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Revision 0

Idaho National Laboratory Site Environmental Surveillance Program Report: Third Quarter 2023

April 2024

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EXECUTIVE SUMMARY

Some human-made radionuclides were detected in samples collected during the third quarter of 2023. None of the radionuclides detected in samples collected during the third quarter of 2023 could be directly linked with 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 for the third quarter of 2023 contains results from the INL Site environmental surveillance program's monitoring of the U.S. Department of Energy's Idaho National Laboratory (INL) Site's onsite, boundary and offsite location environment, July 1 through September 30, 2023. All sample types (media) and the sampling schedule followed during 2023 are listed in Appendix A. This report contains results for the following sample types:

- Air, including particulate air filters, charcoal cartridges, and atmospheric moisture
- Precipitation
- Surface water
- Milk
- Agricultural
- Large game animal sampling.

Table ES-1. Summary of results for the third quarter of 2023.

Media	Sample Type	Analysis	Results
Air	Particulate Filters	Gross alpha, gross beta	There were no statistically significant differences among groups for the months of July and September for gross alpha and gross beta concentrations. Statistically significant differences were observed for gross alpha and gross beta concentrations for the quarter and the month of August. No result exceeded the Derived Concentration Standard (DCS) or 99%/95% upper tolerance limit (UTL) for gross alpha or gross beta activity in air.
	Quarterly Composite	Gamma-emitting radionuclides, strontium-90, actinides (americium, plutonium, and uranium)	Strontium-90 was detected in a quarterly composite sample collected at Van Buren (QA). Americium-241 and $^{239/240}$Pu was detected in two composite samples from Radioactive Waste Management Complex (RWMC and RWMC QA). Uranium radionuclides were detected in a several composite samples. Human-made gamma-emitting radionuclides (e.g., cesium-137), and plutonium-238 were not detected in any of the third quarter composite air samples.
	Charcoal Cartridge	Iodine-131	Iodine-131 was not detected in any of the batches of charcoal cartridges counted during the quarter.
Atmospheric Moisture	Liquid	Tritium	None of the sample results showed tritium concentrations greater than the 3s uncertainty during the quarter. No sample result exceeded the UTL or DCS for tritium in air.
Precipitation	Liquid	Tritium	A total of 16 samples were collected during the third quarter. None of the tritium results were greater than the 3s uncertainty.
Surface Water	Liquid	Gross alpha, gross beta, tritium, gamma-emitting	Enough water flowed in the Big Lost River for two sampling events. Gross alpha activity was detected in eight of twelve samples. Gross beta activity was detected in all 12 samples. No tritium or human-made gamma-emitters were found in any of the surface water samples.
Milk	Liquid	Iodine-131, other gamma-emitting radionuclides	Forty-four milk samples were collected at seven locations (including the offsite control sample from Colorado and three duplicates). No ^{131}I was detected in any of the milk samples analyzed.

Table ES-1. Continued.

Media	Sample Type	Analysis	Results
Potatoes	Vegetation	Gamma-emitting radionuclides, strontium-90	No human-made gamma-emitting radionuclides nor ^{90}Sr were found in any of the ten samples (including a duplicate and a control) collected this year.
Lettuce	Vegetation	Gamma-emitting radionuclides, strontium-90	No human-made gamma-emitting radionuclides or ^{90}Sr were found in any of the nine samples collected.
Alfalfa	Vegetation	Gamma-emitting radionuclides, strontium-90	Samples were collected from five locations (including a duplicate). No human-made gamma-emitting radionuclides or ^{90}Sr were found.
Grain	Vegetation	Gamma-emitting radionuclides, strontium-90	No human-made gamma-emitting radionuclides or ^{90}Sr were found in any of the 13 grain samples collected (including the duplicate and control).
Large game animals	Tissue	Gamma-emitting radionuclides	No human-made gamma-emitting radionuclides were found in any of the tissue samples collected in third quarter.

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TABLES

ACRONYMS

ATR	Advanced Test Reactor
CFA	Central Facilities Area
DCS	Derived Concentration Standard
DOE	U.S. Department of Energy
DOECAP-AP	DOE Consolidated Audit Program – Accreditation 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
INEEL	Idaho National Engineering and Environmental Laboratory
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center (formerly ICPP)
MDC	minimum detectable concentration
MFC	Materials and Fuels Complex
NRF	Naval Reactors Facility
NRTS	National Reactor Testing Station
PE	performance evaluation
PT	performance testing
RHLLW	Remote-handled Low-Level Waste
RWMC	Radioactive Waste Management Complex
SMC	Specific Manufacturing Capability
TRA	Test Reactor Area
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 2015a).

During calendar year 2023, environmental surveillance within the INL Site boundaries was primarily the responsibility of the INL and Idaho Cleanup Project (ICP) contractors. The INL contractor also provides surveillance off the INL Site.

This report contains surveillance monitoring results from the INL contractor for samples collected during the third quarter of 2023 (July 1 – September 30, 2023).

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

- verify compliance with applicable environmental laws, regulations, and DOE Orders
- characterize and define trends in the physical, chemical, and biological condition of environmental media on and around the INL Site
- assess the potential radiation dose to members of the public from INL Site effluents
- 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.

Environmental samples collected include:

- air at 37 low-volume air samplers (four of which are used as replicate samplers) at 33 locations on and around the INL Site
- atmospheric moisture at two INL Site locations and at four locations off the INL Site
- precipitation collected at one INL Site location and three locations off the INL Site
- drinking water collected from eight locations off the INL Site
- surface water collected from three springs located downgradient of the INL Site and from five locations along the Big Lost River, when it is flowing, on the INL Site
- agricultural products, including milk at six dairies around the INL Site, potatoes from at least eight regional producers, alfalfa from three locations off the INL Site, grain (wheat and barley) from approximately nine regional producers, and lettuce from approximately seven home-owned and portable gardens on and around the INL Site
- soil from 30 locations on and around the INL Site once every five years
- environmental dosimeters from 196 (includes duplicates) locations semi-annually
- various numbers of wildlife including bats, big game (pronghorn, mule deer, and elk) and waterfowl sampled from the INL Site.

Table A-1 in Appendix A lists samples, sampling locations, and collection frequency for the INL contractor.

Two laboratories were used to perform analyses on routine environmental samples collected during the quarter identified in this report. The INL Environmental Services In Situ Gamma Laboratory was used to scan charcoal cartridges for gamma-emitting radionuclides. GEL Laboratories performed routine gross alpha, gross beta, tritium, and gamma spectrometry analyses. Analyses requiring radiochemistry including strontium-90 (^{90}Sr), plutonium-238 (^{238}Pu), plutonium-239/240 ($^{239/240}$Pu), uranium-233/234 ($^{233/234U}$), uranium-235 (^{235}U), uranium-238 (^{238}U) and ^{241}Am were also performed by GEL Laboratories (GEL).

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 analysis. 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).

Once samples have been collected and analyzed, the INL contractor has the responsibility for quality control of the data, entry into databases, and reporting in quarterly reports. The quarterly reports are then consolidated into the INL Site Environmental Report for each calendar year. The annual report 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 (MDC) 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 a three standard deviation 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 three standard deviations 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 2022a). The INL contractor reports measured radionuclide concentrations greater than or equal to their respective 3s uncertainties as being detected with confidence.

Concentrations between 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 two standard deviations 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 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 21^{st} 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.

The ICP is a separately managed effort. The ICP 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.

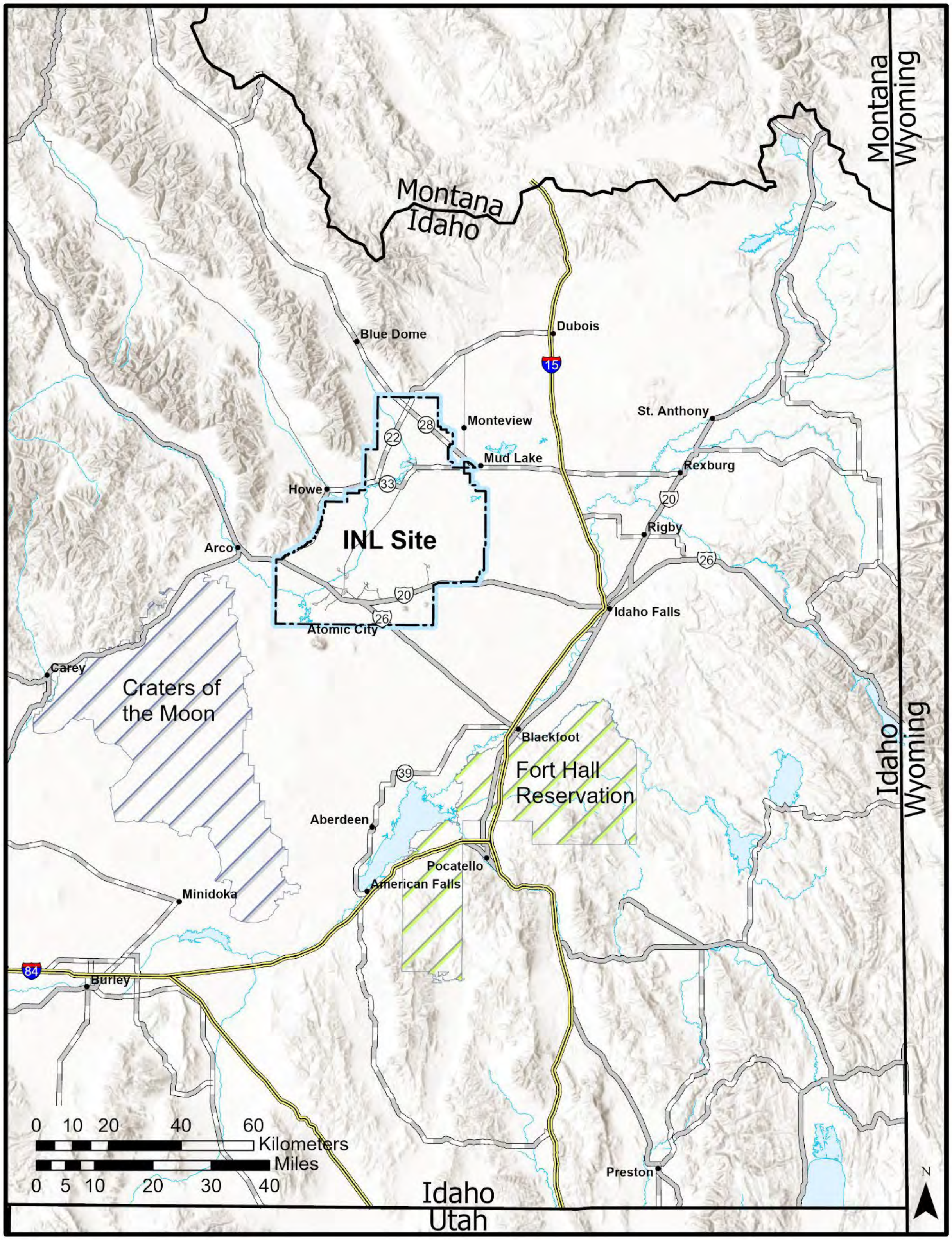

Figure 1. Location of the INL Site.

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 33 locations using low-volume air samplers. Moisture in the atmosphere was sampled at six locations around the INL Site and analyzed for tritium. Air sampling activities and results for the third quarter of 2023 are discussed below. A summary of approximate MDCs for radiological analyses and DOE Derived Concentration Standard (DCS) (DOE 2022b) values is provided in Appendix B.

3.1 Low-volume Air Sampling

Radioactivity associated with airborne particulates was monitored continuously by 37 low-volume air samplers (four of which are used as replicate samplers) at 33 locations during the third quarter of 2023 (Figure 2). Twenty-one of these samplers are located onsite, seven are situated off the INL Site near the boundary, and nine 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. Each replicate sampler is relocated every other year to a new location. During the third quarter 2023, replicate samplers were located at Dubois (offsite location), Idaho Nuclear Technology and Engineering Center (INTEC) – west side (onsite location), Radioactive Waste Management Complex (RWMC) (onsite location), and Van Buren (onsite location). Particulates in air were collected on membrane particulate filters (1.2 µm pore size). Gases passing through the filter were collected with an activated charcoal cartridge.

Filters and charcoal cartridges were changed weekly at each station during the quarter. 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 by location for ^{90}Sr, ^{238}Pu, $^{239/240}$Pu, $^{233/234}$U, ^{238}U, and ^{241}Am.

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.

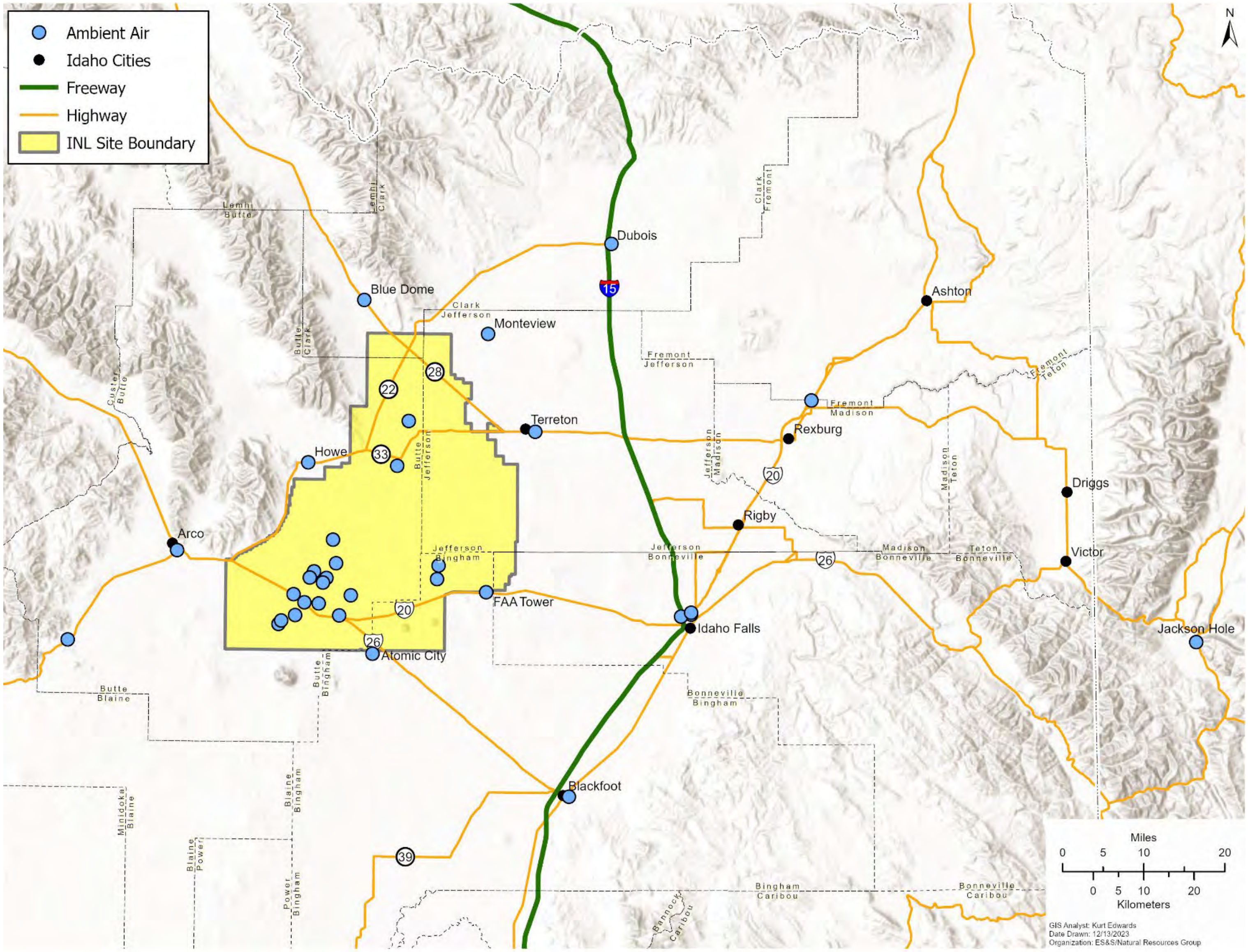

Figure 2. INL contractor air monitoring locations.

Gross alpha results are reported in Table C-1 and shown in Figures 3 through 6. Gross alpha concentrations measured in individual samples ranged from a low of (-0.09 ± 0.02) x 10^{-15} µCi/ml collected at Experimental Field Station (EFS) on July 5, 2023, to a high of (3.79 ± 0.64) x 10^{-15} µCi/ml collected at Van Buren on July 11, 2023. All results were less than the DCS of 1.1 x 10^{-13} µCi/ml for $^{239/240}$Pu (see Table B-1 of Appendix B). In addition, the results were consistent with historical data, as represented by the 99%/95% UTL for gross alpha activity (4.8 x 10^{-15} µCi/ml). 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 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.

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 Table D-1. There were no statistically significant differences among groups for the months of July and September (Table D-1), however, statistically significant differences did occur for the quarter and the month of August. 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 differences were determined between stations (Table D-2).

Gross beta results are presented in Table C-1 and displayed in Figures 7 through 10. Gross beta concentrations measured in individual samples ranged from a low of (5.6 ± 2.9) x 10^{-16} µCi/ml collected at EFS on July 5, 2023, to a high of (42.50 ± 1.48) × 10^{-15} µCi/ml collected at RWMC on September 19, 2023. All results were less than the DCS of 9.6 × 10^{-12} µCi/ml for ^{90}Sr (see Table B-1 of Appendix B). 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 were no statistically significant differences in the gross beta data between groups for July and September (Table D-1), however, statistically significant differences did occur for the quarter and the month of August. 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

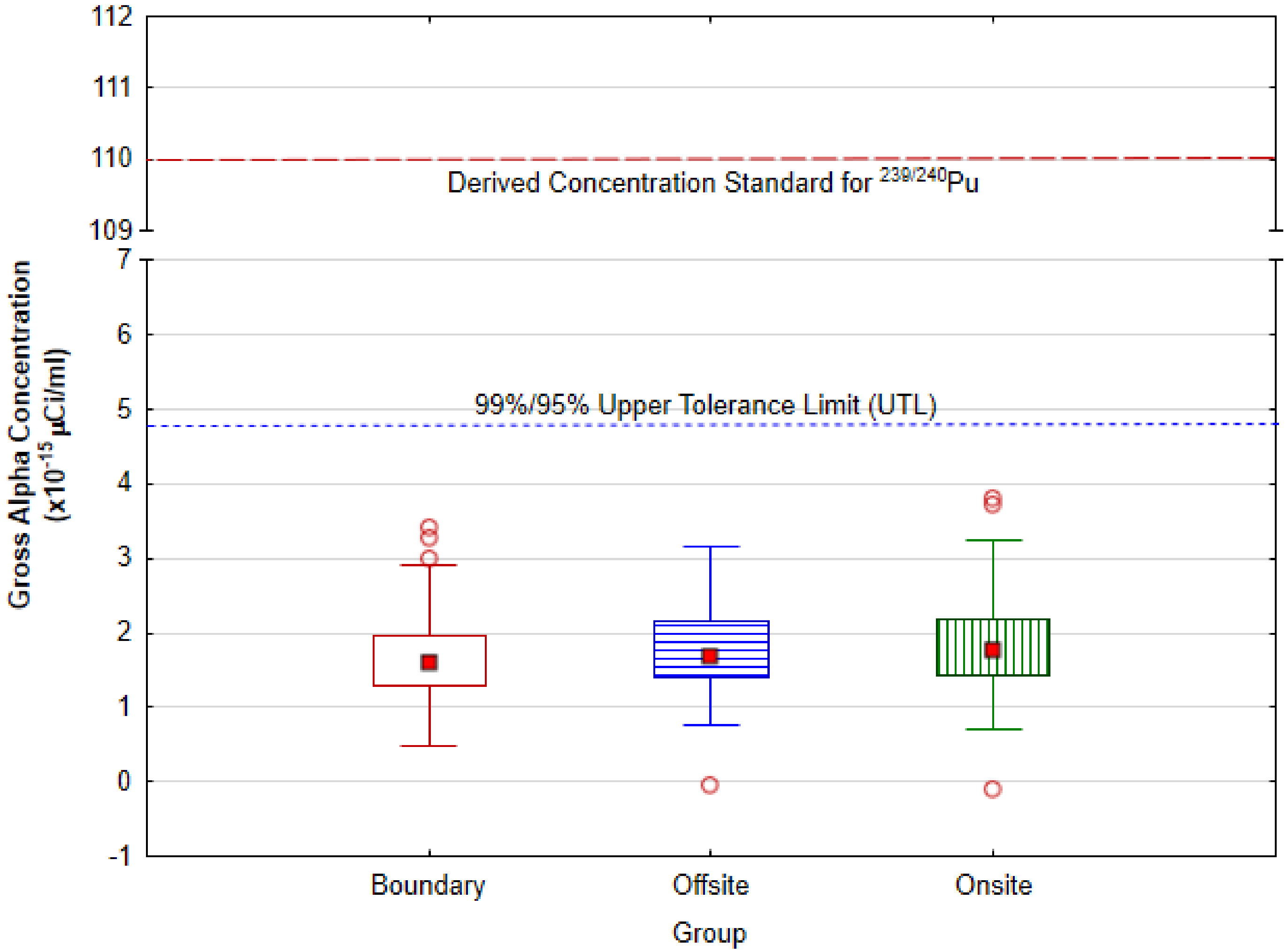

Figure 3. Gross alpha concentrations in air at onsite, boundary, and offsite locations for the third quarter of 2023. The DCS is the concentration of $^{239/240}$Pu in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally-occurring radionuclides (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.

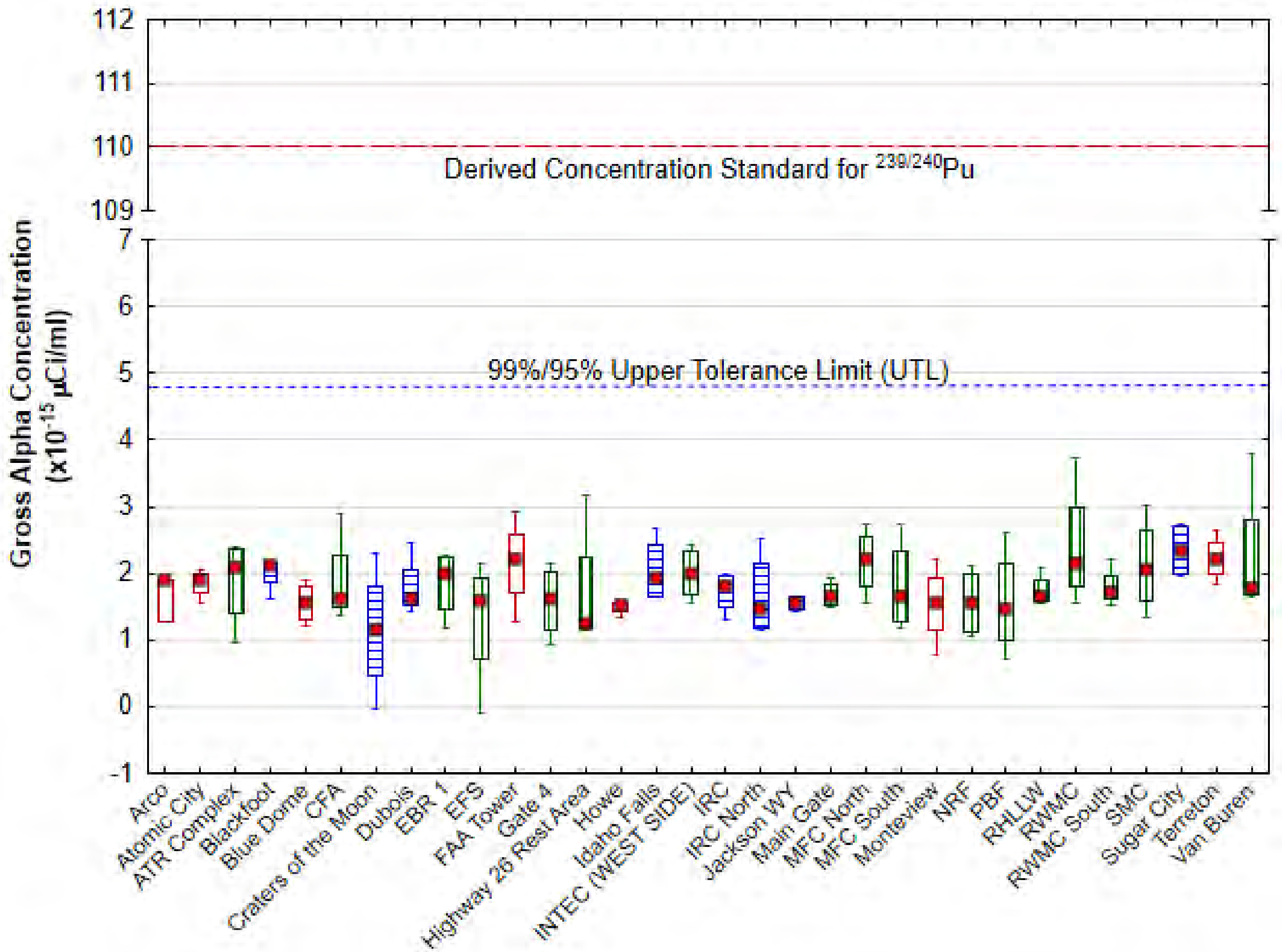

Figure 4. July 2023 gross alpha concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of $^{239/240}Pu$ in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally-occurring radionuclides (such as ^{238}U, ^{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.

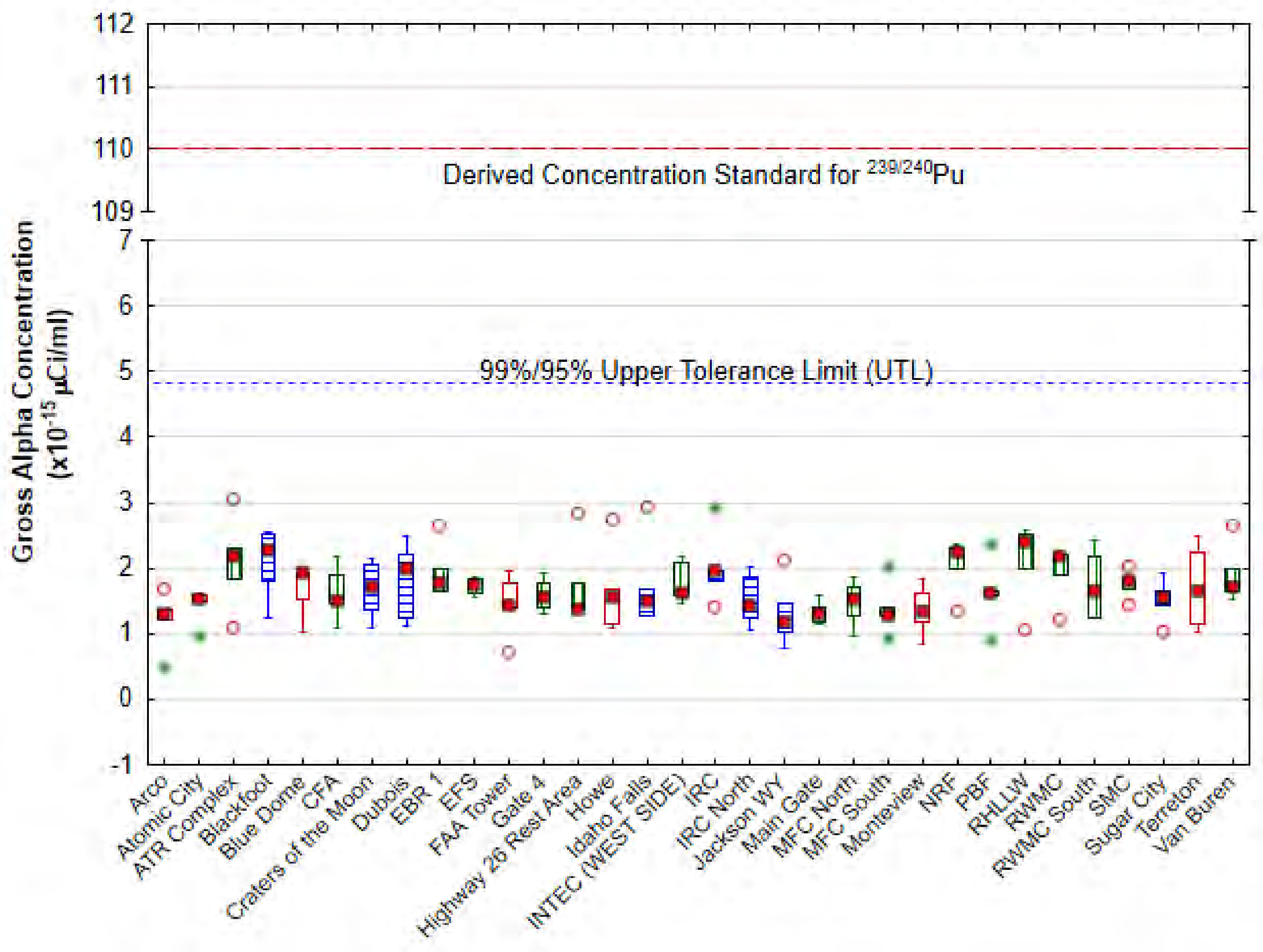

Figure 5. August 2023 gross alpha concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of $^{239/240}$Pu in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally-occurring radionuclides (such as ^{238}U, ^{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.

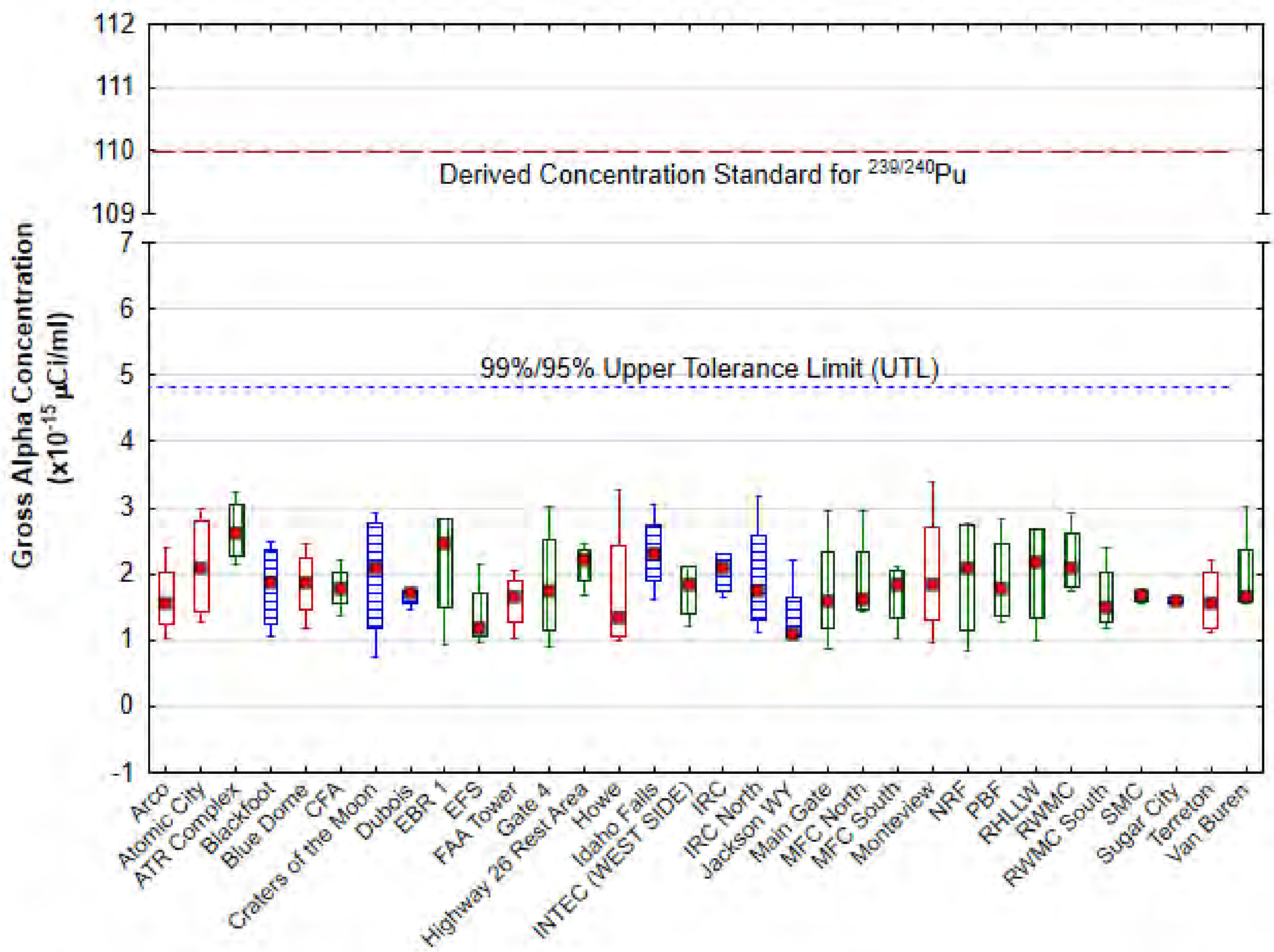

Figure 6. September 2023 gross alpha concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of $^{239/240}$Pu in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally-occurring radionuclides (such as ^{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.

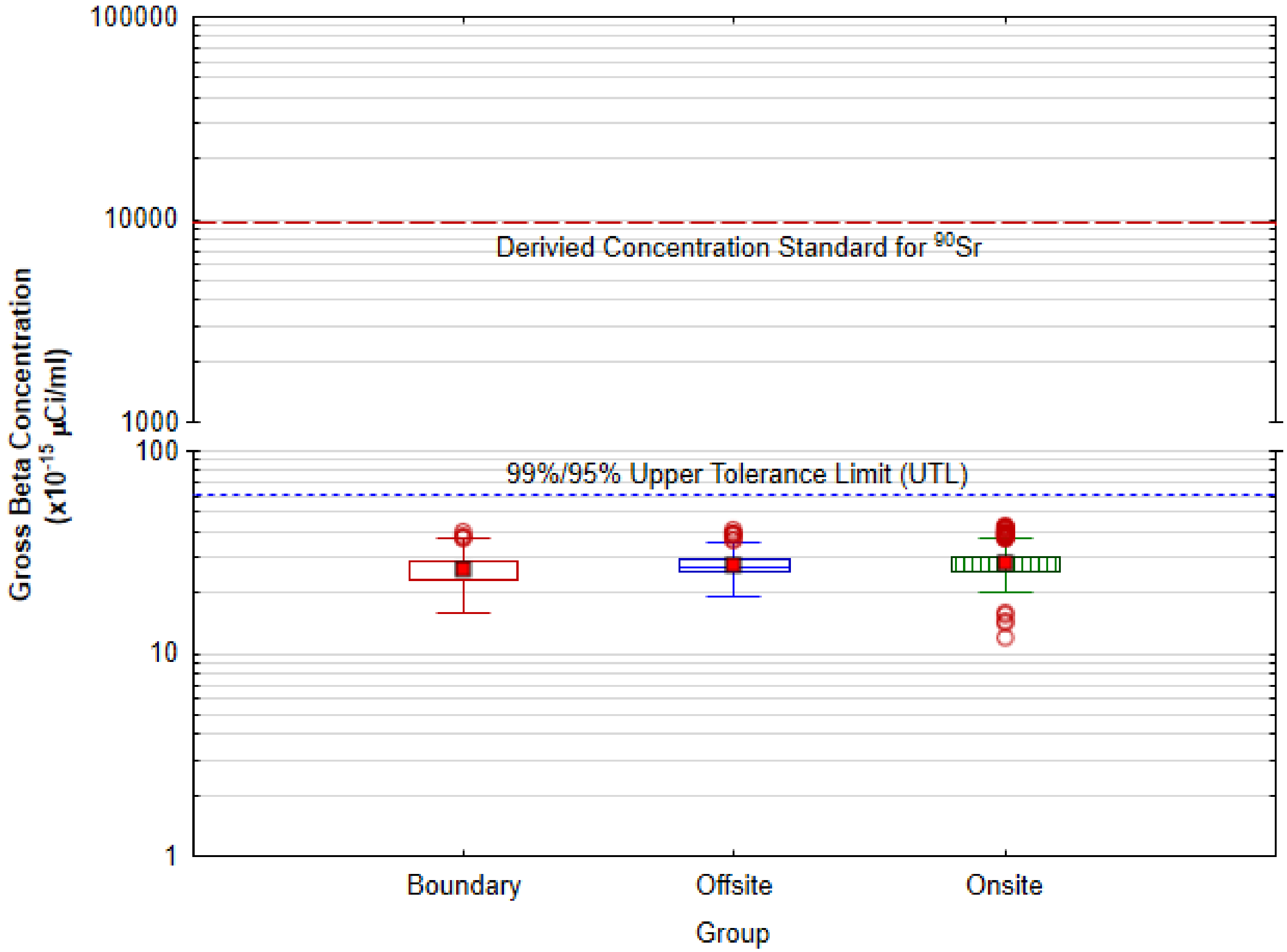

Figure 7. Gross beta concentrations in air at onsite, boundary, and offsite locations for the third quarter of 2023. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally-occurring radionuclides (such 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.

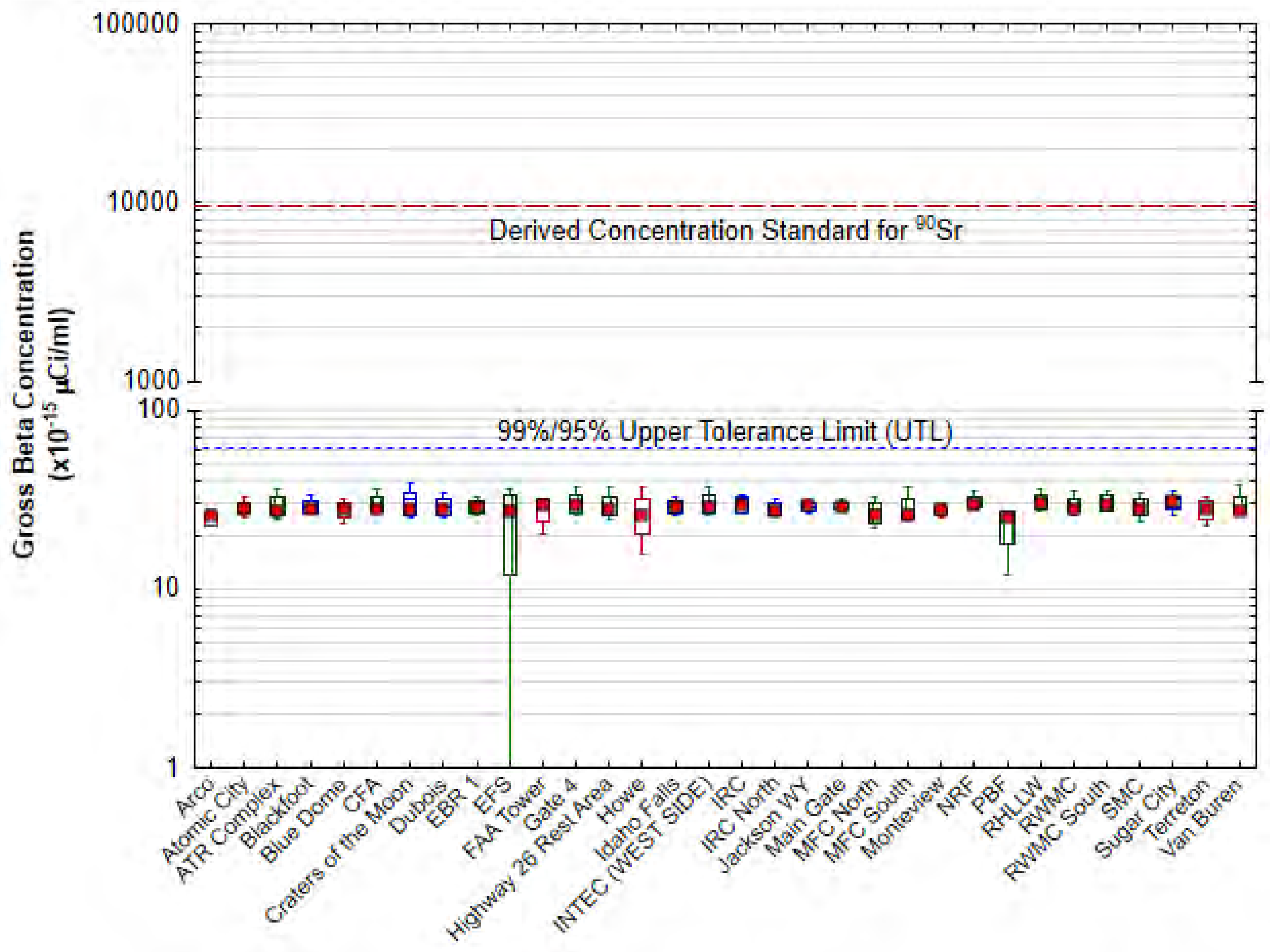

Figure 8. July 2023 gross beta concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally-occurring radionuclides (such as ^{40}K, ^{228}Ra, 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.

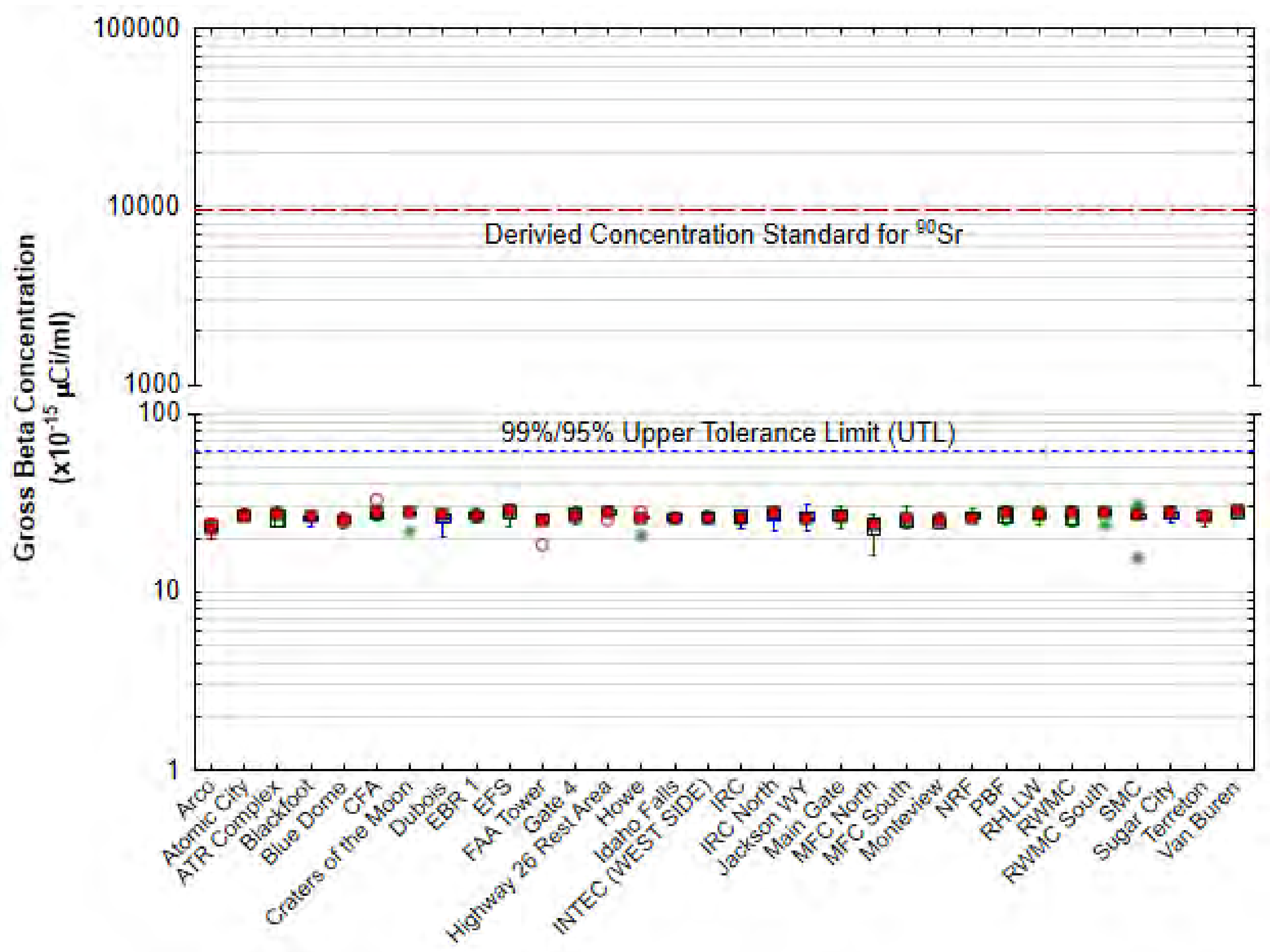

Figure 9. August 2023 gross beta concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally-occurring radionuclides (such as ^{40}K, ^{228}Ra, 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.

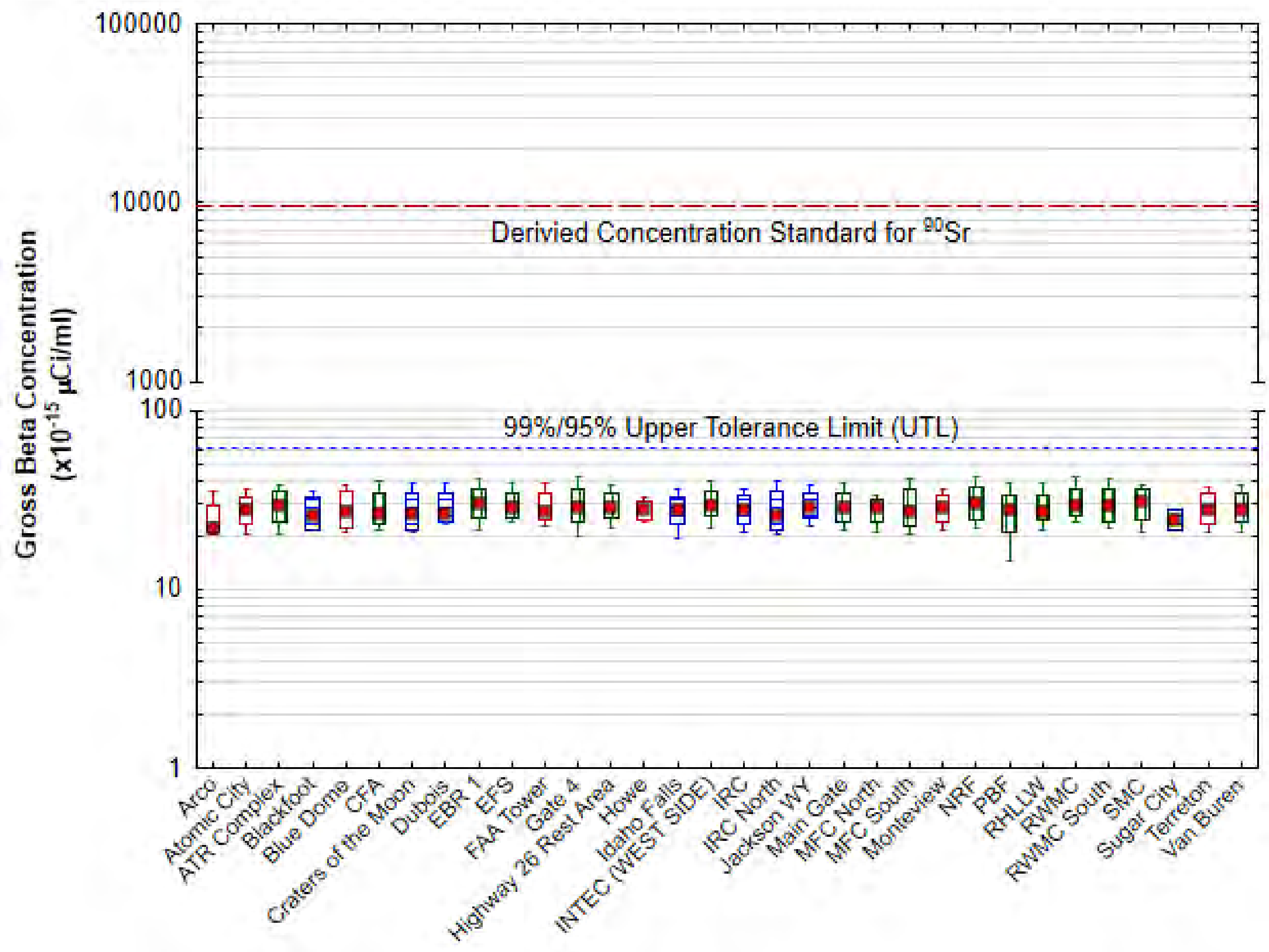

Figure 10. September 2023 gross beta concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally-occurring radionuclides (such as ^{40}K, ^{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.

beta concentrations measured at all locations. No differences were determined to have occurred between stations (Table D-3).

Iodine-131 was not detected in any of the charcoal cartridges measured during the third quarter. Weekly ^{131}I results for each location are listed in Table C-2.

Strontium-90, a beta-emitting radionuclide associated with historic nuclear weapons testing fallout, was detected in the duplicate composite sample at Van Buren (QA) ([27.00 ± 8.86] x 10^{-18} uCi/mL). The original composite sample collected at Van Buren did not result in ^{90}Sr being detected. The original and duplicate composite samples from RWMC had both ^{241}Am (original [45.40 ± 5.00] x 10^{-18} uCi/mL; duplicate [34.60 ± 4.32] x 10^{-18} uCi/mL) and $^{239/240}$Pu (original [107.00 ± 9.25] x 10^{-18} uCi/mL; duplicate [27.90 ± 3.75] 10^{-18} uCi/mL) detected. No ^{241}Am or $^{239/240}$Pu was detected in the composite sample collected from RWMC South. Composite samples from several locations resulted in detections of uranium radionuclides (see Appendix C, Table C-3). A UTL is not available as more data needs to be collected. Uranium occurs naturally in various rocks and soil, can be suspended in the air and captured on an air filter. The United Nations Scientific committee on the Effects of Atomic Radiation lists ^{238}U air concentrations in the United States to be between 2.43 x 10^{-17} μCi/mL to 1.35 x 10^{-16} μCi/mL (UNSCEAR 2000). All results were below the DCS values for these radionuclides in air (i.e., 9.6 x 10^{-12} μCi/mL for ^{90}Sr; 1.3 x 10^{-13} μCi/mL for ^{241}Am; 1.1 x 10^{-13} μCi/mL for $^{239/240}$Pu; 1.6 x 10^{-13} μCi/mL for $^{233/234}$U; and 1.8 x 10^{-13} μCi/mL for ^{238}U).

No ^{137}Cs or other human-made gamma-emitting radionuclides were found in quarterly air composites. Plutonium-238, an alpha-emitting radionuclide, was not detected in any composite sample.

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.

Results were available for twenty-six atmospheric moisture samples collected at the onsite, boundary, and offsite locations during the third quarter of 2023 (Figure 11). None of the results exceeded the 3s uncertainty level for tritium. Results are similar between the sampling locations. The DOE DCS for tritium in air (as water vapor) is 1.3 x 10^{-7} μCi/mL_{air}. Results are shown in Table C-4, Appendix C.

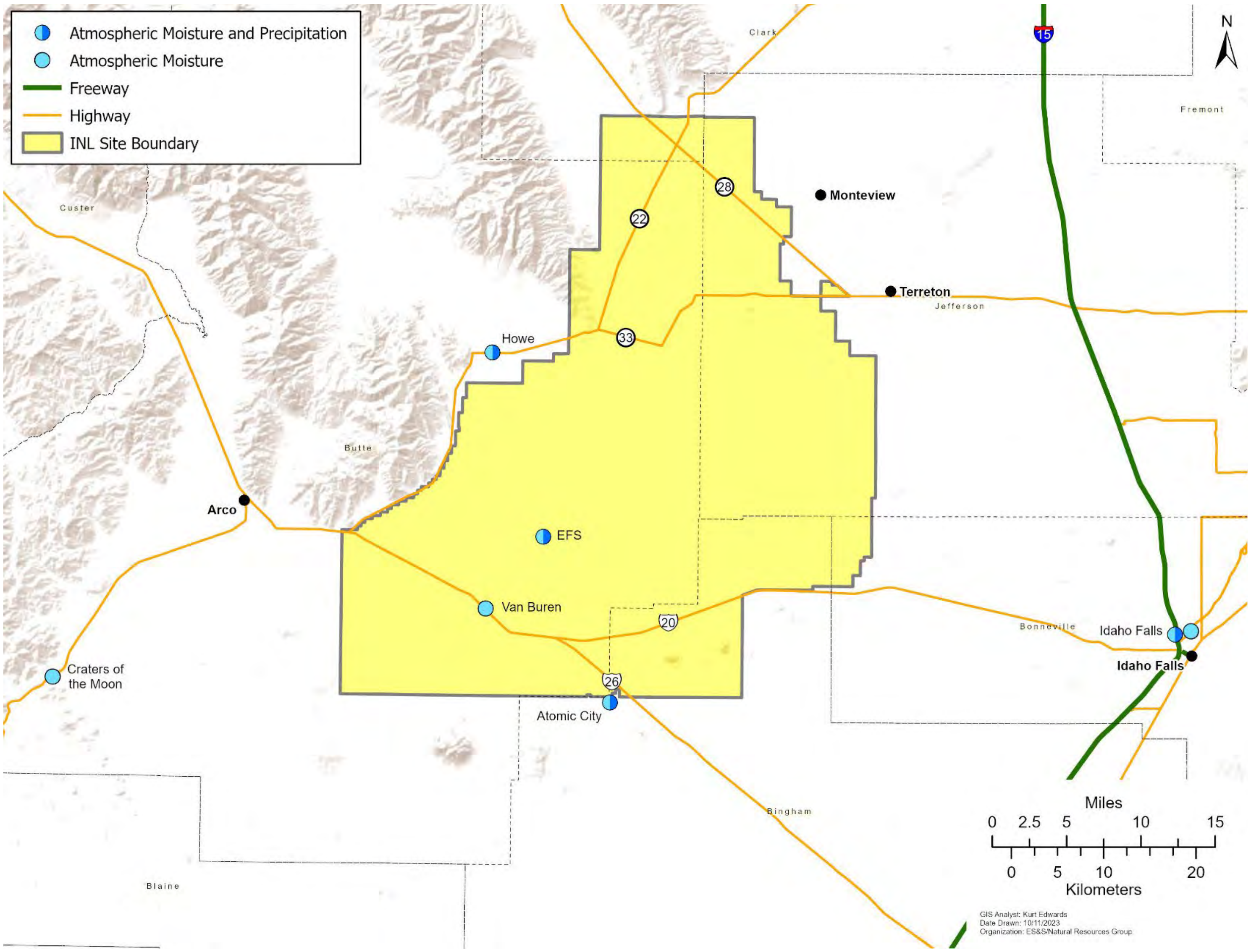

Figure 11. Atmospheric moisture and precipitation monitoring locations.

4. Precipitation and Water Sampling

4.1 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 of monthly composites from Idaho Falls, and weekly (when available) from the EFS (onsite), 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 third quarter of 2023 produced sufficient amounts of precipitation to yield 16 samples.

Tritium was measured below the 3s values in all 16 samples. These results are listed in Table C-5 (Appendix C). Low levels of tritium exist in the environment at all times as a result of cosmic ray reactions with water molecules in the upper atmosphere. Long-term data collected around the globe since 1961 by the International Atomic Energy Agency suggest that tritium levels have steadily decreased since the Nuclear Test Ban Treaty in 1963 and are close to their pre-nuclear test values (Cauquoin et al. 2015) and that there are no longer remnants of fallout from weapons testing.

4.2 Water Sampling

Drinking water is collected in the second and fourth quarters.

There was enough water in the Big Lost River to produce two surface water sampling events during third quarter (June 1, 2023, and July 3, 2023). All samples were analyzed for gross alpha, gross beta, tritium, and gamma-emitting radionuclides. Results are listed in Appendix C, Table C-6.

Gross alpha activity was detected in eight of twelve surface water samples. The highest reported gross alpha value was (5.74 ± 0.60) pCi/L in the sample collected from Big Lost River at NRF (Appendix C, Table C-6).

Gross beta activity was detected in all twelve surface water samples (Appendix C, Table C-6). All concentrations were similar to previous results from surface water sampling. The highest reported gross beta result for surface water was (6.03 ± 0.38) pCi/L in the sample collected from Big Lost River at NRF.

No tritium or human-made gamma-emitters were detected in any of the surface water samples (Appendix C, Table C-6).

5. Agricultural Products 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, lettuce, alfalfa, grain, potato, and large game animals available during the third quarter of 2023.

5.1 Milk Sampling

Milk samples were collected weekly at Rigby and Terreton. Monthly samples were collected at six locations around the INL Site (Figure 12) during the third quarter of 2023. In addition to the regional locations, commercially-available organic milk (from Colorado) was purchased as a control sample each month. All samples were analyzed for gamma-emitting radionuclides, with particular emphasis on ^{131}I.

Iodine-131 was not detected in any weekly or monthly samples during the third quarter. No other human-made gamma-emitting radionuclides were found either. Data for ^{131}I in milk samples are listed in Appendix C, Table C-7.

5.2 Potato Sampling

Regionally-grown potatoes from eight southeast Idaho locations (Figure 13) and one duplicate from Shelley were analyzed for gamma-emitting radionuclides like ^{137}Cs and for ^{90}Sr. A control sample from a local grocery store was also analyzed. No human-made gamma-emitters were found in any sample. Strontium-90 was not reported in any sample. Data for potato samples are listed in Appendix C, Table C-8.

5.3 Lettuce Sampling

Lettuce sampling was completed during the third quarter. A total of eight samples were collected, including a commercially-available sample from a grocery store (Figure 13). Five lettuce samples were collected from portable planters at Atomic City, EFS, the Federal Aviation Administration (FAA) Tower, Howe, and Monteview. Soil from the vicinity of the sampling locations was used in the planters. This soil was amended with potting soil as a gardener in the region would typically do when they grow their lettuce. In addition to the portable samplers, a sample was obtained from a garden in Idaho Falls.

No human-made gamma-emitting radionuclides or ^{90}Sr were found in any of the samples. Data for ^{137}Cs and ^{90}Sr in all lettuce samples taken during the third quarter are listed in Appendix C, Table C-9.

5.4 Alfalfa Sampling

Four samples of alfalfa (including one duplicate) were obtained from growers in the Howe, Mud Lake, Idaho Falls, and Blackfoot areas (Figure 13). All samples were analyzed for gamma-emitting radionuclides and analyzed for ^{90}Sr. No human-made gamma-emitting radionuclides or ^{90}Sr were found any of the alfalfa samples. Data for ^{137}Cs and ^{90}Sr in alfalfa samples are listed in Appendix C, Table C-10.

5.5 Grain Sampling

Regionally-grown grain (wheat and barley) was collected from eleven southeast Idaho locations and one duplicate from Blackfoot (Figure 13). In addition, a commercially-available sample was obtained from outside the regional area. All samples were analyzed for gamma-emitting radionuclides and ^{90}Sr.

No human-made gamma-emitting radionuclides were detected in any grain sample. None of the grain samples collected in 2023 contained a detectable concentration of ^{90}Sr. Data for ^{137}Cs and ^{90}Sr in all grain samples taken during 2023 are listed in Appendix C, Table C-11.

5.6 Large Game Animal Sampling

One elk was available for sampling during the third quarter of 2023. A muscle sample was collected from the animal. The head, neck, and liver were not available at the time of sampling. No human-made gamma-emitting radionuclides were detected in any of the tissues. Results for the tissue samples are listed in Appendix C, Table C-12.

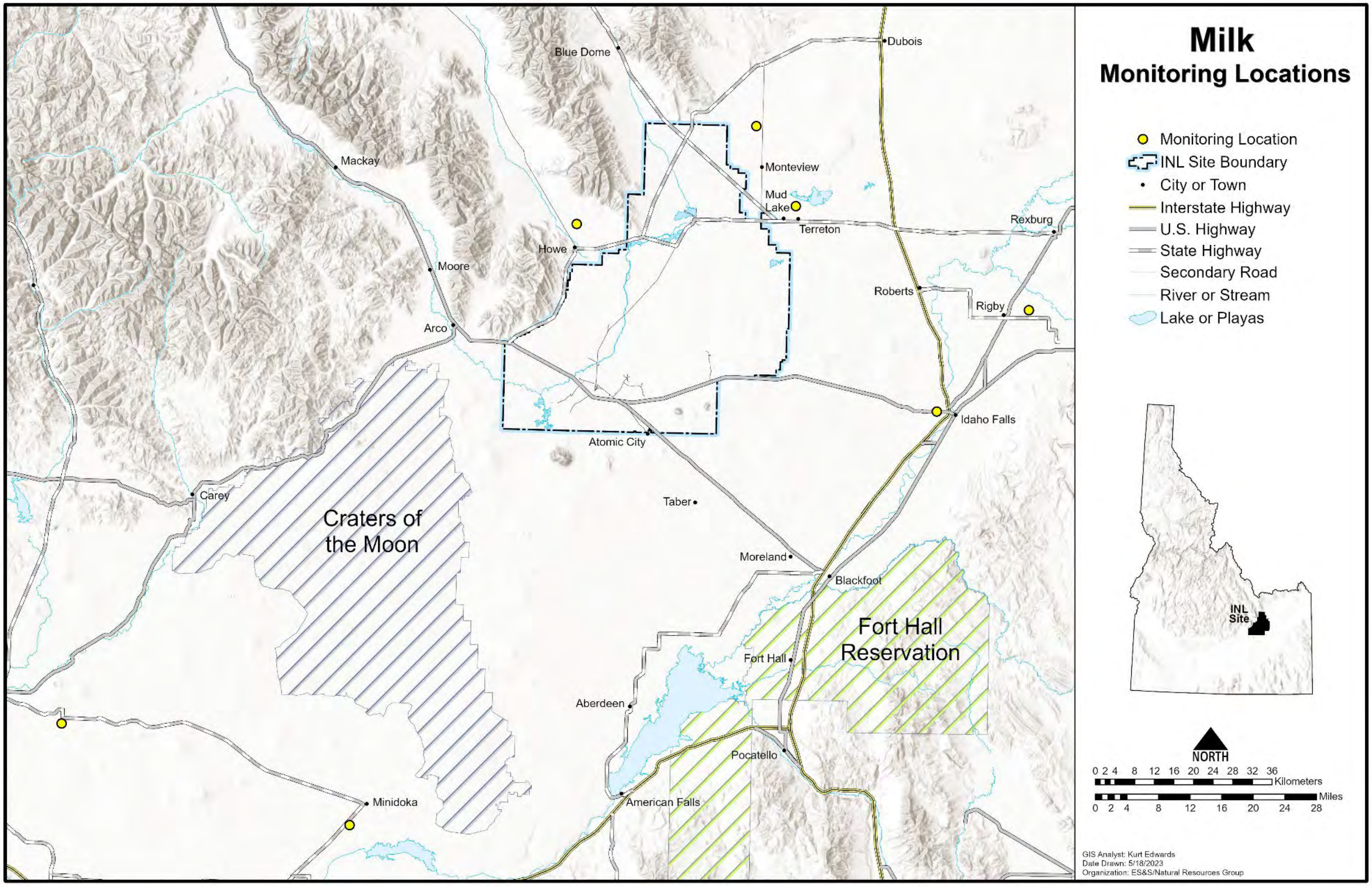

Figure 12. INL contractor milk monitoring locations in 2023.

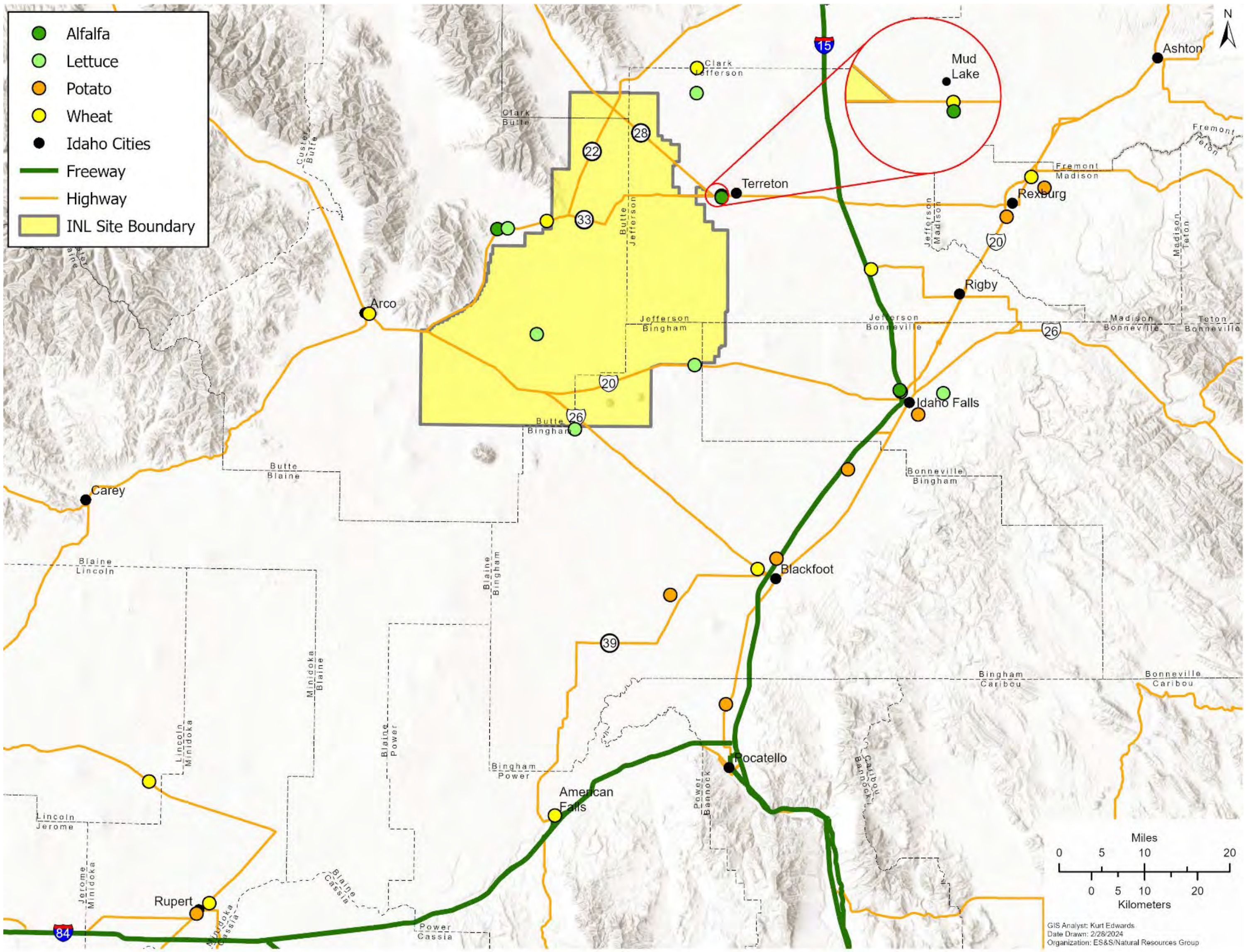

Figure 13. Locations of INL contractor agricultural products samples collected in 2023.

6. Environmental Radiation

Dosimeters are collected in the second and fourth quarters.

7. Quality Assurance

Quality assurance consists of planned and systematic activities that give confidence in environmental surveillance program results (NCRP 2012). Environmental surveillance 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 laboratories performing environmental analyses.

In addition to the quality assurance processes implemented by the INL contractor, the laboratories also utilize trained personnel, procedures, and quality assurance processes to ensure quality data. Data quality reviews were performed by the laboratory 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 the INL contractor laboratories. Results are summarized in Section 7.2-7.3. Together this information was used to assess the quality of data provided to the 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 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 spike, performance evaluation, and duplicate samples; through sample recounts; through analysis of blank samples; and through comparison of sample results to established method quality objectives.

7.1 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 – Accreditation Program (DOECAP-AP) (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).

Similar to DOECAP-AP, DOE Laboratory Accreditation Program is responsible for implementing performance standards for DOE contractor external dosimetry program through periodic PT and onsite program assessments.

INL contracts with analytical laboratories who participate in PT programs accredited to ISO 17043 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 performance evaluations (PE) results for each media and analyte tested. DOECAP accreditation is obtained by achieving a history of two successful studies (acceptable scores) out of the most recent three attempts. Third quarter 2023 PT participation and results are listed below.

GEL Laboratories, LLC

GEL is accredited through DOECAP-AP and participates in PT studies. GEL had acceptable results in Environmental Resource Associates PT study during third quarter for analytes, methods, and media of interest to the INL contractor.

GEL also participated in the Eckert and Ziegler Analytics PT study and had one nonagreement for an analyte and media of interest ^{90}Sr in milk. This was a first-time occurrence and no trend identified.

7.2 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. The laboratory is not aware of which samples are blanks, duplicates or PE samples. Blanks, duplicate/replicate samples and PE samples for the third quarter are discussed below.

7.2.1 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. 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. Third quarter 2023 blanks are discussed below.

GEL Laboratories, LLC

A total of 39 analytes were analyzed by GEL in various media. The media analyzed included: air filters, quarterly air filter composites, atmospheric moisture, precipitation, and milk.

7.2.2 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. Third quarter 2023 duplicate/replicate samples are discussed below.

GEL Laboratories, LLC

A total of 147 analytes were analyzed by GEL. The media analyzed included air filters, quarterly air filter composite samples, milk, surface water, alfalfa, lettuce, grain, and potato.

7.2.3 PE 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 Mixed Analyte Performance Evaluation Program. Mixed Analyte Performance Evaluation Program provides quality assurance oversight for environmental analytical services by performing semiannual PEs of commercial laboratories. These results are then compared with the INL contractor's internal PE results.

GEL Laboratories, LLC

A total of 36 PE analytes for air filter composites, alfalfa, lettuce, grain, and potato were analyzed by GEL for gamma-emitters, and alpha and beta emitters. All the air filter composites for gamma, alpha and beta emitters PE samples received an agreement evaluation.

Nonagreement evaluations for gamma-emitters were identified for ^{57}Co in alfalfa; ^{60}Co and ^{137}Cs in lettuce; and ^{65}Zn in potato. Nonagreement evaluations were identified for beta emitter (^{90}Sr) in alfalfa, lettuce, and grain. The INL contractor requested GEL to review all nonagreements evaluations. GEL's investigation determined that the nonagreements were due to samples not being completely consumed during the sample preparation. GEL requested that the INL contractor document sample preparation requirements on the chain-of-custody and contact the project manager so the message can be relayed to the analysis team. The INL contractor's corrective action for alfalfa, lettuce, grain, and potato PE samples will be to document on the chain-of-custody required sample preparation comments for each PE sample to either "analyze entire sample" for gamma-emitters and to "consume entire sample" for beta emitters. GEL project manager will be notified of these samples and instructions on the chain-of-custody.

7.3 Invalid Samples

The sampler located at INTEC (NE Corner) was inoperable for several weeks due to a power line replacement. As a result, samples (air filters, charcoals, and quarterly composite) were invalid as indicated in Table C-1, C-2, and C-3 of Appendix C.

One sample (air filter and charcoal) was deemed invalid due to a tripped GFCI at Arco (Table C-1 and C-2).

Two samples (air filters and charcoals) were deemed invalid due to insufficient sample volume due to a power outage at Sugar City (Table C-1 and C-2).

8. References

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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, FAA Tower, Howe, Monteview, Mud Lake	ATR Complex, CFA, EBR-I, EFS, Gate 4, Hwy 26 Rest Area, INTEC (NE corner), INTEC (west side), Main Gate, MFC – North, MFC – South, NRF, 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, FAA Tower, Howe, Monteview, Mud Lake	ATR Complex, CFA, EBR-I, EFS, Gate 4, Hwy 26 Rest Area, INTEC (NE corner), INTEC (west side), Main Gate, MFC – North, MFC – South, NRF, 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, FAA Tower, Howe, Monteview, Mud Lake	ATR Complex, CFA, EBR-I, EFS, Gate 4, Hwy 26 Rest Area, INTEC (NE corner), INTEC (west side), Main Gate, MFC – North, MFC – South, NRF, RHLLW, RWMC, RWMC – South, SMC, Van Buren
Atmospheric Moisture				
Tritium	2 to 13 weeks	Idaho Falls, Craters of the Moon	Atomic City, Howe	EFS, Van Buren
Precipitation				
Tritium	monthly	Idaho Falls	None	None
Tritium	weekly	None	Atomic City, Howe	EFS

Table A-1. continued.

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	None
Surface Water				
Gross Alpha, Gross Beta, Tritium	semi-annually	Buhl, Hagerman, Twin Falls	None	Big Lost River (when flowing)
External Radiation Sampling				
OSLDs				
Gamma Radiation	semiannual	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	Advanced Test Reactor Complex; Auxiliary Reactor Area; Central Facilities Area; Experimental Breeder Reactor I; Experimental Field Station; Gate 4; Haul E; Haul W; Highway 20; Highway 22; Highway 28; Highway 33; Idaho Nuclear Technology and Engineering Center; Lincoln Boulevard; Materials and Fuels Complex; Naval Reactors Facility; Power Burst Facility Special Power Excursion Reactor; Radioactive Waste Management Complex; Remote-handled Low-level Waste; Resident Receptor Locations; Rest Area; Test Area North, Loss-of-Fluid Test; Transient Reactor Test; Van Buren
Neutron				
Neutron Radiation	semiannual	Idaho Falls	None	Materials and Fuels Complex; Remote-handled Low-level Waste

Table A-1. continued.

		Soil Sampling		
		Soil		
Gamma Spec, ^{90}Sr, Transuranics	biennially	Blackfoot, Carey, St. Anthony	Atomic City, Birch Creek, Butte City, FAA Tower, Frenchman's 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 (^{131}I)	monthly	Dietrich, Minidoka, Monteview, Rigby	Howe, Terreton	None
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

Table A-1. continued.

		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	None	INL Site wastewater disposal ponds

Appendix B
Summary of MDCs and DCSs

Table B-1. Summary of approximate MDC for radiological analyses performed during third quarter 2023.

Sample Type	Analysis	Average MDC[a]	DCS[b]
Air (particulate filter)[e]	Gross alpha	7.1×10^{-16} µCi/mL	1.1×10^{-13} µCi/ml[c]
	Gross beta	1.2×10^{-15} µCi/mL	9.6×10^{-12} µCi/ml[d]
	^{137}Cs	9.2×10^{-17} µCi/mL	3.8×10^{-11} µCi/ml
	^{90}Sr	1.1×10^{-16} µCi/mL	9.6×10^{-12} µCi/ml
	^{241}Am	6.1×10^{-18} µCi/mL	1.3×10^{-13} µCi/ml
	^{238}Pu	5.7×10^{-18} µCi/mL	1.2×10^{-13} µCi/ml
	$^{239/240}Pu$	4.3×10^{-18} µCi/mL	1.1×10^{-13} µCi/ml
	$^{233/234}U$	7.9×10^{-18} µCi/mL	1.6×10^{-13} µCi/ml
	^{238}U	5.5×10^{-18} µCi/mL	1.8×10^{-13} µCi/ml
Air (charcoal cartridge)[e]	^{131}I	4.8×10^{-13} µCi/mL	4.5×10^{-10} µCi/ml
Air (atmospheric moisture)	^{3}H	1.7×10^{-12} $µCi/mL_{air}$	1.3×10^{-7} $µCi/ml_{air}$
Air (precipitation)	^{3}H	92 pCi/L	2.6×10^{6} pCi/L
Milk	^{131}I	0.6 pCi/L	1.0×10^{4} pCi/L

a. The MDC is an estimate of the concentration of radioactivity in a given sample type that can be identified with a 95% level of confidence. MDCs are calculated and reported by the laboratories based on actual INL contractor sample results following analysis.
b. DCSs, set by the DOE, represent reference values for radiation exposure. They are based on a radiation dose of 100 mrem/yr for exposure through a particular exposure mode such as direct exposure, inhalation, or ingestion of water.
c. Based on the most restrictive human-made alpha emitter (^{239}Pu).
d. Based on the most restrictive human-made beta emitter (^{90}Sr).
e. The approximate MDC for air is based on an average filtered air volume (pressure corrected) of 445 m^3/week.

Appendix C
Sample Analysis Results

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

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty (x 10^-15^ µCi/mL)			Result ± 1s Uncertainty (x 10^-11^ Bq/mL)			Result > 3s	GROSS BETA Result ± 1s Uncertainty (x 10^-15^ µCi/mL)			Result ± 1s Uncertainty (x 10^-11^ Bq/mL)			Result > 3s
BOUNDARY															
ARCO	07/05/23	1.29	±	0.32	4.77	±	1.18	Yes	25.90	±	1.09	95.83	±	4.03	Yes
	07/11/23	1.90	±	0.45	7.03	±	1.68	Yes	26.40	±	1.23	97.68	±	4.55	Yes
	07/18/23	1.91	±	0.47	7.07	±	1.72	Yes	22.80	±	1.11	84.36	±	4.11	Yes
	[a] 07/25/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	08/01/23	1.37	±	0.42	5.07	±	1.57	Yes	20.00	±	1.12	74.00	±	4.14	Yes
	08/08/23	1.68	±	0.43	6.22	±	1.58	Yes	25.70	±	1.16	95.09	±	4.29	Yes
	08/15/23	1.21	±	0.41	4.48	±	1.52	No	22.70	±	1.20	83.99	±	4.44	Yes
	08/22/23	1.30	±	0.37	4.81	±	1.35	Yes	25.30	±	1.24	93.61	±	4.59	Yes
	08/29/23	0.49	±	0.24	1.80	±	0.87	No	22.10	±	1.12	81.77	±	4.14	Yes
	09/05/23	1.64	±	0.43	6.07	±	1.57	Yes	20.20	±	1.10	74.74	±	4.07	Yes
	09/12/23	1.47	±	0.40	5.44	±	1.48	Yes	23.00	±	1.10	85.10	±	4.07	Yes
	09/19/23	2.40	±	0.49	8.88	±	1.81	Yes	35.10	±	1.36	129.87	±	5.03	Yes
	09/26/23	1.02	±	0.34	3.77	±	1.27	No	21.00	±	1.05	77.70	±	3.89	Yes
ATOMIC CITY	07/05/23	1.92	±	0.43	7.10	±	1.61	Yes	27.60	±	1.15	102.12	±	4.26	Yes
	07/11/23	2.05	±	0.54	7.59	±	1.99	Yes	32.30	±	1.46	119.51	±	5.40	Yes
	07/18/23	1.88	±	0.45	6.96	±	1.66	Yes	24.90	±	1.19	92.13	±	4.40	Yes
	07/25/23	1.54	±	0.39	5.70	±	1.46	Yes	27.60	±	1.28	102.12	±	4.74	Yes
	08/01/23	1.50	±	0.38	5.55	±	1.39	Yes	24.80	±	1.17	91.76	±	4.33	Yes
	08/08/23	1.51	±	0.40	5.59	±	1.47	Yes	28.60	±	1.22	105.82	±	4.51	Yes
	08/15/23	1.63	±	0.39	6.03	±	1.45	Yes	26.70	±	1.22	98.79	±	4.51	Yes
	08/22/23	0.97	±	0.33	3.57	±	1.24	No	29.60	±	1.24	109.52	±	4.59	Yes
	08/29/23	1.58	±	0.42	5.85	±	1.54	Yes	25.00	±	1.15	92.50	±	4.26	Yes
	09/05/23	1.59	±	0.43	5.88	±	1.60	Yes	20.20	±	1.06	74.74	±	3.92	Yes
	09/12/23	2.98	±	0.51	11.03	±	1.88	Yes	29.20	±	1.23	108.04	±	4.55	Yes
	09/19/23	2.60	±	0.56	9.62	±	2.08	Yes	36.20	±	1.47	133.94	±	5.44	Yes
	09/26/23	1.26	±	0.35	4.66	±	1.28	Yes	26.00	±	1.20	96.20	±	4.44	Yes
BLUE DOME	07/05/23	1.20	±	0.32	4.44	±	1.17	Yes	29.00	±	1.18	107.30	±	4.37	Yes
	07/11/23	1.90	±	0.48	7.03	±	1.78	Yes	32.10	±	1.43	118.77	±	5.29	Yes
	07/18/23	1.70	±	0.46	6.29	±	1.69	Yes	23.10	±	1.15	85.47	±	4.26	Yes
	07/25/23	1.42	±	0.38	5.25	±	1.41	Yes	27.50	±	1.21	101.75	±	4.48	Yes
	08/01/23	1.92	±	0.48	7.10	±	1.76	Yes	22.60	±	1.14	83.62	±	4.22	Yes
	08/08/23	1.52	±	0.41	5.62	±	1.52	Yes	27.90	±	1.22	103.23	±	4.51	Yes
	08/15/23	1.97	±	0.47	7.29	±	1.74	Yes	26.70	±	1.20	98.79	±	4.44	Yes
	08/22/23	1.94	±	0.47	7.18	±	1.72	Yes	24.90	±	1.17	92.13	±	4.33	Yes
	08/29/23	1.04	±	0.31	3.85	±	1.15	Yes	24.70	±	1.14	91.39	±	4.22	Yes
	09/05/23	1.18	±	0.34	4.37	±	1.27	Yes	20.70	±	1.04	76.59	±	3.85	Yes
	09/12/23	2.45	±	0.51	9.07	±	1.87	Yes	31.40	±	1.27	116.18	±	4.70	Yes
	09/19/23	2.03	±	0.45	7.51	±	1.65	Yes	38.40	±	1.39	142.08	±	5.14	Yes
	09/26/23	1.73	±	0.44	6.40	±	1.62	Yes	23.00	±	1.10	85.10	±	4.07	Yes
FAA TOWER	07/05/23	2.16	±	0.41	7.99	±	1.50	Yes	20.30	±	0.91	75.11	±	3.37	Yes
	07/11/23	1.29	±	0.38	4.77	±	1.41	Yes	32.20	±	1.44	119.14	±	5.33	Yes
	07/18/23	2.27	±	0.50	8.40	±	1.85	Yes	27.70	±	1.21	102.49	±	4.48	Yes
	07/25/23	2.91	±	0.56	10.77	±	2.08	Yes	31.40	±	1.29	116.18	±	4.77	Yes
	08/01/23	0.72	±	0.34	2.68	±	1.27	No	18.20	±	1.09	67.34	±	4.03	Yes
	08/08/23	1.95	±	0.46	7.22	±	1.69	Yes	25.00	±	1.14	92.50	±	4.22	Yes
	08/15/23	1.78	±	0.45	6.59	±	1.67	Yes	26.90	±	1.22	99.53	±	4.51	Yes
	08/22/23	1.42	±	0.36	5.25	±	1.34	Yes	27.50	±	1.16	101.75	±	4.29	Yes
	08/29/23	1.39	±	0.38	5.14	±	1.39	Yes	24.70	±	1.15	91.39	±	4.26	Yes
	09/05/23	1.02	±	0.32	3.77	±	1.19	Yes	22.50	±	1.11	83.25	±	4.11	Yes
	09/12/23	2.04	±	0.46	7.55	±	1.69	Yes	28.20	±	1.18	104.34	±	4.37	Yes
	09/19/23	1.75	±	0.40	6.48	±	1.47	Yes	39.80	±	1.43	147.26	±	5.29	Yes
	09/26/23	1.56	±	0.41	5.77	±	1.50	Yes	26.10	±	1.15	96.57	±	4.26	Yes
HOWE	07/05/23	1.53	±	0.37	5.66	±	1.36	Yes	26.50	±	1.10	98.05	±	4.07	Yes
	07/11/23	1.52	±	0.42	5.62	±	1.54	Yes	37.10	±	1.55	137.27	±	5.74	Yes
	07/18/23	1.34	±	0.41	4.96	±	1.52	Yes	25.40	±	1.21	93.98	±	4.48	Yes

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

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s	GROSS BETA Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	07/25/23	1.58	±	0.39	5.85	±	1.45	Yes	15.70	±	0.97	58.09	±	3.57	Yes
	08/01/23	1.55	±	0.45	5.74	±	1.65	Yes	20.60	±	1.11	76.22	±	4.11	Yes
	08/08/23	1.14	±	0.38	4.22	±	1.39	Yes	27.70	±	1.25	102.49	±	4.63	Yes
	08/15/23	1.67	±	0.44	6.18	±	1.61	Yes	25.90	±	1.20	95.83	±	4.44	Yes
	08/22/23	2.75	±	0.55	10.18	±	2.03	Yes	26.60	±	1.20	98.42	±	4.44	Yes
	08/29/23	1.08	±	0.33	4.00	±	1.23	Yes	25.90	±	1.16	95.83	±	4.29	Yes
	09/05/23	1.11	±	0.34	4.11	±	1.24	Yes	23.60	±	1.14	87.32	±	4.22	Yes
	09/12/23	3.28	±	0.59	12.14	±	2.19	Yes	30.20	±	1.26	111.74	±	4.66	Yes
	09/19/23	1.59	±	0.39	5.88	±	1.44	Yes	32.60	±	1.34	120.62	±	4.96	Yes
	09/26/23	0.99	±	0.34	3.67	±	1.24	No	25.50	±	1.16	94.35	±	4.29	Yes
MONTEVIEW	07/05/23	2.22	±	0.47	8.21	±	1.74	Yes	25.20	±	1.10	93.24	±	4.07	Yes
	07/11/23	1.50	±	0.46	5.55	±	1.68	Yes	29.50	±	1.39	109.15	±	5.14	Yes
	07/18/23	0.78	±	0.29	2.90	±	1.08	No	26.80	±	1.25	99.16	±	4.63	Yes
	07/25/23	1.61	±	0.45	5.96	±	1.65	Yes	28.50	±	1.29	105.45	±	4.77	Yes
	08/01/23	0.85	±	0.33	3.15	±	1.22	No	22.80	±	1.13	84.36	±	4.18	Yes
	08/08/23	1.62	±	0.40	5.99	±	1.49	Yes	24.90	±	1.21	92.13	±	4.48	Yes
	08/15/23	1.83	±	0.44	6.77	±	1.62	Yes	27.80	±	1.22	102.86	±	4.51	Yes
	08/22/23	1.33	±	0.37	4.92	±	1.35	Yes	25.80	±	1.17	95.46	±	4.33	Yes
	08/29/23	1.18	±	0.37	4.37	±	1.35	Yes	22.80	±	1.10	84.36	±	4.07	Yes
	09/05/23	1.63	±	0.44	6.03	±	1.63	Yes	21.40	±	1.08	79.18	±	4.00	Yes
	09/12/23	2.01	±	0.44	7.44	±	1.63	Yes	31.20	±	1.25	115.44	±	4.63	Yes
	09/19/23	3.40	±	0.61	12.58	±	2.24	Yes	36.70	±	1.39	135.79	±	5.14	Yes
	09/26/23	0.96	±	0.32	3.53	±	1.17	Yes	26.00	±	1.15	96.20	±	4.26	Yes
TERRETON	07/05/23	2.26	±	0.61	8.36	±	2.26	Yes	22.70	±	1.35	83.99	±	5.00	Yes
	07/11/23	2.66	±	0.61	9.84	±	2.27	Yes	32.40	±	1.50	119.88	±	5.55	Yes
	07/18/23	1.84	±	0.43	6.81	±	1.60	Yes	30.20	±	1.35	111.74	±	5.00	Yes
	07/25/23	2.15	±	0.51	7.96	±	1.89	Yes	26.10	±	1.24	96.57	±	4.59	Yes
	08/01/23	1.15	±	0.37	4.26	±	1.38	Yes	23.00	±	1.14	85.10	±	4.22	Yes
	08/08/23	2.23	±	0.49	8.25	±	1.81	Yes	27.70	±	1.25	102.49	±	4.63	Yes
	08/15/23	2.48	±	0.52	9.18	±	1.93	Yes	26.70	±	1.24	98.79	±	4.59	Yes
	08/22/23	1.66	±	0.41	6.14	±	1.51	Yes	28.70	±	1.30	106.19	±	4.81	Yes
	08/29/23	1.03	±	0.36	3.81	±	1.31	No	25.00	±	1.18	92.50	±	4.37	Yes
	09/05/23	1.11	±	0.38	4.11	±	1.40	No	20.70	±	1.10	76.59	±	4.07	Yes
	09/12/23	1.85	±	0.44	6.85	±	1.62	Yes	30.90	±	1.29	114.33	±	4.77	Yes
	09/19/23	2.21	±	0.47	8.18	±	1.75	Yes	37.30	±	1.40	138.01	±	5.18	Yes
	09/26/23	1.27	±	0.39	4.70	±	1.43	Yes	25.20	±	1.17	93.24	±	4.33	Yes
OFFSITE															
BLACKFOOT	07/05/23	1.62	±	0.38	5.99	±	1.40	Yes	26.70	±	1.18	98.79	±	4.37	Yes
	07/11/23	2.10	±	0.50	7.77	±	1.86	Yes	33.50	±	1.45	123.95	±	5.37	Yes
	07/18/23	2.14	±	0.49	7.92	±	1.82	Yes	26.60	±	1.20	98.42	±	4.44	Yes
	07/25/23	2.16	±	0.45	7.99	±	1.66	Yes	28.90	±	1.27	106.93	±	4.70	Yes
	08/01/23	2.26	±	0.50	8.36	±	1.85	Yes	23.40	±	1.14	86.58	±	4.22	Yes
	08/08/23	2.51	±	0.57	9.29	±	2.12	Yes	26.70	±	1.31	98.79	±	4.85	Yes
	08/15/23	1.80	±	0.46	6.66	±	1.69	Yes	25.20	±	1.18	93.24	±	4.37	Yes
	08/22/23	2.54	±	0.53	9.40	±	1.95	Yes	27.20	±	1.21	100.64	±	4.48	Yes
	08/29/23	1.24	±	0.34	4.59	±	1.27	Yes	26.30	±	1.20	97.31	±	4.44	Yes
	09/05/23	1.05	±	0.33	3.89	±	1.22	Yes	21.90	±	1.11	81.03	±	4.11	Yes
	09/12/23	2.49	±	0.52	9.21	±	1.91	Yes	29.80	±	1.25	110.26	±	4.63	Yes
	09/19/23	2.26	±	0.46	8.36	±	1.72	Yes	35.40	±	1.33	130.98	±	4.92	Yes
	09/26/23	1.45	±	0.39	5.37	±	1.45	Yes	21.30	±	1.03	78.81	±	3.81	Yes
CRATERS OF THE MOON	07/05/23	0.96	±	0.29	3.57	±	1.06	Yes	29.20	±	1.18	108.04	±	4.37	Yes
	07/11/23	2.29	±	0.52	8.47	±	1.93	Yes	39.20	±	1.55	145.04	±	5.74	Yes
	07/18/23	1.33	±	0.40	4.92	±	1.49	Yes	26.50	±	1.20	98.05	±	4.44	Yes
	07/25/23	-0.04	±	0.10	-0.14	±	0.37	No	24.80	±	1.24	91.76	±	4.59	Yes
	08/01/23	1.08	±	0.37	4.00	±	1.37	No	22.10	±	1.14	81.77	±	4.22	Yes
	08/08/23	1.38	±	0.41	5.11	±	1.53	Yes	27.80	±	1.26	102.86	±	4.66	Yes

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

		GROSS ALPHA							GROSS BETA						
Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty (x 10^{-15} μCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s	Result ± 1s Uncertainty (x 10^{-15} μCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	08/15/23	2.05	±	0.49	7.59	±	1.81	Yes	27.80	±	1.25	102.86	±	4.63	Yes
	08/22/23	1.70	±	0.43	6.29	±	1.61	Yes	28.00	±	1.22	103.60	±	4.51	Yes
	08/29/23	2.14	±	0.44	7.92	±	1.62	Yes	27.30	±	1.21	101.01	±	4.48	Yes
	09/05/23	0.76	±	0.29	2.82	±	1.05	No	20.70	±	1.07	76.59	±	3.96	Yes
	09/12/23	2.59	±	0.52	9.58	±	1.94	Yes	30.10	±	1.26	111.37	±	4.66	Yes
	09/19/23	2.92	±	0.57	10.80	±	2.11	Yes	39.40	±	1.46	145.78	±	5.40	Yes
	09/26/23	1.59	±	0.37	5.88	±	1.38	Yes	22.70	±	1.09	83.99	±	4.03	Yes
DUBOIS	07/05/23	2.46	±	0.46	9.10	±	1.71	Yes	25.00	±	1.08	92.50	±	4.00	Yes
	07/11/23	1.58	±	0.42	5.85	±	1.55	Yes	34.80	±	1.49	128.76	±	5.51	Yes
	07/18/23	1.44	±	0.42	5.33	±	1.56	Yes	27.20	±	1.24	100.64	±	4.59	Yes
	07/25/23	1.67	±	0.42	6.18	±	1.54	Yes	28.10	±	1.30	103.97	±	4.81	Yes
	08/01/23	1.99	±	0.48	7.36	±	1.78	Yes	24.20	±	1.16	89.54	±	4.29	Yes
	08/08/23	2.21	±	0.50	8.18	±	1.86	Yes	27.50	±	1.24	101.75	±	4.59	Yes
	08/15/23	1.24	±	0.38	4.59	±	1.40	Yes	27.00	±	1.22	99.90	±	4.51	Yes
	08/22/23	2.50	±	0.53	9.25	±	1.96	Yes	27.80	±	1.24	102.86	±	4.59	Yes
	08/29/23	1.12	±	0.33	4.14	±	1.22	Yes	20.30	±	1.01	75.11	±	3.74	Yes
	09/05/23	1.73	±	0.41	6.40	±	1.51	Yes	23.00	±	1.13	85.10	±	4.18	Yes
	09/12/23	1.68	±	0.44	6.22	±	1.62	Yes	29.00	±	1.25	107.30	±	4.63	Yes
	09/19/23	1.78	±	0.41	6.59	±	1.53	Yes	39.10	±	1.46	144.67	±	5.40	Yes
	09/26/23	1.45	±	0.41	5.37	±	1.51	Yes	24.30	±	1.16	89.91	±	4.29	Yes
DUBOIS (QA 1)	07/05/23	1.27	±	0.36	4.70	±	1.31	Yes	25.70	±	1.10	95.09	±	4.07	Yes
	07/11/23	1.68	±	0.50	6.22	±	1.83	Yes	31.00	±	1.43	114.70	±	5.29	Yes
	07/18/23	1.74	±	0.42	6.44	±	1.54	Yes	25.80	±	1.16	95.46	±	4.29	Yes
	07/25/23	2.51	±	1.13	9.29	±	4.18	No	31.50	±	2.72	116.55	±	10.06	Yes
	08/01/23	1.68	±	0.41	6.22	±	1.51	Yes	21.80	±	1.14	80.66	±	4.22	Yes
	08/08/23	1.51	±	0.41	5.59	±	1.52	Yes	27.00	±	1.23	99.90	±	4.55	Yes
	08/15/23	2.38	±	0.47	8.81	±	1.75	Yes	27.90	±	1.26	103.23	±	4.66	Yes
	08/22/23	0.79	±	0.28	2.90	±	1.05	No	29.10	±	1.28	107.67	±	4.74	Yes
	08/29/23	1.71	±	0.44	6.33	±	1.61	Yes	25.90	±	1.18	95.83	±	4.37	Yes
	09/05/23	1.06	±	0.36	3.92	±	1.34	No	21.00	±	1.08	77.70	±	4.00	Yes
	09/12/23	1.81	±	0.41	6.70	±	1.51	Yes	30.10	±	1.27	111.37	±	4.70	Yes
	09/19/23	2.36	±	0.70	8.73	±	2.57	Yes	34.00	±	1.84	125.80	±	6.81	Yes
	09/26/23	1.47	±	0.37	5.44	±	1.35	Yes	27.00	±	1.20	99.90	±	4.44	Yes
IDAHO FALLS	07/05/23	1.64	±	0.43	6.07	±	1.59	Yes	27.40	±	1.20	101.38	±	4.44	Yes
	07/11/23	2.16	±	0.51	7.99	±	1.90	Yes	33.00	±	1.40	122.10	±	5.18	Yes
	07/18/23	2.67	±	0.49	9.88	±	1.80	Yes	29.30	±	1.25	108.41	±	4.63	Yes
	07/25/23	1.67	±	0.44	6.18	±	1.62	Yes	25.50	±	1.17	94.35	±	4.33	Yes
	08/01/23	1.28	±	0.40	4.74	±	1.47	Yes	25.40	±	1.21	93.98	±	4.48	Yes
	08/08/23	1.69	±	0.40	6.25	±	1.49	Yes	25.60	±	1.12	94.72	±	4.14	Yes
	08/15/23	2.92	±	0.53	10.80	±	1.95	Yes	27.20	±	1.18	100.64	±	4.37	Yes
	08/22/23	1.28	±	0.32	4.74	±	1.20	Yes	27.90	±	1.16	103.23	±	4.29	Yes
	08/29/23	1.48	±	0.40	5.48	±	1.49	Yes	24.30	±	1.13	89.91	±	4.18	Yes
	09/05/23	1.61	±	0.42	5.96	±	1.57	Yes	19.20	±	1.01	71.04	±	3.74	Yes
	09/12/23	3.05	±	0.53	11.29	±	1.97	Yes	29.40	±	1.21	108.78	±	4.48	Yes
	09/19/23	2.42	±	0.50	8.95	±	1.83	Yes	36.10	±	1.38	133.57	±	5.11	Yes
	09/26/23	2.16	±	0.49	7.99	±	1.80	Yes	27.00	±	1.20	99.90	±	4.44	Yes
IRC	07/05/23	1.70	±	0.37	6.29	±	1.36	Yes	26.90	±	1.13	99.53	±	4.18	Yes
	07/11/23	1.99	±	0.49	7.36	±	1.82	Yes	33.30	±	1.45	123.21	±	5.37	Yes
	07/18/23	1.93	±	0.49	7.14	±	1.79	Yes	31.30	±	1.33	115.81	±	4.92	Yes
	07/25/23	1.31	±	0.40	4.85	±	1.48	Yes	26.30	±	1.21	97.31	±	4.48	Yes
	08/01/23	2.93	±	0.58	10.84	±	2.16	Yes	24.40	±	1.19	90.28	±	4.40	Yes
	08/08/23	1.97	±	0.46	7.29	±	1.69	Yes	28.60	±	1.22	105.82	±	4.51	Yes
	08/15/23	1.79	±	0.45	6.62	±	1.68	Yes	25.70	±	1.19	95.09	±	4.40	Yes
	08/22/23	1.97	±	0.42	7.29	±	1.57	Yes	28.60	±	1.25	105.82	±	4.63	Yes
	08/29/23	1.39	±	0.35	5.14	±	1.28	Yes	22.70	±	1.07	83.99	±	3.96	Yes
	09/05/23	1.66	±	0.41	6.14	±	1.50	Yes	20.90	±	1.05	77.33	±	3.89	Yes

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

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			GROSS ALPHA Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			GROSS ALPHA Result > 3s	GROSS BETA Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			GROSS BETA Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			GROSS BETA Result > 3s
	09/12/23	2.29	±	0.50	8.47	±	1.83	Yes	30.10	±	1.26	111.37	±	4.66	Yes
	09/19/23	2.31	±	0.47	8.55	±	1.75	Yes	36.30	±	1.35	134.31	±	5.00	Yes
	09/26/23	1.85	±	0.44	6.85	±	1.63	Yes	25.30	±	1.13	93.61	±	4.18	Yes
IRC NORTH	07/05/23	1.19	±	0.34	4.40	±	1.25	Yes	26.20	±	1.20	96.94	±	4.44	Yes
	07/11/23	2.52	±	0.62	9.32	±	2.29	Yes	32.10	±	1.61	118.77	±	5.96	Yes
	07/18/23	1.15	±	0.43	4.26	±	1.59	No	28.10	±	1.39	103.97	±	5.14	Yes
	07/25/23	1.76	±	0.50	6.51	±	1.83	Yes	25.80	±	1.30	95.46	±	4.81	Yes
	08/01/23	1.88	±	0.51	6.96	±	1.90	Yes	25.20	±	1.31	93.24	±	4.85	Yes
	08/08/23	1.07	±	0.39	3.96	±	1.43	No	28.50	±	1.35	105.45	±	5.00	Yes
	08/15/23	1.44	±	0.46	5.33	±	1.72	Yes	28.30	±	1.39	104.71	±	5.14	Yes
	08/22/23	2.01	±	0.48	7.44	±	1.77	Yes	28.10	±	1.39	103.97	±	5.14	Yes
	08/29/23	1.23	±	0.37	4.55	±	1.36	Yes	21.90	±	1.18	81.03	±	4.37	Yes
	09/05/23	1.13	±	0.38	4.18	±	1.40	No	20.50	±	1.17	75.85	±	4.33	Yes
	09/12/23	3.16	±	0.64	11.69	±	2.37	Yes	29.40	±	1.38	108.78	±	5.11	Yes
	09/19/23	2.00	±	0.49	7.40	±	1.80	Yes	40.50	±	1.57	149.85	±	5.81	Yes
	09/26/23	1.50	±	0.46	5.55	±	1.70	Yes	22.40	±	1.21	82.88	±	4.48	Yes
JACKSON, WY	07/05/23	1.51	±	0.40	5.59	±	1.46	Yes	26.20	±	1.14	96.94	±	4.22	Yes
	07/11/23	1.63	±	0.48	6.03	±	1.78	Yes	30.50	±	1.40	112.85	±	5.18	Yes
	07/18/23	1.43	±	0.39	5.29	±	1.45	Yes	30.10	±	1.28	111.37	±	4.74	Yes
	07/25/23	1.65	±	0.45	6.11	±	1.66	Yes	28.70	±	1.27	106.19	±	4.70	Yes
	08/01/23	1.18	±	0.34	4.37	±	1.26	Yes	28.10	±	1.25	103.97	±	4.63	Yes
	08/08/23	1.45	±	0.39	5.37	±	1.45	Yes	25.00	±	1.16	92.50	±	4.29	Yes
	08/15/23	0.77	±	0.28	2.85	±	1.04	No	25.70	±	1.20	95.09	±	4.44	Yes
	08/22/23	2.11	±	0.49	7.81	±	1.82	Yes	31.10	±	1.32	115.07	±	4.88	Yes
	08/29/23	1.03	±	0.35	3.81	±	1.30	No	22.10	±	1.11	81.77	±	4.11	Yes
	09/05/23	1.03	±	0.37	3.81	±	1.38	No	22.40	±	1.16	82.88	±	4.29	Yes
	09/12/23	1.06	±	0.32	3.92	±	1.20	Yes	29.70	±	1.27	109.89	±	4.70	Yes
	09/19/23	2.21	±	0.50	8.18	±	1.86	Yes	38.30	±	1.45	141.71	±	5.37	Yes
	09/26/23	1.10	±	0.33	4.07	±	1.21	Yes	27.30	±	1.23	101.01	±	4.55	Yes
SUGAR CITY	07/05/23	1.95	±	0.41	7.22	±	1.53	Yes	26.10	±	1.10	96.57	±	4.07	Yes
	07/11/23	2.64	±	0.54	9.77	±	1.98	Yes	35.10	±	1.51	129.87	±	5.59	Yes
	07/18/23	2.75	±	0.57	10.18	±	2.10	Yes	30.40	±	1.31	112.48	±	4.85	Yes
	07/25/23	2.03	±	0.46	7.51	±	1.69	Yes	30.90	±	1.30	114.33	±	4.81	Yes
	08/01/23	1.66	±	0.44	6.14	±	1.64	Yes	24.20	±	1.15	89.54	±	4.26	Yes
	08/08/23	1.44	±	0.41	5.33	±	1.50	Yes	28.20	±	1.24	104.34	±	4.59	Yes
	08/15/23	1.92	±	0.46	7.10	±	1.69	Yes	27.90	±	1.22	103.23	±	4.51	Yes
	08/22/23	1.55	±	0.43	5.74	±	1.58	Yes	30.40	±	1.30	112.48	±	4.81	Yes
	08/29/23	1.02	±	0.33	3.77	±	1.22	Yes	25.50	±	1.17	94.35	±	4.33	Yes
	09/05/23	1.54	±	0.40	5.70	±	1.48	Yes	21.20	±	1.09	78.44	±	4.03	Yes
	09/12/23	1.66	±	0.43	6.14	±	1.59	Yes	27.90	±	1.21	103.23	±	4.48	Yes
a	09/19/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
a	09/26/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
ONSITE															
ATR COMPLEX	07/05/23	2.38	±	0.81	8.81	±	2.99	No	26.60	±	1.99	98.42	±	7.36	Yes
	07/11/23	0.97	±	0.36	3.59	±	1.31	No	36.40	±	1.60	134.68	±	5.92	Yes
	07/18/23	1.82	±	0.49	6.73	±	1.82	Yes	24.60	±	1.25	91.02	±	4.63	Yes
	07/25/23	2.34	±	0.55	8.66	±	2.05	Yes	28.10	±	1.33	103.97	±	4.92	Yes
	08/01/23	1.82	±	0.50	6.73	±	1.86	Yes	23.00	±	1.22	85.10	±	4.51	Yes
	08/08/23	1.10	±	0.37	4.07	±	1.38	No	30.00	±	1.33	111.00	±	4.92	Yes
	08/15/23	3.05	±	0.60	11.29	±	2.23	Yes	26.90	±	1.27	99.53	±	4.70	Yes
	08/22/23	2.29	±	0.52	8.47	±	1.93	Yes	28.30	±	1.28	104.71	±	4.74	Yes
	08/29/23	2.17	±	0.48	8.03	±	1.77	Yes	23.30	±	1.15	86.21	±	4.26	Yes
	09/05/23	2.37	±	0.51	8.77	±	1.88	Yes	20.50	±	1.11	75.85	±	4.11	Yes
	09/12/23	2.84	±	0.57	10.51	±	2.11	Yes	31.40	±	1.33	116.18	±	4.92	Yes
	09/19/23	3.23	±	0.56	11.95	±	2.06	Yes	38.40	±	1.49	142.08	±	5.51	Yes
	09/26/23	2.15	±	0.50	7.96	±	1.84	Yes	27.60	±	1.25	102.12	±	4.63	Yes

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

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty ($x 10^{-15}$ µCi/mL)			GROSS ALPHA Result ± 1s Uncertainty ($x 10^{-11}$ Bq/mL)			GROSS ALPHA Result > 3s	GROSS BETA Result ± 1s Uncertainty ($x 10^{-15}$ µCi/mL)			GROSS BETA Result ± 1s Uncertainty ($x 10^{-11}$ Bq/mL)			GROSS BETA Result > 3s
CFA	07/05/23	1.58	±	0.40	5.85	±	1.48	Yes	27.30	±	1.15	101.01	±	4.26	Yes
	07/11/23	1.38	±	0.45	5.11	±	1.65	Yes	36.40	±	1.52	134.68	±	5.62	Yes
	07/18/23	2.88	±	0.54	10.66	±	2.00	Yes	27.00	±	1.22	99.90	±	4.51	Yes
	07/25/23	1.65	±	0.44	6.11	±	1.64	Yes	29.10	±	1.27	107.67	±	4.70	Yes
	08/01/23	1.49	±	0.39	5.51	±	1.43	Yes	24.80	±	1.20	91.76	±	4.44	Yes
	08/08/23	2.18	±	0.45	8.07	±	1.65	Yes	32.40	±	1.32	119.88	±	4.88	Yes
	08/15/23	1.91	±	0.42	7.07	±	1.57	Yes	28.20	±	1.26	104.34	±	4.66	Yes
	08/22/23	1.47	±	0.38	5.44	±	1.39	Yes	28.20	±	1.20	104.34	±	4.44	Yes
	08/29/23	1.10	±	0.36	4.07	±	1.32	Yes	25.90	±	1.18	95.83	±	4.37	Yes
	09/05/23	2.22	±	0.51	8.21	±	1.90	Yes	21.60	±	1.11	79.92	±	4.11	Yes
	09/12/23	1.71	±	0.70	6.33	±	2.59	No	24.80	±	2.02	91.76	±	7.47	Yes
	09/19/23	1.81	±	0.41	6.70	±	1.52	Yes	40.40	±	1.46	149.48	±	5.40	Yes
	09/26/23	1.38	±	0.39	5.11	±	1.43	Yes	28.00	±	1.20	103.60	±	4.44	Yes
EBR-I	07/05/23	1.19	±	0.33	4.40	±	1.20	Yes	25.50	±	1.14	94.35	±	4.22	Yes
	07/11/23	2.21	±	0.53	8.18	±	1.95	Yes	32.90	±	1.48	121.73	±	5.48	Yes
	07/18/23	2.27	±	0.52	8.40	±	1.94	Yes	28.10	±	1.27	103.97	±	4.70	Yes
	07/25/23	1.75	±	0.44	6.48	±	1.61	Yes	29.00	±	1.36	107.30	±	5.03	Yes
	08/01/23	1.99	±	0.49	7.36	±	1.82	Yes	24.70	±	1.21	91.39	±	4.48	Yes
	08/08/23	2.66	±	0.55	9.84	±	2.05	Yes	29.50	±	1.29	109.15	±	4.77	Yes
	08/15/23	1.66	±	0.45	6.14	±	1.67	Yes	27.70	±	1.26	102.49	±	4.66	Yes
	08/22/23	1.64	±	0.44	6.07	±	1.61	Yes	26.00	±	1.19	96.20	±	4.40	Yes
	08/29/23	1.78	±	0.41	6.59	±	1.52	Yes	26.20	±	1.21	96.94	±	4.48	Yes
	09/05/23	0.94	±	0.31	3.47	±	1.15	Yes	21.60	±	1.09	79.92	±	4.03	Yes
	09/12/23	2.83	±	0.55	10.47	±	2.04	Yes	31.30	±	1.29	115.81	±	4.77	Yes
	09/19/23	2.82	±	0.55	10.43	±	2.04	Yes	41.60	±	1.48	153.92	±	5.48	Yes
	09/26/23	2.07	±	0.42	7.66	±	1.56	Yes	28.50	±	1.21	105.45	±	4.48	Yes
EFS	07/05/23	-0.09	±	0.02	-0.35	±	0.08	No	0.56	±	0.29	2.07	±	1.07	No
	07/11/23	1.51	±	0.41	5.59	±	1.52	Yes	36.00	±	1.52	133.20	±	5.62	Yes
	07/18/23	2.16	±	0.50	7.99	±	1.85	Yes	23.40	±	1.15	86.58	±	4.26	Yes
	07/25/23	1.69	±	0.45	6.25	±	1.68	Yes	30.60	±	1.32	113.22	±	4.88	Yes
	08/01/23	1.55	±	0.45	5.74	±	1.65	Yes	23.30	±	1.17	86.21	±	4.33	Yes
	08/08/23	1.78	±	0.44	6.59	±	1.64	Yes	31.00	±	1.28	114.70	±	4.74	Yes
	08/15/23	1.69	±	0.44	6.25	±	1.64	Yes	28.90	±	1.27	106.93	±	4.70	Yes
	08/22/23	1.86	±	0.42	6.88	±	1.57	Yes	28.30	±	1.21	104.71	±	4.48	Yes
	08/29/23	1.15	±	0.68	4.26	±	2.50	No	22.00	±	2.11	81.40	±	7.81	Yes
	09/05/23	1.14	±	0.34	4.22	±	1.27	Yes	23.50	±	1.15	86.95	±	4.26	Yes
	09/12/23	1.25	±	0.38	4.63	±	1.40	Yes	30.10	±	1.25	111.37	±	4.63	Yes
	09/19/23	2.14	±	0.44	7.92	±	1.63	Yes	39.10	±	1.44	144.67	±	5.33	Yes
	09/26/23	0.96	±	0.55	3.55	±	2.02	No	26.90	±	1.91	99.53	±	7.07	Yes
GATE 4	07/05/23	0.95	±	0.32	3.51	±	1.20	No	25.50	±	1.11	94.35	±	4.11	Yes
	07/11/23	2.15	±	0.54	7.96	±	2.01	Yes	36.80	±	1.56	136.16	±	5.77	Yes
	07/18/23	1.88	±	0.44	6.96	±	1.64	Yes	28.00	±	1.31	103.60	±	4.85	Yes
	07/25/23	1.33	±	0.41	4.92	±	1.51	Yes	30.10	±	1.30	111.37	±	4.81	Yes
	08/01/23	1.92	±	0.48	7.10	±	1.76	Yes	23.80	±	1.19	88.06	±	4.40	Yes
	08/08/23	1.32	±	0.39	4.88	±	1.43	Yes	29.90	±	1.29	110.63	±	4.77	Yes
	08/15/23	1.41	±	0.40	5.22	±	1.47	Yes	29.70	±	1.28	109.89	±	4.74	Yes
	08/22/23	1.55	±	0.39	5.74	±	1.45	Yes	26.30	±	1.25	97.31	±	4.63	Yes
	08/29/23	1.78	±	0.45	6.59	±	1.68	Yes	25.70	±	1.20	95.09	±	4.44	Yes
	09/05/23	1.42	±	0.42	5.25	±	1.54	Yes	19.90	±	1.07	73.63	±	3.96	Yes
	09/12/23	0.90	±	0.32	3.33	±	1.17	No	30.10	±	1.27	111.37	±	4.70	Yes
	09/19/23	3.02	±	0.55	11.17	±	2.05	Yes	42.20	±	1.50	156.14	±	5.55	Yes
	09/26/23	2.04	±	0.49	7.55	±	1.80	Yes	27.20	±	1.23	100.64	±	4.55	Yes
HIGHWAY 26 REST AREA	07/05/23	1.33	±	0.38	4.92	±	1.39	Yes	26.80	±	1.14	99.16	±	4.22	Yes
	07/11/23	3.17	±	0.64	11.73	±	2.36	Yes	37.10	±	1.53	137.27	±	5.66	Yes
	07/18/23	1.16	±	0.35	4.29	±	1.28	Yes	28.50	±	1.29	105.45	±	4.77	Yes
	07/25/23	1.18	±	0.36	4.37	±	1.33	Yes	24.50	±	1.18	90.65	±	4.37	Yes

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

Sampling Group and Location		Sampling Date	GROSS ALPHA Result ± 1s Uncertainty (x 10^-15 µCi/mL)			GROSS ALPHA Result ± 1s Uncertainty (x 10^-11 Bq/mL)			GROSS ALPHA Result > 3s	GROSS BETA Result ± 1s Uncertainty (x 10^-15 µCi/mL)			GROSS BETA Result ± 1s Uncertainty (x 10^-11 Bq/mL)			GROSS BETA Result > 3s
		08/01/23	1.78	±	0.46	6.59	±	1.68	Yes	24.80	±	1.20	91.76	±	4.44	Yes
		08/08/23	1.36	±	0.38	5.03	±	1.39	Yes	30.50	±	1.34	112.85	±	4.96	Yes
		08/15/23	2.82	±	0.55	10.43	±	2.03	Yes	27.90	±	1.25	103.23	±	4.63	Yes
		08/22/23	1.36	±	0.41	5.03	±	1.50	Yes	28.80	±	1.28	106.56	±	4.74	Yes
		08/29/23	1.38	±	0.41	5.11	±	1.51	Yes	27.40	±	1.25	101.38	±	4.63	Yes
		09/05/23	1.68	±	0.45	6.22	±	1.68	Yes	22.10	±	1.12	81.77	±	4.14	Yes
		09/12/23	2.27	±	0.48	8.40	±	1.79	Yes	30.40	±	1.29	112.48	±	4.77	Yes
		09/19/23	2.45	±	0.53	9.07	±	1.95	Yes	38.10	±	1.44	140.97	±	5.33	Yes
		09/26/23	2.14	±	0.47	7.92	±	1.72	Yes	27.60	±	1.21	102.12	±	4.48	Yes
INTEC (NE CORNER)	a	07/05/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	07/11/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	07/18/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	07/25/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	08/01/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	08/08/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	08/15/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	08/22/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	08/29/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	09/05/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	09/12/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	09/19/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
	a	09/26/23		±		0.00	±	0.00	No		±		0.00	±	0.00	No
INTEC (QA 2)		07/05/23	2.15	±	0.46	7.96	±	1.71	Yes	27.60	±	1.16	102.12	±	4.29	Yes
		07/11/23	2.22	±	0.55	8.21	±	2.02	Yes	29.90	±	1.38	110.63	±	5.11	Yes
		07/18/23	2.14	±	0.47	7.92	±	1.75	Yes	25.90	±	1.20	95.83	±	4.44	Yes
		07/25/23	2.35	±	0.53	8.70	±	1.95	Yes	28.80	±	1.28	106.56	±	4.74	Yes
		08/01/23	1.29	±	0.37	4.77	±	1.38	Yes	24.20	±	1.22	89.54	±	4.51	Yes
		08/08/23	2.07	±	0.44	7.66	±	1.64	Yes	29.30	±	1.28	108.41	±	4.74	Yes
		08/15/23	2.10	±	0.45	7.77	±	1.65	Yes	28.30	±	1.26	104.71	±	4.66	Yes
		08/22/23	2.32	±	0.48	8.58	±	1.78	Yes	29.30	±	1.25	108.41	±	4.63	Yes
		08/29/23	2.12	±	0.48	7.84	±	1.78	Yes	24.50	±	1.15	90.65	±	4.26	Yes
		09/05/23	1.55	±	0.43	5.74	±	1.61	Yes	22.50	±	1.12	83.25	±	4.14	Yes
		09/12/23	2.46	±	0.47	9.10	±	1.74	Yes	35.00	±	1.36	129.50	±	5.03	Yes
		09/19/23	1.64	±	0.39	6.07	±	1.45	Yes	38.60	±	1.43	142.82	±	5.29	Yes
		09/26/23	1.77	±	0.43	6.55	±	1.60	Yes	27.70	±	1.20	102.49	±	4.44	Yes
INTEC (WEST SIDE)		07/05/23	1.80	±	0.44	6.66	±	1.64	Yes	26.70	±	1.17	98.79	±	4.33	Yes
		07/11/23	1.55	±	0.45	5.74	±	1.68	Yes	37.20	±	1.52	137.64	±	5.62	Yes
		07/18/23	2.43	±	0.47	8.99	±	1.73	Yes	30.20	±	1.28	111.74	±	4.74	Yes
		07/25/23	2.21	±	0.47	8.18	±	1.75	Yes	25.70	±	1.19	95.09	±	4.40	Yes
		08/01/23	1.62	±	0.43	5.99	±	1.58	Yes	25.40	±	1.19	93.98	±	4.40	Yes
		08/08/23	1.46	±	0.38	5.40	±	1.41	Yes	24.70	±	1.12	91.39	±	4.14	Yes
		08/15/23	1.60	±	0.40	5.92	±	1.49	Yes	27.70	±	1.20	102.49	±	4.44	Yes
		08/22/23	2.07	±	0.47	7.66	±	1.75	Yes	28.50	±	1.22	105.45	±	4.51	Yes
		08/29/23	2.19	±	0.49	8.10	±	1.79	Yes	25.50	±	1.16	94.35	±	4.29	Yes
		09/05/23	1.60	±	0.43	5.92	±	1.60	Yes	22.10	±	1.09	81.77	±	4.03	Yes
		09/12/23	2.10	±	0.45	7.77	±	1.66	Yes	30.50	±	1.24	112.85	±	4.59	Yes
		09/19/23	2.10	±	0.47	7.77	±	1.75	Yes	39.90	±	1.42	147.63	±	5.25	Yes
		09/26/23	1.20	±	0.35	4.44	±	1.28	Yes	28.90	±	1.20	106.93	±	4.44	Yes
MAIN GATE		07/05/23	1.93	±	0.45	7.14	±	1.66	Yes	29.10	±	1.20	107.67	±	4.44	Yes
		07/11/23	1.71	±	0.48	6.33	±	1.77	Yes	32.00	±	1.43	118.40	±	5.29	Yes
		07/18/23	1.48	±	0.38	5.48	±	1.41	Yes	28.50	±	1.27	105.45	±	4.70	Yes
		07/25/23	1.58	±	0.41	5.85	±	1.52	Yes	27.10	±	1.23	100.27	±	4.55	Yes
		08/01/23	1.19	±	0.39	4.40	±	1.43	Yes	22.60	±	1.15	83.62	±	4.26	Yes
		08/08/23	1.14	±	0.33	4.22	±	1.22	Yes	29.00	±	1.24	107.30	±	4.59	Yes
		08/15/23	1.39	±	0.39	5.14	±	1.45	Yes	24.90	±	1.17	92.13	±	4.33	Yes
		08/22/23	1.58	±	0.43	5.85	±	1.61	Yes	30.50	±	1.31	112.85	±	4.85	Yes

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

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s	GROSS BETA Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	08/29/23	1.30	±	0.39	4.81	±	1.43	Yes	26.60	±	1.20	98.42	±	4.44	Yes
	09/05/23	1.48	±	0.43	5.48	±	1.59	Yes	21.20	±	1.10	78.44	±	4.07	Yes
	09/12/23	1.68	±	0.41	6.22	±	1.51	Yes	30.10	±	1.24	111.37	±	4.59	Yes
	09/19/23	2.96	±	0.56	10.95	±	2.09	Yes	39.00	±	1.42	144.30	±	5.25	Yes
	09/26/23	0.86	±	0.30	3.19	±	1.11	No	26.50	±	1.16	98.05	±	4.29	Yes
MFC NORTH	07/05/23	2.73	±	0.51	10.10	±	1.88	Yes	21.80	±	1.02	80.66	±	3.77	Yes
	07/11/23	2.05	±	0.54	7.59	±	1.99	Yes	32.30	±	1.46	119.51	±	5.40	Yes
	07/18/23	2.39	±	0.49	8.84	±	1.82	Yes	24.20	±	1.15	89.54	±	4.26	Yes
	07/25/23	1.54	±	0.40	5.70	±	1.46	Yes	27.60	±	1.28	102.12	±	4.74	Yes
	08/01/23	1.28	±	0.35	4.74	±	1.31	Yes	15.90	±	0.97	58.83	±	3.58	Yes
	08/08/23	1.51	±	0.39	5.59	±	1.46	Yes	23.60	±	1.11	87.32	±	4.11	Yes
	08/15/23	0.97	±	0.32	3.60	±	1.17	Yes	26.00	±	1.23	96.20	±	4.55	Yes
	08/22/23	1.70	±	0.43	6.29	±	1.61	Yes	27.10	±	1.20	100.27	±	4.44	Yes
	08/29/23	1.86	±	0.47	6.88	±	1.75	Yes	20.90	±	1.12	77.33	±	4.14	Yes
	09/05/23	1.42	±	0.42	5.25	±	1.54	Yes	20.60	±	1.09	76.22	±	4.03	Yes
	09/12/23	1.73	±	0.40	6.40	±	1.48	Yes	30.30	±	1.27	112.11	±	4.70	Yes
	09/19/23	2.96	±	0.58	10.95	±	2.13	Yes	33.50	±	1.37	123.95	±	5.07	Yes
	09/26/23	1.48	±	0.38	5.48	±	1.41	Yes	26.40	±	1.23	97.68	±	4.55	Yes
MFC SOUTH	07/05/23	1.37	±	0.35	5.07	±	1.29	Yes	24.40	±	1.06	90.28	±	3.92	Yes
	07/11/23	2.75	±	0.56	10.18	±	2.06	Yes	37.00	±	1.58	136.90	±	5.85	Yes
	07/18/23	1.19	±	0.38	4.40	±	1.41	Yes	26.90	±	1.22	99.53	±	4.51	Yes
	07/25/23	1.92	±	0.46	7.10	±	1.69	Yes	25.10	±	1.21	92.87	±	4.48	Yes
	08/01/23	1.39	±	0.43	5.14	±	1.61	Yes	22.50	±	1.18	83.25	±	4.37	Yes
	08/08/23	2.01	±	0.47	7.44	±	1.73	Yes	30.40	±	1.27	112.48	±	4.70	Yes
	08/15/23	1.28	±	0.39	4.74	±	1.45	Yes	23.00	±	1.15	85.10	±	4.26	Yes
	08/22/23	1.28	±	0.38	4.74	±	1.40	Yes	25.70	±	1.17	95.09	±	4.33	Yes
	08/29/23	0.93	±	0.32	3.45	±	1.18	No	26.20	±	1.19	96.94	±	4.40	Yes
	09/05/23	1.65	±	0.42	6.11	±	1.54	Yes	20.30	±	1.07	75.11	±	3.96	Yes
	09/12/23	2.00	±	0.46	7.40	±	1.71	Yes	30.10	±	1.24	111.37	±	4.59	Yes
	09/19/23	2.12	±	0.49	7.84	±	1.82	Yes	41.70	±	1.49	154.29	±	5.51	Yes
	09/26/23	1.04	±	0.33	3.85	±	1.21	Yes	24.50	±	1.11	90.65	±	4.11	Yes
NRF	07/05/23	1.05	±	0.41	3.89	±	1.52	No	29.60	±	1.62	109.52	±	5.99	Yes
	07/11/23	1.86	±	0.47	6.88	±	1.75	Yes	35.80	±	1.49	132.46	±	5.51	Yes
	07/18/23	2.11	±	0.50	7.81	±	1.85	Yes	28.20	±	1.25	104.34	±	4.63	Yes
	07/25/23	1.22	±	0.39	4.51	±	1.45	Yes	29.90	±	1.30	110.63	±	4.81	Yes
	08/01/23	2.37	±	0.55	8.77	±	2.05	Yes	25.50	±	1.28	94.35	±	4.74	Yes
	08/08/23	2.31	±	0.50	8.55	±	1.84	Yes	25.50	±	1.16	94.35	±	4.29	Yes
	08/15/23	1.98	±	0.49	7.33	±	1.81	Yes	24.90	±	1.20	92.13	±	4.44	Yes
	08/22/23	2.24	±	0.49	8.29	±	1.82	Yes	29.30	±	1.39	108.41	±	5.14	Yes
	08/29/23	1.33	±	0.36	4.92	±	1.32	Yes	28.20	±	1.24	104.34	±	4.59	Yes
	09/05/23	0.86	±	0.30	3.16	±	1.12	No	22.00	±	1.10	81.40	±	4.07	Yes
	09/12/23	2.73	±	0.54	10.10	±	2.01	Yes	33.10	±	1.33	122.47	±	4.92	Yes
	09/19/23	2.77	±	0.53	3.89	±	1.27	Yes	42.30	±	1.49	156.51	±	5.51	Yes
	09/26/23	1.45	±	0.41	5.37	±	1.51	Yes	26.80	±	1.19	99.16	±	4.40	Yes
PBF	07/05/23	1.30	±	0.38	4.81	±	1.40	Yes	23.50	±	1.11	86.95	±	4.11	Yes
	07/11/23	0.71	±	0.29	2.61	±	1.08	No	11.90	±	0.80	44.03	±	2.95	Yes
	07/18/23	1.65	±	0.41	6.11	±	1.51	Yes	26.70	±	1.19	98.79	±	4.40	Yes
	07/25/23	2.62	±	0.54	9.69	±	1.98	Yes	27.50	±	1.22	101.75	±	4.51	Yes
	08/01/23	0.92	±	0.31	3.39	±	1.13	No	23.70	±	1.16	87.69	±	4.29	Yes
	08/08/23	2.35	±	0.45	8.70	±	1.68	Yes	29.20	±	1.23	108.04	±	4.55	Yes
	08/15/23	1.61	±	0.39	5.96	±	1.43	Yes	27.70	±	1.23	102.49	±	4.55	Yes
	08/22/23	1.58	±	0.42	5.85	±	1.55	Yes	30.50	±	1.34	112.85	±	4.96	Yes
	08/29/23	1.66	±	0.45	6.14	±	1.68	Yes	24.60	±	1.21	91.02	±	4.48	Yes
	09/05/23	1.27	±	0.37	4.70	±	1.37	Yes	14.40	±	0.85	53.28	±	3.14	Yes
	09/12/23	2.08	±	0.42	7.70	±	1.55	Yes	28.30	±	1.19	104.71	±	4.40	Yes
	09/19/23	2.82	±	0.50	10.43	±	1.86	Yes	39.40	±	1.44	145.78	±	5.33	Yes

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

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s	GROSS BETA Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	09/26/23	1.44	±	0.39	5.33	±	1.44	Yes	27.30	±	1.17	101.01	±	4.33	Yes
RHLLW	07/05/23	1.57	±	0.40	5.81	±	1.48	Yes	27.10	±	1.13	100.27	±	4.18	Yes
	07/11/23	1.68	±	0.47	6.22	±	1.75	Yes	36.20	±	1.50	133.94	±	5.55	Yes
	07/18/23	2.09	±	0.44	7.73	±	1.61	Yes	29.30	±	1.26	108.41	±	4.66	Yes
	07/25/23	1.61	±	0.41	5.96	±	1.50	Yes	30.80	±	1.28	113.96	±	4.74	Yes
	08/01/23	2.00	±	0.48	7.40	±	1.78	Yes	26.00	±	1.23	96.20	±	4.55	Yes
	08/08/23	2.53	±	0.48	9.36	±	1.77	Yes	30.00	±	1.27	111.00	±	4.70	Yes
	08/15/23	2.59	±	0.50	9.58	±	1.86	Yes	27.90	±	1.20	103.23	±	4.44	Yes
	08/22/23	1.06	±	0.35	3.92	±	1.28	Yes	27.40	±	1.19	101.38	±	4.40	Yes
	08/29/23	2.38	±	0.50	8.81	±	1.86	Yes	23.90	±	1.12	88.43	±	4.14	Yes
	09/05/23	0.98	±	0.35	3.63	±	1.30	No	21.50	±	1.07	79.55	±	3.96	Yes
	09/12/23	2.66	±	0.50	9.84	±	1.86	Yes	26.90	±	1.17	99.53	±	4.33	Yes
	09/19/23	2.68	±	0.53	9.92	±	1.96	Yes	39.10	±	1.40	144.67	±	5.18	Yes
	09/26/23	1.71	±	0.40	6.33	±	1.48	Yes	27.20	±	1.15	100.64	±	4.26	Yes
RWMC	07/05/23	1.55	±	0.44	5.74	±	1.62	Yes	28.40	±	1.34	105.08	±	4.96	Yes
	07/11/23	2.03	±	0.48	7.51	±	1.76	Yes	35.20	±	1.51	130.24	±	5.59	Yes
	07/18/23	3.73	±	0.64	13.80	±	2.38	Yes	25.70	±	1.20	95.09	±	4.44	Yes
	07/25/23	2.27	±	0.51	8.40	±	1.88	Yes	28.00	±	1.24	103.60	±	4.59	Yes
	08/01/23	2.20	±	0.51	8.14	±	1.87	Yes	24.00	±	1.16	88.80	±	4.29	Yes
	08/08/23	1.22	±	0.38	4.51	±	1.42	Yes	29.90	±	1.28	110.63	±	4.74	Yes
	08/15/23	2.17	±	0.49	8.03	±	1.81	Yes	27.70	±	1.23	102.49	±	4.55	Yes
	08/22/23	2.22	±	0.46	8.21	±	1.71	Yes	28.60	±	1.21	105.82	±	4.48	Yes
	08/29/23	1.89	±	0.43	6.99	±	1.58	Yes	23.20	±	1.10	85.84	±	4.07	Yes
	09/05/23	1.75	±	0.40	6.48	±	1.49	Yes	23.50	±	1.12	86.95	±	4.14	Yes
	09/12/23	2.94	±	0.56	10.88	±	2.07	Yes	31.00	±	1.27	114.70	±	4.70	Yes
	09/19/23	1.84	±	0.41	6.81	±	1.51	Yes	42.50	±	1.48	157.25	±	5.48	Yes
	09/26/23	2.31	±	0.48	8.55	±	1.79	Yes	28.40	±	1.19	105.08	±	4.40	Yes
RWMC (QA 3)	07/05/23	2.09	±	0.49	7.73	±	1.80	Yes	32.00	±	1.46	118.40	±	5.40	Yes
	07/11/23	2.56	±	0.55	9.47	±	2.05	Yes	33.50	±	1.46	123.95	±	5.40	Yes
	07/18/23	2.25	±	0.52	8.33	±	1.92	Yes	27.80	±	1.26	102.86	±	4.66	Yes
	07/25/23	1.75	±	0.42	6.48	±	1.56	Yes	26.80	±	1.27	99.16	±	4.70	Yes
	08/01/23	2.06	±	0.47	7.62	±	1.74	Yes	14.10	±	0.88	52.17	±	3.26	Yes
	08/08/23	1.96	±	0.47	7.25	±	1.75	Yes	26.90	±	1.22	99.53	±	4.51	Yes
	08/15/23	1.89	±	0.47	6.99	±	1.72	Yes	26.50	±	1.20	98.05	±	4.44	Yes
	08/22/23	1.90	±	0.46	7.03	±	1.69	Yes	28.40	±	1.22	105.08	±	4.51	Yes
	08/29/23	0.96	±	0.30	3.54	±	1.11	Yes	25.30	±	1.16	93.61	±	4.29	Yes
	09/05/23	1.17	±	0.34	4.33	±	1.25	Yes	23.40	±	1.12	86.58	±	4.14	Yes
	09/12/23	2.29	±	0.50	8.47	±	1.84	Yes	28.10	±	1.22	103.97	±	4.51	Yes
	09/19/23	2.39	±	0.51	8.84	±	1.87	Yes	37.50	±	1.40	138.75	±	5.18	Yes
	09/26/23	0.92	±	0.29	3.42	±	1.06	Yes	21.30	±	1.04	78.81	±	3.85	Yes
RWMC SOUTH	07/05/23	1.68	±	0.39	6.22	±	1.44	Yes	27.40	±	1.09	101.38	±	4.03	Yes
	07/11/23	1.71	±	0.47	6.33	±	1.72	Yes	35.70	±	1.44	132.09	±	5.33	Yes
	07/18/23	2.21	±	0.46	8.18	±	1.69	Yes	27.50	±	1.18	101.75	±	4.37	Yes
	07/25/23	1.53	±	0.38	5.66	±	1.41	Yes	30.60	±	1.29	113.22	±	4.77	Yes
	08/01/23	1.23	±	0.34	4.55	±	1.27	Yes	27.40	±	1.22	101.38	±	4.51	Yes
	08/08/23	2.42	±	0.49	8.95	±	1.81	Yes	28.20	±	1.21	104.34	±	4.48	Yes
	08/15/23	1.65	±	0.39	6.11	±	1.42	Yes	28.50	±	1.23	105.45	±	4.55	Yes
	08/22/23	2.17	±	0.47	8.03	±	1.74	Yes	28.90	±	1.19	106.93	±	4.40	Yes
	08/29/23	1.23	±	0.36	4.55	±	1.34	Yes	24.00	±	1.10	88.80	±	4.07	Yes
	09/05/23	1.18	±	0.36	4.37	±	1.34	Yes	22.00	±	1.06	81.40	±	3.92	Yes
	09/12/23	1.65	±	0.38	6.11	±	1.41	Yes	32.30	±	1.28	119.51	±	4.74	Yes
	09/19/23	2.38	±	0.49	8.81	±	1.83	Yes	40.90	±	1.42	151.33	±	5.25	Yes
	09/26/23	1.35	±	0.34	5.00	±	1.24	Yes	25.90	±	1.12	95.83	±	4.14	Yes
SMC	07/05/23	2.28	±	0.48	8.44	±	1.78	Yes	24.00	±	1.09	88.80	±	4.03	Yes
	07/11/23	3.02	±	0.64	11.17	±	2.35	Yes	34.80	±	1.51	128.76	±	5.59	Yes
	07/18/23	1.33	±	0.37	4.92	±	1.35	Yes	26.90	±	1.25	99.53	±	4.63	Yes

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

Sampling Group and Location	Sampling Date	GROSS ALPHA Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s	GROSS BETA Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	07/25/23	1.82	±	0.48	6.73	±	1.76	Yes	28.80	±	1.30	106.56	±	4.81	Yes
	08/01/23	2.01	±	0.47	7.44	±	1.74	Yes	15.50	±	0.95	57.35	±	3.50	Yes
	08/08/23	1.81	±	0.45	6.70	±	1.65	Yes	31.00	±	1.31	114.70	±	4.85	Yes
	08/15/23	1.43	±	0.40	5.29	±	1.48	Yes	27.00	±	1.23	99.90	±	4.55	Yes
	08/22/23	1.79	±	0.42	6.62	±	1.54	Yes	26.90	±	1.25	99.53	±	4.63	Yes
	08/29/23	1.69	±	0.44	6.25	±	1.64	Yes	25.80	±	1.21	95.46	±	4.48	Yes
	09/05/23	1.61	±	0.44	5.96	±	1.63	Yes	20.60	±	1.08	76.22	±	4.00	Yes
	09/12/23	1.76	±	0.43	6.51	±	1.58	Yes	33.30	±	1.33	123.21	±	4.92	Yes
	09/19/23	1.72	±	0.45	6.36	±	1.66	Yes	38.50	±	1.45	142.45	±	5.37	Yes
	09/26/23	1.57	±	0.40	5.81	±	1.49	Yes	27.90	±	1.22	103.23	±	4.51	Yes
VAN BUREN	07/05/23	1.69	±	0.39	6.25	±	1.45	Yes	26.90	±	1.14	99.53	±	4.22	Yes
	07/11/23	3.79	±	0.64	14.02	±	2.36	Yes	38.40	±	1.58	142.08	±	5.85	Yes
	07/18/23	1.83	±	0.48	6.77	±	1.77	Yes	26.50	±	1.25	98.05	±	4.63	Yes
	07/25/23	1.66	±	0.43	6.14	±	1.59	Yes	27.80	±	1.28	102.86	±	4.74	Yes
	08/01/23	1.70	±	0.47	6.29	±	1.74	Yes	25.80	±	1.24	95.46	±	4.59	Yes
	08/08/23	2.63	±	0.54	9.73	±	2.01	Yes	29.20	±	1.27	108.04	±	4.70	Yes
	08/15/23	1.65	±	0.45	6.11	±	1.65	Yes	28.90	±	1.30	106.93	±	4.81	Yes
	08/22/23	1.98	±	0.48	7.33	±	1.76	Yes	30.50	±	1.30	112.85	±	4.81	Yes
	08/29/23	1.53	±	0.40	5.66	±	1.48	Yes	26.10	±	1.20	96.57	±	4.44	Yes
	09/05/23	1.57	±	0.41	5.81	±	1.50	Yes	20.70	±	1.08	76.59	±	4.00	Yes
	09/12/23	1.70	±	0.44	6.29	±	1.63	Yes	29.60	±	1.26	109.52	±	4.66	Yes
	09/19/23	3.03	±	0.58	11.21	±	2.13	Yes	38.40	±	1.43	142.08	±	5.29	Yes
	09/26/23	1.62	±	0.40	5.99	±	1.49	Yes	26.70	±	1.18	98.79	±	4.37	Yes
VAN BUREN (QA 4)	07/05/23	1.64	±	0.38	6.07	±	1.41	Yes	27.00	±	1.12	99.90	±	4.14	Yes
	07/11/23	1.65	±	0.41	6.11	±	1.52	Yes	39.30	±	1.52	145.41	±	5.62	Yes
	07/18/23	2.12	±	0.49	7.84	±	1.82	Yes	25.90	±	1.19	95.83	±	4.40	Yes
	07/25/23	1.52	±	0.39	5.62	±	1.46	Yes	28.90	±	1.24	106.93	±	4.59	Yes
	08/01/23	1.84	±	0.46	6.81	±	1.70	Yes	25.10	±	1.16	92.87	±	4.29	Yes
	08/08/23	1.29	±	0.38	4.77	±	1.41	Yes	28.60	±	1.23	105.82	±	4.55	Yes
	08/15/23	2.29	±	0.51	8.47	±	1.87	Yes	27.80	±	1.24	102.86	±	4.59	Yes
	08/22/23	0.75	±	0.30	2.78	±	1.10	No	28.70	±	1.21	106.19	±	4.48	Yes
	08/29/23	1.90	±	0.43	7.03	±	1.59	Yes	26.70	±	1.18	98.79	±	4.37	Yes
	09/05/23	1.17	±	0.34	4.33	±	1.26	Yes	21.60	±	1.06	79.92	±	3.92	Yes
	09/12/23	3.17	±	0.57	11.73	±	2.12	Yes	30.60	±	1.25	113.22	±	4.63	Yes
	09/19/23	2.54	±	0.51	9.40	±	1.89	Yes	38.70	±	1.38	143.19	±	5.11	Yes
	09/26/23	1.23	±	0.35	4.55	±	1.31	Yes	28.00	±	1.20	103.60	±	4.44	Yes

a. Invalid sample identified in red

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

Sampling Group and Location		Sampling Date	Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
BOUNDARY									
ARCO		07/05/23	-1.01	±	106.48	-3.73	±	393.98	No
		07/11/23	-63.90	±	135.70	-236.43	±	502.09	No
		07/18/23	-10.25	±	122.59	-37.91	±	453.58	No
	a	07/25/23		±		0.00	±	0.00	No
		08/01/23	-20.59	±	135.07	-76.19	±	499.76	No
		08/08/23	44.56	±	132.89	164.88	±	491.69	No
		08/15/23	1.38	±	131.55	5.10	±	486.74	No
		08/22/23	-42.17	±	299.65	-156.01	±	1108.71	No
		08/29/23	-243.92	±	234.29	-902.50	±	866.87	No
		09/05/23	-204.03	±	251.71	-754.91	±	931.33	No
		09/12/23	-129.98	±	206.51	-480.93	±	764.09	No
		09/19/23	-155.26	±	221.26	-574.46	±	818.66	No
		09/26/23	-251.21	±	243.09	-929.48	±	899.43	No
ATOMIC CITY		07/05/23	-88.38	±	110.79	-327.00	±	409.92	No
		07/11/23	-124.10	±	174.80	-459.17	±	646.76	No
		07/18/23	-0.50	±	125.00	-1.87	±	462.50	No
		07/25/23	0.26	±	106.16	0.97	±	392.79	No
		08/01/23	89.71	±	138.52	331.94	±	512.52	No
		08/08/23	-89.93	±	132.61	-332.73	±	490.66	No
		08/15/23	-116.07	±	141.08	-429.46	±	522.00	No
		08/22/23	-252.64	±	227.54	-934.77	±	841.90	No
		08/29/23	-233.42	±	223.81	-863.65	±	828.10	No
		09/05/23	17.38	±	275.95	64.31	±	1021.02	No
		09/12/23	227.21	±	198.94	840.68	±	736.08	No
		09/19/23	-297.67	±	260.64	-1101.38	±	964.37	No
		09/26/23	-158.55	±	233.31	-586.64	±	863.25	No
BLUE DOME		07/05/23	-53.65	±	104.37	-198.50	±	386.17	No
		07/11/23	95.02	±	150.96	351.58	±	558.55	No
		07/18/23	2.50	±	113.96	9.26	±	421.65	No
		07/25/23	-5.90	±	134.33	-21.83	±	497.02	No
		08/01/23	3.16	±	112.90	11.69	±	417.73	No
		08/08/23	11.02	±	125.71	40.78	±	465.13	No
		08/15/23	-62.75	±	125.30	-232.16	±	463.61	No
		08/22/23	185.20	±	220.39	685.24	±	815.44	No
		08/29/23	212.94	±	200.70	787.88	±	742.59	No
		09/05/23	-70.73	±	205.79	-261.68	±	761.42	No
		09/12/23	77.42	±	204.07	286.45	±	755.06	No
		09/19/23	-223.25	±	214.69	-826.03	±	794.35	No
		09/26/23	-295.59	±	293.37	-1093.68	±	1085.47	No
FAA TOWER		07/05/23	76.06	±	98.16	281.41	±	363.18	No
		07/11/23	-58.64	±	166.13	-216.96	±	614.68	No
		07/18/23	-3.06	±	139.13	-11.34	±	514.78	No
		07/25/23	-20.72	±	117.20	-76.65	±	433.64	No
		08/01/23	-64.71	±	139.77	-239.44	±	517.15	No
		08/08/23	-30.25	±	111.91	-111.93	±	414.07	No
		08/15/23	75.93	±	122.74	280.92	±	454.14	No
		08/22/23	-4.33	±	195.62	-16.01	±	723.79	No
		08/29/23	-229.05	±	230.50	-847.49	±	852.85	No
		09/05/23	-192.81	±	205.23	-713.40	±	759.35	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($x 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($x 10^{-11}$ Bq/mL)			Result > 3s
	09/12/23	-49.23	±	193.97	-182.15	±	717.69	No
	09/19/23	123.45	±	257.18	456.77	±	951.57	No
	09/26/23	-12.59	±	208.62	-46.58	±	771.89	No
HOWE	07/05/23	-77.02	±	105.20	-284.96	±	389.24	No
	07/11/23	-105.50	±	164.16	-390.35	±	607.39	No
	07/18/23	-52.87	±	134.61	-195.63	±	498.06	No
	07/25/23	59.50	±	119.86	220.14	±	443.48	No
	08/01/23	-40.26	±	128.92	-148.95	±	477.00	No
	08/08/23	-54.25	±	148.58	-200.73	±	549.75	No
	08/15/23	-127.94	±	130.07	-473.38	±	481.26	No
	08/22/23	-243.90	±	218.12	-902.43	±	807.04	No
	08/29/23	105.81	±	201.39	391.50	±	745.14	No
	09/05/23	48.21	±	216.56	178.37	±	801.27	No
	09/12/23	35.08	±	213.24	129.80	±	788.99	No
	09/19/23	-262.51	±	231.94	-971.29	±	858.18	No
	09/26/23	230.34	±	260.79	852.26	±	964.92	No
MONTEVIEW	07/05/23	-65.18	±	102.49	-241.18	±	379.21	No
	07/11/23	-8.34	±	133.62	-30.86	±	494.39	No
	07/18/23	4.70	±	148.84	17.40	±	550.71	No
	07/25/23	82.03	±	127.83	303.53	±	472.97	No
	08/01/23	-108.90	±	148.25	-402.93	±	548.53	No
	08/08/23	-162.87	±	130.60	-602.62	±	483.22	No
	08/15/23	6.11	±	131.56	22.59	±	486.77	No
	08/22/23	-246.52	±	231.52	-912.12	±	856.62	No
	08/29/23	-141.87	±	204.32	-524.92	±	755.98	No
	09/05/23	-249.51	±	222.64	-923.19	±	823.77	No
	09/12/23	-242.85	±	234.19	-898.55	±	866.50	No
	09/19/23	-243.53	±	220.58	-901.06	±	816.15	No
	09/26/23	70.09	±	215.82	259.34	±	798.53	No
TERRETON	07/05/23	199.60	±	177.63	738.52	±	657.23	No
	07/11/23	-6.79	±	168.72	-25.13	±	624.26	No
	07/18/23	30.72	±	130.52	113.68	±	482.92	No
	07/25/23	-26.18	±	123.85	-96.88	±	458.25	No
	08/01/23	-91.53	±	125.48	-338.66	±	464.28	No
	08/08/23	2.45	±	147.38	9.06	±	545.31	No
	08/15/23	-13.50	±	158.17	-49.94	±	585.23	No
	08/22/23	-271.66	±	243.12	-1005.14	±	899.54	No
	08/29/23	-225.92	±	215.71	-835.90	±	798.13	No
	09/05/23	-323.25	±	306.19	-1196.03	±	1132.90	No
	09/12/23	-168.50	±	278.79	-623.45	±	1031.52	No
	09/19/23	-252.26	±	239.24	-933.36	±	885.19	No
	09/26/23	178.53	±	268.78	660.56	±	994.49	No
OFFSITE								
BLACKFOOT	07/05/23	-9.61	±	108.77	-35.56	±	402.45	No
	07/11/23	-107.13	±	157.95	-396.38	±	584.42	No
	07/18/23	-65.06	±	115.80	-240.70	±	428.46	No
	07/25/23	-46.52	±	110.69	-172.13	±	409.55	No
	08/01/23	-156.22	±	132.35	-578.01	±	489.70	No
	08/08/23	-10.01	±	132.62	-37.02	±	490.69	No
	08/15/23	0.29	±	102.41	1.06	±	378.92	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	08/22/23	-220.89	±	286.40	-817.29	±	1059.68	No
	08/29/23	-238.47	±	222.06	-882.34	±	821.62	No
	09/05/23	-138.58	±	237.45	-512.75	±	878.57	No
	09/12/23	92.05	±	199.23	340.59	±	737.15	No
	09/19/23	219.21	±	211.83	811.08	±	783.77	No
	09/26/23	-25.68	±	206.87	-95.02	±	765.42	No
CRATERS OF THE MOON	07/05/23	81.09	±	114.39	300.03	±	423.24	No
	07/11/23	-50.66	±	150.52	-187.45	±	556.92	No
	07/18/23	49.78	±	109.09	184.19	±	403.63	No
	07/25/23	-17.77	±	133.65	-65.73	±	494.51	No
	08/01/23	1.43	±	138.69	5.31	±	513.15	No
	08/08/23	80.08	±	112.60	296.31	±	416.62	No
	08/15/23	25.92	±	132.07	95.91	±	488.66	No
	08/22/23	111.02	±	223.16	410.77	±	825.69	No
	08/29/23	-232.90	±	213.21	-861.73	±	788.88	No
	09/05/23	-300.22	±	278.62	-1110.81	±	1030.89	No
	09/12/23	-241.07	±	214.98	-891.96	±	795.43	No
	09/19/23	-255.93	±	225.60	-946.94	±	834.72	No
	09/26/23	-35.82	±	261.99	-132.55	±	969.36	No
DUBOIS	07/05/23	82.72	±	81.42	306.07	±	301.26	No
	07/11/23	131.21	±	165.07	485.48	±	610.76	No
	07/18/23	-37.00	±	134.68	-136.91	±	498.32	No
	07/25/23	-119.84	±	142.96	-443.41	±	528.95	No
	08/01/23	-23.17	±	109.46	-85.71	±	405.00	No
	08/08/23	43.31	±	134.40	160.23	±	497.28	No
	08/15/23	0.70	±	120.27	2.57	±	445.00	No
	08/22/23	-235.13	±	237.37	-869.98	±	878.27	No
	08/29/23	-260.66	±	267.87	-964.44	±	991.12	No
	09/05/23	162.08	±	209.30	599.70	±	774.41	No
	09/12/23	58.32	±	215.18	215.78	±	796.17	No
	09/19/23	-149.60	±	219.33	-553.52	±	811.52	No
	09/26/23	-154.21	±	224.54	-570.58	±	830.80	No
DUBOS (QA-1)	07/05/23	0.43	±	94.39	1.58	±	349.24	No
	07/11/23	-81.83	±	141.95	-302.77	±	525.22	No
	07/18/23	-124.40	±	119.00	-460.28	±	440.30	No
	07/25/23	31.02	±	409.36	114.77	±	1514.63	No
	08/01/23	-54.60	±	125.41	-202.03	±	464.02	No
	08/08/23	-11.68	±	140.50	-43.23	±	519.85	No
	08/15/23	-43.56	±	127.44	-161.16	±	471.53	No
	08/22/23	-15.68	±	234.91	-58.03	±	869.17	No
	08/29/23	-83.35	±	217.20	-308.39	±	803.64	No
	09/05/23	3.80	±	199.32	14.07	±	737.48	No
	09/12/23	-233.31	±	224.04	-863.25	±	828.95	No
	09/19/23	-19.31	±	468.98	-71.44	±	1735.23	No
	09/26/23	-48.07	±	215.56	-177.84	±	797.57	No
IDAHO FALLS	07/05/23	-8.76	±	127.08	-32.42	±	470.20	No
	07/11/23	-27.09	±	130.90	-100.24	±	484.33	No
	07/18/23	-4.36	±	114.53	-16.14	±	423.76	No
	07/25/23	-57.28	±	133.75	-211.95	±	494.88	No
	08/01/23	122.30	±	96.35	452.51	±	356.48	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	08/08/23	-152.74	±	120.87	-565.14	±	447.22	No
	08/15/23	-1.22	±	117.00	-4.51	±	432.90	No
	08/22/23	34.54	±	179.16	127.80	±	662.89	No
	08/29/23	-203.29	±	220.84	-752.17	±	817.11	No
	09/05/23	-260.14	±	232.27	-962.52	±	859.40	No
	09/12/23	220.20	±	192.83	814.74	±	713.47	No
	09/19/23	-277.27	±	243.85	-1025.90	±	902.25	No
	09/26/23	217.09	±	211.43	803.23	±	782.29	No
IRC	07/05/23	-71.56	±	99.40	-264.78	±	367.78	No
	07/11/23	171.65	±	156.16	635.11	±	577.79	No
	07/18/23	58.75	±	122.43	217.37	±	452.99	No
	07/25/23	-167.38	±	132.59	-619.31	±	490.58	No
	08/01/23	-83.18	±	117.04	-307.75	±	433.05	No
	08/08/23	-10.53	±	132.16	-38.94	±	488.99	No
	08/15/23	19.03	±	110.15	70.43	±	407.56	No
	08/22/23	-241.41	±	232.24	-893.22	±	859.29	No
	08/29/23	-157.61	±	253.12	-583.16	±	936.54	No
	09/05/23	4.16	±	220.01	15.39	±	814.04	No
	09/12/23	5.96	±	199.47	22.05	±	738.04	No
	09/19/23	-250.89	±	221.56	-928.29	±	819.77	No
	09/26/23	228.25	±	193.73	844.53	±	716.80	No
IRC NORTH	07/05/23	-2.17	±	81.19	-8.04	±	300.41	No
	07/11/23	-86.20	±	173.16	-318.93	±	640.69	No
	07/18/23	-25.96	±	119.56	-96.05	±	442.37	No
	07/25/23	-44.32	±	127.48	-164.00	±	471.68	No
	08/01/23	52.04	±	130.63	192.53	±	483.33	No
	08/08/23	145.30	±	125.94	537.61	±	465.98	No
	08/15/23	6.58	±	155.17	24.35	±	574.13	No
	08/22/23	114.61	±	280.40	424.06	±	1037.48	No
	08/29/23	-266.68	±	233.13	-986.72	±	862.58	No
	09/05/23	293.22	±	265.77	1084.91	±	983.35	No
	09/12/23	-600.98	±	567.20	-2223.63	±	2098.64	No
	09/19/23	-362.51	±	336.38	-1341.29	±	1244.61	No
	09/26/23	26.56	±	261.76	98.26	±	968.51	No
JACKSON, WY	07/05/23	-68.93	±	108.03	-255.06	±	399.71	No
	07/11/23	41.19	±	123.98	152.42	±	458.73	No
	07/18/23	23.59	±	115.47	87.27	±	427.24	No
	07/25/23	-29.87	±	121.78	-110.50	±	450.59	No
	08/01/23	153.11	±	130.32	566.51	±	482.18	No
	08/08/23	89.47	±	143.97	331.05	±	532.69	No
	08/15/23	50.15	±	124.42	185.54	±	460.35	No
	08/22/23	-500.17	±	472.31	-1850.63	±	1747.55	No
	08/29/23	-319.91	±	306.63	-1183.67	±	1134.53	No
	09/05/23	-47.69	±	249.28	-176.43	±	922.34	No
	09/12/23	-81.48	±	170.75	-301.48	±	631.78	No
	09/19/23	-328.22	±	306.44	-1214.41	±	1133.83	No
	09/26/23	-139.14	±	225.29	-514.82	±	833.57	No
SUGAR CITY	07/05/23	68.12	±	113.75	252.05	±	420.88	No
	07/11/23	-48.21	±	142.04	-178.38	±	525.55	No
	07/18/23	30.66	±	114.17	113.42	±	422.43	No

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

Sampling Group and Location		Sampling Date	Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
		07/25/23	8.59	±	110.45	31.78	±	408.67	No
		08/01/23	1.74	±	129.83	6.44	±	480.37	No
		08/08/23	-6.59	±	93.68	-24.37	±	346.62	No
		08/15/23	105.27	±	113.38	389.50	±	419.51	No
		08/22/23	47.49	±	221.14	175.72	±	818.22	No
		08/29/23	262.89	±	258.92	972.69	±	958.00	No
		09/05/23	11.45	±	227.71	42.37	±	842.53	No
		09/12/23	-37.30	±	210.57	-138.01	±	779.11	No
	a	09/19/23		±		0.00	±	0.00	No
	a	09/26/23		±		0.00	±	0.00	No
ONSITE									
ATR COMPLEX		07/05/23	100.66	±	314.36	372.44	±	1163.13	No
		07/11/23	-191.94	±	162.60	-710.18	±	601.62	No
		07/18/23	-142.70	±	141.34	-527.99	±	522.96	No
		07/25/23	-1.33	±	145.86	-4.91	±	539.68	No
		08/01/23	4.70	±	132.49	17.37	±	490.21	No
		08/08/23	48.77	±	135.76	180.44	±	502.31	No
		08/15/23	1.68	±	155.96	6.20	±	577.05	No
		08/22/23	-247.59	±	235.66	-916.08	±	871.94	No
		08/29/23	-269.32	±	240.03	-996.48	±	888.11	No
		09/05/23	-282.66	±	252.11	-1045.84	±	932.81	No
		09/12/23	-246.39	±	219.93	-911.64	±	813.74	No
		09/19/23	-75.11	±	243.89	-277.91	±	902.39	No
		09/26/23	-258.01	±	251.41	-954.64	±	930.22	No
CFA		07/05/23	7.24	±	116.44	26.80	±	430.83	No
		07/11/23	-20.69	±	136.50	-76.53	±	505.05	No
		07/18/23	53.15	±	99.13	196.67	±	366.79	No
		07/25/23	-137.71	±	134.85	-509.53	±	498.95	No
		08/01/23	74.08	±	137.03	274.10	±	507.01	No
		08/08/23	-1.57	±	129.35	-5.82	±	478.60	No
		08/15/23	-44.76	±	146.96	-165.60	±	543.75	No
		08/22/23	-76.65	±	209.42	-283.62	±	774.85	No
		08/29/23	-260.81	±	241.05	-965.00	±	891.89	No
		09/05/23	293.81	±	227.55	1087.10	±	841.94	No
		09/12/23	75.70	±	557.82	280.10	±	2063.93	No
		09/19/23	-239.35	±	220.70	-885.60	±	816.59	No
		09/26/23	-252.70	±	267.18	-934.99	±	988.57	No
EBR-I		07/05/23	-86.35	±	105.78	-319.50	±	391.39	No
		07/11/23	-157.42	±	145.62	-582.45	±	538.79	No
		07/18/23	-26.04	±	124.00	-96.35	±	458.80	No
		07/25/23	73.33	±	135.96	271.32	±	503.05	No
		08/01/23	-70.41	±	127.07	-260.51	±	470.16	No
		08/08/23	-97.62	±	148.44	-361.20	±	549.23	No
		08/15/23	-57.25	±	128.35	-211.83	±	474.90	No
		08/22/23	-258.12	±	231.31	-955.04	±	855.85	No
		08/29/23	-235.83	±	224.70	-872.57	±	831.39	No
		09/05/23	-244.17	±	230.51	-903.43	±	852.89	No
		09/12/23	56.58	±	225.46	209.35	±	834.20	No
		09/19/23	-204.07	±	228.34	-755.06	±	844.86	No
		09/26/23	93.86	±	205.36	347.28	±	759.83	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
EFS	07/05/23	95.52	±	117.92	353.44	±	436.30	No
	07/11/23	0.00	±	155.10	0.00	±	573.87	No
	07/18/23	-75.28	±	142.32	-278.54	±	526.58	No
	07/25/23	-2.53	±	123.42	-9.37	±	456.65	No
	08/01/23	-99.13	±	153.26	-366.78	±	567.06	No
	08/08/23	-89.79	±	130.30	-332.21	±	482.11	No
	08/15/23	-203.96	±	146.08	-754.65	±	540.50	No
	08/22/23	-240.82	±	223.96	-891.03	±	828.65	No
	08/29/23	-521.30	±	704.44	-1928.81	±	2606.43	No
	09/05/23	-309.50	±	301.40	-1145.15	±	1115.18	No
	09/12/23	-181.83	±	204.59	-672.77	±	756.98	No
	09/19/23	-298.73	±	287.45	-1105.30	±	1063.57	No
	09/26/23	-632.76	±	610.60	-2341.21	±	2259.22	No
GATE 4	07/05/23	-120.12	±	104.21	-444.44	±	385.58	No
	07/11/23	33.32	±	143.12	123.29	±	529.54	No
	07/18/23	-107.50	±	132.22	-397.75	±	489.21	No
	07/25/23	-69.52	±	120.85	-257.21	±	447.15	No
	08/01/23	-4.71	±	132.98	-17.44	±	492.03	No
	08/08/23	9.69	±	134.88	35.83	±	499.06	No
	08/15/23	31.83	±	133.92	117.76	±	495.50	No
	08/22/23	-209.88	±	241.46	-776.56	±	893.40	No
	08/29/23	-116.21	±	266.33	-429.98	±	985.42	No
	09/05/23	-26.80	±	222.81	-99.15	±	824.40	No
	09/12/23	137.85	±	226.88	510.05	±	839.46	No
	09/19/23	54.97	±	276.54	203.38	±	1023.20	No
	09/26/23	246.38	±	214.99	911.61	±	795.46	No
HIGHWAY 26 REST AREA	07/05/23	34.50	±	124.22	127.64	±	459.61	No
	07/11/23	-98.89	±	142.84	-365.90	±	528.51	No
	07/18/23	40.91	±	126.20	151.37	±	466.94	No
	07/25/23	-3.17	±	135.29	-11.74	±	500.57	No
	08/01/23	-42.17	±	139.70	-156.02	±	516.89	No
	08/08/23	-4.51	±	140.66	-16.69	±	520.44	No
	08/15/23	-23.18	±	146.95	-85.77	±	543.72	No
	08/22/23	401.81	±	263.87	1486.70	±	976.32	No
	08/29/23	-254.13	±	230.92	-940.28	±	854.40	No
	09/05/23	-269.95	±	237.28	-998.82	±	877.94	No
	09/12/23	-43.07	±	216.52	-159.34	±	801.12	No
	09/19/23	-62.15	±	221.23	-229.95	±	818.55	No
	09/26/23	217.23	±	211.09	803.75	±	781.03	No
INTEC (NE CORNER) a	07/05/23		±		0.00	±	0.00	No
a	07/11/23		±		0.00	±	0.00	No
a	07/18/23		±		0.00	±	0.00	No
a	07/25/23		±		0.00	±	0.00	No
a	08/01/23		±		0.00	±	0.00	No
a	08/08/23		±		0.00	±	0.00	No
a	08/15/23		±		0.00	±	0.00	No
a	08/22/23		±		0.00	±	0.00	No
a	08/29/23		±		0.00	±	0.00	No
a	09/05/23		±		0.00	±	0.00	No
a	09/12/23		±		0.00	±	0.00	No

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

Sampling Group and Location		Sampling Date	Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	a	09/19/23		±		0.00	±	0.00	No
	a	09/26/23		±		0.00	±	0.00	No
INTEC (QA-2)		07/05/23	-17.56	±	127.78	-64.97	±	472.79	No
		07/11/23	74.19	±	129.52	274.49	±	479.22	No
		07/18/23	-98.14	±	129.48	-363.12	±	479.08	No
		07/25/23	2.18	±	144.87	8.07	±	536.02	No
		08/01/23	-136.36	±	140.05	-504.53	±	518.19	No
		08/08/23	-7.73	±	128.17	-28.60	±	474.23	No
		08/15/23	282.73	±	191.99	1046.10	±	710.36	No
		08/22/23	302.22	±	203.89	1118.21	±	754.39	No
		08/29/23	180.61	±	263.41	668.26	±	974.62	No
		09/05/23	-116.63	±	224.45	-431.53	±	830.47	No
		09/12/23	-138.24	±	217.37	-511.49	±	804.27	No
		09/19/23	-175.40	±	230.01	-648.98	±	851.04	No
		09/26/23	-143.81	±	218.87	-532.10	±	809.82	No
INTEC (WEST SIDE)		07/05/23	-91.44	±	135.61	-338.34	±	501.76	No
		07/11/23	101.62	±	116.85	375.99	±	432.35	No
		07/18/23	35.81	±	116.81	132.50	±	432.20	No
		07/25/23	-50.71	±	123.08	-187.64	±	455.40	No
		08/01/23	-77.23	±	145.77	-285.74	±	539.35	No
		08/08/23	-5.24	±	107.20	-19.39	±	396.64	No
		08/15/23	-134.84	±	131.83	-498.91	±	487.77	No
		08/22/23	-230.16	±	210.47	-851.59	±	778.74	No
		08/29/23	-262.08	±	230.54	-969.70	±	853.00	No
		09/05/23	-259.28	±	229.71	-959.34	±	849.93	No
		09/12/23	-47.00	±	219.88	-173.90	±	813.56	No
		09/19/23	207.97	±	204.66	769.49	±	757.24	No
		09/26/23	17.73	±	264.50	65.61	±	978.65	No
MAIN GATE		07/05/23	-9.04	±	109.06	-33.46	±	403.52	No
		07/11/23	6.97	±	141.00	25.77	±	521.70	No
		07/18/23	20.93	±	133.62	77.43	±	494.39	No
		07/25/23	-92.65	±	122.75	-342.79	±	454.18	No
		08/01/23	249.51	±	139.64	923.19	±	516.67	No
		08/08/23	0.08	±	108.05	0.30	±	399.79	No
		08/15/23	0.00	±	137.56	0.00	±	508.97	No
		08/22/23	106.18	±	220.72	392.87	±	816.66	No
		08/29/23	-247.23	±	250.85	-914.75	±	928.15	No
		09/05/23	-278.23	±	246.72	-1029.45	±	912.86	No
		09/12/23	214.27	±	196.78	792.80	±	728.09	No
		09/19/23	50.64	±	268.74	187.38	±	994.34	No
		09/26/23	-42.77	±	211.21	-158.26	±	781.48	No
MFC NORTH		07/05/23	-120.60	±	114.15	-446.22	±	422.36	No
		07/11/23	-80.55	±	172.03	-298.03	±	636.51	No
		07/18/23	19.48	±	121.09	72.08	±	448.03	No
		07/25/23	-177.16	±	145.43	-655.49	±	538.09	No
		08/01/23	-90.07	±	130.84	-333.24	±	484.11	No
		08/08/23	-98.46	±	120.19	-364.30	±	444.70	No
		08/15/23	-63.86	±	143.21	-236.29	±	529.88	No
		08/22/23	-281.80	±	264.64	-1042.66	±	979.17	No
		08/29/23	169.59	±	222.21	627.48	±	822.18	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	09/05/23	-217.22	±	227.64	-803.71	±	842.27	No
	09/12/23	-27.16	±	202.52	-100.51	±	749.32	No
	09/19/23	-233.28	±	246.24	-863.14	±	911.09	No
	09/26/23	-3.78	±	224.29	-14.00	±	829.87	No
MFC SOUTH	07/05/23	19.10	±	111.63	70.66	±	413.03	No
	07/11/23	95.64	±	157.91	353.86	±	584.27	No
	07/18/23	11.59	±	142.40	42.86	±	526.88	No
	07/25/23	124.35	±	119.49	460.10	±	442.11	No
	08/01/23	0.00	±	134.48	0.00	±	497.58	No
	08/08/23	90.22	±	112.13	333.83	±	414.88	No
	08/15/23	-8.03	±	114.29	-29.71	±	422.87	No
	08/22/23	-231.67	±	212.62	-857.18	±	786.69	No
	08/29/23	-262.22	±	231.14	-970.21	±	855.22	No
	09/05/23	53.21	±	213.25	196.89	±	789.03	No
	09/12/23	-286.85	±	269.41	-1061.35	±	996.82	No
	09/19/23	-261.41	±	233.18	-967.22	±	862.77	No
	09/26/23	-257.21	±	226.87	-951.68	±	839.42	No
NRF	07/05/23	-89.33	±	217.58	-330.53	±	805.05	No
	07/11/23	-175.79	±	168.06	-650.42	±	621.82	No
	07/18/23	-145.84	±	140.34	-539.61	±	519.26	No
	07/25/23	-80.47	±	131.35	-297.75	±	486.00	No
	08/01/23	-52.13	±	129.88	-192.89	±	480.56	No
	08/08/23	-79.77	±	135.05	-295.15	±	499.69	No
	08/15/23	62.98	±	119.64	233.03	±	442.67	No
	08/22/23	-59.26	±	242.93	-219.28	±	898.84	No
	08/29/23	-9.53	±	205.34	-35.26	±	759.76	No
	09/05/23	-265.08	±	241.92	-980.80	±	895.10	No
	09/12/23	103.78	±	465.22	383.99	±	1721.31	No
	09/19/23	149.03	±	221.37	551.41	±	819.07	No
	09/26/23	-74.81	±	226.38	-276.78	±	837.61	No
PBF	07/05/23	13.81	±	111.63	51.11	±	413.03	No
	07/11/23	-11.79	±	124.01	-43.64	±	458.84	No
	07/18/23	-121.97	±	128.33	-451.29	±	474.82	No
	07/25/23	-21.10	±	108.78	-78.08	±	402.49	No
	08/01/23	113.79	±	140.19	421.02	±	518.70	No
	08/08/23	4.61	±	115.04	17.04	±	425.65	No
	08/15/23	-92.46	±	119.12	-342.08	±	440.74	No
	08/22/23	-275.36	±	255.93	-1018.83	±	946.94	No
	08/29/23	21.58	±	243.52	79.83	±	901.02	No
	09/05/23	-223.49	±	205.57	-826.91	±	760.61	No
	09/12/23	-248.10	±	216.48	-917.97	±	800.98	No
	09/19/23	118.65	±	210.59	439.01	±	779.18	No
	09/26/23	-247.96	±	221.27	-917.45	±	818.70	No
RHLLW	07/05/23	22.11	±	102.27	81.80	±	378.40	No
	07/11/23	-77.72	±	148.53	-287.58	±	549.56	No
	07/18/23	-14.96	±	111.78	-55.33	±	413.59	No
	07/25/23	-11.62	±	140.52	-43.01	±	519.92	No
	08/01/23	-5.25	±	97.56	-19.42	±	360.96	No
	08/08/23	-107.93	±	114.65	-399.34	±	424.21	No
	08/15/23	-62.69	±	135.59	-231.96	±	501.68	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	08/22/23	-273.98	±	267.20	-1013.73	±	988.64	No
	08/29/23	274.50	±	207.19	1015.65	±	766.60	No
	09/05/23	208.89	±	210.63	772.89	±	779.33	No
	09/12/23	-228.32	±	217.32	-844.78	±	804.08	No
	09/19/23	66.41	±	215.45	245.71	±	797.17	No
	09/26/23	-232.78	±	218.41	-861.29	±	808.12	No
RWMC (QA-3)	07/05/23	131.99	±	170.76	488.36	±	631.81	No
	07/11/23	30.56	±	171.40	113.05	±	634.18	No
	07/18/23	-4.78	±	114.13	-17.68	±	422.28	No
	07/25/23	36.43	±	149.75	134.78	±	554.08	No
	08/01/23	-98.27	±	118.17	-363.61	±	437.23	No
	08/08/23	28.42	±	131.17	105.15	±	485.33	No
	08/15/23	66.27	±	104.36	245.19	±	386.13	No
	08/22/23	-258.77	±	233.65	-957.45	±	864.51	No
	08/29/23	171.04	±	195.94	632.85	±	724.98	No
	09/05/23	-232.25	±	267.61	-859.33	±	990.16	No
	09/12/23	122.47	±	206.86	453.14	±	765.38	No
	09/19/23	-235.92	±	207.80	-872.90	±	768.86	No
	09/26/23	-286.12	±	265.52	-1058.64	±	982.42	No
RWMC	07/05/23	-7.79	±	123.71	-28.84	±	457.73	No
	07/11/23	-207.48	±	170.66	-767.68	±	631.44	No
	07/18/23	83.35	±	108.86	308.40	±	402.78	No
	07/25/23	24.65	±	144.40	91.22	±	534.28	No
	08/01/23	2.51	±	119.55	9.28	±	442.34	No
	08/08/23	-67.02	±	112.98	-247.97	±	418.03	No
	08/15/23	-12.16	±	121.77	-44.98	±	450.55	No
	08/22/23	-305.01	±	287.22	-1128.54	±	1062.71	No
	08/29/23	114.86	±	247.10	424.98	±	914.27	No
	09/05/23	295.46	±	199.98	1093.20	±	739.93	No
	09/12/23	-224.33	±	216.79	-830.02	±	802.12	No
	09/19/23	-278.90	±	258.83	-1031.93	±	957.67	No
	09/26/23	-173.21	±	208.14	-640.88	±	770.12	No
RWMC SOUTH	07/05/23	10.46	±	106.66	38.69	±	394.64	No
	07/11/23	-1.22	±	126.57	-4.50	±	468.31	No
	07/18/23	-54.71	±	123.80	-202.43	±	458.06	No
	07/25/23	-20.51	±	117.73	-75.87	±	435.60	No
	08/01/23	16.12	±	121.91	59.64	±	451.07	No
	08/08/23	-46.53	±	119.23	-172.18	±	441.15	No
	08/15/23	-7.20	±	133.63	-26.66	±	494.43	No
	08/22/23	-242.48	±	209.76	-897.18	±	776.11	No
	08/29/23	31.92	±	198.55	118.10	±	734.64	No
	09/05/23	356.17	±	190.28	1317.83	±	704.04	No
	09/12/23	-269.89	±	252.40	-998.59	±	933.88	No
	09/19/23	-159.90	±	214.27	-591.63	±	792.80	No
	09/26/23	-234.06	±	201.16	-866.02	±	744.29	No
SMC	07/05/23	-9.35	±	108.73	-34.61	±	402.30	No
	07/11/23	27.55	±	154.79	101.92	±	572.72	No
	07/18/23	-13.04	±	142.57	-48.26	±	527.51	No
	07/25/23	-103.80	±	151.95	-384.06	±	562.22	No
	08/01/23	-26.62	±	132.11	-98.49	±	488.81	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty (x 10^{-15} µCi/mL)			Result ± 1s Uncertainty (x 10^{-11} Bq/mL)			Result > 3s
	08/08/23	-106.89	±	148.44	-395.49	±	549.23	No
	08/15/23	89.55	±	131.46	331.33	±	486.40	No
	08/22/23	-265.00	±	241.16	-980.50	±	892.29	No
	08/29/23	-254.20	±	247.53	-940.54	±	915.86	No
	09/05/23	-297.64	±	290.74	-1101.27	±	1075.74	No
	09/12/23	-188.77	±	218.48	-698.45	±	808.38	No
	09/19/23	96.82	±	223.61	358.25	±	827.36	No
	09/26/23	-153.19	±	234.80	-566.80	±	868.76	No
VAN BUREN	07/05/23	1.76	±	105.92	6.51	±	391.90	No
	07/11/23	-29.36	±	109.04	-108.61	±	403.45	No
	07/18/23	4.16	±	105.80	15.38	±	391.46	No
	07/25/23	-71.75	±	134.64	-265.46	±	498.17	No
	08/01/23	48.39	±	129.35	179.03	±	478.60	No
	08/08/23	-45.60	±	137.98	-168.72	±	510.53	No
	08/15/23	-105.60	±	144.74	-390.72	±	535.54	No
	08/22/23	-234.08	±	269.34	-866.10	±	996.56	No
	08/29/23	31.96	±	209.75	118.25	±	776.08	No
	09/05/23	-271.03	±	240.89	-1002.81	±	891.29	No
	09/12/23	-290.47	±	277.14	-1074.74	±	1025.42	No
	09/19/23	-180.40	±	231.95	-667.48	±	858.22	No
	09/26/23	-250.91	±	221.83	-928.37	±	820.77	No
VAN BUREN (QA-4)	07/05/23	-35.75	±	95.71	-132.29	±	354.12	No
	07/11/23	-38.42	±	129.96	-142.16	±	480.85	No
	07/18/23	-19.80	±	118.71	-73.27	±	439.23	No
	07/25/23	-39.71	±	126.41	-146.93	±	467.72	No
	08/01/23	12.01	±	104.59	44.43	±	386.98	No
	08/08/23	-17.40	±	132.04	-64.38	±	488.55	No
	08/15/23	-7.18	±	115.82	-26.56	±	428.53	No
	08/22/23	73.09	±	213.42	270.42	±	789.65	No
	08/29/23	-90.22	±	205.58	-333.81	±	760.65	No
	09/05/23	-246.55	±	217.86	-912.24	±	806.08	No
	09/12/23	-110.22	±	204.34	-407.81	±	756.06	No
	09/19/23	-223.38	±	208.89	-826.51	±	772.89	No
	09/26/23	-262.25	±	236.13	-970.33	±	873.68	No

a. Invalid sample identified in red

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

Sampling Group and Location	Sampling Date	Analyte	Result ± 1s Uncertainty (x 10^{-18} µCi/mL)			Result ± 1s Uncertainty (x 10^{-14} Bq/mL)			Result > 3s
BOUNDARY									
ARCO	09/30/23	Americium-241	-1.46	±	1.29	-5.40	±	4.77	No
	09/30/23	Cesium-137	12.70	±	30.20	46.99	±	111.74	No
	09/30/23	Plutonium-238	-1.04	±	1.25	-3.85	±	4.63	No
	09/30/23	Plutonium-239/240	0.35	±	1.04	1.28	±	3.85	No
	09/30/23	Strontium-90	53.40	±	36.50	197.58	±	135.05	No
	09/30/23	Uranium-233/234	16.90	±	3.18	62.53	±	11.77	**Yes**
	09/30/23	Uranium-238	17.80	±	3.10	65.86	±	11.47	**Yes**
ATOMIC CITY	09/30/23	Americium-241	2.00	±	2.74	7.40	±	10.14	No
	09/30/23	Cesium-137	7.74	±	26.10	28.64	±	96.57	No
	09/30/23	Plutonium-238	0.50	±	1.93	1.85	±	7.14	No
	09/30/23	Plutonium-239/240	1.00	±	1.41	3.69	±	5.22	No
	09/30/23	Strontium-90	117.00	±	42.30	432.90	±	156.51	No
	09/30/23	Uranium-233/234	6.30	±	3.04	23.31	±	11.25	No
	09/30/23	Uranium-238	5.18	±	2.55	19.17	±	9.44	No
BLUE DOME	09/30/23	Americium-241	1.76	±	1.52	6.51	±	5.62	No
	09/30/23	Cesium-137	84.60	±	33.60	313.02	±	124.32	No
	09/30/23	Plutonium-238	-1.41	±	1.57	-5.22	±	5.81	No
	09/30/23	Plutonium-239/240	1.76	±	1.17	6.51	±	4.33	No
	09/30/23	Strontium-90	-66.30	±	26.70	-245.31	±	98.79	No
	09/30/23	Uranium-233/234	4.15	±	2.85	15.36	±	10.55	No
	09/30/23	Uranium-238	3.89	±	1.95	14.39	±	7.22	No
FAA TOWER	09/30/23	Americium-241	0.60	±	1.58	2.21	±	5.85	No
	09/30/23	Cesium-137	-7.71	±	44.70	-28.53	±	165.39	No
	09/30/23	Plutonium-238	1.41	±	2.15	5.22	±	7.96	No
	09/30/23	Plutonium-239/240	0.94	±	1.33	3.47	±	4.92	No
	09/30/23	Strontium-90	42.50	±	37.80	157.25	±	139.86	No
	09/30/23	Uranium-233/234	5.96	±	2.56	22.05	±	9.47	No
	09/30/23	Uranium-238	6.57	±	2.23	24.31	±	8.25	No
HOWE	09/30/23	Americium-241	8.86	±	3.57	32.78	±	13.21	No
	09/30/23	Cesium-137	40.10	±	27.10	148.37	±	100.27	No
	09/30/23	Plutonium-238	-4.15	±	1.55	-15.36	±	5.74	No
	09/30/23	Plutonium-239/240	-0.69	±	1.09	-2.55	±	4.03	No
	09/30/23	Strontium-90	56.90	±	39.70	210.53	±	146.89	No

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

Sampling Group and Location	Sampling Date	Analyte	Result ± 1s Uncertainty (x 10^{-18} µCi/mL)			Result ± 1s Uncertainty (x 10^{-14} Bq/mL)			Result > 3s
	09/30/23	Uranium-233/234	22.10	±	3.93	81.77	±	14.54	Yes
	09/30/23	Uranium-238	28.00	±	4.07	103.60	±	15.06	Yes
MONTEVIEW	09/30/23	Americium-241	2.30	±	1.38	8.51	±	5.11	No
	09/30/23	Cesium-137	0.00	±	91.90	0.00	±	340.03	No
	09/30/23	Plutonium-238	-0.65	±	1.37	-2.39	±	5.07	No
	09/30/23	Plutonium-239/240	0.97	±	1.07	3.59	±	3.96	No
	09/30/23	Strontium-90	47.50	±	25.90	175.75	±	95.83	No
	09/30/23	Uranium-233/234	18.30	±	3.91	67.71	±	14.47	Yes
	09/30/23	Uranium-238	20.00	±	3.91	74.00	±	14.47	Yes
TERRETON	09/30/23	Americium-241	2.02	±	1.75	7.47	±	6.48	No
	09/30/23	Cesium-137	0.00	±	72.50	0.00	±	268.25	No
	09/30/23	Plutonium-238	1.31	±	1.16	4.85	±	4.29	No
	09/30/23	Plutonium-239/240	4.38	±	1.76	16.21	±	6.51	No
	09/30/23	Strontium-90	2.96	±	9.33	10.95	±	34.52	No
	09/30/23	Uranium-233/234	25.30	±	3.99	93.61	±	14.76	Yes
	09/30/23	Uranium-238	16.50	±	3.24	61.05	±	11.99	Yes
OFFSITE									
BLACKFOOT	09/30/23	Americium-241	2.73	±	1.44	10.10	±	5.33	No
	09/30/23	Cesium-137	49.30	±	26.90	182.41	±	99.53	No
	09/30/23	Plutonium-238	-0.47	±	1.23	-1.72	±	4.55	No
	09/30/23	Plutonium-239/240	2.79	±	1.48	10.32	±	5.48	No
	09/30/23	Strontium-90	-46.60	±	26.50	-172.42	±	98.05	No
	09/30/23	Uranium-233/234	33.20	±	5.51	122.84	±	20.39	Yes
	09/30/23	Uranium-238	23.60	±	4.12	87.32	±	15.24	Yes
CRATERS OF THE MOON	09/30/23	Americium-241	3.34	±	1.77	12.36	±	6.55	No
	09/30/23	Cesium-137	15.70	±	26.40	58.09	±	97.68	No
	09/30/23	Plutonium-238	-0.54	±	2.07	-1.98	±	7.66	No
	09/30/23	Plutonium-239/240	1.07	±	1.51	3.96	±	5.59	No
	09/30/23	Strontium-90	120.00	±	40.90	444.00	±	151.33	No
	09/30/23	Uranium-233/234	5.86	±	2.82	21.68	±	10.43	No
	09/30/23	Uranium-238	5.52	±	2.31	20.42	±	8.55	No
DUBOIS	09/30/23	Americium-241	3.29	±	2.16	12.17	±	7.99	No
	09/30/23	Cesium-137	-149.00	±	82.20	-551.30	±	304.14	No
	09/30/23	Plutonium-238	1.10	±	1.21	4.07	±	4.48	No

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

Sampling Group and Location	Sampling Date	Analyte	Result ± 1s Uncertainty (x 10^{-18} µCi/mL)			Result ± 1s Uncertainty (x 10^{-14} Bq/mL)			Result > 3s
	09/30/23	Plutonium-239/240	2.19	±	1.16	8.10	±	4.29	No
	09/30/23	Strontium-90	93.80	±	35.50	347.06	±	131.35	No
	09/30/23	Uranium-233/234	10.60	±	3.64	39.22	±	13.47	No
	09/30/23	Uranium-238	11.10	±	3.63	41.07	±	13.43	**Yes**
DUBOIS (QA)	09/30/23	Americium-241	3.26	±	2.17	12.06	±	8.03	No
	09/30/23	Cesium-137	50.00	±	32.20	185.00	±	119.14	No
	09/30/23	Plutonium-238	1.14	±	1.47	4.22	±	5.44	No
	09/30/23	Plutonium-239/240	1.89	±	1.14	6.99	±	4.22	No
	09/30/23	Strontium-90	75.70	±	39.80	280.09	±	147.26	No
	09/30/23	Uranium-233/234	9.60	±	3.29	35.52	±	12.17	No
	09/30/23	Uranium-238	8.03	±	2.84	29.71	±	10.51	No
IDAHO FALLS	09/30/23	Americium-241	0.00	±	1.37	0.00	±	5.07	No
	09/30/23	Cesium-137	32.60	±	26.90	120.62	±	99.53	No
	09/30/23	Plutonium-238	-1.69	±	1.46	-6.25	±	5.40	No
	09/30/23	Plutonium-239/240	0.42	±	1.12	1.56	±	4.14	No
	09/30/23	Strontium-90	1.31	±	10.50	4.85	±	38.85	No
	09/30/23	Uranium-233/234	29.90	±	3.93	110.63	±	14.54	**Yes**
	09/30/23	Uranium-238	25.60	±	3.46	94.72	±	12.80	**Yes**
IRC	09/30/23	Americium-241	1.65	±	1.17	6.11	±	4.33	No
	09/30/23	Cesium-137	23.90	±	27.10	88.43	±	100.27	No
	09/30/23	Plutonium-238	1.29	±	1.29	4.77	±	4.77	No
	09/30/23	Plutonium-239/240	1.72	±	1.61	6.36	±	5.96	No
	09/30/23	Strontium-90	42.70	±	32.60	157.99	±	120.62	No
	09/30/23	Uranium-233/234	21.00	±	6.74	77.70	±	24.94	**Yes**
	09/30/23	Uranium-238	24.60	±	6.00	91.02	±	22.20	**Yes**
IRC NORTH	09/30/23	Americium-241	0.00	±	2.33	0.00	±	8.62	No
	09/30/23	Cesium-137	-119.00	±	73.00	-440.30	±	270.10	No
	09/30/23	Plutonium-238	-1.26	±	2.83	-4.66	±	10.47	No
	09/30/23	Plutonium-239/240	0.63	±	1.67	2.33	±	6.18	No
	09/30/23	Strontium-90	8.94	±	33.90	33.08	±	125.43	No
	09/30/23	Uranium-233/234	27.40	±	5.08	101.38	±	18.80	**Yes**
	09/30/23	Uranium-238	28.90	±	4.52	106.93	±	16.72	**Yes**
JACKSON, WY	09/30/23	Americium-241	3.02	±	2.01	11.17	±	7.44	No
	09/30/23	Cesium-137	32.80	±	26.80	121.36	±	99.16	No

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

Sampling Group and Location	Sampling Date	Analyte	Result ± 1s Uncertainty (x 10^{-18} µCi/mL)			Result ± 1s Uncertainty (x 10^{-14} Bq/mL)			Result > 3s
	09/30/23	Plutonium-238	0.97	±	1.54	3.60	±	5.70	No
	09/30/23	Plutonium-239/240	-0.49	±	1.09	-1.80	±	4.03	No
	09/30/23	Strontium-90	11.60	±	35.30	42.92	±	130.61	No
	09/30/23	Uranium-233/234	3.08	±	2.26	11.40	±	8.36	No
	09/30/23	Uranium-238	5.74	±	2.26	21.24	±	8.36	No
SUGAR CITY	09/30/23	Americium-241	0.00	±	1.54	0.00	±	5.70	No
	09/30/23	Cesium-137	60.70	±	39.20	224.59	±	145.04	No
	09/30/23	Plutonium-238	0.88	±	1.87	3.25	±	6.92	No
	09/30/23	Plutonium-239/240	2.19	±	1.92	8.10	±	7.10	No
	09/30/23	Strontium-90	24.90	±	35.80	92.13	±	132.46	No
	09/30/23	Uranium-233/234	17.00	±	4.39	62.90	±	16.24	**Yes**
	09/30/23	Uranium-238	18.30	±	3.88	67.71	±	14.36	**Yes**
ONSITE									
ATR COMPLEX	09/30/23	Americium-241	3.69	±	2.05	13.65	±	7.59	No
	09/30/23	Cesium-137	1.83	±	52.80	6.77	±	195.36	No
	09/30/23	Plutonium-238	1.93	±	2.65	7.14	±	9.81	No
	09/30/23	Plutonium-239/240	3.85	±	2.57	14.25	±	9.51	No
	09/30/23	Strontium-90	69.70	±	36.10	257.89	±	133.57	No
	09/30/23	Uranium-233/234	20.10	±	3.24	74.37	±	11.99	**Yes**
	09/30/23	Uranium-238	20.90	±	3.20	77.33	±	11.84	**Yes**
CFA	09/30/23	Americium-241	2.60	±	1.84	9.62	±	6.81	No
	09/30/23	Cesium-137	0.00	±	73.70	0.00	±	272.69	No
	09/30/23	Plutonium-238	1.62	±	1.28	5.99	±	4.74	No
	09/30/23	Plutonium-239/240	2.02	±	1.34	7.47	±	4.96	No
	09/30/23	Strontium-90	-51.20	±	12.00	-189.44	±	44.40	No
	09/30/23	Uranium-233/234	11.00	±	2.40	40.70	±	8.88	**Yes**
	09/30/23	Uranium-238	15.60	±	2.66	57.72	±	9.84	**Yes**
EBR-I	09/30/23	Americium-241	1.17	±	2.34	4.33	±	8.66	No
	09/30/23	Cesium-137	44.30	±	29.20	163.91	±	108.04	No
	09/30/23	Plutonium-238	1.54	±	1.36	5.70	±	5.03	No
	09/30/23	Plutonium-239/240	0.51	±	0.88	1.89	±	3.26	No
	09/30/23	Strontium-90	57.90	±	37.20	214.23	±	137.64	No
	09/30/23	Uranium-233/234	9.53	±	3.42	35.26	±	12.65	No
	09/30/23	Uranium-238	9.00	±	2.91	33.30	±	10.77	**Yes**

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

Sampling Group and Location		Sampling Date	Analyte	Result ± 1s Uncertainty (x 10^{-18} µCi/mL)			Result ± 1s Uncertainty (x 10^{-14} Bq/mL)			Result > 3s
EFS		09/30/23	Americium-241	-1.51	±	2.19	-5.59	±	8.10	No
		09/30/23	Cesium-137	-2.55	±	23.30	-9.44	±	86.21	No
		09/30/23	Plutonium-238	1.13	±	1.97	4.18	±	7.29	No
		09/30/23	Plutonium-239/240	3.40	±	1.80	12.58	±	6.66	No
		09/30/23	Strontium-90	15.80	±	35.00	58.46	±	129.50	No
		09/30/23	Uranium-233/234	12.60	±	3.31	46.62	±	12.25	**Yes**
		09/30/23	Uranium-238	9.42	±	2.70	34.85	±	9.99	**Yes**
GATE 4		09/30/23	Americium-241	1.33	±	1.18	4.92	±	4.37	No
		09/30/23	Cesium-137	0.90	±	25.00	3.34	±	92.50	No
		09/30/23	Plutonium-238	0.48	±	1.72	1.76	±	6.36	No
		09/30/23	Plutonium-239/240	2.38	±	1.43	8.81	±	5.29	No
		09/30/23	Strontium-90	85.40	±	38.50	315.98	±	142.45	No
		09/30/23	Uranium-233/234	0.13	±	2.99	0.46	±	11.06	No
		09/30/23	Uranium-238	6.85	±	2.87	25.35	±	10.62	No
HIGHWAY 26 REST AREA		09/30/23	Americium-241	0.99	±	1.57	3.68	±	5.81	No
		09/30/23	Cesium-137	-15.30	±	25.80	-56.61	±	95.46	No
		09/30/23	Plutonium-238	2.59	±	1.50	9.58	±	5.55	No
		09/30/23	Plutonium-239/240	2.16	±	1.78	7.99	±	6.59	No
		09/30/23	Strontium-90	-91.70	±	22.50	-339.29	±	83.25	No
		09/30/23	Uranium-233/234	11.10	±	2.42	41.07	±	8.95	**Yes**
		09/30/23	Uranium-238	6.60	±	2.16	24.42	±	7.99	**Yes**
INTEC (NE CORNER)	a	09/30/23	Americium-241		±		0.00	±	0.00	No
	a	09/30/23	Cesium-137		±		0.00	±	0.00	No
	a	09/30/23	Plutonium-238		±		0.00	±	0.00	No
	a	09/30/23	Plutonium-239/240		±		0.00	±	0.00	No
	a	09/30/23	Strontium-90		±		0.00	±	0.00	No
	a	09/30/23	Uranium-233/234		±		0.00	±	0.00	No
	a	09/30/23	Uranium-238		±		0.00	±	0.00	No
INTEC (QA)		09/30/23	Americium-241	2.17	±	1.57	8.03	±	5.81	No
		09/30/23	Cesium-137	-48.40	±	39.40	-179.08	±	145.78	No
		09/30/23	Plutonium-238	0.76	±	0.92	2.80	±	3.40	No
		09/30/23	Plutonium-239/240	0.76	±	1.07	2.79	±	3.96	No
		09/30/23	Strontium-90	81.50	±	36.60	301.55	±	135.42	No
		09/30/23	Uranium-233/234	6.99	±	2.48	25.86	±	9.18	No

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

Sampling Group and Location	Sampling Date	Analyte	Result ± 1s Uncertainty (x 10^{-18} µCi/mL)			Result ± 1s Uncertainty (x 10^{-14} Bq/mL)			Result > 3s
	09/30/23	Uranium-238	10.50	±	2.42	38.85	±	8.95	Yes
INTEC (WEST SIDE)	09/30/23	Americium-241	2.30	±	2.30	8.51	±	8.51	No
	09/30/23	Cesium-137	50.50	±	26.30	186.85	±	97.31	No
	09/30/23	Plutonium-238	0.43	±	1.42	1.58	±	5.25	No
	09/30/23	Plutonium-239/240	2.56	±	1.48	9.47	±	5.48	No
	09/30/23	Strontium-90	32.30	±	33.00	119.51	±	122.10	No
	09/30/23	Uranium-233/234	1.50	±	2.30	5.55	±	8.51	No
	09/30/23	Uranium-238	7.69	±	1.95	28.45	±	7.22	Yes
MAIN GATE	09/30/23	Americium-241	2.18	±	1.89	8.07	±	6.99	No
	09/30/23	Cesium-137	-11.40	±	72.40	-42.18	±	267.88	No
	09/30/23	Plutonium-238	0.66	±	1.32	2.44	±	4.88	No
	09/30/23	Plutonium-239/240	1.32	±	0.93	4.88	±	3.44	No
	09/30/23	Strontium-90	-14.60	±	33.50	-54.02	±	123.95	No
	09/30/23	Uranium-233/234	16.90	±	3.48	62.53	±	12.88	Yes
	09/30/23	Uranium-238	12.70	±	2.64	46.99	±	9.77	Yes
MFC NORTH	09/30/23	Americium-241	2.22	±	1.34	8.21	±	4.96	No
	09/30/23	Cesium-137	83.90	±	33.50	310.43	±	123.95	No
	09/29/23	Chlorine-36	13.10	±	10.70	48.47	±	39.59	No
	09/30/23	Plutonium-238	1.59	±	2.06	5.88	±	7.62	No
	09/30/23	Plutonium-239/240	1.06	±	1.68	3.92	±	6.22	No
	09/30/23	Strontium-90	-30.80	±	28.10	-113.96	±	103.97	No
	09/30/23	Uranium-233/234	20.80	±	4.19	76.96	±	15.50	Yes
	09/30/23	Uranium-238	19.60	±	4.11	72.52	±	15.21	Yes
MFC SOUTH	09/30/23	Americium-241	1.38	±	1.53	5.11	±	5.66	No
	09/30/23	Cesium-137	1.16	±	26.10	4.29	±	96.57	No
	09/29/23	Chlorine-36	-10.10	±	10.90	-37.37	±	40.33	No
	09/30/23	Plutonium-238	0.91	±	1.43	3.36	±	5.29	No
	09/30/23	Plutonium-239/240	-0.45	±	2.35	-1.68	±	8.70	No
	09/30/23	Strontium-90	41.60	±	36.30	153.92	±	134.31	No
	09/30/23	Uranium-233/234	9.65	±	2.74	35.71	±	10.14	Yes
	09/30/23	Uranium-238	13.40	±	2.85	49.58	±	10.55	Yes
NRF	09/30/23	Americium-241	0.57	±	1.28	2.12	±	4.74	No
	09/30/23	Cesium-137	69.90	±	41.30	258.63	±	152.81	No
	09/30/23	Plutonium-238	4.71	±	2.04	17.43	±	7.55	No

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

Sampling Group and Location	Sampling Date	Analyte	Result ± 1s Uncertainty (x 10^{-18} µCi/mL)			Result ± 1s Uncertainty (x 10^{-14} Bq/mL)			Result > 3s
	09/30/23	Plutonium-239/240	-0.52	±	0.90	-1.94	±	3.33	No
	09/30/23	Strontium-90	-31.80	±	29.10	-117.66	±	107.67	No
	09/30/23	Uranium-233/234	7.02	±	4.04	25.97	±	14.95	No
	09/30/23	Uranium-238	12.90	±	4.45	47.73	±	16.47	No
PBF	09/30/23	Americium-241	1.68	±	3.37	6.22	±	12.47	No
	09/30/23	Cesium-137	31.10	±	61.80	115.07	±	228.66	No
	09/30/23	Plutonium-238	0.43	±	1.28	1.58	±	4.74	No
	09/30/23	Plutonium-239/240	2.98	±	1.42	11.03	±	5.25	No
	09/30/23	Strontium-90	-8.63	±	13.60	-31.93	±	50.32	No
	09/30/23	Uranium-233/234	10.30	±	2.59	38.11	±	9.58	**Yes**
	09/30/23	Uranium-238	11.90	±	2.28	44.03	±	8.44	**Yes**
RHLLW	09/30/23	Americium-241	1.52	±	1.68	5.62	±	6.22	No
	09/30/23	Cesium-137	15.80	±	23.40	58.46	±	86.58	No
	09/30/23	Plutonium-238	2.01	±	2.13	7.44	±	7.88	No
	09/30/23	Plutonium-239/240	1.50	±	1.51	5.55	±	5.59	No
	09/30/23	Strontium-90	39.90	±	36.10	147.63	±	133.57	No
	09/30/23	Uranium-233/234	10.40	±	2.67	38.48	±	9.88	**Yes**
	09/30/23	Uranium-238	15.70	±	2.80	58.09	±	10.36	**Yes**
RWMC	09/30/23	Americium-241	45.40	±	5.00	167.98	±	18.50	**Yes**
	09/30/23	Cesium-137	30.70	±	32.40	113.59	±	119.88	No
	09/30/23	Plutonium-238	0.57	±	1.89	2.11	±	6.99	No
	09/30/23	Plutonium-239/240	107.00	±	9.25	395.90	±	34.23	**Yes**
	09/30/23	Strontium-90	3.46	±	24.80	12.80	±	91.76	No
	09/30/23	Uranium-233/234	23.10	±	3.96	85.47	±	14.65	**Yes**
	09/30/23	Uranium-238	15.80	±	3.15	58.46	±	11.66	**Yes**
RWMC (QA)	09/30/23	Americium-241	34.60	±	4.32	128.02	±	15.98	**Yes**
	09/30/23	Cesium-137	42.90	±	24.90	158.73	±	92.13	No
	09/30/23	Plutonium-238	1.23	±	1.36	4.55	±	5.03	No
	09/30/23	Plutonium-239/240	27.90	±	3.75	103.23	±	13.88	**Yes**
	09/30/23	Strontium-90	42.40	±	36.80	156.88	±	136.16	No
	09/30/23	Uranium-233/234	15.10	±	3.06	55.87	±	11.32	**Yes**
	09/30/23	Uranium-238	10.30	±	2.48	38.11	±	9.18	**Yes**
RWMC SOUTH	09/30/23	Americium-241	2.16	±	3.24	7.99	±	11.99	No
	09/30/23	Cesium-137	22.80	±	61.50	84.36	±	227.55	No

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

Sampling Group and Location	Sampling Date	Analyte	Result ± 1s Uncertainty (x 10^{-18} µCi/mL)			Result ± 1s Uncertainty (x 10^{-14} Bq/mL)			Result > 3s
	09/30/23	Plutonium-238	-0.71	±	1.11	-2.61	±	4.11	No
	09/30/23	Plutonium-239/240	4.93	±	1.81	18.24	±	6.70	No
	09/30/23	Strontium-90	78.10	±	33.00	288.97	±	122.10	No
	09/30/23	Uranium-233/234	12.00	±	2.67	44.40	±	9.88	**Yes**
	09/30/23	Uranium-238	12.80	±	2.67	47.36	±	9.88	**Yes**
SMC	09/30/23	Americium-241	-0.40	±	1.34	-1.49	±	4.96	No
	09/30/23	Cesium-137	-22.30	±	25.70	-82.51	±	95.09	No
	09/30/23	Plutonium-238	1.32	±	1.71	4.88	±	6.33	No
	09/30/23	Plutonium-239/240	-0.44	±	0.76	-1.63	±	2.81	No
	09/30/23	Strontium-90	-13.00	±	20.60	-48.10	±	76.22	No
	09/30/23	Uranium-233/234	8.62	±	3.42	31.89	±	12.65	No
	09/30/23	Uranium-238	20.60	±	4.25	76.22	±	15.73	**Yes**
VAN BUREN GATE	09/30/23	Americium-241	-0.41	±	1.48	-1.52	±	5.48	No
	09/30/23	Cesium-137	-14.30	±	24.50	-52.91	±	90.65	No
	09/30/23	Plutonium-238	0.00	±	1.70	0.00	±	6.29	No
	09/30/23	Plutonium-239/240	0.00	±	0.75	0.00	±	2.78	No
	09/30/23	Strontium-90	-9.75	±	30.50	-36.08	±	112.85	No
	09/30/23	Uranium-233/234	8.75	±	2.45	32.38	±	9.07	**Yes**
	09/30/23	Uranium-238	12.50	±	2.75	46.25	±	10.18	**Yes**
VAN BUREN (QA)	09/30/23	Americium-241	0.43	±	1.65	1.58	±	6.11	No
	09/30/23	Cesium-137	33.20	±	23.50	122.84	±	86.95	No
	09/30/23	Plutonium-238	0.67	±	0.81	2.48	±	3.00	No
	09/30/23	Plutonium-239/240	1.67	±	1.11	6.18	±	4.11	No
	09/30/23	Strontium-90	27.00	±	8.86	99.90	±	32.78	**Yes**
	09/30/23	Uranium-233/234	7.41	±	2.22	27.42	±	8.21	**Yes**
	09/30/23	Uranium-238	10.70	±	2.23	39.59	±	8.25	**Yes**

a. The sampler located at INTEC (NE Corner) was inoperable for several weeks due to a power outage.

Table C-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	07/25/23	0.64	±	2.88	2.35	±	10.66	No
	08/22/23	8.57	±	4.65	31.71	±	17.21	No
	09/19/23	5.26	±	4.39	19.46	±	16.24	No
HOWE	07/18/23	5.26	±	5.00	19.46	±	18.50	No
	08/15/23	-2.59	±	4.02	-9.58	±	14.87	No
	09/12/23	-2.67	±	4.05	-9.88	±	14.99	No
OFFSITE								
CRATERS OF THE MOON	07/05/23	7.75	±	4.30	28.68	±	15.91	No
	08/08/23	1.40	±	3.57	5.18	±	13.21	No
	09/05/23	5.38	±	4.55	19.91	±	16.84	No
IDAHO FALLS	07/05/23	11.80	±	4.97	43.66	±	18.39	No
	07/18/23	-1.03	±	5.83	-3.81	±	21.57	No
	08/01/23	-9.94	±	5.60	-36.78	±	20.72	No
	08/08/23	4.07	±	5.91	15.06	±	21.87	No
	08/22/23	5.55	±	6.66	20.54	±	24.64	No
	08/29/23	9.41	±	6.01	34.82	±	22.24	No
	09/19/23	11.00	±	6.18	40.70	±	22.87	No
	09/19/23	-4.44	±	3.92	-16.43	±	14.50	No
ONSITE								
EFS	07/11/23	-2.09	±	6.05	-7.73	±	22.39	No
	08/08/23	10.80	±	4.90	39.96	±	18.13	No
	09/05/23	1.36	±	5.51	5.03	±	20.39	No
RHLLW	07/26/23	9.32	±	4.53	34.48	±	16.76	No
	08/22/23	11.80	±	5.20	43.66	±	19.24	No
	09/12/23	6.86	±	5.91	25.38	±	21.87	No
VAN BUREN	07/26/23	3.78	±	3.14	13.99	±	11.62	No
	08/08/23	0.66	±	4.57	2.46	±	16.91	No
	09/05/23	-0.61	±	4.74	-2.24	±	17.54	No

Table C-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	06/27/23	07/05/23	25.90	±	27.70	0.96	±	1.02	No
	08/01/23	08/08/23	-3.58	±	26.20	-0.13	±	0.97	No
	08/15/23	08/22/23	-24.70	±	24.50	-0.91	±	0.91	No
	08/22/23	08/29/23	-42.80	±	23.40	-1.58	±	0.87	No
	09/19/23	09/26/23	27.70	±	27.40	1.02	±	1.01	No
HOWE	06/27/23	07/06/23	-16.40	±	25.80	-0.61	±	0.95	No
	08/01/23	08/08/23	12.60	±	26.70	0.47	±	0.99	No
	08/15/23	08/22/23	-8.75	±	25.60	-0.32	±	0.95	No
	08/29/23	09/05/23	22.90	±	27.10	0.85	±	1.00	No
	10/19/23	09/26/23	6.30	±	26.20	0.23	±	0.97	No
OFFSITE									
IDAHO FALLS	08/01/23	08/31/23	-31.20	±	24.70	-1.15	±	0.91	No
	09/01/23	09/30/23	27.80	±	27.00	1.03	±	1.00	No
ONSITE									
EFS	08/01/23	08/14/23	1.92	±	26.10	0.07	±	0.97	No
	08/14/23	08/22/23	34.00	±	26.90	1.26	±	1.00	No
	08/29/23	09/05/23	1.24	±	25.60	0.05	±	0.95	No
	09/19/23	09/26/23	-35.90	±	23.60	-1.33	±	0.87	No

Table C-6. Gross alpha, gross beta, and tritium concentrations in surface water.

Location	Sampling Date	Analyte	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
SURFACE WATER									
BIG LOST RIVER (EFS)	06/01/23	GROSS ALPHA	2.60	±	0.53	0.10	±	0.02	Yes
	06/01/23	GROSS BETA	4.91	±	0.45	0.18	±	0.02	Yes
	06/01/23	TRITIUM	-34.80	±	21.20	-1.29	±	0.79	No
	06/01/23	CESIUM-137	2.41	±	1.43	0.09	±	0.05	No
BIG LOST RIVER (EFS)	07/03/23	GROSS ALPHA	0.51	±	0.23	0.02	±	0.01	No
	07/03/23	GROSS BETA	1.82	±	0.27	0.07	±	0.01	Yes
	07/03/23	TRITIUM	32.90	±	24.60	1.22	±	0.91	No
	07/03/23	CESIUM-137	-0.84	±	1.22	-0.03	±	0.05	No
BIG LOST RIVER (BIRCH CREEK)	06/01/23	GROSS ALPHA	1.73	±	0.55	0.06	±	0.02	Yes
	06/01/23	GROSS BETA	2.21	±	0.33	0.08	±	0.01	Yes
	06/01/23	TRITIUM	72.30	±	27.30	2.68	±	1.01	No
	06/01/23	CESIUM-137	-3.37	±	2.17	-0.12	±	0.08	No
BIG LOST RIVER (BIRCH CREEK)	07/03/23	GROSS ALPHA	1.58	±	0.37	0.06	±	0.01	Yes
	07/03/23	GROSS BETA	1.86	±	0.27	0.07	±	0.01	Yes
	07/03/23	TRITIUM	38.30	±	24.90	1.42	±	0.92	No
	07/03/23	CESIUM-137	1.10	±	0.76	0.04	±	0.03	No
BIG LOST RIVER SINKS	06/01/23	GROSS ALPHA	1.93	±	0.63	0.07	±	0.02	Yes
	06/01/23	GROSS BETA	3.75	±	0.38	0.14	±	0.01	Yes
	06/01/23	TRITIUM	18.50	±	23.90	0.69	±	0.89	No
	06/01/23	CESIUM-137	0.40	±	0.64	0.01	±	0.02	No
BIG LOST RIVER SINKS	07/03/23	GROSS ALPHA	1.26	±	0.48	0.05	±	0.02	No
	07/03/23	GROSS BETA	2.25	±	0.37	0.08	±	0.01	Yes
	07/03/23	TRITIUM	50.80	±	25.60	1.88	±	0.95	No
	07/03/23	CESIUM-137	1.03	±	0.93	0.04	±	0.03	No
BIG LOST RIVER (INTEC)	06/01/23	GROSS ALPHA	3.23	±	0.51	0.12	±	0.02	Yes
	06/01/23	GROSS BETA	5.62	±	0.44	0.21	±	0.02	Yes
	06/01/23	TRITIUM	6.47	±	23.30	0.24	±	0.86	No
	06/01/23	CESIUM-137	-2.09	±	1.31	-0.08	±	0.05	No
BIG LOST RIVER (INTEC)	07/03/23	GROSS ALPHA	0.76	±	0.27	0.03	±	0.01	No
	07/03/23	GROSS BETA	1.71	±	0.34	0.06	±	0.01	Yes
	07/03/23	TRITIUM	12.90	±	23.50	0.48	±	0.87	No
	07/03/23	CESIUM-137	0.00	±	2.50	0.00	±	0.09	No
BIG LOST RIVER (NRF)	06/01/23	GROSS ALPHA	5.74	±	0.60	0.21	±	0.02	Yes
	06/01/23	GROSS BETA	6.03	±	0.38	0.22	±	0.01	Yes
	06/01/23	TRITIUM	-8.96	±	22.50	-0.33	±	0.83	No
	06/01/23	CESIUM-137	0.58	±	0.68	0.02	±	0.03	No
BIG LOST RIVER (NRF)	07/03/23	GROSS ALPHA	0.45	±	0.25	0.02	±	0.01	No
	07/03/23	GROSS BETA	1.07	±	0.22	0.04	±	0.01	Yes
	07/03/23	TRITIUM	23.60	±	24.00	0.87	±	0.89	No
	07/03/23	CESIUM-137	1.76	±	1.00	0.07	±	0.04	No
BIG LOST RIVER (REST AREA)	06/01/23	GROSS ALPHA	3.32	±	0.50	0.12	±	0.02	Yes
	06/01/23	GROSS BETA	4.45	±	0.32	0.16	±	0.01	Yes
	06/01/23	TRITIUM	-26.60	±	21.60	-0.99	±	0.80	No
	06/01/23	CESIUM-137	0.63	±	0.77	0.02	±	0.03	No
BIG LOST RIVER (REST AREA)	07/03/23	GROSS ALPHA	1.48	±	0.36	0.05	±	0.01	Yes
	07/03/23	GROSS BETA	1.91	±	0.28	0.07	±	0.01	Yes
	07/03/23	TRITIUM	-30.90	±	21.30	-1.14	±	0.79	No
	07/03/23	CESIUM-137	-1.84	±	1.92	-0.07	±	0.07	No

Table C-7. Weekly and monthly iodine-131 concentrations in milk.

Location		Sampling Date	Result ± 1s Uncertainty (pCi/L)			Result ± 1s Uncertainty (Bq/L)			Result > 3s
IODINE-131									
CONTROL		07/17/23	-0.15	±	0.12	-0.01	±	0.00	No
		08/22/23	-0.10	±	0.20	0.00	±	0.01	No
		09/19/23	-0.01	±	0.27	0.00	±	0.01	No
DIETRICH		07/17/23	0.02	±	0.11	0.00	±	0.00	No
		08/21/23	0.21	±	0.20	0.01	±	0.01	No
		09/18/23	0.23	±	0.23	0.01	±	0.01	No
HOWE		07/17/23	-0.01	±	0.11	0.00	±	0.00	No
		08/21/23	-0.24	±	0.25	-0.01	±	0.01	No
		09/18/23	-0.05	±	0.22	0.00	±	0.01	No
MINIDOKA		07/17/23	0.08	±	0.13	0.00	±	0.00	No
		08/21/23	-0.08	±	0.23	0.00	±	0.01	No
		09/18/23	-0.02	±	0.28	0.00	±	0.01	No
MONTEVIEW		07/17/23	0.06	±	0.14	0.00	±	0.01	No
		08/22/23	-0.49	±	0.27	-0.02	±	0.01	No
		09/19/23	-0.07	±	0.23	0.00	±	0.01	No
	(QA)	09/19/23	0.04	±	0.19	0.00	±	0.01	No
RIGBY		07/05/23	0.05	±	0.12	0.00	±	0.00	No
		07/11/23	-0.15	±	0.17	-0.01	±	0.01	No
		07/17/23	0.19	±	0.12	0.01	±	0.00	No
		07/25/23	-0.09	±	0.18	0.00	±	0.01	No
		07/31/23	0.20	±	0.15	0.01	±	0.01	No
		08/08/23	-0.06	±	0.14	0.00	±	0.01	No
		08/14/23	0.13	±	0.18	0.00	±	0.01	No
		08/22/23	-0.06	±	0.17	0.00	±	0.01	No
	(QA)	08/22/23	0.27	±	0.24	0.01	±	0.01	No
		08/28/23	-0.05	±	0.22	0.00	±	0.01	No
		09/05/23	-0.10	±	0.15	0.00	±	0.01	No
		09/11/23	0.23	±	0.20	0.01	±	0.01	No
		09/19/23	0.18	±	0.19	0.01	±	0.01	No
		09/25/23	0.16	±	0.25	0.01	±	0.01	No
TERRETON		07/05/23	0.04	±	0.11	0.00	±	0.00	No
		07/11/23	0.27	±	0.16	0.01	±	0.01	No
		07/17/23	-0.05	±	0.12	0.00	±	0.00	No
	(QA)	07/17/23	-0.09	±	0.15	0.00	±	0.01	No
		07/25/23	-0.04	±	0.11	0.00	±	0.00	No
		07/31/23	-0.14	±	0.24	-0.01	±	0.01	No
		08/08/23	0.02	±	0.15	0.00	±	0.01	No
		08/14/23	0.24	±	0.18	0.01	±	0.01	No
		08/22/23	-0.27	±	0.19	-0.01	±	0.01	No
		08/28/23	-0.23	±	0.18	-0.01	±	0.01	No
		09/05/23	0.00	±	0.14	0.00	±	0.01	No
		09/11/23	0.11	±	0.16	0.00	±	0.01	No
		09/19/23	-0.20	±	0.20	-0.01	±	0.01	No
		09/25/23	-0.19	±	0.19	-0.01	±	0.01	No

Table C-8. Cesium-137 and strontium-90 concentrations in potatoes.

Location	Sampling Date	Result ± 1s Uncertainty pCi/kg			Result ± 1s Uncertainty (x 10^{-2} Bq/kg)			Result > 3s
CESIUM-137								
BLACKFOOT	09/20/23	1.37	±	3.56	5.07	±	13.19	No
CONTROL	10/02/23	-2.07	±	2.92	-7.67	±	10.81	No
IDAHO FALLS	09/21/23	-0.24	±	1.30	-0.88	±	4.81	No
PINGREE	09/19/23	-1.28	±	1.05	-4.74	±	3.89	No
POCATELLO	09/20/23	1.16	±	1.47	4.30	±	5.44	No
REXBURG	09/20/23	-2.09	±	2.06	-7.74	±	7.63	No
RUPERT	09/20/23	-0.18	±	0.93	-0.68	±	3.46	No
SHELLEY	09/20/23	0.00	±	2.10	0.00	±	7.78	No
SHELLEY (QA)	09/20/23	0.58	±	2.33	2.14	±	8.63	No
SUGAR CITY	09/20/23	0.00	±	2.86	0.00	±	10.59	No
STRONTIUM-90								
BLACKFOOT	09/20/23	5.38	±	6.82	19.93	±	25.26	No
CONTROL	10/02/23	17.10	±	10.60	63.33	±	39.26	No
IDAHO FALLS	09/21/23	4.90	±	6.79	18.15	±	25.15	No
PINGREE	09/19/23	0.79	±	6.71	2.92	±	24.85	No
POCATELLO	09/20/23	6.49	±	3.43	24.04	±	12.70	No
REXBURG	09/20/23	15.70	±	7.37	58.15	±	27.30	No
RUPERT	09/20/23	-10.90	±	3.73	-40.37	±	13.81	No
SHELLEY	09/20/23	-5.77	±	6.99	-21.37	±	25.89	No
SHELLEY (QA)	09/20/23	-6.43	±	5.98	-23.81	±	22.15	No
SUGAR CITY	09/20/23	-9.34	±	4.39	-34.59	±	16.26	No

Table C-9. Cesium-137 and strontium-90 concentrations in lettuce.

Location	Sampling Date	Result ± 1s Uncertainty pCi/kg			Result ± 1s Uncertainty (x 10^{-2} Bq/kg)			Result > 3s
CESIUM-137								
ATOMIC CITY	09/07/23	52.2	±	71.7	193.3	±	265.6	No
CONTROL	11/22/23	127.0	±	57.0	470.4	±	211.1	No
EFS	09/07/23	12.8	±	41.8	47.4	±	154.8	No
FAA TOWER	09/07/23	-102.0	±	91.5	-377.8	±	338.9	No
HOWE	09/07/23	44.8	±	85.7	165.9	±	317.4	No
HOWE (QA)	09/07/23	90.0	±	41.3	333.3	±	153.0	No
IDAHO FALLS	10/03/23	60.0	±	50.4	222.2	±	186.7	No
MONTEVIEW	09/07/23	-28.2	±	32.1	-104.4	±	118.9	No
STRONTIUM-90								
ATOMIC CITY	09/07/23	29.3	±	13.9	108.5	±	51.5	No
CONTROL	11/22/23	33.3	±	19.2	123.3	±	71.1	No
EFS	09/07/23	56.6	±	21.7	209.6	±	80.4	No
FAA TOWER	09/07/23	19.1	±	15.1	70.7	±	55.9	No
HOWE	09/07/23	18.9	±	18.5	70.0	±	68.5	No
HOWE (QA)	09/07/23	36.4	±	15.9	134.8	±	58.9	No
IDAHO FALLS	10/03/23	-34.4	±	17.0	-127.4	±	63.0	No
MONTEVIEW	09/07/23	59.7	±	21.3	221.1	±	78.9	No

Table C-10. Gamma-emitting radionuclides and strontium-90 in alfalfa.

Location	Sampling Date	Result ± 1s Uncertainty pCi/kg			Result ± 1s Uncertainty Bq/kg			Result > 3s
CESIUM-137								
BLACKFOOT	11/25/23	4.52	±	12.90	0.17	±	0.48	No
HOWE (QA)	06/15/23	15.10	±	14.50	0.56	±	0.54	No
HOWE	06/15/23	24.40	±	18.60	0.90	±	0.69	No
IDAHO FALLS	06/15/23	-10.20	±	15.20	-0.38	±	0.56	No
MUDLAKE	06/15/23	23.00	±	21.20	0.85	±	0.79	No
STRONTIUM-90								
BLACKFOOT	11/25/23	-7.76	±	12.80	-0.29	±	0.47	No
HOWE (QA)	06/15/23	47.10	±	18.40	1.74	±	0.68	No
HOWE	06/15/23	32.30	±	16.50	1.20	±	0.61	No
IDAHO FALLS	06/15/23	-3.37	±	14.90	-0.12	±	0.55	No
MUDLAKE	06/15/23	25.20	±	14.90	0.93	±	0.55	No

Table C-11. Cesium-137 and strontium-90 concentrations in grain.

Location	Sampling Date	Result ± 1s Uncertainty pCi/kg			Result ± 1s Uncertainty Bq/kg			Result > 3s
CESIUM-137								
AMERICAN FALLS	09/20/23	2.64	±	3.08	0.10	±	0.11	No
ARCO	09/13/23	5.34	±	3.92	0.20	±	0.15	No
BLACKFOOT	09/20/23	1.59	±	2.05	0.06	±	0.08	No
BLACKFOOT (QA)	09/20/23	1.52	±	3.07	0.06	±	0.11	No
HOWE	09/13/23	2.06	±	2.99	0.08	±	0.11	No
IDAHO FALLS	09/13/23	3.34	±	2.54	0.12	±	0.09	No
KIMAMA	09/18/23	5.08	±	2.80	0.19	±	0.10	No
CONTROL	09/25/23	3.01	±	2.45	0.11	±	0.09	No
MONTEVIEW	09/13/23	1.10	±	4.64	0.04	±	0.17	No
ROBERTS	09/13/23	-0.43	±	3.22	-0.02	±	0.12	No
RUPERT	09/20/23	-1.65	±	2.12	-0.06	±	0.08	No
SUGAR CITY	09/13/23	0.04	±	2.01	0.00	±	0.07	No
TERRETON	09/13/23	-0.71	±	1.91	-0.03	±	0.07	No
STRONTIUM-90								
AMERICAN FALLS	09/20/23	12.70	±	15.90	0.47	±	0.59	No
ARCO	09/13/23	5.21	±	17.70	0.19	±	0.66	No
BLACKFOOT	09/20/23	-1.57	±	11.80	-0.06	±	0.44	No
BLACKFOOT (QA)	09/20/23	11.90	±	17.50	0.44	±	0.65	No
HOWE	09/13/23	-27.60	±	16.10	-1.02	±	0.60	No
IDAHO FALLS	09/13/23	18.40	±	7.82	0.68	±	0.29	No
KIMAMA	09/18/23	26.40	±	10.40	0.98	±	0.39	No
CONTROL	09/25/23	-9.85	±	10.60	-0.36	±	0.39	No
MONTEVIEW	09/13/23	34.10	±	19.60	1.26	±	0.73	No
ROBERTS	09/13/23	16.70	±	8.78	0.62	±	0.33	No
RUPERT	09/20/23	10.40	±	15.50	0.39	±	0.57	No
SUGAR CITY	09/13/23	-1.54	±	17.30	-0.06	±	0.64	No
TERRETON	09/13/23	-33.8	±	13.40	-1.25	±	0.50	No

Table C-12. Gamma-emitting radionuclides in large game animals.

Species	Collection Date	Tissue	Analyte	Result ± 1s (pCi/kg wet weight)			Result ± 1s Uncertainty (x 10^{-2} Bq/kg wet weight)			Result > 3s
ELK	09/26/23	Muscle	Cesium-137	7.62	±	3.46	28.19	±	12.80	No

Appendix D
Statistical Analysis Results

Table D-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	90	18272.50	203.0278		
Onsite	259	63227.00	244.1197	6.483626	0.0391
Offsite	114	25916.50	227.3377		
July	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	27	1845.500	68.35185		
Onsite	80	5912.500	73.90625	ver0.6271020	0.7308
Offsite	35	2395.000	68.42857		
August	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	35	2439.500	69.70000		
Onsite	99	9648.000	97.45455	7.427979	0.0244
Offsite	45	4022.500	89.38889		
September	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	28	1840.500	65.73214		
Onsite	80	5917.500	73.96875	0.8612267	0.6501
Offsite	34	2395.000	70.44118		
GROSS BETA					
Quarter	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	90	17682.50	196.4722		
Onsite	259	63620.00	245.6371	9.091692	0.0106
Offsite	114	26113.50	229.0658		
July	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	27	1623.000	60.11111		
Onsite	80	5937.000	74.21250	2.556185	0.2786
Offsite	35	2593.000	74.08571		
August	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	35	2383.500	68.10000		
Onsite	99	9760.500	98.59091	9.034520	0.0109
Offsite	45	3966.000	88.13333		

Table D-1. continued.

September	Valid N	Sum of Ranks	Mean Ranks	H[a]	P[b]
Boundary	28	1843.500	65.83929	1.962830	0.3748
Onsite	80	6060.500	75.75625		
Offsite	34	2249.000	66.14706		

a. Kruskal-Wallis test statistic calculated using mean ranks. This test assumes H is approximately distributed as χ^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 D-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.

Multiple Comparisons p values (2-tailed); Coded result (x10-15) (3rd Qtr 2023 Filter_Charcoal_Atmosph - DONE in 3rd-Qtr-23-LvF)
Independent (grouping) variable: Sample Location
Kruskal-Wallis test: H (31, N= 412) =47.42518 p =.0299
Include condition: v7='gross alpha'

Depend.: Coded result (x10-15)	Arco R:145.00	Atomic City R:199.19	ATR Complex R:290.31	Blackfoot R:255.92	Blue Dome R:195.96	CFA R:200.38	Craters of the Moon R:180.19	Dubois R:207.54	EBR 1 R:253.81	EFS R:162.00	FAA Tower R:195.81	Gate 4 R:178.92	Highway 26 Rest Area R:209.81	Howe R:153.08	Idaho Falls R:246.46	INTEC (west side) R:229.31	IRC R:250.81	IRC North R:179.35	Jackson WY R:119.85	Main Gate R:151.38	MFC North R:210.31	MFC South R:166.81	Monteview R:161.85	NRF R:226.69	PBF R:185.15	RHLLW R:248.54	RWMC R:284.23	RWMC South R:198.00	SMC R:225.58	Sugar City R:218.41	Terreton R:225.38	Van Buren R:245.65
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	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	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	0.130253	1.000000	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	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	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	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	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	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	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	1.000000
FAA Tower	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	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	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 (west side)	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	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	0.130253	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	0.214426	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	0.214426	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 D-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) (3rd Qtr 2023 Filter_Charcoal_Atmosph - DONE in 3rd-Qtr-23-LvF)
Independent (grouping) variable: Sample Location
Kruskal-Wallis test: H (31, N= 412) =24.91593 p =.7715
Include condition: v7='gross beta'

Depend.: Coded result (x10-15)	Arco R:98.667	Atomic City R:206.58	ATR Complex R:211.69	Blackfoot R:188.96	Blue Dome R:184.62	CFA R:227.50	Craters of the Moon R:208.00	Dubois R:191.62	EBR 1 R:230.69	EFS R:225.21	FAA Tower R:185.35	Gate 4 R:229.81	Highway 26 Rest Area R:235.12	Howe R:173.42	Idaho Falls R:203.00	INTEC (west side) R:223.69
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
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
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
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
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
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
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
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
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
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
FAA Tower	1.000000	1.000000	1.000000	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
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
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
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
INTEC (west side)	1.000000	1.000000	1.000000	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

Depend.: Coded result (x10-15)	IRC R:208.65	IRC North R:199.12	Jackson WY R:223.23	Main Gate R:227.00	MFC North R:154.85	MFC South R:178.50	Monteview R:181.04	NRF R:241.27	PBF R:180.73	RHLLW R:231.54	RWMC R:234.69	RWMC South R:243.92	SMC R:214.73	Sugar City R:225.41	Terreton R:199.50	Van Buren R:235.96
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
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
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
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
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
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
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
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
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
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
FAA Tower	1.000000	1.000000	1.000000	1.000000	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
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
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
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
INTEC (west side)	1.000000	1.000000	1.000000	1.000000	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	