-99	-29.4	pCi/Sample	-3.96E-03	-3.96E-15	1.40E-13	-2.83E-02	U	
AMD612	Q3AMD6123-16	29-Jul-16	Thorium-234	12.3	pCi/sample	1.66E-03	1.66E-15	2.20E-12	7.53E-04	U	
AMD612	Q3AMD6123-16	29-Jul-16	Uranium-234	2.95	pCi/Sample	3.97E-04	3.97E-16	7.70E-15	5.16E-02		
AMD612	Q3AMD6123-16	29-Jul-16	Uranium-235	-0.0706	pCi/Sample	-9.51E-06	-9.51E-18	7.10E-15	-1.34E-03	U	
AMD612	Q3AMD6123-16	29-Jul-16	Uranium-238	1.76	pCi/Sample	2.37E-04	2.37E-16	8.30E-15	2.86E-02		
						Sum of the Fractions of the Standard			4.91E-01		
	Quarter Air Flow	7404	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD746S	Q3AMD746S3-16	29-Jul-16	Americium-241	-30.4	pCi/sample	-4.11E-03	-4.11E-15	1.90E-15	-2.16E+00	U	
AMD746S	Q3AMD746S3-16	29-Jul-16	Neptunium-237	-2.18	pCi/sample	-2.94E-04	-2.94E-16	1.20E-15	-2.45E-01	U	
AMD746S	Q3AMD746S3-16	29-Jul-16	Plutonium-238	-0.024	pCi/Sample	-3.24E-06	-3.24E-18	2.10E-15	-1.54E-03	U	
AMD746S	Q3AMD746S3-16	29-Jul-16	Plutonium-239/240	0.905	pCi/Sample	1.22E-04	1.22E-16	2.00E-15	6.11E-02		
AMD746S	Q3AMD746S3-16	29-Jul-16	Technetium-99	-24.4	pCi/Sample	-3.30E-03	-3.30E-15	1.40E-13	-2.35E-02	U	
AMD746S	Q3AMD746S3-16	29-Jul-16	Thorium-234	-35.8	pCi/sample	-4.84E-03	-4.84E-15	2.20E-12	-2.20E-03	U	
AMD746S	Q3AMD746S3-16	29-Jul-16	Uranium-234	1.95	pCi/Sample	2.63E-04	2.63E-16	7.70E-15	3.42E-02		
AMD746S	Q3AMD746S3-16	29-Jul-16	Uranium-235	0.232	pCi/Sample	3.13E-05	3.13E-17	7.10E-15	4.41E-03	U	
AMD746S	Q3AMD746S3-16	29-Jul-16	Uranium-238	2.3	pCi/Sample	3.11E-04	3.11E-16	8.30E-15	3.74E-02		
						Sum of the Fractions of the Standard			-2.30E+00		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
	Quarter Air Flow	7404	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD746U	Q3AMD746U3-16	29-Jul-16	Americium-241	-3.26	pCi/sample	-4.40E-04	-4.40E-16	1.90E-15	-2.32E-01	U	
AMD746U	Q3AMD746U3-16	29-Jul-16	Neptunium-237	0.21	pCi/sample	2.84E-05	2.84E-17	1.20E-15	2.36E-02	U	
AMD746U	Q3AMD746U3-16	29-Jul-16	Plutonium-238	2.16	pCi/Sample	2.92E-04	2.92E-16	2.10E-15	1.39E-01		
AMD746U	Q3AMD746U3-16	29-Jul-16	Plutonium-239/240	-0.0569	pCi/Sample	-7.69E-06	-7.69E-18	2.00E-15	-3.84E-03	U	
AMD746U	Q3AMD746U3-16	29-Jul-16	Technetium-99	-27.7	pCi/Sample	-3.74E-03	-3.74E-15	1.40E-13	-2.67E-02	U	
AMD746U	Q3AMD746U3-16	29-Jul-16	Thorium-234	-31.6	pCi/sample	-4.27E-03	-4.27E-15	2.20E-12	-1.94E-03	U	
AMD746U	Q3AMD746U3-16	29-Jul-16	Uranium-234	2.33	pCi/Sample	3.15E-04	3.15E-16	7.70E-15	4.09E-02		
AMD746U	Q3AMD746U3-16	29-Jul-16	Uranium-235	0.0297	pCi/Sample	4.01E-06	4.01E-18	7.10E-15	5.65E-04	U	
AMD746U	Q3AMD746U3-16	29-Jul-16	Uranium-238	2.68	pCi/Sample	3.62E-04	3.62E-16	8.30E-15	4.36E-02		
						Sum of the Fractions of the Standard			-1.66E-02		
	Quarter Air Flow	7090	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMDBCP	Q3AMDBCP3-16	29-Jul-16	Americium-241	-0.72	pCi/sample	-1.02E-04	-1.02E-16	1.90E-15	-5.34E-02	U	
AMDBCP	Q3AMDBCP3-16	29-Jul-16	Neptunium-237	1.34	pCi/sample	1.89E-04	1.89E-16	1.20E-15	1.57E-01	U	
AMDBCP	Q3AMDBCP3-16	29-Jul-16	Plutonium-238	0.0648	pCi/Sample	9.14E-06	9.14E-18	2.10E-15	4.35E-03	U	
AMDBCP	Q3AMDBCP3-16	29-Jul-16	Plutonium-239/240	0.0443	pCi/Sample	6.25E-06	6.25E-18	2.00E-15	3.12E-03	U	
AMDBCP	Q3AMDBCP3-16	29-Jul-16	Technetium-99	-48.6	pCi/Sample	-6.85E-03	-6.85E-15	1.40E-13	-4.90E-02	U	
AMDBCP	Q3AMDBCP3-16	29-Jul-16	Thorium-234	-21.8	pCi/sample	-3.07E-03	-3.07E-15	2.20E-12	-1.40E-03	U	
AMDBCP	Q3AMDBCP3-16	29-Jul-16	Uranium-234	1.93	pCi/Sample	2.72E-04	2.72E-16	7.70E-15	3.54E-02		
AMDBCP	Q3AMDBCP3-16	29-Jul-16	Uranium-235	0.106	pCi/Sample	1.50E-05	1.50E-17	7.10E-15	2.11E-03	U	
AMDBCP	Q3AMDBCP3-16	29-Jul-16	Uranium-238	1.87	pCi/Sample	2.64E-04	2.64E-16	8.30E-15	3.18E-02		
						Sum of the Fractions of the Standard			1.30E-01		
	Quarter Air Flow	7424	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMDNE	Q3AMDNE3-16	29-Jul-16	Americium-241	-0.11	pCi/sample	-1.48E-05	-1.48E-17	1.90E-15	-7.80E-03	U	
AMDNE	Q3AMDNE3-16	29-Jul-16	Neptunium-237	0.826	pCi/sample	1.11E-04	1.11E-16	1.20E-15	9.27E-02	U	
AMDNE	Q3AMDNE3-16	29-Jul-16	Plutonium-238	0.04	pCi/Sample	5.39E-06	5.39E-18	2.10E-15	2.57E-03	U	
AMDNE	Q3AMDNE3-16	29-Jul-16	Plutonium-239/240	-0.0308	pCi/Sample	-4.15E-06	-4.15E-18	2.00E-15	-2.07E-03	U	
AMDNE	Q3AMDNE3-16	29-Jul-16	Technetium-99	-34.9	pCi/Sample	-4.70E-03	-4.70E-15	1.40E-13	-3.36E-02	U	
AMDNE	Q3AMDNE3-16	29-Jul-16	Thorium-234	34.1	pCi/sample	4.59E-03	4.59E-15	2.20E-12	2.09E-03	U	
AMDNE	Q3AMDNE3-16	29-Jul-16	Uranium-234	2.5	pCi/Sample	3.37E-04	3.37E-16	7.70E-15	4.37E-02		
AMDNE	Q3AMDNE3-16	29-Jul-16	Uranium-235	0.163	pCi/Sample	2.20E-05	2.20E-17	7.10E-15	3.09E-03	U	
AMDNE	Q3AMDNE3-16	29-Jul-16	Uranium-238	2.13	pCi/Sample	2.87E-04	2.87E-16	8.30E-15	3.46E-02		
						Sum of the Fractions of the Standard			1.35E-01		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
3rd Quarter July through September											
	Quarter Air Flow	7400	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD002	Q4AMD0024-16	27-Oct-16	Americium-241	0.411	pCi/sample	5.55E-05	5.55E-17	1.90E-15	2.92E-02	U	
AMD002	Q4AMD0024-16	27-Oct-16	Neptunium-237	-2.2	pCi/sample	-2.97E-04	-2.97E-16	1.20E-15	-2.48E-01	U	
AMD002	Q4AMD0024-16	27-Oct-16	Plutonium-238	-0.0306	pCi/Sample	-4.14E-06	-4.14E-18	2.10E-15	-1.97E-03	U	
AMD002	Q4AMD0024-16	27-Oct-16	Plutonium-239/240	-0.0153	pCi/Sample	-2.07E-06	-2.07E-18	2.00E-15	-1.03E-03	U	
AMD002	Q4AMD0024-16	27-Oct-16	Technetium-99	26.3	pCi/Sample	3.55E-03	3.55E-15	1.40E-13	2.54E-02	U	
AMD002	Q4AMD0024-16	27-Oct-16	Thorium-234	-38.2	pCi/sample	-5.16E-03	-5.16E-15	2.20E-12	-2.35E-03	U	
AMD002	Q4AMD0024-16	27-Oct-16	Uranium-234	2.58	pCi/Sample	3.49E-04	3.49E-16	7.70E-15	4.53E-02		
AMD002	Q4AMD0024-16	27-Oct-16	Uranium-235	0.57	pCi/Sample	7.70E-05	7.70E-17	7.10E-15	1.08E-02		
AMD002	Q4AMD0024-16	27-Oct-16	Uranium-238	2.08	pCi/Sample	2.81E-04	2.81E-16	8.30E-15	3.39E-02		
							Sum of the Fractions of the Standard		-1.08E-01		
	Quarter Air Flow	7397	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD012	Q4AMD0124-16	27-Oct-16	Americium-241	1.98	pCi/sample	2.68E-04	2.68E-16	1.90E-15	1.41E-01	U	
AMD012	Q4AMD0124-16	27-Oct-16	Neptunium-237	1.56	pCi/sample	2.11E-04	2.11E-16	1.20E-15	1.76E-01	U	
AMD012	Q4AMD0124-16	27-Oct-16	Plutonium-238	-0.111	pCi/Sample	-1.50E-05	-1.50E-17	2.10E-15	-7.15E-03	U	
AMD012	Q4AMD0124-16	27-Oct-16	Plutonium-239/240	-0.126	pCi/Sample	-1.70E-05	-1.70E-17	2.00E-15	-8.52E-03	U	
AMD012	Q4AMD0124-16	27-Oct-16	Technetium-99	17	pCi/Sample	2.30E-03	2.30E-15	1.40E-13	1.64E-02	U	
AMD012	Q4AMD0124-16	27-Oct-16	Thorium-234	7.97	pCi/sample	1.08E-03	1.08E-15	2.20E-12	4.90E-04	U	
AMD012	Q4AMD0124-16	27-Oct-16	Uranium-234	1.95	pCi/Sample	2.64E-04	2.64E-16	7.70E-15	3.42E-02		
AMD012	Q4AMD0124-16	27-Oct-16	Uranium-235	0.145	pCi/Sample	1.96E-05	1.96E-17	7.10E-15	2.76E-03	U	
AMD012	Q4AMD0124-16	27-Oct-16	Uranium-238	1.74	pCi/Sample	2.35E-04	2.35E-16	8.30E-15	2.83E-02		
							Sum of the Fractions of the Standard		3.83E-01		
	Quarter Air Flow	5913	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD015	Q4AMD0154-16	27-Oct-16	Americium-241	5.99	pCi/sample	1.01E-03	1.01E-15	1.90E-15	5.33E-01	U	
AMD015	Q4AMD0154-16	27-Oct-16	Neptunium-237	0.32	pCi/sample	5.41E-05	5.41E-17	1.20E-15	4.51E-02	U	
AMD015	Q4AMD0154-16	27-Oct-16	Plutonium-238	-0.0405	pCi/Sample	-6.85E-06	-6.85E-18	2.10E-15	-3.26E-03	U	
AMD015	Q4AMD0154-16	27-Oct-16	Plutonium-239/240	0	pCi/Sample	0.00E+00	0.00E+00	2.00E-15	0.00E+00	U	
AMD015	Q4AMD0154-16	27-Oct-16	Technetium-99	17.4	pCi/Sample	2.94E-03	2.94E-15	1.40E-13	2.10E-02	U	
AMD015	Q4AMD0154-16	27-Oct-16	Thorium-234	22.8	pCi/sample	3.86E-03	3.86E-15	2.20E-12	1.75E-03	U	
AMD015	Q4AMD0154-16	27-Oct-16	Uranium-234	2.21	pCi/Sample	3.74E-04	3.74E-16	7.70E-15	4.85E-02		
AMD015	Q4AMD0154-16	27-Oct-16	Uranium-235	0.172	pCi/Sample	2.91E-05	2.91E-17	7.10E-15	4.10E-03	U	
AMD015	Q4AMD0154-16	27-Oct-16	Uranium-238	2.16	pCi/Sample	3.65E-04	3.65E-16	8.30E-15	4.40E-02		
							Sum of the Fractions of the Standard		6.94E-01		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
	Quarter Air Flow	7346	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD57	Q4AMD574-16	27-Oct-16	Americium-241	-0.0327	pCi/sample	-4.45E-06	-4.45E-18	1.90E-15	-2.34E-03	U	
AMD57	Q4AMD574-16	27-Oct-16	Neptunium-237	-0.298	pCi/sample	-4.06E-05	-4.06E-17	1.20E-15	-3.38E-02	U	
AMD57	Q4AMD574-16	27-Oct-16	Plutonium-238	0.157	pCi/Sample	2.14E-05	2.14E-17	2.10E-15	1.02E-02	U	
AMD57	Q4AMD574-16	27-Oct-16	Plutonium-239/240	0.0627	pCi/Sample	8.54E-06	8.54E-18	2.00E-15	4.27E-03	U	
AMD57	Q4AMD574-16	27-Oct-16	Technetium-99	23.4	pCi/Sample	3.19E-03	3.19E-15	1.40E-13	2.28E-02	U	
AMD57	Q4AMD574-16	27-Oct-16	Thorium-234	0.446	pCi/sample	6.07E-05	6.07E-17	2.20E-12	2.76E-05	U	
AMD57	Q4AMD574-16	27-Oct-16	Uranium-234	1.98	pCi/Sample	2.70E-04	2.70E-16	7.70E-15	3.50E-02		
AMD57	Q4AMD574-16	27-Oct-16	Uranium-235	0.14	pCi/Sample	1.91E-05	1.91E-17	7.10E-15	2.68E-03	U	
AMD57	Q4AMD574-16	27-Oct-16	Uranium-238	2.07	pCi/Sample	2.82E-04	2.82E-16	8.30E-15	3.40E-02		
								Sum of the Fractions of the Standard	7.27E-02		
	Quarter Air Flow	7223	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD612	Q4AMD6124-16	27-Oct-16	Americium-241	-1.63	pCi/sample	-2.26E-04	-2.26E-16	1.90E-15	-1.19E-01	U	
AMD612	Q4AMD6124-16	27-Oct-16	Neptunium-237	1.35	pCi/sample	1.87E-04	1.87E-16	1.20E-15	1.56E-01	U	
AMD612	Q4AMD6124-16	27-Oct-16	Plutonium-238	0.111	pCi/Sample	1.54E-05	1.54E-17	2.10E-15	7.32E-03	U	
AMD612	Q4AMD6124-16	27-Oct-16	Plutonium-239/240	-0.089	pCi/Sample	-1.23E-05	-1.23E-17	2.00E-15	-6.16E-03	U	
AMD612	Q4AMD6124-16	27-Oct-16	Technetium-99	32.2	pCi/Sample	4.46E-03	4.46E-15	1.40E-13	3.18E-02	U	
AMD612	Q4AMD6124-16	27-Oct-16	Thorium-234	-34.1	pCi/sample	-4.72E-03	-4.72E-15	2.20E-12	-2.15E-03	U	
AMD612	Q4AMD6124-16	27-Oct-16	Uranium-234	2.05	pCi/Sample	2.84E-04	2.84E-16	7.70E-15	3.69E-02		
AMD612	Q4AMD6124-16	27-Oct-16	Uranium-235	0.317	pCi/Sample	4.39E-05	4.39E-17	7.10E-15	6.18E-03		
AMD612	Q4AMD6124-16	27-Oct-16	Uranium-238	1.81	pCi/Sample	2.51E-04	2.51E-16	8.30E-15	3.02E-02		
								Sum of the Fractions of the Standard	1.41E-01		
	Quarter Air Flow	7630	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD746S	Q4AMD746S4-16	27-Oct-16	Americium-241	-2.13	pCi/sample	-2.79E-04	-2.79E-16	1.90E-15	-1.47E-01	U	
AMD746S	Q4AMD746S4-16	27-Oct-16	Neptunium-237	-0.243	pCi/sample	-3.18E-05	-3.18E-17	1.20E-15	-2.65E-02	U	
AMD746S	Q4AMD746S4-16	27-Oct-16	Plutonium-238	-0.0695	pCi/Sample	-9.11E-06	-9.11E-18	2.10E-15	-4.34E-03	U	
AMD746S	Q4AMD746S4-16	27-Oct-16	Plutonium-239/240	-0.0144	pCi/Sample	-1.89E-06	-1.89E-18	2.00E-15	-9.44E-04	U	
AMD746S	Q4AMD746S4-16	27-Oct-16	Technetium-99	21.3	pCi/Sample	2.79E-03	2.79E-15	1.40E-13	1.99E-02	U	
AMD746S	Q4AMD746S4-16	27-Oct-16	Thorium-234	0.984	pCi/sample	1.29E-04	1.29E-16	2.20E-12	5.86E-05	U	
AMD746S	Q4AMD746S4-16	27-Oct-16	Uranium-234	2.89	pCi/Sample	3.79E-04	3.79E-16	7.70E-15	4.92E-02		
AMD746S	Q4AMD746S4-16	27-Oct-16	Uranium-235	0.226	pCi/Sample	2.96E-05	2.96E-17	7.10E-15	4.17E-03		
AMD746S	Q4AMD746S4-16	27-Oct-16	Uranium-238	3.11	pCi/Sample	4.08E-04	4.08E-16	8.30E-15	4.91E-02		
								Sum of the Fractions of the Standard	-5.63E-02		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
	Quarter Air Flow	7397	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD746U	Q4AMD746U4-16	27-Oct-16	Americium-241	0.0483	pCi/sample	6.53E-06	6.53E-18	1.90E-15	3.44E-03	U	
AMD746U	Q4AMD746U4-16	27-Oct-16	Neptunium-237	1.64	pCi/sample	2.22E-04	2.22E-16	1.20E-15	1.85E-01	U	
AMD746U	Q4AMD746U4-16	27-Oct-16	Plutonium-238	0.0773	pCi/Sample	1.05E-05	1.05E-17	2.10E-15	4.98E-03	U	
AMD746U	Q4AMD746U4-16	27-Oct-16	Plutonium-239/240	0.0386	pCi/Sample	5.22E-06	5.22E-18	2.00E-15	2.61E-03	U	
AMD746U	Q4AMD746U4-16	27-Oct-16	Technetium-99	12.3	pCi/Sample	1.66E-03	1.66E-15	1.40E-13	1.19E-02	U	
AMD746U	Q4AMD746U4-16	27-Oct-16	Thorium-234	-56.9	pCi/sample	-7.69E-03	-7.69E-15	2.20E-12	-3.50E-03	U	
AMD746U	Q4AMD746U4-16	27-Oct-16	Uranium-234	1.79	pCi/Sample	2.42E-04	2.42E-16	7.70E-15	3.14E-02		
AMD746U	Q4AMD746U4-16	27-Oct-16	Uranium-235	0.124	pCi/Sample	1.68E-05	1.68E-17	7.10E-15	2.36E-03	U	
AMD746U	Q4AMD746U4-16	27-Oct-16	Uranium-238	2.61	pCi/Sample	3.53E-04	3.53E-16	8.30E-15	4.25E-02		
						Sum of the Fractions of the Standard			2.80E-01		
	Quarter Air Flow	7398	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMDBCP	Q4AMDBCP4-16	27-Oct-16	Americium-241	-0.757	pCi/sample	-1.02E-04	-1.02E-16	1.90E-15	-5.39E-02	U	
AMDBCP	Q4AMDBCP4-16	27-Oct-16	Neptunium-237	-1.44	pCi/sample	-1.95E-04	-1.95E-16	1.20E-15	-1.62E-01	U	
AMDBCP	Q4AMDBCP4-16	27-Oct-16	Plutonium-238	0.00265	pCi/Sample	3.58E-07	3.58E-19	2.10E-15	1.71E-04	U	
AMDBCP	Q4AMDBCP4-16	27-Oct-16	Plutonium-239/240	0.037	pCi/Sample	5.00E-06	5.00E-18	2.00E-15	2.50E-03	U	
AMDBCP	Q4AMDBCP4-16	27-Oct-16	Technetium-99	27.9	pCi/Sample	3.77E-03	3.77E-15	1.40E-13	2.69E-02	U	
AMDBCP	Q4AMDBCP4-16	27-Oct-16	Thorium-234	-42.1	pCi/sample	-5.69E-03	-5.69E-15	2.20E-12	-2.59E-03	U	
AMDBCP	Q4AMDBCP4-16	27-Oct-16	Uranium-234	2.01	pCi/Sample	2.72E-04	2.72E-16	7.70E-15	3.53E-02		
AMDBCP	Q4AMDBCP4-16	27-Oct-16	Uranium-235	0.0788	pCi/Sample	1.07E-05	1.07E-17	7.10E-15	1.50E-03	U	
AMDBCP	Q4AMDBCP4-16	27-Oct-16	Uranium-238	1.76	pCi/Sample	2.38E-04	2.38E-16	8.30E-15	2.87E-02		
						Sum of the Fractions of the Standard			-1.24E-01		
	Quarter Air Flow	7416	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMDNE	Q4AMDNE4-16	27-Oct-16	Americium-241	-7.42	pCi/sample	-1.00E-03	-1.00E-15	1.90E-15	-5.27E-01	U	
AMDNE	Q4AMDNE4-16	27-Oct-16	Neptunium-237	1.25	pCi/sample	1.69E-04	1.69E-16	1.20E-15	1.40E-01	U	
AMDNE	Q4AMDNE4-16	27-Oct-16	Plutonium-238	-0.106	pCi/Sample	-1.43E-05	-1.43E-17	2.10E-15	-6.81E-03	U	
AMDNE	Q4AMDNE4-16	27-Oct-16	Plutonium-239/240	-0.0265	pCi/Sample	-3.57E-06	-3.57E-18	2.00E-15	-1.79E-03	U	
AMDNE	Q4AMDNE4-16	27-Oct-16	Technetium-99	20.6	pCi/Sample	2.78E-03	2.78E-15	1.40E-13	1.98E-02	U	
AMDNE	Q4AMDNE4-16	27-Oct-16	Thorium-234	36.7	pCi/sample	4.95E-03	4.95E-15	2.20E-12	2.25E-03	U	
AMDNE	Q4AMDNE4-16	27-Oct-16	Uranium-234	2.33	pCi/Sample	3.14E-04	3.14E-16	7.70E-15	4.08E-02		
AMDNE	Q4AMDNE4-16	27-Oct-16	Uranium-235	0.211	pCi/Sample	2.85E-05	2.85E-17	7.10E-15	4.01E-03		
AMDNE	Q4AMDNE4-16	27-Oct-16	Uranium-238	1.81	pCi/Sample	2.44E-04	2.44E-16	8.30E-15	2.94E-02		
						Sum of the Fractions of the Standard			-2.98E-01		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
4th Quarter October through December											
	Quarter Air Flow	7403	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD002	Q1AMD0021-17	24-Jan-17	Americium-241	3.66	pCi/sample	4.94E-04	4.94E-16	1.90E-15	2.60E-01	U	
AMD002	Q1AMD0021-17	24-Jan-17	Neptunium-237	1.95	pCi/sample	2.63E-04	2.63E-16	1.20E-15	2.20E-01	U	
AMD002	Q1AMD0021-17	24-Jan-17	Plutonium-238	0.154	pCi/Sample	2.08E-05	2.08E-17	2.10E-15	9.91E-03	U	
AMD002	Q1AMD0021-17	24-Jan-17	Plutonium-239/240	0.204	pCi/Sample	2.76E-05	2.76E-17	2.00E-15	1.38E-02	U	
AMD002	Q1AMD0021-17	24-Jan-17	Technetium-99	56	pCi/Sample	7.56E-03	7.56E-15	1.40E-13	5.40E-02	U	
AMD002	Q1AMD0021-17	24-Jan-17	Thorium-234	15.6	pCi/sample	2.11E-03	2.11E-15	2.20E-12	9.58E-04	U	
AMD002	Q1AMD0021-17	24-Jan-17	Uranium-234	0.914	pCi/Sample	1.23E-04	1.23E-16	7.70E-15	1.60E-02		
AMD002	Q1AMD0021-17	24-Jan-17	Uranium-235	0.0851	pCi/Sample	1.15E-05	1.15E-17	7.10E-15	1.62E-03	U	
AMD002	Q1AMD0021-17	24-Jan-17	Uranium-238	1.43	pCi/Sample	1.93E-04	1.93E-16	8.30E-15	2.33E-02		
						Sum of the Fractions of the Standard			5.99E-01		
	Quarter Air Flow	5786	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD012	Q1AMD0121-17	24-Jan-17	Americium-241	0.848	pCi/sample	1.47E-04	1.47E-16	1.90E-15	7.71E-02	U	
AMD012	Q1AMD0121-17	24-Jan-17	Neptunium-237	-0.682	pCi/sample	-1.18E-04	-1.18E-16	1.20E-15	-9.82E-02	U	
AMD012	Q1AMD0121-17	24-Jan-17	Plutonium-238	-0.0239	pCi/Sample	-4.13E-06	-4.13E-18	2.10E-15	-1.97E-03	U	
AMD012	Q1AMD0121-17	24-Jan-17	Plutonium-239/240	0.0755	pCi/Sample	1.30E-05	1.30E-17	2.00E-15	6.52E-03	U	
AMD012	Q1AMD0121-17	24-Jan-17	Technetium-99	-20.1	pCi/Sample	-3.47E-03	-3.47E-15	1.40E-13	-2.48E-02	U	
AMD012	Q1AMD0121-17	24-Jan-17	Thorium-234	2.92	pCi/sample	5.05E-04	5.05E-16	2.20E-12	2.29E-04	U	
AMD012	Q1AMD0121-17	24-Jan-17	Uranium-234	1.44	pCi/Sample	2.49E-04	2.49E-16	7.70E-15	3.23E-02		
AMD012	Q1AMD0121-17	24-Jan-17	Uranium-235	0.26	pCi/Sample	4.49E-05	4.49E-17	7.10E-15	6.33E-03		
AMD012	Q1AMD0121-17	24-Jan-17	Uranium-238	1.07	pCi/Sample	1.85E-04	1.85E-16	8.30E-15	2.23E-02		
						Sum of the Fractions of the Standard			1.98E-02		
	Quarter Air Flow	7404	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD015	Q1AMD0151-17	24-Jan-17	Americium-241	-0.289	pCi/sample	-3.90E-05	-3.90E-17	1.90E-15	-2.05E-02	U	
AMD015	Q1AMD0151-17	24-Jan-17	Neptunium-237	-1.28	pCi/sample	-1.73E-04	-1.73E-16	1.20E-15	-1.44E-01	U	
AMD015	Q1AMD0151-17	24-Jan-17	Plutonium-238	-0.078	pCi/Sample	-1.05E-05	-1.05E-17	2.10E-15	-5.02E-03	U	
AMD015	Q1AMD0151-17	24-Jan-17	Plutonium-239/240	-0.0975	pCi/Sample	-1.32E-05	-1.32E-17	2.00E-15	-6.58E-03	U	
AMD015	Q1AMD0151-17	24-Jan-17	Technetium-99	22.4	pCi/Sample	3.03E-03	3.03E-15	1.40E-13	2.16E-02	U	
AMD015	Q1AMD0151-17	24-Jan-17	Thorium-234	4.47	pCi/sample	6.04E-04	6.04E-16	2.20E-12	2.74E-04	U	
AMD015	Q1AMD0151-17	24-Jan-17	Uranium-234	1.45	pCi/Sample	1.96E-04	1.96E-16	7.70E-15	2.54E-02		
AMD015	Q1AMD0151-17	24-Jan-17	Uranium-235	0.0541	pCi/Sample	7.31E-06	7.31E-18	7.10E-15	1.03E-03	U	
AMD015	Q1AMD0151-17	24-Jan-17	Uranium-238	1.2	pCi/Sample	1.62E-04	1.62E-16	8.30E-15	1.95E-02		
						Sum of the Fractions of the Standard			-1.08E-01		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
	Quarter Air Flow	7404	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD57	Q1AMD571-17	24-Jan-17	Americium-241	13.9	pCi/sample	1.88E-03	1.88E-15	1.90E-15	9.88E-01	U	
AMD57	Q1AMD571-17	24-Jan-17	Neptunium-237	-0.202	pCi/sample	-2.73E-05	-2.73E-17	1.20E-15	-2.27E-02	U	
AMD57	Q1AMD571-17	24-Jan-17	Plutonium-238	-0.0701	pCi/Sample	-9.47E-06	-9.47E-18	2.10E-15	-4.51E-03	U	
AMD57	Q1AMD571-17	24-Jan-17	Plutonium-239/240	0.0446	pCi/Sample	6.02E-06	6.02E-18	2.00E-15	3.01E-03	U	
AMD57	Q1AMD571-17	24-Jan-17	Technetium-99	11	pCi/Sample	1.49E-03	1.49E-15	1.40E-13	1.06E-02	U	
AMD57	Q1AMD571-17	24-Jan-17	Thorium-234	17.7	pCi/sample	2.39E-03	2.39E-15	2.20E-12	1.09E-03	U	
AMD57	Q1AMD571-17	24-Jan-17	Uranium-234	1.34	pCi/Sample	1.81E-04	1.81E-16	7.70E-15	2.35E-02		
AMD57	Q1AMD571-17	24-Jan-17	Uranium-235	0.0628	pCi/Sample	8.48E-06	8.48E-18	7.10E-15	1.19E-03	U	
AMD57	Q1AMD571-17	24-Jan-17	Uranium-238	0.853	pCi/Sample	1.15E-04	1.15E-16	8.30E-15	1.39E-02		
						Sum of the Fractions of the Standard			1.01E+00		
	Quarter Air Flow	5720	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD612	Q1AMD6121-17	24-Jan-17	Americium-241	-3.89	pCi/sample	-6.80E-04	-6.80E-16	1.90E-15	-3.58E-01	U	
AMD612	Q1AMD6121-17	24-Jan-17	Neptunium-237	-0.313	pCi/sample	-5.47E-05	-5.47E-17	1.20E-15	-4.56E-02	U	
AMD612	Q1AMD6121-17	24-Jan-17	Plutonium-238	-0.0358	pCi/Sample	-6.26E-06	-6.26E-18	2.10E-15	-2.98E-03	U	
AMD612	Q1AMD6121-17	24-Jan-17	Plutonium-239/240	-0.0895	pCi/Sample	-1.56E-05	-1.56E-17	2.00E-15	-7.82E-03	U	
AMD612	Q1AMD6121-17	24-Jan-17	Technetium-99	34.3	pCi/Sample	6.00E-03	6.00E-15	1.40E-13	4.28E-02	U	
AMD612	Q1AMD6121-17	24-Jan-17	Thorium-234	-48.7	pCi/sample	-8.51E-03	-8.51E-15	2.20E-12	-3.87E-03	U	
AMD612	Q1AMD6121-17	24-Jan-17	Uranium-234	1.67	pCi/Sample	2.92E-04	2.92E-16	7.70E-15	3.79E-02		
AMD612	Q1AMD6121-17	24-Jan-17	Uranium-235	0.336	pCi/Sample	5.87E-05	5.87E-17	7.10E-15	8.27E-03	U	
AMD612	Q1AMD6121-17	24-Jan-17	Uranium-238	0.908	pCi/Sample	1.59E-04	1.59E-16	8.30E-15	1.91E-02		
						Sum of the Fractions of the Standard			-3.10E-01		
	Quarter Air Flow	8138	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD746S	Q1AMD746S1-17	24-Jan-17	Americium-241	0	pCi/sample	0.00E+00	0.00E+00	1.90E-15	0.00E+00	U	
AMD746S	Q1AMD746S1-17	24-Jan-17	Neptunium-237	2.02	pCi/sample	2.48E-04	2.48E-16	1.20E-15	2.07E-01	U	
AMD746S	Q1AMD746S1-17	24-Jan-17	Plutonium-238	-0.228	pCi/Sample	-2.80E-05	-2.80E-17	2.10E-15	-1.33E-02	U	
AMD746S	Q1AMD746S1-17	24-Jan-17	Plutonium-239/240	-0.126	pCi/Sample	-1.55E-05	-1.55E-17	2.00E-15	-7.74E-03	U	
AMD746S	Q1AMD746S1-17	24-Jan-17	Technetium-99	54.6	pCi/Sample	6.71E-03	6.71E-15	1.40E-13	4.79E-02	U	
AMD746S	Q1AMD746S1-17	24-Jan-17	Thorium-234	24.9	pCi/sample	3.06E-03	3.06E-15	2.20E-12	1.39E-03	U	
AMD746S	Q1AMD746S1-17	24-Jan-17	Uranium-234	1.34	pCi/Sample	1.65E-04	1.65E-16	7.70E-15	2.14E-02		
AMD746S	Q1AMD746S1-17	24-Jan-17	Uranium-235	0.0568	pCi/Sample	6.98E-06	6.98E-18	7.10E-15	9.83E-04	U	
AMD746S	Q1AMD746S1-17	24-Jan-17	Uranium-238	1.43	pCi/Sample	1.76E-04	1.76E-16	8.30E-15	2.12E-02		
						Sum of the Fractions of the Standard			2.79E-01		

Table A.1. Air Monitoring Calculations for 2016 (Continued)

Station	Client Sample ID	Date Collected	Analysis	Result	Units	Concentration	Concentration	Standard	Fraction of Standard	Qualifier	Assessment Code
	Quarter Air Flow	7332	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMD746U	Q1AMD746U1-17	24-Jan-17	Americium-241	1.22	pCi/sample	1.66E-04	1.66E-16	1.90E-15	8.76E-02	U	
AMD746U	Q1AMD746U1-17	24-Jan-17	Neptunium-237	0.167	pCi/sample	2.28E-05	2.28E-17	1.20E-15	1.90E-02	U	
AMD746U	Q1AMD746U1-17	24-Jan-17	Plutonium-238	-0.182	pCi/Sample	-2.48E-05	-2.48E-17	2.10E-15	-1.18E-02	U	
AMD746U	Q1AMD746U1-17	24-Jan-17	Plutonium-239/240	-0.0908	pCi/Sample	-1.24E-05	-1.24E-17	2.00E-15	-6.19E-03	U	
AMD746U	Q1AMD746U1-17	24-Jan-17	Technetium-99	26.6	pCi/Sample	3.63E-03	3.63E-15	1.40E-13	2.59E-02	U	
AMD746U	Q1AMD746U1-17	24-Jan-17	Thorium-234	5.47	pCi/sample	7.46E-04	7.46E-16	2.20E-12	3.39E-04	U	
AMD746U	Q1AMD746U1-17	24-Jan-17	Uranium-234	1.05	pCi/Sample	1.43E-04	1.43E-16	7.70E-15	1.86E-02		
AMD746U	Q1AMD746U1-17	24-Jan-17	Uranium-235	-0.0188	pCi/Sample	-2.56E-06	-2.56E-18	7.10E-15	-3.61E-04	U	
AMD746U	Q1AMD746U1-17	24-Jan-17	Uranium-238	1.03	pCi/Sample	1.40E-04	1.40E-16	8.30E-15	1.69E-02		
						Sum of the Fractions of the Standard			1.50E-01		
	Quarter Air Flow	6268	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMDBCP	Q1AMDBCP1-17	24-Jan-17	Americium-241	0	pCi/sample	0.00E+00	0.00E+00	1.90E-15	0.00E+00	U	
AMDBCP	Q1AMDBCP1-17	24-Jan-17	Neptunium-237	-1.22	pCi/sample	-1.95E-04	-1.95E-16	1.20E-15	-1.62E-01	U	
AMDBCP	Q1AMDBCP1-17	24-Jan-17	Plutonium-238	0.0908	pCi/Sample	1.45E-05	1.45E-17	2.10E-15	6.90E-03	U	
AMDBCP	Q1AMDBCP1-17	24-Jan-17	Plutonium-239/240	0.0621	pCi/Sample	9.91E-06	9.91E-18	2.00E-15	4.95E-03	U	
AMDBCP	Q1AMDBCP1-17	24-Jan-17	Technetium-99	20.7	pCi/Sample	3.30E-03	3.30E-15	1.40E-13	2.36E-02	U	
AMDBCP	Q1AMDBCP1-17	24-Jan-17	Thorium-234	22.3	pCi/sample	3.56E-03	3.56E-15	2.20E-12	1.62E-03	U	
AMDBCP	Q1AMDBCP1-17	24-Jan-17	Uranium-234	1.66	pCi/Sample	2.65E-04	2.65E-16	7.70E-15	3.44E-02		
AMDBCP	Q1AMDBCP1-17	24-Jan-17	Uranium-235	0.192	pCi/Sample	3.06E-05	3.06E-17	7.10E-15	4.31E-03	U	
AMDBCP	Q1AMDBCP1-17	24-Jan-17	Uranium-238	0.835	pCi/Sample	1.33E-04	1.33E-16	8.30E-15	1.61E-02		
						Sum of the Fractions of the Standard			-7.04E-02		
	Quarter Air Flow	6930	m3			pCi/m3	Ci/m3	Ci/m3	fraction		
AMDNE	Q1AMDNE1-17	24-Jan-17	Americium-241	-2.48	pCi/sample	-3.58E-04	-3.58E-16	1.90E-15	-1.88E-01	U	
AMDNE	Q1AMDNE1-17	24-Jan-17	Neptunium-237	-2.22	pCi/sample	-3.20E-04	-3.20E-16	1.20E-15	-2.67E-01	U	
AMDNE	Q1AMDNE1-17	24-Jan-17	Plutonium-238	0.00343	pCi/Sample	4.95E-07	4.95E-19	2.10E-15	2.36E-04	U	
AMDNE	Q1AMDNE1-17	24-Jan-17	Plutonium-239/240	0.089	pCi/Sample	1.28E-05	1.28E-17	2.00E-15	6.42E-03	U	
AMDNE	Q1AMDNE1-17	24-Jan-17	Technetium-99	21.6	pCi/Sample	3.12E-03	3.12E-15	1.40E-13	2.23E-02	U	
AMDNE	Q1AMDNE1-17	24-Jan-17	Thorium-234	-106	pCi/sample	-1.53E-02	-1.53E-14	2.20E-12	-6.95E-03	U	
AMDNE	Q1AMDNE1-17	24-Jan-17	Uranium-234	1.77	pCi/Sample	2.55E-04	2.55E-16	7.70E-15	3.32E-02		
AMDNE	Q1AMDNE1-17	24-Jan-17	Uranium-235	0.0536	pCi/Sample	7.73E-06	7.73E-18	7.10E-15	1.09E-03	U	
AMDNE	Q1AMDNE1-17	24-Jan-17	Uranium-238	1.16	pCi/Sample	1.67E-04	1.67E-16	8.30E-15	2.02E-02		
						Sum of the Fractions of the Standard			-3.79E-01		

Table A.2. Ambient Air Monitoring 2016 Individual Sample Isotopic Concentrations

STA_NAME	D_COLLECTED	CHEMICAL_NAME	ANA_METHOD	RESULTS	UNITS	RSLTQUAL	DETECT_LIMIT	RAD_ERR	TPU
AMD002	22-Apr-16	Americium-241	HASL 300, 4.5.2.3	-4.77	pCi/sample	U	8.72	5.23	5.67
AMD002	22-Apr-16	Neptunium-237	HASL 300, 4.5.2.3	-0.492	pCi/sample	U	5.02	3.37	3.38
AMD002	22-Apr-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.151	pCi/Sample	U	0.776	0.244	0.244
AMD002	22-Apr-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.151	pCi/Sample	U	0.775	0.243	0.244
AMD002	22-Apr-16	Protactinium-233	HASL 300, 4.5.2.3	-0.492	pCi/sample	U	5.02	3.37	3.38
AMD002	22-Apr-16	Technetium-99	HASL 300, Tc-02-RC M	42.7	pCi/Sample	U	47.4	28.8	29.1
AMD002	22-Apr-16	Thorium-234	HASL 300, 4.5.2.3	-11.7	pCi/sample	U	88.1	80.1	80.3
AMD002	22-Apr-16	Uranium-234	HASL 300, U-02-RC M	1.91	pCi/Sample		0.473	0.702	0.747
AMD002	22-Apr-16	Uranium-235	HASL 300, U-02-RC M	0.226	pCi/Sample		0.226	0.298	0.299
AMD002	22-Apr-16	Uranium-238	HASL 300, U-02-RC M	1.86	pCi/Sample		0.338	0.678	0.722
AMD002	22-Apr-16	Uranium-238	HASL 300, 4.5.2.3	-11.7	pCi/sample	U	88.1	80.1	80.3
AMD002	29-Jul-16	Americium-241	HASL 300, 4.5.2.3	9.5	pCi/sample	U	15.4	9.52	10.5
AMD002	29-Jul-16	Neptunium-237	HASL 300, 4.5.2.3	-0.322	pCi/sample	U	5.69	3.35	3.35
AMD002	29-Jul-16	Plutonium-238	HASL 300, Pu-11-RC M	0.0608	pCi/Sample	U	0.182	0.171	0.171
AMD002	29-Jul-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.0462	pCi/Sample	U	0.291	0.173	0.173
AMD002	29-Jul-16	Protactinium-233	HASL 300, 4.5.2.3	-0.322	pCi/sample	U	5.69	3.35	3.35
AMD002	29-Jul-16	Technetium-99	HASL 300, Tc-02-RC M	-31.6	pCi/Sample	U	84.2	47.7	47.7
AMD002	29-Jul-16	Thorium-234	HASL 300, 4.5.2.3	92.8	pCi/sample	U	125	142	143
AMD002	29-Jul-16	Uranium-234	HASL 300, U-02-RC M	1.9	pCi/Sample		0.262	0.643	0.69
AMD002	29-Jul-16	Uranium-235	HASL 300, U-02-RC M	0.0512	pCi/Sample	U	0.323	0.192	0.192
AMD002	29-Jul-16	Uranium-238	HASL 300, U-02-RC M	1.72	pCi/Sample		0.302	0.616	0.657
AMD002	29-Jul-16	Uranium-238	HASL 300, 4.5.2.3	92.8	pCi/sample	U	125	142	143
AMD002	27-Oct-16	Americium-241	HASL 300, 4.5.2.3	0.411	pCi/sample	U	3.23	1.73	1.74
AMD002	27-Oct-16	Neptunium-237	HASL 300, 4.5.2.3	-2.2	pCi/sample	U	4.93	3.09	3.26
AMD002	27-Oct-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.0306	pCi/Sample	U	0.353	0.135	0.136
AMD002	27-Oct-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0153	pCi/Sample	U	0.305	0.132	0.132
AMD002	27-Oct-16	Protactinium-233	HASL 300, 4.5.2.3	-2.2	pCi/sample	U	4.93	3.09	3.26
AMD002	27-Oct-16	Technetium-99	HASL 300, Tc-02-RC M	26.3	pCi/Sample	U	73.7	43.3	43.4
AMD002	27-Oct-16	Thorium-234	HASL 300, 4.5.2.3	-38.2	pCi/sample	U	48.2	35.9	40.8
AMD002	27-Oct-16	Uranium-234	HASL 300, U-02-RC M	2.58	pCi/Sample		0.426	0.894	0.97
AMD002	27-Oct-16	Uranium-235	HASL 300, U-02-RC M	0.57	pCi/Sample		0.285	0.495	0.502
AMD002	27-Oct-16	Uranium-238	HASL 300, 4.5.2.3	-38.2	pCi/sample	U	48.2	35.9	40.8
AMD002	27-Oct-16	Uranium-238	HASL 300, U-02-RC M	2.08	pCi/Sample		0.231	0.798	0.854
AMD002	24-Jan-17	Americium-241	HASL 300, 4.5.2.3	3.66	pCi/sample	U	14.3	9.11	9.26
AMD002	24-Jan-17	Neptunium-237	HASL 300, 4.5.2.3	1.95	pCi/sample	U	5.58	3.05	3.18
AMD002	24-Jan-17	Plutonium-238	HASL 300, Pu-11-RC M	0.154	pCi/Sample	U	1.02	0.536	0.537
AMD002	24-Jan-17	Plutonium-239/240	HASL 300, Pu-11-RC M	0.204	pCi/Sample	U	0.547	0.361	0.362
AMD002	24-Jan-17	Protactinium-233	HASL 300, 4.5.2.3	1.95	pCi/sample	U	5.58	3.05	3.18
AMD002	24-Jan-17	Technetium-99	HASL 300, Tc-02-RC M	56	pCi/Sample	U	78	47.1	47.4
AMD002	24-Jan-17	Thorium-234	HASL 300, 4.5.2.3	15.6	pCi/sample	U	159	185	185
AMD002	24-Jan-17	Uranium-234	HASL 300, U-02-RC M	0.914	pCi/Sample		0.42	0.526	0.543
AMD002	24-Jan-17	Uranium-235	HASL 300, U-02-RC M	0.0851	pCi/Sample	U	0.255	0.239	0.239
AMD002	24-Jan-17	Uranium-238	HASL 300, 4.5.2.3	15.6	pCi/sample	U	159	185	185
AMD002	24-Jan-17	Uranium-238	HASL 300, U-02-RC M	1.43	pCi/Sample		0.577	0.669	0.7
AMD012	22-Apr-16	Americium-241	HASL 300, 4.5.2.3	-0.063	pCi/sample	U	10.2	6.56	6.56
AMD012	22-Apr-16	Neptunium-237	HASL 300, 4.5.2.3	-0.684	pCi/sample	U	4.34	2.59	2.61
AMD012	22-Apr-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.0469	pCi/Sample	U	0.541	0.207	0.208

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Table A.2. Ambient Air Monitoring 2016 Individual Sample Isotopic Concentrations (Continued)

STA_NAME	D_COLLECTED	CHEMICAL_NAME	ANA_METHOD	RESULTS	UNITS	RSLTQUAL	DETECT_LIMIT	RAD_ERR	TPU
AMD012	22-Apr-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0703	pCi/Sample	U	0.596	0.212	0.213
AMD012	22-Apr-16	Protactinium-233	HASL 300, 4.5.2.3	-0.684	pCi/sample	U	4.34	2.59	2.61
AMD012	22-Apr-16	Technetium-99	HASL 300, Tc-02-RC M	34.4	pCi/Sample	U	55.1	32.9	33.1
AMD012	22-Apr-16	Thorium-234	HASL 300, 4.5.2.3	-138	pCi/sample	U	107	98.4	121
AMD012	22-Apr-16	Uranium-234	HASL 300, U-02-RC M	1.23	pCi/Sample		0.528	0.683	0.708
AMD012	22-Apr-16	Uranium-235	HASL 300, U-02-RC M	0.214	pCi/Sample	U	0.321	0.366	0.368
AMD012	22-Apr-16	Uranium-238	HASL 300, U-02-RC M	2.12	pCi/Sample		0.479	0.867	0.925
AMD012	22-Apr-16	Uranium-238	HASL 300, 4.5.2.3	-138	pCi/sample	U	107	98.4	121
AMD012	29-Jul-16	Americium-241	HASL 300, 4.5.2.3	-6.82	pCi/sample	U	11.5	7.45	8.09
AMD012	29-Jul-16	Neptunium-237	HASL 300, 4.5.2.3	1.37	pCi/sample	U	4.32	2.54	2.62
AMD012	29-Jul-16	Plutonium-238	HASL 300, Pu-11-RC M	0.145	pCi/Sample	U	0.694	0.4	0.401
AMD012	29-Jul-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.286	pCi/Sample	U	0.629	0.454	0.457
AMD012	29-Jul-16	Protactinium-233	HASL 300, 4.5.2.3	1.37	pCi/sample	U	4.32	2.54	2.62
AMD012	29-Jul-16	Technetium-99	HASL 300, Tc-02-RC M	-21.3	pCi/Sample	U	83.9	47.9	47.9
AMD012	29-Jul-16	Thorium-234	HASL 300, 4.5.2.3	6.68	pCi/sample	U	94.4	107	107
AMD012	29-Jul-16	Uranium-234	HASL 300, U-02-RC M	1.96	pCi/Sample		0.326	0.732	0.784
AMD012	29-Jul-16	Uranium-235	HASL 300, U-02-RC M	-0.0202	pCi/Sample	U	0.403	0.174	0.175
AMD012	29-Jul-16	Uranium-238	HASL 300, 4.5.2.3	6.68	pCi/sample	U	94.4	107	107
AMD012	29-Jul-16	Uranium-238	HASL 300, U-02-RC M	2.04	pCi/Sample		0.204	0.743	0.799
AMD012	27-Oct-16	Americium-241	HASL 300, 4.5.2.3	1.98	pCi/sample	U	10.2	6.12	6.19
AMD012	27-Oct-16	Neptunium-237	HASL 300, 4.5.2.3	1.56	pCi/sample	U	3.78	3.55	3.62
AMD012	27-Oct-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.111	pCi/Sample	U	0.51	0.156	0.156
AMD012	27-Oct-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.126	pCi/Sample	U	0.531	0.159	0.159
AMD012	27-Oct-16	Protactinium-233	HASL 300, 4.5.2.3	1.56	pCi/sample	U	3.78	3.55	3.62
AMD012	27-Oct-16	Technetium-99	HASL 300, Tc-02-RC M	17	pCi/Sample	U	71.5	41.7	41.8
AMD012	27-Oct-16	Thorium-234	HASL 300, 4.5.2.3	7.97	pCi/sample	U	93.7	107	107
AMD012	27-Oct-16	Uranium-234	HASL 300, U-02-RC M	1.95	pCi/Sample		0.358	0.682	0.73
AMD012	27-Oct-16	Uranium-235	HASL 300, U-02-RC M	0.145	pCi/Sample	U	0.217	0.248	0.249
AMD012	27-Oct-16	Uranium-238	HASL 300, U-02-RC M	1.74	pCi/Sample		0.281	0.641	0.682
AMD012	27-Oct-16	Uranium-238	HASL 300, 4.5.2.3	7.97	pCi/sample	U	93.7	107	107
AMD012	24-Jan-17	Americium-241	HASL 300, 4.5.2.3	0.848	pCi/sample	U	7.77	4.64	4.66
AMD012	24-Jan-17	Neptunium-237	HASL 300, 4.5.2.3	-0.682	pCi/sample	U	3.44	2.12	2.15
AMD012	24-Jan-17	Plutonium-238	HASL 300, Pu-11-RC M	-0.0239	pCi/Sample	U	0.477	0.206	0.207
AMD012	24-Jan-17	Plutonium-239/240	HASL 300, Pu-11-RC M	0.0755	pCi/Sample	U	0.477	0.283	0.284
AMD012	24-Jan-17	Protactinium-233	HASL 300, 4.5.2.3	-0.682	pCi/sample	U	3.44	2.12	2.15
AMD012	24-Jan-17	Technetium-99	HASL 300, Tc-02-RC M	-20.1	pCi/Sample	U	76.9	43	43
AMD012	24-Jan-17	Thorium-234	HASL 300, 4.5.2.3	2.92	pCi/sample	U	59.5	85.1	85.1
AMD012	24-Jan-17	Uranium-234	HASL 300, U-02-RC M	1.44	pCi/Sample		0.388	0.647	0.679
AMD012	24-Jan-17	Uranium-235	HASL 300, U-02-RC M	0.26	pCi/Sample		0.26	0.342	0.344
AMD012	24-Jan-17	Uranium-238	HASL 300, U-02-RC M	1.07	pCi/Sample		0.428	0.57	0.591
AMD012	24-Jan-17	Uranium-238	HASL 300, 4.5.2.3	2.92	pCi/sample	U	59.5	85.1	85.1
AMD015	22-Apr-16	Americium-241	HASL 300, 4.5.2.3	-1.55	pCi/sample	U	9.02	5.3	5.35
AMD015	22-Apr-16	Neptunium-237	HASL 300, 4.5.2.3	-0.382	pCi/sample	U	7.76	4.53	4.53
AMD015	22-Apr-16	Plutonium-238	HASL 300, Pu-11-RC M	0	pCi/Sample	U	0.282	0.189	0.19
AMD015	22-Apr-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.259	pCi/Sample	U	0.45	0.373	0.375
AMD015	22-Apr-16	Protactinium-233	HASL 300, 4.5.2.3	-0.382	pCi/sample	U	7.76	4.53	4.53
AMD015	22-Apr-16	Technetium-99	HASL 300, Tc-02-RC M	41.2	pCi/Sample	U	52.4	31.6	31.9

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Table A.2. Ambient Air Monitoring 2016 Individual Sample Isotopic Concentrations (Continued)

STA_NAME	D_COLLECTED	CHEMICAL_NAME	ANA_METHOD	RESULTS	UNITS	RSLTQUAL	DETECT_LIMIT	RAD_ERR	TPU
AMD015	22-Apr-16	Thorium-234	HASL 300, 4.5.2.3	-46.3	pCi/sample	U	96.1	93	95.9
AMD015	22-Apr-16	Uranium-234	HASL 300, U-02-RC M	2.23	pCi/Sample		0.436	0.755	0.813
AMD015	22-Apr-16	Uranium-235	HASL 300, U-02-RC M	0.194	pCi/Sample	U	0.426	0.308	0.309
AMD015	22-Apr-16	Uranium-238	HASL 300, 4.5.2.3	-46.3	pCi/sample	U	96.1	93	95.9
AMD015	22-Apr-16	Uranium-238	HASL 300, U-02-RC M	2.12	pCi/Sample		0.41	0.735	0.788
AMD015	29-Jul-16	Americium-241	HASL 300, 4.5.2.3	-7.54	pCi/sample	U	6.19	3.92	5.23
AMD015	29-Jul-16	Neptunium-237	HASL 300, 4.5.2.3	-0.0322	pCi/sample	U	4.1	2.39	2.39
AMD015	29-Jul-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.03	pCi/Sample	U	0.505	0.207	0.208
AMD015	29-Jul-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.0873	pCi/Sample	U	0.417	0.24	0.241
AMD015	29-Jul-16	Protactinium-233	HASL 300, 4.5.2.3	-0.0322	pCi/sample	U	4.1	2.39	2.39
AMD015	29-Jul-16	Technetium-99	HASL 300, Tc-02-RC M	-9.6	pCi/Sample	U	77	44.3	44.3
AMD015	29-Jul-16	Thorium-234	HASL 300, 4.5.2.3	1.38	pCi/sample	U	72.7	61.9	61.9
AMD015	29-Jul-16	Uranium-234	HASL 300, U-02-RC M	1.88	pCi/Sample		0.336	0.728	0.778
AMD015	29-Jul-16	Uranium-235	HASL 300, U-02-RC M	0.347	pCi/Sample		0.26	0.382	0.385
AMD015	29-Jul-16	Uranium-238	HASL 300, U-02-RC M	2.16	pCi/Sample		0.336	0.779	0.84
AMD015	29-Jul-16	Uranium-238	HASL 300, 4.5.2.3	1.38	pCi/sample	U	72.7	61.9	61.9
AMD015	27-Oct-16	Americium-241	HASL 300, 4.5.2.3	5.99	pCi/sample	U	6.48	5.69	5.71
AMD015	27-Oct-16	Neptunium-237	HASL 300, 4.5.2.3	0.32	pCi/sample	U	5.13	2.83	2.83
AMD015	27-Oct-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.0405	pCi/Sample	U	0.343	0.122	0.122
AMD015	27-Oct-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0	pCi/Sample	U	0.168	0.113	0.113
AMD015	27-Oct-16	Protactinium-233	HASL 300, 4.5.2.3	0.32	pCi/sample	U	5.13	2.83	2.83
AMD015	27-Oct-16	Technetium-99	HASL 300, Tc-02-RC M	17.4	pCi/Sample	U	56.2	32.9	33
AMD015	27-Oct-16	Thorium-234	HASL 300, 4.5.2.3	22.8	pCi/sample	U	57.1	75.4	75.6
AMD015	27-Oct-16	Uranium-234	HASL 300, U-02-RC M	2.21	pCi/Sample		0.334	0.785	0.846
AMD015	27-Oct-16	Uranium-235	HASL 300, U-02-RC M	0.172	pCi/Sample	U	0.258	0.295	0.296
AMD015	27-Oct-16	Uranium-238	HASL 300, 4.5.2.3	22.8	pCi/sample	U	57.1	75.4	75.6
AMD015	27-Oct-16	Uranium-238	HASL 300, U-02-RC M	2.16	pCi/Sample		0.209	0.772	0.831
AMD015	24-Jan-17	Americium-241	HASL 300, 4.5.2.3	-0.289	pCi/sample	U	9.3	5.78	5.78
AMD015	24-Jan-17	Neptunium-237	HASL 300, 4.5.2.3	-1.28	pCi/sample	U	4.69	2.92	2.98
AMD015	24-Jan-17	Plutonium-238	HASL 300, Pu-11-RC M	-0.078	pCi/Sample	U	0.536	0.181	0.181
AMD015	24-Jan-17	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0975	pCi/Sample	U	0.57	0.185	0.185
AMD015	24-Jan-17	Protactinium-233	HASL 300, 4.5.2.3	-1.28	pCi/sample	U	4.69	2.92	2.98
AMD015	24-Jan-17	Technetium-99	HASL 300, Tc-02-RC M	22.4	pCi/Sample	U	80.6	47.1	47.1
AMD015	24-Jan-17	Thorium-234	HASL 300, 4.5.2.3	4.47	pCi/sample	U	106	118	118
AMD015	24-Jan-17	Uranium-234	HASL 300, U-02-RC M	1.45	pCi/Sample		0.531	0.616	0.646
AMD015	24-Jan-17	Uranium-235	HASL 300, U-02-RC M	0.0541	pCi/Sample	U	0.341	0.203	0.203
AMD015	24-Jan-17	Uranium-238	HASL 300, 4.5.2.3	4.47	pCi/sample	U	106	118	118
AMD015	24-Jan-17	Uranium-238	HASL 300, U-02-RC M	1.2	pCi/Sample		0.276	0.531	0.555
AMD57	22-Apr-16	Americium-241	HASL 300, 4.5.2.3	4.66	pCi/sample	U	10.1	5.92	6.31
AMD57	22-Apr-16	Neptunium-237	HASL 300, 4.5.2.3	-0.606	pCi/sample	U	4.5	2.61	2.62
AMD57	22-Apr-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.04	pCi/Sample	U	0.462	0.177	0.177
AMD57	22-Apr-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.0633	pCi/Sample	U	0.399	0.237	0.238
AMD57	22-Apr-16	Protactinium-233	HASL 300, 4.5.2.3	-0.606	pCi/sample	U	4.5	2.61	2.62
AMD57	22-Apr-16	Technetium-99	HASL 300, Tc-02-RC M	25.9	pCi/Sample	U	52.2	31	31.2
AMD57	22-Apr-16	Thorium-234	HASL 300, 4.5.2.3	38.1	pCi/sample	U	94	98.4	100
AMD57	22-Apr-16	Uranium-234	HASL 300, U-02-RC M	1.97	pCi/Sample		0.384	0.71	0.757
AMD57	22-Apr-16	Uranium-235	HASL 300, U-02-RC M	0.351	pCi/Sample	U	0.43	0.378	0.381

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Table A.2. Ambient Air Monitoring 2016 Individual Sample Isotopic Concentrations (Continued)

STA_NAME	D_COLLECTED	CHEMICAL_NAME	ANA_METHOD	RESULTS	UNITS	RSLTQUAL	DETECT_LIMIT	RAD_ERR	TPU
AMD57	22-Apr-16	Uranium-238	HASL 300, U-02-RC M	1.86	pCi/Sample		0.465	0.701	0.744
AMD57	22-Apr-16	Uranium-238	HASL 300, 4.5.2.3	38.1	pCi/sample	U	94	98.4	100
AMD57	29-Jul-16	Americium-241	HASL 300, 4.5.2.3	2.46	pCi/sample	U	15	9.52	9.58
AMD57	29-Jul-16	Neptunium-237	HASL 300, 4.5.2.3	0.568	pCi/sample	U	5.71	3.33	3.34
AMD57	29-Jul-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.0251	pCi/Sample	U	0.29	0.111	0.111
AMD57	29-Jul-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0377	pCi/Sample	U	0.32	0.114	0.114
AMD57	29-Jul-16	Protactinium-233	HASL 300, 4.5.2.3	0.568	pCi/sample	U	5.71	3.33	3.34
AMD57	29-Jul-16	Technetium-99	HASL 300, Tc-02-RC M	-9.2	pCi/Sample	U	77.7	44.7	44.7
AMD57	29-Jul-16	Thorium-234	HASL 300, 4.5.2.3	14.7	pCi/sample	U	122	140	140
AMD57	29-Jul-16	Uranium-234	HASL 300, U-02-RC M	2.29	pCi/Sample		0.461	0.882	0.95
AMD57	29-Jul-16	Uranium-235	HASL 300, U-02-RC M	0.206	pCi/Sample	U	0.309	0.353	0.354
AMD57	29-Jul-16	Uranium-238	HASL 300, U-02-RC M	1.48	pCi/Sample		0.399	0.714	0.75
AMD57	29-Jul-16	Uranium-238	HASL 300, 4.5.2.3	14.7	pCi/sample	U	122	140	140
AMD57	27-Oct-16	Americium-241	HASL 300, 4.5.2.3	-0.0327	pCi/sample	U	5.07	3.17	3.17
AMD57	27-Oct-16	Neptunium-237	HASL 300, 4.5.2.3	-0.298	pCi/sample	U	3.72	2.11	2.11
AMD57	27-Oct-16	Plutonium-238	HASL 300, Pu-11-RC M	0.157	pCi/Sample	U	0.235	0.269	0.27
AMD57	27-Oct-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.0627	pCi/Sample	U	0.55	0.281	0.281
AMD57	27-Oct-16	Protactinium-233	HASL 300, 4.5.2.3	-0.298	pCi/sample	U	3.72	2.11	2.11
AMD57	27-Oct-16	Technetium-99	HASL 300, Tc-02-RC M	23.4	pCi/Sample	U	73.4	43.1	43.1
AMD57	27-Oct-16	Thorium-234	HASL 300, 4.5.2.3	0.446	pCi/sample	U	66.8	78.9	78.9
AMD57	27-Oct-16	Uranium-234	HASL 300, U-02-RC M	1.98	pCi/Sample		0.45	0.726	0.777
AMD57	27-Oct-16	Uranium-235	HASL 300, U-02-RC M	0.14	pCi/Sample	U	0.38	0.274	0.275
AMD57	27-Oct-16	Uranium-238	HASL 300, 4.5.2.3	0.446	pCi/sample	U	66.8	78.9	78.9
AMD57	27-Oct-16	Uranium-238	HASL 300, U-02-RC M	2.07	pCi/Sample		0.392	0.735	0.79
AMD57	24-Jan-17	Americium-241	HASL 300, 4.5.2.3	13.9	pCi/sample	U	17.6	10.4	12.3
AMD57	24-Jan-17	Neptunium-237	HASL 300, 4.5.2.3	-0.202	pCi/sample	U	5.15	2.89	2.89
AMD57	24-Jan-17	Plutonium-238	HASL 300, Pu-11-RC M	-0.0701	pCi/Sample	U	0.734	0.302	0.302
AMD57	24-Jan-17	Plutonium-239/240	HASL 300, Pu-11-RC M	0.0446	pCi/Sample	U	0.588	0.288	0.288
AMD57	24-Jan-17	Protactinium-233	HASL 300, 4.5.2.3	-0.202	pCi/sample	U	5.15	2.89	2.89
AMD57	24-Jan-17	Technetium-99	HASL 300, Tc-02-RC M	11	pCi/Sample	U	79.8	46.1	46.1
AMD57	24-Jan-17	Thorium-234	HASL 300, 4.5.2.3	17.7	pCi/sample	U	125	149	150
AMD57	24-Jan-17	Uranium-234	HASL 300, U-02-RC M	1.34	pCi/Sample		0.201	0.601	0.63
AMD57	24-Jan-17	Uranium-235	HASL 300, U-02-RC M	0.0628	pCi/Sample	U	0.396	0.236	0.236
AMD57	24-Jan-17	Uranium-238	HASL 300, 4.5.2.3	17.7	pCi/sample	U	125	149	150
AMD57	24-Jan-17	Uranium-238	HASL 300, U-02-RC M	0.853	pCi/Sample		0.32	0.492	0.507
AMD612	22-Apr-16	Americium-241	HASL 300, 4.5.2.3	-1.57	pCi/sample	U	2.95	1.77	1.91
AMD612	22-Apr-16	Neptunium-237	HASL 300, 4.5.2.3	-0.16	pCi/sample	U	5	2.98	2.98
AMD612	22-Apr-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.0425	pCi/Sample	U	0.491	0.188	0.188
AMD612	22-Apr-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.046	pCi/Sample	U	0.49	0.256	0.256
AMD612	22-Apr-16	Protactinium-233	HASL 300, 4.5.2.3	-0.16	pCi/sample	U	5	2.98	2.98
AMD612	22-Apr-16	Technetium-99	HASL 300, Tc-02-RC M	26.1	pCi/Sample	U	47.3	28.2	28.3
AMD612	22-Apr-16	Thorium-234	HASL 300, 4.5.2.3	-9.87	pCi/sample	U	43.5	36.3	36.6
AMD612	22-Apr-16	Uranium-234	HASL 300, U-02-RC M	2.39	pCi/Sample		0.563	0.894	0.961
AMD612	22-Apr-16	Uranium-235	HASL 300, U-02-RC M	0.151	pCi/Sample	U	0.549	0.346	0.347
AMD612	22-Apr-16	Uranium-238	HASL 300, 4.5.2.3	-9.87	pCi/sample	U	43.5	36.3	36.6
AMD612	22-Apr-16	Uranium-238	HASL 300, U-02-RC M	1.89	pCi/Sample		0.444	0.789	0.837
AMD612	29-Jul-16	Americium-241	HASL 300, 4.5.2.3	1.69	pCi/sample	U	2.91	2.18	2.32

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Table A.2. Ambient Air Monitoring 2016 Individual Sample Isotopic Concentrations (Continued)

STA_NAME	D_COLLECTED	CHEMICAL_NAME	ANA_METHOD	RESULTS	UNITS	RSLTQUAL	DETECT_LIMIT	RAD_ERR	TPU
AMD612	29-Jul-16	Neptunium-237	HASL 300, 4.5.2.3	2.91	pCi/sample	U	4.58	2.53	2.86
AMD612	29-Jul-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.0461	pCi/Sample	U	0.391	0.139	0.14
AMD612	29-Jul-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0614	pCi/Sample	U	0.422	0.142	0.143
AMD612	29-Jul-16	Protactinium-233	HASL 300, 4.5.2.3	2.91	pCi/sample	U	4.58	2.53	2.86
AMD612	29-Jul-16	Technetium-99	HASL 300, Tc-02-RC M	-29.4	pCi/Sample	U	82.6	46.9	46.9
AMD612	29-Jul-16	Thorium-234	HASL 300, 4.5.2.3	12.3	pCi/sample	U	28.1	35.1	35.2
AMD612	29-Jul-16	Uranium-234	HASL 300, U-02-RC M	2.95	pCi/Sample		0.834	1.22	1.33
AMD612	29-Jul-16	Uranium-235	HASL 300, U-02-RC M	-0.0706	pCi/Sample	U	0.814	0.312	0.313
AMD612	29-Jul-16	Uranium-238	HASL 300, U-02-RC M	1.76	pCi/Sample		0.834	0.971	1.02
AMD612	29-Jul-16	Uranium-238	HASL 300, 4.5.2.3	12.3	pCi/sample	U	28.1	35.1	35.2
AMD612	27-Oct-16	Americium-241	HASL 300, 4.5.2.3	-1.63	pCi/sample	U	7.08	4.07	4.14
AMD612	27-Oct-16	Neptunium-237	HASL 300, 4.5.2.3	1.35	pCi/sample	U	6.23	3.41	3.46
AMD612	27-Oct-16	Plutonium-238	HASL 300, Pu-11-RC M	0.111	pCi/Sample	U	0.434	0.253	0.253
AMD612	27-Oct-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.089	pCi/Sample	U	0.457	0.143	0.144
AMD612	27-Oct-16	Protactinium-233	HASL 300, 4.5.2.3	1.35	pCi/sample	U	6.23	3.41	3.46
AMD612	27-Oct-16	Technetium-99	HASL 300, Tc-02-RC M	32.2	pCi/Sample	U	71.1	42.1	42.2
AMD612	27-Oct-16	Thorium-234	HASL 300, 4.5.2.3	-34.1	pCi/sample	U	84.2	90.9	92.6
AMD612	27-Oct-16	Uranium-234	HASL 300, U-02-RC M	2.05	pCi/Sample		0.338	0.654	0.706
AMD612	27-Oct-16	Uranium-235	HASL 300, U-02-RC M	0.317	pCi/Sample		0.19	0.306	0.309
AMD612	27-Oct-16	Uranium-238	HASL 300, 4.5.2.3	-34.1	pCi/sample	U	84.2	90.9	92.6
AMD612	27-Oct-16	Uranium-238	HASL 300, U-02-RC M	1.81	pCi/Sample		0.313	0.613	0.657
AMD612	24-Jan-17	Americium-241	HASL 300, 4.5.2.3	-3.89	pCi/sample	U	13.6	8.13	8.33
AMD612	24-Jan-17	Neptunium-237	HASL 300, 4.5.2.3	-0.313	pCi/sample	U	4.16	2.41	2.42
AMD612	24-Jan-17	Plutonium-238	HASL 300, Pu-11-RC M	-0.0358	pCi/Sample	U	0.413	0.158	0.159
AMD612	24-Jan-17	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0895	pCi/Sample	U	0.523	0.17	0.17
AMD612	24-Jan-17	Protactinium-233	HASL 300, 4.5.2.3	-0.313	pCi/sample	U	4.16	2.41	2.42
AMD612	24-Jan-17	Technetium-99	HASL 300, Tc-02-RC M	34.3	pCi/Sample	U	80.7	47.6	47.8
AMD612	24-Jan-17	Thorium-234	HASL 300, 4.5.2.3	-48.7	pCi/sample	U	123	122	124
AMD612	24-Jan-17	Uranium-234	HASL 300, U-02-RC M	1.67	pCi/Sample		0.476	0.712	0.753
AMD612	24-Jan-17	Uranium-235	HASL 300, U-02-RC M	0.336	pCi/Sample	U	0.428	0.396	0.399
AMD612	24-Jan-17	Uranium-238	HASL 300, 4.5.2.3	-48.7	pCi/sample	U	123	122	124
AMD612	24-Jan-17	Uranium-238	HASL 300, U-02-RC M	0.908	pCi/Sample		0.535	0.556	0.572
AMD746S	22-Apr-16	Americium-241	HASL 300, 4.5.2.3	-0.0975	pCi/sample	U	7.83	4.91	4.91
AMD746S	22-Apr-16	Neptunium-237	HASL 300, 4.5.2.3	-0.985	pCi/sample	U	4.6	2.65	2.69
AMD746S	22-Apr-16	Plutonium-238	HASL 300, Pu-11-RC M	0.065	pCi/Sample	U	0.41	0.244	0.244
AMD746S	22-Apr-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.00342	pCi/Sample	U	0.563	0.253	0.254
AMD746S	22-Apr-16	Protactinium-233	HASL 300, 4.5.2.3	-0.985	pCi/sample	U	4.6	2.65	2.69
AMD746S	22-Apr-16	Technetium-99	HASL 300, Tc-02-RC M	27.3	pCi/Sample	U	46.9	28	28.1
AMD746S	22-Apr-16	Thorium-234	HASL 300, 4.5.2.3	0.64	pCi/sample	U	67.4	87.3	87.3
AMD746S	22-Apr-16	Uranium-234	HASL 300, U-02-RC M	1.58	pCi/Sample		0.367	0.625	0.66
AMD746S	22-Apr-16	Uranium-235	HASL 300, U-02-RC M	0.428	pCi/Sample		0.356	0.388	0.392
AMD746S	22-Apr-16	Uranium-238	HASL 300, U-02-RC M	1.79	pCi/Sample		0.288	0.657	0.698
AMD746S	22-Apr-16	Uranium-238	HASL 300, 4.5.2.3	0.64	pCi/sample	U	67.4	87.3	87.3
AMD746S	29-Jul-16	Americium-241	HASL 300, 4.5.2.3	-30.4	pCi/sample	U	18.6	11.8	18.2
AMD746S	29-Jul-16	Neptunium-237	HASL 300, 4.5.2.3	-2.18	pCi/sample	U	5.36	3.14	3.29
AMD746S	29-Jul-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.024	pCi/Sample	U	0.48	0.207	0.208
AMD746S	29-Jul-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.905	pCi/Sample		0.659	0.659	0.675

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Table A.2. Ambient Air Monitoring 2016 Individual Sample Isotopic Concentrations (Continued)

STA_NAME	D_COLLECTED	CHEMICAL_NAME	ANA_METHOD	RESULTS	UNITS	RSLTQUAL	DETECT_LIMIT	RAD_ERR	TPU
AMD746S	29-Jul-16	Protactinium-233	HASL 300, 4.5.2.3	-2.18	pCi/sample	U	5.36	3.14	3.29
AMD746S	29-Jul-16	Technetium-99	HASL 300, Tc-02-RC M	-24.4	pCi/Sample	U	75.5	42.9	42.9
AMD746S	29-Jul-16	Thorium-234	HASL 300, 4.5.2.3	-35.8	pCi/sample	U	168	147	148
AMD746S	29-Jul-16	Uranium-234	HASL 300, U-02-RC M	1.95	pCi/Sample		0.395	0.657	0.706
AMD746S	29-Jul-16	Uranium-235	HASL 300, U-02-RC M	0.232	pCi/Sample	U	0.366	0.294	0.296
AMD746S	29-Jul-16	Uranium-238	HASL 300, 4.5.2.3	-35.8	pCi/sample	U	168	147	148
AMD746S	29-Jul-16	Uranium-238	HASL 300, U-02-RC M	2.3	pCi/Sample		0.352	0.705	0.767
AMD746S	27-Oct-16	Americium-241	HASL 300, 4.5.2.3	-2.13	pCi/sample	U	3.64	2.45	2.64
AMD746S	27-Oct-16	Neptunium-237	HASL 300, 4.5.2.3	-0.243	pCi/sample	U	5.46	3.13	3.13
AMD746S	27-Oct-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.0695	pCi/Sample	U	0.502	0.188	0.189
AMD746S	27-Oct-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0144	pCi/Sample	U	0.287	0.124	0.124
AMD746S	27-Oct-16	Protactinium-233	HASL 300, 4.5.2.3	-0.243	pCi/sample	U	5.46	3.13	3.13
AMD746S	27-Oct-16	Technetium-99	HASL 300, Tc-02-RC M	21.3	pCi/Sample	U	61.6	36.2	36.3
AMD746S	27-Oct-16	Thorium-234	HASL 300, 4.5.2.3	0.984	pCi/sample	U	59	64.8	64.8
AMD746S	27-Oct-16	Uranium-234	HASL 300, U-02-RC M	2.89	pCi/Sample		0.373	0.839	0.927
AMD746S	27-Oct-16	Uranium-235	HASL 300, U-02-RC M	0.226	pCi/Sample		0.226	0.298	0.299
AMD746S	27-Oct-16	Uranium-238	HASL 300, 4.5.2.3	0.984	pCi/sample	U	59	64.8	64.8
AMD746S	27-Oct-16	Uranium-238	HASL 300, U-02-RC M	3.11	pCi/Sample		0.183	0.863	0.962
AMD746S	24-Jan-17	Americium-241	HASL 300, 4.5.2.3	0	pCi/sample	UX	7.17	6.18	6.24
AMD746S	24-Jan-17	Neptunium-237	HASL 300, 4.5.2.3	2.02	pCi/sample	U	6.3	3.42	3.55
AMD746S	24-Jan-17	Plutonium-238	HASL 300, Pu-11-RC M	-0.228	pCi/Sample	U	0.883	0.259	0.26
AMD746S	24-Jan-17	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.126	pCi/Sample	U	0.738	0.239	0.24
AMD746S	24-Jan-17	Protactinium-233	HASL 300, 4.5.2.3	2.02	pCi/sample	U	6.3	3.42	3.55
AMD746S	24-Jan-17	Technetium-99	HASL 300, Tc-02-RC M	54.6	pCi/Sample	U	80	48.1	48.5
AMD746S	24-Jan-17	Thorium-234	HASL 300, 4.5.2.3	24.9	pCi/sample	U	62.9	110	110
AMD746S	24-Jan-17	Uranium-234	HASL 300, U-02-RC M	1.34	pCi/Sample		0.445	0.579	0.607
AMD746S	24-Jan-17	Uranium-235	HASL 300, U-02-RC M	0.0568	pCi/Sample	U	0.498	0.255	0.255
AMD746S	24-Jan-17	Uranium-238	HASL 300, 4.5.2.3	24.9	pCi/sample	U	62.9	110	110
AMD746S	24-Jan-17	Uranium-238	HASL 300, U-02-RC M	1.43	pCi/Sample		0.482	0.602	0.632
AMD746U	22-Apr-16	Americium-241	HASL 300, 4.5.2.3	0.408	pCi/sample	U	2.72	1.68	1.69
AMD746U	22-Apr-16	Neptunium-237	HASL 300, 4.5.2.3	0.338	pCi/sample	U	4.14	2.35	2.35
AMD746U	22-Apr-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.0691	pCi/Sample	U	0.586	0.209	0.209
AMD746U	22-Apr-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.0537	pCi/Sample	U	0.709	0.346	0.347
AMD746U	22-Apr-16	Protactinium-233	HASL 300, 4.5.2.3	0.338	pCi/sample	U	4.14	2.35	2.35
AMD746U	22-Apr-16	Technetium-99	HASL 300, Tc-02-RC M	23.2	pCi/Sample	U	49.9	29.6	29.7
AMD746U	22-Apr-16	Thorium-234	HASL 300, 4.5.2.3	21.4	pCi/sample	U	26.8	34.9	35.3
AMD746U	22-Apr-16	Uranium-234	HASL 300, U-02-RC M	1.51	pCi/Sample		0.433	0.648	0.68
AMD746U	22-Apr-16	Uranium-235	HASL 300, U-02-RC M	0.104	pCi/Sample	U	0.496	0.286	0.287
AMD746U	22-Apr-16	Uranium-238	HASL 300, 4.5.2.3	21.4	pCi/sample	U	26.8	34.9	35.3
AMD746U	22-Apr-16	Uranium-238	HASL 300, U-02-RC M	1.09	pCi/Sample		0.486	0.568	0.587
AMD746U	29-Jul-16	Americium-241	HASL 300, 4.5.2.3	-3.26	pCi/sample	U	9.62	8.09	8.23
AMD746U	29-Jul-16	Neptunium-237	HASL 300, 4.5.2.3	0.21	pCi/sample	U	4.37	2.51	2.51
AMD746U	29-Jul-16	Plutonium-238	HASL 300, Pu-11-RC M	2.16	pCi/Sample		0.483	0.838	0.896
AMD746U	29-Jul-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0569	pCi/Sample	U	0.483	0.172	0.172
AMD746U	29-Jul-16	Protactinium-233	HASL 300, 4.5.2.3	0.21	pCi/sample	U	4.37	2.51	2.51
AMD746U	29-Jul-16	Technetium-99	HASL 300, Tc-02-RC M	-27.7	pCi/Sample	U	69.4	39.3	39.3
AMD746U	29-Jul-16	Thorium-234	HASL 300, 4.5.2.3	-31.6	pCi/sample	U	91.5	69.5	71.4

U = Indicates the analyte was analyzed for but not detected.

Table A.2. Ambient Air Monitoring 2016 Individual Sample Isotopic Concentrations (Continued)

STA_NAME	D_COLLECTED	CHEMICAL_NAME	ANA_METHOD	RESULTS	UNITS	RSLTQUAL	DETECT_LIMIT	RAD_ERR	TPU
AMD746U	29-Jul-16	Uranium-234	HASL 300, U-02-RC M	2.33	pCi/Sample		0.606	0.864	0.932
AMD746U	29-Jul-16	Uranium-235	HASL 300, U-02-RC M	0.0297	pCi/Sample	U	0.718	0.338	0.338
AMD746U	29-Jul-16	Uranium-238	HASL 300, 4.5.2.3	-31.6	pCi/sample	U	91.5	69.5	71.4
AMD746U	29-Jul-16	Uranium-238	HASL 300, U-02-RC M	2.68	pCi/Sample		0.526	0.91	0.996
AMD746U	27-Oct-16	Americium-241	HASL 300, 4.5.2.3	0.0483	pCi/sample	U	4.02	2.16	2.16
AMD746U	27-Oct-16	Neptunium-237	HASL 300, 4.5.2.3	1.64	pCi/sample	U	5.97	3.35	3.43
AMD746U	27-Oct-16	Plutonium-238	HASL 300, Pu-11-RC M	0.0773	pCi/Sample	U	0.281	0.177	0.178
AMD746U	27-Oct-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.0386	pCi/Sample	U	0.243	0.145	0.145
AMD746U	27-Oct-16	Protactinium-233	HASL 300, 4.5.2.3	1.64	pCi/sample	U	5.97	3.35	3.43
AMD746U	27-Oct-16	Technetium-99	HASL 300, Tc-02-RC M	12.3	pCi/Sample	U	64.1	37.3	37.3
AMD746U	27-Oct-16	Thorium-234	HASL 300, 4.5.2.3	-56.9	pCi/sample	U	58.4	38.8	48.5
AMD746U	27-Oct-16	Uranium-234	HASL 300, U-02-RC M	1.79	pCi/Sample		0.381	0.605	0.647
AMD746U	27-Oct-16	Uranium-235	HASL 300, U-02-RC M	0.124	pCi/Sample	U	0.4	0.247	0.247
AMD746U	27-Oct-16	Uranium-238	HASL 300, 4.5.2.3	-56.9	pCi/sample	U	58.4	38.8	48.5
AMD746U	27-Oct-16	Uranium-238	HASL 300, U-02-RC M	2.61	pCi/Sample		0.324	0.716	0.79
AMD746U	24-Jan-17	Americium-241	HASL 300, 4.5.2.3	1.22	pCi/sample	U	2.3	1.31	1.42
AMD746U	24-Jan-17	Neptunium-237	HASL 300, 4.5.2.3	0.167	pCi/sample	U	3.45	2.07	2.08
AMD746U	24-Jan-17	Plutonium-238	HASL 300, Pu-11-RC M	-0.182	pCi/Sample	U	0.764	0.229	0.229
AMD746U	24-Jan-17	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0908	pCi/Sample	U	0.623	0.21	0.211
AMD746U	24-Jan-17	Protactinium-233	HASL 300, 4.5.2.3	0.167	pCi/sample	U	3.45	2.07	2.08
AMD746U	24-Jan-17	Technetium-99	HASL 300, Tc-02-RC M	26.6	pCi/Sample	U	60	35.5	35.6
AMD746U	24-Jan-17	Thorium-234	HASL 300, 4.5.2.3	5.47	pCi/sample	U	35.4	36.9	37
AMD746U	24-Jan-17	Uranium-234	HASL 300, U-02-RC M	1.05	pCi/Sample		0.534	0.604	0.623
AMD746U	24-Jan-17	Uranium-235	HASL 300, U-02-RC M	-0.0188	pCi/Sample	U	0.66	0.283	0.283
AMD746U	24-Jan-17	Uranium-238	HASL 300, 4.5.2.3	5.47	pCi/sample	U	35.4	36.9	37
AMD746U	24-Jan-17	Uranium-238	HASL 300, U-02-RC M	1.03	pCi/Sample		0.563	0.605	0.623
AMDBCP	22-Apr-16	Americium-241	HASL 300, 4.5.2.3	1.31	pCi/sample	U	8.78	5.08	5.12
AMDBCP	22-Apr-16	Neptunium-237	HASL 300, 4.5.2.3	-0.598	pCi/sample	U	4.81	3.23	3.24
AMDBCP	22-Apr-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.0238	pCi/Sample	U	0.476	0.205	0.206
AMDBCP	22-Apr-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.00396	pCi/Sample	U	0.653	0.294	0.294
AMDBCP	22-Apr-16	Protactinium-233	HASL 300, 4.5.2.3	-0.598	pCi/sample	U	4.81	3.23	3.24
AMDBCP	22-Apr-16	Technetium-99	HASL 300, Tc-02-RC M	34.7	pCi/Sample	U	55.5	33.2	33.4
AMDBCP	22-Apr-16	Thorium-234	HASL 300, 4.5.2.3	-10.7	pCi/sample	U	88	81.2	81.4
AMDBCP	22-Apr-16	Uranium-234	HASL 300, U-02-RC M	1.55	pCi/Sample		0.532	0.696	0.73
AMDBCP	22-Apr-16	Uranium-235	HASL 300, U-02-RC M	0.135	pCi/Sample	U	0.492	0.31	0.311
AMDBCP	22-Apr-16	Uranium-238	HASL 300, U-02-RC M	1.19	pCi/Sample		0.398	0.601	0.624
AMDBCP	22-Apr-16	Uranium-238	HASL 300, 4.5.2.3	-10.7	pCi/sample	U	88	81.2	81.4
AMDBCP	29-Jul-16	Americium-241	HASL 300, 4.5.2.3	-0.72	pCi/sample	U	11.4	6.47	6.48
AMDBCP	29-Jul-16	Neptunium-237	HASL 300, 4.5.2.3	1.34	pCi/sample	U	5.1	2.89	2.96
AMDBCP	29-Jul-16	Plutonium-238	HASL 300, Pu-11-RC M	0.0648	pCi/Sample	U	0.409	0.243	0.243
AMDBCP	29-Jul-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.0443	pCi/Sample	U	0.472	0.246	0.246
AMDBCP	29-Jul-16	Protactinium-233	HASL 300, 4.5.2.3	1.34	pCi/sample	U	5.1	2.89	2.96
AMDBCP	29-Jul-16	Technetium-99	HASL 300, Tc-02-RC M	-48.6	pCi/Sample	U	81.5	45.6	45.6
AMDBCP	29-Jul-16	Thorium-234	HASL 300, 4.5.2.3	-21.8	pCi/sample	U	111	93.4	94
AMDBCP	29-Jul-16	Uranium-234	HASL 300, U-02-RC M	1.93	pCi/Sample		0.457	0.679	0.727
AMDBCP	29-Jul-16	Uranium-235	HASL 300, U-02-RC M	0.106	pCi/Sample	U	0.387	0.244	0.244
AMDBCP	29-Jul-16	Uranium-238	HASL 300, U-02-RC M	1.87	pCi/Sample		0.373	0.658	0.705

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Table A.2. Ambient Air Monitoring 2016 Individual Sample Isotopic Concentrations (Continued)

STA_NAME	D_COLLECTED	CHEMICAL_NAME	ANA_METHOD	RESULTS	UNITS	RSLTQUAL	DETECT_LIMIT	RAD_ERR	TPU
AMDBCP	29-Jul-16	Uranium-238	HASL 300, 4.5.2.3	-21.8	pCi/sample	U	111	93.4	94
AMDBCP	27-Oct-16	Americium-241	HASL 300, 4.5.2.3	-0.757	pCi/sample	U	3.75	2.28	2.3
AMDBCP	27-Oct-16	Neptunium-237	HASL 300, 4.5.2.3	-1.44	pCi/sample	U	5.46	3.17	3.24
AMDBCP	27-Oct-16	Plutonium-238	HASL 300, Pu-11-RC M	0.00265	pCi/Sample	U	0.436	0.196	0.196
AMDBCP	27-Oct-16	Plutonium-239/240	HASL 300, Pu-11-RC M	0.037	pCi/Sample	U	0.489	0.239	0.239
AMDBCP	27-Oct-16	Protactinium-233	HASL 300, 4.5.2.3	-1.44	pCi/sample	U	5.46	3.17	3.24
AMDBCP	27-Oct-16	Technetium-99	HASL 300, Tc-02-RC M	27.9	pCi/Sample	U	64.4	38.1	38.2
AMDBCP	27-Oct-16	Thorium-234	HASL 300, 4.5.2.3	-42.1	pCi/sample	U	58.2	55	58.9
AMDBCP	27-Oct-16	Uranium-234	HASL 300, U-02-RC M	2.01	pCi/Sample		0.353	0.72	0.772
AMDBCP	27-Oct-16	Uranium-235	HASL 300, U-02-RC M	0.0788	pCi/Sample	U	0.236	0.222	0.222
AMDBCP	27-Oct-16	Uranium-238	HASL 300, 4.5.2.3	-42.1	pCi/sample	U	58.2	55	58.9
AMDBCP	27-Oct-16	Uranium-238	HASL 300, U-02-RC M	1.76	pCi/Sample		0.353	0.675	0.717
AMDBCP	24-Jan-17	Americium-241	HASL 300, 4.5.2.3	0	pCi/sample	UX	7.62	8.04	8.07
AMDBCP	24-Jan-17	Neptunium-237	HASL 300, 4.5.2.3	-1.22	pCi/sample	U	4.39	2.51	2.57
AMDBCP	24-Jan-17	Plutonium-238	HASL 300, Pu-11-RC M	0.0908	pCi/Sample	U	0.573	0.341	0.341
AMDBCP	24-Jan-17	Plutonium-239/240	HASL 300, Pu-11-RC M	0.0621	pCi/Sample	U	0.661	0.345	0.345
AMDBCP	24-Jan-17	Protactinium-233	HASL 300, 4.5.2.3	-1.22	pCi/sample	U	4.39	2.51	2.57
AMDBCP	24-Jan-17	Technetium-99	HASL 300, Tc-02-RC M	20.7	pCi/Sample	U	66.8	39.1	39.2
AMDBCP	24-Jan-17	Thorium-234	HASL 300, 4.5.2.3	22.3	pCi/sample	U	65.8	106	106
AMDBCP	24-Jan-17	Uranium-234	HASL 300, U-02-RC M	1.66	pCi/Sample		0.433	0.656	0.692
AMDBCP	24-Jan-17	Uranium-235	HASL 300, U-02-RC M	0.192	pCi/Sample	U	0.423	0.306	0.307
AMDBCP	24-Jan-17	Uranium-238	HASL 300, U-02-RC M	0.835	pCi/Sample		0.342	0.472	0.485
AMDBCP	24-Jan-17	Uranium-238	HASL 300, 4.5.2.3	22.3	pCi/sample	U	65.8	106	106
AMDNE	22-Apr-16	Americium-241	HASL 300, 4.5.2.3	1.37	pCi/sample	U	2.68	1.62	1.74
AMDNE	22-Apr-16	Neptunium-237	HASL 300, 4.5.2.3	0.992	pCi/sample	U	4.16	2.34	2.38
AMDNE	22-Apr-16	Plutonium-238	HASL 300, Pu-11-RC M	0.134	pCi/Sample	U	0.488	0.308	0.308
AMDNE	22-Apr-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0846	pCi/Sample	U	0.58	0.196	0.196
AMDNE	22-Apr-16	Protactinium-233	HASL 300, 4.5.2.3	0.992	pCi/sample	U	4.16	2.34	2.38
AMDNE	22-Apr-16	Technetium-99	HASL 300, Tc-02-RC M	32.6	pCi/Sample	U	51.4	30.8	30.9
AMDNE	22-Apr-16	Thorium-234	HASL 300, 4.5.2.3	24	pCi/sample	U	26.4	35.3	35.7
AMDNE	22-Apr-16	Uranium-234	HASL 300, U-02-RC M	1.46	pCi/Sample		0.33	0.597	0.627
AMDNE	22-Apr-16	Uranium-235	HASL 300, U-02-RC M	0.0382	pCi/Sample	U	0.407	0.213	0.213
AMDNE	22-Apr-16	Uranium-238	HASL 300, U-02-RC M	1.46	pCi/Sample		0.33	0.597	0.627
AMDNE	22-Apr-16	Uranium-238	HASL 300, 4.5.2.3	24	pCi/sample	U	26.4	35.3	35.7
AMDNE	29-Jul-16	Americium-241	HASL 300, 4.5.2.3	-0.11	pCi/sample	U	6.46	4.33	4.33
AMDNE	29-Jul-16	Neptunium-237	HASL 300, 4.5.2.3	0.826	pCi/sample	U	4.42	2.55	2.58
AMDNE	29-Jul-16	Plutonium-238	HASL 300, Pu-11-RC M	0.04	pCi/Sample	U	0.426	0.222	0.223
AMDNE	29-Jul-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0308	pCi/Sample	U	0.667	0.287	0.288
AMDNE	29-Jul-16	Protactinium-233	HASL 300, 4.5.2.3	0.826	pCi/sample	U	4.42	2.55	2.58
AMDNE	29-Jul-16	Technetium-99	HASL 300, Tc-02-RC M	-34.9	pCi/Sample	U	75.2	42.4	42.4
AMDNE	29-Jul-16	Thorium-234	HASL 300, 4.5.2.3	34.1	pCi/sample	U	55.4	65.9	66.3
AMDNE	29-Jul-16	Uranium-234	HASL 300, U-02-RC M	2.5	pCi/Sample		0.37	0.696	0.765
AMDNE	29-Jul-16	Uranium-235	HASL 300, U-02-RC M	0.163	pCi/Sample	U	0.283	0.234	0.235
AMDNE	29-Jul-16	Uranium-238	HASL 300, 4.5.2.3	34.1	pCi/sample	U	55.4	65.9	66.3
AMDNE	29-Jul-16	Uranium-238	HASL 300, U-02-RC M	2.13	pCi/Sample		0.353	0.644	0.698
AMDNE	27-Oct-16	Americium-241	HASL 300, 4.5.2.3	-7.42	pCi/sample	U	6.65	7.51	8.25
AMDNE	27-Oct-16	Neptunium-237	HASL 300, 4.5.2.3	1.25	pCi/sample	U	4.12	2.45	2.52

U = Indicates the analyte was analyzed for but not detected.

Table A.2. Ambient Air Monitoring 2016 Individual Sample Isotopic Concentrations (Continued)

STA_NAME	D_COLLECTED	CHEMICAL_NAME	ANA_METHOD	RESULTS	UNITS	RSLTQUAL	DETECT_LIMIT	RAD_ERR	TPU
AMDNE	27-Oct-16	Plutonium-238	HASL 300, Pu-11-RC M	-0.106	pCi/Sample	U	0.446	0.133	0.134
AMDNE	27-Oct-16	Plutonium-239/240	HASL 300, Pu-11-RC M	-0.0265	pCi/Sample	U	0.306	0.117	0.117
AMDNE	27-Oct-16	Protactinium-233	HASL 300, 4.5.2.3	1.25	pCi/sample	U	4.12	2.45	2.52
AMDNE	27-Oct-16	Technetium-99	HASL 300, Tc-02-RC M	20.6	pCi/Sample	U	54.7	32.2	32.3
AMDNE	27-Oct-16	Thorium-234	HASL 300, 4.5.2.3	36.7	pCi/sample	U	57.4	81.9	82.4
AMDNE	27-Oct-16	Uranium-234	HASL 300, U-02-RC M	2.33	pCi/Sample		0.374	0.732	0.794
AMDNE	27-Oct-16	Uranium-235	HASL 300, U-02-RC M	0.211	pCi/Sample		0.211	0.277	0.278
AMDNE	27-Oct-16	Uranium-238	HASL 300, U-02-RC M	1.81	pCi/Sample		0.398	0.652	0.694
AMDNE	27-Oct-16	Uranium-238	HASL 300, 4.5.2.3	36.7	pCi/sample	U	57.4	81.9	82.4
AMDNE	24-Jan-17	Americium-241	HASL 300, 4.5.2.3	-2.48	pCi/sample	U	12.3	6.82	6.92
AMDNE	24-Jan-17	Neptunium-237	HASL 300, 4.5.2.3	-2.22	pCi/sample	U	4.26	4.04	4.16
AMDNE	24-Jan-17	Plutonium-238	HASL 300, Pu-11-RC M	0.00343	pCi/Sample	U	0.565	0.254	0.254
AMDNE	24-Jan-17	Plutonium-239/240	HASL 300, Pu-11-RC M	0.089	pCi/Sample	U	0.564	0.304	0.304
AMDNE	24-Jan-17	Protactinium-233	HASL 300, 4.5.2.3	-2.22	pCi/sample	U	4.26	4.04	4.16
AMDNE	24-Jan-17	Technetium-99	HASL 300, Tc-02-RC M	21.6	pCi/Sample	U	70.4	41.2	41.3
AMDNE	24-Jan-17	Thorium-234	HASL 300, 4.5.2.3	-106	pCi/sample	U	135	103	116
AMDNE	24-Jan-17	Uranium-234	HASL 300, U-02-RC M	1.77	pCi/Sample		0.376	0.645	0.686
AMDNE	24-Jan-17	Uranium-235	HASL 300, U-02-RC M	0.0536	pCi/Sample	U	0.338	0.201	0.201
AMDNE	24-Jan-17	Uranium-238	HASL 300, U-02-RC M	1.16	pCi/Sample		0.348	0.527	0.549
AMDNE	24-Jan-17	Uranium-238	HASL 300, 4.5.2.3	-106	pCi/sample	U	135	103	116

U = Indicates the analyte was analyzed for but not detected.

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Table A.3. Air Monitoring Flows for 2016

QUARTER	Results	Chemical Name	Station	Units	Date Collected	Project Sample ID
1	22655	Flow-total	AMD002	ft3	7-Jan-16	W14AMD0021-16
1	19753	Flow-total	AMD002	ft3	14-Jan-16	W01AMD0022-16
1	19928	Flow-total	AMD002	ft3	21-Jan-16	W02AMD0022-16
1	20010	Flow-total	AMD002	ft3	28-Jan-16	W03AMD0022-16
1	20177	Flow-total	AMD002	ft3	4-Feb-16	W04AMD0022-16
1	20097	Flow-total	AMD002	ft3	11-Feb-16	W05AMD0022-16
1	20109	Flow-total	AMD002	ft3	18-Feb-16	W06AMD0022-16
1	20104	Flow-total	AMD002	ft3	25-Feb-16	W07AMD0022-16
1	20096	Flow-total	AMD002	ft3	3-Mar-16	W08AMD0022-16
1	20344	Flow-total	AMD002	ft3	10-Mar-16	W09AMD0022-16
1	19798	Flow-total	AMD002	ft3	17-Mar-16	W10AMD0022-16
1	19998	Flow-total	AMD002	ft3	24-Mar-16	W11AMD0022-16
1	20185	Flow-total	AMD002	ft3	31-Mar-16	W12AMD0022-16
1	22651	Flow-total	AMD012	ft3	7-Jan-16	W14AMD0121-16
1	19760	Flow-total	AMD012	ft3	14-Jan-16	W01AMD0122-16
1	19917	Flow-total	AMD012	ft3	21-Jan-16	W02AMD0122-16
1	20015	Flow-total	AMD012	ft3	28-Jan-16	W03AMD0122-16
1	20188	Flow-total	AMD012	ft3	4-Feb-16	W04AMD0122-16
1	20098	Flow-total	AMD012	ft3	11-Feb-16	W05AMD0122-16
1	20105	Flow-total	AMD012	ft3	18-Feb-16	W06AMD0122-16
1	20106	Flow-total	AMD012	ft3	25-Feb-16	W07AMD0122-16
1	20098	Flow-total	AMD012	ft3	3-Mar-16	W08AMD0122-16
1	20339	Flow-total	AMD012	ft3	10-Mar-16	W09AMD0122-16
1	19795	Flow-total	AMD012	ft3	17-Mar-16	W10AMD0122-16
1	19998	Flow-total	AMD012	ft3	24-Mar-16	W11AMD0122-16
1	20188	Flow-total	AMD012	ft3	31-Mar-16	W12AMD0122-16
1	22653	Flow-total	AMD015	ft3	7-Jan-16	W14AMD0151-16
1	19606	Flow-total	AMD015	ft3	14-Jan-16	W01AMD0152-16
1	20054	Flow-total	AMD015	ft3	21-Jan-16	W02AMD0152-16
1	20071	Flow-total	AMD015	ft3	28-Jan-16	W03AMD0152-16
1	20109	Flow-total	AMD015	ft3	4-Feb-16	W04AMD0152-16
1	20115	Flow-total	AMD015	ft3	11-Feb-16	W05AMD0152-16
1	20058	Flow-total	AMD015	ft3	18-Feb-16	W06AMD0152-16
1	20133	Flow-total	AMD015	ft3	25-Feb-16	W07AMD0152-16
1	20090	Flow-total	AMD015	ft3	3-Mar-16	W08AMD0152-16
1	20401	Flow-total	AMD015	ft3	10-Mar-16	W09AMD0152-16
1	19732	Flow-total	AMD015	ft3	17-Mar-16	W10AMD0152-16
1	20038	Flow-total	AMD015	ft3	24-Mar-16	W11AMD0152-16
1	20137	Flow-total	AMD015	ft3	31-Mar-16	W12AMD0152-16
1	22660	Flow-total	AMD57	ft3	7-Jan-16	W14AMD571-16
1	19629	Flow-total	AMD57	ft3	14-Jan-16	W01AMD572-16
1	20035	Flow-total	AMD57	ft3	21-Jan-16	W02AMD572-16
1	20083	Flow-total	AMD57	ft3	28-Jan-16	W03AMD572-16
1	20105	Flow-total	AMD57	ft3	4-Feb-16	W04AMD572-16
1	20120	Flow-total	AMD57	ft3	11-Feb-16	W05AMD572-16
1	20070	Flow-total	AMD57	ft3	18-Feb-16	W06AMD572-16
1	20143	Flow-total	AMD57	ft3	25-Feb-16	W07AMD572-16
1	20081	Flow-total	AMD57	ft3	3-Mar-16	W08AMD572-16

Table A.3. Air Monitoring Flows for 2016 (Continued)

QUARTER	Results	Chemical Name	Station	Units	Date Collected	Project Sample ID
1	20408	Flow-total	AMD57	ft3	10-Mar-16	W09AMD572-16
1	19729	Flow-total	AMD57	ft3	17-Mar-16	W10AMD572-16
1	20052	Flow-total	AMD57	ft3	24-Mar-16	W11AMD572-16
1	20128	Flow-total	AMD57	ft3	31-Mar-16	W12AMD572-16
1	22716	Flow-total	AMD612	ft3	7-Jan-16	W14AMD6121-16
1	19643.7	Flow-total	AMD612	ft3	14-Jan-16	W01AMD6122-16
1	20130	Flow-total	AMD612	ft3	21-Jan-16	W02AMD6122-16
1	20129.3	Flow-total	AMD612	ft3	28-Jan-16	W03AMD6122-16
1	20168	Flow-total	AMD612	ft3	4-Feb-16	W04AMD6122-16
1	20170	Flow-total	AMD612	ft3	11-Feb-16	W05AMD6122-16
1	20111	Flow-total	AMD612	ft3	18-Feb-16	W06AMD6122-16
1	20133.5	Flow-total	AMD612	ft3	25-Feb-16	W07AMD6122-16
1	20143.65	Flow-total	AMD612	ft3	3-Mar-16	W08AMD6122-16
1	20451.3	Flow-total	AMD612	ft3	10-Mar-16	W09AMD6122-16
1	13738	Flow-total	AMD612	ft3	17-Mar-16	W10AMD6122-16
1	20033	Flow-total	AMD612	ft3	24-Mar-16	W11AMD6122-16
1	20195	Flow-total	AMD612	ft3	31-Mar-16	W12AMD6122-16
1	22654	Flow-total	AMD746S	ft3	7-Jan-16	W14AMD746S1-16
1	19663	Flow-total	AMD746S	ft3	14-Jan-16	W01AMD746S2-16
1	20000	Flow-total	AMD746S	ft3	21-Jan-16	W02AMD746S2-16
1	20021	Flow-total	AMD746S	ft3	28-Jan-16	W03AMD746S2-16
1	20177	Flow-total	AMD746S	ft3	4-Feb-16	W04AMD746S2-16
1	20110	Flow-total	AMD746S	ft3	11-Feb-16	W05AMD746S2-16
1	20094	Flow-total	AMD746S	ft3	18-Feb-16	W06AMD746S2-16
1	20109	Flow-total	AMD746S	ft3	25-Feb-16	W07AMD746S2-16
1	20099	Flow-total	AMD746S	ft3	3-Mar-16	W08AMD746S2-16
1	20328	Flow-total	AMD746S	ft3	10-Mar-16	W09AMD746S2-16
1	19575	Flow-total	AMD746S	ft3	17-Mar-16	W10AMD746S2-16
1	20016	Flow-total	AMD746S	ft3	24-Mar-16	W11AMD746S2-16
1	20164	Flow-total	AMD746S	ft3	31-Mar-16	W12AMD746S2-16
1	22653	Flow-total	AMD746U	ft3	7-Jan-16	W14AMD746U1-16
1	19699	Flow-total	AMD746U	ft3	14-Jan-16	W01AMD746U2-16
1	19972	Flow-total	AMD746U	ft3	21-Jan-16	W02AMD746U2-16
1	19192	Flow-total	AMD746U	ft3	28-Jan-16	W03AMD746U2-16
1	20177	Flow-total	AMD746U	ft3	4-Feb-16	W04AMD746U2-16
1	20096	Flow-total	AMD746U	ft3	11-Feb-16	W05AMD746U2-16
1	20107	Flow-total	AMD746U	ft3	18-Feb-16	W06AMD746U2-16
1	20113	Flow-total	AMD746U	ft3	25-Feb-16	W07AMD746U2-16
1	20094	Flow-total	AMD746U	ft3	3-Mar-16	W08AMD746U2-16
1	20328	Flow-total	AMD746U	ft3	10-Mar-16	W09AMD746U2-16
1	19797	Flow-total	AMD746U	ft3	17-Mar-16	W10AMD746U2-16
1	19983	Flow-total	AMD746U	ft3	24-Mar-16	W11AMD746U2-16
1	20180	Flow-total	AMD746U	ft3	31-Mar-16	W12AMD746U2-16
1	22643	Flow-total	AMDBCP	ft3	7-Jan-16	W14AMDBCP1-16
1	19643	Flow-total	AMDBCP	ft3	14-Jan-16	W01AMDBCP2-16
1	20018	Flow-total	AMDBCP	ft3	21-Jan-16	W02AMDBCP2-16
1	20197	Flow-total	AMDBCP	ft3	28-Jan-16	W03AMDBCP2-16
1	20014	Flow-total	AMDBCP	ft3	4-Feb-16	W04AMDBCP2-16

Table A.3. Air Monitoring Flows for 2016 (Continued)

QUARTER	Results	Chemical Name	Station	Units	Date Collected	Project Sample ID
1	20094	Flow-total	AMDBCP	ft3	11-Feb-16	W05AMDBCP2-16
1	20084	Flow-total	AMDBCP	ft3	18-Feb-16	W06AMDBCP2-16
1	20126	Flow-total	AMDBCP	ft3	25-Feb-16	W07AMDBCP2-16
1	20083	Flow-total	AMDBCP	ft3	3-Mar-16	W08AMDBCP2-16
1	20482	Flow-total	AMDBCP	ft3	10-Mar-16	W09AMDBCP2-16
1	19652	Flow-total	AMDBCP	ft3	17-Mar-16	W10AMDBCP2-16
1	20175	Flow-total	AMDBCP	ft3	24-Mar-16	W11AMDBCP2-16
1	20015	Flow-total	AMDBCP	ft3	31-Mar-16	W12AMDBCP2-16
1	22719	Flow-total	AMDNE	ft3	7-Jan-16	W14AMDNE1-16
1	19740	Flow-total	AMDNE	ft3	14-Jan-16	W01AMDNE2-16
1	20033	Flow-total	AMDNE	ft3	21-Jan-16	W02AMDNE2-16
1	20035.3	Flow-total	AMDNE	ft3	28-Jan-16	W03AMDNE2-16
1	20218.1	Flow-total	AMDNE	ft3	4-Feb-16	W04AMDNE2-16
1	20135	Flow-total	AMDNE	ft3	11-Feb-16	W05AMDNE2-16
1	20184	Flow-total	AMDNE	ft3	18-Feb-16	W06AMDNE2-16
1	20116.1	Flow-total	AMDNE	ft3	25-Feb-16	W07AMDNE2-16
1	20150.14	Flow-total	AMDNE	ft3	3-Mar-16	W08AMDNE2-16
1	20434	Flow-total	AMDNE	ft3	10-Mar-16	W09AMDNE2-16
1	13879	Flow-total	AMDNE	ft3	17-Mar-16	W10AMDNE2-16
1	20020	Flow-total	AMDNE	ft3	24-Mar-16	W11AMDNE2-16
1	20219	Flow-total	AMDNE	ft3	31-Mar-16	W12AMDNE2-16
2	20211	Flow-total	AMD002	ft3	7-Apr-16	W01AMD0023-16
2	19991	Flow-total	AMD002	ft3	14-Apr-16	W02AMD0023-16
2	20171	Flow-total	AMD002	ft3	21-Apr-16	W03AMD0023-16
2	19953	Flow-total	AMD002	ft3	28-Apr-16	W04AMD0023-16
2	20100	Flow-total	AMD002	ft3	5-May-16	W05AMD0023-16
2	20250	Flow-total	AMD002	ft3	12-May-16	W06AMD0023-16
2	19957	Flow-total	AMD002	ft3	19-May-16	W07AMD0023-16
2	20205	Flow-total	AMD002	ft3	26-May-16	W08AMD0023-16
2	20102	Flow-total	AMD002	ft3	2-Jun-16	W09AMD0023-16
2	20220	Flow-total	AMD002	ft3	9-Jun-16	W10AMD0023-16
2	19935	Flow-total	AMD002	ft3	16-Jun-16	W11AMD0023-16
2	20270	Flow-total	AMD002	ft3	23-Jun-16	W12AMD0023-16
2	20211	Flow-total	AMD002	ft3	30-Jun-16	W13AMD0023-16
2	20208	Flow-total	AMD012	ft3	7-Apr-16	W01AMD0123-16
2	19990	Flow-total	AMD012	ft3	14-Apr-16	W02AMD0123-16
2	20168	Flow-total	AMD012	ft3	21-Apr-16	W03AMD0123-16
2	19942	Flow-total	AMD012	ft3	28-Apr-16	W04AMD0123-16
2	20107	Flow-total	AMD012	ft3	5-May-16	W05AMD0123-16
2	20248	Flow-total	AMD012	ft3	12-May-16	W06AMD0123-16
2	19950	Flow-total	AMD012	ft3	19-May-16	W07AMD0123-16
2	20202	Flow-total	AMD012	ft3	26-May-16	W08AMD0123-16
2	20100	Flow-total	AMD012	ft3	2-Jun-16	W09AMD0123-16
2	20217	Flow-total	AMD012	ft3	9-Jun-16	W10AMD0123-16
2	19930	Flow-total	AMD012	ft3	16-Jun-16	W11AMD0123-16
2	20282	Flow-total	AMD012	ft3	23-Jun-16	W12AMD0123-16
2	20210	Flow-total	AMD012	ft3	30-Jun-16	W13AMD0123-16
2	20131	Flow-total	AMD015	ft3	7-Apr-16	W01AMD0153-16

Table A.3. Air Monitoring Flows for 2016 (Continued)

QUARTER	Results	Chemical Name	Station	Units	Date Collected	Project Sample ID
2	20047	Flow-total	AMD015	ft3	14-Apr-16	W02AMD0153-16
2	20243	Flow-total	AMD015	ft3	21-Apr-16	W03AMD0153-16
2	19926	Flow-total	AMD015	ft3	28-Apr-16	W04AMD0153-16
2	20109	Flow-total	AMD015	ft3	5-May-16	W05AMD0153-16
2	20163	Flow-total	AMD015	ft3	12-May-16	W06AMD0153-16
2	20038	Flow-total	AMD015	ft3	19-May-16	W07AMD0153-16
2	20131	Flow-total	AMD015	ft3	26-May-16	W08AMD0153-16
2	20115	Flow-total	AMD015	ft3	2-Jun-16	W09AMD0153-16
2	20275	Flow-total	AMD015	ft3	9-Jun-16	W10AMD0153-16
2	19920	Flow-total	AMD015	ft3	16-Jun-16	W11AMD0153-16
2	20153	Flow-total	AMD015	ft3	23-Jun-16	W12AMD0153-16
2	20163	Flow-total	AMD015	ft3	30-Jun-16	W13AMD0153-16
2	20159	Flow-total	AMD57	ft3	7-Apr-16	W01AMD573-16
2	20096	Flow-total	AMD57	ft3	14-Apr-16	W02AMD573-16
2	20241	Flow-total	AMD57	ft3	21-Apr-16	W03AMD573-16
2	19939	Flow-total	AMD57	ft3	28-Apr-16	W04AMD573-16
2	20115	Flow-total	AMD57	ft3	5-May-16	W05AMD573-16
2	20161	Flow-total	AMD57	ft3	12-May-16	W06AMD573-16
2	20025	Flow-total	AMD57	ft3	19-May-16	W07AMD573-16
2	20137	Flow-total	AMD57	ft3	26-May-16	W08AMD573-16
2	20162	Flow-total	AMD57	ft3	2-Jun-16	W09AMD573-16
2	20222	Flow-total	AMD57	ft3	9-Jun-16	W10AMD573-16
2	19927	Flow-total	AMD57	ft3	16-Jun-16	W11AMD573-16
2	20146	Flow-total	AMD57	ft3	23-Jun-16	W12AMD573-16
2	20153	Flow-total	AMD57	ft3	30-Jun-16	W13AMD573-16
2	20183	Flow-total	AMD612	ft3	7-Apr-16	W01AMD6123-16
2	20108.46	Flow-total	AMD612	ft3	14-Apr-16	W02AMD6123-16
2	20287	Flow-total	AMD612	ft3	21-Apr-16	W03AMD6123-16
2	19992.7	Flow-total	AMD612	ft3	28-Apr-16	W04AMD6123-16
2	20178.6	Flow-total	AMD612	ft3	5-May-16	W05AMD6123-16
2	20213	Flow-total	AMD612	ft3	12-May-16	W06AMD6123-16
2	20093.3	Flow-total	AMD612	ft3	19-May-16	W07AMD6123-16
2	20183	Flow-total	AMD612	ft3	26-May-16	W08AMD6123-16
2	20223	Flow-total	AMD612	ft3	2-Jun-16	W09AMD6123-16
2	20273	Flow-total	AMD612	ft3	9-Jun-16	W10AMD6123-16
2	19971	Flow-total	AMD612	ft3	16-Jun-16	W11AMD6123-16
2	20203	Flow-total	AMD612	ft3	23-Jun-16	W12AMD6123-16
2	20211	Flow-total	AMD612	ft3	30-Jun-16	W13AMD6123-16
2	20229	Flow-total	AMD746S	ft3	7-Apr-16	W01AMD746S3-16
2	19990	Flow-total	AMD746S	ft3	14-Apr-16	W02AMD746S3-16
2	20231	Flow-total	AMD746S	ft3	21-Apr-16	W03AMD746S3-16
2	19880	Flow-total	AMD746S	ft3	28-Apr-16	W04AMD746S3-16
2	20090	Flow-total	AMD746S	ft3	5-May-16	W05AMD746S3-16
2	20358	Flow-total	AMD746S	ft3	12-May-16	W06AMD746S3-16
2	19963	Flow-total	AMD746S	ft3	19-May-16	W07AMD746S3-16
2	20098	Flow-total	AMD746S	ft3	26-May-16	W08AMD746S3-16
2	20095	Flow-total	AMD746S	ft3	2-Jun-16	W09AMD746S3-16
2	20203	Flow-total	AMD746S	ft3	9-Jun-16	W10AMD746S3-16

Table A.3. Air Monitoring Flows for 2016 (Continued)

QUARTER	Results	Chemical Name	Station	Units	Date Collected	Project Sample ID
2	19937	Flow-total	AMD746S	ft3	16-Jun-16	W11AMD746S3-16
2	20205	Flow-total	AMD746S	ft3	23-Jun-16	W12AMD746S3-16
2	20174	Flow-total	AMD746S	ft3	30-Jun-16	W13AMD746S3-16
2	20205	Flow-total	AMD746U	ft3	7-Apr-16	W01AMD746U3-16
2	20009	Flow-total	AMD746U	ft3	14-Apr-16	W02AMD746U3-16
2	20264	Flow-total	AMD746U	ft3	21-Apr-16	W03AMD746U3-16
2	19835	Flow-total	AMD746U	ft3	28-Apr-16	W04AMD746U3-16
2	20094	Flow-total	AMD746U	ft3	5-May-16	W05AMD746U3-16
2	20254	Flow-total	AMD746U	ft3	12-May-16	W06AMD746U3-16
2	20058	Flow-total	AMD746U	ft3	19-May-16	W07AMD746U3-16
2	20094	Flow-total	AMD746U	ft3	26-May-16	W08AMD746U3-16
2	20101	Flow-total	AMD746U	ft3	2-Jun-16	W09AMD746U3-16
2	20243	Flow-total	AMD746U	ft3	9-Jun-16	W10AMD746U3-16
2	19906	Flow-total	AMD746U	ft3	16-Jun-16	W11AMD746U3-16
2	20210	Flow-total	AMD746U	ft3	23-Jun-16	W12AMD746U3-16
2	20199	Flow-total	AMD746U	ft3	30-Jun-16	W13AMD746U3-16
2	20155	Flow-total	AMDBCP	ft3	7-Apr-16	W01AMDBCP3-16
2	9857	Flow-total	AMDBCP	ft3	14-Apr-16	W02AMDBCP3-16
2	19369	Flow-total	AMDBCP	ft3	21-Apr-16	W03AMDBCP3-16
2	20045	Flow-total	AMDBCP	ft3	28-Apr-16	W04AMDBCP3-16
2	20086	Flow-total	AMDBCP	ft3	5-May-16	W05AMDBCP3-16
2	20074	Flow-total	AMDBCP	ft3	12-May-16	W06AMDBCP3-16
2	20053	Flow-total	AMDBCP	ft3	19-May-16	W07AMDBCP3-16
2	20112	Flow-total	AMDBCP	ft3	26-May-16	W08AMDBCP3-16
2	20254	Flow-total	AMDBCP	ft3	2-Jun-16	W09AMDBCP3-16
2	20264	Flow-total	AMDBCP	ft3	9-Jun-16	W10AMDBCP3-16
2	19895	Flow-total	AMDBCP	ft3	16-Jun-16	W11AMDBCP3-16
2	20057	Flow-total	AMDBCP	ft3	23-Jun-16	W12AMDBCP3-16
2	20167	Flow-total	AMDBCP	ft3	30-Jun-16	W13AMDBCP3-16
2	20286	Flow-total	AMDNE	ft3	7-Apr-16	W01AMDNE3-16
2	19986.5	Flow-total	AMDNE	ft3	14-Apr-16	W02AMDNE3-16
2	20305	Flow-total	AMDNE	ft3	21-Apr-16	W03AMDNE3-16
2	19978.4	Flow-total	AMDNE	ft3	28-Apr-16	W04AMDNE3-16
2	20134.5	Flow-total	AMDNE	ft3	5-May-16	W05AMDNE3-16
2	20415	Flow-total	AMDNE	ft3	12-May-16	W06AMDNE3-16
2	20007.8	Flow-total	AMDNE	ft3	19-May-16	W07AMDNE3-16
2	20153	Flow-total	AMDNE	ft3	26-May-16	W08AMDNE3-16
2	20153	Flow-total	AMDNE	ft3	2-Jun-16	W09AMDNE3-16
2	20227	Flow-total	AMDNE	ft3	9-Jun-16	W10AMDNE3-16
2	20029	Flow-total	AMDNE	ft3	16-Jun-16	W11AMDNE3-16
2	20207	Flow-total	AMDNE	ft3	23-Jun-16	W12AMDNE3-16
2	20300	Flow-total	AMDNE	ft3	30-Jun-16	W13AMDNE3-16
3	20059	Flow-total	AMD002	ft3	7-Jul-16	W01AMD0024-16
3	19934	Flow-total	AMD002	ft3	14-Jul-16	W02AMD0024-16
3	20100	Flow-total	AMD002	ft3	21-Jul-16	W03AMD0024-16
3	20371	Flow-total	AMD002	ft3	28-Jul-16	W04AMD0024-16
3	19828	Flow-total	AMD002	ft3	4-Aug-16	W05AMD0024-16
3	20244	Flow-total	AMD002	ft3	11-Aug-16	W06AMD0024-16

Table A.3. Air Monitoring Flows for 2016 (Continued)

QUARTER	Results	Chemical Name	Station	Units	Date Collected	Project Sample ID
3	20095	Flow-total	AMD002	ft3	18-Aug-16	W07AMD0024-16
3	20130	Flow-total	AMD002	ft3	25-Aug-16	W08AMD0024-16
3	20647	Flow-total	AMD002	ft3	1-Sep-16	W09AMD0024-16
3	19738	Flow-total	AMD002	ft3	8-Sep-16	W10AMD0024-16
3	19978	Flow-total	AMD002	ft3	15-Sep-16	W11AMD0024-16
3	20277	Flow-total	AMD002	ft3	22-Sep-16	W12AMD0024-16
3	19942	Flow-total	AMD002	ft3	29-Sep-16	W13AMD0024-16
3	20040	Flow-total	AMD012	ft3	7-Jul-16	W01AMD0124-16
3	19926	Flow-total	AMD012	ft3	14-Jul-16	W02AMD0124-16
3	20099	Flow-total	AMD012	ft3	21-Jul-16	W03AMD0124-16
3	20359	Flow-total	AMD012	ft3	28-Jul-16	W04AMD0124-16
3	19813	Flow-total	AMD012	ft3	4-Aug-16	W05AMD0124-16
3	20249	Flow-total	AMD012	ft3	11-Aug-16	W06AMD0124-16
3	20074	Flow-total	AMD012	ft3	18-Aug-16	W07AMD0124-16
3	20123	Flow-total	AMD012	ft3	25-Aug-16	W08AMD0124-16
3	20650	Flow-total	AMD012	ft3	1-Sep-16	W09AMD0124-16
3	19731	Flow-total	AMD012	ft3	8-Sep-16	W10AMD0124-16
3	19958	Flow-total	AMD012	ft3	15-Sep-16	W11AMD0124-16
3	20281	Flow-total	AMD012	ft3	22-Sep-16	W12AMD0124-16
3	19930	Flow-total	AMD012	ft3	29-Sep-16	W13AMD0124-16
3	20229	Flow-total	AMD015	ft3	7-Jul-16	W01AMD0154-16
3	20212	Flow-total	AMD015	ft3	14-Jul-16	W02AMD0154-16
3	5639	Flow-total	AMD015	ft3	21-Jul-16	W03AMD0154-16
3	19838	Flow-total	AMD015	ft3	28-Jul-16	W04AMD0154-16
3	19390	Flow-total	AMD015	ft3	4-Aug-16	W05AMD0154-16
3	20098	Flow-total	AMD015	ft3	11-Aug-16	W06AMD0154-16
3	20230	Flow-total	AMD015	ft3	18-Aug-16	W07AMD0154-16
3	20055	Flow-total	AMD015	ft3	25-Aug-16	W08AMD0154-16
3	20589	Flow-total	AMD015	ft3	1-Sep-16	W09AMD0154-16
3	19945	Flow-total	AMD015	ft3	8-Sep-16	W10AMD0154-16
3	19756	Flow-total	AMD015	ft3	15-Sep-16	W11AMD0154-16
3	2834	Flow-total	AMD015	ft3	29-Sep-16	W13AMD0154-16
3	19622	Flow-total	AMD57	ft3	7-Jul-16	W01AMD574-16
3	19807	Flow-total	AMD57	ft3	14-Jul-16	W02AMD574-16
3	20212	Flow-total	AMD57	ft3	21-Jul-16	W03AMD574-16
3	20355	Flow-total	AMD57	ft3	28-Jul-16	W04AMD574-16
3	19805	Flow-total	AMD57	ft3	4-Aug-16	W05AMD574-16
3	20101	Flow-total	AMD57	ft3	11-Aug-16	W06AMD574-16
3	20221	Flow-total	AMD57	ft3	18-Aug-16	W07AMD574-16
3	20049	Flow-total	AMD57	ft3	25-Aug-16	W08AMD574-16
3	19375	Flow-total	AMD57	ft3	1-Sep-16	W09AMD574-16
3	19876	Flow-total	AMD57	ft3	8-Sep-16	W10AMD574-16
3	19859	Flow-total	AMD57	ft3	15-Sep-16	W11AMD574-16
3	20373	Flow-total	AMD57	ft3	22-Sep-16	W12AMD574-16
3	19762	Flow-total	AMD57	ft3	29-Sep-16	W13AMD574-16
3	20283	Flow-total	AMD612	ft3	7-Jul-16	W01AMD6124-16
3	19855	Flow-total	AMD612	ft3	14-Jul-16	W02AMD6124-16
3	13366	Flow-total	AMD612	ft3	21-Jul-16	W03AMD6124-16

Table A.3. Air Monitoring Flows for 2016 (Continued)

QUARTER	Results	Chemical Name	Station	Units	Date Collected	Project Sample ID
3	20424	Flow-total	AMD612	ft3	28-Jul-16	W04AMD6124-16
3	19847	Flow-total	AMD612	ft3	4-Aug-16	W05AMD6124-16
3	20171	Flow-total	AMD612	ft3	11-Aug-16	W06AMD6124-16
3	20276	Flow-total	AMD612	ft3	18-Aug-16	W07AMD6124-16
3	20104	Flow-total	AMD612	ft3	25-Aug-16	W08AMD6124-16
3	20658	Flow-total	AMD612	ft3	1-Sep-16	W09AMD6124-16
3	20014	Flow-total	AMD612	ft3	8-Sep-16	W10AMD6124-16
3	19792	Flow-total	AMD612	ft3	15-Sep-16	W11AMD6124-16
3	20374	Flow-total	AMD612	ft3	22-Sep-16	W12AMD6124-16
3	19898	Flow-total	AMD612	ft3	29-Sep-16	W13AMD6124-16
3	18510	Flow-total	AMD746S	ft3	7-Jul-16	W01AMD746S4-16
3	19821	Flow-total	AMD746S	ft3	14-Jul-16	W02AMD746S4-16
3	20051	Flow-total	AMD746S	ft3	21-Jul-16	W03AMD746S4-16
3	20336	Flow-total	AMD746S	ft3	28-Jul-16	W04AMD746S4-16
3	19829	Flow-total	AMD746S	ft3	4-Aug-16	W05AMD746S4-16
3	20141	Flow-total	AMD746S	ft3	11-Aug-16	W06AMD746S4-16
3	20160	Flow-total	AMD746S	ft3	18-Aug-16	W07AMD746S4-16
3	20111	Flow-total	AMD746S	ft3	25-Aug-16	W08AMD746S4-16
3	22638	Flow-total	AMD746S	ft3	1-Sep-16	W09AMD746S4-16
3	21673	Flow-total	AMD746S	ft3	8-Sep-16	W10AMD746S4-16
3	22045	Flow-total	AMD746S	ft3	15-Sep-16	W11AMD746S4-16
3	22191	Flow-total	AMD746S	ft3	22-Sep-16	W12AMD746S4-16
3	21949	Flow-total	AMD746S	ft3	29-Sep-16	W13AMD746S4-16
3	20116	Flow-total	AMD746U	ft3	7-Jul-16	W01AMD746U4-16
3	19933	Flow-total	AMD746U	ft3	14-Jul-16	W02AMD746U4-16
3	20101	Flow-total	AMD746U	ft3	21-Jul-16	W03AMD746U4-16
3	20347	Flow-total	AMD746U	ft3	28-Jul-16	W04AMD746U4-16
3	19818	Flow-total	AMD746U	ft3	4-Aug-16	W05AMD746U4-16
3	20156	Flow-total	AMD746U	ft3	11-Aug-16	W06AMD746U4-16
3	20176	Flow-total	AMD746U	ft3	18-Aug-16	W07AMD746U4-16
3	20112	Flow-total	AMD746U	ft3	25-Aug-16	W08AMD746U4-16
3	20586	Flow-total	AMD746U	ft3	1-Sep-16	W09AMD746U4-16
3	19734	Flow-total	AMD746U	ft3	8-Sep-16	W10AMD746U4-16
3	20014	Flow-total	AMD746U	ft3	15-Sep-16	W11AMD746U4-16
3	20208	Flow-total	AMD746U	ft3	22-Sep-16	W12AMD746U4-16
3	19931	Flow-total	AMD746U	ft3	29-Sep-16	W13AMD746U4-16
3	20327	Flow-total	AMDBCP	ft3	7-Jul-16	W01AMDBCP4-16
3	19695	Flow-total	AMDBCP	ft3	14-Jul-16	W02AMDBCP4-16
3	20443	Flow-total	AMDBCP	ft3	21-Jul-16	W03AMDBCP4-16
3	20182	Flow-total	AMDBCP	ft3	28-Jul-16	W04AMDBCP4-16
3	19864	Flow-total	AMDBCP	ft3	4-Aug-16	W05AMDBCP4-16
3	19997	Flow-total	AMDBCP	ft3	11-Aug-16	W06AMDBCP4-16
3	20355	Flow-total	AMDBCP	ft3	18-Aug-16	W07AMDBCP4-16
3	19928	Flow-total	AMDBCP	ft3	25-Aug-16	W08AMDBCP4-16
3	20586	Flow-total	AMDBCP	ft3	1-Sep-16	W09AMDBCP4-16
3	19869	Flow-total	AMDBCP	ft3	8-Sep-16	W10AMDBCP4-16
3	19867	Flow-total	AMDBCP	ft3	15-Sep-16	W11AMDBCP4-16
3	20371	Flow-total	AMDBCP	ft3	22-Sep-16	W12AMDBCP4-16

Table A.3. Air Monitoring Flows for 2016 (Continued)

QUARTER	Results	Chemical Name	Station	Units	Date Collected	Project Sample ID
3	19779	Flow-total	AMDBCP	ft3	29-Sep-16	W13AMDBCP4-16
3	20184	Flow-total	AMDNE	ft3	7-Jul-16	W01AMDNE4-16
3	20010	Flow-total	AMDNE	ft3	14-Jul-16	W02AMDNE4-16
3	20111	Flow-total	AMDNE	ft3	21-Jul-16	W03AMDNE4-16
3	20383	Flow-total	AMDNE	ft3	28-Jul-16	W04AMDNE4-16
3	19895	Flow-total	AMDNE	ft3	4-Aug-16	W05AMDNE4-16
3	20149	Flow-total	AMDNE	ft3	11-Aug-16	W06AMDNE4-16
3	20232	Flow-total	AMDNE	ft3	18-Aug-16	W07AMDNE4-16
3	20221	Flow-total	AMDNE	ft3	25-Aug-16	W08AMDNE4-16
3	20590	Flow-total	AMDNE	ft3	1-Sep-16	W09AMDNE4-16
3	19819	Flow-total	AMDNE	ft3	8-Sep-16	W10AMDNE4-16
3	20091	Flow-total	AMDNE	ft3	15-Sep-16	W11AMDNE4-16
3	20247	Flow-total	AMDNE	ft3	22-Sep-16	W12AMDNE4-16
3	19951	Flow-total	AMDNE	ft3	29-Sep-16	W13AMDNE4-16
4	20077	Flow-total	AMD002	ft3	6-Oct-16	W01AMD0021-17
4	20132	Flow-total	AMD002	ft3	13-Oct-16	W02AMD0021-17
4	20218	Flow-total	AMD002	ft3	21-Oct-16	W03AMD0021-17
4	20011	Flow-total	AMD002	ft3	27-Oct-16	W04AMD0021-17
4	20131	Flow-total	AMD002	ft3	3-Nov-16	W05AMD0021-17
4	20210	Flow-total	AMD002	ft3	10-Nov-16	W06AMD0021-17
4	20022	Flow-total	AMD002	ft3	17-Nov-16	W07AMD0021-17
4	17261	Flow-total	AMD002	ft3	23-Nov-16	W08AMD0021-17
4	23092	Flow-total	AMD002	ft3	1-Dec-16	W09AMD0021-17
4	20253	Flow-total	AMD002	ft3	8-Dec-16	W10AMD0021-17
4	19914	Flow-total	AMD002	ft3	15-Dec-16	W11AMD0021-17
4	20144	Flow-total	AMD002	ft3	22-Dec-16	W12AMD0021-17
4	19982	Flow-total	AMD002	ft3	29-Dec-16	W13AMD0021-17
4	20046	Flow-total	AMD012	ft3	6-Oct-16	W01AMD0121-17
4	20130	Flow-total	AMD012	ft3	13-Oct-16	W02AMD0121-17
4	20229	Flow-total	AMD012	ft3	21-Oct-16	W03AMD0121-17
4	19980	Flow-total	AMD012	ft3	27-Oct-16	W04AMD0121-17
4	20120	Flow-total	AMD012	ft3	3-Nov-16	W05AMD0121-17
4	17918	Flow-total	AMD012	ft3	10-Nov-16	W06AMD0121-17
4	2267	Flow-total	AMD012	ft3	1-Dec-16	W09AMD0121-17
4	20232	Flow-total	AMD012	ft3	8-Dec-16	W10AMD0121-17
4	19908	Flow-total	AMD012	ft3	15-Dec-16	W11AMD0121-17
4	21862	Flow-total	AMD012	ft3	22-Dec-16	W12AMD0121-17
4	21624	Flow-total	AMD012	ft3	29-Dec-16	W13AMD0121-17
4	20136	Flow-total	AMD015	ft3	6-Oct-16	W01AMD0151-17
4	20107	Flow-total	AMD015	ft3	13-Oct-16	W02AMD0151-17
4	20155	Flow-total	AMD015	ft3	21-Oct-16	W03AMD0151-17
4	20069	Flow-total	AMD015	ft3	27-Oct-16	W04AMD0151-17
4	20100	Flow-total	AMD015	ft3	3-Nov-16	W05AMD0151-17
4	20217	Flow-total	AMD015	ft3	10-Nov-16	W06AMD0151-17
4	20077	Flow-total	AMD015	ft3	17-Nov-16	W07AMD0151-17
4	17252	Flow-total	AMD015	ft3	23-Nov-16	W08AMD0151-17
4	22947	Flow-total	AMD015	ft3	1-Dec-16	W09AMD0151-17
4	20327	Flow-total	AMD015	ft3	8-Dec-16	W10AMD0151-17

Table A.3. Air Monitoring Flows for 2016 (Continued)

QUARTER	Results	Chemical Name	Station	Units	Date Collected	Project Sample ID
4	19880	Flow-total	AMD015	ft3	15-Dec-16	W11AMD0151-17
4	20134	Flow-total	AMD015	ft3	22-Dec-16	W12AMD0151-17
4	20062	Flow-total	AMD015	ft3	29-Dec-16	W13AMD0151-17
4	20139	Flow-total	AMD57	ft3	6-Oct-16	W01AMD571-17
4	20115	Flow-total	AMD57	ft3	13-Oct-16	W02AMD571-17
4	20142	Flow-total	AMD57	ft3	21-Oct-16	W03AMD571-17
4	20074	Flow-total	AMD57	ft3	27-Oct-16	W04AMD571-17
4	20127	Flow-total	AMD57	ft3	3-Nov-16	W05AMD571-17
4	20209	Flow-total	AMD57	ft3	10-Nov-16	W06AMD571-17
4	20073	Flow-total	AMD57	ft3	17-Nov-16	W07AMD571-17
4	17256	Flow-total	AMD57	ft3	23-Nov-16	W08AMD571-17
4	22949	Flow-total	AMD57	ft3	1-Dec-16	W09AMD571-17
4	20327	Flow-total	AMD57	ft3	8-Dec-16	W10AMD571-17
4	19891	Flow-total	AMD57	ft3	15-Dec-16	W11AMD571-17
4	20123	Flow-total	AMD57	ft3	22-Dec-16	W12AMD571-17
4	20060	Flow-total	AMD57	ft3	29-Dec-16	W13AMD571-17
4	20190	Flow-total	AMD612	ft3	6-Oct-16	W01AMD6121-17
4	20168	Flow-total	AMD612	ft3	13-Oct-16	W02AMD6121-17
4	20214	Flow-total	AMD612	ft3	21-Oct-16	W03AMD6121-17
4	20109	Flow-total	AMD612	ft3	27-Oct-16	W04AMD6121-17
4	20157	Flow-total	AMD612	ft3	3-Nov-16	W05AMD6121-17
4	18207	Flow-total	AMD612	ft3	10-Nov-16	W06AMD6121-17
4	2329	Flow-total	AMD612	ft3	1-Dec-16	W09AMD6121-17
4	20386	Flow-total	AMD612	ft3	8-Dec-16	W10AMD6121-17
4	19933.5	Flow-total	AMD612	ft3	15-Dec-16	W11AMD6121-17
4	20187	Flow-total	AMD612	ft3	22-Dec-16	W12AMD6121-17
4	20118	Flow-total	AMD612	ft3	29-Dec-16	W13AMD6121-17
4	22119	Flow-total	AMD746S	ft3	6-Oct-16	W01AMD746S1-17
4	22180	Flow-total	AMD746S	ft3	13-Oct-16	W02AMD746S1-17
4	22100	Flow-total	AMD746S	ft3	21-Oct-16	W03AMD746S1-17
4	22109	Flow-total	AMD746S	ft3	27-Oct-16	W04AMD746S1-17
4	22112	Flow-total	AMD746S	ft3	3-Nov-16	W05AMD746S1-17
4	22234	Flow-total	AMD746S	ft3	10-Nov-16	W06AMD746S1-17
4	22076	Flow-total	AMD746S	ft3	17-Nov-16	W07AMD746S1-17
4	18898	Flow-total	AMD746S	ft3	23-Nov-16	W08AMD746S1-17
4	25219	Flow-total	AMD746S	ft3	1-Dec-16	W09AMD746S1-17
4	22317	Flow-total	AMD746S	ft3	8-Dec-16	W10AMD746S1-17
4	21909	Flow-total	AMD746S	ft3	15-Dec-16	W11AMD746S1-17
4	22148	Flow-total	AMD746S	ft3	22-Dec-16	W12AMD746S1-17
4	21967	Flow-total	AMD746S	ft3	29-Dec-16	W13AMD746S1-17
4	20113	Flow-total	AMD746U	ft3	6-Oct-16	W01AMD746U1-17
4	20174	Flow-total	AMD746U	ft3	13-Oct-16	W02AMD746U1-17
4	20149	Flow-total	AMD746U	ft3	21-Oct-16	W03AMD746U1-17
4	20063	Flow-total	AMD746U	ft3	27-Oct-16	W04AMD746U1-17
4	20098	Flow-total	AMD746U	ft3	3-Nov-16	W05AMD746U1-17
4	20194	Flow-total	AMD746U	ft3	10-Nov-16	W06AMD746U1-17
4	20097	Flow-total	AMD746U	ft3	17-Nov-16	W07AMD746U1-17
4	17177	Flow-total	AMD746U	ft3	23-Nov-16	W08AMD746U1-17

Table A.3. Air Monitoring Flows for 2016 (Continued)

QUARTER	Results	Chemical Name	Station	Units	Date Collected	Project Sample ID
4	21362	Flow-total	AMD746U	ft3	1-Dec-16	W09AMD746U1-17
4	20198	Flow-total	AMD746U	ft3	8-Dec-16	W10AMD746U1-17
4	19636	Flow-total	AMD746U	ft3	15-Dec-16	W11AMD746U1-17
4	19723	Flow-total	AMD746U	ft3	22-Dec-16	W12AMD746U1-17
4	19926	Flow-total	AMD746U	ft3	29-Dec-16	W13AMD746U1-17
4	20125	Flow-total	AMDBCP	ft3	6-Oct-16	W01AMDBCP1-17
4	20115	Flow-total	AMDBCP	ft3	13-Oct-16	W02AMDBCP1-17
4	20143	Flow-total	AMDBCP	ft3	21-Oct-16	W03AMDBCP1-17
4	20070	Flow-total	AMDBCP	ft3	27-Oct-16	W04AMDBCP1-17
4	20127	Flow-total	AMDBCP	ft3	3-Nov-16	W05AMDBCP1-17
4	17884	Flow-total	AMDBCP	ft3	10-Nov-16	W06AMDBCP1-17
4	22400	Flow-total	AMDBCP	ft3	1-Dec-16	W09AMDBCP1-17
4	20322	Flow-total	AMDBCP	ft3	8-Dec-16	W10AMDBCP1-17
4	19892	Flow-total	AMDBCP	ft3	15-Dec-16	W11AMDBCP1-17
4	20126	Flow-total	AMDBCP	ft3	22-Dec-16	W12AMDBCP1-17
4	20134	Flow-total	AMDBCP	ft3	29-Dec-16	W13AMDBCP1-17
4	20220	Flow-total	AMDNE	ft3	6-Oct-16	W01AMDNE1-17
4	20144	Flow-total	AMDNE	ft3	13-Oct-16	W02AMDNE1-17
4	20241	Flow-total	AMDNE	ft3	21-Oct-16	W03AMDNE1-17
4	20031	Flow-total	AMDNE	ft3	27-Oct-16	W04AMDNE1-17
4	3877	Flow-total	AMDNE	ft3	3-Nov-16	W05AMDNE1-17
4	19660	Flow-total	AMDNE	ft3	10-Nov-16	W06AMDNE1-17
4	20087	Flow-total	AMDNE	ft3	17-Nov-16	W07AMDNE1-17
4	17147	Flow-total	AMDNE	ft3	23-Nov-16	W08AMDNE1-17
4	22974	Flow-total	AMDNE	ft3	1-Dec-16	W09AMDNE1-17
4	20363	Flow-total	AMDNE	ft3	8-Dec-16	W10AMDNE1-17
4	19893	Flow-total	AMDNE	ft3	15-Dec-16	W11AMDNE1-17
4	20131	Flow-total	AMDNE	ft3	22-Dec-16	W12AMDNE1-17
4	19963	Flow-total	AMDNE	ft3	29-Dec-16	W13AMDNE1-17