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Revision 0

Idaho National Laboratory Site Environmental Surveillance Program Report: Third Quarter 2024

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Battelle Energy Alliance manages INL for the U.S. Department of Energy's Office of Nuclear Energy

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EXECUTIVE SUMMARY

Some human-made radionuclides were detected in samples collected during the quarter. None of the radionuclides detected in samples collected during the quarter could be directly linked with Idaho National Laboratory (INL) Site activities. All detected radionuclide concentrations were well below standards set by the U.S. Department of Energy (DOE) and regulatory standards established by the U.S. Environmental Protection Agency (EPA) for protection of the public.

This report provides the results from the INL Site environmental surveillance monitoring program for the U.S. Department of Energy's INL Site's onsite, boundary and offsite locations from October 1 through December 31, 2024.

Table ES-1. Summary of environmental monitoring surveillance results for the quarter.

SAMPLE TYPE	POSITIVE DETECTIONS	RESULTS	COMPARISON VALUE
		AIR	
Particulate Filters *(Section 3.1)*	850	Thirty-two locations (duplicates at four locations) were sampled. Gross alpha concentrations had statistically significant differences for the quarter and September but not for the months of July and August or between sampling locations. No statistically significant differences were observed for any month during the quarter, or between sampling locations for gross beta concentrations. Results were consistent with historical data. Gross alpha results above the upper tolerance limit (UTL) are likely due to smokey conditions resulting from wildfires.	No result exceeded the Derived Concentration Standard (DCS) values.
Quarterly Composite *(Section 3.1)*	15	Thirty-six locations (duplicates at four locations) were sampled. Cesium-137 and zinc-65 were detected in a composite sample from Experimental Breeder Reactor-I (EBR-I). No additional human-made gamma-emitting radionuclides were detected. Americium-241 was detected in a composite sample collected at Radioactive Waste Management Complex (RWMC). Plutonium-238, plutonium-239/240, an strontium-90 were not detected in any quarterly composited samples. Uranium-233/244 and uranium-238 were detected in composite samples from several locations.	None of the results exceeded the corresponding DCS values.
Charcoal Cartridge *(Section 3.1)*	None	Thirty-two locations (duplicates at four locations) were sampled. Iodine-131 was not detected in any of the charcoal cartridges.	NA[a]

Table ES-1. continued.

SAMPLE TYPE	POSITIVE DETECTIONS	RESULTS	COMPARISON VALUE
Atmospheric Moisture *(Section 3.2)*	1	Twenty-three atmospheric moisture samples were collected. One sample result showed a tritium concentration greater than the 3s uncertainty.	The sample result was below the DCS value.
Precipitation *(Section 3.3)*	None	Sixteen precipitation samples were collected. None of the 16 results showed tritium concentrations greater than the 3s uncertainty.	NA
LIQUID EFFLUENT			
Effluent *(Section 4)*	5	Five effluent sampling events (including a duplicate) were collected. No human-made gamma-emitting radionuclides were detected. Gross beta was detected in two samples collected from the Cold Waste Pond (CWP) and one sample from the Industrial Waste Pond (IWP). Uranium-233/234 and uranium-238 was detected in IWP effluent samples. Detected results were within historical ranges.	Detected concentrations were below respective screening levels.
WATER			
Groundwater *(Section 5.1)*	29	Ten groundwater sampling events were collected. No human-made gamma-emitting radionuclides were detected in groundwater samples. Gross alpha and gross beta were detected in some groundwater samples collected from Advanced Test Reactor (ATR) Complex and the Materials and Fuels Complex (MFC). Tritium was detected in several samples collected from the ATR Complex. Uranium-233/234 and uranium-238 were detected in MFC groundwater samples. Detected results were within historical ranges.	All concentrations were below applicable groundwater standards.
Drinking water *(Section 5.3)*	13	Eight drinking water systems were sampled. Gross alpha activity was detected in the samples collected at ATR Complex, Gun Range, and MFC. Gross beta was detected in all onsite drinking water samples except for ATR Complex and the Test Area North – Contained Test Facility. Tritium was detected in samples collected from Central Facilities Area and the Gun Range. Concentrations were similar to previous results.	Detected concentrations were below maximum contaminant levels.

Table ES-1. continued.

SAMPLE TYPE	POSITIVE DETECTIONS	RESULTS	COMPARISON VALUE
AGRICULTURAL PRODUCTS			
Milk *(Section 6.1)*	1	Forty-four milk samples were collected at seven locations (including the offsite control sample from Broomfield, Colorado, and three duplicates). No human-made gamma-emitting radionuclides were detected.	NA
LARGE GAME ANIMALS			
Elk *(Section 6.2)*	None	Two elk were available for sampling. No human-made gamma-emitting radionuclides were found in any of the tissue samples.	NA

a. NA = comparison value not included due to no detections for the quarter.

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FIGURES

TABLES

ACRONYMS

ATR	Advanced Test Reactor
CFA	Central Facilities Area
CFR	Code of Federal Regulations
CITRC	Critical Infrastructure Test Range Complex
CTF	Contained Test Facility
CWP	Cold Waste Pond
DCS	Derived Concentration Standard
DEQ	Department of Environmental Quality
DOE	U.S. Department of Energy
DOECAP	DOE Consolidated Audit Program
EBR-I	Experimental Breeder Reactor-I
EFS	Experimental Field Station
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
GEL	GEL Laboratories, LLC
HWY	Highway
ICP	Idaho Cleanup Project
ICPP	Idaho Chemical Processing Plant
IDAPA	Idaho Administrative Procedures Act
INEEL	Idaho National Engineering and Environmental Laboratory
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center (formerly ICPP)
IRC	INL Research Center
IWP	Industrial Waste Pond
MCL	maximum contaminant level
MFC	Materials and Fuels Complex
NRF	Naval Reactors Facility
NRTS	National Reactor Testing Station
PBF	Power Burst Facility
PE	performance evaluation
PT	performance testing
RHLLW	Remote-Handled Low-Level Waste
RWMC	Radioactive Waste Management Complex
SMC	Specific Manufacturing Capability
TAN	Test Area North
UTL	upper tolerance limit

UNITS

Bq	becquerel
Ci	curie
g	gram
L	liter
µCi	microcurie
ml	milliliter
mrem	millirem
mR	milliroentgen
pCi	picocurie

1. INL Contractor Program Description

Operations at the Idaho National Laboratory (INL) Site are conducted under requirements imposed by the U.S. Department of Energy (DOE) under authority of the Atomic Energy Act and the U.S. Environmental Protection Agency (EPA) under several acts (e.g., the Clean Air Act and Safe Drinking Water Act). The requirements imposed by DOE are specified in DOE Orders. These requirements include those to monitor the effects of DOE activities both inside and outside the boundaries of DOE facilities (DOE 2011, DOE 2015).

The INL Site contractors (INL and the Idaho Cleanup Project [ICP] contractors) perform environmental surveillance monitoring within the INL Site boundaries. The INL contractor also provides environmental surveillance monitoring off the INL Site.

This report contains the INL contractor's environmental surveillance monitoring results for samples collected during the quarter of 2024 (July 1 – September 30, 2024). Compliance monitoring results from the INL Site contractors and U.S. Geological Survey are reported in the Annual Site Environmental Report (https://inl.gov/aser/).

The INL environmental surveillance program is designed to satisfy the following objectives:

1. verify compliance with applicable environmental laws, regulations, and DOE Orders
2. characterize and define trends in the physical, chemical, and biological condition of environmental media on and around the INL Site
3. assess the potential radiation dose to members of the public from INL Site effluents
4. present laboratory data which has been reviewed using an EPA quality assurance process.

The goal of the surveillance program is to monitor different media at a number of potential exposure points within the various exposure pathways, including air, water, agricultural products, wildlife, and soil that could possibly contribute to the radiation dose received by the public.

The INL contractor's environmental surveillance program collects the following environmental samples:

- air (particulate air filters, charcoal cartridges, and atmospheric moisture)
- water (precipitation, effluent, groundwater, surface water, drinking water)
- agricultural products (milk, potatoes, lettuce, alfalfa, and grain [wheat and barley])
- large game animal sampling (pronghorn, mule deer, and elk), and waterfowl
- soil
- environmental direct radiation (optically stimulated luminescent dosimeter and neutron dosimeters)

The laboratories used by the INL contractor to perform analyses on routine environmental samples are identified in Table 1.

Table 1. INL contractor analytical laboratories used to analyze surveillance media.

ANALYTICAL LABORATORY	MEDIA					
	AIR	WATER	AGRICULTURAL PRODUCTS	BIOTA	SOIL	ENVIRONMENTAL DIRECT RADIATION
GEL Laboratories, LLC	X[a]	X[b]	X	X	X	—[c]
INL Environmental Services In Situ Gamma Laboratory	X[d]	—	—	—	—	—
Landauer	—	—	—	—	—	X

a. Includes atmospheric moisture.
b. Includes precipitation.
c. Charcoal cartridges only.
d. — = Not contracted with laboratory.

Appendix A, Table A-1, details the sample media, analysis type, locations, and collection frequency for the INL contractor.

In the event of non-routine occurrences, such as suspected releases of radioactive material, the INL contractor may increase the frequency of sampling and/or the number of sampling locations based on the nature of the release and wind distribution patterns. Any data found to be outside historical norms is thoroughly investigated to determine if an INL Site origin is likely. Investigation may include re-sampling and/or re-analysis of prior samples.

In the event of any suspected worldwide nuclear incidents, like the 1986 Chernobyl accident or the 2011 Fukushima accident, the EPA may request additional sampling be performed through RadNet. RadNet is a nationwide environmental radiation monitoring system that monitors the nation's air, precipitation, and drinking water for radiation. The INL contractor currently operates a high-volume air sampler and collects precipitation and drinking water in Idaho Falls for this national program and routinely sends samples to EPA's Eastern Environmental Radiation Facility for analyses. The RadNet data collected at Idaho Falls are not reported by the INL contractor but are available through the EPA RadNet website (https://www.epa.gov/radnet).

After collecting and analyzing samples, the INL contractor is responsibility for data quality control, database entry, and quarterly report preparation. These quarterly reports are consolidated into the INL Site Environmental Report for each calendar year, which also includes data collected by other INL Site contractors.

The results reported in the quarterly and annual reports are assessed in terms of data quality and statistical significance with respect to laboratory analytical uncertainties, sample locations, reported INL Site releases, meteorological data, and worldwide events that might conceivably affect the INL Site environment. First, field collection and laboratory information are reviewed to determine identifiable errors that would invalidate or limit use of the data. Examples of such limitations include insufficient sample volume, torn filters, evidence of laboratory cross-contamination or quality control issues. Data that pass initial screening are further evaluated using statistical methods. Statistical tools are necessary for data evaluation particularly since environmental measurements typically involve the determination of minute concentrations, which are difficult to detect and even more difficult to distinguish from other measurements.

Results are presented in this report with an analytical uncertainty term, s, where 's' is the estimated sample standard deviation (σ), assuming a Gaussian or normal distribution. All results are reported in this document, even those that do not necessarily represent detections. The term 'detected,' as used for the discussion of results in this report, does not imply any degree of risk to the public or environment, but rather indicates that the radionuclide was measured at a concentration sufficient for the analytical instrument to record a value that is statistically different from background. Laboratory measurements involve the analysis of a target sample and the analysis of a prepared laboratory blank (i.e., a sample which is identical to the sample collected in the environment, except that the radionuclide of interest is absent). In order to conclude that a radionuclide has been detected, it is essential to consider two fundamental aspects of the problem of detection: (1) the instrument signal for the sample must be greater than that observed for the blank before the decision can be made that the radionuclide has been detected; and (2) an estimate must be made of the minimum radionuclide concentration that will yield a sufficiently large observed signal before the correct decision can be made for detection or non-detection. Each laboratory currently defines a detection of radioactivity in an individual sample if the result exceeds a detection level calculated by the laboratory after the analysis of a background sample, based on calculations derived by Currie (1984). The minimum detectable concentration is defined as the concentration at which there is a 95% confidence that an analyte signal will be distinguishable from an analyte-free sample.

In addition, the INL contractor uses the three standard deviation (3s) criterion to minimize the chance that a potentially false positive result is included in the data set. Statistically, the probability that a result can exceed the absolute value of its total uncertainty at 3s by chance alone is less than 1%. A result that is greater than three times the total uncertainty of the measurement represents a statistically positive detection with over 99% confidence (DOE 2022). The INL contractor reports measured radionuclide concentrations greater than or equal to their respective 3s uncertainties as being detected with confidence.

Concentrations between two standard deviations (2s) and 3s are reported as questionably detected. That is, the radionuclide may be present in the sample; however, the probability that a result can exceed the absolute value of its total uncertainty at 2s by chance alone may be as high as 5%. Measurements made between 2s and 3s are examined further to determine if they are a part of a pattern (temporal or spatial) that might warrant further investigation or recounting. For example, if a radionuclide is routinely detected at > 3s at a specific location, a sample result between 2s and 3s might be considered detected.

If a result is less than or equal to 2s there is even less statistical confidence that the radionuclide is present in the sample. Analytical results in this report are presented as the result value ± one standard deviation (1s) for reporting consistency with the annual report. To obtain the 2s or 3s values simply multiply the uncertainty term by 2 or 3.

Data are also compared to historical measurements using the upper tolerance limit (UTL). The UTL is a value such that 99% of the population (all valid measurements made between 2011-2020) is less than the UTL with 95% confidence (EPA 2015). With a 99%/95% UTL it is expected that approximately 1% of the measurements will exceed the UTL if the concentration of a radionuclide is within the normal range. This means that if a concentration exceeds the UTL it does not necessarily indicate that the sampling location is outside of the normal range. Rather, it indicates that the measurement should be closely examined to determine if it is unusually high.

For more information concerning the INL environmental surveillance monitoring program, please email George.KrauszerII@inl.gov, or visit https://inl.gov/environmental-monitoring/.

2. INL Site

The INL Site is a nuclear energy and homeland security research and environmental management facility. It is owned and administered by the DOE, Idaho Operations Office and occupies about 890 mi^2 (2,300 km^2) of the upper Snake River Plain in Southeastern Idaho (Figure 1). The history of the INL Site began during World War II when the U.S. Naval Ordnance Station was located in Pocatello, Idaho. This station, one of two such installations in the U.S., retooled large guns from U.S. Navy warships. The retooled guns were tested on the nearby, uninhabited plain, known as the Naval Proving Ground. In the years following the war, as the nation worked to develop nuclear power, the Atomic Energy Commission, predecessor to the DOE, became interested in the Naval Proving Ground and made plans for a facility to build, test, and perfect nuclear power reactors.

The Naval Proving Ground became the National Reactor Testing Station (NRTS) in 1949, under the Atomic Energy Commission. By the end of 1951, a reactor at the NRTS became the first to produce useful amounts of electricity. Over time the site has operated 52 various types of reactors, associated research centers, and waste handling areas. The NRTS was renamed the Idaho National Engineering Laboratory in 1974, and the Idaho National Engineering and Environmental Laboratory (INEEL) in January 1997. With renewed interest in nuclear power the DOE announced in 2003 that Argonne National Laboratory and the INEEL would be the lead laboratories for development of the next generation of power reactors. On February 1, 2005, the INEEL and Argonne National Laboratory-West became the INL. The INL is committed to providing international nuclear leadership for the 21st Century, developing and demonstrating compelling national security technologies, and delivering excellence in science and technology as one of the DOE's multi-program national laboratories. Battelle Energy Alliance, LLC, is

responsible for the management and operations of the INL and is identified as the INL contractor in this report.

The ICP is a separately managed effort. The ICP contractor is charged with safely and cost-effectively completing the majority of cleanup work from past laboratory missions in an ongoing process. The Idaho Environmental Coalition, LLC, is responsible for the ICP.

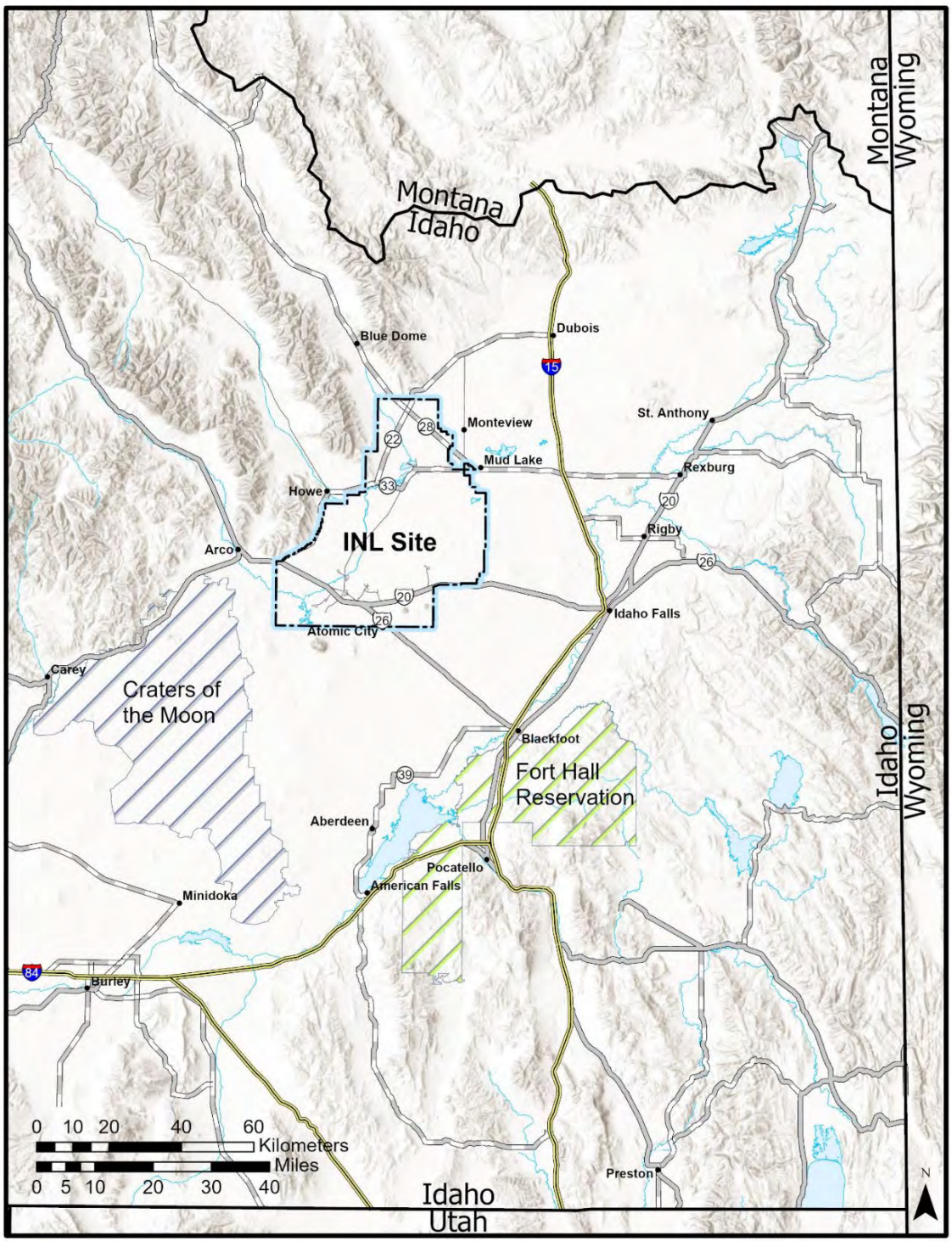

Figure 1. Location of the INL Site.

3. Air Sampling

The primary pathway by which radionuclides can move off the INL Site is through the air and for this reason the air pathway is the primary focus of monitoring on and around the INL Site. Samples for particulates and iodine-131 (^{131}I) gas in air were collected weekly for the duration of the quarter at 32 locations using low-volume air samplers (four of which have replicate samplers). Moisture in the atmosphere was sampled at eight locations around the INL Site and analyzed for tritium. See Appendix A, Table A-1 for a sampling schedule. Air sampling activities and results for the quarter are discussed below.

3.1 Low-volume Air Sampling

Radioactivity associated with airborne particulates was monitored continuously during the quarter (Figure 2). Eighteen of these samplers are located onsite, six are situated off the INL Site near the boundary, and eight have been placed at locations off the INL Site. Samplers are divided into onsite, boundary, and offsite groups to determine if there is a gradient of radionuclide concentrations, increasing towards the INL Site. Replicate samplers for this quarter were located at Howe (boundary location), Sugar City (offsite location), Highway 26 Rest Area (onsite location), and Remote-Handled Low-Level Waste facility (RHLLW) (onsite location). Each replicate sampler is relocated every other year to a new location. Particulates in air were collected on membrane particulate filters (1.2 µm pore size), whereas gases passing through the filter were collected with an activated charcoal cartridge.

Filters and charcoal cartridges were changed weekly at each station. Each particulate filter was analyzed for gross alpha and gross beta radioactivity using thin-window gas flow proportional counting systems after waiting about four days for shorter-lived naturally occurring daughter products of radon and thorium to decay.

The weekly particulate filters collected during the quarter for each location were composited and analyzed for gamma-emitting radionuclides. Composites were also analyzed for ^{90}Sr, ^{238}Pu, $^{239/240}$Pu, $^{233/234}$U, ^{235}U, ^{238}U, and ^{241}Am. Additional samples were collected at the Materials and Fuels Complex (MFC) and analyzed for ^{36}Cl.

Charcoal cartridges are analyzed for gamma-emitting radionuclides, specifically for ^{131}I. The INL Environmental Services In Situ Gamma Laboratory individually scans the cartridges. If the scan of an individual cartridge results in a positive detection, the cartridge is shipped to GEL for analysis. Iodine-131 is of particular interest because it is produced in relatively large quantities by nuclear fission, is readily accumulated in human and animal thyroids, and has a half-life of eight days. This means that any elevated level of ^{131}I in the environment could be from a recent release of fission products.

Gross alpha results are reported in Appendix B, Table B-1 and shown in Figures 3 through 6. Gross alpha concentrations measured in individual samples ranged from a low of $(-1.2 \pm 0.2) \times 10^{-16}$ µCi/ml collected at Advanced Test Reactor (ATR) Complex on July 2, 2024, to a high of $(6.5 \pm 0.9) \times 10^{-15}$ µCi/ml collected at ATR Complex on July 24, 2024. All results were less than the DOE Derived Concentration Standard (DCS) of 1.1×10^{-13} µCi/ml for $^{239/240}$Pu. In addition, the results were consistent with historical data, as represented by the 99%/95% UTL for gross alpha activity (4.8×10^{-15} µCi/ml). Sample results above the UTL are representative of smokey conditions resulting from wildfires. The UTL was determined using ten years of historical data (measured from 2011 through 2020) and the ProUCL statistical software (https://www.epa.gov/land-research/proucl-software). The 99%/95% UTL is a value such that 99% of the population (all possible air measurements) is less than the UTL with 95% confidence. With a 99%/95% UTL it is expected that approximately 1% of the measurements will exceed the UTL if the concentration of gross alpha is within the normal range. This means that if a concentration exceeds the UTL it does not necessarily indicate that the result is outside of the normal range. Rather, it indicates that the measurement should be closely examined to determine if it is unusually high.

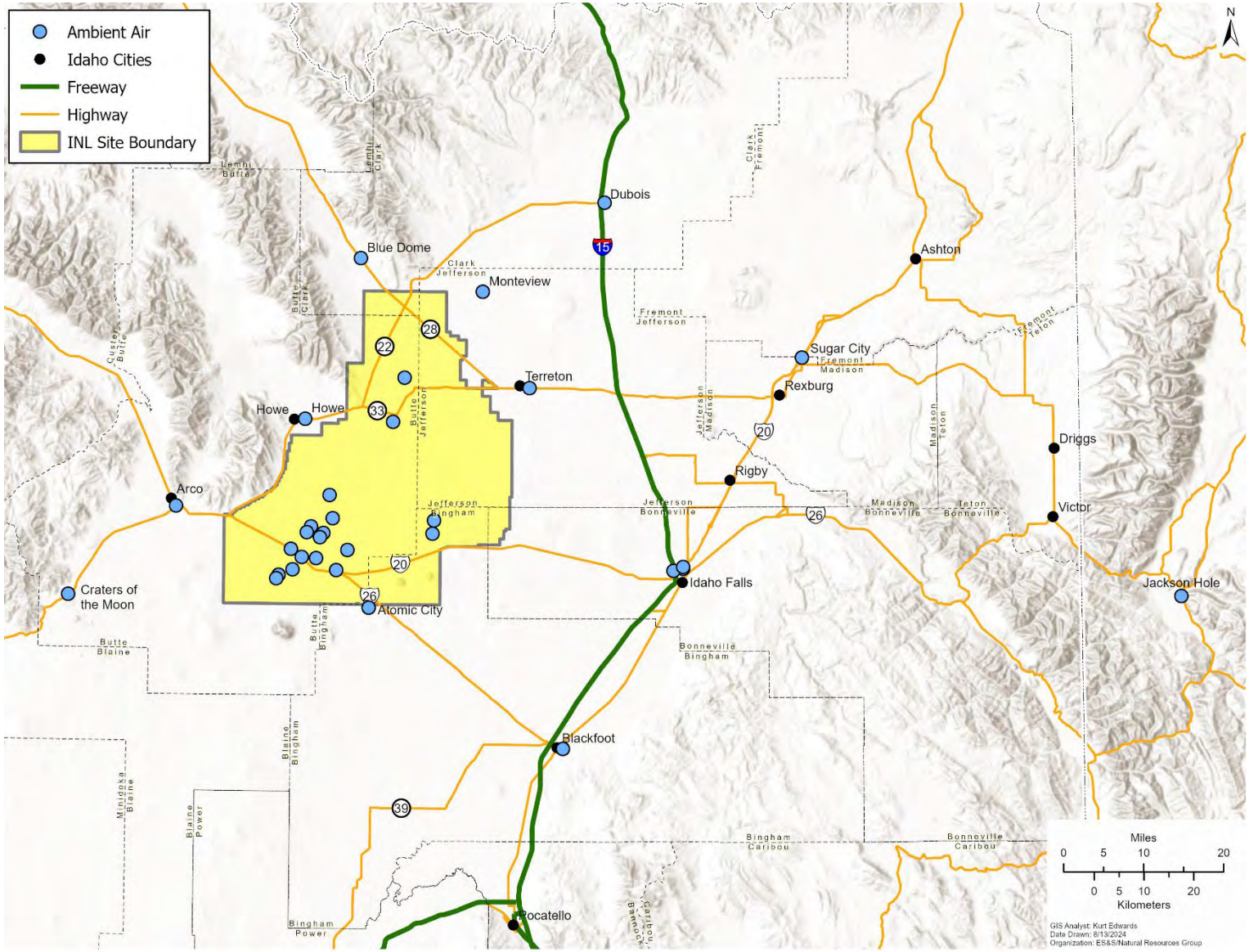

Figure 2. INL contractor low-volume air monitoring locations.

Gross alpha data have been tested for distribution (normally or log-normally distributed) and generally show no consistent discernible distribution. Because there is no discernible distribution of the data, a parametric test of significance cannot be used. The non-parametric Kruskal-Wallis analysis of variance by ranks test of multiple independent groups was used to determine statistical differences between onsite, boundary, and offsite locations. The test assesses the hypothesis that the different samples in the comparison were drawn from the same distribution or from distributions with the same median. In the computation of the Kruskal-Wallis test, each of the N observations is replaced by a rank. That is, all the results from all the locations are combined and ranked in a single series with the smallest result replaced by rank 1 and the largest result replaced by rank N (i.e., the total number of results). The sum of the ranks in each location group (i.e., onsite, boundary, and offsite) is found and then averaged for each group. If the samples are from the same populations, the average ranks should be about the same, whereas if the samples are from populations with different medians, the average ranks should differ. Statistically significant difference exists between data groups if the p-value (or probability value) is less than 0.05. Values greater than 0.05 translate into a 95% confidence that the medians are statistically the same. The p-value for each comparison is shown in Appendix C, Table C-1. There was no statistically significant difference among groups for the months of July and August, however data for the quarter and September had statistically significant differences (Appendix C, Table C-1). To determine if there were any differences between stations and where the differences occur, the Kruskal-Wallis analysis of variance by ranks test was used again. No statistical differences were determined between stations (Appendix C, Table C-2).

Gross beta results are presented in Appendix B, Table B-1 and displayed in Figures 7 through 10. Gross beta concentrations measured in individual samples ranged from a low of $(-1.6 \pm 3.2) \times 10^{-16}$ μCi/ml collected at Gate 4 on July 31, 2024, to a high of $(5.0 \pm 0.2) \times 10^{-14}$ μCi/ml collected at RHLLW duplicate location on September 25, 2024. All results were less than the DCS of 9.6×10^{-12} μCi/ml for ^{90}Sr. In addition, the results were consistent with historical data, as represented by the 99%/95% UTL for gross beta activity (6.1×10^{-14} μCi/ml). The data were tested quarterly and generally are found to be neither normally nor log-normally distributed. Box and whiskers plots were used to present the non-parametric data. Outliers and extreme values were retained in subsequent statistical analyses because they are within the range of measurements made in the past ten years, and because these values could not be attributed to mistakes in collection, analysis, or reporting procedures.

There was no statistically significant differences in the gross beta data between groups for the quarter or any month of the quarter (Appendix C, Table C-1). To determine if there were any differences between stations and where the differences occur, multiple comparisons were also made using the Kruskal-Wallis analysis of variance by ranks test between gross beta concentrations measured at all locations. No statistical differences were determined between stations (Appendix C, Table C-3).

3.1.1 Charcoal Cartridge Results

Iodine-131 was not detected in any of the charcoal cartridges measured during the quarter.

Charcoal cartridge ^{131}I results for each location are listed in Appendix B, Table B-2.

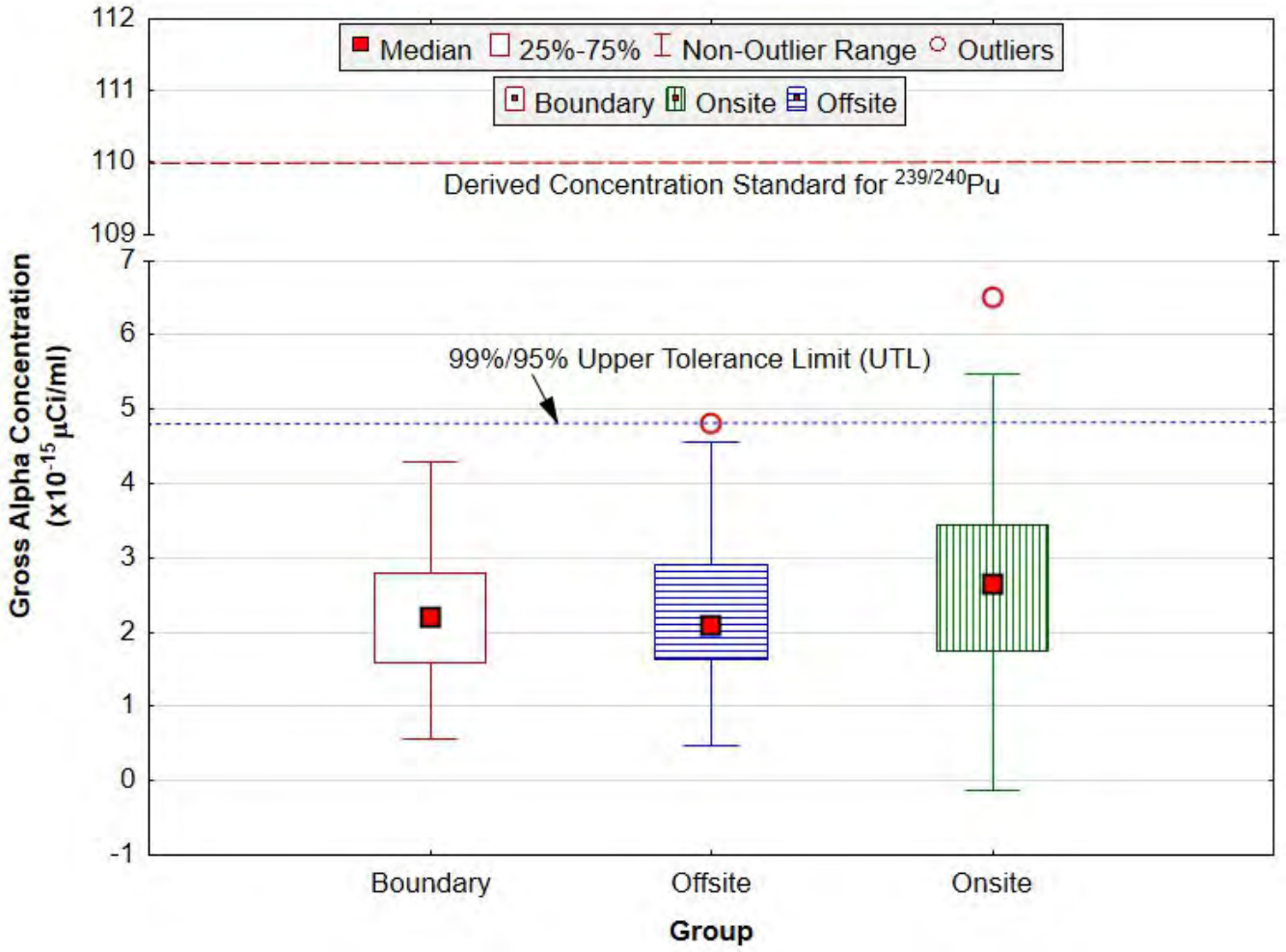

Figure 3. Gross alpha concentrations in air at onsite, boundary, and offsite locations for the third quarter of 2024. The DCS is the concentration of $^{239/240}$Pu in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{238}U, ^{234}U, ^{232}Th, ^{226}Ra, and ^{210}Po) in uncertain proportions, a meaningful DCS cannot be constructed for gross alpha concentrations. The DCS for $^{239/240}$Pu is shown because it is the most restrictive human-made alpha emitter. The UTL represents the value below which 99% of the population values are expected to fall with 95% confidence.

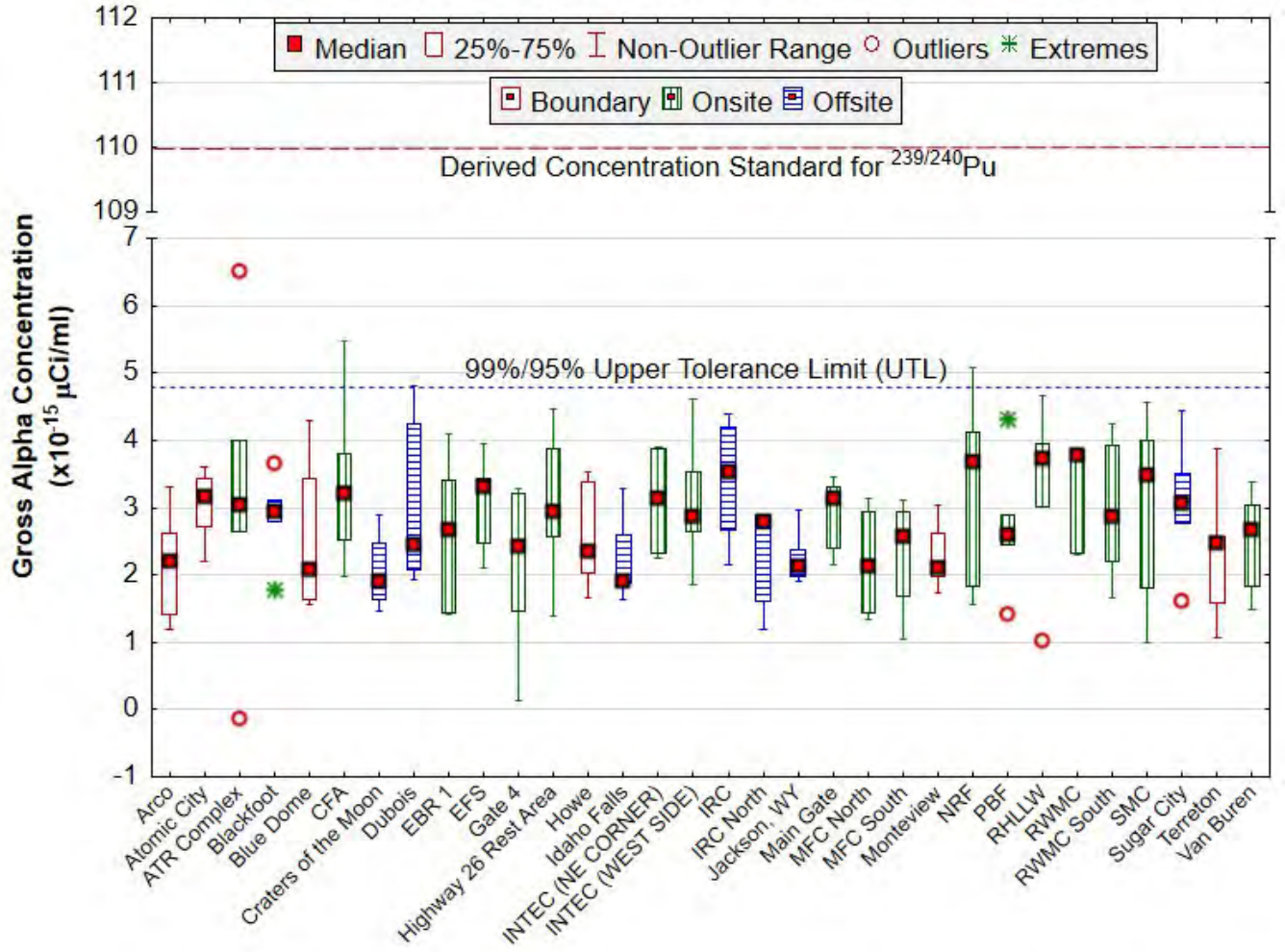

Figure 4. July 2024 gross alpha concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of $^{239/240}$Pu in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{238}U, ^{234}U, ^{232}Th, ^{226}Ra, and ^{210}Po) in uncertain proportions, a meaningful DCS cannot be constructed for gross alpha concentrations. The DCS for $^{239/240}$Pu is shown because it is the most restrictive human-made alpha emitter. The UTL represents the value below which 99% of the population values are expected to fall with 95% confidence.

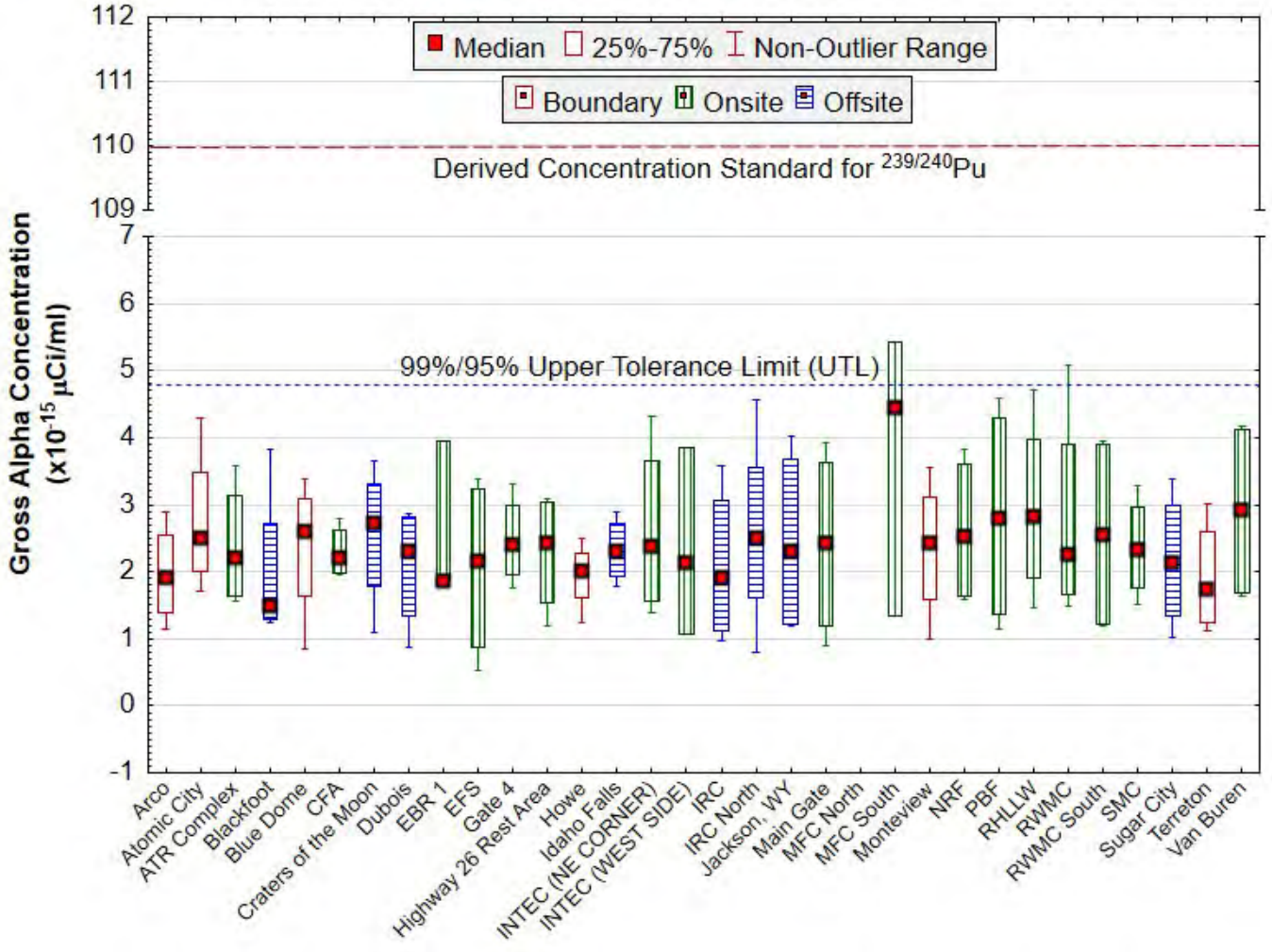

Figure 5. August 2024 gross alpha concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of $^{239/240}$Pu in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{238}U, ^{234}U, ^{232}Th, ^{226}Ra, and ^{210}Po) in uncertain proportions, a meaningful DCS cannot be constructed for gross alpha concentrations. The DCS for $^{239/240}$Pu is shown because it is the most restrictive human-made alpha emitter. The UTL represents the value below which 99% of the population values are expected to fall with 95% confidence.

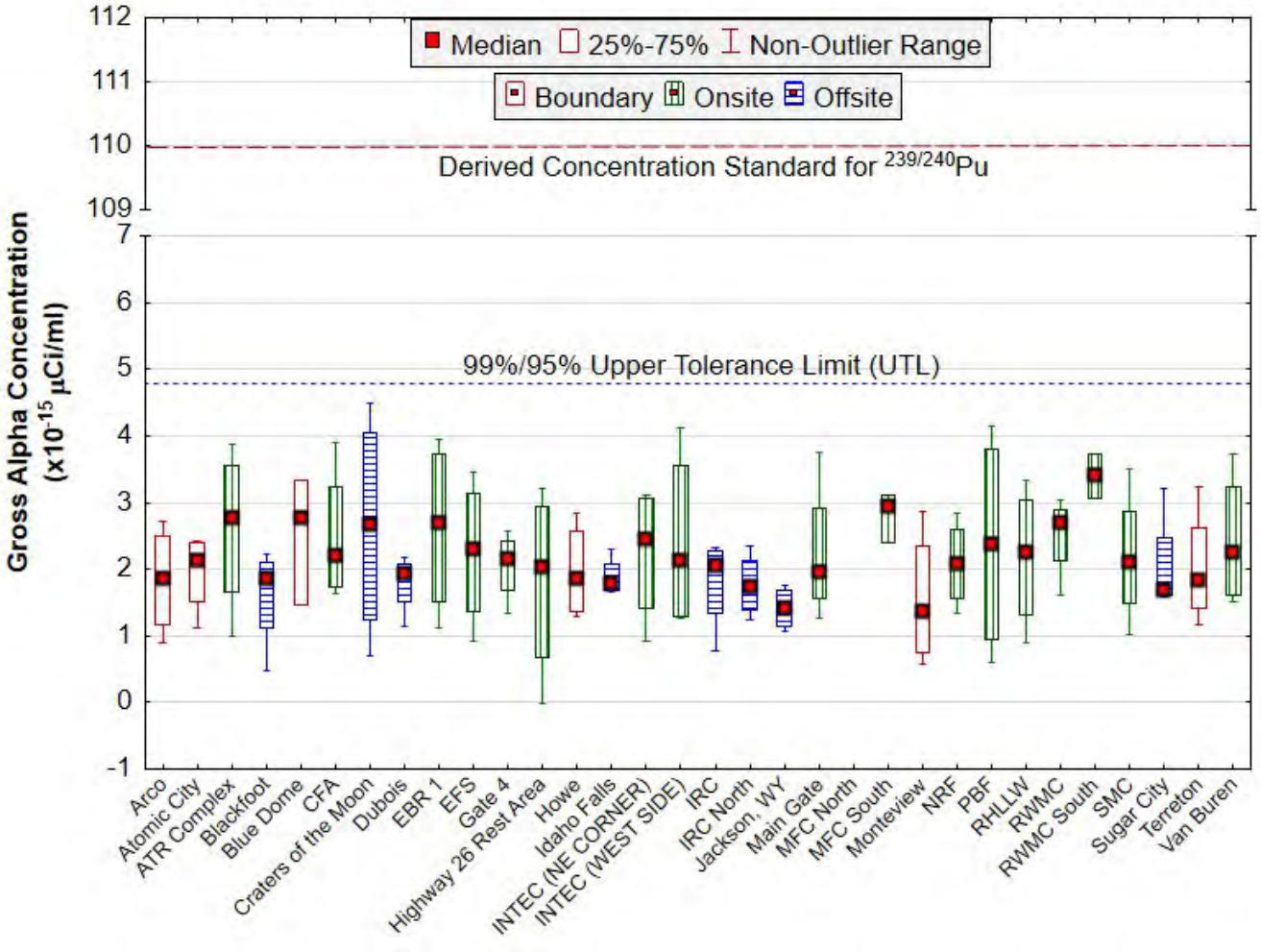

Figure 6. September 2024 gross alpha concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of $^{239/240}$Pu in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{238}U, ^{234}U, ^{232}Th, ^{226}Ra, and ^{210}Po) in uncertain proportions, a meaningful DCS cannot be constructed for gross alpha concentrations. The DCS for $^{239/240}$Pu is shown because it is the most restrictive human-made alpha emitter. The UTL represents the value below which 99% of the population values are expected to fall with 95% confidence.

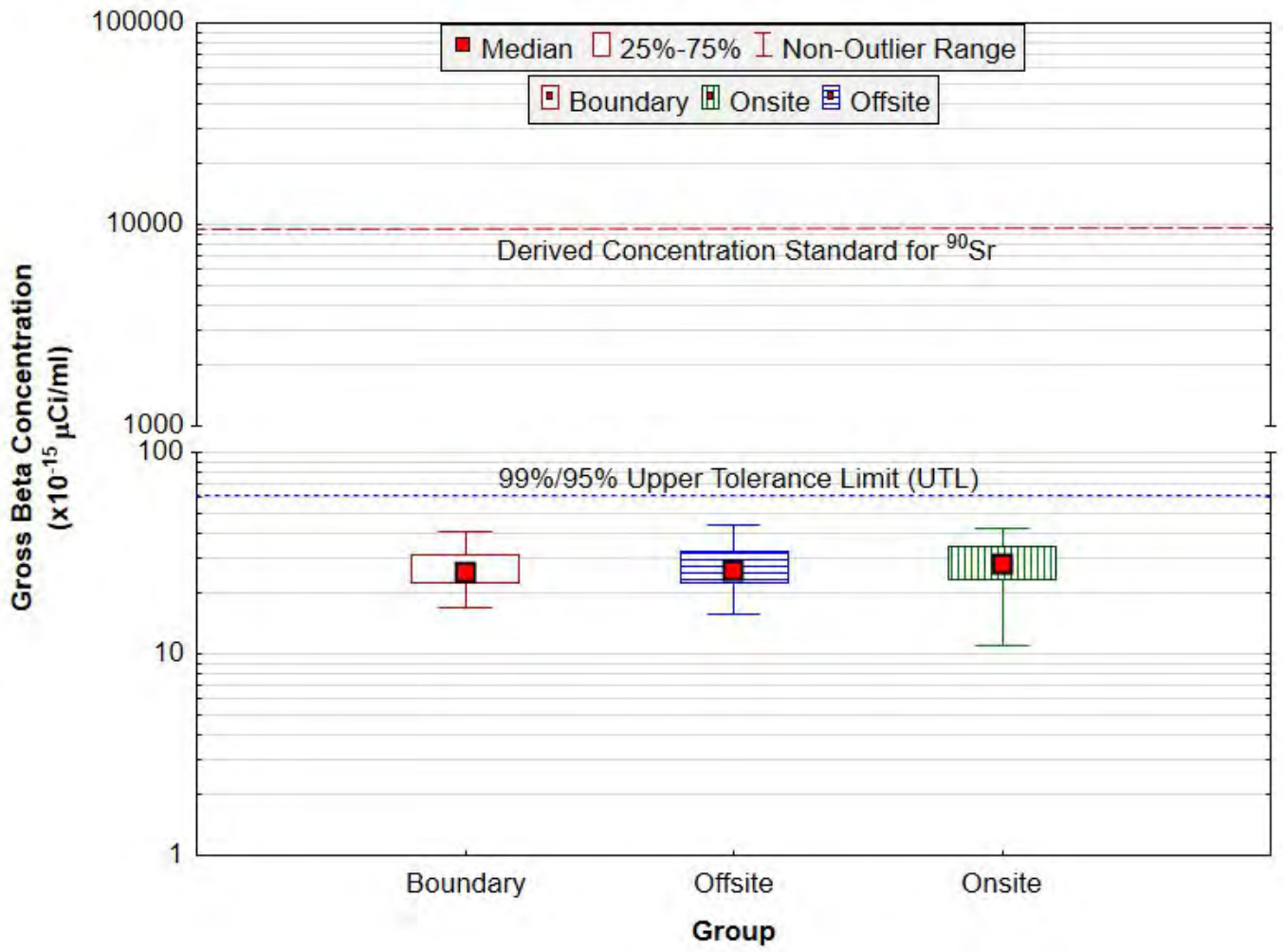

Figure 7. Gross beta concentrations in air at onsite, boundary, and offsite locations for the third quarter of 2024. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{40}K, ^{228}Ra, and ^{210}Pb) in uncertain proportions, a meaningful DCS cannot be constructed for gross beta concentration. The DCS for ^{90}Sr is shown because it is the most restrictive human-made beta emitter. The UTL represents the value below which 99% of the population values are expected to fall with 95% confidence.

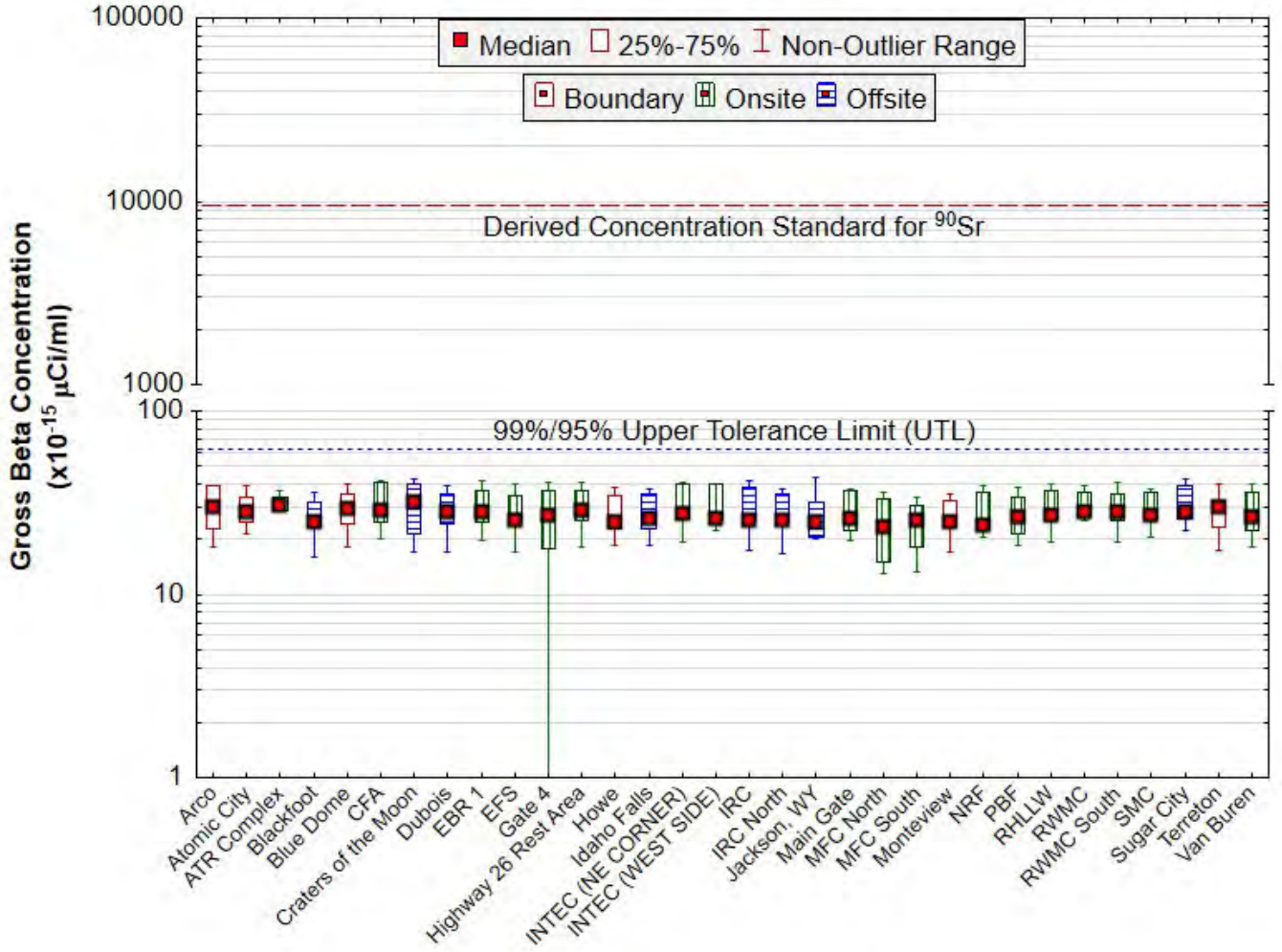

Figure 8. July 2024 gross beta concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{40}K, ^{228}Ra, and ^{210}Pb) in uncertain proportions, a meaningful DCS cannot be constructed for gross beta concentrations. The DCS for ^{90}Sr is shown because it is the most restrictive human-made beta emitter. The UTL represents the value below which 99% of the population values are expected to fall with 95% confidence.

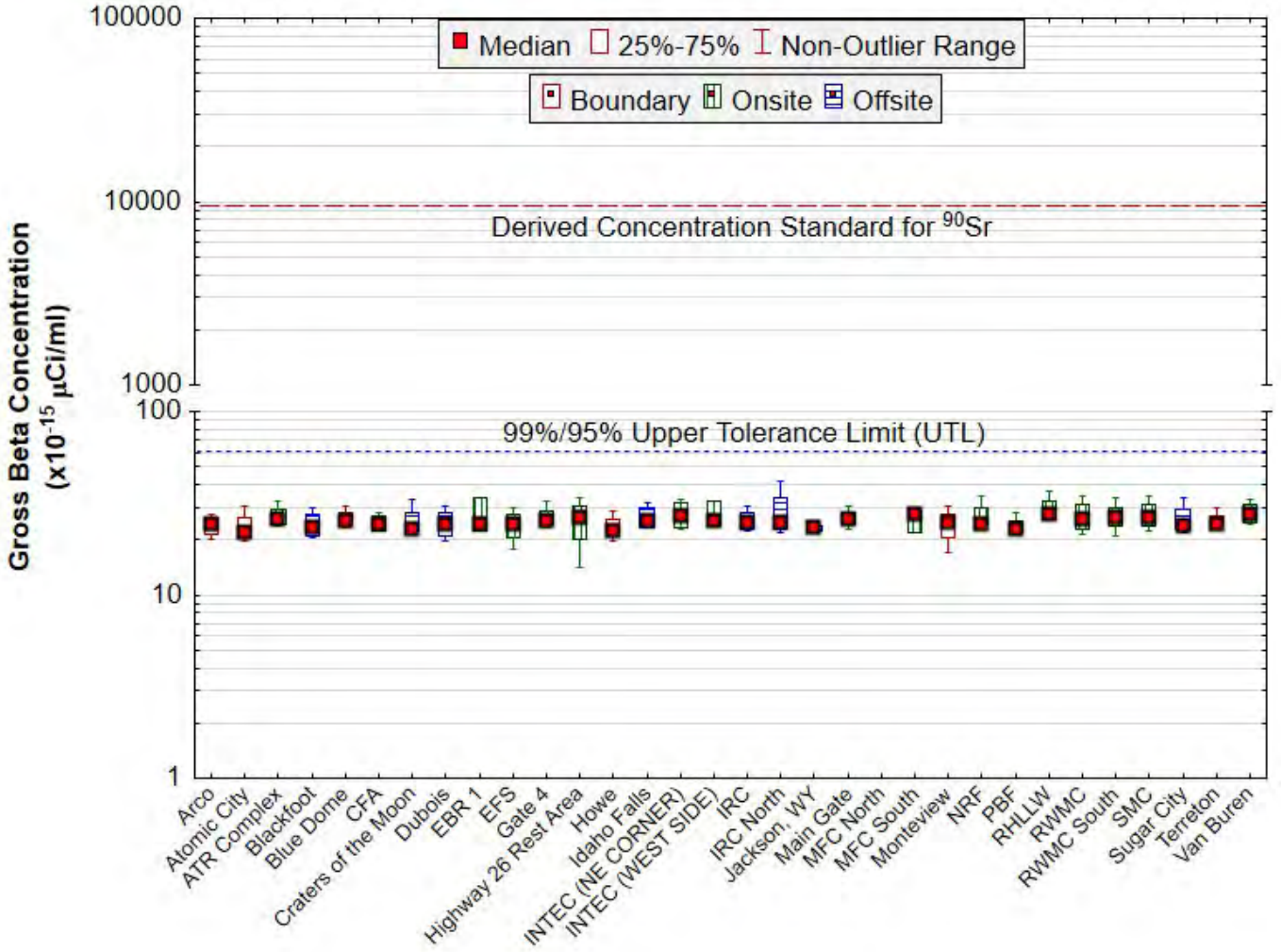

Figure 9. August 2024 gross beta concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{40}K, ^{228}Ra, and ^{210}Pb) in uncertain proportions, a meaningful DCS cannot be constructed for gross beta concentrations. The DCS for ^{90}Sr is shown because it is the most restrictive human-made beta emitter. The UTL represents the value below which 99% of the population values are expected to fall with 95% confidence.

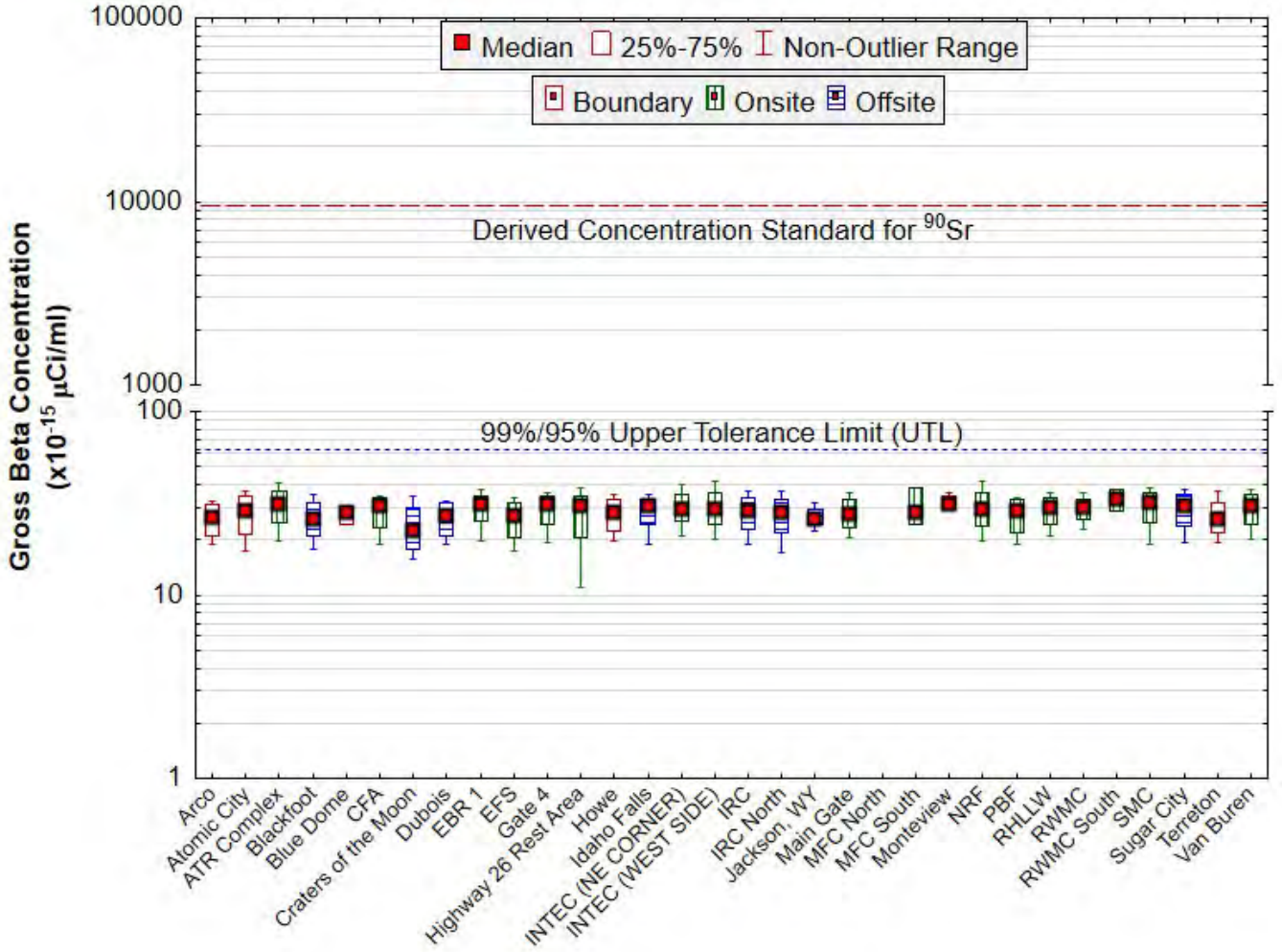

Figure 10. September 2024 gross beta concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{40}K, ^{228}Ra, and ^{210}Pb) in uncertain proportions, a meaningful DCS cannot be constructed for gross beta concentrations. The DCS for ^{90}Sr is shown because it is the most restrictive human-made beta emitter. The UTL represents the value below which 99% of the population are expected to fall with 95% confidence.

3.1.2 Composite Results

Gamma Spec Results

No human-made gamma-emitting radionuclides were detected in quarterly air filter composite samples except for the sample collected at the Experimental Breeder Reactor-I (EBR-I). Cesium-137 and ^{65}Zn were detected in the composite sample from EBR-I. Both detected results are below the DOE DCS values (3.6×10^{-16} µCi/mL for ^{137}Cs, and 1.2×10^{-9} µCi/mL for ^{65}Zn).

Alpha Spec Results

Plutonium-238 (^{238}Pu) and $^{239/240}$Pu were not detected in any composite samples. Results for each location are listed in Appendix B, Table B-3.

A composite sample collected at Radioactive Waste Management Complex (RWMC) had a detection of ^{241}Am. Composite samples from several locations resulted in detection s of $^{233/234}$U and ^{238}U. Monitoring of $^{233/234}$U and ^{238}U was initiated in the third quarter of 2023, resulting in a limited data set. Once enough data has been collected, a UTL will be determined. Uranium occurs naturally in various rocks and soil, can be suspended in the air and captured on an air filter. All detected results were below the DOE DCS values for these radionuclides in air (i.e., 1.3×10^{-13} µCi/mL for ^{241}Am, 1.6×10^{-13} µCi/mL for $^{233/234}$U, and 1.8×10^{-13} µCi/mL for ^{238}U).

Beta Results

Strontium-90 was not detected in any composite samples. No ^{36}Cl was detected in any composite samples collected from MFC.

Composite results for the quarter are listed in Appendix B, Table B-3.

3.2 Atmospheric Moisture Sampling

Atmospheric moisture is collected by pulling air through a column of absorbent material (molecular sieve material) to absorb water vapor. The water is then extracted from the absorbent material by heat distillation. The resulting water samples are then analyzed for tritium using liquid scintillation.

3.2.1 Atmospheric Moisture Results

Results were available for 23 atmospheric moisture samples collected at the onsite and offsite locations during the quarter of 2024 (Figure 11). One result exceeded the 3s uncertainty level for tritium, with a reported value of $(8.23 \pm 2.61) \times 10^{-13}$ µCi/mL$_{air}$ at the National Oceanic and Atmospheric Administration station in Idaho Falls, on July 24, 2024. The sample result was below the UTL for atmospheric moisture (1.6×10^{-12} µCi/mL$_{air}$). The DOE DCS for tritium in air (as water vapor) is 1.3×10^{-7} µCi/mL$_{air}$.

Atmospheric moisture results for the quarter are listed in Appendix B, Table B-4.

3.3 Precipitation Sampling

Precipitation samples are gathered when enough precipitation occurs to allow for the collection of the minimum sample volume of approximately 50 mL. Samples are taken (when available) of monthly composites from Idaho Falls, and weekly (offsite) from Experimental Field Station (EFS) (onsite) and Atomic City and Howe (boundary) (Figure 11). These are the same locations where atmospheric moisture samples are collected. Precipitation samples are analyzed for tritium. Storm events in the quarter produced sufficient amounts of precipitation to yield 16 samples.

3.3.1 Precipitation Results

None of the results exceeded the 3s uncertainty level for tritium. These results are listed in Appendix B, Table B-5. The 99%/95% UTL for tritium in precipitation is 300 pCi/L. The DOE DCS for tritium in water is 2.6×10^{6} pCi/L.

Precipitation results for the quarter are listed in Appendix B, Table B-5.

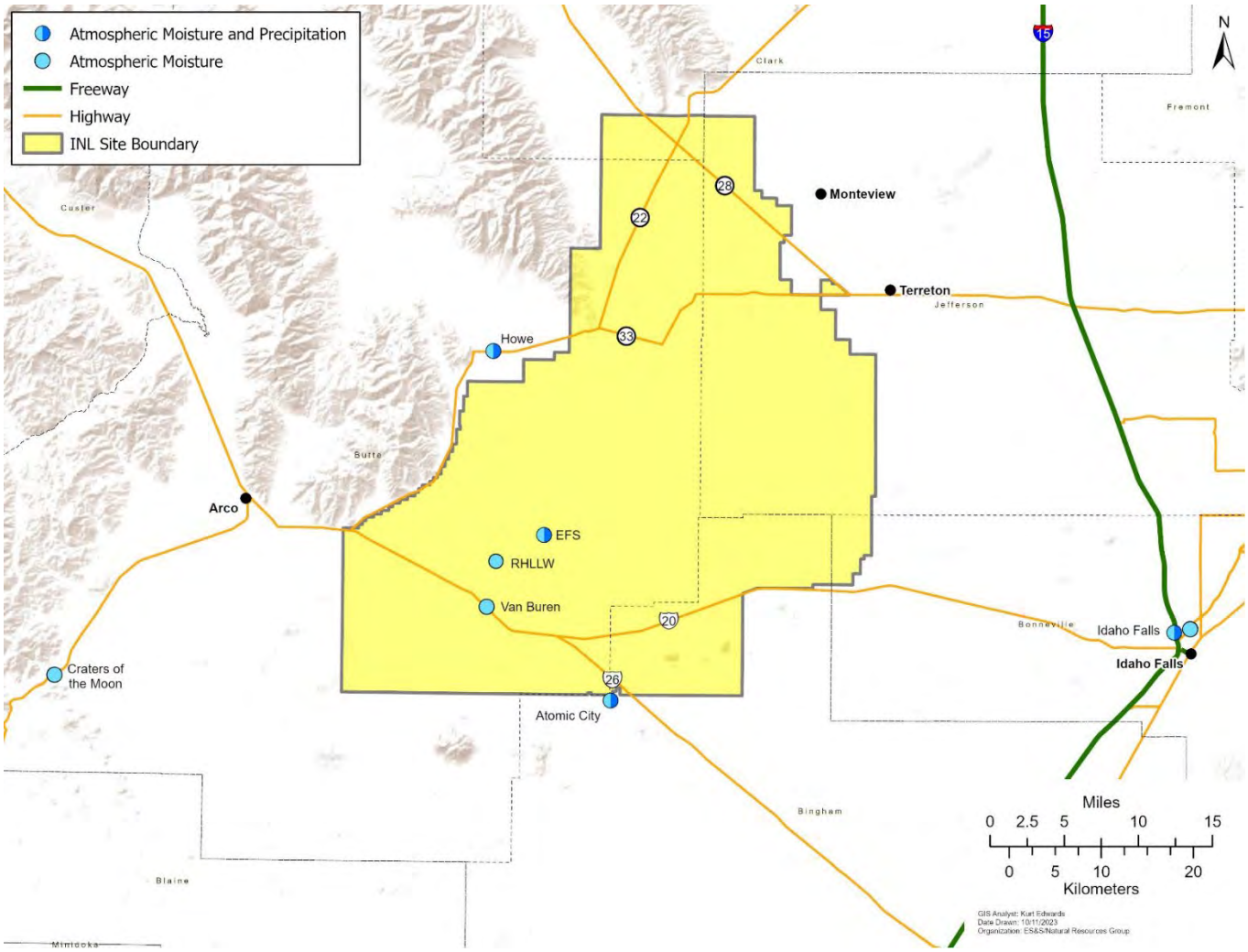

Figure 11. Atmospheric moisture and precipitation monitoring locations.

4. Liquid Effluent Sampling

Some INL Site operations retain wastewater in lined, total containment evaporative ponds constructed to eliminate liquid effluent discharge to the environment. Other INL Site operations, including the ATR Complex and MFC, discharge liquid effluents to unlined infiltration basins or ponds that may potentially contain nonhazardous levels of radioactive, or nonradioactive, contamination. Effluent discharges to the environment are subject to specified discharge limits, permit limits, or maximum contamination levels. The INL contractor conducts liquid effluent monitoring on the systems that discharge to the environment to ensure compliance with permit requirements and DOE Order 458.1. These programs sample groundwater related to liquid effluent. This section discusses results from environmental surveillance monitoring effluent samples available during the quarter. Environmental surveillance groundwater sampling results associated with the effluent discharges are discussed in Section 5. Permit required compliance sampling is reported in the Annual Site Environmental Report (https://inl.gov/aser/). See Appendix A, Table A-1 for a sampling schedule. Liquid effluent sample locations are shown in Figure 12.

4.1 ATR Complex Cold Waste Pond Results

The ATR Complex Cold Waste Pond (CWP) was excavated in 1982 and consists of two unlined cells with a design capacity of 38.69 ML (10.22 MG) and a depth of 3 m (10 ft). The CWP function as percolation basins for the infiltration of nonhazardous industrial liquid effluent consisting primarily of noncontact cooling tower blowdown, once-through cooling water for air conditioning units, coolant water from air compressors, and wastewater from secondary system drains and other nonradioactive drains throughout the ATR Complex. As noted in Appendix A, Table A-1, environmental surveillance samples of the effluent are collected monthly for gross alpha, gross beta, gamma spectrometry, and tritium.

Gross beta was the only radiological constituents detected in the CWP effluent during the quarter. The gross beta results did not exceed the respective screening level (gross beta: 15 pCi/L). The detected results were within historical ranges.

ATR Complex CWP effluent results for the quarter are listed in Appendix B, Table B-6.

4.2 MFC Industrial Waste Pond Results

The MFC Industrial Waste Pond (IWP) is an unlined basin that was first excavated in 1959 and has a design capacity of 1,078.84 ML (285 MG) at a maximum water depth of 3.96 m (13 ft). The effluent discharged to the MFC IWP consists primarily of nonhazardous noncontact cooling water, cooling tower drains, and air wash flows. Small volumes of power plant cooling water system blowdown, intermittent reverse osmosis blowdown, and floor drain and laboratory sink discharges are also sent to the IWP. Environmental surveillance samples are collected from the IWP three times per year in the second, third, and fourth quarter for gross alpha, gross beta, gamma spectrometry, and tritium. In addition to the analytes previously mentioned, sampling is performed annually during the third quarter for analysis of select isotopes of americium, strontium, plutonium, and uranium.

Gross beta, $^{233/234}U$, and ^{238}U were the only radiological constituents detected in the IWP effluent during the quarter. The detected results did not exceed the respective screening levels. The detected results were within historical ranges.

MFC IWP effluent results for the quarter are listed in Appendix B, Table B-6.

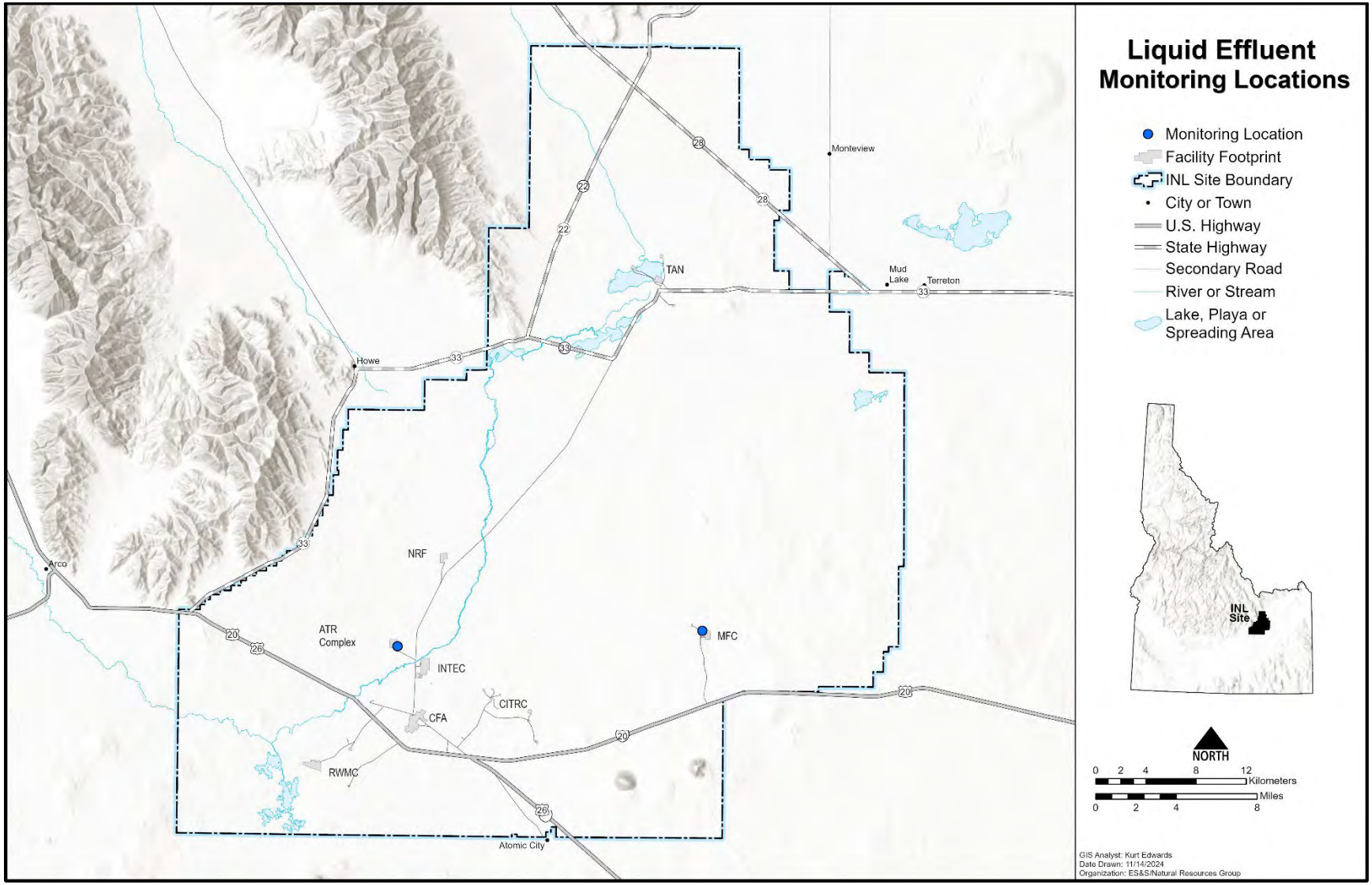

Figure 12. INL contractor liquid effluent monitoring locations.

5. Groundwater, Surface Water, and Drinking Water

The eastern Snake River Plain Aquifer serves as the primary source for drinking water and crop irrigation in the upper Snake River Basin. The INL contractor conducts surveillance monitoring on and off the INL Site within the eastern Snake River Plain Aquifer hydrogeologic system to comply with DOE Order 458.1. Additional sampling is performed by the INL contractor to demonstrate compliance with federal and state regulations and reuse permit requirements. Results for compliance monitoring are reported in the Annual Site Environmental Report. Monitoring results are also evaluated against public drinking water system maximum contaminant limits and state groundwater standards to ensure the requirements of DOE Order 458.1 are met. Monitoring includes the collection of water from the aquifer (including dedicated monitoring wells and drinking water wells), downgradient springs along the Snake River where the aquifer discharges water and an ephemeral stream (the Big Lost River), which flows through the INL Site and helps to recharge the aquifer. This section discusses environmental surveillance monitoring results from onsite groundwater, onsite and offsite drinking water, and offsite surface water samples available during the quarter. See Table A-1, Appendix A for a sampling schedule.

5.1 Groundwater Sampling

The INL contractor conducts semi-annual groundwater monitoring in the second quarter (April/May) and third/fourth quarter (September/October) at the ATR Complex and MFC to ensure compliance with reuse permit requirements and DOE Order 458.1. Groundwater is sampled at upgradient and downgradient locations to measure potential impacts from the associated liquid effluent discharges at both facilities. Permit required compliance sampling is reported in the Annual Site Environmental Report (https://inl.gov/aser/). Groundwater samples were collected from seven wells at the ATR Complex and three wells at MFC during the quarter. Groundwater monitoring locations are shown in Figure 13.

The INL contractor also conducts annual groundwater monitoring in the second quarter (April/May) at the RHLLW Disposal Facility. The RHLLW Disposal Facility does not generate or discharge liquid effluent. Groundwater monitoring is performed to ensure compliance with DOE Order 435.1 and DOE Order 458.1. Groundwater samples were not collected during the quarter at RHLLW Disposal Facility.

5.1.1 Groundwater Results

Gross alpha and gross beta were detected in ATR Complex samples collected during the quarter. Tritium was detected at four of the seven wells sampled during the quarter. All detected results were well below the applicable groundwater standards (IDAPA 58.01.11) and within historical ranges. The wells with detected tritium concentrations continue to gradually trend down over time.

Gross alpha, gross beta, $^{233/234}U$, and ^{238}U were positively detected in some of the MFC samples and were below applicable groundwater standards and within historical ranges.

Groundwater results for the quarter are listed in Appendix B, Table B-7.

5.2 Surface Water Sampling

Surface water is collected in the second and fourth quarters. Big Lost River samples are collected when available. No surface water was collected during the third quarter.

5.3 Drinking Water Sampling

The public/drinking water source, in southeastern Idaho, is primarily derived from groundwater. Surveillance monitoring of offsite drinking water systems, due to the potential for contaminant migration beyond the INL Site boundary, are conducted by the INL contractor (Figure 14). The INL Site has 11 drinking water systems that are monitored by the INL Site contractors to demonstrate that they are safe

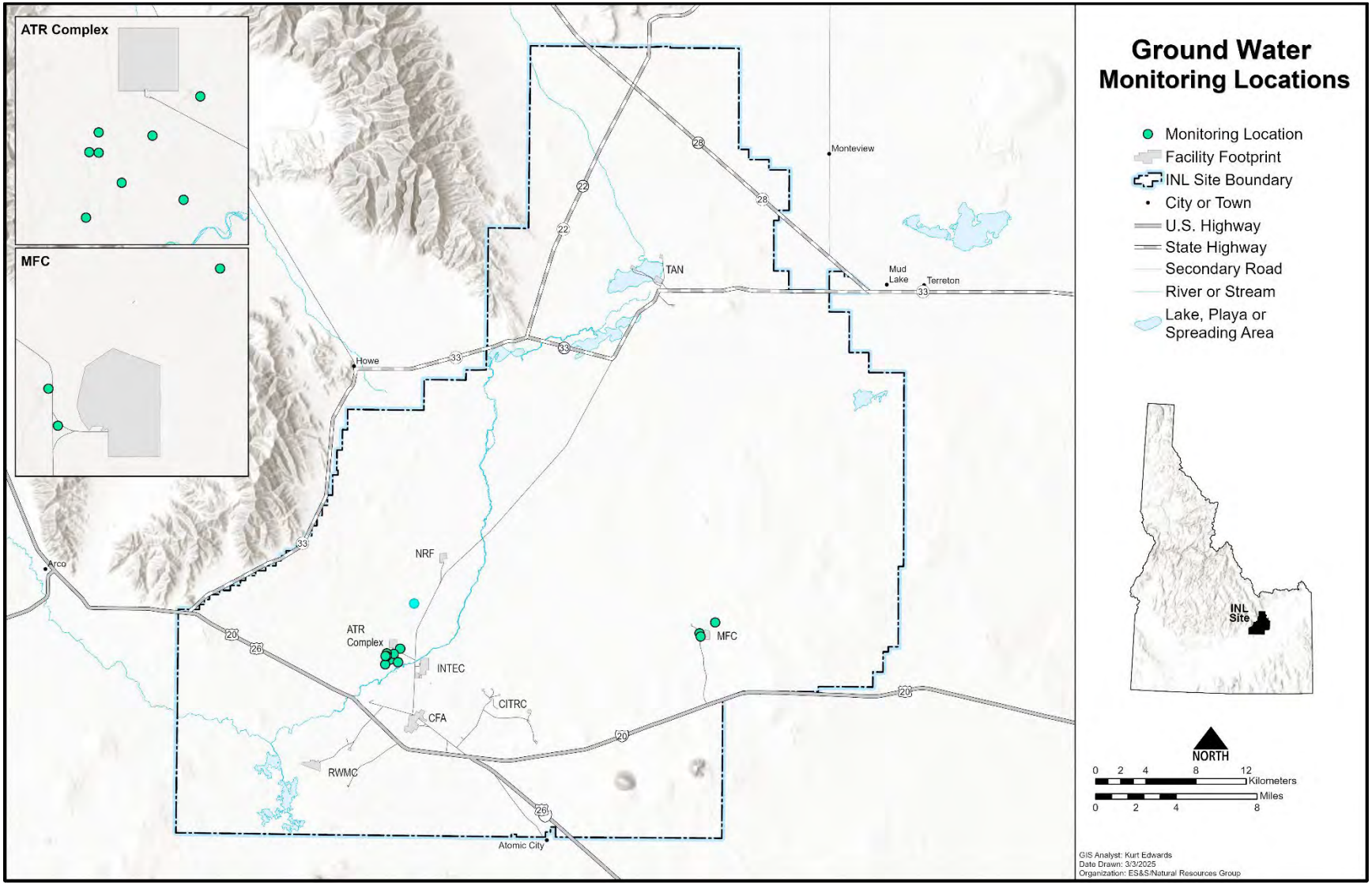

Figure 13. INL contractor groundwater monitoring locations.

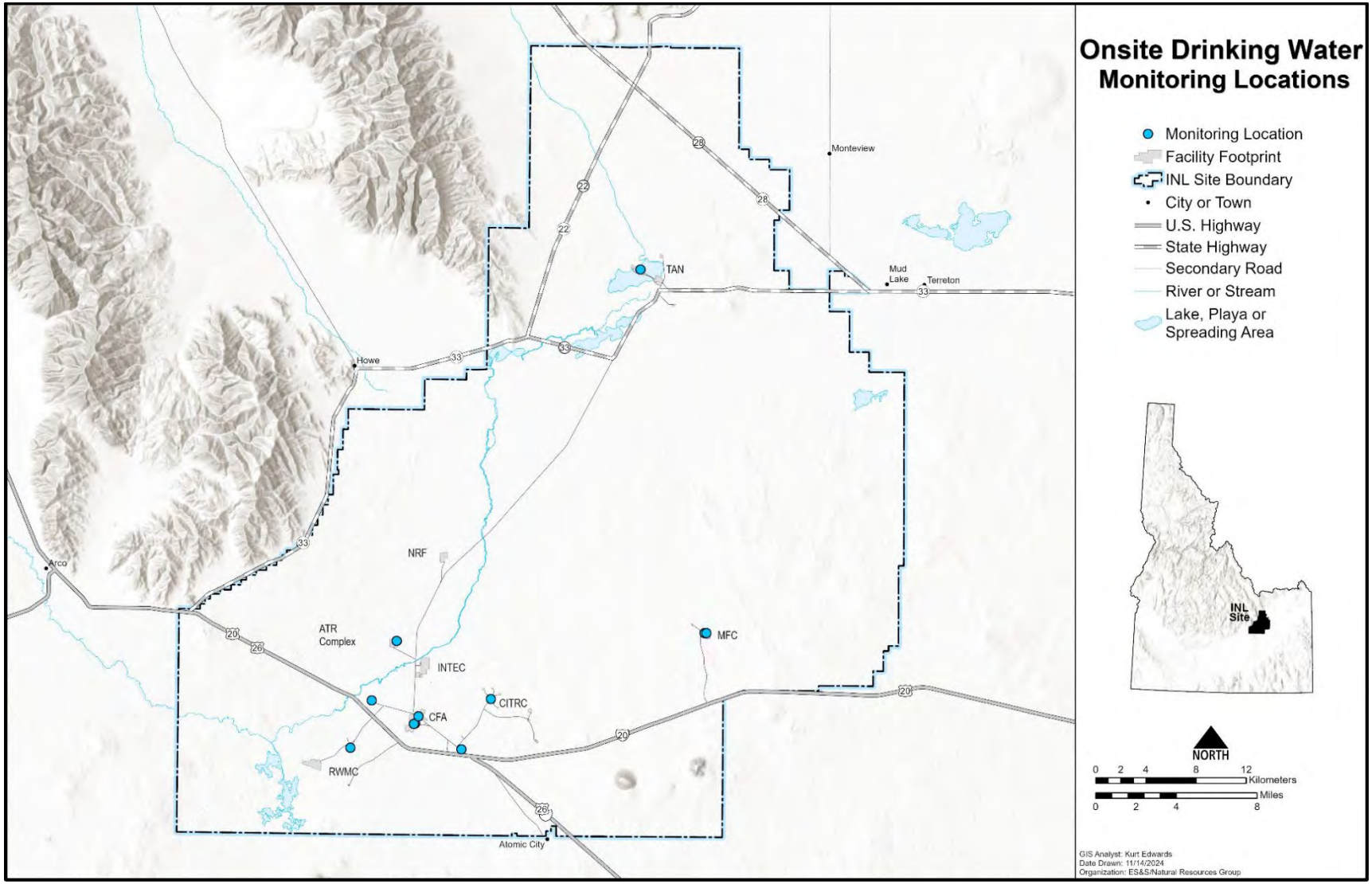

Figure 14. INL contractor onsite drinking water monitoring locations.

for consumption. The INL contractor monitors eight of these drinking water systems, while the ICP contractor monitors three. Drinking water parameters are regulated by the state of Idaho under authority of the Safe Drinking Water Act (42 U.S.C. 300f et seq), "National Primary Drinking Water Regulations" (40 CFR 141-142), and "Idaho Rules for Public Drinking Water Systems" (IDAPA 58.01.08). INL Site drinking water systems are classified as either non-transient or transient, non-community water systems. The four INL contractor transient, non-transient, non-community water systems are located at Critical Infrastructure Test Range Complex (CITRC), EBR-I, Gun Range, and Main Gate. The four remaining INL contractor water systems are classified as non-transient, non-community water systems and are located at ATR Complex, Central Facilities Area (CFA), MFC, and Test Area North (TAN)/Contained Test Facility (CTF). Compliance monitoring schedules for each water system are set by the Department of Environmental Quality (DEQ). Compliance results are not reported in these quarterly reports since these results can be found on the Idaho DEQ's public water system switchboard (www.deq.idaho.gov).

In addition to compliance sampling, INL performs surveillance drinking water sampling in accordance with DOE Order 458.1. The INL contractor collects surveillance samples semi-annually from all eight drinking water systems that are analyzed for gross alpha, gross beta, and tritium. Additional samples are collected from CFA and analyzed for iodine-129 and ^{90}Sr.

The INL contractor also collects samples from municipal water sources that have been through a water treatment facility or a well-used for drinking water. Drinking water samples are collected offsite to adhere to DOE Order 458.1 but are not utilized for compliance with drinking water regulations. The results of the offsite samples are compared with historic data to identify trends or detect anomalies. Water samples are collected from eight locations off the INL Site. Two downgradient locations of the INL Site, Shoshone and Minidoka, and one upgradient location, Mud Lake, are co-sampled with the state of Idaho DEQ-INL Oversight Program. Samples are also collected at Atomic City, Craters of the Moon, Howe, Idaho Falls, and the public Rest Area at Highway 20/26. No offsite drinking water sampling was conducted during the quarter.

5.3.1 Drinking Water Results (Onsite)

No iodine-129 (^{129}I) or ^{90}Sr was detected in water samples collected from CFA. Gross alpha, gross beta, and tritium were detected in some of the samples collected during the quarter. Concentrations were within historical range and below maximum contaminant levels (MCL). The MCLs for drinking water are 15 pCi/L for gross alpha and 20,000 pCi/L for tritium. The EPA public drinking water system regulation specifies a MCL of 4 mrem/yr for gross beta and uses a screening level of 50 pCi/L to determine when individual beta/gamma emitters need to be identified.

Onsite drinking water results for the quarter are listed in Appendix B, Table B-8.

6. Agricultural Product and Wildlife

Another potential pathway for contaminants to reach humans is through the food chain. The INL contractor samples multiple agricultural products and game animals from around the INL Site and southeast Idaho. Specifically, milk, alfalfa, grain, potatoes, lettuce, large game animals, and waterfowl are sampled. Milk is sampled throughout the year. Large game animals are sampled whenever they are killed onsite from vehicle collisions. Alfalfa is collected during the second quarter, lettuce and grain are sampled during the fourth quarter, while potatoes are collected during the third or fourth quarter. Waterfowl are collected in either the third or fourth quarter. See Table A-1, Appendix A for a sampling schedule. This section discusses results from milk, and large game animal samples available during the quarter.

6.1 Milk Sampling

Milk samples were collected weekly at dairies located in Rigby and Terreton. Monthly samples were collected at six locations around the INL Site (Figure 15). In addition to the regional locations, commercially-available organic milk (from Broomfield, Colorado) was purchased as a control sample each month. All samples were analyzed for gamma-emitting radionuclides.

6.1.1 Milk Results

Cesium-137 and ^{131}I were not detected in any weekly or monthly samples during the quarter. Data for ^{131}I and ^{137}Cs in milk samples are listed in Appendix B, Table B-9.

6.2 Large Game Animal Sampling

Two elk were available for sampling during the quarter. Muscle and thyroid samples were taken from both animals and only one liver was obtained. A liver from one of the animals was not able to be sampled due to damage received when the animal was struck by a vehicle.

6.2.1 Large Game Animal Results

No human-made gamma-emitting radionuclides were detected in the samples.

Large game animal results are listed in Appendix B, Table B-10.

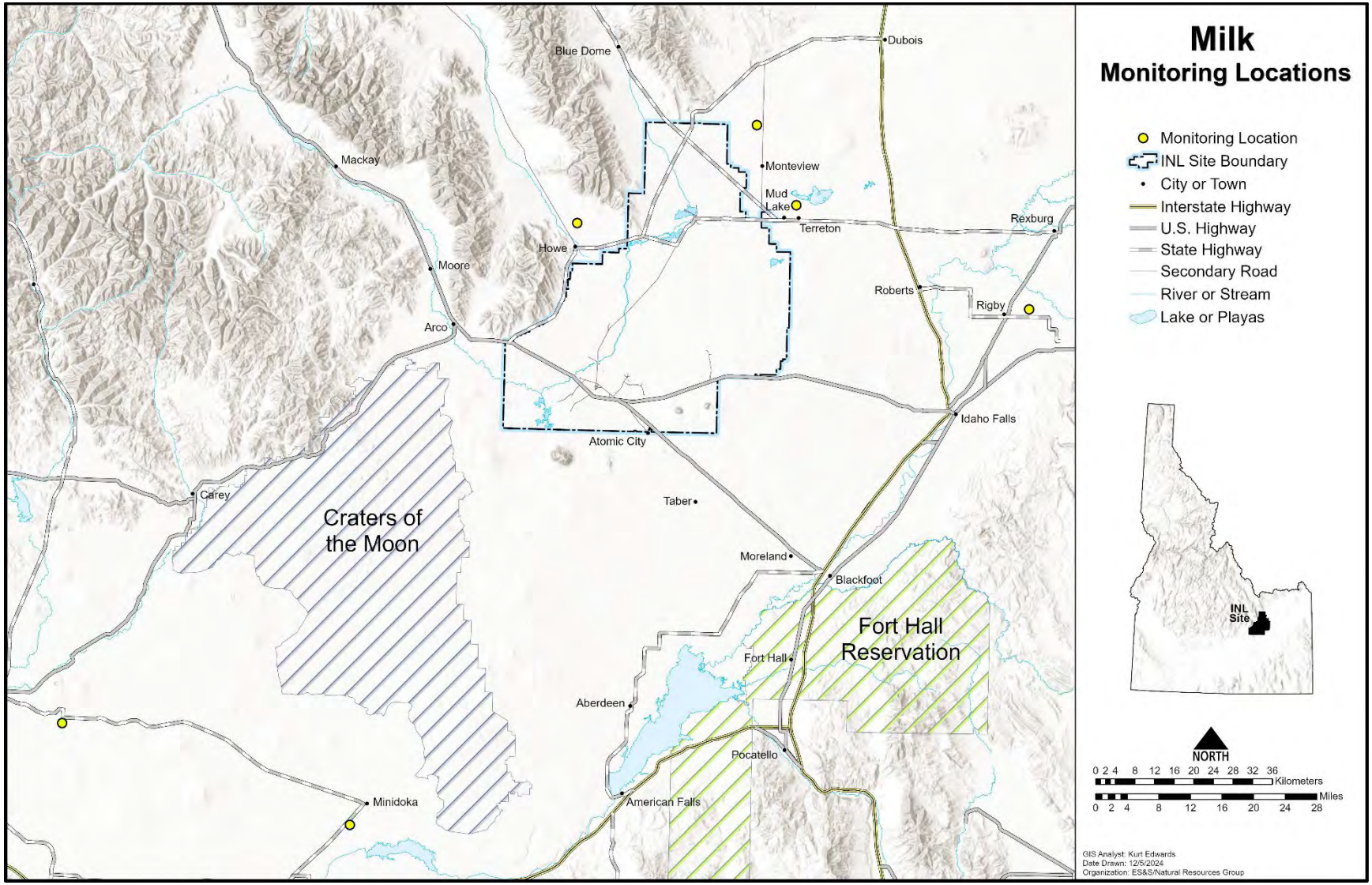

Figure 15. INL contractor milk monitoring locations.

7. Environmental Direct Radiation

Environmental direct radiation measures exposure of the public and non-involved workers within INL Site boundaries and surrounding areas.

An array of optically stimulated luminescent dosimeters are distributed throughout the Eastern Snake River Plain and on the INL Site to measure environmental radiation. In addition, neutron dose surveillance monitoring is conducted around INL facilities and buildings where neutron radiation may be present.

Dosimeters on the INL Site are placed at facility perimeters, concentrated in areas likely to detect the highest gamma radiation readings. Other dosimeters on the INL Site are located near radioactive materials storage areas and along roads.

Dosimeters are collected in the second and fourth quarters.

8. Quality Assurance

Quality assurance consists of planned and systematic activities that give confidence in environmental surveillance program results (NCRP 2012). Environmental surveillance monitoring programs should provide data of known quality for the assessments and decisions being made. Quality assurance and quality control programs were maintained by the INL contractor and GEL performing environmental analyses.

In addition to the quality assurance processes implemented by the INL contractor, GEL utilizes trained personnel, procedures, and quality assurance processes to ensure quality data. Data quality reviews were performed by GEL and any unusual conditions were addressed and identified in the case narrative prior to reporting to INL.

Field sampling elements, laboratory measurements, and quality control samples were reviewed and evaluated by GEL. Results are summarized in Section 8.2. Together this information was used to assess the quality of data provided to INL contractor, and to follow-up and/or conduct a corrective action to improve processes when necessary. This multi-faceted approach to quality assurance and quality control added value to the INL contractor's environmental surveillance monitoring program by providing confidence that all laboratory data reported in this report are reliable and of acceptable quality.

The INL contractor Quality Assurance Program consists of five ongoing tasks which measure: (1) method uncertainty; (2) data completeness; (3) data accuracy, using spike, performance evaluation and laboratory control samples; (4) data precision, using split samples, duplicate samples and recounts; and (5) presence of contamination in samples, using blanks.

Sample results are compared to criteria described in the "Environmental Monitoring Services Quality Assurance Project Plan" (INL 2022).

Assessments of the INL contractor data quality are achieved through analysis of performance evaluation (PE), and duplicate samples; through sample recounts; through analysis of blank samples; and through comparison of sample results to established method quality objectives.

8.1 Inter-laboratory Program Performance Testing Evaluations

Laboratories used for routine analyses of radionuclides in environmental media were selected by the INL contractor based on a laboratory's capabilities to meet program objectives, such as the ability to meet required detection levels, and past results in performance testing (PT) programs. The DOE Consolidated Audit Program (DOECAP) – Accreditation Program (comprised of third-party accreditation bodies) issues an annual accreditation certificate to laboratories seeking and maintaining accreditation. The rigorous accreditation process reviews each method, media, and analyte analyzed at the laboratory. An annual audit is performed to evaluate a laboratory's technical capability and competence, along with their

proficiency in complying with DOE quality assurance requirements as outlined in the Quality Systems Manual (QSM 2021).

INL contracts with analytical laboratories who participate in ISO 17043 accredited PT programs as outlined in the Quality Systems Manual (QSM 2021). The analytical laboratory is responsible for reviewing their PT results and correcting potential quality concerns identified by the PT provider. Analytical results from these PT providers are then compared to PE results relative for each media and analyte tested. DOE Consolidated Audit Program accreditation is obtained and/or maintained by achieving a history of two successful studies (acceptable scores) out of the most recent three attempts. Inter-laboratory PT participation and results are listed below.

GEL Laboratories, LLC

GEL is accredited through DOECAP – Accreditation Program and participated in PT study through Environmental Resource Associates and Eckert & Ziegler Analytics, Inc. during the quarter. GEL had acceptable results for analytes, methods, and media of interest to the INL contractor except for cerium-141 (^{141}Ce) in milk and ^{90}Sr in water. The laboratory did not identify any errors or anomalies that led to the nonagreements. The laboratory completed an additional single blind spike for ^{90}Sr and achieved acceptable performance. An additional PT study for ^{141}Ce in milk will be performed during the 4th quarter of 2024. The INL contractor will continue to monitor PT performance for these analytes and media.

8.2 Quality Control Sample Program

The INL contractor sends quality control samples to laboratories along with routine environmental samples to be analyzed in tandem. The samples are prepared in a way that the quality control samples are analogous to the field samples. Blanks, duplicate/replicate samples and PE samples for the quarter are discussed below.

8.2.1 Blanks

The INL contractor submits field blanks along with the regular samples to test for the introduction of contamination during the process of field collection, laboratory preparation, and laboratory analysis. The laboratory is not aware of which samples are blanks. In the event a data quality or trending issue is identified, the concern will be documented in the Issues Management System to track resolutions and/or corrective actions.

No concerns were identified in blanks that would indicate data quality or trending issues with sampling, handling, shipment, or analysis by the laboratory contributed to the actual sample results. Blanks for the quarter are discussed below.

GEL Laboratories, LLC

A total of 47 analytes were analyzed by GEL in various media. The media analyzed included: air filters, quarterly air filter composites, atmospheric moisture, precipitation, and milk.

8.2.2 Duplicate/Replicate Samples

The INL contractor submits field duplicate/replicate samples with the regular samples to assess field collection, homogeneity, reproducibility, laboratory preparation, laboratory analysis, and precision. In the event a data quality or trending issue is identified, the concern will be documented in the Issues Management System to track resolutions and/or corrective actions.

No concerns were identified in duplicate/replicates that would indicate data quality or trending issues with sampling, handling, shipment, homogeneity, reproducibility, or preparation and analysis by the laboratory contributed to the actual sample results. Duplicate/replicates for the quarter are discussed below.

GEL Laboratories, LLC

A total of 171 analytes were analyzed by GEL in various media. The media analyzed included: air filters, quarterly air filter composites, milk, and effluent samples.

8.2.3 Performance Evaluation Samples

PE samples are prepared samples that contain known values of analyte(s) of interest to the specific project, INL Site contractor program, or laboratory. PE samples are used to assist in improving accuracy of laboratory data by evaluating the analytical method (e.g., new media, new analyte, or adverse trends in PT or PE samples). The samples are matched as closely as possible to the specific media, analytes of interest, and expected concentration or activity levels appropriate for the specific project, program, or use in decision-making. In some cases, the PE sample matrix may differ from the field samples (i.e., using deionized water with a known amount of analyte to simulate an atmospheric moisture sample). The PE samples are generally submitted with batches of field samples, so they are processed simultaneously in the laboratory. In the event a data quality or trending issue is identified, the concern will be documented in INL's Issues Management System for tracking responses from the laboratory on the resolutions and/or corrective actions. These concerns provide for an opportunity for the INL contractor to work with the laboratory to fine tune methods, processes, and procedures that will lead to improved accuracy of the data.

In addition to the INL contractor PE program, GEL participates in the Mixed Analyte Performance Evaluation Program conducted by the DOE Radiological and Environmental Sciences Laboratory. Mixed Analyte Performance Evaluation Program provides quality assurance oversight for environmental analytical services through a performance-based PE program that tests the ability of the laboratories to correctly analyze for radiological, stable organic and inorganic constituents representative of those at DOE sites. These results are then compared with the INL contractor's internal PE results.

GEL Laboratories, LLC

A total of 50 PE analytes for an air filter composite and effluent samples were analyzed by GEL for alpha, beta, and gamma emitters. All the beta and gamma PE analytes received an agreement evaluation.

A nonagreement evaluation was identified for ^{241}Am in an effluent PE sample marking the second occurrence. The INL contractor contacted the laboratory and requested a review of the nonagreement. The laboratory determined the bias was due to spectral interference. A manual integration was performed on the sample that resulted in an activity recovery (85%) that meets the acceptable criteria. The INL contractor reviewed previous water PT results and found agreements for ^{241}Am. The INL contractor will continue to monitor PE and PT performance for trends.

8.3 Invalid Samples

Thirty-eight samples (19 air filters and 19 charcoal cartridges) were deemed invalid due to a mechanical issue and power outages at Blue Dome, Craters of the Moon, EBR-I, Highway 26 Rest Area, Idaho Nuclear Technology and Engineering Center (INTEC) (West side), MFC North, MFC South, and RWMC South (Appendix B, Tables B-1 and B-2). For a sample to be considered valid, a minimum air volume of 5,760 ft^3 must be obtained.

9. References

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40 CFR 142, 2024, "National Primary Drinking Water Regulations Implementation," Code of Federal Regulations, Office of the Federal Register, National Archives and Records Administration, Washington, D.C., https://www.ecfr.gov/current/title-40/chapter-I/subchapter-D/part-142.

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Safe Drinking Water Act (SDWA) of 1974 (42 USC § 300f), Washington, D.C., https://www.epa.gov/laws-regulations/summary-safe-drinking-water-act.

Appendix A
Summary of Sampling Schedule

Table A-1. Summary of the INL contractor's sampling schedule.

SAMPLE TYPE ANALYSIS	COLLECTION FREQUENCY	LOCATIONS		
		OFFSITE	BOUNDARY	ONSITE
Air Sampling				
Low-volume Air				
Gross Alpha, Gross Beta, ^{131}I	weekly	Blackfoot; Craters of the Moon; Dubois; Idaho Falls; IRC; IRC – North; Jackson, WY; Sugar City	Arco; Atomic City; Blue Dome; Howe; Monteview; Terreton	ATR Complex; CFA; EBR-I; EFS, Gate 4; Hwy 26 Rest Area; INTEC (NE corner); INTEC (westside); Main Gate; MFC – North; MFC – South; NRF; PBF; RHLLW; RWMC; RWMC – South; SMC; Van Buren
Gamma Spec	quarterly	Blackfoot; Craters of the Moon; Dubois; Idaho Falls; IRC; IRC – North; Jackson, WY; Sugar City	Arco; Atomic City; Blue Dome; Howe; Monteview; Terreton	ATR Complex; CFA; EBR-I; EFS; Gate 4; Hwy 26 Rest Area; INTEC (NE corner); INTEC (westside); Main Gate; MFC – North; MFC – South; NRF; PBF; RHLLW; RWMC; RWMC – South; SMC; Van Buren
^{90}Sr, Transuranics	quarterly	Blackfoot; Craters of the Moon; Dubois; Idaho Falls; IRC; IRC – North; Jackson, WY; Sugar City	Arco; Atomic City; Blue Dome; Howe; Monteview; Terreton	ATR Complex; CFA; EBR-I; EFS; Gate 4; Hwy 26 Rest Area; INTEC (NE corner); INTEC (westside); Main Gate; MFC – North; MFC – South; NRF; PBF; RHLLW; RWMC; RWMC – South; SMC; Van Buren
Atmospheric Moisture				
Tritium	2 to 13 weeks	Idaho Falls (NOAA); Idaho Falls (IRC); Craters of the Moon	Atomic City; Howe	EFS; RHLLW; Van Buren
Precipitation				
Tritium	monthly	Idaho Falls	None	None
Tritium	weekly	None	Atomic City; Howe	EFS

Table A-1. continued.

SAMPLE TYPE ANALYSIS	COLLECTION FREQUENCY	LOCATIONS		
		OFFSITE	BOUNDARY	ONSITE
Water Sampling				
Drinking Water				
Gross Alpha, Gross Beta, Tritium	semi-annually	Craters of the Moon; Idaho Falls; Minidoka; Shoshone	Atomic City; Howe; Mud Lake; Rest Area	ATR Complex; CFA; CITRC; EBR-I; Gun Range; Main Gate; MFC; TAN CTF
^{129}I, ^{90}Sr	semi-annually	None	None	CFA
Liquid Effluent				
Gross Alpha, Gross Beta, Tritium, Gamma Spec	monthly	None	None	ATR Complex
Gross Alpha, Gross Beta, Tritium, Gamma Spec	tri-annually	None	None	MFC
^{90}Sr, Transuranics	annually	None	None	MFC
Groundwater				
Gross Alpha, Gross Beta, Tritium, Gamma Spec, ^{90}Sr	semi-annually	None	None	ATR Complex
Gross Alpha, Gross Beta, Tritium, Gamma Spec, Transuranics	semi-annually	None	None	MFC
Gross Alpha, Gross Beta, Tritium, ^{14}C, ^{129}I, ^{99}Tc	annually	None	None	RHLLW
Surface Water				
Gross Alpha, Gross Beta, Tritium	semi-annually	Buhl; Hagerman; Twin Falls	None	Big Lost River (when flowing)

Table A-1. continued.

SAMPLE TYPE ANALYSIS	COLLECTION FREQUENCY	LOCATIONS		
		OFFSITE	BOUNDARY	ONSITE
External Radiation Sampling				
OSLDs				
Gamma Radiation	semi-annual	Aberdeen; Blackfoot; Craters of the Moon; Dubois; Idaho Falls; Jackson, WY; Minidoka; Roberts; Sugar City	Arco; Atomic City; Birch Creek; Blue Dome; Howe; Monteview; Mud Lake; Resident Receptor Location	ATR Complex; Auxiliary Reactor Area; CFA; EBR-I; EFS; Gate 4; Haul E; Haul W; Hwy 20; Hwy 22; Hwy 28; Hwy 33; INTEC; Lincoln Boulevard; MFC; NRF; PBF Special Power Excursion Reactor; RWMC; RHLLW; Resident Receptor Locations; Rest Area; TAN, Loss-of-Fluid Test; Transient Reactor Test Facility; Van Buren
Neutron				
Neutron Radiation	semi-annual	Idaho Falls	None	MFC; RHLLW
Soil Sampling				
Gamma Spec, ^{90}Sr, Transuranics	every five years	Blackfoot; Carey; St. Anthony	Atomic City; Birch Creek; Butte City; FAA Tower; Frenchmans Cabin; Howe; Monteview; Mud Lake (2)	EFS; Hwy 26 Rest Area; RWMC
Agricultural Product Sampling				
Milk				
Gamma Spec (^{131}I)	weekly	Rigby	Terreton	None
Gamma Spec (131I)	monthly	Dietrich; Minidoka; Monteview; Rigby	Howe; Terreton	None

Table A-1. continued.

SAMPLE TYPE ANALYSIS	COLLECTION FREQUENCY	LOCATIONS		
		OFFSITE	BOUNDARY	ONSITE
Tritium, ^{90}Sr	Semi-annually	Dietrich; Minidoka; Monteview; Rigby	Howe; Terreton	None
Potatoes				
Gamma Spec, ^{90}Sr	annually	Varies among Blackfoot; Driggs; Hamer; Idaho Falls; Rupert; Shelley; occasional samples across the U.S.	Varies among Arco; Monteview; Mud Lake; Terreton	None
Alfalfa				
Gamma Spec, ^{90}Sr	annually	Idaho Falls	Howe; Mud Lake	None
Grain				
Gamma Spec, ^{90}Sr	annually	Varies among American Falls; Blackfoot; Carey; Idaho Falls; Roberts; Rupert/Minidoka	Varies among Arco; Monteview; Mud Lake; Taber; Terreton	None
Lettuce				
Gamma Spec, ^{90}Sr	annually	Varies among Blackfoot; Carey; Idaho Falls; Rigby; Sugar City	Varies among Arco; Atomic City; FAA Tower; Howe; Monteview	EFS
Wildlife Sampling				
Big Game				
Gamma Spec	varies	Occasional samples across the U.S.	Public Highways	INL Site roads
Waterfowl				
Gamma Spec, ^{90}Sr, Transuranics	annually	Varies among: American Falls; Firth; Fort Hall; Heise; Market Lake; Mud Lake; Swan Valley	None	INL Site wastewater disposal ponds

Appendix B
Sample Analysis Results

Table B-1. Weekly gross alpha and gross beta concentrations in air.

Sampling Group and Location		Sampling Date	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			GROSS ALPHA Result > 3s	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			GROSS BETA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			GROSS BETA Result > 3s
BOUNDARY																
ARCO		07/02/24	1.41	±	0.43	5.22	±	1.57	Yes	18.10	±	1.07	66.97	±	3.96	Yes
		07/10/24	1.18	±	0.30	4.37	±	1.11	Yes	22.60	±	1.04	83.62	±	3.85	Yes
		07/17/24	2.63	±	0.53	9.73	±	1.96	Yes	38.90	±	1.43	143.93	±	5.29	Yes
		07/24/24	2.20	±	0.49	8.14	±	1.83	Yes	30.10	±	1.28	111.37	±	4.74	Yes
		07/31/24	3.32	±	0.68	12.28	±	2.50	Yes	38.90	±	1.70	143.93	±	6.29	Yes
		08/07/24	2.19	±	0.47	8.10	±	1.73	Yes	27.30	±	1.29	101.01	±	4.77	Yes
		08/14/24	1.64	±	0.43	6.07	±	1.59	Yes	25.70	±	1.33	95.09	±	4.92	Yes
		08/21/24	1.15	±	0.47	4.26	±	1.73	No	20.20	±	1.36	74.74	±	5.03	Yes
		08/28/24	2.90	±	0.57	10.73	±	2.09	Yes	22.50	±	1.12	83.25	±	4.14	Yes
		09/04/24	2.71	±	0.55	10.03	±	2.03	Yes	23.50	±	1.27	86.95	±	4.70	Yes
		09/11/24	2.26	±	0.49	8.36	±	1.82	Yes	29.50	±	1.30	109.15	±	4.81	Yes
		09/18/24	0.89	±	0.38	3.29	±	1.42	No	18.80	±	1.18	69.56	±	4.37	Yes
		09/25/24	1.47	±	0.38	5.44	±	1.42	Yes	32.40	±	1.27	119.88	±	4.70	Yes
ATOMIC CITY		07/02/24	2.21	±	0.59	8.18	±	2.18	Yes	21.40	±	1.31	79.18	±	4.85	Yes
		07/10/24	2.71	±	0.48	10.03	±	1.78	Yes	24.60	±	1.07	91.02	±	3.96	Yes
		07/17/24	3.60	±	0.64	13.32	±	2.37	Yes	38.80	±	1.47	143.56	±	5.44	Yes
		07/24/24	3.17	±	0.61	11.73	±	2.27	Yes	33.80	±	1.40	125.06	±	5.18	Yes
		07/31/24	3.42	±	0.62	12.65	±	2.31	Yes	28.10	±	1.41	103.97	±	5.22	Yes
		08/07/24	4.29	±	0.67	15.87	±	2.48	Yes	30.50	±	1.32	112.85	±	4.88	Yes
		08/14/24	2.66	±	0.56	9.84	±	2.06	Yes	19.60	±	1.12	72.52	±	4.14	Yes
		08/21/24	2.32	±	0.50	8.58	±	1.84	Yes	21.60	±	1.08	79.92	±	4.00	Yes
		08/28/24	1.70	±	0.43	6.29	±	1.59	Yes	22.50	±	1.11	83.25	±	4.11	Yes
		09/04/24	2.42	±	0.50	8.95	±	1.84	Yes	25.30	±	1.20	93.61	±	4.44	Yes
		09/11/24	2.39	±	0.50	8.84	±	1.84	Yes	36.90	±	1.52	136.53	±	5.62	Yes
		09/18/24	1.12	±	0.36	4.14	±	1.34	Yes	17.30	±	0.98	64.01	±	3.61	Yes
		09/25/24	1.89	±	0.41	6.99	±	1.51	Yes	32.50	±	1.30	120.25	±	4.81	Yes
BLUE DOME		07/02/24	1.55	±	0.39	5.74	±	1.45	Yes	18.00	±	1.05	66.60	±	3.89	Yes
		07/10/24	2.07	±	0.43	7.66	±	1.60	Yes	24.20	±	1.04	89.54	±	3.85	Yes
		07/17/24	3.42	±	0.56	12.65	±	2.08	Yes	39.90	±	1.50	147.63	±	5.55	Yes
		07/24/24	1.64	±	0.41	6.07	±	1.52	Yes	35.40	±	1.46	130.98	±	5.40	Yes
		07/31/24	4.30	±	0.77	15.91	±	2.84	Yes	29.20	±	1.43	108.04	±	5.29	Yes
		08/07/24	3.39	±	0.63	12.54	±	2.33	Yes	30.70	±	1.34	113.59	±	4.96	Yes
		08/14/24	2.79	±	0.68	10.32	±	2.51	Yes	25.10	±	1.45	92.87	±	5.37	Yes
		08/21/24	0.86	±	0.29	3.18	±	1.07	No	23.10	±	1.06	85.47	±	3.92	Yes
		08/28/24	2.41	±	0.48	8.92	±	1.77	Yes	25.60	±	1.15	94.72	±	4.26	Yes
		09/04/24	3.33	±	0.64	12.32	±	2.36	Yes	24.40	±	1.24	90.28	±	4.59	Yes
		09/11/24	2.76	±	0.62	10.21	±	2.29	Yes	28.00	±	1.40	103.60	±	5.18	Yes
	a	09/18/24		±			±				±			±		
		09/25/24	1.47	±	0.39	5.44	±	1.45	Yes	30.60	±	1.26	113.22	±	4.66	Yes
HOWE		07/02/24	2.04	±	0.51	7.55	±	1.88	Yes	18.60	±	1.10	68.82	±	4.07	Yes
		07/10/24	1.65	±	0.41	6.11	±	1.53	Yes	24.80	±	1.17	91.76	±	4.33	Yes
		07/17/24	3.38	±	0.62	12.51	±	2.30	Yes	38.40	±	1.46	142.08	±	5.40	Yes
		07/24/24	2.34	±	0.53	8.66	±	1.95	Yes	34.30	±	1.39	126.91	±	5.14	Yes
		07/31/24	3.52	±	0.65	13.02	±	2.41	Yes	22.70	±	1.32	83.99	±	4.88	Yes
		08/07/24	1.95	±	0.45	7.22	±	1.65	Yes	28.70	±	1.25	106.19	±	4.63	Yes
		08/14/24	2.49	±	0.52	9.21	±	1.93	Yes	19.60	±	1.08	72.52	±	4.00	Yes
		08/21/24	1.25	±	0.36	4.63	±	1.35	Yes	22.40	±	1.07	82.88	±	3.96	Yes
		08/28/24	2.07	±	0.47	7.66	±	1.73	Yes	22.60	±	1.10	83.62	±	4.07	Yes
		09/04/24	2.84	±	0.54	10.51	±	2.00	Yes	24.80	±	1.19	91.76	±	4.40	Yes
		09/11/24	2.28	±	0.46	8.44	±	1.68	Yes	35.30	±	1.39	130.61	±	5.14	Yes
		09/18/24	1.43	±	0.39	5.29	±	1.44	Yes	19.90	±	1.01	73.63	±	3.74	Yes
		09/25/24	1.30	±	0.34	2.73	±	0.94	No	31.10	±	1.27	115.07	±	4.70	Yes
HOWE (duplicate)		07/02/24	0.84	±	0.34	3.12	±	1.25	No	16.60	±	1.04	61.42	±	3.85	Yes
		07/10/24	1.86	±	0.44	6.88	±	1.62	Yes	22.10	±	1.11	81.77	±	4.11	Yes
		07/17/24	3.60	±	0.64	13.32	±	2.36	Yes	38.50	±	1.46	142.45	±	5.40	Yes
		07/24/24	2.79	±	0.57	10.32	±	2.12	Yes	35.70	±	1.42	132.09	±	5.25	Yes
		07/31/24	3.84	±	0.71	14.21	±	2.63	Yes	23.50	±	1.32	86.95	±	4.88	Yes
		08/07/24	3.09	±	0.58	11.43	±	2.13	Yes	29.10	±	1.25	107.67	±	4.63	Yes
		08/14/24	2.67	±	0.67	9.88	±	2.48	Yes	26.70	±	1.50	98.79	±	5.55	Yes
		08/21/24	1.12	±	0.32	4.14	±	1.20	Yes	24.80	±	1.09	91.76	±	4.03	Yes
		08/28/24	2.30	±	0.50	8.51	±	1.84	Yes	22.00	±	1.08	81.40	±	4.00	Yes
		09/04/24	2.76	±	0.56	10.21	±	2.08	Yes	21.10	±	1.11	78.07	±	4.11	Yes
		09/11/24	4.65	±	0.68	17.21	±	2.53	Yes	32.60	±	1.34	120.62	±	4.96	Yes
		09/18/24	0.77	±	0.30	2.83	±	1.10	No	18.80	±	0.99	69.56	±	3.65	Yes
		09/25/24	0.72	±	0.28	2.65	±	1.02	No	33.00	±	1.26	122.10	±	4.66	Yes
MONTEVIEW		07/02/24	2.61	±	0.57	9.66	±	2.11	Yes	17.10	±	1.05	63.27	±	3.89	Yes
		07/10/24	1.73	±	0.37	6.40	±	1.35	Yes	24.90	±	1.09	92.13	±	4.03	Yes
		07/17/24	2.10	±	0.49	7.77	±	1.80	Yes	35.20	±	1.39	130.24	±	5.14	Yes
		07/24/24	1.98	±	0.48	7.33	±	1.79	Yes	32.20	±	1.36	119.14	±	5.03	Yes
		07/31/24	3.04	±	0.59	11.25	±	2.20	Yes	23.30	±	1.22	86.21	±	4.51	Yes
		08/07/24	2.66	±	0.49	9.84	±	1.81	Yes	30.40	±	1.29	112.48	±	4.77	Yes
		08/14/24	3.55	±	0.58	13.14	±	2.15	Yes	25.10	±	1.22	92.87	±	4.51	Yes
		08/21/24	0.99	±	0.33	3.67	±	1.22	No	17.20	±	0.96	63.64	±	3.54	Yes
		08/28/24	2.20	±	0.49	8.14	±	1.81	Yes	24.30	±	1.14	89.91	±	4.22	Yes
		09/04/24	1.82	±	0.42	6.73	±	1.57	Yes	29.10	±	1.30	107.67	±	4.81	Yes
		09/11/24	2.86	±	0.54	10.58	±	2.00	Yes	33.50	±	1.36	123.95	±	5.03	Yes
		09/18/24	0.93	±	0.35	3.45	±	1.30	No	36.10	±	1.43	133.57	±	5.29	Yes
		09/25/24	0.57	±	0.26	2.09	±	0.95	No	29.00	±	1.20	107.30	±	4.44	Yes
TERRETON		07/02/24	1.06	±	0.35	3.92	±	1.31	Yes	17.40	±	1.04	64.38	±	3.85	Yes
		07/10/24	1.59	±	0.38	5.88	±	1.42	Yes	23.40	±	1.04	86.58	±	3.85	Yes
		07/17/24	2.58	±	0.50	9.55	±	1.86	Yes	40.10	±	1.45	148.37	±	5.37	Yes
		07/24/24	2.48	±	0.50	9.18	±	1.86	Yes	32.40	±	1.33	119.88	±	4.92	Yes

Table B-1. Weekly gross alpha and gross beta concentrations in air.

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)	GROSS ALPHA Result > 3s	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)	GROSS BETA Result > 3s
	07/31/24	3.87 ± 0.76	14.32 ± 2.83	Yes	30.10 ± 1.52	111.37 ± 5.62	Yes
	08/07/24	2.16 ± 0.48	7.99 ± 1.77	Yes	29.90 ± 1.26	110.63 ± 4.66	Yes
	08/14/24	3.02 ± 0.58	11.17 ± 2.16	Yes	24.50 ± 1.18	90.65 ± 4.37	Yes
	08/21/24	1.13 ± 0.32	4.18 ± 1.18	Yes	23.50 ± 1.13	86.95 ± 4.18	Yes
	08/28/24	1.33 ± 0.35	4.92 ± 1.29	Yes	24.40 ± 1.16	90.28 ± 4.29	Yes
	09/04/24	1.99 ± 0.48	7.36 ± 1.78	Yes	24.10 ± 1.18	89.17 ± 4.37	Yes
	09/11/24	3.23 ± 0.61	11.95 ± 2.26	Yes	36.50 ± 1.45	135.05 ± 5.37	Yes
	09/18/24	1.16 ± 0.32	4.29 ± 1.20	Yes	19.40 ± 1.04	71.78 ± 3.85	Yes
	09/25/24	1.69 ± 0.43	6.25 ± 1.61	Yes	27.30 ± 1.20	101.01 ± 4.44	Yes
OFFSITE							
BLACKFOOT	07/02/24	2.95 ± 0.60	10.92 ± 2.22	Yes	16.00 ± 1.01	59.20 ± 3.74	Yes
	07/10/24	1.78 ± 0.39	6.59 ± 1.44	Yes	23.30 ± 1.03	86.21 ± 3.81	Yes
	07/17/24	3.10 ± 0.58	11.47 ± 2.14	Yes	35.80 ± 1.37	132.46 ± 5.07	Yes
	07/24/24	2.80 ± 0.56	10.36 ± 2.08	Yes	31.60 ± 1.32	116.92 ± 4.88	Yes
	07/31/24	3.65 ± 0.69	13.51 ± 2.53	Yes	24.80 ± 1.28	91.76 ± 4.74	Yes
	08/07/24	1.62 ± 0.40	5.99 ± 1.49	Yes	29.90 ± 1.26	110.63 ± 4.66	Yes
	08/14/24	3.82 ± 0.69	14.13 ± 2.55	Yes	25.40 ± 1.27	93.98 ± 4.70	Yes
	08/21/24	1.35 ± 0.39	5.00 ± 1.45	Yes	20.50 ± 1.07	75.85 ± 3.96	Yes
	08/28/24	1.25 ± 0.35	4.63 ± 1.31	Yes	21.10 ± 1.06	78.07 ± 3.92	Yes
	09/04/24	1.75 ± 0.42	6.48 ± 1.54	Yes	23.90 ± 1.14	88.43 ± 4.22	Yes
	09/11/24	2.23 ± 0.48	8.25 ± 1.76	Yes	35.60 ± 1.47	131.72 ± 5.44	Yes
	09/18/24	0.48 ± 0.26	1.78 ± 0.96	No	17.80 ± 1.00	65.86 ± 3.70	Yes
	09/25/24	1.98 ± 0.42	7.33 ± 1.55	Yes	28.10 ± 1.22	103.97 ± 4.51	Yes
CRATERS OF THE MOON	07/02/24	1.47 ± 0.38	5.44 ± 1.42	Yes	17.10 ± 1.03	63.27 ± 3.81	Yes
	07/10/24	2.04 ± 0.44	7.55 ± 1.62	Yes	26.20 ± 1.10	96.94 ± 4.07	Yes
	07/17/24	2.90 ± 0.51	10.73 ± 1.90	Yes	42.50 ± 1.52	157.25 ± 5.62	Yes
	07/24/24	1.78 ± 0.41	6.59 ± 1.51	Yes	37.30 ± 1.44	138.01 ± 5.33	Yes
a	07/31/24	±	±		±	±	
	08/07/24	3.66 ± 0.66	13.54 ± 2.44	Yes	33.20 ± 1.41	122.84 ± 5.22	Yes
	08/14/24	2.96 ± 0.62	10.95 ± 2.29	Yes	23.30 ± 1.24	86.21 ± 4.59	Yes
	08/21/24	1.10 ± 0.33	4.07 ± 1.23	Yes	21.90 ± 1.06	81.03 ± 3.92	Yes
	08/28/24	2.48 ± 0.48	9.18 ± 1.79	Yes	22.50 ± 1.08	83.25 ± 4.00	Yes
	09/04/24	4.50 ± 0.74	16.65 ± 2.73	Yes	25.30 ± 1.26	93.61 ± 4.66	Yes
	09/11/24	3.58 ± 0.65	13.25 ± 2.39	Yes	34.50 ± 1.41	127.65 ± 5.22	Yes
	09/18/24	1.78 ± 0.43	6.59 ± 1.59	Yes	19.60 ± 1.00	72.52 ± 3.70	Yes
	09/25/24	0.71 ± 0.27	2.63 ± 0.99	No	15.60 ± 0.89	57.72 ± 3.29	Yes
DUBOIS	07/02/24	1.92 ± 0.49	7.10 ± 1.82	Yes	17.10 ± 1.05	63.27 ± 3.89	Yes
	07/10/24	2.45 ± 0.46	9.07 ± 1.69	Yes	24.50 ± 1.06	90.65 ± 3.92	Yes
	07/17/24	4.81 ± 0.72	17.80 ± 2.67	Yes	39.00 ± 1.44	144.30 ± 5.33	Yes
	07/24/24	2.08 ± 0.51	7.70 ± 1.88	Yes	35.10 ± 1.43	129.87 ± 5.29	Yes
	07/31/24	4.25 ± 0.66	15.73 ± 2.45	Yes	28.10 ± 1.35	103.97 ± 5.00	Yes
	08/07/24	2.74 ± 0.52	10.14 ± 1.91	Yes	30.60 ± 1.27	113.22 ± 4.70	Yes
	08/14/24	2.87 ± 0.61	10.62 ± 2.27	Yes	22.40 ± 1.27	82.88 ± 4.70	Yes
	08/21/24	1.84 ± 0.44	6.81 ± 1.61	Yes	19.90 ± 1.01	73.63 ± 3.74	Yes
	08/28/24	0.86 ± 0.31	3.19 ± 1.15	No	26.00 ± 1.18	96.20 ± 4.37	Yes
	09/04/24	2.18 ± 0.48	8.07 ± 1.78	Yes	22.80 ± 1.16	84.36 ± 4.29	Yes
	09/11/24	1.86 ± 0.41	6.88 ± 1.53	Yes	32.70 ± 1.34	120.99 ± 4.96	Yes
	09/18/24	1.15 ± 0.33	4.26 ± 1.24	Yes	18.80 ± 1.00	69.56 ± 3.70	Yes
	09/25/24	2.00 ± 0.41	7.40 ± 1.53	Yes	31.20 ± 1.26	115.44 ± 4.66	Yes
IDAHO FALLS	07/02/24	1.91 ± 0.51	7.07 ± 1.89	Yes	18.70 ± 1.14	69.19 ± 4.22	Yes
	07/10/24	1.88 ± 0.37	6.96 ± 1.38	Yes	26.00 ± 1.09	96.20 ± 4.03	Yes
	07/17/24	2.59 ± 0.53	9.58 ± 1.97	Yes	37.80 ± 1.42	139.86 ± 5.25	Yes
	07/24/24	3.28 ± 0.57	12.14 ± 2.11	Yes	35.40 ± 1.38	130.98 ± 5.11	Yes
	07/31/24	1.64 ± 0.48	6.07 ± 1.77	Yes	22.90 ± 1.25	84.73 ± 4.63	Yes
	08/07/24	2.53 ± 0.47	9.36 ± 1.75	Yes	32.00 ± 1.31	118.40 ± 4.85	Yes
	08/14/24	2.90 ± 0.54	10.73 ± 1.98	Yes	27.40 ± 1.29	101.38 ± 4.77	Yes
	08/21/24	2.07 ± 0.47	7.66 ± 1.72	Yes	23.40 ± 1.10	86.58 ± 4.07	Yes
	08/28/24	1.78 ± 0.38	6.59 ± 1.42	Yes	23.20 ± 1.08	85.84 ± 4.00	Yes
	09/04/24	1.86 ± 0.40	6.88 ± 1.49	Yes	29.30 ± 1.23	108.41 ± 4.55	Yes
	09/11/24	2.31 ± 0.49	8.55 ± 1.81	Yes	35.40 ± 1.40	130.98 ± 5.18	Yes
	09/18/24	1.66 ± 0.42	6.14 ± 1.55	Yes	18.80 ± 0.99	69.56 ± 3.66	Yes
	09/25/24	1.73 ± 0.40	6.40 ± 1.48	Yes	31.60 ± 1.22	116.92 ± 4.51	Yes
IRC	07/02/24	2.67 ± 0.58	9.88 ± 2.15	Yes	17.40 ± 1.07	64.38 ± 3.96	Yes
	07/10/24	2.16 ± 0.43	7.99 ± 1.60	Yes	25.20 ± 1.08	93.24 ± 4.00	Yes
	07/17/24	4.38 ± 0.70	16.21 ± 2.58	Yes	41.40 ± 1.50	153.18 ± 5.55	Yes
	07/24/24	3.52 ± 0.62	13.02 ± 2.28	Yes	38.40 ± 1.42	142.08 ± 5.25	Yes
	07/31/24	4.19 ± 0.73	15.50 ± 2.69	Yes	25.30 ± 1.28	93.61 ± 4.74	Yes
	08/07/24	2.54 ± 0.50	9.40 ± 1.84	Yes	30.30 ± 1.26	112.11 ± 4.66	Yes
	08/14/24	3.59 ± 0.60	13.28 ± 2.23	Yes	25.90 ± 1.28	95.83 ± 4.74	Yes
	08/21/24	1.26 ± 0.38	4.66 ± 1.41	Yes	22.40 ± 1.12	82.88 ± 4.14	Yes
	08/28/24	0.97 ± 0.32	3.60 ± 1.17	Yes	23.50 ± 1.12	86.95 ± 4.14	Yes
	09/04/24	1.89 ± 0.43	6.99 ± 1.58	Yes	26.30 ± 1.18	97.31 ± 4.37	Yes
	09/11/24	2.22 ± 0.48	8.21 ± 1.79	Yes	36.90 ± 1.53	136.53 ± 5.66	Yes
	09/18/24	0.77 ± 0.31	2.86 ± 1.14	No	19.00 ± 1.02	70.30 ± 3.77	Yes
	09/25/24	2.33 ± 0.45	8.62 ± 1.68	Yes	31.50 ± 1.29	116.55 ± 4.77	Yes
IRC NORTH	07/02/24	1.20 ± 0.42	4.44 ± 1.55	Yes	16.80 ± 1.10	62.16 ± 4.07	Yes
	07/10/24	1.60 ± 0.38	5.92 ± 1.40	Yes	24.90 ± 1.09	92.13 ± 4.03	Yes
	07/17/24	2.89 ± 0.58	10.69 ± 2.15	Yes	37.60 ± 1.46	139.12 ± 5.40	Yes
	07/24/24	2.89 ± 0.57	10.69 ± 2.11	Yes	35.00 ± 1.38	129.50 ± 5.11	Yes
	07/31/24	2.78 ± 0.59	10.29 ± 2.18	Yes	25.30 ± 1.32	93.61 ± 4.88	Yes
	08/07/24	4.56 ± 0.71	16.87 ± 2.61	Yes	42.10 ± 1.52	155.77 ± 5.62	Yes
	08/14/24	2.43 ± 0.55	8.99 ± 2.02	Yes	25.60 ± 1.25	94.72 ± 4.63	Yes

Table B-1. Weekly gross alpha and gross beta concentrations in air.

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)	GROSS ALPHA Result > 3s	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)	GROSS BETA Result > 3s
	08/21/24	0.80 ± 0.31	2.96 ± 1.13	Yes	24.10 ± 1.17	89.17 ± 4.33	Yes
	08/28/24	2.54 ± 0.54	9.40 ± 1.99	Yes	21.80 ± 1.11	80.66 ± 4.11	Yes
	09/04/24	2.34 ± 0.55	8.66 ± 2.04	Yes	27.20 ± 1.33	100.64 ± 4.92	Yes
	09/11/24	1.56 ± 0.45	5.77 ± 1.68	Yes	37.00 ± 1.52	136.90 ± 5.62	Yes
	09/18/24	1.23 ± 0.38	4.55 ± 1.39	Yes	16.90 ± 0.97	62.53 ± 3.59	Yes
	09/25/24	1.93 ± 0.44	7.14 ± 1.62	Yes	29.30 ± 1.22	108.41 ± 4.51	Yes
JACKSON, WY	07/02/24	1.98 ± 0.43	7.33 ± 1.58	Yes	20.50 ± 1.08	75.85 ± 4.00	Yes
	07/09/24	1.91 ± 0.46	7.07 ± 1.72	Yes	24.90 ± 1.18	92.13 ± 4.37	Yes
	07/16/24	2.13 ± 0.45	7.88 ± 1.68	Yes	43.40 ± 1.58	160.58 ± 5.85	Yes
	07/23/24	2.38 ± 0.49	8.81 ± 1.79	Yes	31.90 ± 1.38	118.03 ± 5.11	Yes
	07/30/24	2.97 ± 0.59	10.99 ± 2.18	Yes	20.30 ± 1.11	75.11 ± 4.11	Yes
	08/06/24	4.03 ± 0.79	14.91 ± 2.92	Yes	24.40 ± 1.40	90.28 ± 5.18	Yes
	08/13/24	3.32 ± 0.69	12.28 ± 2.57	Yes	23.00 ± 1.31	85.10 ± 4.85	Yes
	08/20/24	1.19 ± 0.35	4.40 ± 1.28	Yes	23.40 ± 1.10	86.58 ± 4.07	Yes
	08/27/24	1.26 ± 0.36	4.66 ± 1.32	Yes	21.80 ± 1.09	80.66 ± 4.03	Yes
	09/03/24	1.75 ± 0.44	6.48 ± 1.62	Yes	26.00 ± 1.18	96.20 ± 4.37	Yes
	09/10/24	1.64 ± 0.44	6.07 ± 1.63	Yes	32.10 ± 1.35	118.77 ± 5.00	Yes
	09/17/24	1.20 ± 0.35	4.44 ± 1.30	Yes	22.30 ± 1.11	82.51 ± 4.11	Yes
	09/24/24	1.08 ± 0.34	4.00 ± 1.27	Yes	25.80 ± 1.18	95.46 ± 4.37	Yes
SUGAR CITY	07/02/24	1.62 ± 0.43	5.99 ± 1.61	Yes	22.40 ± 1.18	82.88 ± 4.37	Yes
	07/10/24	3.06 ± 0.53	11.32 ± 1.96	Yes	25.80 ± 1.10	95.46 ± 4.07	Yes
	07/17/24	4.44 ± 0.66	16.43 ± 2.45	Yes	42.70 ± 1.51	157.99 ± 5.59	Yes
	07/24/24	2.77 ± 0.52	10.25 ± 1.94	Yes	39.10 ± 1.44	144.67 ± 5.33	Yes
	07/31/24	3.51 ± 0.63	12.99 ± 2.33	Yes	28.00 ± 1.40	103.60 ± 5.18	Yes
	08/07/24	3.37 ± 0.59	12.47 ± 2.19	Yes	34.20 ± 1.34	126.54 ± 4.96	Yes
	08/14/24	2.59 ± 0.52	9.58 ± 1.92	Yes	24.60 ± 1.18	91.02 ± 4.37	Yes
	08/21/24	1.02 ± 0.30	3.77 ± 1.11	Yes	23.20 ± 1.11	85.84 ± 4.11	Yes
	08/28/24	1.65 ± 0.42	6.11 ± 1.54	Yes	22.10 ± 1.08	81.77 ± 4.00	Yes
	09/04/24	1.63 ± 0.43	6.03 ± 1.60	Yes	27.90 ± 1.26	103.23 ± 4.66	Yes
	09/11/24	3.21 ± 0.61	11.88 ± 2.25	Yes	37.60 ± 1.46	139.12 ± 5.40	Yes
	09/18/24	1.59 ± 0.40	5.88 ± 1.48	Yes	19.30 ± 1.04	71.41 ± 3.85	Yes
	09/25/24	1.75 ± 0.44	6.48 ± 1.61	Yes	32.80 ± 1.30	121.36 ± 4.81	Yes
SUGAR CITY (duplicate)	07/02/24	1.42 ± 0.39	5.25 ± 1.43	Yes	18.60 ± 1.10	68.82 ± 4.07	Yes
	07/10/24	2.69 ± 0.50	9.95 ± 1.85	Yes	25.60 ± 1.09	94.72 ± 4.03	Yes
	07/17/24	2.78 ± 0.51	10.29 ± 1.88	Yes	39.90 ± 1.49	147.63 ± 5.51	Yes
	07/24/24	3.16 ± 0.54	11.69 ± 2.00	Yes	38.40 ± 1.47	142.08 ± 5.44	Yes
	07/31/24	4.45 ± 0.78	16.47 ± 2.88	Yes	26.00 ± 1.35	96.20 ± 5.00	Yes
	08/07/24	2.10 ± 0.44	7.77 ± 1.63	Yes	33.60 ± 1.36	124.32 ± 5.03	Yes
	08/14/24	3.66 ± 0.64	13.54 ± 2.36	Yes	25.50 ± 1.25	94.35 ± 4.63	Yes
	08/21/24	2.08 ± 0.48	7.70 ± 1.76	Yes	21.30 ± 1.08	78.81 ± 4.00	Yes
	08/28/24	1.20 ± 0.33	4.44 ± 1.20	Yes	22.50 ± 1.10	83.25 ± 4.07	Yes
	09/04/24	1.68 ± 0.40	6.22 ± 1.49	Yes	28.40 ± 1.27	105.08 ± 4.70	Yes
	09/11/24	2.80 ± 0.57	10.36 ± 2.12	Yes	34.10 ± 1.40	126.17 ± 5.18	Yes
	09/18/24	1.33 ± 0.36	4.92 ± 1.32	Yes	18.50 ± 0.99	68.45 ± 3.67	Yes
	09/25/24	2.13 ± 0.48	7.88 ± 1.76	Yes	29.40 ± 1.22	108.78 ± 4.51	Yes
ONSITE							
ATR COMPLEX	07/02/24	-0.12 ± 0.02	-0.46 ± 0.08	No	0.15 ± 0.36	0.54 ± 1.34	No
	07/10/24	3.05 ± 0.50	11.29 ± 1.85	Yes	36.80 ± 1.36	136.16 ± 5.03	Yes
	07/17/24	2.64 ± 0.55	9.77 ± 2.05	Yes	30.50 ± 1.32	112.85 ± 4.88	Yes
	07/24/24	6.50 ± 0.88	24.05 ± 3.25	Yes	34.00 ± 1.44	125.80 ± 5.33	Yes
	07/31/24	4.00 ± 0.74	14.80 ± 2.72	Yes	28.80 ± 1.40	106.56 ± 5.18	Yes
	08/07/24	3.59 ± 0.60	13.28 ± 2.22	Yes	32.70 ± 1.42	120.99 ± 5.25	Yes
	08/14/24	2.66 ± 0.57	9.84 ± 2.11	Yes	26.00 ± 1.26	96.20 ± 4.66	Yes
	08/21/24	1.55 ± 0.42	5.74 ± 1.54	Yes	23.70 ± 1.14	87.69 ± 4.22	Yes
	08/28/24	1.74 ± 0.40	6.44 ± 1.49	Yes	25.20 ± 1.20	93.24 ± 4.44	Yes
	09/04/24	3.21 ± 0.57	11.88 ± 2.12	Yes	29.70 ± 1.36	109.89 ± 5.03	Yes
	09/11/24	3.88 ± 0.72	14.36 ± 2.66	Yes	40.50 ± 1.71	149.85 ± 6.33	Yes
	09/18/24	1.00 ± 0.34	3.68 ± 1.25	No	19.90 ± 1.03	73.63 ± 3.81	Yes
	09/25/24	2.32 ± 0.48	8.58 ± 1.77	Yes	33.00 ± 1.30	122.10 ± 4.81	Yes
CFA	07/02/24	2.53 ± 0.56	9.36 ± 2.08	Yes	20.10 ± 1.14	74.37 ± 4.22	Yes
	07/10/24	1.97 ± 0.41	7.29 ± 1.52	Yes	24.70 ± 1.07	91.39 ± 3.96	Yes
	07/17/24	5.48 ± 0.78	20.28 ± 2.88	Yes	41.70 ± 1.51	154.29 ± 5.59	Yes
	07/24/24	3.21 ± 0.56	11.88 ± 2.07	Yes	40.70 ± 1.55	150.59 ± 5.74	Yes
	07/31/24	3.79 ± 0.73	14.02 ± 2.68	Yes	28.60 ± 1.42	105.82 ± 5.25	Yes
	08/07/24	1.96 ± 0.43	7.25 ± 1.57	Yes	22.20 ± 1.06	82.14 ± 3.92	Yes
	08/14/24	2.80 ± 0.66	10.36 ± 2.45	Yes	28.20 ± 1.49	104.34 ± 5.51	Yes
	08/21/24	2.43 ± 0.51	8.99 ± 1.89	Yes	22.60 ± 1.10	83.62 ± 4.07	Yes
	08/28/24	1.99 ± 0.44	7.36 ± 1.63	Yes	26.10 ± 1.17	96.57 ± 4.33	Yes
	09/04/24	3.90 ± 0.65	14.43 ± 2.42	Yes	27.80 ± 1.30	102.86 ± 4.81	Yes
	09/11/24	2.56 ± 0.51	9.47 ± 1.89	Yes	34.80 ± 1.46	128.76 ± 5.40	Yes
	09/18/24	1.82 ± 0.44	6.73 ± 1.63	Yes	19.00 ± 1.00	70.30 ± 3.69	Yes
	09/25/24	1.63 ± 0.36	6.03 ± 1.34	Yes	33.60 ± 1.26	124.32 ± 4.66	Yes
EBR-I	07/02/24	1.41 ± 0.38	5.22 ± 1.42	Yes	19.70 ± 1.12	72.89 ± 4.14	Yes
	07/10/24	1.43 ± 0.37	5.29 ± 1.37	Yes	24.90 ± 1.08	92.13 ± 4.00	Yes
	07/17/24	3.41 ± 0.56	12.62 ± 2.08	Yes	41.80 ± 1.53	154.66 ± 5.66	Yes
	07/24/24	2.67 ± 0.56	9.88 ± 2.07	Yes	36.60 ± 1.45	135.42 ± 5.37	Yes
	07/31/24	4.09 ± 0.69	15.13 ± 2.55	Yes	27.90 ± 1.34	103.23 ± 4.96	Yes
	08/07/24	3.96 ± 0.69	14.65 ± 2.56	Yes	34.10 ± 1.44	126.17 ± 5.33	Yes
b	08/14/24	±	±		±	±	
	08/21/24	1.85 ± 0.43	6.85 ± 1.57	Yes	22.40 ± 1.08	82.88 ± 4.00	Yes
	08/28/24	1.85 ± 0.46	6.85 ± 1.69	Yes	24.30 ± 1.15	89.91 ± 4.26	Yes
	09/04/24	3.94 ± 0.73	14.58 ± 2.70	Yes	30.40 ± 1.45	112.48 ± 5.37	Yes
	09/11/24	3.52 ± 0.67	13.02 ± 2.47	Yes	37.50 ± 1.54	138.75 ± 5.70	Yes

Table B-1. Weekly gross alpha and gross beta concentrations in air.

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)	GROSS ALPHA Result > 3s	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)	GROSS BETA Result > 3s
	09/18/24	1.13 ± 0.31	4.18 ± 1.13	Yes	19.80 ± 1.00	73.26 ± 3.70	Yes
	09/25/24	1.88 ± 0.45	6.96 ± 1.65	Yes	31.90 ± 1.30	118.03 ± 4.81	Yes
EFS	07/02/24	2.10 ± 0.51	7.77 ± 1.89	Yes	17.10 ± 1.04	63.27 ± 3.85	Yes
	07/10/24	2.48 ± 0.43	9.18 ± 1.59	Yes	24.90 ± 1.08	92.13 ± 4.00	Yes
	07/17/24	3.44 ± 0.61	12.73 ± 2.26	Yes	40.10 ± 1.47	148.37 ± 5.44	Yes
	07/24/24	3.32 ± 0.60	12.28 ± 2.22	Yes	34.80 ± 1.37	128.76 ± 5.07	Yes
	07/31/24	3.96 ± 0.63	14.65 ± 2.35	Yes	25.30 ± 1.27	93.61 ± 4.70	Yes
	08/07/24	3.12 ± 0.58	11.54 ± 2.13	Yes	30.20 ± 1.27	111.74 ± 4.70	Yes
	08/14/24	3.37 ± 0.60	12.47 ± 2.21	Yes	23.80 ± 1.13	88.06 ± 4.18	Yes
	08/21/24	1.21 ± 0.32	4.48 ± 1.18	Yes	24.50 ± 1.11	90.65 ± 4.11	Yes
	08/28/24	0.53 ± 0.25	1.98 ± 0.91	No	17.60 ± 0.97	65.12 ± 3.59	Yes
	09/04/24	2.81 ± 0.56	10.40 ± 2.08	Yes	24.20 ± 1.17	89.54 ± 4.33	Yes
	09/11/24	3.45 ± 0.63	12.77 ± 2.33	Yes	29.50 ± 1.31	109.15 ± 4.85	Yes
	09/18/24	0.91 ± 0.32	3.38 ± 1.18	No	17.30 ± 0.94	64.01 ± 3.48	Yes
	09/25/24	1.81 ± 0.39	6.70 ± 1.45	Yes	33.80 ± 1.30	125.06 ± 4.81	Yes
GATE 4	07/02/24	1.47 ± 0.42	5.44 ± 1.57	Yes	17.90 ± 1.05	66.23 ± 3.89	Yes
	07/10/24	2.42 ± 0.42	8.95 ± 1.55	Yes	26.90 ± 1.10	99.53 ± 4.07	Yes
	07/17/24	3.20 ± 0.59	11.84 ± 2.17	Yes	41.00 ± 1.48	151.70 ± 5.48	Yes
	07/24/24	3.28 ± 0.61	12.14 ± 2.27	Yes	36.90 ± 1.45	136.53 ± 5.37	Yes
	07/31/24	0.14 ± 0.16	0.51 ± 0.60	No	-0.16 ± 0.32	-0.58 ± 1.17	No
	08/07/24	3.31 ± 0.55	12.25 ± 2.05	Yes	32.20 ± 1.35	119.14 ± 5.00	Yes
	08/14/24	2.65 ± 0.56	9.81 ± 2.07	Yes	25.60 ± 1.37	94.72 ± 5.07	Yes
	08/21/24	1.77 ± 0.42	6.55 ± 1.55	Yes	23.50 ± 1.07	86.95 ± 3.96	Yes
	08/28/24	2.15 ± 0.47	7.96 ± 1.72	Yes	25.20 ± 1.12	93.24 ± 4.14	Yes
	09/04/24	2.04 ± 0.45	7.55 ± 1.67	Yes	29.00 ± 1.31	107.30 ± 4.85	Yes
	09/11/24	2.58 ± 0.51	9.55 ± 1.87	Yes	36.10 ± 1.38	133.57 ± 5.11	Yes
	09/18/24	1.35 ± 0.35	5.00 ± 1.31	Yes	19.30 ± 1.05	71.41 ± 3.89	Yes
	09/25/24	2.29 ± 0.52	8.47 ± 1.91	Yes	32.80 ± 1.40	121.36 ± 5.18	Yes
HIGHWAY 26 REST AREA	07/02/24	1.38 ± 0.38	5.11 ± 1.39	Yes	18.20 ± 1.07	67.34 ± 3.96	Yes
	07/10/24	2.58 ± 0.49	9.55 ± 1.81	Yes	25.50 ± 1.09	94.35 ± 4.03	Yes
	07/17/24	3.87 ± 0.59	14.32 ± 2.19	Yes	41.20 ± 1.50	152.44 ± 5.55	Yes
	07/24/24	2.94 ± 0.52	10.88 ± 1.93	Yes	37.20 ± 1.44	137.64 ± 5.33	Yes
	07/31/24	4.46 ± 0.71	16.50 ± 2.61	Yes	28.80 ± 1.33	106.56 ± 4.92	Yes
	08/07/24	3.00 ± 0.59	11.10 ± 2.18	Yes	34.10 ± 1.40	126.17 ± 5.18	Yes
	08/14/24	3.08 ± 0.66	11.40 ± 2.44	Yes	27.40 ± 1.40	101.38 ± 5.18	Yes
	08/21/24	1.87 ± 0.42	6.92 ± 1.55	Yes	25.90 ± 1.14	95.83 ± 4.22	Yes
	08/28/24	1.19 ± 0.34	4.40 ± 1.25	Yes	14.20 ± 0.82	52.54 ± 3.02	Yes
	09/04/24	3.21 ± 0.61	11.88 ± 2.25	Yes	30.30 ± 1.32	112.11 ± 4.88	Yes
	09/11/24	2.66 ± 0.60	9.84 ± 2.21	Yes	38.70 ± 1.60	143.19 ± 5.92	Yes
	09/18/24	-0.02 ± 0.13	-0.08 ± 0.48	No	11.00 ± 0.89	40.70 ± 3.30	Yes
	09/25/24	1.38 ± 0.37	5.11 ± 1.38	Yes	30.50 ± 1.24	112.85 ± 4.59	Yes
HIGHWAY 26 REST AREA (duplicate)	07/02/24	1.05 ± 0.35	3.89 ± 1.30	No	18.60 ± 1.06	68.82 ± 3.92	Yes
	07/10/24	2.63 ± 0.50	9.73 ± 1.84	Yes	26.50 ± 1.12	98.05 ± 4.14	Yes
	07/17/24	3.66 ± 0.61	13.54 ± 2.25	Yes	41.40 ± 1.50	153.18 ± 5.55	Yes
	07/24/24	2.97 ± 0.55	10.99 ± 2.04	Yes	41.90 ± 1.51	155.03 ± 5.59	Yes
	07/31/24	4.88 ± 0.79	18.06 ± 2.92	Yes	25.50 ± 1.30	94.35 ± 4.81	Yes
	08/07/24	3.76 ± 0.63	13.91 ± 2.34	Yes	34.00 ± 1.41	125.80 ± 5.22	Yes
	08/14/24	2.93 ± 0.58	10.84 ± 2.15	Yes	27.20 ± 1.40	100.64 ± 5.18	Yes
	08/21/24	1.52 ± 0.41	5.62 ± 1.52	Yes	23.20 ± 1.12	85.84 ± 4.14	Yes
	08/28/24	1.64 ± 0.40	6.07 ± 1.49	Yes	23.60 ± 1.12	87.32 ± 4.14	Yes
	09/04/24	3.06 ± 0.56	11.32 ± 2.08	Yes	28.80 ± 1.28	106.56 ± 4.74	Yes
b	09/11/24	±	±		±	±	
	09/18/24	1.63 ± 0.59	6.03 ± 2.17	No	37.90 ± 2.19	140.23 ± 8.10	Yes
	09/25/24	1.54 ± 0.40	5.70 ± 1.48	Yes	32.50 ± 1.29	120.25 ± 4.77	Yes
INTEC (NE CORNER)	07/02/24	2.25 ± 0.48	8.33 ± 1.79	Yes	19.30 ± 1.12	71.41 ± 4.14	Yes
	07/10/24	2.33 ± 0.47	8.62 ± 1.73	Yes	25.80 ± 1.10	95.46 ± 4.07	Yes
	07/17/24	3.90 ± 0.61	14.43 ± 2.25	Yes	40.50 ± 1.53	149.85 ± 5.66	Yes
	07/24/24	3.87 ± 0.60	14.32 ± 2.23	Yes	39.80 ± 1.51	147.26 ± 5.59	Yes
	07/31/24	3.14 ± 0.61	11.62 ± 2.27	Yes	27.40 ± 1.34	101.38 ± 4.96	Yes
	08/07/24	4.33 ± 0.70	16.02 ± 2.60	Yes	33.20 ± 1.38	122.84 ± 5.11	Yes
	08/14/24	2.98 ± 0.59	11.03 ± 2.19	Yes	30.20 ± 1.48	111.74 ± 5.48	Yes
	08/21/24	1.39 ± 0.36	5.14 ± 1.34	Yes	23.60 ± 1.07	87.32 ± 3.96	Yes
	08/28/24	1.75 ± 0.43	6.48 ± 1.59	Yes	23.00 ± 1.09	85.10 ± 4.03	Yes
	09/04/24	3.02 ± 0.59	11.17 ± 2.19	Yes	29.10 ± 1.30	107.67 ± 4.81	Yes
	09/11/24	3.10 ± 0.61	11.47 ± 2.26	Yes	40.30 ± 1.55	149.11 ± 5.74	Yes
	09/18/24	0.92 ± 0.28	3.42 ± 1.04	Yes	21.20 ± 1.05	78.44 ± 3.89	Yes
	09/25/24	1.88 ± 0.43	6.96 ± 1.60	Yes	29.80 ± 1.22	110.26 ± 4.51	Yes
INTEC (WEST SIDE)	07/02/24	1.87 ± 0.43	6.92 ± 1.61	Yes	22.40 ± 1.18	82.88 ± 4.37	Yes
	07/10/24	2.64 ± 0.48	9.77 ± 1.79	Yes	26.10 ± 1.07	96.57 ± 3.96	Yes
	07/17/24	2.86 ± 0.51	10.58 ± 1.90	Yes	40.40 ± 1.50	149.48 ± 5.55	Yes
	07/24/24	4.62 ± 0.64	17.09 ± 2.37	Yes	40.20 ± 1.48	148.74 ± 5.48	Yes
	07/31/24	3.54 ± 0.64	13.10 ± 2.38	Yes	25.20 ± 1.28	93.24 ± 4.74	Yes
	08/07/24	3.84 ± 0.66	14.21 ± 2.44	Yes	32.80 ± 1.37	121.36 ± 5.07	Yes
b	08/14/24	±	±		±	±	
	08/21/24	1.06 ± 0.32	3.92 ± 1.18	Yes	23.90 ± 1.09	88.43 ± 4.03	Yes
	08/28/24	2.13 ± 0.47	7.88 ± 1.75	Yes	25.10 ± 1.13	92.87 ± 4.18	Yes
	09/04/24	4.12 ± 0.68	15.24 ± 2.50	Yes	28.10 ± 1.26	103.97 ± 4.66	Yes
	09/11/24	2.97 ± 0.60	10.99 ± 2.21	Yes	41.40 ± 1.56	153.18 ± 5.77	Yes
	09/18/24	1.30 ± 0.33	4.81 ± 1.22	Yes	20.10 ± 1.01	74.37 ± 3.74	Yes
	09/25/24	1.26 ± 0.35	4.66 ± 1.30	Yes	30.80 ± 1.22	113.96 ± 4.51	Yes
MAIN GATE	07/02/24	2.39 ± 0.52	8.84 ± 1.93	Yes	19.80 ± 1.11	73.26 ± 4.11	Yes
	07/10/24	2.15 ± 0.45	7.96 ± 1.65	Yes	25.70 ± 1.09	95.09 ± 4.03	Yes
	07/17/24	3.45 ± 0.59	12.77 ± 2.18	Yes	37.90 ± 1.44	140.23 ± 5.33	Yes

Table B-1. Weekly gross alpha and gross beta concentrations in air.

Sampling Group and Location		Sampling Date	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)	GROSS ALPHA Result > 3s	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)	GROSS BETA Result > 3s
		07/24/24	3.13 ± 0.57	11.58 ± 2.11	Yes	37.10 ± 1.44	137.27 ± 5.33	Yes
		07/31/24	3.30 ± 0.66	12.21 ± 2.46	Yes	22.40 ± 1.24	82.88 ± 4.59	Yes
		08/07/24	3.33 ± 0.63	12.32 ± 2.31	Yes	30.80 ± 1.36	113.96 ± 5.03	Yes
		08/14/24	3.93 ± 0.76	14.54 ± 2.81	Yes	22.90 ± 1.32	84.73 ± 4.88	Yes
		08/21/24	0.89 ± 0.29	3.29 ± 1.07	Yes	25.70 ± 1.19	95.09 ± 4.40	Yes
		08/28/24	1.50 ± 0.37	5.55 ± 1.36	Yes	25.70 ± 1.19	95.09 ± 4.40	Yes
		09/04/24	1.85 ± 0.48	6.85 ± 1.76	Yes	25.80 ± 1.25	95.46 ± 4.63	Yes
		09/11/24	3.76 ± 0.67	13.91 ± 2.46	Yes	36.30 ± 1.46	134.31 ± 5.40	Yes
		09/18/24	1.26 ± 0.34	4.66 ± 1.26	Yes	20.40 ± 1.07	75.48 ± 3.96	Yes
		09/25/24	2.06 ± 0.48	7.62 ± 1.79	Yes	29.50 ± 1.27	109.15 ± 4.70	Yes
MFC NORTH		07/02/24	1.52 ± 0.44	5.62 ± 1.62	Yes	17.10 ± 1.08	63.27 ± 4.00	Yes
		07/10/24	1.35 ± 0.37	5.00 ± 1.37	Yes	13.00 ± 0.83	48.10 ± 3.06	Yes
		07/17/24	2.75 ± 0.55	10.18 ± 2.02	Yes	29.90 ± 1.33	110.63 ± 4.92	Yes
		07/24/24	3.13 ± 0.71	11.58 ± 2.64	Yes	35.90 ± 1.78	132.83 ± 6.59	Yes
	b	07/31/24	±	±		±	±	
	b	08/07/24	±	±		±	±	
	b	08/14/24	±	±		±	±	
	b	08/21/24	±	±		±	±	
	b	08/28/24	±	±		±	±	
	b	09/04/24	±	±		±	±	
	b	09/11/24	±	±		±	±	
	b	09/18/24	±	±		±	±	
	b	09/25/24	±	±		±	±	
MFC SOUTH		07/02/24	1.04 ± 0.35	3.85 ± 1.28	Yes	13.20 ± 0.90	48.84 ± 3.34	Yes
		07/10/24	2.35 ± 0.47	8.70 ± 1.73	Yes	22.80 ± 1.04	84.36 ± 3.85	Yes
		07/17/24	2.80 ± 0.53	10.36 ± 1.95	Yes	34.10 ± 1.35	126.17 ± 5.00	Yes
	b	07/24/24	±	±		±	±	
		07/31/24	3.10 ± 0.56	11.47 ± 2.09	Yes	27.60 ± 1.32	102.12 ± 4.88	Yes
		08/07/24	4.45 ± 0.70	16.47 ± 2.59	Yes	27.40 ± 1.25	101.38 ± 4.63	Yes
		08/14/24	5.43 ± 1.28	20.09 ± 4.74	Yes	28.70 ± 2.17	106.19 ± 8.03	Yes
		08/21/24	1.35 ± 0.38	5.00 ± 1.41	Yes	21.70 ± 1.19	80.29 ± 4.40	Yes
	b	08/28/24	±	±		±	±	
		09/04/24	3.10 ± 0.61	11.47 ± 2.24	Yes	24.20 ± 1.21	89.54 ± 4.48	Yes
		09/11/24	2.94 ± 0.59	10.88 ± 2.18	Yes	38.10 ± 1.49	140.97 ± 5.51	Yes
	b	09/18/24	±	±		±	±	
		09/25/24	2.41 ± 0.55	8.92 ± 2.04	Yes	28.10 ± 1.31	103.97 ± 4.85	Yes
NRF		07/02/24	1.55 ± 0.45	5.74 ± 1.65	Yes	20.40 ± 1.14	75.48 ± 4.22	Yes
		07/10/24	1.84 ± 0.39	6.81 ± 1.46	Yes	24.00 ± 1.04	88.80 ± 3.85	Yes
		07/17/24	3.68 ± 0.65	13.62 ± 2.39	Yes	39.60 ± 1.48	146.52 ± 5.48	Yes
		07/24/24	4.11 ± 0.68	15.21 ± 2.51	Yes	36.30 ± 1.42	134.31 ± 5.25	Yes
		07/31/24	5.07 ± 0.82	18.76 ± 3.03	Yes	22.90 ± 1.26	84.73 ± 4.66	Yes
		08/07/24	3.82 ± 0.62	14.13 ± 2.29	Yes	34.50 ± 1.37	127.65 ± 5.07	Yes
		08/14/24	3.38 ± 0.61	12.51 ± 2.27	Yes	24.70 ± 1.31	91.39 ± 4.85	Yes
		08/21/24	1.67 ± 0.42	6.18 ± 1.55	Yes	24.00 ± 1.11	88.80 ± 4.11	Yes
		08/28/24	1.58 ± 0.39	5.85 ± 1.44	Yes	24.20 ± 1.12	89.54 ± 4.14	Yes
		09/04/24	2.85 ± 0.53	10.55 ± 1.98	Yes	28.00 ± 1.24	103.60 ± 4.59	Yes
		09/11/24	2.35 ± 0.48	8.70 ± 1.78	Yes	41.60 ± 1.56	153.92 ± 5.77	Yes
		09/18/24	1.33 ± 0.34	4.92 ± 1.24	Yes	19.70 ± 1.01	72.89 ± 3.74	Yes
		09/25/24	1.79 ± 0.42	6.62 ± 1.56	Yes	30.90 ± 1.24	114.33 ± 4.59	Yes
PBF		07/02/24	1.41 ± 0.38	5.22 ± 1.42	Yes	18.50 ± 1.09	68.45 ± 4.03	Yes
		07/10/24	2.88 ± 0.58	10.66 ± 2.13	Yes	21.40 ± 1.12	79.18 ± 4.14	Yes
		07/17/24	2.44 ± 0.48	9.03 ± 1.77	Yes	38.50 ± 1.47	142.45 ± 5.44	Yes
		07/24/24	2.59 ± 0.48	9.58 ± 1.78	Yes	34.10 ± 1.35	126.17 ± 5.00	Yes
		07/31/24	4.32 ± 0.78	15.98 ± 2.90	Yes	26.40 ± 1.39	97.68 ± 5.14	Yes
		08/07/24	4.01 ± 1.20	14.84 ± 4.44	Yes	28.00 ± 2.33	103.60 ± 8.62	Yes
		08/14/24	4.60 ± 0.78	17.02 ± 2.88	Yes	22.90 ± 1.25	84.73 ± 4.63	Yes
		08/21/24	1.15 ± 0.33	4.26 ± 1.24	Yes	21.40 ± 1.03	79.18 ± 3.81	Yes
		08/28/24	1.56 ± 0.39	5.77 ± 1.42	Yes	22.30 ± 1.07	82.51 ± 3.96	Yes
		09/04/24	4.15 ± 0.67	15.36 ± 2.49	Yes	25.40 ± 1.19	93.98 ± 4.40	Yes
		09/11/24	3.47 ± 0.65	12.84 ± 2.39	Yes	34.00 ± 1.43	125.80 ± 5.29	Yes
		09/18/24	0.60 ± 0.25	2.21 ± 0.91	No	18.80 ± 1.00	69.56 ± 3.70	Yes
		09/25/24	1.28 ± 0.39	4.74 ± 1.43	Yes	32.00 ± 1.36	118.40 ± 5.03	Yes
RHLLW		07/02/24	1.03 ± 0.33	3.81 ± 1.22	Yes	19.20 ± 1.11	71.04 ± 4.11	Yes
		07/10/24	3.01 ± 0.53	11.14 ± 1.94	Yes	26.70 ± 1.11	98.79 ± 4.11	Yes
		07/17/24	3.74 ± 0.59	13.84 ± 2.16	Yes	40.30 ± 1.49	149.11 ± 5.51	Yes
		07/24/24	3.94 ± 0.60	14.58 ± 2.22	Yes	36.80 ± 1.43	136.16 ± 5.29	Yes
		07/31/24	4.67 ± 0.77	17.28 ± 2.85	Yes	25.60 ± 1.29	94.72 ± 4.77	Yes
		08/07/24	3.27 ± 0.56	12.10 ± 2.05	Yes	36.50 ± 1.45	135.05 ± 5.37	Yes
		08/14/24	4.70 ± 0.88	17.39 ± 3.24	Yes	28.30 ± 1.60	104.71 ± 5.92	Yes
		08/21/24	2.36 ± 0.54	8.73 ± 2.01	Yes	26.20 ± 1.28	96.94 ± 4.74	Yes
		08/28/24	1.47 ± 0.36	5.44 ± 1.33	Yes	25.60 ± 1.17	94.72 ± 4.33	Yes
		09/04/24	3.33 ± 0.57	12.32 ± 2.11	Yes	28.10 ± 1.29	103.97 ± 4.77	Yes
		09/11/24	2.75 ± 0.58	10.18 ± 2.16	Yes	36.30 ± 1.56	134.31 ± 5.77	Yes
		09/18/24	0.90 ± 0.34	3.32 ± 1.27	No	20.80 ± 1.21	76.96 ± 4.48	Yes
		09/25/24	1.74 ± 0.46	6.44 ± 1.71	Yes	31.50 ± 1.35	116.55 ± 5.00	Yes
RHLLW (duplicate)		07/02/24	1.81 ± 0.49	6.70 ± 1.79	Yes	18.40 ± 1.10	68.08 ± 4.07	Yes
		07/10/24	2.16 ± 0.41	7.99 ± 1.50	Yes	27.30 ± 1.14	101.01 ± 4.22	Yes
		07/17/24	4.96 ± 0.73	18.35 ± 2.72	Yes	42.70 ± 1.52	157.99 ± 5.62	Yes
		07/24/24	3.52 ± 0.63	13.02 ± 2.31	Yes	36.60 ± 1.42	135.42 ± 5.25	Yes
		07/31/24	3.87 ± 0.64	14.32 ± 2.35	Yes	28.90 ± 1.37	106.93 ± 5.07	Yes
		08/07/24	3.29 ± 0.61	12.17 ± 2.25	Yes	33.00 ± 1.37	122.10 ± 5.07	Yes
		08/14/24	4.46 ± 0.86	16.50 ± 3.18	Yes	28.20 ± 1.55	104.34 ± 5.74	Yes
		08/21/24	1.21 ± 0.33	4.48 ± 1.22	Yes	26.30 ± 1.19	97.31 ± 4.40	Yes

Table B-1. Weekly gross alpha and gross beta concentrations in air.

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)	GROSS ALPHA Result > 3s	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)	GROSS BETA Result > 3s
	08/28/24	1.73 ± 0.43	6.40 ± 1.57	Yes	23.70 ± 1.11	87.69 ± 4.11	Yes
	09/04/24	2.92 ± 0.58	10.80 ± 2.16	Yes	26.30 ± 1.25	97.31 ± 4.63	Yes
	09/11/24	2.66 ± 0.51	9.84 ± 1.89	Yes	39.20 ± 1.52	145.04 ± 5.62	Yes
	09/18/24	1.19 ± 0.36	4.40 ± 1.32	Yes	19.50 ± 0.99	72.15 ± 3.66	Yes
	09/25/24	2.06 ± 0.42	7.62 ± 1.55	Yes	49.80 ± 1.57	184.26 ± 5.81	Yes
RWMC	07/02/24	2.32 ± 0.53	8.58 ± 1.97	Yes	28.10 ± 1.31	103.97 ± 4.85	Yes
	07/10/24	2.31 ± 0.42	8.55 ± 1.55	Yes	26.70 ± 1.12	98.79 ± 4.14	Yes
	07/17/24	3.84 ± 0.65	14.21 ± 2.41	Yes	39.20 ± 1.47	145.04 ± 5.44	Yes
	07/24/24	3.88 ± 0.66	14.36 ± 2.44	Yes	36.10 ± 1.42	133.57 ± 5.25	Yes
	07/31/24	3.77 ± 0.68	13.95 ± 2.52	Yes	25.30 ± 1.26	93.61 ± 4.66	Yes
	08/07/24	5.09 ± 0.70	18.83 ± 2.60	Yes	34.60 ± 1.44	128.02 ± 5.33	Yes
	08/14/24	2.70 ± 0.55	9.99 ± 2.05	Yes	27.40 ± 1.29	101.38 ± 4.77	Yes
	08/21/24	1.82 ± 0.44	6.73 ± 1.64	Yes	24.10 ± 1.13	89.17 ± 4.18	Yes
	08/28/24	1.48 ± 0.36	5.48 ± 1.34	Yes	21.60 ± 1.08	79.92 ± 4.00	Yes
	09/04/24	2.62 ± 0.51	9.69 ± 1.89	Yes	29.50 ± 1.33	109.15 ± 4.92	Yes
	09/11/24	3.03 ± 0.58	11.21 ± 2.15	Yes	35.80 ± 1.47	132.46 ± 5.44	Yes
	09/18/24	1.62 ± 0.39	5.99 ± 1.42	Yes	22.60 ± 1.06	83.62 ± 3.92	Yes
	09/25/24	2.75 ± 0.54	10.18 ± 1.99	Yes	30.10 ± 1.25	111.37 ± 4.63	Yes
RWMC SOUTH	07/02/24	1.67 ± 0.43	6.18 ± 1.60	Yes	19.20 ± 1.08	71.04 ± 4.00	Yes
	07/10/24	2.21 ± 0.45	8.18 ± 1.67	Yes	25.30 ± 1.08	93.61 ± 4.00	Yes
	07/17/24	4.24 ± 0.65	15.69 ± 2.39	Yes	40.70 ± 1.47	150.59 ± 5.44	Yes
	07/24/24	2.87 ± 0.54	10.62 ± 2.00	Yes	35.60 ± 1.40	131.72 ± 5.18	Yes
	07/31/24	3.93 ± 0.65	14.54 ± 2.42	Yes	28.00 ± 1.38	103.60 ± 5.11	Yes
	08/07/24	3.95 ± 0.68	14.62 ± 2.53	Yes	33.70 ± 1.42	124.69 ± 5.25	Yes
	08/14/24	3.86 ± 0.73	14.28 ± 2.70	Yes	26.60 ± 1.37	98.42 ± 5.07	Yes
	08/21/24	1.19 ± 0.33	4.40 ± 1.21	Yes	26.40 ± 1.18	97.68 ± 4.37	Yes
	08/28/24	1.23 ± 0.36	4.55 ± 1.34	Yes	21.20 ± 1.06	78.44 ± 3.92	Yes
	09/04/24	3.72 ± 0.67	13.76 ± 2.47	Yes	28.70 ± 1.32	106.19 ± 4.88	Yes
	09/11/24	3.07 ± 0.62	11.36 ± 2.28	Yes	37.70 ± 1.52	139.49 ± 5.62	Yes
b	09/18/24	±	±		±	±	
b	09/25/24	±	±		±	±	
SMC	07/02/24	1.80 ± 0.47	6.66 ± 1.73	Yes	20.70 ± 1.12	76.59 ± 4.14	Yes
	07/10/24	0.99 ± 0.27	3.68 ± 1.01	Yes	27.10 ± 1.11	100.27 ± 4.11	Yes
	07/17/24	3.49 ± 0.61	12.91 ± 2.26	Yes	37.50 ± 1.41	138.75 ± 5.22	Yes
	07/24/24	4.01 ± 0.66	14.84 ± 2.45	Yes	35.80 ± 1.40	132.46 ± 5.18	Yes
	07/31/24	4.56 ± 0.72	16.87 ± 2.68	Yes	25.90 ± 1.24	95.83 ± 4.59	Yes
	08/07/24	2.64 ± 0.49	9.77 ± 1.82	Yes	34.60 ± 1.39	128.02 ± 5.14	Yes
	08/14/24	3.28 ± 0.66	12.14 ± 2.44	Yes	24.70 ± 1.29	91.39 ± 4.77	Yes
	08/21/24	2.02 ± 0.45	7.47 ± 1.67	Yes	22.50 ± 1.07	83.25 ± 3.96	Yes
	08/28/24	1.51 ± 0.36	5.59 ± 1.33	Yes	27.80 ± 1.20	102.86 ± 4.44	Yes
	09/04/24	2.23 ± 0.46	8.25 ± 1.71	Yes	30.30 ± 1.31	112.11 ± 4.85	Yes
	09/11/24	3.51 ± 0.59	12.99 ± 2.19	Yes	38.30 ± 1.44	141.71 ± 5.33	Yes
	09/18/24	1.01 ± 0.33	3.74 ± 1.20	Yes	19.10 ± 0.97	70.67 ± 3.59	Yes
	09/25/24	1.98 ± 0.44	7.33 ± 1.61	Yes	33.60 ± 1.29	124.32 ± 4.77	Yes
VAN BUREN	07/02/24	1.83 ± 0.46	6.77 ± 1.69	Yes	18.20 ± 1.07	67.34 ± 3.96	Yes
	07/10/24	1.48 ± 0.38	5.48 ± 1.41	Yes	26.60 ± 1.13	98.42 ± 4.18	Yes
	07/17/24	3.04 ± 0.56	11.25 ± 2.09	Yes	40.00 ± 1.50	148.00 ± 5.55	Yes
	07/24/24	2.66 ± 0.53	9.84 ± 1.96	Yes	36.30 ± 1.43	134.31 ± 5.29	Yes
	07/31/24	3.39 ± 0.68	12.54 ± 2.52	Yes	22.30 ± 1.25	82.51 ± 4.63	Yes
	08/07/24	4.08 ± 0.71	15.10 ± 2.61	Yes	33.20 ± 1.44	122.84 ± 5.33	Yes
	08/14/24	4.18 ± 0.81	15.47 ± 2.99	Yes	29.60 ± 1.54	109.52 ± 5.70	Yes
	08/21/24	1.74 ± 0.39	6.44 ± 1.42	Yes	25.60 ± 1.15	94.72 ± 4.26	Yes
	08/28/24	1.63 ± 0.38	6.03 ± 1.40	Yes	24.30 ± 1.14	89.91 ± 4.22	Yes
	09/04/24	2.75 ± 0.59	10.18 ± 2.17	Yes	28.00 ± 1.33	103.60 ± 4.92	Yes
	09/11/24	3.73 ± 0.71	13.80 ± 2.61	Yes	37.80 ± 1.59	139.86 ± 5.88	Yes
	09/18/24	1.50 ± 0.37	5.55 ± 1.36	Yes	20.20 ± 0.94	74.74 ± 3.49	Yes
	09/25/24	1.74 ± 0.44	6.44 ± 1.61	Yes	32.50 ± 1.29	120.25 ± 4.77	Yes

a. No sample due to mechanical issue.
b. Insufficent sample volume

Table B-2. Weekly iodine-131 activity in air.

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
BOUNDARY								
ARCO	07/02/24	105.47	±	194.75	390.24	±	720.58	No
	07/10/24	-66.90	±	86.50	-247.53	±	320.06	No
	07/17/24	44.57	±	89.86	164.89	±	332.47	No
	07/24/24	-105.66	±	120.57	-390.94	±	446.11	No
	07/31/24	-178.05	±	130.11	-658.79	±	481.41	No
	08/07/24	-51.15	±	131.30	-189.25	±	485.81	No
	08/14/24	327.23	±	221.15	1210.75	±	818.26	No
	08/21/24	98.07	±	154.52	362.86	±	571.72	No
	08/28/24	-41.06	±	148.27	-151.90	±	548.60	No
	09/04/24	13.59	±	131.31	50.27	±	485.85	No
	09/11/24	47.74	±	107.88	176.65	±	399.16	No
	09/18/24	89.14	±	127.45	329.83	±	471.57	No
	09/25/24	61.75	±	130.43	228.46	±	482.59	No
ATOMIC CITY	07/02/24	3.54	±	139.28	13.10	±	515.34	No
	07/10/24	100.59	±	80.76	372.18	±	298.80	No
	07/17/24	81.02	±	96.31	299.79	±	356.34	No
	07/24/24	124.73	±	106.92	461.50	±	395.60	No
	07/31/24	-152.77	±	120.13	-565.25	±	444.48	No
	08/07/24	-159.18	±	111.34	-588.97	±	411.96	No
	08/14/24	-128.60	±	131.60	-475.82	±	486.92	No
	08/21/24	33.48	±	92.67	123.86	±	342.87	No
	08/28/24	193.81	±	123.76	717.10	±	457.91	No
	09/04/24	28.39	±	102.62	105.05	±	379.69	No
	09/11/24	23.13	±	114.34	85.58	±	423.06	No
	09/18/24	165.51	±	145.06	612.39	±	536.72	No
	09/25/24	-76.61	±	143.07	-283.44	±	529.36	No
BLUE DOME	07/02/24	180.37	±	186.04	667.37	±	688.35	No
	07/10/24	-7.48	±	80.87	-27.67	±	299.23	No
	07/17/24	25.43	±	108.97	94.09	±	403.19	No
	07/24/24	-93.55	±	190.03	-346.13	±	703.11	No
	07/31/24	-126.22	±	150.67	-467.01	±	557.48	No
	08/07/24	44.00	±	170.94	162.81	±	632.48	No
	08/14/24	-162.70	±	142.94	-601.99	±	528.88	No
	08/21/24	-32.80	±	116.17	-121.36	±	429.83	No
	08/28/24	1.48	±	95.36	5.49	±	352.84	No
	09/04/24	43.32	±	196.42	160.29	±	726.75	No
	09/11/24	33.63	±	127.10	124.43	±	470.27	No
a	09/18/24		±			±		
	09/25/24	19.34	±	120.00	71.57	±	444.00	No
HOWE	07/02/24	-1.02	±	105.63	-3.77	±	390.83	No
	07/10/24	-29.20	±	99.11	-108.05	±	366.70	No
	07/17/24	-38.30	±	94.52	-141.70	±	349.71	No
	07/24/24	-24.39	±	98.05	-90.24	±	362.79	No
	07/31/24	66.01	±	185.19	244.25	±	685.20	No
	08/07/24	-26.99	±	113.36	-99.85	±	419.43	No
	08/14/24	-211.93	±	169.30	-784.14	±	626.41	No
	08/21/24	-188.15	±	111.69	-696.16	±	413.25	No
	08/28/24	50.26	±	178.82	185.94	±	661.63	No
	09/04/24	-23.27	±	105.60	-86.10	±	390.72	No

Table B-2. Weekly iodine-131 activity in air.

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	09/11/24	-77.07	±	93.08	-285.14	±	344.39	No
	09/18/24	47.43	±	111.91	175.47	±	414.07	No
	09/25/24	-127.98	±	114.52	-473.53	±	423.72	No
HOWE (duplicate)	07/02/24	-204.83	±	163.63	-757.87	±	605.43	No
	07/10/24	-146.85	±	102.14	-543.35	±	377.92	No
	07/17/24	-58.72	±	143.58	-217.26	±	531.25	No
	07/24/24	20.24	±	104.82	74.87	±	387.83	No
	07/31/24	-177.72	±	124.53	-657.56	±	460.76	No
	08/07/24	27.68	±	91.37	102.43	±	338.05	No
	08/14/24	-30.87	±	173.61	-114.23	±	642.36	No
	08/21/24	28.60	±	113.16	105.82	±	418.69	No
	08/28/24	-3.69	±	94.95	-13.64	±	351.33	No
	09/04/24	123.45	±	106.27	456.77	±	393.20	No
	09/11/24	103.49	±	98.70	382.91	±	365.20	No
	09/18/24	35.41	±	95.00	131.01	±	351.50	No
	09/25/24	-141.05	±	94.67	-521.89	±	350.27	No
MONTEVIEW	07/02/24	-102.35	±	128.37	-378.70	±	474.97	No
	07/10/24	-134.60	±	162.73	-498.02	±	602.10	No
	07/17/24	25.25	±	112.96	93.43	±	417.95	No
	07/24/24	167.84	±	155.92	621.01	±	576.90	No
	07/31/24	-167.91	±	119.26	-621.27	±	441.26	No
	08/07/24	17.65	±	93.47	65.29	±	345.84	No
	08/14/24	12.18	±	98.77	45.05	±	365.46	No
	08/21/24	-41.94	±	177.53	-155.18	±	656.86	No
	08/28/24	-44.14	±	125.33	-163.32	±	463.72	No
	09/04/24	25.64	±	99.97	94.88	±	369.90	No
	09/11/24	152.27	±	117.97	563.40	±	436.49	No
	09/18/24	-80.97	±	107.13	-299.57	±	396.38	No
	09/25/24	-183.02	±	146.22	-677.17	±	541.01	No
TERRETON	07/02/24	91.95	±	107.35	340.20	±	397.20	No
	07/10/24	-72.14	±	81.81	-266.90	±	302.70	No
	07/17/24	-65.34	±	120.23	-241.74	±	444.85	No
	07/24/24	-72.49	±	115.88	-268.23	±	428.76	No
	07/31/24	-217.70	±	146.77	-805.49	±	543.05	No
	08/07/24	-131.30	±	92.76	-485.81	±	343.20	No
	08/14/24	-80.67	±	114.53	-298.46	±	423.76	No
	08/21/24	-10.86	±	99.03	-40.20	±	366.39	No
	08/28/24	138.90	±	98.27	513.93	±	363.60	No
	09/04/24	53.05	±	186.99	196.30	±	691.86	No
	09/11/24	51.60	±	116.26	190.93	±	430.16	No
	09/18/24	-74.07	±	149.33	-274.06	±	552.52	No
	09/25/24	127.99	±	98.71	473.56	±	365.23	No
OFFSITE								
BLACKFOOT	07/02/24	79.23	±	105.75	293.17	±	391.28	No
	07/10/24	7.68	±	86.31	28.41	±	319.36	No
	07/17/24	60.16	±	95.86	222.60	±	354.70	No
	07/24/24	25.89	±	106.73	95.77	±	394.90	No
	07/31/24	-0.36	±	113.04	-1.34	±	418.25	No
	08/07/24	3.79	±	120.18	14.02	±	444.67	No
	08/14/24	31.05	±	110.47	114.88	±	408.74	No

Table B-2. Weekly iodine-131 activity in air.

Sampling Group and Location		Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
		08/21/24	-6.68	±	138.32	-24.73	±	511.78	No
		08/28/24	-22.66	±	100.13	-83.84	±	370.48	No
		09/04/24	46.71	±	100.79	172.81	±	372.92	No
		09/11/24	104.58	±	193.95	386.95	±	717.62	No
		09/18/24	-94.93	±	143.53	-351.23	±	531.06	No
		09/25/24	-114.21	±	98.42	-422.58	±	364.14	No
CRATERS OF THE MOON		07/02/24	36.05	±	100.93	133.37	±	373.44	No
		07/10/24	-33.73	±	78.04	-124.80	±	288.74	No
		07/17/24	-12.45	±	93.13	-46.06	±	344.59	No
		07/24/24	127.69	±	98.82	472.45	±	365.63	No
	a	07/31/24		±			±		
		08/07/24	-212.77	±	171.88	-787.25	±	635.96	No
		08/14/24	-50.52	±	112.37	-186.92	±	415.77	No
		08/21/24	28.63	±	176.78	105.94	±	654.09	No
		08/28/24	48.29	±	111.87	178.66	±	413.92	No
		09/04/24	34.02	±	111.12	125.86	±	411.14	No
		09/11/24	-18.91	±	106.68	-69.96	±	394.72	No
		09/18/24	135.48	±	102.85	501.28	±	380.55	No
		09/25/24	18.25	±	87.17	67.53	±	322.53	No
DUBOIS		07/02/24	-150.79	±	128.71	-557.92	±	476.23	No
		07/10/24	-48.80	±	91.55	-180.55	±	338.75	No
		07/17/24	-109.43	±	100.25	-404.89	±	370.93	No
		07/24/24	84.59	±	105.80	312.97	±	391.46	No
		07/31/24	-4.86	±	130.93	-18.00	±	484.44	No
		08/07/24	-55.30	±	172.44	-204.61	±	638.03	No
		08/14/24	-237.21	±	189.50	-877.68	±	701.15	No
		08/21/24	59.64	±	93.45	220.68	±	345.78	No
		08/28/24	111.54	±	100.10	412.70	±	370.37	No
		09/04/24	156.80	±	125.31	580.16	±	463.65	No
		09/11/24	-108.97	±	142.05	-403.19	±	525.59	No
		09/18/24	23.79	±	170.52	88.02	±	630.92	No
		09/25/24	-55.45	±	93.06	-205.15	±	344.31	No
IDAHO FALLS		07/02/24	-68.41	±	136.11	-253.13	±	503.61	No
		07/10/24	66.68	±	76.96	246.70	±	284.73	No
		07/17/24	55.75	±	96.09	206.29	±	355.55	No
		07/24/24	-539.61	±	1126.10	-1996.56	±	4166.57	No
		07/31/24	-221.10	±	176.63	-818.07	±	653.53	No
		08/07/24	103.25	±	175.01	382.03	±	647.54	No
		08/14/24	77.97	±	110.93	288.49	±	410.44	No
		08/21/24	50.48	±	106.09	186.79	±	392.53	No
		08/28/24	44.23	±	85.15	163.66	±	315.06	No
		09/04/24	24.78	±	87.96	91.67	±	325.44	No
		09/11/24	-197.95	±	158.14	-732.42	±	585.12	No
		09/18/24	70.49	±	93.88	260.82	±	347.35	No
		09/25/24	-148.20	±	121.84	-548.34	±	450.81	No
IRC		07/02/24	-50.60	±	116.61	-187.21	±	431.46	No
		07/10/24	-81.18	±	81.85	-300.38	±	302.84	No
		07/17/24	-125.32	±	102.68	-463.68	±	379.92	No
		07/24/24	-74.78	±	178.53	-276.69	±	660.56	No
		07/31/24	19.72	±	109.04	72.96	±	403.45	No

Table B-2. Weekly iodine-131 activity in air.

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	08/07/24	31.76	±	97.00	117.52	±	358.89	No
	08/14/24	-160.42	±	144.66	-593.55	±	535.24	No
	08/21/24	57.49	±	102.01	212.70	±	377.44	No
	08/28/24	15.74	±	148.05	58.25	±	547.79	No
	09/04/24	86.47	±	91.65	319.95	±	339.12	No
	09/11/24	46.11	±	160.82	170.60	±	595.03	No
	09/18/24	-134.58	±	93.15	-497.95	±	344.64	No
	09/25/24	-163.07	±	117.41	-603.36	±	434.42	No
IRC NORTH	07/02/24	-114.14	±	119.13	-422.32	±	440.78	No
	07/10/24	15.68	±	99.67	58.00	±	368.79	No
	07/17/24	62.47	±	98.17	231.15	±	363.22	No
	07/24/24	-105.29	±	107.45	-389.57	±	397.57	No
	07/31/24	-56.12	±	224.72	-207.63	±	831.46	No
	08/07/24	-216.36	±	217.64	-800.53	±	805.27	No
	08/14/24	47.93	±	103.99	177.34	±	384.76	No
	08/21/24	-64.53	±	108.86	-238.77	±	402.78	No
	08/28/24	84.38	±	98.75	312.22	±	365.36	No
	09/04/24	156.11	±	211.97	577.61	±	784.29	No
	09/11/24	40.71	±	110.05	150.63	±	407.19	No
	09/18/24	-52.01	±	96.06	-192.43	±	355.41	No
	09/25/24	-92.92	±	95.39	-343.81	±	352.93	No
JACKSON, WY	07/02/24	-10.65	±	153.98	-39.42	±	569.73	No
	07/09/24	-177.63	±	120.44	-657.23	±	445.63	No
	07/16/24	-61.54	±	178.58	-227.71	±	660.75	No
	07/23/24	-213.51	±	170.54	-789.99	±	631.00	No
	07/30/24	-126.75	±	126.76	-468.98	±	469.01	No
	08/06/24	50.59	±	144.27	187.17	±	533.80	No
	08/13/24	71.64	±	124.61	265.08	±	461.06	No
	08/20/24	186.99	±	157.12	691.86	±	581.34	No
	08/27/24	-10.29	±	109.13	-38.07	±	403.78	No
	09/03/24	15.64	±	103.15	57.88	±	381.66	No
	09/10/24	-37.86	±	99.23	-140.08	±	367.15	No
	09/17/24	13.61	±	110.39	50.34	±	408.44	No
	09/24/24	-18.83	±	121.42	-69.66	±	449.25	No
SUGAR CITY	07/02/24	66.62	±	112.69	246.49	±	416.95	No
	07/10/24	-85.71	±	85.83	-317.13	±	317.56	No
	07/17/24	105.30	±	187.23	389.61	±	692.75	No
	07/24/24	8.69	±	98.86	32.16	±	365.77	No
	07/31/24	-134.81	±	126.43	-498.80	±	467.79	No
	08/07/24	-6.81	±	91.94	-25.20	±	340.16	No
	08/14/24	-64.64	±	100.79	-239.15	±	372.92	No
	08/21/24	-79.97	±	96.57	-295.88	±	357.31	No
	08/28/24	-65.74	±	178.00	-243.23	±	658.60	No
	09/04/24	19.30	±	126.69	71.41	±	468.75	No
	09/11/24	-94.39	±	102.07	-349.22	±	377.66	No
	09/18/24	-18.15	±	97.61	-67.14	±	361.15	No
	09/25/24	136.56	±	179.11	505.27	±	662.71	No
SUGAR CITY (duplicate)	07/02/24	-93.15	±	104.56	-344.66	±	386.87	No
	07/10/24	-122.96	±	88.77	-454.95	±	328.44	No
	07/17/24	-129.83	±	103.49	-480.37	±	382.91	No

Table B-2. Weekly iodine-131 activity in air.

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	07/24/24	172.62	±	189.40	638.69	±	700.78	No
	07/31/24	163.89	±	231.82	606.39	±	857.73	No
	08/07/24	-73.65	±	141.98	-272.49	±	525.33	No
	08/14/24	86.54	±	111.44	320.18	±	412.33	No
	08/21/24	33.54	±	102.03	124.09	±	377.51	No
	08/28/24	126.94	±	94.93	469.68	±	351.25	No
	09/04/24	-32.41	±	152.83	-119.93	±	565.47	No
	09/11/24	-87.61	±	103.35	-324.15	±	382.40	No
	09/18/24	-47.27	±	97.18	-174.89	±	359.58	No
	09/25/24	25.67	±	95.91	94.99	±	354.85	No
ONSITE								
ATR COMPLEX	07/02/24	15.49	±	164.98	57.31	±	610.43	No
	07/10/24	-34.14	±	89.30	-126.33	±	330.40	No
	07/17/24	-22.04	±	158.30	-81.56	±	585.71	No
	07/24/24	-4.46	±	101.73	-16.49	±	376.40	No
	07/31/24	-96.22	±	116.80	-356.01	±	432.16	No
	08/07/24	38.73	±	112.46	143.30	±	416.10	No
	08/14/24	-88.89	±	129.39	-328.89	±	478.74	No
	08/21/24	-71.87	±	93.46	-265.91	±	345.81	No
	08/28/24	-18.52	±	97.81	-68.52	±	361.90	No
	09/04/24	91.93	±	192.14	340.15	±	710.92	No
	09/11/24	-14.03	±	166.16	-51.89	±	614.79	No
	09/18/24	56.56	±	91.83	209.28	±	339.75	No
	09/25/24	-73.65	±	89.68	-272.50	±	331.82	No
CFA	07/02/24	-2.27	±	107.17	-8.41	±	396.53	No
	07/10/24	-165.31	±	97.93	-611.65	±	362.35	No
	07/17/24	-65.97	±	102.51	-244.10	±	379.29	No
	07/24/24	-1.57	±	106.13	-5.79	±	392.68	No
	07/31/24	-65.30	±	191.13	-241.60	±	707.18	No
	08/07/24	-13.85	±	93.84	-51.24	±	347.21	No
	08/14/24	-29.50	±	167.95	-109.14	±	621.42	No
	08/21/24	45.29	±	91.90	167.58	±	340.03	No
	08/28/24	139.96	±	135.87	517.85	±	502.72	No
	09/04/24	126.94	±	107.53	469.68	±	397.86	No
	09/11/24	44.45	±	194.60	164.45	±	720.02	No
	09/18/24	-167.84	±	134.09	-621.01	±	496.13	No
	09/25/24	-119.29	±	82.56	-441.37	±	305.46	No
EBR-I	07/02/24	167.18	±	104.36	618.57	±	386.13	No
	07/10/24	35.01	±	79.79	129.55	±	295.22	No
	07/17/24	16.77	±	178.68	62.06	±	661.12	No
	07/24/24	-24.16	±	104.01	-89.38	±	384.84	No
	07/31/24	-88.25	±	142.91	-326.51	±	528.77	No
	08/07/24	-149.87	±	127.19	-554.52	±	470.60	No
	b 08/14/24		±			±		
	08/21/24	41.17	±	146.94	152.31	±	543.68	No
	08/28/24	138.42	±	97.61	512.15	±	361.16	No
	09/04/24	-31.68	±	153.04	-117.20	±	566.25	No
	09/11/24	139.43	±	210.45	515.89	±	778.67	No
	09/18/24	-75.28	±	165.09	-278.54	±	610.83	No
	09/25/24	15.84	±	98.24	58.61	±	363.50	No

Table B-2. Weekly iodine-131 activity in air.

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
EFS	07/02/24	18.45	±	109.66	68.28	±	405.74	No
	07/10/24	-113.48	±	100.51	-419.88	±	371.89	No
	07/17/24	-135.14	±	119.35	-500.02	±	441.60	No
	07/24/24	56.06	±	98.41	207.43	±	364.11	No
	07/31/24	25.95	±	209.26	96.03	±	774.26	No
	08/07/24	-132.92	±	92.95	-491.80	±	343.93	No
	08/14/24	-121.04	±	122.69	-447.85	±	453.95	No
	08/21/24	91.80	±	106.51	339.65	±	394.09	No
	08/28/24	-22.98	±	112.67	-85.04	±	416.88	No
	09/04/24	-134.96	±	145.08	-499.35	±	536.80	No
	09/11/24	23.23	±	148.65	85.94	±	550.01	No
	09/18/24	6.56	±	106.82	24.28	±	395.23	No
	09/25/24	-46.90	±	158.73	-173.53	±	587.30	No
GATE 4	07/02/24	11.38	±	98.10	42.10	±	362.96	No
	07/10/24	-57.44	±	80.84	-212.51	±	299.11	No
	07/17/24	165.03	±	93.54	610.61	±	346.10	No
	07/24/24	-107.03	±	110.88	-396.01	±	410.26	No
	07/31/24	-127.46	±	111.62	-471.60	±	412.99	No
	08/07/24	-17.65	±	103.19	-65.29	±	381.80	No
	08/14/24	-104.37	±	123.16	-386.17	±	455.69	No
	08/21/24	-3.16	±	90.05	-11.69	±	333.18	No
	08/28/24	-61.35	±	91.33	-226.98	±	337.94	No
	09/04/24	-9.10	±	104.67	-33.65	±	387.28	No
	09/11/24	304.37	±	184.49	1126.17	±	682.61	No
	09/18/24	-110.32	±	116.11	-408.18	±	429.61	No
	09/25/24	27.35	±	140.93	101.19	±	521.44	No
HIGHWAY 26 REST AREA	07/02/24	72.13	±	204.00	266.88	±	754.80	No
	07/10/24	49.80	±	77.46	184.26	±	286.58	No
	07/17/24	16.69	±	90.89	61.75	±	336.29	No
	07/24/24	115.09	±	101.22	425.83	±	374.51	No
	07/31/24	31.88	±	113.02	117.96	±	418.17	No
	08/07/24	-63.51	±	161.26	-234.97	±	596.66	No
	08/14/24	27.23	±	141.51	100.74	±	523.59	No
	08/21/24	-86.78	±	112.12	-321.07	±	414.84	No
	08/28/24	-22.62	±	37.95	-83.70	±	140.42	No
	09/04/24	77.23	±	98.01	285.74	±	362.64	No
	09/11/24	-74.21	±	118.06	-274.58	±	436.82	No
	09/18/24	-231.90	±	185.26	-858.03	±	685.46	No
	09/25/24	-126.35	±	113.06	-467.50	±	418.32	No
HIGHWAY 26 REST AREA (duplicate)	07/02/24	159.17	±	102.43	588.93	±	378.99	No
	07/10/24	42.22	±	84.74	156.23	±	313.55	No
	07/17/24	-71.09	±	115.99	-263.04	±	429.16	No
	07/24/24	196.53	±	121.87	727.16	±	450.92	No
	07/31/24	66.06	±	110.53	244.42	±	408.96	No
	08/07/24	0.42	±	108.57	1.55	±	401.71	No
	08/14/24	129.25	±	118.47	478.23	±	438.34	No
	08/21/24	3.67	±	120.66	13.58	±	446.44	No
	08/28/24	68.15	±	94.00	252.16	±	347.81	No
	09/04/24	117.00	±	121.87	432.90	±	450.92	No
b	09/11/24		±			±		

Table B-2. Weekly iodine-131 activity in air.

Sampling Group and Location		Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
		09/18/24	299.01	±	215.22	1106.34	±	796.31	No
		09/25/24	-128.63	±	174.33	-475.93	±	645.02	No
INTEC (NE CORNER)		07/02/24	80.27	±	128.52	296.98	±	475.52	No
		07/10/24	-155.13	±	123.93	-573.98	±	458.54	No
		07/17/24	122.89	±	106.27	454.69	±	393.20	No
		07/24/24	-29.22	±	117.39	-108.10	±	434.34	No
		07/31/24	-18.54	±	122.67	-68.59	±	453.88	No
		08/07/24	-282.31	±	205.15	-1044.55	±	759.06	No
		08/14/24	83.59	±	123.00	309.28	±	455.10	No
		08/21/24	-2.39	±	85.23	-8.84	±	315.35	No
		08/28/24	19.38	±	163.57	71.72	±	605.21	No
		09/04/24	-191.96	±	153.35	-710.25	±	567.40	No
		09/11/24	42.19	±	134.93	156.09	±	499.24	No
		09/18/24	11.74	±	101.49	43.42	±	375.51	No
		09/25/24	15.44	±	87.60	57.11	±	324.13	No
INTEC (WEST SIDE)		07/02/24	-17.64	±	102.95	-65.26	±	380.92	No
		07/10/24	34.94	±	75.51	129.28	±	279.37	No
		07/17/24	168.20	±	97.83	622.34	±	361.98	No
		07/24/24	-94.18	±	150.36	-348.48	±	556.33	No
		07/31/24	-149.50	±	134.76	-553.15	±	498.61	No
		08/07/24	62.96	±	100.37	232.96	±	371.37	No
	b	08/14/24		±			±		
		08/21/24	29.29	±	88.12	108.35	±	326.05	No
		08/28/24	69.68	±	86.62	257.80	±	320.51	No
		09/04/24	-1102.10	±	2775.10	-4077.77	±	10267.87	No
		09/11/24	-43.62	±	126.47	-161.40	±	467.94	No
		09/18/24	8.46	±	83.91	31.32	±	310.46	No
		09/25/24	-160.97	±	128.59	-595.59	±	475.78	No
MAIN GATE		07/02/24	16.31	±	104.32	60.34	±	385.98	No
		07/10/24	-111.94	±	129.86	-414.18	±	480.48	No
		07/17/24	-34.69	±	190.05	-128.33	±	703.19	No
		07/24/24	76.07	±	99.27	281.46	±	367.30	No
		07/31/24	-75.94	±	120.68	-280.99	±	446.52	No
		08/07/24	-141.35	±	102.80	-523.00	±	380.36	No
		08/14/24	372.20	±	242.95	1377.14	±	898.92	No
		08/21/24	42.06	±	95.14	155.63	±	352.00	No
		08/28/24	-8.85	±	118.71	-32.76	±	439.23	No
		09/04/24	70.35	±	189.02	260.28	±	699.37	No
		09/11/24	-138.86	±	124.26	-513.78	±	459.76	No
		09/18/24	32.74	±	101.25	121.13	±	374.63	No
		09/25/24	129.41	±	115.98	478.82	±	429.13	No
MFC NORTH		07/02/24	-51.32	±	113.11	-189.88	±	418.51	No
		07/10/24	97.90	±	157.59	362.22	±	583.08	No
		07/17/24	38.48	±	109.34	142.38	±	404.56	No
		07/24/24	-121.48	±	151.86	-449.48	±	561.88	No
	b	07/31/24		±			±		
	b	08/07/24		±			±		
	b	08/14/24		±			±		
	b	08/21/24		±			±		
	b	08/28/24		±			±		

Table B-2. Weekly iodine-131 activity in air.

Sampling Group and Location		Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	b	09/04/24		±			±		
	b	09/11/24		±			±		
	b	09/18/24		±			±		
	b	09/25/24		±			±		
MFC SOUTH		07/02/24	-14.91	±	100.87	-55.17	±	373.22	No
		07/10/24	43.78	±	157.86	161.97	±	584.08	No
		07/17/24	-183.90	±	190.95	-680.43	±	706.52	No
	b	07/24/24		±			±		
		07/31/24	-85.64	±	116.66	-316.87	±	431.64	No
		08/07/24	-27.29	±	182.40	-100.97	±	674.88	No
		08/14/24	405.52	±	271.34	1500.42	±	1003.96	No
		08/21/24	15.38	±	108.57	56.89	±	401.71	No
	b	08/28/24		±			±		
		09/04/24	87.64	±	119.13	324.27	±	440.78	No
		09/11/24	-24.39	±	104.35	-90.25	±	386.10	No
	b	09/18/24		±			±		
		09/25/24	-64.20	±	107.85	-237.53	±	399.05	No
NRF		07/02/24	-17.96	±	104.97	-66.46	±	388.39	No
		07/10/24	126.99	±	81.75	469.86	±	302.46	No
		07/17/24	-91.50	±	95.77	-338.54	±	354.36	No
		07/24/24	-95.51	±	103.04	-353.39	±	381.25	No
		07/31/24	19.32	±	131.07	71.47	±	484.96	No
		08/07/24	-125.15	±	103.68	-463.06	±	383.62	No
		08/14/24	-12.58	±	180.60	-46.53	±	668.22	No
		08/21/24	80.92	±	87.89	299.41	±	325.19	No
		08/28/24	-10.18	±	87.73	-37.65	±	324.59	No
		09/04/24	-119.68	±	112.70	-442.82	±	416.99	No
		09/11/24	-0.42	±	101.12	-1.56	±	374.14	No
		09/18/24	-34.34	±	101.42	-127.05	±	375.25	No
		09/25/24	-99.73	±	107.58	-369.01	±	398.05	No
PBF		07/02/24	-129.01	±	196.02	-477.34	±	725.27	No
		07/10/24	-107.77	±	194.53	-398.75	±	719.76	No
		07/17/24	-57.46	±	103.56	-212.60	±	383.17	No
		07/24/24	-136.43	±	100.22	-504.79	±	370.81	No
		07/31/24	-103.97	±	133.52	-384.69	±	494.02	No
		08/07/24	534.24	±	590.20	1976.69	±	2183.74	No
		08/14/24	-165.62	±	116.32	-612.79	±	430.38	No
		08/21/24	-35.32	±	110.77	-130.68	±	409.85	No
		08/28/24	41.09	±	90.04	152.05	±	333.16	No
		09/04/24	-190.57	±	118.66	-705.11	±	439.04	No
		09/11/24	-13.85	±	108.42	-51.23	±	401.15	No
		09/18/24	-198.23	±	182.48	-733.45	±	675.18	No
		09/25/24	-103.73	±	142.29	-383.80	±	526.47	No
RHLLW		07/02/24	62.19	±	102.41	230.09	±	378.92	No
		07/10/24	-3.18	±	78.72	-11.77	±	291.25	No
		07/17/24	63.07	±	98.04	233.37	±	362.74	No
		07/24/24	43.11	±	94.99	159.49	±	351.47	No
		07/31/24	-62.27	±	116.77	-230.38	±	432.05	No
		08/07/24	-4.50	±	105.77	-16.64	±	391.35	No
		08/14/24	-294.63	±	235.38	-1090.13	±	870.91	No

Table B-2. Weekly iodine-131 activity in air.

Sampling Group and Location		Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
		08/21/24	-200.55	±	161.26	-742.04	±	596.66	No
		08/28/24	-116.48	±	108.36	-430.98	±	400.93	No
		09/04/24	53.18	±	97.73	196.76	±	361.59	No
		09/11/24	130.21	±	144.47	481.78	±	534.54	No
		09/18/24	-113.17	±	120.78	-418.73	±	446.89	No
		09/25/24	-133.53	±	119.49	-494.06	±	442.11	No
RHLLW (duplicate)		07/02/24	56.57	±	106.57	209.32	±	394.31	No
		07/10/24	-1.90	±	102.30	-7.02	±	378.51	No
		07/17/24	-46.68	±	150.99	-172.71	±	558.66	No
		07/24/24	-2.34	±	94.60	-8.65	±	350.01	No
		07/31/24	-57.40	±	106.06	-212.37	±	392.42	No
		08/07/24	-97.25	±	154.77	-359.81	±	572.65	No
		08/14/24	17.34	±	264.54	64.16	±	978.80	No
		08/21/24	68.55	±	168.65	253.63	±	624.01	No
		08/28/24	208.86	±	163.00	772.78	±	603.10	No
		09/04/24	-17.72	±	125.17	-65.55	±	463.13	No
		09/11/24	117.31	±	126.51	434.05	±	468.09	No
		09/18/24	-110.31	±	92.83	-408.15	±	343.48	No
		09/25/24	-28.12	±	87.59	-104.06	±	324.09	No
RWMC		07/02/24	-67.55	±	102.73	-249.95	±	380.10	No
		07/10/24	20.61	±	149.35	76.25	±	552.60	No
		07/17/24	-37.96	±	99.81	-140.45	±	369.30	No
		07/24/24	-123.44	±	152.58	-456.73	±	564.55	No
		07/31/24	-133.81	±	161.71	-495.10	±	598.33	No
		08/07/24	10.57	±	110.48	39.10	±	408.78	No
		08/14/24	98.19	±	196.63	363.31	±	727.53	No
		08/21/24	98.44	±	182.29	364.22	±	674.47	No
		08/28/24	-65.04	±	98.12	-240.64	±	363.06	No
		09/04/24	50.79	±	108.27	187.93	±	400.60	No
		09/11/24	86.90	±	105.38	321.54	±	389.91	No
		09/18/24	-46.01	±	93.08	-170.22	±	344.39	No
		09/25/24	-23.68	±	112.99	-87.61	±	418.06	No
RWMC SOUTH		07/02/24	-40.13	±	153.39	-148.50	±	567.54	No
		07/10/24	203.38	±	116.22	752.51	±	430.01	No
		07/17/24	-181.32	±	144.85	-670.88	±	535.95	No
		07/24/24	-74.50	±	189.25	-275.66	±	700.23	No
		07/31/24	19.65	±	119.06	72.72	±	440.52	No
		08/07/24	-11.96	±	109.34	-44.26	±	404.56	No
		08/14/24	-42.62	±	121.55	-157.69	±	449.74	No
		08/21/24	-146.65	±	108.47	-542.61	±	401.34	No
		08/28/24	80.99	±	92.37	299.64	±	341.78	No
		09/04/24	85.49	±	108.41	316.32	±	401.12	No
		09/11/24	-35.83	±	132.92	-132.56	±	491.80	No
	b	09/18/24		±			±		
	b	09/25/24		±			±		
SMC		07/02/24	-56.40	±	107.21	-208.66	±	396.68	No
		07/10/24	-130.25	±	87.81	-481.93	±	324.91	No
		07/17/24	130.83	±	96.13	484.07	±	355.69	No
		07/24/24	43.32	±	92.63	160.30	±	342.74	No
		07/31/24	-139.79	±	101.13	-517.22	±	374.18	No

Table B-2. Weekly iodine-131 activity in air.

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	08/07/24	6.66	±	104.32	24.65	±	385.98	No
	08/14/24	294.08	±	205.78	1088.10	±	761.39	No
	08/21/24	100.65	±	93.63	372.41	±	346.45	No
	08/28/24	207.25	±	109.18	766.83	±	403.97	No
	09/04/24	17.94	±	103.05	66.37	±	381.29	No
	09/11/24	-90.59	±	178.63	-335.17	±	660.93	No
	09/18/24	-33.57	±	105.05	-124.19	±	388.69	No
	09/25/24	70.60	±	94.35	261.23	±	349.10	No
VAN BUREN	07/02/24	169.80	±	167.78	628.26	±	620.79	No
	07/10/24	-14.00	±	82.49	-51.79	±	305.20	No
	07/17/24	142.51	±	98.47	527.29	±	364.35	No
	07/24/24	-97.44	±	107.74	-360.54	±	398.64	No
	07/31/24	-3.94	±	125.43	-14.58	±	464.09	No
	08/07/24	-106.19	±	110.10	-392.90	±	407.37	No
	08/14/24	171.03	±	140.83	632.81	±	521.07	No
	08/21/24	156.98	±	89.46	580.83	±	331.02	No
	08/28/24	46.72	±	88.56	172.86	±	327.68	No
	09/04/24	-80.44	±	159.97	-297.62	±	591.89	No
	09/11/24	-18.20	±	118.95	-67.35	±	440.12	No
	09/18/24	9.15	±	145.97	33.87	±	540.09	No
	09/25/24	151.10	±	176.35	559.07	±	652.50	No

a. No sample due to mechanical issue.
b. Insufficient sample volume

Table B-3. Quarterly cesium-137, strontium-90, and actinide concentrations in composite air filters.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
BOUNDARY									
ARCO	09/30/24	Americium-241	3.19	±	2.05	11.80	±	7.59	No
	09/30/24	Cesium-137	54.70	±	82.80	202.39	±	306.36	No
	09/30/24	Plutonium-238	0.76	±	2.83	2.80	±	10.47	No
	09/30/24	Plutonium-239/240	4.29	±	2.50	15.87	±	9.25	No
	09/30/24	Strontium-90	36.70	±	18.90	135.79	±	69.93	No
	09/30/24	Uranium-233/234	18.60	±	6.73	68.82	±	24.90	No
	09/30/24	Uranium-238	28.30	±	7.66	104.71	±	28.34	**Yes**
	09/30/24	Zinc-65	-139.00	±	122.00	-514.30	±	451.40	No
ATOMIC CITY	09/30/24	Americium-241	0.40	±	2.77	1.47	±	10.25	No
	09/30/24	Cesium-137	21.20	±	36.80	78.44	±	136.16	No
	09/30/24	Plutonium-238	-1.29	±	2.28	-4.77	±	8.44	No
	09/30/24	Plutonium-239/240	-2.99	±	2.82	-11.06	±	10.43	No
	09/30/24	Strontium-90	52.10	±	36.60	192.77	±	135.42	No
	09/30/24	Uranium-233/234	10.70	±	5.51	39.59	±	20.39	No
	09/30/24	Uranium-238	6.72	±	4.07	24.86	±	15.06	No
	09/30/24	Zinc-65	-136.00	±	80.70	-503.20	±	298.59	No
BLUE DOME	09/30/24	Americium-241	-0.75	±	0.83	-2.77	±	3.07	No
	09/30/24	Cesium-137	-38.70	±	45.00	-143.19	±	166.50	No
	09/30/24	Plutonium-238	1.54	±	1.54	5.70	±	5.70	No
	09/30/24	Plutonium-239/240	0.13	±	1.85	0.48	±	6.85	No
	09/30/24	Strontium-90	-5.42	±	14.10	-20.05	±	52.17	No
	09/30/24	Uranium-233/234	12.50	±	5.85	46.25	±	21.65	No
	09/30/24	Uranium-238	3.24	±	3.75	11.99	±	13.88	No
	09/30/24	Zinc-65	0.00	±	92.00	0.00	±	340.40	No
HOWE	09/30/24	Americium-241	4.11	±	2.74	15.21	±	10.14	No
	09/30/24	Cesium-137	10.50	±	29.20	38.85	±	108.04	No
	09/30/24	Plutonium-238	1.01	±	1.46	3.74	±	5.40	No
	09/30/24	Plutonium-239/240	1.01	±	1.46	3.74	±	5.40	No
	09/30/24	Strontium-90	-57.50	±	26.80	-212.75	±	99.16	No
	09/30/24	Uranium-233/234	20.00	±	7.97	74.00	±	29.49	No
	09/30/24	Uranium-238	9.50	±	5.24	35.15	±	19.39	No
	09/30/24	Zinc-65	0.00	±	61.50	0.00	±	227.55	No
HOWE (duplicate)	09/30/24	Americium-241	-1.81	±	2.17	-6.70	±	8.03	No

Table B-3. Quarterly cesium-137, strontium-90, and actinide concentrations in composite air filters.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
	09/30/24	Cesium-137	-32.60	±	33.40	-120.62	±	123.58	No
	09/30/24	Plutonium-238	0.46	±	1.46	1.69	±	5.40	No
	09/30/24	Plutonium-239/240	3.21	±	2.44	11.88	±	9.03	No
	09/30/24	Strontium-90	-21.10	±	30.10	-78.07	±	111.37	No
	09/30/24	Uranium-233/234	24.60	±	8.97	91.02	±	33.19	No
	09/30/24	Uranium-238	17.60	±	7.87	65.12	±	29.12	No
	09/30/24	Zinc-65	-10.60	±	77.00	-39.22	±	284.90	No
MONTEVIEW	09/30/24	Americium-241	-0.46	±	1.22	-1.68	±	4.51	No
	09/30/24	Cesium-137	14.40	±	34.80	53.28	±	128.76	No
	09/30/24	Plutonium-238	3.68	±	2.05	13.62	±	7.59	No
	09/30/24	Plutonium-239/240	3.10	±	2.45	11.47	±	9.07	No
	09/30/24	Strontium-90	33.70	±	27.80	124.69	±	102.86	No
	09/30/24	Uranium-233/234	26.90	±	9.17	99.53	±	33.93	No
	09/30/24	Uranium-238	24.30	±	8.55	89.91	±	31.64	No
	09/30/24	Zinc-65	-38.30	±	78.60	-141.71	±	290.82	No
TERRETON	09/30/24	Americium-241	1.08	±	1.50	4.00	±	5.55	No
	09/30/24	Cesium-137	0.00	±	41.50	0.00	±	153.55	No
	09/30/24	Plutonium-238	1.97	±	1.52	7.29	±	5.62	No
	09/30/24	Plutonium-239/240	1.33	±	1.76	4.92	±	6.51	No
	09/30/24	Strontium-90	36.00	±	18.70	133.20	±	69.19	No
	09/30/24	Uranium-233/234	18.10	±	7.84	66.97	±	29.01	No
	09/30/24	Uranium-238	28.20	±	8.52	104.34	±	31.52	**Yes**
	09/30/24	Zinc-65	-243.00	±	90.60	-899.10	±	335.22	No
OFFSITE									
BLACKFOOT	09/30/24	Americium-241	-4.37	±	2.37	-16.17	±	8.77	No
	09/30/24	Cesium-137	31.50	±	31.50	116.55	±	116.55	No
	09/30/24	Plutonium-238	-0.46	±	1.12	-1.71	±	4.14	No
	09/30/24	Plutonium-239/240	1.78	±	3.00	6.59	±	11.10	No
	09/30/24	Strontium-90	83.70	±	32.50	309.69	±	120.25	No
	09/30/24	Uranium-233/234	32.30	±	7.86	119.51	±	29.08	**Yes**
	09/30/24	Uranium-238	42.20	±	8.88	156.14	±	32.86	**Yes**
	09/30/24	Zinc-65	151.00	±	78.10	558.70	±	288.97	No
CRATERS OF THE MOON	09/30/24	Americium-241	-3.34	±	1.51	-12.36	±	5.59	No
	09/30/24	Cesium-137	79.80	±	40.30	295.26	±	149.11	No

Table B-3. Quarterly cesium-137, strontium-90, and actinide concentrations in composite air filters.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
	09/30/24	Plutonium-238	2.06	±	1.66	7.62	±	6.14	No
	09/30/24	Plutonium-239/240	1.34	±	2.27	4.96	±	8.40	No
	09/30/24	Strontium-90	7.88	±	21.60	29.16	±	79.92	No
	09/30/24	Uranium-233/234	25.20	±	7.29	93.24	±	26.97	**Yes**
	09/30/24	Uranium-238	12.40	±	5.08	45.88	±	18.80	No
	09/30/24	Zinc-65	119.00	±	157.00	440.30	±	580.90	No
DUBOIS	09/30/24	Americium-241	1.06	±	1.46	3.92	±	5.40	No
	09/30/24	Cesium-137	4.56	±	26.60	16.87	±	98.42	No
	09/30/24	Plutonium-238	1.25	±	1.25	4.63	±	4.63	No
	09/30/24	Plutonium-239/240	0.76	±	1.15	2.82	±	4.26	No
	09/30/24	Strontium-90	-13.30	±	21.80	-49.21	±	80.66	No
	09/30/24	Uranium-233/234	4.76	±	5.06	17.61	±	18.72	No
	09/30/24	Uranium-238	4.75	±	3.94	17.58	±	14.58	No
	09/30/24	Zinc-65	-54.20	±	58.70	-200.54	±	217.19	No
IDAHO FALLS	09/30/24	Americium-241	-0.10	±	1.78	-0.35	±	6.59	No
	09/30/24	Cesium-137	0.00	±	26.80	0.00	±	99.16	No
	09/30/24	Plutonium-238	-0.31	±	1.38	-1.15	±	5.11	No
	09/30/24	Plutonium-239/240	0.95	±	1.38	3.53	±	5.11	No
	09/30/24	Strontium-90	30.40	±	17.10	112.48	±	63.27	No
	09/30/24	Uranium-233/234	17.70	±	7.25	65.49	±	26.83	No
	09/30/24	Uranium-238	22.80	±	7.51	84.36	±	27.79	**Yes**
	09/30/24	Zinc-65	36.00	±	70.10	133.20	±	259.37	No
IRC	09/30/24	Americium-241	-2.68	±	1.98	-9.92	±	7.33	No
	09/30/24	Cesium-137	0.00	±	32.80	0.00	±	121.36	No
	09/30/24	Plutonium-238	0.61	±	1.50	2.26	±	5.55	No
	09/30/24	Plutonium-239/240	1.00	±	1.45	3.70	±	5.37	No
	09/30/24	Strontium-90	-41.60	±	27.70	-153.92	±	102.49	No
	09/30/24	Uranium-233/234	28.50	±	8.20	105.45	±	30.34	**Yes**
	09/30/24	Uranium-238	22.50	±	7.30	83.25	±	27.01	**Yes**
	09/30/24	Zinc-65	59.00	±	76.40	218.30	±	282.68	No
IRC NORTH	09/30/24	Americium-241	-10.30	±	3.21	-38.11	±	11.88	No
	09/30/24	Cesium-137	61.00	±	34.60	225.70	±	128.02	No
	09/30/24	Plutonium-238	1.14	±	1.43	4.22	±	5.29	No
	09/30/24	Plutonium-239/240	1.91	±	1.63	7.07	±	6.03	No

Table B-3. Quarterly cesium-137, strontium-90, and actinide concentrations in composite air filters.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
	09/30/24	Strontium-90	12.80	±	24.70	47.36	±	91.39	No
	09/30/24	Uranium-233/234	23.80	±	7.82	88.06	±	28.93	**Yes**
	09/30/24	Uranium-238	31.20	±	7.59	115.44	±	28.08	**Yes**
	09/30/24	Zinc-65	70.00	±	76.90	259.00	±	284.53	No
JACKSON, WY	09/30/24	Americium-241	2.58	±	3.05	9.55	±	11.29	No
	09/30/24	Cesium-137	1.73	±	25.00	6.40	±	92.50	No
	09/30/24	Plutonium-238	-2.70	±	2.09	-9.99	±	7.73	No
	09/30/24	Plutonium-239/240	0.04	±	1.85	0.14	±	6.85	No
	09/30/24	Strontium-90	5.86	±	16.60	21.68	±	61.42	No
	09/30/24	Uranium-233/234	7.16	±	5.80	26.49	±	21.46	No
	09/30/24	Uranium-238	11.90	±	5.71	44.03	±	21.13	No
	09/30/24	Zinc-65	0.00	±	62.90	0.00	±	232.73	No
SUGAR CITY	09/30/24	Americium-241	-0.12	±	1.75	-0.46	±	6.48	No
	09/30/24	Cesium-137	65.10	±	30.70	240.87	±	113.59	No
	09/30/24	Plutonium-238	0.40	±	1.28	1.48	±	4.74	No
	09/30/24	Plutonium-239/240	-2.45	±	1.35	-9.07	±	5.00	No
	09/30/24	Strontium-90	26.70	±	27.00	98.79	±	99.90	No
	09/30/24	Uranium-233/234	34.40	±	8.66	127.28	±	32.04	**Yes**
	09/30/24	Uranium-238	23.20	±	6.98	85.84	±	25.83	**Yes**
	09/30/24	Zinc-65	42.80	±	56.70	158.36	±	209.79	No
SUGAR CITY (duplicate)	09/30/24	Americium-241	1.04	±	1.51	3.85	±	5.59	No
	09/30/24	Cesium-137	52.20	±	47.10	193.14	±	174.27	No
	09/30/24	Plutonium-238	1.33	±	1.67	4.92	±	6.18	No
	09/30/24	Plutonium-239/240	0.87	±	2.05	3.23	±	7.59	No
	09/30/24	Strontium-90	25.60	±	20.70	94.72	±	76.59	No
	09/30/24	Uranium-233/234	22.30	±	9.75	82.51	±	36.08	No
	09/30/24	Uranium-238	24.10	±	9.31	89.17	±	34.45	No
	09/30/24	Zinc-65	-81.70	±	127.00	-302.29	±	469.90	No
ONSITE									
ATR COMPLEX	09/30/24	Americium-241	-0.19	±	1.69	-0.68	±	6.25	No
	09/30/24	Cesium-137	0.00	±	33.70	0.00	±	124.69	No
	09/30/24	Plutonium-238	-1.17	±	1.33	-4.33	±	4.92	No
	09/30/24	Plutonium-239/240	-2.44	±	2.08	-9.03	±	7.70	No
	09/30/24	Strontium-90	-19.50	±	14.50	-72.15	±	53.65	No

Table B-3. Quarterly cesium-137, strontium-90, and actinide concentrations in composite air filters.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
	09/30/24	Uranium-233/234	23.40	±	7.36	86.58	±	27.23	**Yes**
	09/30/24	Uranium-238	41.90	±	9.48	155.03	±	35.08	**Yes**
	09/30/24	Zinc-65	-63.80	±	83.40	-236.06	±	308.58	No
CFA	09/30/24	Americium-241	-0.12	±	1.65	-0.43	±	6.11	No
	09/30/24	Cesium-137	10.60	±	32.40	39.22	±	119.88	No
	09/30/24	Plutonium-238	1.25	±	2.16	4.63	±	7.99	No
	09/30/24	Plutonium-239/240	-1.31	±	2.16	-4.85	±	7.99	No
	09/30/24	Strontium-90	40.60	±	19.80	150.22	±	73.26	No
	09/30/24	Uranium-233/234	16.90	±	6.09	62.53	±	22.53	No
	09/30/24	Uranium-238	9.96	±	4.70	36.85	±	17.39	No
	09/30/24	Zinc-65	6.99	±	82.00	25.86	±	303.40	No
EBR-I	09/30/24	Americium-241	7.22	±	4.31	26.71	±	15.95	No
	09/30/24	Cesium-137	309.00	±	84.20	1143.30	±	311.54	**Yes**
	09/30/24	Plutonium-238	7.05	±	2.36	26.09	±	8.73	No
	09/30/24	Plutonium-239/240	7.40	±	2.60	27.38	±	9.62	No
	09/30/24	Strontium-90	-4.16	±	18.90	-15.39	±	69.93	No
	09/30/24	Uranium-233/234	46.10	±	10.20	170.57	±	37.74	**Yes**
	09/30/24	Uranium-238	49.90	±	10.40	184.63	±	38.48	**Yes**
	09/30/24	Zinc-65	792.00	±	136.00	2930.40	±	503.20	**Yes**
EFS	09/30/24	Americium-241	-1.70	±	1.81	-6.29	±	6.70	No
	09/30/24	Cesium-137	98.90	±	40.40	365.93	±	149.48	No
	09/30/24	Plutonium-238	-1.33	±	2.20	-4.92	±	8.14	No
	09/30/24	Plutonium-239/240	4.26	±	2.82	15.76	±	10.43	No
	09/30/24	Strontium-90	24.40	±	22.70	90.28	±	83.99	No
	09/30/24	Uranium-233/234	27.90	±	7.84	103.23	±	29.01	**Yes**
	09/30/24	Uranium-238	24.70	±	6.96	91.39	±	25.75	**Yes**
	09/30/24	Zinc-65	-23.00	±	77.20	-85.10	±	285.64	No
GATE 4	09/30/24	Americium-241	3.61	±	1.94	13.36	±	7.18	No
	09/30/24	Cesium-137	-52.80	±	41.30	-195.36	±	152.81	No
	09/30/24	Plutonium-238	-0.02	±	1.98	-0.09	±	7.33	No
	09/30/24	Plutonium-239/240	0.39	±	1.94	1.45	±	7.18	No
	09/30/24	Strontium-90	-11.30	±	27.00	-41.81	±	99.90	No
	09/30/24	Uranium-233/234	21.60	±	6.55	79.92	±	24.24	**Yes**
	09/30/24	Uranium-238	16.50	±	5.45	61.05	±	20.17	**Yes**

Table B-3. Quarterly cesium-137, strontium-90, and actinide concentrations in composite air filters.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
	09/30/24	Zinc-65	-4.30	±	94.30	-15.91	±	348.91	No
HIGHWAY 26 REST AREA	09/30/24	Americium-241	3.07	±	2.41	11.36	±	8.92	No
	09/30/24	Cesium-137	0.00	±	37.50	0.00	±	138.75	No
	09/30/24	Plutonium-238	0.32	±	1.22	1.18	±	4.51	No
	09/30/24	Plutonium-239/240	1.14	±	1.07	4.22	±	3.96	No
	09/30/24	Strontium-90	-54.90	±	26.40	-203.13	±	97.68	No
	09/30/24	Uranium-233/234	3.78	±	4.70	13.99	±	17.39	No
	09/30/24	Uranium-238	18.90	±	6.86	69.93	±	25.38	No
	09/30/24	Zinc-65	7.90	±	76.60	29.23	±	283.42	No
HIGHWAY 26 REST AREA	09/30/24	Americium-241	0.74	±	2.55	2.72	±	9.44	No
(duplicate)	09/30/24	Cesium-137	0.00	±	48.40	0.00	±	179.08	No
	09/30/24	Plutonium-238	1.88	±	2.85	6.96	±	10.55	No
	09/30/24	Plutonium-239/240	2.52	±	2.77	9.32	±	10.25	No
	09/30/24	Strontium-90	31.60	±	27.70	116.92	±	102.49	No
	09/30/24	Uranium-233/234	16.10	±	6.67	59.57	±	24.68	No
	09/30/24	Uranium-238	10.90	±	5.65	40.33	±	20.91	No
	09/30/24	Zinc-65	-91.70	±	96.50	-339.29	±	357.05	No
INTEC (NE CORNER)	09/30/24	Americium-241	1.68	±	2.45	6.22	±	9.07	No
	09/30/24	Cesium-137	-70.80	±	63.50	-261.96	±	234.95	No
	09/30/24	Plutonium-238	-0.83	±	1.45	-3.09	±	5.37	No
	09/30/24	Plutonium-239/240	0.29	±	2.05	1.06	±	7.59	No
	09/30/24	Strontium-90	32.20	±	18.80	119.14	±	69.56	No
	09/30/24	Uranium-233/234	21.70	±	10.60	80.29	±	39.22	No
	09/30/24	Uranium-238	14.80	±	8.57	54.76	±	31.71	No
	09/30/24	Zinc-65	-7.89	±	67.80	-29.19	±	250.86	No
INTEC (WEST SIDE)	09/30/24	Americium-241	-3.60	±	1.75	-13.32	±	6.48	No
	09/30/24	Cesium-137	0.00	±	29.50	0.00	±	109.15	No
	09/30/24	Plutonium-238	0.76	±	1.20	2.82	±	4.44	No
	09/30/24	Plutonium-239/240	0.83	±	1.80	3.09	±	6.66	No
	09/30/24	Strontium-90	43.30	±	34.10	160.21	±	126.17	No
	09/30/24	Uranium-233/234	13.50	±	7.77	49.95	±	28.75	No
	09/30/24	Uranium-238	15.80	±	6.92	58.46	±	25.60	No
	09/30/24	Zinc-65	17.90	±	66.60	66.23	±	246.42	No
MAIN GATE	09/30/24	Americium-241	0.18	±	2.62	0.68	±	9.69	No

Table B-3. Quarterly cesium-137, strontium-90, and actinide concentrations in composite air filters.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
	09/30/24	Cesium-137	27.70	±	35.70	102.49	±	132.09	No
	09/30/24	Plutonium-238	0.41	±	2.88	1.53	±	10.66	No
	09/30/24	Plutonium-239/240	2.25	±	2.26	8.33	±	8.36	No
	09/30/24	Strontium-90	-8.84	±	27.70	-32.71	±	102.49	No
	09/30/24	Uranium-233/234	12.50	±	5.93	46.25	±	21.94	No
	09/30/24	Uranium-238	13.50	±	5.63	49.95	±	20.83	No
	09/30/24	Zinc-65	-61.90	±	77.30	-229.03	±	286.01	No
MFC NORTH	09/30/24	Americium-241	2.56	±	4.05	9.47	±	14.99	No
	09/30/24	Cesium-137	-6.57	±	119.00	-24.31	±	440.30	No
	09/30/24	Chlorine-36	-35.00	±	55.00	-129.50	±	203.50	No
	09/30/24	Plutonium-238	-11.30	±	4.54	-41.81	±	16.80	No
	09/30/24	Plutonium-239/240	-5.03	±	5.33	-18.61	±	19.72	No
	09/30/24	Strontium-90	69.80	±	40.00	258.26	±	148.00	No
	09/30/24	Uranium-233/234	38.60	±	19.80	142.82	±	73.26	No
	09/30/24	Uranium-238	4.88	±	9.35	18.06	±	34.60	No
	09/30/24	Zinc-65	446.00	±	363.00	1650.20	±	1343.10	No
MFC SOUTH	09/30/24	Americium-241	3.10	±	2.46	11.47	±	9.10	No
	09/30/24	Cesium-137	0.00	±	38.30	0.00	±	141.71	No
	09/30/24	Chlorine-36	30.90	±	27.70	114.33	±	102.49	No
	09/30/24	Plutonium-238	1.58	±	2.29	5.85	±	8.47	No
	09/30/24	Plutonium-239/240	4.78	±	2.67	17.69	±	9.88	No
	09/30/24	Strontium-90	-71.00	±	32.50	-262.70	±	120.25	No
	09/30/24	Uranium-233/234	2.57	±	5.82	9.51	±	21.53	No
	09/30/24	Uranium-238	19.30	±	8.07	71.41	±	29.86	No
	09/30/24	Zinc-65	-80.90	±	76.10	-299.33	±	281.57	No
NRF	09/30/24	Americium-241	-2.62	±	2.57	-9.69	±	9.51	No
	09/30/24	Cesium-137	-29.10	±	31.90	-107.67	±	118.03	No
	09/30/24	Plutonium-238	0.39	±	1.77	1.44	±	6.55	No
	09/30/24	Plutonium-239/240	-0.84	±	1.91	-3.12	±	7.07	No
	09/30/24	Strontium-90	-16.50	±	16.10	-61.05	±	59.57	No
	09/30/24	Uranium-233/234	23.40	±	7.14	86.58	±	26.42	**Yes**
	09/30/24	Uranium-238	26.30	±	7.13	97.31	±	26.38	**Yes**
	09/30/24	Zinc-65	-32.90	±	60.00	-121.73	±	222.00	No
PBF	09/30/24	Americium-241	-0.26	±	2.41	-0.97	±	8.92	No

Table B-3. Quarterly cesium-137, strontium-90, and actinide concentrations in composite air filters.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
	09/30/24	Cesium-137	30.00	±	32.50	111.00	±	120.25	No
	09/30/24	Plutonium-238	1.88	±	2.50	6.96	±	9.25	No
	09/30/24	Plutonium-239/240	-1.38	±	2.44	-5.11	±	9.03	No
	09/30/24	Strontium-90	-11.00	±	15.00	-40.70	±	55.50	No
	09/30/24	Uranium-233/234	11.70	±	7.38	43.29	±	27.31	No
	09/30/24	Uranium-238	6.87	±	5.71	25.42	±	21.13	No
	09/30/24	Zinc-65	-79.30	±	69.80	-293.41	±	258.26	No
RHLLW	09/30/24	Americium-241	1.80	±	1.81	6.66	±	6.70	No
	09/30/24	Cesium-137	-121.00	±	70.90	-447.70	±	262.33	No
	09/30/24	Plutonium-238	1.26	±	2.95	4.66	±	10.92	No
	09/30/24	Plutonium-239/240	5.75	±	3.64	21.28	±	13.47	No
	09/30/24	Strontium-90	2.46	±	27.20	9.10	±	100.64	No
	09/30/24	Uranium-233/234	19.50	±	7.01	72.15	±	25.94	No
	09/30/24	Uranium-238	24.10	±	7.23	89.17	±	26.75	**Yes**
	09/30/24	Zinc-65	15.80	±	63.80	58.46	±	236.06	No
RHLLW (duplicate)	09/30/24	Americium-241	-0.92	±	1.42	-3.41	±	5.25	No
	09/30/24	Cesium-137	82.60	±	39.60	305.62	±	146.52	No
	09/30/24	Plutonium-238	1.17	±	1.47	4.33	±	5.44	No
	09/30/24	Plutonium-239/240	0.36	±	2.08	1.35	±	7.70	No
	09/30/24	Strontium-90	1.74	±	26.90	6.44	±	99.53	No
	09/30/24	Uranium-233/234	12.20	±	7.97	45.14	±	29.49	No
	09/30/24	Uranium-238	2.96	±	5.20	10.95	±	19.24	No
	09/30/24	Zinc-65	48.30	±	75.30	178.71	±	278.61	No
RWMC	09/30/24	Americium-241	29.00	±	5.51	107.30	±	20.39	**Yes**
	09/30/24	Cesium-137	75.00	±	38.50	277.50	±	142.45	No
	09/30/24	Plutonium-238	-1.12	±	1.48	-4.14	±	5.48	No
	09/30/24	Plutonium-239/240	6.08	±	3.62	22.50	±	13.39	No
	09/30/24	Strontium-90	63.40	±	28.90	234.58	±	106.93	No
	09/30/24	Uranium-233/234	42.10	±	9.29	155.77	±	34.37	**Yes**
	09/30/24	Uranium-238	29.10	±	7.52	107.67	±	27.82	**Yes**
	09/30/24	Zinc-65	178.00	±	165.00	658.60	±	610.50	No
RWMC SOUTH	09/30/24	Americium-241	3.16	±	2.11	11.69	±	7.81	No
	09/30/24	Cesium-137	15.10	±	37.70	55.87	±	139.49	No
	09/30/24	Plutonium-238	0.51	±	2.12	1.90	±	7.84	No

Table B-3. Quarterly cesium-137, strontium-90, and actinide concentrations in composite air filters.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
	09/30/24	Plutonium-239/240	5.26	±	3.23	19.46	±	11.95	No
	09/30/24	Strontium-90	-6.08	±	18.80	-22.50	±	69.56	No
	09/30/24	Uranium-233/234	7.13	±	6.34	26.38	±	23.46	No
	09/30/24	Uranium-238	10.20	±	5.90	37.74	±	21.83	No
	09/30/24	Zinc-65	124.00	±	86.50	458.80	±	320.05	No
SMC	09/30/24	Americium-241	-0.03	±	2.17	-0.10	±	8.03	No
	09/30/24	Cesium-137	-5.21	±	28.30	-19.28	±	104.71	No
	09/30/24	Plutonium-238	2.42	±	1.84	8.95	±	6.81	No
	09/30/24	Plutonium-239/240	1.72	±	1.70	6.36	±	6.29	No
	09/30/24	Strontium-90	68.00	±	31.30	251.60	±	115.81	No
	09/30/24	Uranium-233/234	10.70	±	6.01	39.59	±	22.24	No
	09/30/24	Uranium-238	23.80	±	7.68	88.06	±	28.42	**Yes**
	09/30/24	Zinc-65	86.20	±	65.70	318.94	±	243.09	No
VAN BUREN	09/30/24	Americium-241	-0.18	±	1.69	-0.68	±	6.25	No
	09/30/24	Cesium-137	85.10	±	42.60	314.87	±	157.62	No
	09/30/24	Plutonium-238	-0.01	±	1.24	-0.03	±	4.59	No
	09/30/24	Plutonium-239/240	1.47	±	1.86	5.44	±	6.88	No
	09/30/24	Strontium-90	-9.26	±	27.90	-34.26	±	103.23	No
	09/30/24	Uranium-233/234	13.60	±	5.73	50.32	±	21.20	No
	09/30/24	Uranium-238	19.00	±	6.39	70.30	±	23.64	No
	09/30/24	Zinc-65	-30.00	±	82.20	-111.00	±	304.14	No

a. Sample did not meet detection limits due to limited sample volume

Table B-4. Tritium concentrations in atmospheric moisture.

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-13}$ µCi/mL$_{air}$)			Result ± 1s Uncertainty ($\times 10^{-9}$ Bq/mL$_{air}$)			Result > 3s
BOUNDARY								
ATOMIC CITY	07/10/24	9.52	±	7.51	35.22	±	27.79	No
	08/01/24	3.57	±	3.15	13.21	±	11.66	No
	08/21/24	5.31	±	4.56	19.65	±	16.87	No
	09/25/24	3.44	±	2.92	12.73	±	10.80	No
HOWE	07/17/24	3.11	±	2.98	11.51	±	11.03	No
	08/07/24	3.28	±	4.26	12.14	±	15.76	No
	08/28/24	3.48	±	4.55	12.88	±	16.84	No
OFFSITE								
CRATERS OF THE MOON	07/31/24	0.24	±	1.77	0.90	±	6.55	No
	08/21/24	7.34	±	4.54	27.16	±	16.80	No
IDAHO FALLS (IRC)	07/17/24	4.86	±	4.29	17.98	±	15.87	No
	08/07/24	7.78	±	4.16	28.79	±	15.39	No
	08/28/24	5.77	±	4.42	21.35	±	16.35	No
IDAHO FALLS (NOAA)	07/24/24	8.23	±	2.61	30.45	±	9.66	**Yes**
	08/14/24	10.80	±	4.85	39.96	±	17.95	No
	09/25/24	5.28	±	2.21	19.54	±	8.18	No
ONSITE								
EFS	07/24/24	2.78	±	2.28	10.29	±	8.44	No
	08/14/24	1.06	±	3.34	3.92	±	12.36	No
	09/25/24	4.07	±	2.57	15.06	±	9.51	No
RHLLW	07/10/24	7.95	±	3.73	29.42	±	13.80	No
	09/04/24	1.94	±	2.83	7.18	±	10.47	No
VAN BUREN	07/02/24	1.13	±	2.73	4.18	±	10.10	No
	07/31/24	2.50	±	3.22	9.25	±	11.91	No
	08/21/24	10.60	±	3.79	39.22	±	14.02	No

Table B-5. Monthly and weekly tritium concentrations in precipitation.

Location	Start Date	End Date	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
BOUNDARY									
ATOMIC CITY	07/24/24	07/31/24	2.70	±	38.80	0.10	±	1.44	No
	08/07/24	08/14/24	-46.60	±	38.10	-1.72	±	1.41	No
	08/14/24	08/21/24	-15.60	±	37.80	-0.58	±	1.40	No
	09/11/24	09/18/24	64.10	±	42.30	2.37	±	1.57	No
	09/18/24	09/25/24	4.51	±	40.00	0.17	±	1.48	No
HOWE	07/24/24	07/31/24	71.00	±	41.50	2.63	±	1.54	No
	08/07/24	08/14/24	34.30	±	40.00	1.27	±	1.48	No
	08/14/24	08/21/24	-33.20	±	38.80	-1.23	±	1.44	No
	08/21/24	08/28/24	-72.90	±	37.30	-2.70	±	1.38	No
	09/11/24	09/18/24	-17.40	±	38.80	-0.64	±	1.44	No
OFFSITE									
IDAHO FALLS	08/01/24	08/31/24	14.20	±	36.60	0.53	±	1.35	No
	09/01/24	09/30/24	7.28	±	40.10	0.27	±	1.48	No
ONSITE									
EFS	07/24/24	07/31/24	-59.30	±	36.60	-2.19	±	1.35	No
	08/07/24	08/14/24	54.10	±	38.00	2.00	±	1.41	No
	08/14/24	08/21/24	83.00	±	42.40	3.07	±	1.57	No
	09/11/24	09/18/24	-15.70	±	37.40	-0.58	±	1.38	No

Table B-6. Gamma emitters, tritum, alpha, and beta concentrations in effluent water.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
ATR COMPLEX COLD WASTE	07/16/24	Americium-241	6.95	±	5.29	0.26	±	0.20	No
POND	07/16/24	Antimony-125	-1.53	±	1.12	-0.06	±	0.04	No
	07/16/24	Cerium-144	-4.05	±	3.77	-0.15	±	0.14	No
	07/16/24	Cesium-134	0.32	±	0.45	0.01	±	0.02	No
	07/16/24	Cesium-137	0.15	±	0.42	0.01	±	0.02	No
	07/16/24	Cobalt-58	-0.02	±	0.50	0.00	±	0.02	No
	07/16/24	Cobalt-60	1.03	±	0.49	0.04	±	0.02	No
	07/16/24	Europium-152	-1.52	±	1.23	-0.06	±	0.05	No
	07/16/24	Europium-154	-1.97	±	1.31	-0.07	±	0.05	No
	07/16/24	Europium-155	-1.87	±	2.68	-0.07	±	0.10	No
	07/16/24	Gross alpha	0.62	±	0.76	0.02	±	0.03	No
	07/16/24	Gross beta	1.78	±	0.71	0.07	±	0.03	No
	07/16/24	Manganese-54	-1.50	±	0.75	-0.06	±	0.03	No
	07/16/24	Niobium-95	0.57	±	0.55	0.02	±	0.02	No
	07/16/24	Potassium-40	10.30	±	13.80	0.38	±	0.51	No
	07/16/24	Radium-226	0.75	±	25.70	0.03	±	0.95	No
	07/16/24	Ruthenium-103	-2.37	±	1.03	-0.09	±	0.04	No
	07/16/24	Ruthenium-106	6.90	±	4.09	0.26	±	0.15	No
	07/16/24	Silver-108 meta-stable	0.00	±	0.34	0.00	±	0.01	No
	07/16/24	Silver-110 meta-stable	-0.16	±	0.55	-0.01	±	0.02	No
	07/16/24	Tritium	47.10	±	105.00	1.74	±	3.89	No
	07/16/24	Uranium-235	0.18	±	5.66	0.01	±	0.21	No
	07/16/24	Zinc-65	0.59	±	0.89	0.02	±	0.03	No
	07/16/24	Zirconium-95	-0.02	±	0.91	0.00	±	0.03	No
ATR COMPLEX COLD WASTE	07/16/24	Americium-241	-1.16	±	2.70	-0.04	±	0.10	No
POND (duplicate)	07/16/24	Antimony-125	2.04	±	1.18	0.08	±	0.04	No
	07/16/24	Cerium-144	-0.73	±	2.69	-0.03	±	0.10	No
	07/16/24	Cesium-134	-0.58	±	0.47	-0.02	±	0.02	No
	07/16/24	Cesium-137	0.47	±	0.46	0.02	±	0.02	No
	07/16/24	Cobalt-58	0.97	±	0.56	0.04	±	0.02	No
	07/16/24	Cobalt-60	0.50	±	0.52	0.02	±	0.02	No
	07/16/24	Europium-152	-2.93	±	1.32	-0.11	±	0.05	No
	07/16/24	Europium-154	-1.65	±	1.25	-0.06	±	0.05	No
	07/16/24	Europium-155	0.74	±	1.44	0.03	±	0.05	No
	07/16/24	Gross alpha	0.73	±	0.78	0.03	±	0.03	No
	07/16/24	Gross beta	2.90	±	0.90	0.11	±	0.03	**Yes**
	07/16/24	Manganese-54	0.69	±	0.48	0.03	±	0.02	No
	07/16/24	Niobium-95	0.73	±	0.53	0.03	±	0.02	No

Table B-6. Gamma emitters, tritum, alpha, and beta concentrations in effluent water.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
	07/16/24	Potassium-40	8.25	±	15.40	0.31	±	0.57	No
	07/16/24	Radium-226	20.90	±	21.40	0.77	±	0.79	No
	07/16/24	Ruthenium-103	-1.04	±	0.67	-0.04	±	0.02	No
	07/16/24	Ruthenium-106	0.34	±	3.82	0.01	±	0.14	No
	07/16/24	Silver-108 meta-stable	0.52	±	0.37	0.02	±	0.01	No
	07/16/24	Silver-110 meta-stable	-0.36	±	0.68	-0.01	±	0.03	No
	07/16/24	Tritium	25.30	±	105.00	0.94	±	3.89	No
	07/16/24	Uranium-235	0.18	±	5.75	0.01	±	0.21	No
	07/16/24	Zinc-65	-0.23	±	0.98	-0.01	±	0.04	No
	07/16/24	Zirconium-95	-0.91	±	0.90	-0.03	±	0.03	No
ATR COMPLEX COLD WASTE POND	08/13/24	Americium-241	1.14	±	3.67	0.04	±	0.14	No
	08/13/24	Antimony-125	-1.46	±	1.22	-0.05	±	0.05	No
	08/13/24	Cerium-144	-3.80	±	3.25	-0.14	±	0.12	No
	08/13/24	Cesium-134	-0.44	±	0.48	-0.02	±	0.02	No
	08/13/24	Cesium-137	0.89	±	0.47	0.03	±	0.02	No
	08/13/24	Cobalt-58	0.45	±	0.48	0.02	±	0.02	No
	08/13/24	Cobalt-60	1.11	±	0.54	0.04	±	0.02	No
	08/13/24	Europium-152	-0.09	±	1.25	0.00	±	0.05	No
	08/13/24	Europium-154	1.54	±	1.27	0.06	±	0.05	No
	08/13/24	Europium-155	3.56	±	1.89	0.13	±	0.07	No
	08/13/24	Gross alpha	2.70	±	1.33	0.10	±	0.05	No
	08/13/24	Gross beta	6.34	±	0.86	0.23	±	0.03	**Yes**
	08/13/24	Manganese-54	0.33	±	0.46	0.01	±	0.02	No
	08/13/24	Niobium-95	0.63	±	0.54	0.02	±	0.02	No
	08/13/24	Potassium-40	-6.66	±	13.30	-0.25	±	0.49	No
	08/13/24	Radium-226	6.34	±	27.20	0.23	±	1.01	No
	08/13/24	Ruthenium-103	-1.14	±	0.69	-0.04	±	0.03	No
	08/13/24	Ruthenium-106	-0.34	±	3.89	-0.01	±	0.14	No
	08/13/24	Silver-108 meta-stable	-0.62	±	0.42	-0.02	±	0.02	No
	08/13/24	Silver-110 meta-stable	0.72	±	0.61	0.03	±	0.02	No
	08/13/24	Tritium	93.30	±	114.00	3.46	±	4.22	No
	08/13/24	Uranium-235	-0.07	±	5.89	0.00	±	0.22	No
	08/13/24	Zinc-65	0.02	±	1.06	0.00	±	0.04	No
	08/13/24	Zirconium-95	1.20	±	0.85	0.04	±	0.03	No
ATR COMPLEX COLD WASTE POND	09/05/24	Americium-241	-4.73	±	3.92	-0.18	±	0.15	No
	09/05/24	Antimony-125	0.64	±	1.29	0.02	±	0.05	No
	09/05/24	Cerium-144	-4.35	±	3.55	-0.16	±	0.13	No
	09/05/24	Cesium-134	1.07	±	0.59	0.04	±	0.02	No

Table B-6. Gamma emitters, tritum, alpha, and beta concentrations in effluent water.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
	09/05/24	Cesium-137	-1.75	±	0.99	-0.06	±	0.04	No
	09/05/24	Cobalt-58	-0.12	±	0.55	0.00	±	0.02	No
	09/05/24	Cobalt-60	0.03	±	1.20	0.00	±	0.04	No
	09/05/24	Europium-152	-1.99	±	1.46	-0.07	±	0.05	No
	09/05/24	Europium-154	0.15	±	1.47	0.01	±	0.05	No
	09/05/24	Europium-155	1.66	±	1.77	0.06	±	0.07	No
	09/05/24	Gross alpha	1.57	±	0.91	0.06	±	0.03	No
	09/05/24	Gross beta	2.40	±	0.87	0.09	±	0.03	No
	09/05/24	Manganese-54	0.15	±	0.43	0.01	±	0.02	No
	09/05/24	Niobium-95	-0.04	±	0.56	0.00	±	0.02	No
	09/05/24	Potassium-40	18.70	±	14.40	0.69	±	0.53	No
	09/05/24	Radium-226	11.50	±	26.90	0.43	±	1.00	No
	09/05/24	Ruthenium-103	-0.66	±	0.73	-0.02	±	0.03	No
	09/05/24	Ruthenium-106	6.64	±	4.39	0.25	±	0.16	No
	09/05/24	Silver-108 meta-stable	-0.21	±	0.40	-0.01	±	0.01	No
	09/05/24	Silver-110 meta-stable	0.02	±	0.70	0.00	±	0.03	No
	09/05/24	Tritium	0.05	±	89.10	0.00	±	3.30	No
	09/05/24	Uranium-235	6.22	±	6.85	0.23	±	0.25	No
	09/05/24	Zinc-65	0.78	±	1.10	0.03	±	0.04	No
	09/05/24	Zirconium-95	-0.21	±	0.97	-0.01	±	0.04	No
MFC INDUSTRIAL WASTE	08/20/24	Americium-241	3.13	±	2.44	0.12	±	0.09	No
POND	08/20/24	Americium-241 (alpha spec)	-0.02	±	0.02	0.00	±	0.00	No
	08/20/24	Antimony-125	0.73	±	1.14	0.03	±	0.04	No
	08/20/24	Cerium-144	1.84	±	2.78	0.07	±	0.10	No
	08/20/24	Cesium-134	-0.16	±	0.53	-0.01	±	0.02	No
	08/20/24	Cesium-137	0.19	±	0.44	0.01	±	0.02	No
	08/20/24	Cobalt-58	0.09	±	0.54	0.00	±	0.02	No
	08/20/24	Cobalt-60	0.60	±	0.41	0.02	±	0.02	No
	08/20/24	Europium-152	1.00	±	1.27	0.04	±	0.05	No
	08/20/24	Europium-154	-0.70	±	1.17	-0.03	±	0.04	No
	08/20/24	Europium-155	1.88	±	1.50	0.07	±	0.06	No
	08/20/24	Gross alpha	2.93	±	1.04	0.11	±	0.04	No
	08/20/24	Gross beta	8.07	±	0.82	0.30	±	0.03	**Yes**
	08/20/24	Manganese-54	-0.50	±	0.45	-0.02	±	0.02	No
	08/20/24	Niobium-95	-0.04	±	0.55	0.00	±	0.02	No
	08/20/24	Plutonium-236	0.02	±	0.02	0.00	±	0.00	No
	08/20/24	Plutonium-238	0.02	±	0.02	0.00	±	0.00	No
	08/20/24	Plutonium-239/240	-0.01	±	0.01	0.00	±	0.00	No

Table B-6. Gamma emitters, tritum, alpha, and beta concentrations in effluent water.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
	08/20/24	Plutonium-241	2.01	±	1.73	0.07	±	0.06	No
	08/20/24	Plutonium-242	-0.02	±	0.01	0.00	±	0.00	No
	08/20/24	Potassium-40	0.32	±	8.53	0.01	±	0.32	No
	08/20/24	Radium-226	3.62	±	22.40	0.13	±	0.83	No
	08/20/24	Ruthenium-103	1.09	±	0.77	0.04	±	0.03	No
	08/20/24	Ruthenium-106	0.62	±	3.59	0.02	±	0.13	No
	08/20/24	Silver-108 meta-stable	0.00	±	0.81	0.00	±	0.03	No
	08/20/24	Silver-110 meta-stable	1.03	±	0.64	0.04	±	0.02	No
	08/20/24	Strontium-90	-0.36	±	0.23	-0.01	±	0.01	No
	08/20/24	Tritium	-120.00	±	88.60	-4.44	±	3.28	No
	08/20/24	Uranium-233/234	0.63	±	0.11	0.02	±	0.00	**Yes**
	08/20/24	Uranium-235	-2.12	±	4.11	-0.08	±	0.15	No
	08/20/24	Uranium-235 (alpha spec)	-0.01	±	0.02	0.00	±	0.00	No
	08/20/24	Uranium-238	0.24	±	0.06	0.01	±	0.00	**Yes**
	08/20/24	Zinc-65	-0.43	±	0.75	-0.02	±	0.03	No
	08/20/24	Zirconium-95	1.00	±	0.96	0.04	±	0.04	No

Appendix B-7. Gamma emitters, tritium, alpha, beta concentrations in groundwater.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
ATR COMPLEX									
MIDDLE-1823 MONITORING WELL	09/24/24	Americium-241	1.52	±	1.48	0.06	±	0.05	No
	09/24/24	Antimony-125	-0.60	±	0.84	-0.02	±	0.03	No
	09/24/24	Cerium-144	-2.35	±	2.30	-0.09	±	0.09	No
	09/24/24	Cesium-134	0.29	±	0.40	0.01	±	0.01	No
	09/24/24	Cesium-137	0.41	±	0.35	0.02	±	0.01	No
	09/24/24	Cobalt-58	-0.49	±	0.40	-0.02	±	0.01	No
	09/24/24	Cobalt-60	0.21	±	0.35	0.01	±	0.01	No
	09/24/24	Europium-152	-0.67	±	0.96	-0.02	±	0.04	No
	09/24/24	Europium-154	1.17	±	0.94	0.04	±	0.03	No
	09/24/24	Europium-155	0.26	±	1.17	0.01	±	0.04	No
	09/24/24	Gross alpha	2.07	±	0.43	0.08	±	0.02	**Yes**
	09/24/24	Gross beta	2.26	±	0.20	0.08	±	0.01	**Yes**
	09/24/24	Manganese-54	0.09	±	0.34	0.00	±	0.01	No
	09/24/24	Niobium-95	-0.17	±	0.49	-0.01	±	0.02	No
	09/24/24	Potassium-40	-8.13	±	8.65	-0.30	±	0.32	No
	09/24/24	Radium-226	22.20	±	17.20	0.82	±	0.64	No
	09/24/24	Ruthenium-103	0.29	±	0.46	0.01	±	0.02	No
	09/24/24	Ruthenium-106	3.41	±	3.13	0.13	±	0.12	No
	09/24/24	Silver-108 meta-stable	0.12	±	0.29	0.00	±	0.01	No
	09/24/24	Silver-110 meta-stable	0.12	±	0.45	0.00	±	0.02	No
	09/24/24	Strontium-90	-0.33	±	0.23	-0.01	±	0.01	No
	09/24/24	Tritium	518.00	±	119.00	19.19	±	4.41	**Yes**
	09/24/24	Uranium-235	2.50	±	4.88	0.09	±	0.18	No
	09/24/24	Zinc-65	-1.33	±	0.76	-0.05	±	0.03	No
	09/24/24	Zirconium-95	0.43	±	0.71	0.02	±	0.03	No
TRA-08 MONITORING WELL	09/24/24	Americium-241	-0.23	±	1.10	-0.01	±	0.04	No
	09/24/24	Antimony-125	-0.42	±	0.85	-0.02	±	0.03	No
	09/24/24	Cerium-144	0.54	±	2.28	0.02	±	0.08	No
	09/24/24	Cesium-134	0.04	±	0.37	0.00	±	0.01	No
	09/24/24	Cesium-137	0.30	±	0.35	0.01	±	0.01	No
	09/24/24	Cobalt-58	-0.16	±	0.39	-0.01	±	0.01	No
	09/24/24	Cobalt-60	-1.64	±	0.85	-0.06	±	0.03	No
	09/24/24	Europium-152	-1.55	±	1.02	-0.06	±	0.04	No
	09/24/24	Europium-154	0.85	±	0.90	0.03	±	0.03	No
	09/24/24	Europium-155	1.97	±	1.26	0.07	±	0.05	No
	09/24/24	Gross alpha	1.90	±	0.43	0.07	±	0.02	**Yes**
	09/24/24	Gross beta	2.42	±	0.20	0.09	±	0.01	**Yes**

Appendix B-7. Gamma emitters, tritium, alpha, beta concentrations in ground water.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
	09/24/24	Manganese-54	0.61	±	0.36	0.02	±	0.01	No
	09/24/24	Niobium-95	0.08	±	0.73	0.00	±	0.03	No
	09/24/24	Potassium-40	-13.40	±	8.69	-0.50	±	0.32	No
	09/24/24	Radium-226	18.00	±	17.30	0.67	±	0.64	No
	09/24/24	Ruthenium-103	0.23	±	0.50	0.01	±	0.02	No
	09/24/24	Ruthenium-106	-2.76	±	2.96	-0.10	±	0.11	No
	09/24/24	Silver-108 meta-stable	-0.02	±	0.27	0.00	±	0.01	No
	09/24/24	Silver-110 meta-stable	0.02	±	0.45	0.00	±	0.02	No
	09/24/24	Strontium-90	-0.20	±	0.25	-0.01	±	0.01	No
	09/24/24	Tritium	535.00	±	121.00	19.81	±	4.48	**Yes**
	09/24/24	Uranium-235	2.48	±	4.05	0.09	±	0.15	No
	09/24/24	Zinc-65	-0.06	±	1.08	0.00	±	0.04	No
	09/24/24	Zirconium-95	-0.72	±	0.82	-0.03	±	0.03	No
USGS-058 MONITORING WELL	09/23/24	Americium-241	2.63	±	3.66	0.10	±	0.14	No
	09/23/24	Antimony-125	2.26	±	1.25	0.08	±	0.05	No
	09/23/24	Cerium-144	-0.53	±	3.07	-0.02	±	0.11	No
	09/23/24	Cesium-134	-1.30	±	0.84	-0.05	±	0.03	No
	09/23/24	Cesium-137	0.28	±	0.44	0.01	±	0.02	No
	09/23/24	Cobalt-58	0.93	±	0.48	0.03	±	0.02	No
	09/23/24	Cobalt-60	-0.53	±	0.50	-0.02	±	0.02	No
	09/23/24	Europium-152	-0.30	±	1.22	-0.01	±	0.05	No
	09/23/24	Europium-154	-1.43	±	1.36	-0.05	±	0.05	No
	09/23/24	Europium-155	3.88	±	1.94	0.14	±	0.07	No
	09/23/24	Gross alpha	1.13	±	0.36	0.04	±	0.01	**Yes**
	09/23/24	Gross beta	1.66	±	0.26	0.06	±	0.01	**Yes**
	09/23/24	Manganese-54	-0.86	±	0.48	-0.03	±	0.02	No
	09/23/24	Niobium-95	0.24	±	0.55	0.01	±	0.02	No
	09/23/24	Potassium-40	6.70	±	11.20	0.25	±	0.41	No
	09/23/24	Radium-226	27.60	±	24.90	1.02	±	0.92	No
	09/23/24	Ruthenium-103	-0.88	±	0.59	-0.03	±	0.02	No
	09/23/24	Ruthenium-106	5.94	±	5.19	0.22	±	0.19	No
	09/23/24	Silver-108 meta-stable	-0.18	±	0.38	-0.01	±	0.01	No
	09/23/24	Silver-110 meta-stable	-0.13	±	0.57	0.00	±	0.02	No
	09/23/24	Strontium-90	0.13	±	0.26	0.00	±	0.01	No
	09/23/24	Tritium	89.40	±	74.60	3.31	±	2.76	No
	09/23/24	Uranium-235	1.26	±	6.41	0.05	±	0.24	No
	09/23/24	Zinc-65	-0.73	±	1.00	-0.03	±	0.04	No
	09/23/24	Zirconium-95	-0.07	±	0.83	0.00	±	0.03	No

Appendix B-7. Gamma emitters, tritium, alpha, beta concentrations in ground water.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
USGS-065 MONITORING WELL	09/25/24	Americium-241	-1.01	±	3.45	-0.04	±	0.13	No
	09/25/24	Antimony-125	-0.58	±	1.15	-0.02	±	0.04	No
	09/25/24	Cerium-144	0.47	±	3.17	0.02	±	0.12	No
	09/25/24	Cesium-134	0.46	±	0.48	0.02	±	0.02	No
	09/25/24	Cesium-137	-0.04	±	0.42	0.00	±	0.02	No
	09/25/24	Cobalt-58	1.16	±	0.68	0.04	±	0.03	No
	09/25/24	Cobalt-60	1.51	±	0.59	0.06	±	0.02	No
	09/25/24	Europium-152	-0.11	±	1.25	0.00	±	0.05	No
	09/25/24	Europium-154	-2.88	±	2.38	-0.11	±	0.09	No
	09/25/24	Europium-155	-2.09	±	2.50	-0.08	±	0.09	No
	09/25/24	Gross alpha	4.67	±	0.74	0.17	±	0.03	**Yes**
	09/25/24	Gross beta	3.12	±	0.52	0.12	±	0.02	**Yes**
	09/25/24	Manganese-54	0.21	±	0.45	0.01	±	0.02	No
	09/25/24	Niobium-95	0.60	±	0.52	0.02	±	0.02	No
	09/25/24	Potassium-40	7.11	±	13.60	0.26	±	0.50	No
	09/25/24	Radium-226	-11.10	±	18.50	-0.41	±	0.69	No
	09/25/24	Ruthenium-103	-1.07	±	0.75	-0.04	±	0.03	No
	09/25/24	Ruthenium-106	-1.28	±	3.63	-0.05	±	0.13	No
	09/25/24	Silver-108 meta-stable	0.15	±	0.37	0.01	±	0.01	No
	09/25/24	Silver-110 meta-stable	0.16	±	0.63	0.01	±	0.02	No
	09/25/24	Strontium-90	0.52	±	0.26	0.02	±	0.01	No
	09/25/24	Tritium	1010.00	±	151.00	37.41	±	5.59	**Yes**
	09/25/24	Uranium-235	-10.70	±	5.78	-0.40	±	0.21	No
	09/25/24	Zinc-65	0.42	±	1.02	0.02	±	0.04	No
	09/25/24	Zirconium-95	0.28	±	0.87	0.01	±	0.03	No
USGS-076 MONITORING WELL	09/26/24	Americium-241	-5.49	±	4.15	-0.20	±	0.15	No
	09/26/24	Antimony-125	0.12	±	1.21	0.00	±	0.04	No
	09/26/24	Cerium-144	0.39	±	3.17	0.01	±	0.12	No
	09/26/24	Cesium-134	0.40	±	0.49	0.01	±	0.02	No
	09/26/24	Cesium-137	0.25	±	1.12	0.01	±	0.04	No
	09/26/24	Cobalt-58	0.65	±	0.65	0.02	±	0.02	No
	09/26/24	Cobalt-60	0.98	±	0.55	0.04	±	0.02	No
	09/26/24	Europium-152	-0.74	±	1.33	-0.03	±	0.05	No
	09/26/24	Europium-154	-0.49	±	1.31	-0.02	±	0.05	No
	09/26/24	Europium-155	2.06	±	1.77	0.08	±	0.07	No
	09/26/24	Gross alpha	1.17	±	0.38	0.04	±	0.01	**Yes**
	09/26/24	Gross beta	1.47	±	0.20	0.05	±	0.01	**Yes**
	09/26/24	Manganese-54	-0.54	±	0.44	-0.02	±	0.02	No

Appendix B-7. Gamma emitters, tritium, alpha, beta concentrations in ground water.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
	09/26/24	Niobium-95	1.35	±	0.80	0.05	±	0.03	No
	09/26/24	Potassium-40	1.88	±	13.80	0.07	±	0.51	No
	09/26/24	Radium-226	34.00	±	25.00	1.26	±	0.93	No
	09/26/24	Ruthenium-103	-0.24	±	0.61	-0.01	±	0.02	No
	09/26/24	Ruthenium-106	-0.23	±	3.81	-0.01	±	0.14	No
	09/26/24	Silver-108 meta-stable	-0.12	±	0.38	0.00	±	0.01	No
	09/26/24	Silver-110 meta-stable	-0.57	±	0.67	-0.02	±	0.02	No
	09/26/24	Strontium-90	-0.11	±	0.13	0.00	±	0.00	No
	09/26/24	Tritium	207.00	±	101.00	7.67	±	3.74	No
	09/26/24	Uranium-235	-6.71	±	5.72	-0.25	±	0.21	No
	09/26/24	Zinc-65	-0.66	±	0.96	-0.02	±	0.04	No
	09/26/24	Zirconium-95	-2.16	±	1.63	-0.08	±	0.06	No
USGS-098 MONITORING WELL	09/23/24	Americium-241	0.17	±	2.21	0.01	±	0.08	No
	09/23/24	Antimony-125	-1.08	±	0.84	-0.04	±	0.03	No
	09/23/24	Cerium-144	3.16	±	2.38	0.12	±	0.09	No
	09/23/24	Cesium-134	0.22	±	0.35	0.01	±	0.01	No
	09/23/24	Cesium-137	-0.49	±	0.34	-0.02	±	0.01	No
	09/23/24	Cobalt-58	0.03	±	0.35	0.00	±	0.01	No
	09/23/24	Cobalt-60	-0.38	±	0.36	-0.01	±	0.01	No
	09/23/24	Europium-152	-0.53	±	0.95	-0.02	±	0.04	No
	09/23/24	Europium-154	-0.34	±	0.90	-0.01	±	0.03	No
	09/23/24	Europium-155	1.29	±	1.19	0.05	±	0.04	No
	09/23/24	Gross alpha	1.56	±	0.38	0.06	±	0.01	**Yes**
	09/23/24	Gross beta	1.50	±	0.23	0.06	±	0.01	**Yes**
	09/23/24	Manganese-54	-0.47	±	0.35	-0.02	±	0.01	No
	09/23/24	Niobium-95	0.35	±	0.70	0.01	±	0.03	No
	09/23/24	Potassium-40	-15.50	±	9.47	-0.57	±	0.35	No
	09/23/24	Radium-226	-9.97	±	16.30	-0.37	±	0.60	No
	09/23/24	Ruthenium-103	0.45	±	0.42	0.02	±	0.02	No
	09/23/24	Ruthenium-106	0.85	±	2.89	0.03	±	0.11	No
	09/23/24	Silver-108 meta-stable	-0.36	±	0.27	-0.01	±	0.01	No
	09/23/24	Silver-110 meta-stable	0.50	±	0.47	0.02	±	0.02	No
	09/23/24	Strontium-90	0.12	±	0.27	0.00	±	0.01	No
	09/23/24	Tritium	-47.40	±	61.40	-1.76	±	2.27	No
	09/23/24	Uranium-235	-10.30	±	4.56	-0.38	±	0.17	No
	09/23/24	Zinc-65	-0.80	±	0.69	-0.03	±	0.03	No
	09/23/24	Zirconium-95	0.22	±	0.64	0.01	±	0.02	No

Appendix B-7. Gamma emitters, tritium, alpha, beta concentrations in ground water.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
USGS-136 MONITORING WELL	09/25/24	Americium-241	-0.51	±	3.62	-0.02	±	0.13	No
(ATR REUSE)	09/25/24	Antimony-125	-0.02	±	1.21	0.00	±	0.04	No
	09/25/24	Cerium-144	3.42	±	2.94	0.13	±	0.11	No
	09/25/24	Cesium-134	0.64	±	0.53	0.02	±	0.02	No
	09/25/24	Cesium-137	-0.13	±	0.49	0.00	±	0.02	No
	09/25/24	Cobalt-58	0.71	±	0.56	0.03	±	0.02	No
	09/25/24	Cobalt-60	0.26	±	0.47	0.01	±	0.02	No
	09/25/24	Europium-152	-0.19	±	1.35	-0.01	±	0.05	No
	09/25/24	Europium-154	-0.45	±	1.42	-0.02	±	0.05	No
	09/25/24	Europium-155	1.82	±	1.52	0.07	±	0.06	No
	09/25/24	Gross alpha	1.88	±	0.39	0.07	±	0.01	**Yes**
	09/25/24	Gross beta	1.69	±	0.21	0.06	±	0.01	**Yes**
	09/25/24	Manganese-54	-0.12	±	0.46	0.00	±	0.02	No
	09/25/24	Niobium-95	0.63	±	0.60	0.02	±	0.02	No
	09/25/24	Potassium-40	0.70	±	15.60	0.03	±	0.58	No
	09/25/24	Radium-226	-27.60	±	20.50	-1.02	±	0.76	No
	09/25/24	Ruthenium-103	-1.69	±	0.76	-0.06	±	0.03	No
	09/25/24	Ruthenium-106	10.50	±	5.29	0.39	±	0.20	No
	09/25/24	Silver-108 meta-stable	0.10	±	0.41	0.00	±	0.02	No
	09/25/24	Silver-110 meta-stable	0.58	±	0.63	0.02	±	0.02	No
	09/25/24	Strontium-90	-0.26	±	0.23	-0.01	±	0.01	No
	09/25/24	Tritium	758.00	±	135.00	28.07	±	5.00	**Yes**
	09/25/24	Uranium-235	-8.95	±	5.75	-0.33	±	0.21	No
	09/25/24	Zinc-65	0.61	±	1.12	0.02	±	0.04	No
	09/25/24	Zirconium-95	-0.45	±	1.00	-0.02	±	0.04	No
MFC									
ANL-MON-A-012 MONITORING	09/17/24	Americium-241 (alpha spec)	0.00	±	0.03	0.00	±	0.00	No
WELL	09/17/24	Americium-241	-0.32	±	0.72	-0.01	±	0.03	No
	09/17/24	Antimony-125	-0.14	±	1.15	-0.01	±	0.04	No
	09/17/24	Cerium-144	-2.12	±	2.34	-0.08	±	0.09	No
	09/17/24	Cesium-134	-0.40	±	0.57	-0.01	±	0.02	No
	09/17/24	Cesium-137	-0.59	±	0.47	-0.02	±	0.02	No
	09/17/24	Cobalt-58	-0.35	±	0.54	-0.01	±	0.02	No
	09/17/24	Cobalt-60	-0.12	±	0.49	0.00	±	0.02	No
	09/17/24	Europium-152	0.86	±	1.14	0.03	±	0.04	No
	09/17/24	Europium-154	1.49	±	1.45	0.06	±	0.05	No
	09/17/24	Europium-155	2.65	±	1.66	0.10	±	0.06	No

Appendix B-7. Gamma emitters, tritium, alpha, beta concentrations in ground water.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
	09/17/24	Gross alpha	0.50	±	0.32	0.02	±	0.01	No
	09/17/24	Gross beta	3.48	±	0.27	0.13	±	0.01	**Yes**
	09/17/24	Manganese-54	-0.67	±	0.59	-0.02	±	0.02	No
	09/17/24	Niobium-95	1.66	±	1.03	0.06	±	0.04	No
	09/17/24	Potassium-40	-26.70	±	14.70	-0.99	±	0.54	No
	09/17/24	Radium-226	-37.90	±	20.50	-1.40	±	0.76	No
	09/17/24	Ruthenium-103	0.06	±	0.54	0.00	±	0.02	No
	09/17/24	Ruthenium-106	0.96	±	4.12	0.04	±	0.15	No
	09/17/24	Silver-108 meta-stable	0.02	±	0.37	0.00	±	0.01	No
	09/17/24	Silver-110 meta-stable	-0.08	±	0.65	0.00	±	0.02	No
	09/17/24	Tritium	70.40	±	112.00	2.61	±	4.15	No
	09/17/24	Uranium-233/234	1.05	±	0.16	0.04	±	0.01	**Yes**
	09/17/24	Uranium-235 (alpha spec)	0.04	±	0.04	0.00	±	0.00	No
	09/17/24	Uranium-235	-6.75	±	4.76	-0.25	±	0.18	No
	09/17/24	Uranium-238	0.54	±	0.11	0.02	±	0.00	**Yes**
	09/17/24	Zinc-65	-0.76	±	1.17	-0.03	±	0.04	No
	09/17/24	Zirconium-95	-0.71	±	0.98	-0.03	±	0.04	No
ANL-MON-A-013 MONITORING	09/18/24	Americium-241 (alpha spec)	0.02	±	0.04	0.00	±	0.00	No
WELL	09/18/24	Americium-241	1.88	±	3.82	0.07	±	0.14	No
	09/18/24	Antimony-125	-0.11	±	1.21	0.00	±	0.04	No
	09/18/24	Cerium-144	-1.31	±	3.16	-0.05	±	0.12	No
	09/18/24	Cesium-134	1.00	±	0.55	0.04	±	0.02	No
	09/18/24	Cesium-137	-1.65	±	1.06	-0.06	±	0.04	No
	09/18/24	Cobalt-58	0.39	±	0.49	0.01	±	0.02	No
	09/18/24	Cobalt-60	1.01	±	0.57	0.04	±	0.02	No
	09/18/24	Europium-152	1.07	±	1.35	0.04	±	0.05	No
	09/18/24	Europium-154	-0.02	±	1.31	0.00	±	0.05	No
	09/18/24	Europium-155	3.02	±	1.85	0.11	±	0.07	No
	09/18/24	Gross alpha	1.89	±	0.43	0.07	±	0.02	**Yes**
	09/18/24	Gross beta	3.38	±	0.22	0.13	±	0.01	**Yes**
	09/18/24	Manganese-54	0.20	±	0.44	0.01	±	0.02	No
	09/18/24	Niobium-95	-0.65	±	1.07	-0.02	±	0.04	No
	09/18/24	Potassium-40	-12.30	±	10.70	-0.46	±	0.40	No
	09/18/24	Radium-226	17.70	±	28.30	0.66	±	1.05	No
	09/18/24	Ruthenium-103	-0.74	±	0.63	-0.03	±	0.02	No
	09/18/24	Ruthenium-106	1.89	±	3.89	0.07	±	0.14	No
	09/18/24	Silver-108 meta-stable	-0.04	±	0.40	0.00	±	0.01	No
	09/18/24	Silver-110 meta-stable	-0.79	±	0.63	-0.03	±	0.02	No

Appendix B-7. Gamma emitters, tritium, alpha, beta concentrations in ground water.

Sampling Group and Location	Sampling Date	Constituent	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
	09/18/24	Tritium	111.00	±	92.80	4.11	±	3.44	No
	09/18/24	Uranium-233/234	1.12	±	0.15	0.04	±	0.01	**Yes**
	09/18/24	Uranium-235 (alpha spec)	0.03	±	0.03	0.00	±	0.00	No
	09/18/24	Uranium-235	-4.28	±	5.26	-0.16	±	0.19	No
	09/18/24	Uranium-238	0.64	±	0.11	0.02	±	0.00	**Yes**
	09/18/24	Zinc-65	0.93	±	1.15	0.03	±	0.04	No
	09/18/24	Zirconium-95	-0.03	±	0.87	0.00	±	0.03	No
ANL-MON-A-014 MONITORING WELL	09/18/24	Americium-241 (alpha spec)	-0.02	±	0.03	0.00	±	0.00	No
	09/18/24	Americium-241	1.84	±	4.64	0.07	±	0.17	No
	09/18/24	Antimony-125	0.44	±	1.49	0.02	±	0.06	No
	09/18/24	Cerium-144	-3.20	±	3.26	-0.12	±	0.12	No
	09/18/24	Cesium-134	0.10	±	0.51	0.00	±	0.02	No
	09/18/24	Cesium-137	-0.50	±	0.49	-0.02	±	0.02	No
	09/18/24	Cobalt-58	-0.19	±	0.51	-0.01	±	0.02	No
	09/18/24	Cobalt-60	-1.27	±	0.88	-0.05	±	0.03	No
	09/18/24	Europium-152	0.92	±	1.25	0.03	±	0.05	No
	09/18/24	Europium-154	-0.90	±	1.32	-0.03	±	0.05	No
	09/18/24	Europium-155	1.89	±	1.75	0.07	±	0.06	No
	09/18/24	Gross alpha	1.60	±	0.34	0.06	±	0.01	**Yes**
	09/18/24	Gross beta	4.48	±	0.30	0.17	±	0.01	**Yes**
	09/18/24	Manganese-54	0.01	±	0.44	0.00	±	0.02	No
	09/18/24	Niobium-95	-0.95	±	0.58	-0.04	±	0.02	No
	09/18/24	Potassium-40	8.23	±	18.50	0.30	±	0.69	No
	09/18/24	Radium-226	12.00	±	26.50	0.44	±	0.98	No
	09/18/24	Ruthenium-103	0.51	±	0.66	0.02	±	0.02	No
	09/18/24	Ruthenium-106	10.50	±	6.93	0.39	±	0.26	No
	09/18/24	Silver-108 meta-stable	-0.58	±	0.40	-0.02	±	0.01	No
	09/18/24	Silver-110 meta-stable	-0.09	±	0.62	0.00	±	0.02	No
	09/18/24	Tritium	29.80	±	88.40	1.10	±	3.27	No
	09/18/24	Uranium-233/234	1.38	±	0.18	0.05	±	0.01	**Yes**
	09/18/24	Uranium-235 (alpha spec)	0.11	±	0.05	0.00	±	0.00	No
	09/18/24	Uranium-235	1.44	±	6.83	0.05	±	0.25	No
	09/18/24	Uranium-238	0.67	±	0.11	0.02	±	0.00	**Yes**
	09/18/24	Zinc-65	0.28	±	1.00	0.01	±	0.04	No
	09/18/24	Zirconium-95	-0.08	±	0.88	0.00	±	0.03	No

Table B-8. Gross alpha, gross beta, and tritium concentrations in onsite drinking water.

Location	Sampling Date	Analyte	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
DRINKING WATER									
ATR COMPLEX (PWS[a] 6120020)	08/20/24	Gross Alpha	3.13	±	1.04	0.12	±	0.04	**Yes**
	08/20/24	Gross Beta	0.95	±	0.58	0.04	±	0.02	No
	08/20/24	Tritium	29.50	±	93.20	1.09	±	3.45	No
CFA 1603 Manifold (PWS 6120008)	08/20/24	Gross Alpha	3.21	±	1.07	0.12	±	0.04	No
	08/20/24	Gross Beta	6.14	±	0.72	0.23	±	0.03	**Yes**
	08/20/24	Iodine-129	0.01	±	0.01	0.00	±	0.00	No
	08/20/24	Strontium-90	0.37	±	0.24	0.01	±	0.01	No
	08/20/24	Tritium	1860.00	±	230.00	68.89	±	8.52	**Yes**
CFA-1 (PWS 6120008)	08/20/24	Strontium-90	-0.05	±	0.17	0.00	±	0.01	No
	08/20/24	Tritium	1810.00	±	225.00	67.04	±	8.33	**Yes**
CFA-2 (PWS 6120008)	08/20/24	Strontium-90	-0.07	±	0.32	0.00	±	0.01	No
	08/20/24	Tritium	2030.00	±	245.00	75.19	±	9.07	**Yes**
CITRC (PWS 6120019)	08/20/24	Gross Alpha	1.63	±	0.92	0.06	±	0.03	No
	08/20/24	Gross Beta	4.70	±	0.84	0.00	±	0.00	**Yes**
	08/20/24	Tritium	77.00	±	95.50	2.85	±	3.54	No
EBR-I (PWS 6120009)	08/20/24	Gross Alpha	2.02	±	0.74	0.07	±	0.03	No
	08/20/24	Gross Beta	2.85	±	0.66	0.11	±	0.02	**Yes**
	08/20/24	Tritium	-111.00	±	85.20	-4.11	±	3.16	No
GUN RANGE (PWS 6120025)	08/20/24	Gross Alpha	5.02	±	1.16	0.19	±	0.04	**Yes**
	08/20/24	Gross Beta	3.16	±	0.58	0.12	±	0.02	**Yes**
	08/20/24	Tritium	480.00	±	119.00	17.78	±	4.41	**Yes**
MAIN GATE (PWS 6120015)	08/20/24	Gross Alpha	2.46	±	0.98	0.09	±	0.04	No
	08/20/24	Gross Beta	3.25	±	0.78	0.12	±	0.03	**Yes**
	08/20/24	Tritium	-73.40	±	85.10	-2.72	±	3.15	No
MFC (PWS 6060036)	08/20/24	Gross Alpha	4.18	±	1.10	0.15	±	0.04	**Yes**
	08/20/24	Gross Beta	3.84	±	0.72	0.14	±	0.03	**Yes**
	08/20/24	Tritium	151.00	±	99.00	5.59	±	3.67	No
TAN CTF (PWS 6120013)	08/20/24	Gross Alpha	3.22	±	1.08	0.12	±	0.04	No
	08/20/24	Gross Beta	1.02	±	0.69	0.04	±	0.03	No
	08/20/24	Tritium	54.20	±	94.70	2.01	±	3.51	No

a. PWS = public water system

Table B-9. Weekly and monthly iodine-131 and cesium-137 concentrations in milk.

Location	Sampling Date	Iodine-131 Result ± 1s Uncertainty (pCi/L)	Iodine-131 Result ± 1s Uncertainty (Bq/L)	Iodine-131 Result > 3s	Cesium-137 Result ± 1s Uncertainty (pCi/L)	Cesium-137 Result ± 1s Uncertainty (Bq/L)	Cesium-137 Result > 3s
CONTROL	07/16/24	0.52 ± 0.29	0.02 ± 0.01	No	-1.61 ± 2.59	-0.06 ± 0.10	No
	08/19/24	0.12 ± 0.23	0.00 ± 0.01	No	2.39 ± 1.71	0.09 ± 0.06	No
	09/16/24	-0.19 ± 0.25	-0.01 ± 0.01	No	4.36 ± 2.65	0.16 ± 0.10	No
DIETRICH	07/15/24	-0.01 ± 0.28	0.00 ± 0.01	No	1.32 ± 2.00	0.05 ± 0.07	No
	08/20/24	0.18 ± 0.20	0.01 ± 0.01	No	0.17 ± 1.83	0.01 ± 0.07	No
	09/17/24	-0.07 ± 0.24	0.00 ± 0.01	No	-0.35 ± 1.65	-0.01 ± 0.06	No
HOWE	07/15/24	0.09 ± 0.26	0.00 ± 0.01	No	-2.00 ± 2.43	-0.07 ± 0.09	No
	08/20/24	0.15 ± 0.28	0.01 ± 0.01	No	1.10 ± 1.97	0.04 ± 0.07	No
	09/17/24	0.04 ± 0.23	0.00 ± 0.01	No	-0.01 ± 1.54	0.00 ± 0.06	No
MINIDOKA	07/15/24	-0.08 ± 0.28	0.00 ± 0.01	No	0.51 ± 2.16	0.02 ± 0.08	No
	08/20/24	-0.02 ± 0.20	0.00 ± 0.01	No	1.99 ± 2.28	0.07 ± 0.08	No
	09/17/24	0.40 ± 0.36	0.01 ± 0.01	No	2.36 ± 2.59	0.09 ± 0.10	No
MONTEVIEW	07/16/24	0.15 ± 0.24	0.01 ± 0.01	No	0.45 ± 1.95	0.02 ± 0.07	No
	08/19/24	-0.06 ± 0.28	0.00 ± 0.01	No	-1.32 ± 1.70	-0.05 ± 0.06	No
duplicate	08/19/24	0.26 ± 0.24	0.01 ± 0.01	No	2.92 ± 2.40	0.11 ± 0.09	No
	09/16/24	0.04 ± 0.22	0.00 ± 0.01	No	2.85 ± 2.61	0.11 ± 0.10	No
RIGBY	07/01/24	0.08 ± 0.19	0.00 ± 0.01	No	2.58 ± 1.61	0.10 ± 0.06	No
	07/09/24	-0.24 ± 0.22	-0.01 ± 0.01	No	4.27 ± 2.13	0.16 ± 0.08	No
	07/16/24	-0.39 ± 0.30	-0.01 ± 0.01	No	0.00 ± 2.80	0.00 ± 0.10	No
duplicate	07/16/24	0.26 ± 0.25	0.01 ± 0.01	No	0.34 ± 1.67	0.01 ± 0.06	No
	07/23/24	0.54 ± 0.50	0.02 ± 0.02	No	1.21 ± 1.89	0.04 ± 0.07	No
	07/29/24	-0.13 ± 0.24	0.00 ± 0.01	No	13.60 ± 4.83	0.50 ± 0.18	No
	08/08/24	-0.07 ± 0.16	0.00 ± 0.01	No	-0.24 ± 1.54	-0.01 ± 0.06	No
	08/12/24	0.22 ± 0.22	0.01 ± 0.01	No	-0.72 ± 1.72	-0.03 ± 0.06	No
	08/19/24	0.15 ± 0.24	0.01 ± 0.01	No	0.00 ± 5.75	0.00 ± 0.21	No
	08/26/24	-0.09 ± 0.20	0.00 ± 0.01	No	-1.03 ± 2.25	-0.04 ± 0.08	No
	09/03/24	-0.24 ± 0.23	-0.01 ± 0.01	No	1.30 ± 1.83	0.05 ± 0.07	No
	09/09/24	0.12 ± 0.22	0.00 ± 0.01	No	0.99 ± 1.77	0.04 ± 0.07	No
	09/17/24	0.16 ± 0.18	0.01 ± 0.01	No	4.07 ± 2.40	0.15 ± 0.09	No
	09/23/24	-0.04 ± 0.19	0.00 ± 0.01	No	3.46 ± 2.10	0.13 ± 0.08	No
TERRETON	07/01/24	-0.07 ± 0.23	0.00 ± 0.01	No	-0.08 ± 2.21	0.00 ± 0.08	No
	07/09/24	-0.18 ± 0.22	-0.01 ± 0.01	No	2.90 ± 1.97	0.11 ± 0.07	No
	07/15/24	0.51 ± 0.28	0.02 ± 0.01	No	1.75 ± 2.81	0.06 ± 0.10	No
	07/23/24	0.22 ± 0.22	0.01 ± 0.01	No	1.78 ± 1.86	0.07 ± 0.07	No
	07/29/24	0.15 ± 0.22	0.01 ± 0.01	No	2.95 ± 2.33	0.11 ± 0.09	No
	08/08/24	-0.59 ± 0.51	-0.02 ± 0.02	No	2.85 ± 1.98	0.11 ± 0.07	No
	08/12/24	0.15 ± 0.19	0.01 ± 0.01	No	-0.79 ± 1.55	-0.03 ± 0.06	No
	08/20/24	-0.10 ± 0.15	0.00 ± 0.01	No	0.77 ± 1.82	0.03 ± 0.07	No
	08/26/24	-0.40 ± 0.31	-0.01 ± 0.01	No	-3.83 ± 1.99	-0.14 ± 0.07	No
	09/03/24	-0.38 ± 0.23	-0.01 ± 0.01	No	-0.67 ± 1.81	-0.02 ± 0.07	No

Table B-9. Weekly and monthly iodine-131 concentrations in milk.

Location	Sampling Date	Iodine-131 Result ± 1s Uncertainty (pCi/L)	Iodine-131 Result ± 1s Uncertainty (Bq/L)	Iodine-131 Result > 3s	Cesium-137 Result ± 1s Uncertainty (pCi/L)	Cesium-137 Result ± 1s Uncertainty (Bq/L)	Cesium-137 Result > 3s
	09/09/24	0.70 ± 0.53	0.03 ± 0.02	No	1.33 ± 1.94	0.05 ± 0.07	No
	09/17/24	0.31 ± 0.25	0.01 ± 0.01	No	0.32 ± 2.13	0.01 ± 0.08	No
duplicate	09/17/24	0.12 ± 0.22	0.00 ± 0.01	No	-0.98 ± 1.99	-0.04 ± 0.07	No
	09/23/24	-0.16 ± 0.29	-0.01 ± 0.01	No	0.85 ± 1.48	0.03 ± 0.05	No

Table B-10. Gamma-emitting radionuclides in large game animals.

Species	Collection Date	Tissue	Constituent	Result ± 1s (pCi/kg wet weight)			Result ± 1s Uncertainty (x 10^{-2} Bq/kg wet weight)			Result > 3s
ELK [a]	09/23/24	Liver			±			±		No
	09/23/24	Muscle	Cesium-137	0.17	±	2.58	0.63	±	9.55	No
	09/23/24	Thyroid	Iodine-131	-223.00	±	374.00	-825.10	±	1383.80	No
ELK	09/23/24	Liver	Cesium-137	0.80	±	0.92	2.97	±	3.41	No
	09/23/24	Muscle	Cesium-137	2.40	±	1.02	8.88	±	3.77	No
	09/23/24	Thyroid	Iodine-131	-283.00	±	565.00	-1047.10	±	2090.50	No

a. A liver sample was not able to be collected.

Appendix C
Statistical Analysis Results

Table C-1. Results of the Kruskal-Wallace one-way analysis of variance by ranks between onsite, boundary, and offsite sample groups by quarter and by month.

GROSS ALPHA					
Quarter	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	77	13562.50	176.1364		
Onsite	218	47235.50	216.6766	10.81349	0.0045
Offsite	103	18603.00	180.6117		
July	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	30	2013.500	67.11667		
Onsite	88	7484.500	85.05114	3.992562	0.1358
Offsite	39	2905.000	74.48718		
August	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	24	1333.000	55.54167		
Onsite	65	4244.000	65.29231	2.111324	0.3480
Offsite	32	1804.000	56.37500		
September	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	23	1245.000	54.13043		
Onsite	65	4423.000	68.04615	6.886986	0.0320
Offsite	32	1592.000	49.75000		
GROSS BETA					
Quarter	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	77	14408.50	187.1234		
Onsite	218	45680.50	209.5436	3.674923	0.1592
Offsite	103	19312.00	187.4951		
July	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	30	2266.500	75.55000		
Onsite	88	7095.500	80.63068	0.3058252	0.8582
Offsite	39	3041.000	77.97436		
August	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	24	1229.500	51.22917		
Onsite	65	4429.500	68.14615	5.906508	0.0522
Offsite	32	1722.000	53.81250		

Table C-1. continued.

September	Valid N	Sum of Ranks	Mean Ranks	H[a]	P[b]
Boundary	23	1316.000	57.21739		
Onsite	65	4242.000	65.26154	2.837420	0.2420
Offsite	32	1702.000	53.18750		

a. Kruskal-Wallis test statistic calculated using mean ranks. This test assumes H is approximately distributed as μ^2.
b. A p-value (probability value) greater than 0.05 signifies no statistical difference between data groups. Any values below 0.05 are indicated in red.

Table C-2. Results of multiple comparisons of gross alpha results between locations during the third quarter. A 'p' value greater than 0.05 signifies no statistical difference between data groups. Any values below 0.05 are indicated in red. 'R' represents the average rank for each location.

Depend.: Coded result (x10-15)	Multiple Comparisons p values (2-tailed); Coded result (x10-15 µCi/mL) (3rd Qtr 2024_QA_ Air Query in 3rd-Qtr-24-LVf) Independent (grouping) variable: Location Kruskal-Wallis test: H (31, N= 449) =21.94869 p =.8846 Include condition: v9='gross alpha'																														
	Arco R:164.23	Atomic City R:246.35	ATR Complex R:250.73	Blackfoot R:196.12	Blue Dome R:229.46	CFA R:255.65	Craters of the Moon R:216.25	Dubois R:210.12	EBR 1 R:238.96	EFS R:236.81	Gate 4 R:200.73	Highway 26 Rest Area R:230.32	Howe R:203.33	Idaho Falls R:190.15	INTEC (NE CORNER) R:254.00	INTEC (WESTSIDE) R:247.21	IRC R:227.85	IRC North R:189.88	Jackson WY R:172.12	Main Gate R:236.92	MFC North R:189.75	MFC South R:265.40	Monteview R:181.27	NRF R:242.73	PBF R:239.15	RHLLW R:257.56	RWMC R:268.23	RWMC South R:276.45	SMC R:230.65	Sugar City R:220.88	Terreton R:176.00	Van Buren R:238.35
Arco		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Atomic City	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
ATR Complex	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Blackfoot	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Blue Dome	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
CFA	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Craters of the Moon	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Dubois	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
EBR 1	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
EFS	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Gate 4	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Highway 26 Rest Area	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Howe	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Idaho Falls	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
INTEC (NE Corner)	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
INTEC (Westside)	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
IRC	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
IRC North	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Jackson WY	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Main Gate	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
MFC North	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
MFC South	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Monteview	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
NRF	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
PBF	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
RHLLW	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
RWMC	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000
RWMC South	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000
SMC	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000
Sugar City	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000
Terreton	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000
Van Buren	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	

Table C-3. Results of multiple comparisons of gross beta results between locations during the third quarter. A 'p' value greater than 0.05 signifies no statistical difference between data groups. Any values below 0.05 are indicated in red. 'R' represents the average rank for each location.

	Multiple Comparisons p values (2-tailed); Coded result (x10-15 µCi/mL) (3rd Qtr 2024_QA_ Air Query in 3rd-Qtr-24-LVf) Independent (grouping) variable: Location Kruskal-Wallis test: H (31, N= 449) =15.80840 p =.9891 Include condition: v9='gross beta'																														
tDepend.: Coded result (x10-15)	Arco R:201.81	Atomic City R:207.69	ATR Complex R:251.27	Blackfoot R:183.35	Blue Dome R:227.67	CFA R:231.92	Craters of the Moon R:192.92	Dubois R:204.65	EBR 1 R:246.63	EFS R:196.19	Gate 4 R:225.12	Highway 26 Rest Area R:251.32	Howe R:192.98	Idaho Falls R:225.04	INTEC (NE CORNER) R:252.65	INTEC (WESTSIDE) R:253.96	IRC R:224.31	IRC North R:222.92	Jackson WY R:182.27	Main Gate R:223.04	MFC North R:170.25	MFC South R:209.90	Monteview R:222.35	NRF R:228.96	PBF R:193.19	RHLLW R:261.69	RWMC R:256.27	RWMC South R:255.14	SMC R:248.19	Sugar City R:232.75	Terreton R:209.38	Van Buren R:242.38
Arco		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Atomic City	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
ATR Complex	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Blackfoot	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Blue Dome	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
CFA	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Craters of the Moon	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Dubois	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
EBR 1	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
EFS	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Gate 4	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Highway 26 Rest Area	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Howe	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Idaho Falls	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
INTEC (NE Corner)	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
INTEC (Westside)	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
IRC	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
IRC North	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Jackson WY	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Main Gate	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
MFC North	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
MFC South	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Monteview	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
NRF	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
PBF	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
RHLLW	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
RWMC	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000
RWMC South	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000
SMC	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000
Sugar City	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000
Terreton	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000
Van Buren	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	