INL/RPT-22-69651
Revision 0

Idaho National Laboratory Site Environmental Surveillance Program Report: First Quarter 2022

October 2023

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INL is a U.S. Department of Energy National Laboratory
operated by Battelle Energy Alliance, LLC

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EXECUTIVE SUMMARY

Some human-made radionuclides were detected in samples collected during the first quarter of 2022. None of the radionuclides detected in samples collected during the first quarter of 2022 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 first quarter of 2022 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, January 1 through March 31, 2022. All sample types (media) and the sampling schedule followed during 2022 are listed in Appendix A. This report contains results for the following sample types:

- Air, including particulate air filters, charcoal cartridges, and atmospheric moisture
- Quarterly composites
- Precipitation
- Milk
- Large game animals.

Table ES-1. Summary of results for the first quarter of 2022.

Media	Sample Type	Analysis	Results
Air	Particulate Filters	Gross alpha, gross beta	There were no statistically significant differences during March for gross alpha. In addition, there were no statistically significant differences during January, February, and March for gross beta. Statistically significant differences were observed for gross alpha during the quarter, January, and February as well as during the quarter for gross beta. No result exceeded the Derived Concentration Standard (DCS) for gross alpha or gross beta activity in air. A few results exceeded the 99%/95% upper tolerance limit (UTL) but appear to be due to naturally higher concentrations during periods of temperature inversion.
	Quarterly Composite	Gamma-emitting radionuclides, strontium-90, actinides (americium and plutonium)	Strontium-90 (^{90}Sr) was detected in quarterly composited samples from Blue Dome, FAA Tower, Howe, Dubois, and the duplicate in Dubois. Results were well below the DCS, within historical measurements, and probably originated from historical nuclear weapons testing. Human-made gamma-emitting radionuclides (e.g., cesium-137), americium-241, plutonium-238, and plutonium-239/240 were not detected in any of the first 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	Two of eleven 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 17 samples were collected during the first quarter. Two of the tritium results were greater than the 3s uncertainty. None result exceeded the UTL, however, the value is within historical range and below the DCS for tritium in water.
Milk	Liquid	Iodine-131, other gamma-emitting radionuclides	Forty-one milk samples were collected at seven locations (including the offsite control sample from Colorado and two duplicates). No human-made gamma-emitting radionuclides were detected.

Table ES-1. continued.

Media	Sample Type	Analysis	Results
Large game animals	Tissue	Gamma-emitting radionuclides	Two game animals were sampled during the quarter. No human-made gamma emitting radionuclides were found in any of the tissue samples.

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CONTENTS

FIGURES

TABLES

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ACRONYMS

ATR	Advanced Test Reactor
BEA	Battelle Energy Alliance
CFA	Central Facilities Area
DCS	Derived Concentration Standard
DOE	U.S. Department of Energy
EBR I	Experimental Breeder Reactor I
EFS	Experimental Field Station
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
HWY	Highway
ICP	Idaho Cleanup Project
INEEL	Idaho National Engineering and Environmental Laboratory
INL	Idaho National Laboratory
INTEC	Idaho Nuclear Technology and Engineering Center
ISU-EAL	Idaho State University-Environmental Assessment Laboratory
MDC	minimum detectable concentration
MFC	Materials and Fuels Complex
NRF	Naval Reactors Facility
NRTS	National Reactor Testing Station
PE	performance evaluation
RHLLW	Remote-handled Low-Level Waste
RWMC	Radioactive Waste Management Complex
SMC	Specific Manufacturing Capability
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 2022, 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.

In December 2020, DOE initiated transition of the Environmental Surveillance, Education, and Research (ESER) Program from DOE management to the INL contract managed by Battelle Energy Alliance, LLC (BEA). A team composed of DOE, BEA and the ESER Program contractor, Veolia Nuclear Solutions – Federal Services, successfully transitioned the program on September 30, 2021. It is now called the Environmental Monitoring and Natural Resource Services. The ESER Program environmental surveillance scope has been integrated into the INL environmental surveillance program. Sampling activities conducted prior to September 30, 2021, were performed by Veolia Nuclear Solutions – Federal Services while sampling activities conducted after September 30, 2021, were performed under BEA.

This report contains integrated surveillance monitoring results from the INL contractor for samples collected during the first quarter of 2022 (January 1 – March 31, 2022).

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 42 low-volume air samplers (four of which are used as replicate samplers) at 32 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 29 locations on and around the INL Site biennially
- environmental dosimeters from 196 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.

Four 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. The Idaho State University Environmental Assessment Laboratory performed routine gross alpha, gross beta, tritium, and gamma spectrometry analyses. ALS Fort Collins performed gross alpha, gross beta, gamma spectrometry, alpha spectrometry (americium-241 [^{241}Am], plutonium-238 [^{238}Pu], and plutonium-239/240 [$^{239/240}$Pu]) and strontium-90 (^{90}Sr) analyses. GEL Laboratories performed analyses for ^{90}Sr, ^{238}Pu, $^{239/240}$Pu, and ^{241}Am)

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

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

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. A false positive result is indicated when the range encompassing the result, plus or minus the total uncertainty at three standard deviations, includes zero (e.g., 2.5 +/- 1.0; range of -0.5 to 5.5). 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 2015b). 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 (in this case, 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 site 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 scott.lee@inl.gov, or visit https://idahoeser.inl.gov/.

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2. INL Site

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

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

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.

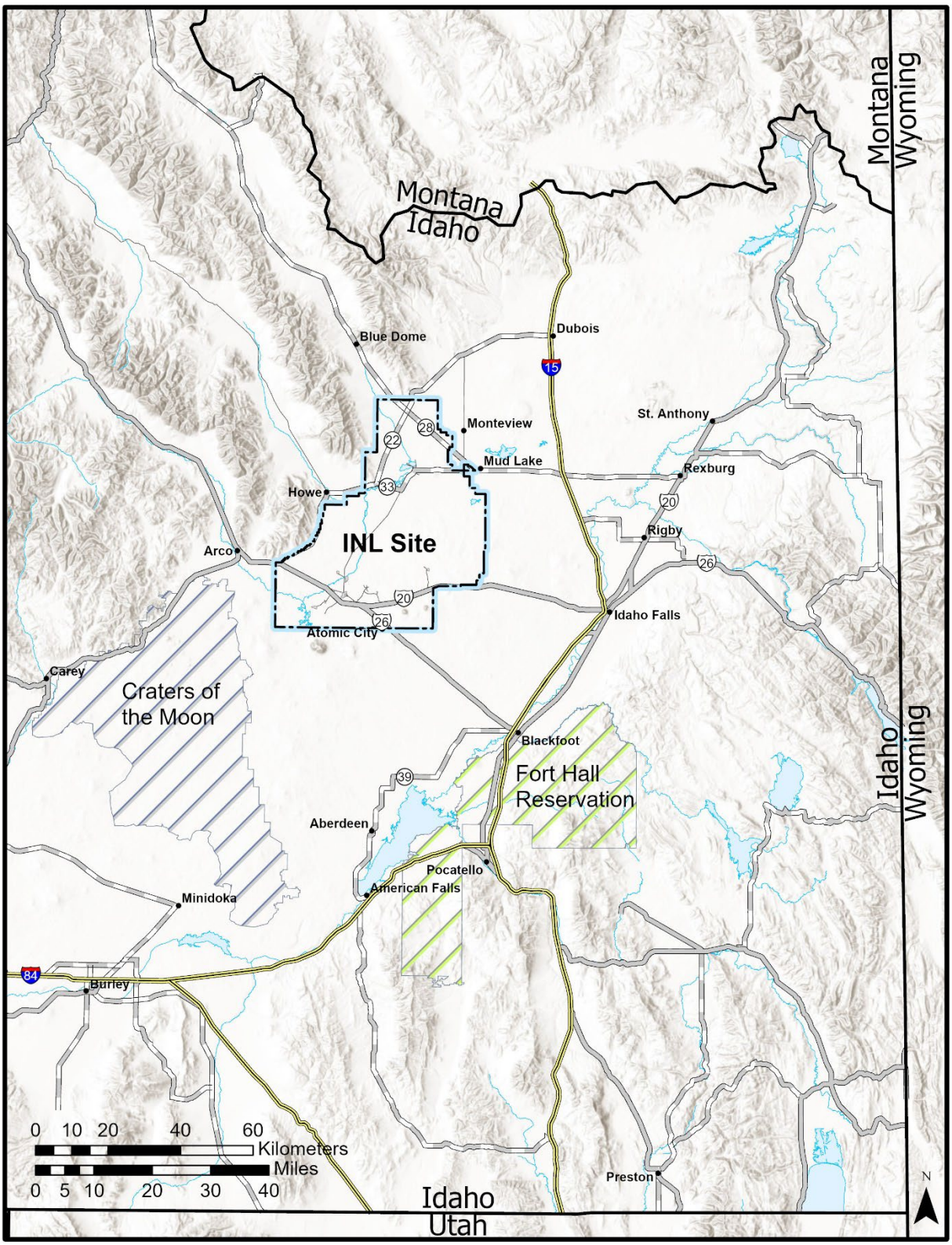

Figure 1. Location of the INL Site.

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 32 locations using low-volume air samplers. Moisture in the atmosphere was sampled at seven locations around the INL Site and analyzed for tritium. Air sampling activities and results for the first quarter of 2022 are discussed below. A summary of approximate MDCs for radiological analyses and DOE Derived Concentration Standard (DCS) (DOE 2021) values is provided in Appendix B.

3.1 Low-volume Air Sampling

Radioactivity associated with airborne particulates was monitored continuously by 42 low-volume air samplers (four of which are used as replicate samplers) at 32 locations during the first quarter of 2022 (Figure 2). Seventeen of these samplers are located onsite, seven are situated off the INL Site near the boundary, and eight have been placed at locations off the INL Site. Currently, several locations have two samplers as a result of the ESER program being transferred to BEA. The locations include: Blackfoot, Craters of the Moon, Experimental Field Station (EFS), Idaho Falls, Sugar City, and Van Buren. One sampler at each location is being scheduled for deactivation since duplicate samplers are already in place. 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 first quarter 2022, replicate samplers were located at Dubois (offsite location), Idaho Nuclear Technology and Engineering Center (INTEC) – westside (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), whereas 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. Selected composites were also analyzed by location for ^{90}Sr, ^{238}Pu, $^{239/240}Pu$, and ^{241}Am as determined by a rotating quarterly schedule.

Charcoal cartridges were analyzed for gamma-emitting radionuclides, specifically for ^{131}I, using two methods. Cartridges analyzed by Idaho State University Environmental Assessment Laboratory are done in batches of ten as an initial scan. If the scan results in ^{131}I activity above 3-sigma, the cartridges are split into smaller batches and analyzed to identify the cartridge which contains the radioanalyte above 3-sigma. Cartridges which are analyzed by the INL Environmental Services In Situ Gamma Laboratory are scanned individually. If the scan of an individual cartridge results in a positive detection, the cartridge is shipped to ALS Laboratories 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.

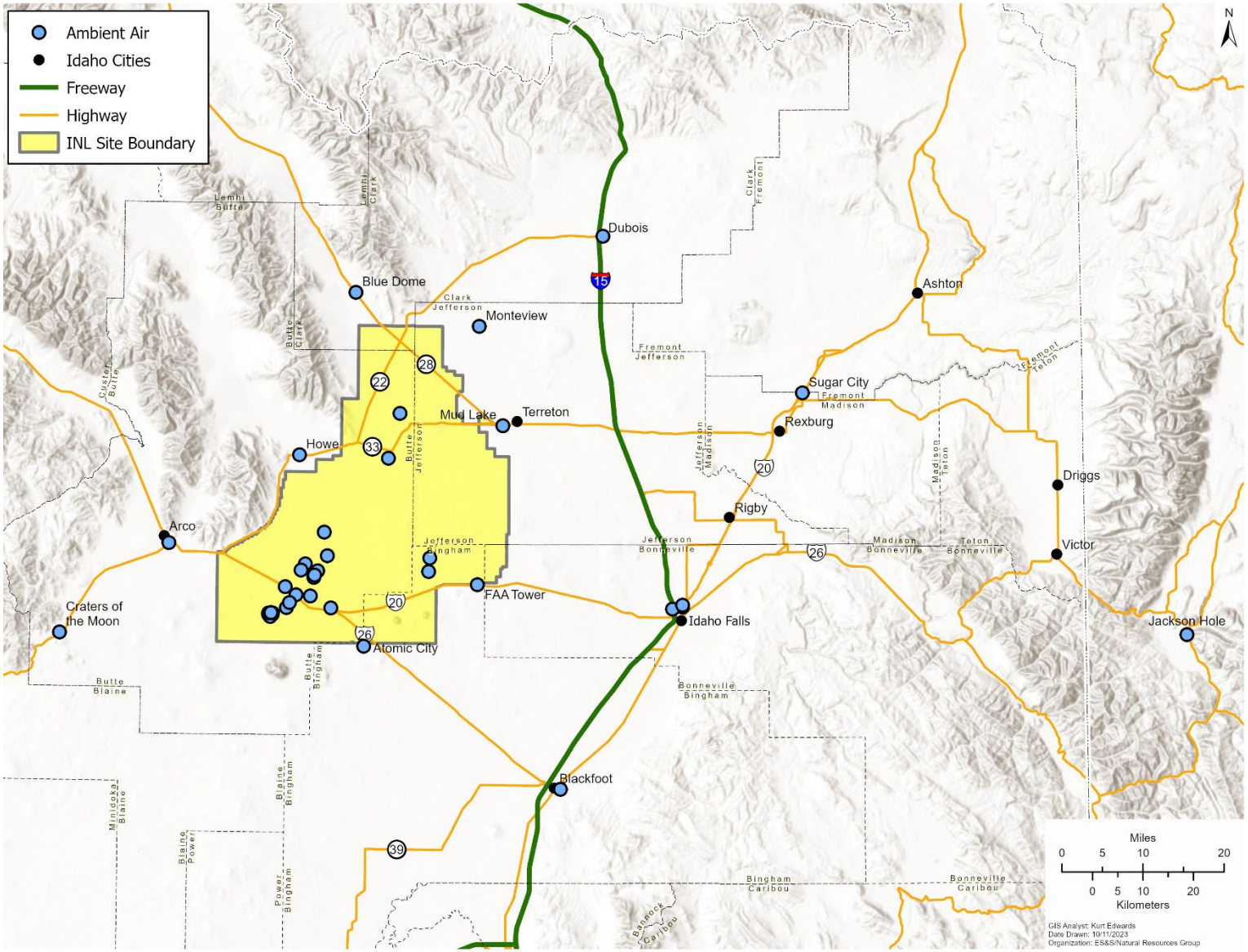

Figure 2. INL contractor air monitoring locations.

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 (-7.3 ± 5.1) x 10^{-16} µCi/ml collected at RHLLW on March 16, 2022, to a high of (6.4 ± 0.44) x 10^{-15} µCi/ml collected at Atomic City on January 19, 2022. 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 that if a concentration exceeds the UTL it does not necessarily indicate that the result is outside of the normal range. Rather, it indicates that the measurement should be closely examined to determine if it is unusually high.

Gross alpha data have been tested for distribution (normally or lognormally 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 nonparametric 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 was no statistically significant difference among groups for March, however, there were statistically significant difference among groups for the quarter, January and February (Table D-1). To determine if there were any differences between stations and where the differences occur, the Kruskal-Wallis analysis of variance by ranks test was used again. No differences were determined (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 (10.1 ± 0.63) x 10^{-15} µCi/ml collected at Craters of the Moon on January 12, 2022, to a high of (8.7 ± 0.17) × 10^{-14} µCi/ml collected at EFS on February 2, 2022. The typical temporal fluctuations in gross beta concentrations in air were observed during the quarter because of temperature inversions. 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 (6.3 × 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 January, February and March, yet data measured during the quarter had statistically significant differences (Table D-1). To determine if there were any differences between stations and where the differences occur,

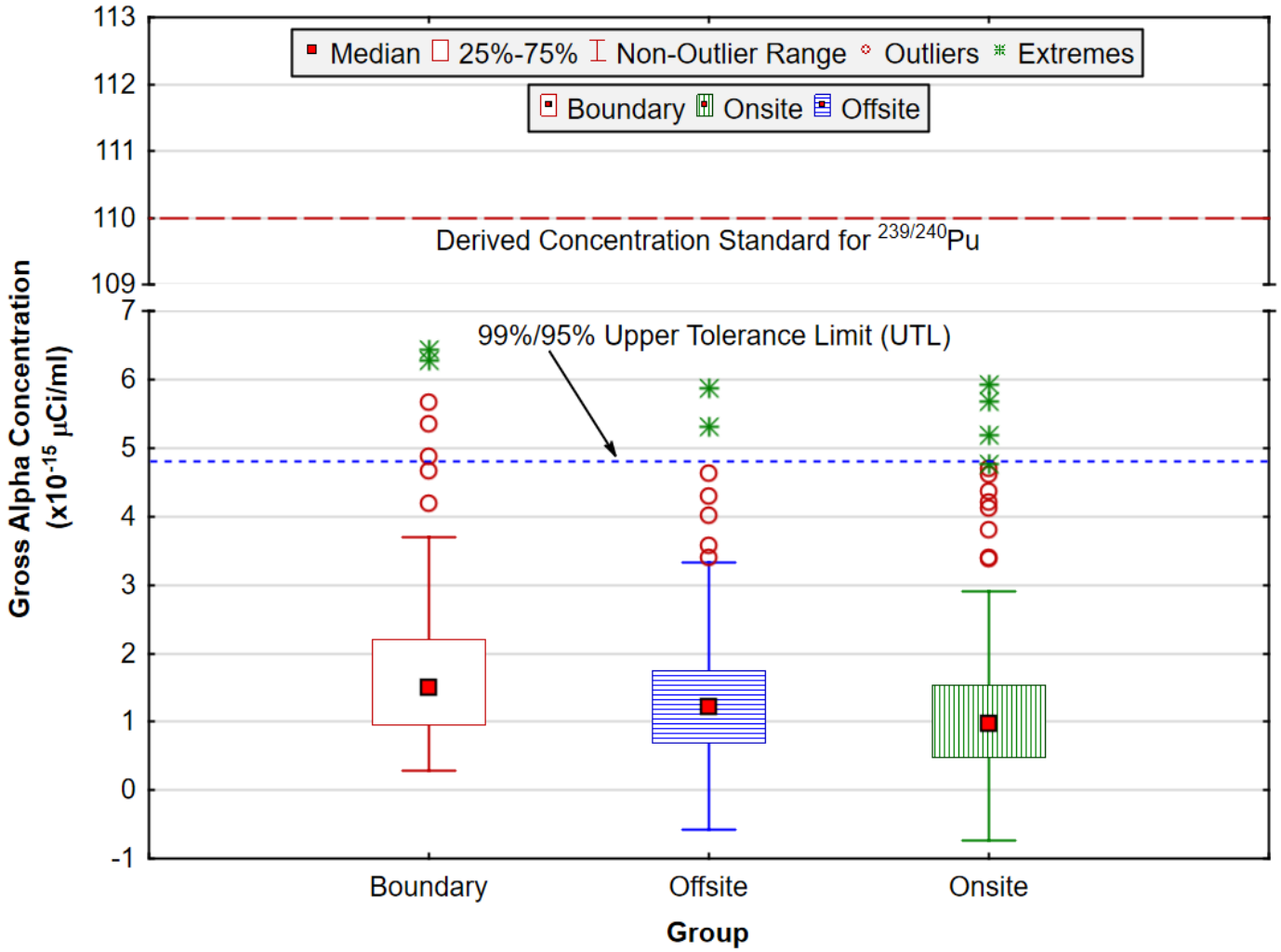

Figure 3. Gross alpha concentrations in air at onsite, boundary, and offsite locations for the first quarter of 2022. The DCS is the concentration of $^{239/240}Pu$ in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (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.

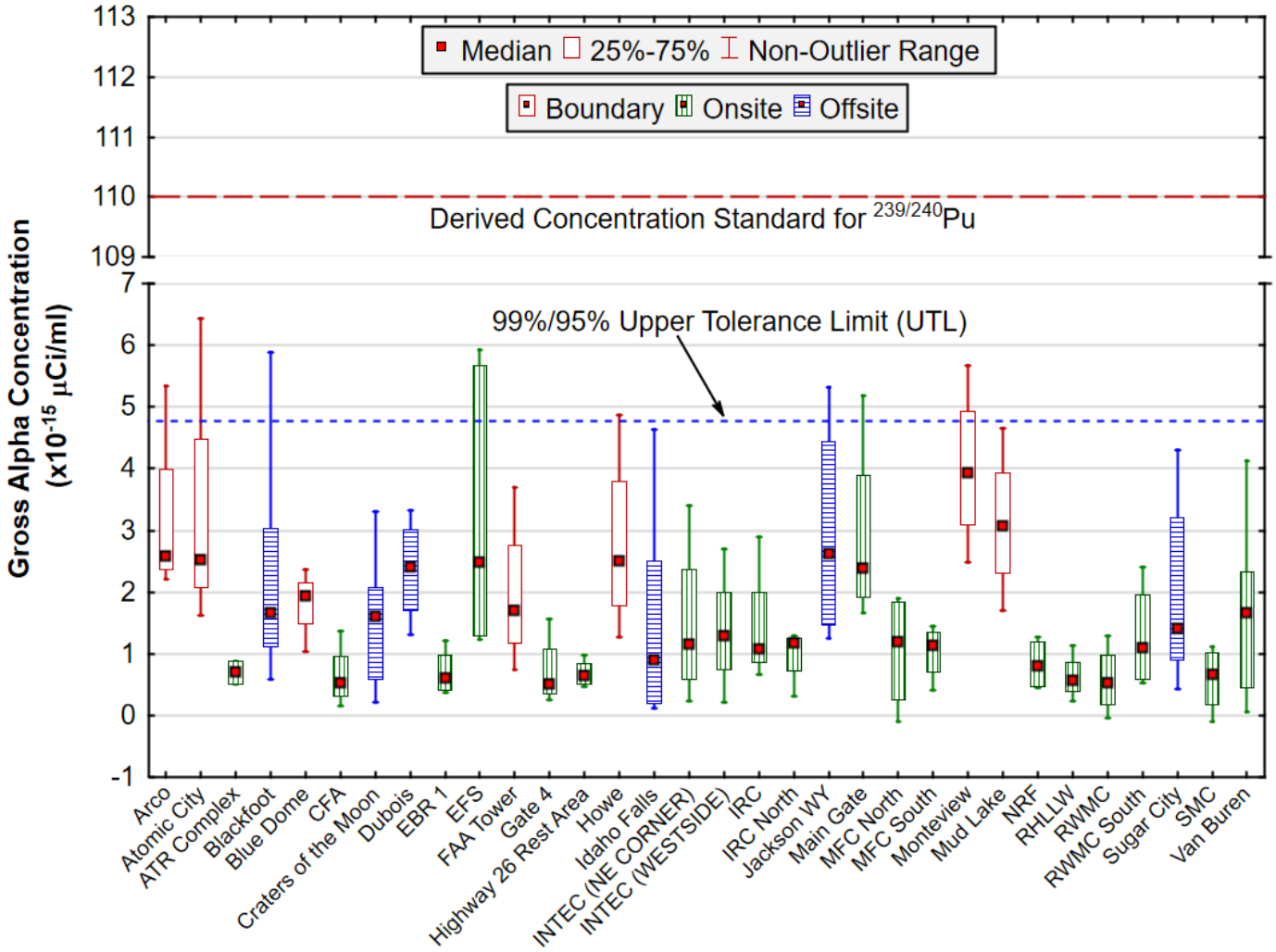

Figure 4. January 2022 gross alpha concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of $^{239/240}Pu$ in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{238}U, ^{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.

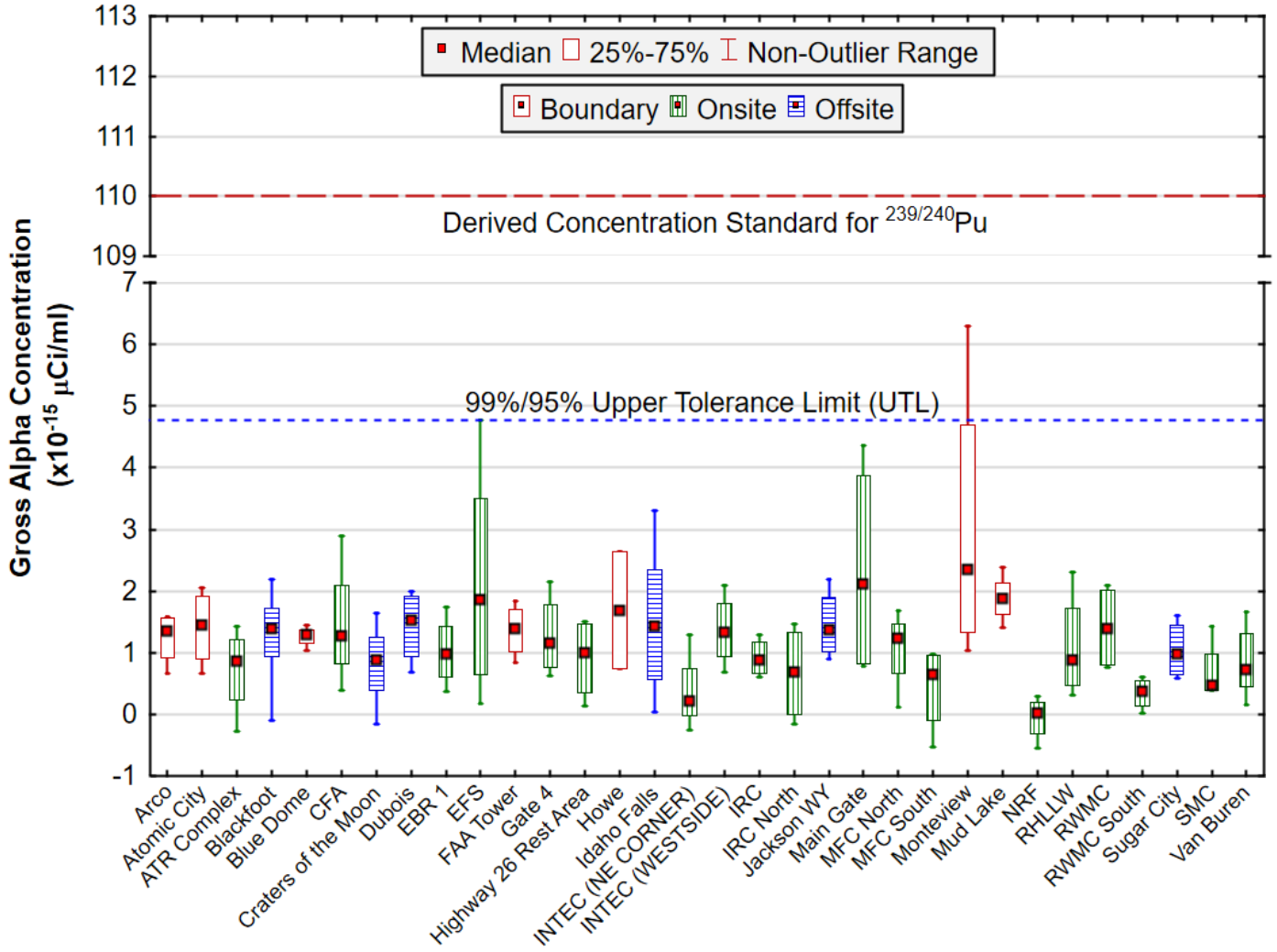

Figure 5. February 2022 gross alpha concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of $^{239/240}Pu$ in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{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.

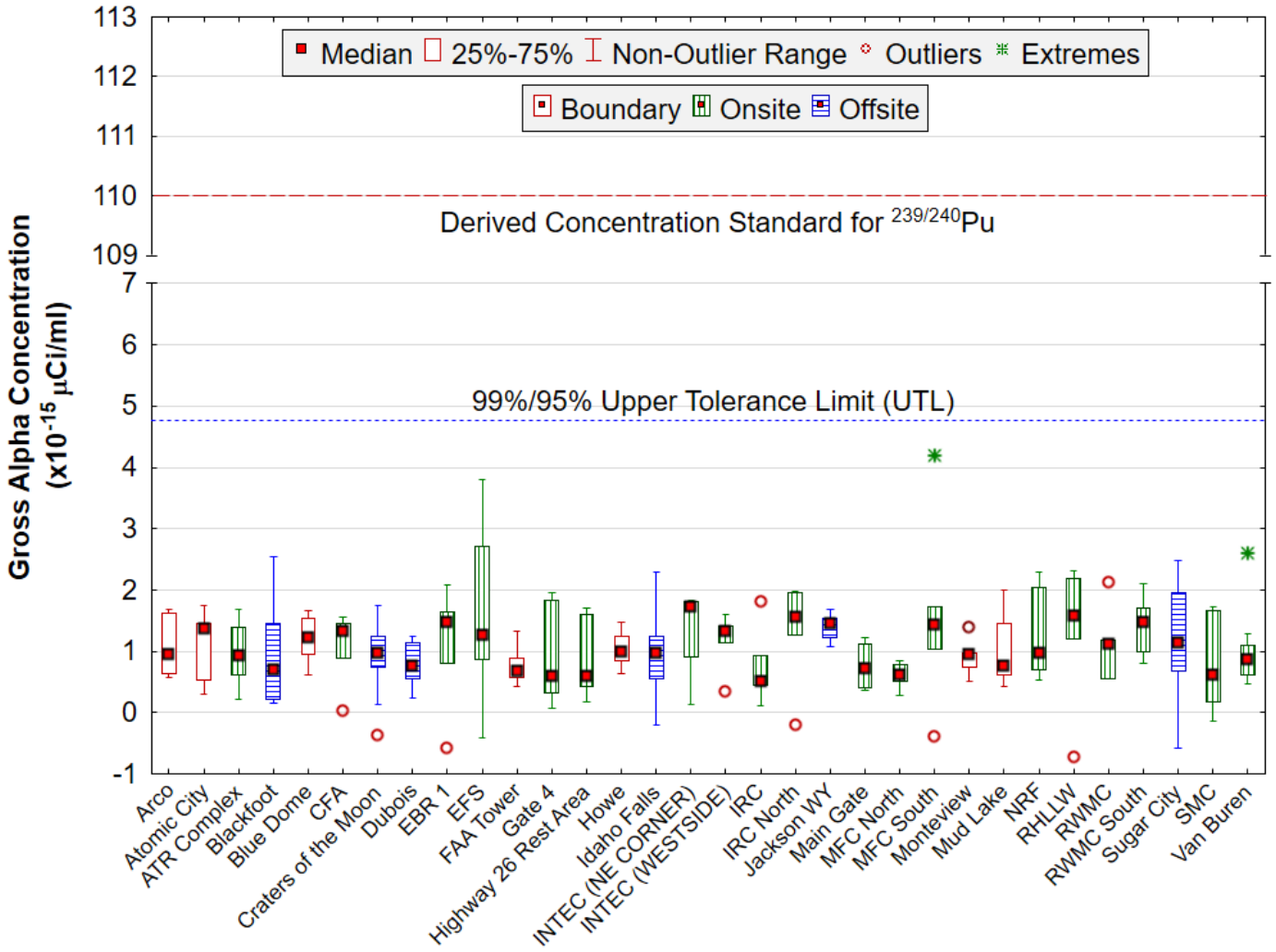

Figure 6. March 2022 gross alpha concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of $^{239/240}Pu$ in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{238}U, ^{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.

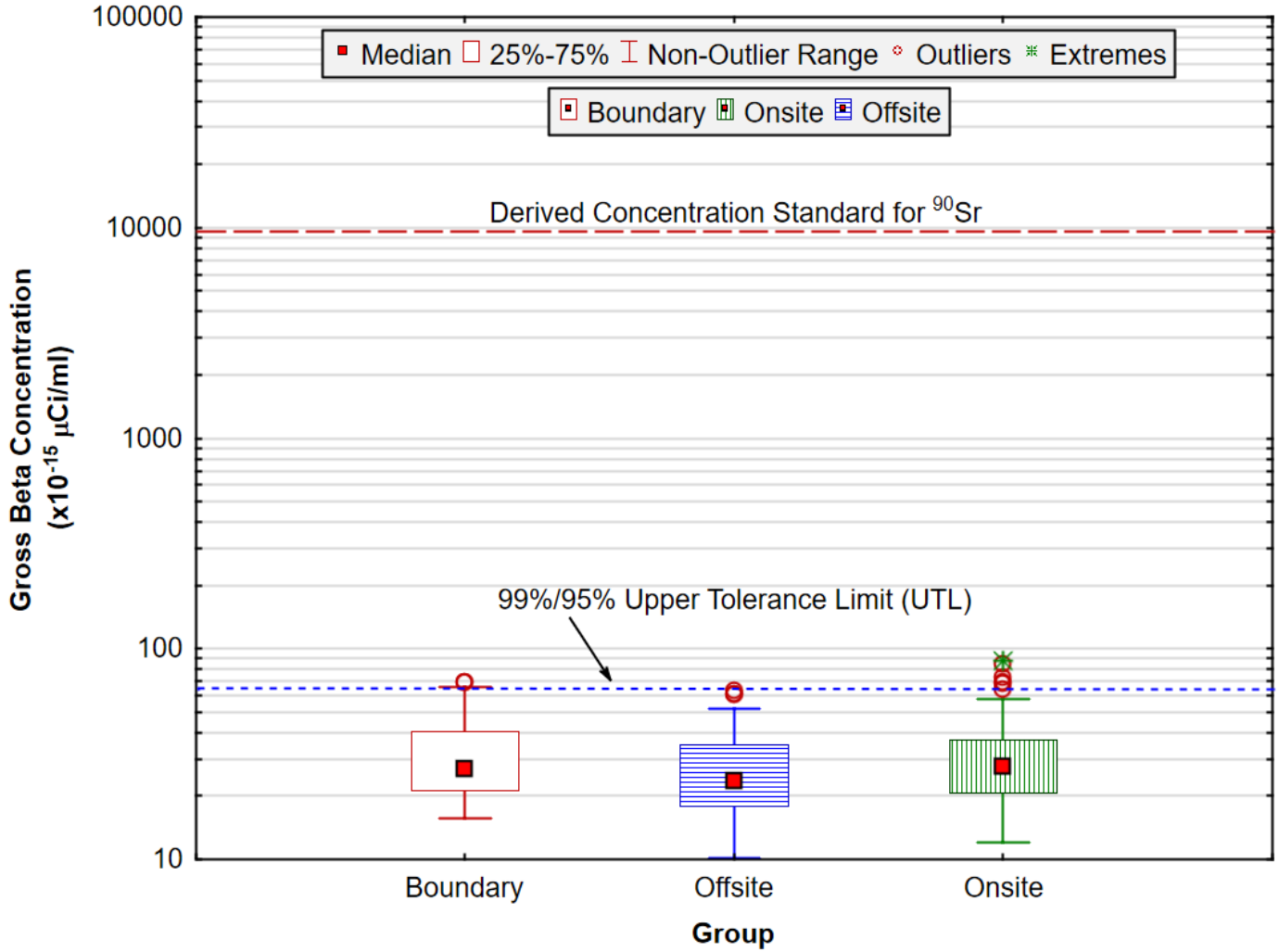

Figure 7. Gross beta concentrations in air at onsite, boundary, and offsite locations for the first quarter of 2022. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such 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.

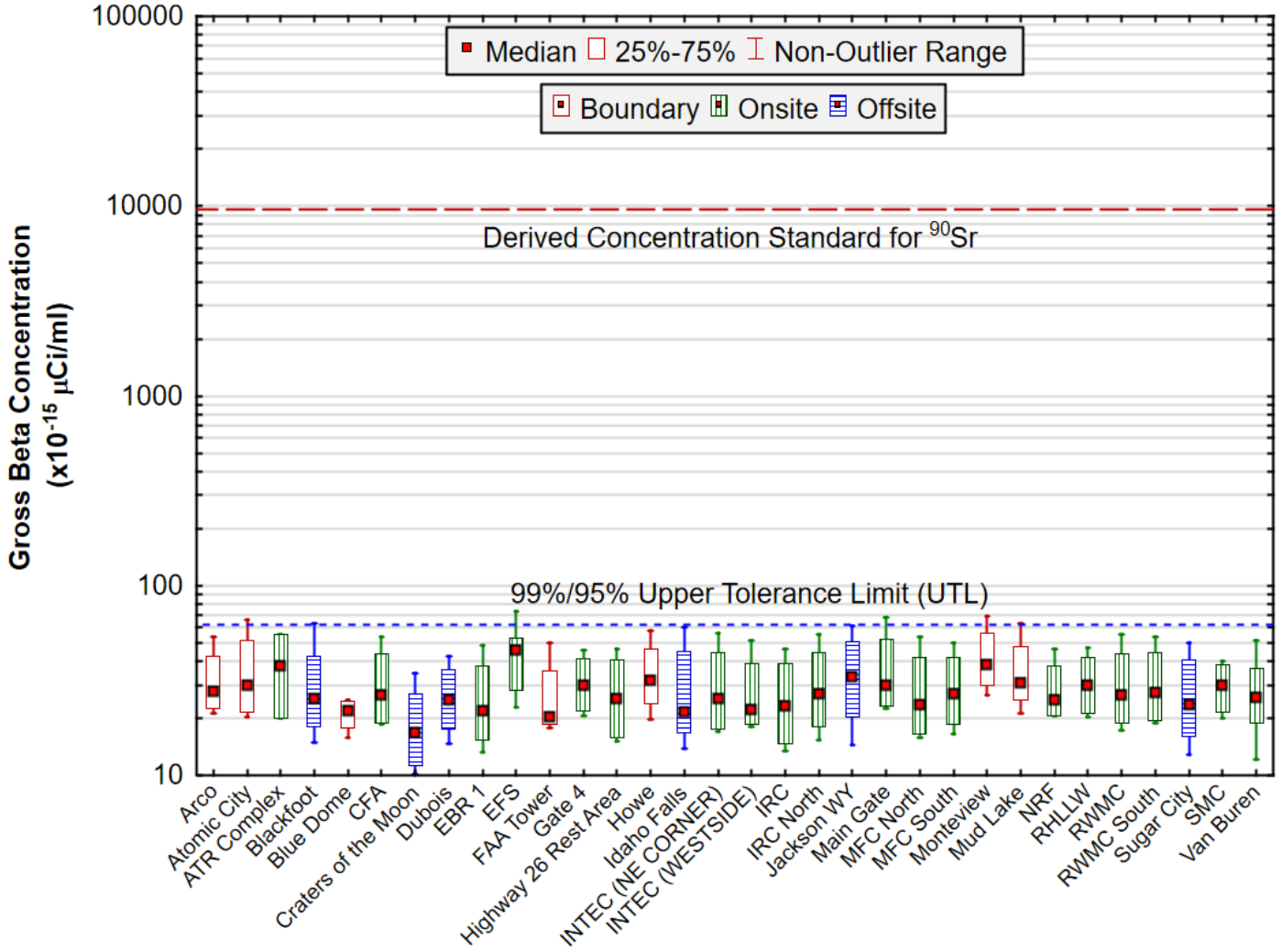

Figure 8. January 2022 gross beta concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{40}K, ^{228}Ra, 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.

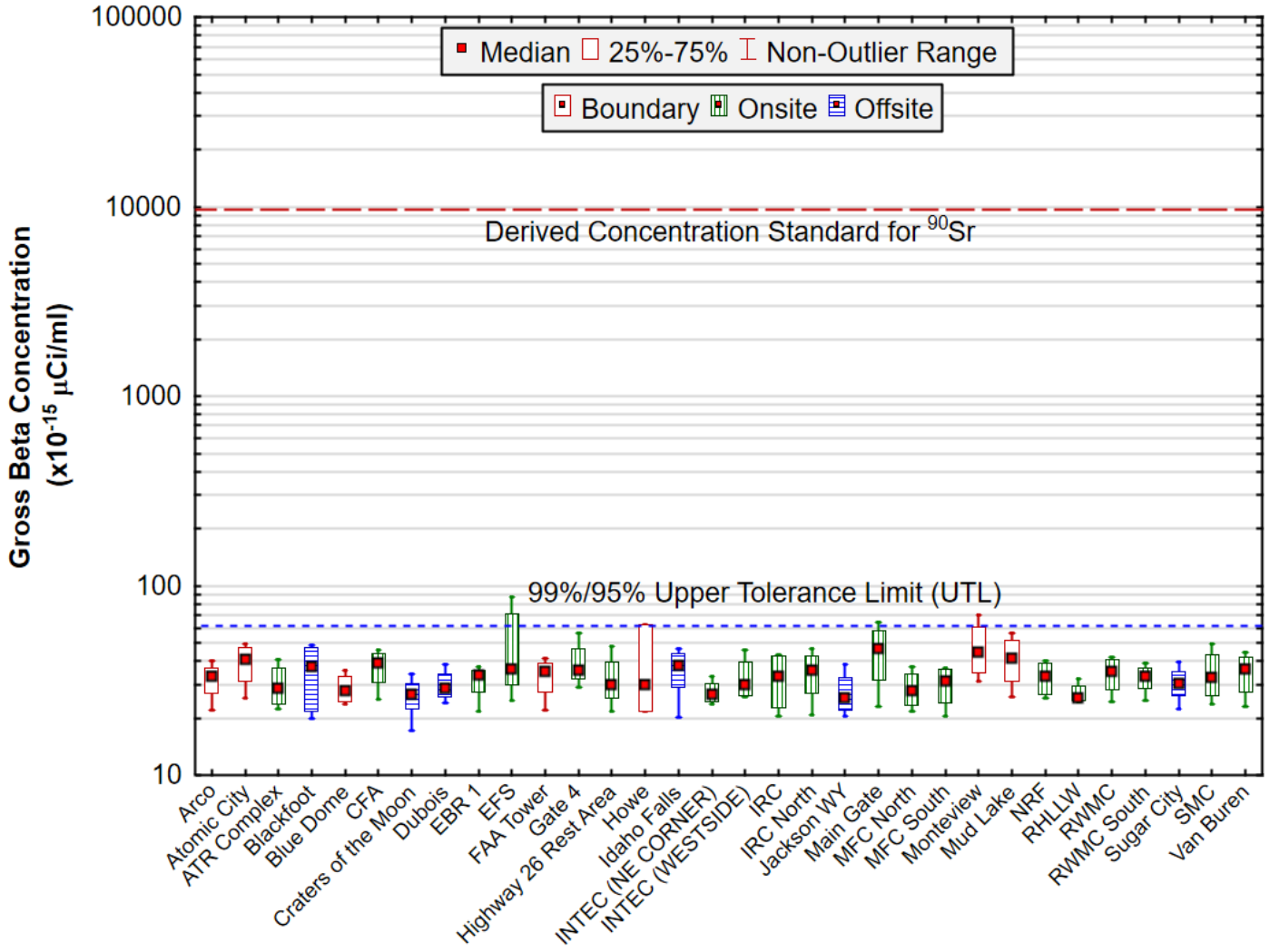

Figure 9. February 2022 gross beta concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{40}K, ^{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.

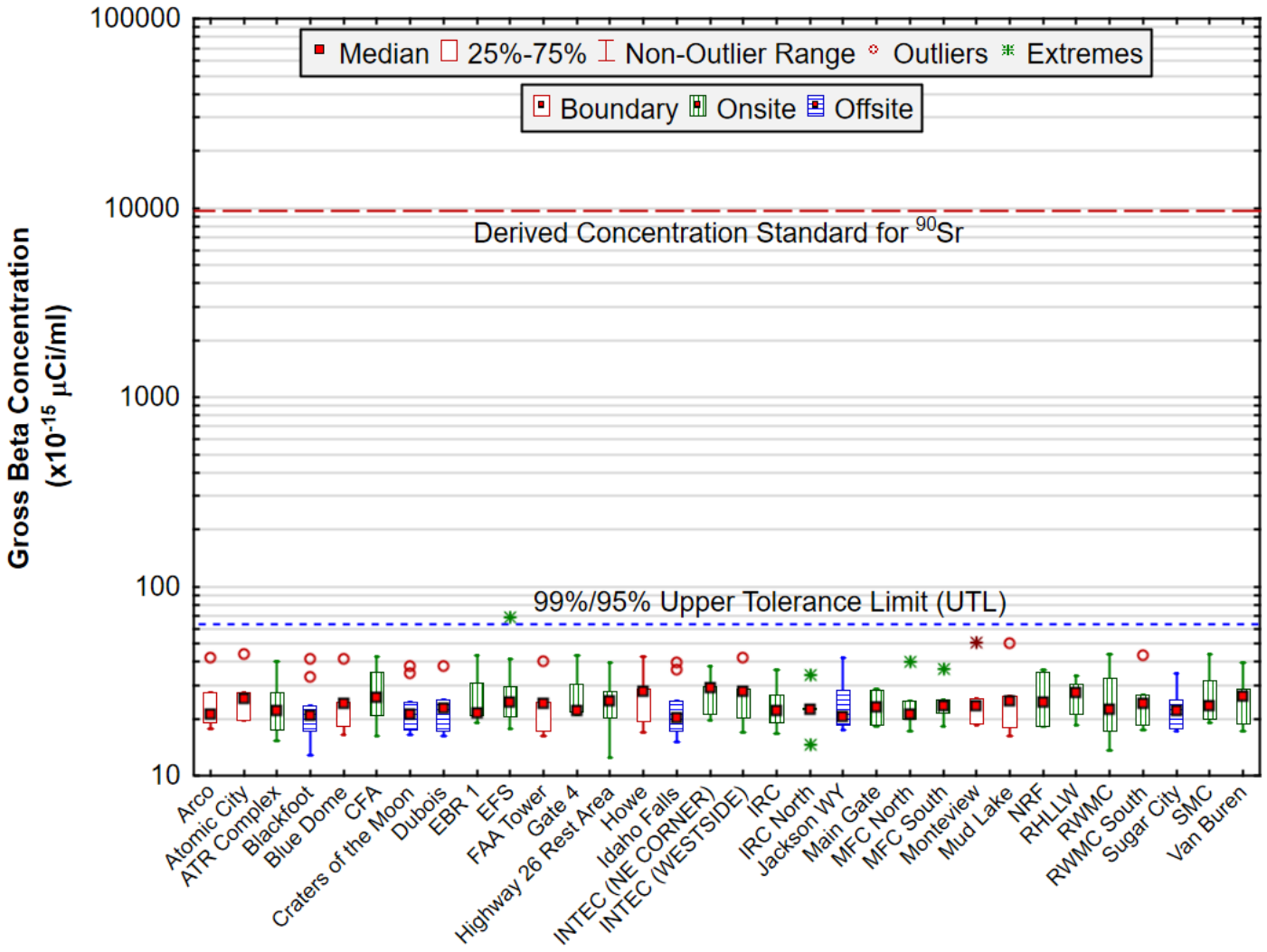

Figure 10. March 2022 gross beta concentrations in air at onsite, boundary, and offsite locations. The DCS is the concentration of ^{90}Sr in air which, if inhaled for a year, would result in a dose of 100 mrem/yr. Because the measurements include naturally occurring radionuclides (such as ^{40}K, ^{228}Ra, 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.

multiple comparisons were also made using the Kruskal-Wallis analysis of variance by ranks test between gross beta concentrations measured at all locations. No differences were determined (Table D-3).

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

No ^{137}Cs or other human-made gamma-emitting radionuclides were found in quarterly air composites. Strontium-90, a beta-emitting radionuclide associated with historic nuclear weapons testing fallout, was detected in a composite sample collected from Blue Dome, FAA Tower, Howe, Dubois, and a duplicate sample collected from Dubois (Table C-3). The results are well below the DCS for ^{90}Sr in air (9.6E-12 μCi/ml) (see Table B-1 of Appendix B) and within historical measurements.

Americium-241, ^{238}Pu and $^{239/240}Pu$, alpha-emitting radionuclides, were 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 eleven atmospheric moisture samples collected at the onsite, boundary, and offsite locations during the first quarter of 2022 (Figure 11). Two of the results exceeded the 3s uncertainty level for tritium, with a maximum reported value of $(3.08 \pm 0.84) \times 10^{-13}$ $\mu Ci/mL_{air}$ at EFS. The maximum result is below the 99%/95% UTL of 1.6×10^{-12} $\mu Ci/mL_{air}$. Results are similar between the sampling locations. All samples were significantly below the DOE DCS for tritium in air (as water vapor) of 1.3×10^{-7} $\mu Ci/mL_{air}$ (see Table B-1 of Appendix B). Results are shown in Table C-4, Appendix C.

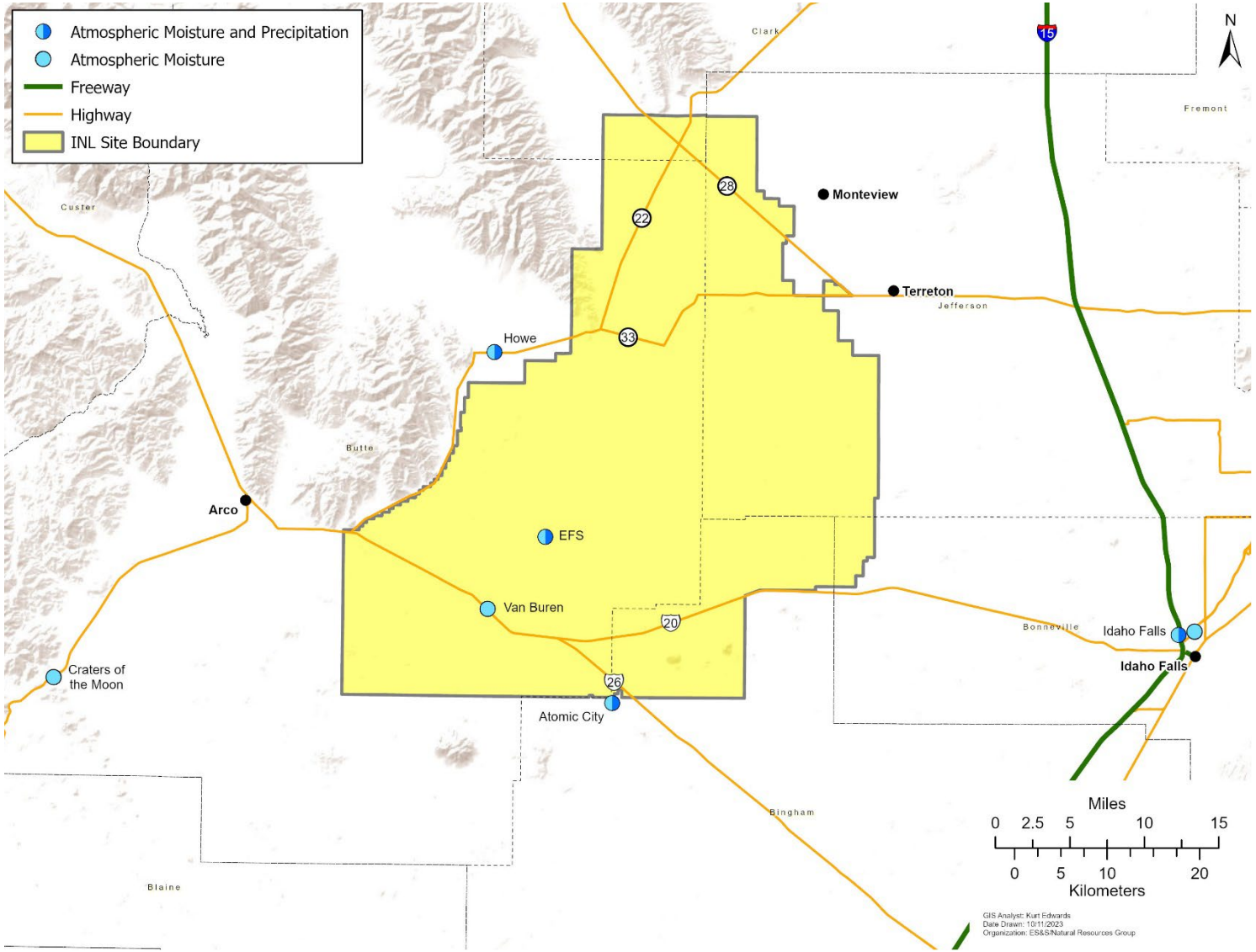

Figure 11. Atmospheric moisture and precipitation monitoring locations.

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4. Precipitation, Surface, and Drinking 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) and Atomic City and Howe (boundary) (Figure 11). These are the same locations where atmospheric moisture samples are collected. Precipitation samples are analyzed for tritium. Storm events in the first quarter of 2022 produced sufficient amounts of precipitation to yield 17 samples.

Tritium was measured above the 3s values in two of the 17 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. The maximum value in the first quarter was (104 ± 25.3) pCi/L in an EFS sample collected on March 16, 2022. The result does not exceed the 99%/95% UTL of 300 pCi/L. The result is well below the DCS for tritium in water (2.6×10^6 pCi/L) and within the range of historical values (-173 to 413 pCi/L) measured from 2012-2021.

4.2 Surface Water Sampling

Surface water is collected in the second and fourth quarters. Big Lost River samples are collected when available.

4.3 Drinking Water Sampling

Drinking water is collected in the second and fourth quarters.

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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 when they are killed onsite from vehicle collisions. Alfalfa is collected during the second quarter, lettuce and grain are sampled during the fourth quarter, while potatoes are collected during the third or fourth quarter. Waterfowl are collected in either the third or fourth quarter. See Table A-1, Appendix A, for a sampling schedule. This section discusses results from milk and large-game animal samples available during the first quarter of 2022.

5.1 Milk Sampling

Milk samples were collected weekly at Rigby and Terreton. Monthly samples were collected at six other locations around the INL Site (Figure 12) during the first quarter of 2022. 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.

Neither ^{131}I nor ^{137}Cs was detected in any weekly or monthly samples during the first quarter. No other human-made gamma-emitting radionuclides were found either. Data for ^{131}I and ^{137}Cs in milk samples are listed in Appendix C, Table C-6.

5.2 Large Game Animal Sampling

One elk and one pronghorn were available for sampling during the first quarter of 2022. Muscle, liver, and thyroid samples were taken from the two animals. 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-7.

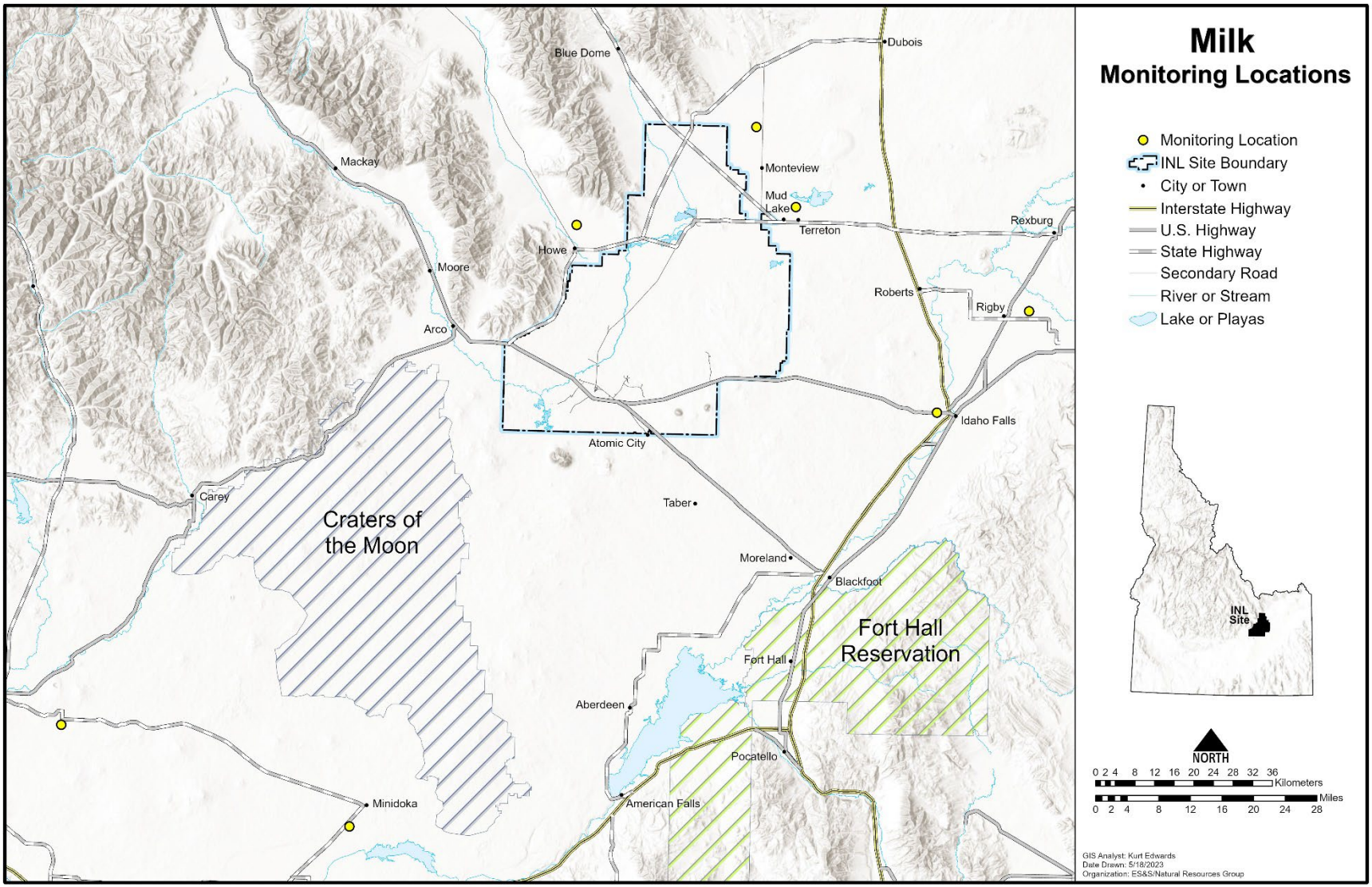

Figure 12. INL contractor milk monitoring locations.

6. External Radiation

Dosimeters are collected in the second and fourth quarters.

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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 7.2-7.4. Together this information was used to assess the quality of data provided to the INL contractor and determine if a follow-up and/or corrective action were 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.

Required Criteria of a Quality Program

- Quality assurance program
- Personnel training and qualification
- Quality improvement process
- Documents and records
- Established work processes
- Established standards for design and verification
- Established procurement requirements
- Inspection and acceptance testing
- Management assessment
- Independent assessment

7.1 Inter-laboratory Program Performance Testing Evaluations

The Mixed Analyte Performance Evaluation Program (MAPEP) is an inter-laboratory program that uses performance testing evaluations to test the ability of the laboratories to correctly analyze radiological, non-radiological, stable organic, and stable inorganic constituents representative of those at DOE sites. MAPEPs series are distributed to labs twice a year (January-March and July-September quarters). The MAPEP results will be reported in second and fourth quarter surveillance reports.

7.2 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, a LabWay assessment will be created in order 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. First quarter 2022 blanks are discussed below.

ALS

A total of 33 analytes were analyzed by ALS in various media. The media analyzed included: air filters, quarterly air filter composites, and atmospheric moisture.

Idaho State University-Environmental Assessment Laboratory

A total of 68 analytes were analyzed by Idaho State University-Environmental Assessments Laboratory (ISU-EAL) in various media. The media analyzed included: air filters, quarterly air filter composites, milk, atmospheric moisture, and precipitation.

GEL Laboratories, LLC

A total of four analytes were analyzed by GEL in various media. The media analyzed included quarterly air filter composites.

7.3 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, a LabWay assessment will be created in order 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. First quarter 2022 duplicate/replicate samples are discussed below.

ALS-Fort Collins

A total of 64 analytes were analyzed in various media. The media analyzed included: air filters and quarterly air filter composites.

Idaho State University-Environmental Assessment Laboratory

A total of 62 analytes were analyzed by ISU-EAL in various media. The media analyzed included: air filters, quarterly air filter composites, and milks.

GEL Laboratories, LLC

A total of four analytes were analyzed by GEL Laboratories. The media analyzed included quarterly air filter composite samples.

7.4 PE Samples

Performance Evaluation (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 assess analytical method specific laboratory performance and to check that the laboratory can be within criteria set by the specific project or program for known value sample recovery. 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.

ALS-Fort Collins

A total of eight quarterly air filter composite PE analytes were analyzed by ALS during the first calendar quarter of 2022. The analysis performed included: alpha spec (^{241}Am, ^{238}Pu, and $^{239/240}$Pu), gamma spec (^{60}Co, ^{134}Cs, ^{137}Cs, ^{54}Mn, and ^{65}Zn), and ^{90}Sr. All eight analytes received an acceptable performance evaluation.

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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 (westside), 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 (westside), Main Gate, MFC – North, MFC – South, NRF, RHLLW, RWMC, RWMC – South, SMC, Van Buren
^{90}Sr, Transuranics	quarterly	Rotating schedule	Rotating schedule	Rotating schedule
Atmospheric Moisture				
Tritium	2 to 13 weeks	Idaho Falls, Craters of the Moon	Atomic City, Howe	EFS, MFC, Van Buren
Precipitation				
Tritium	monthly	Idaho Falls	None	None
Tritium	weekly	None	Atomic City, Howe	EFS
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

Table A-1. continued.

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
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

Table A-1. continued.

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
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

Table A-1. continued.

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

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Appendix B
Summary of MDCs and DCSs

Table B-1. Summary of approximate MDC for radiological analyses performed during first quarter 2022.

Sample Type	Analysis	Average MDC[a]	DCS[b]
Air (particulate filter)[e]	Gross alpha	2.0×10^{-15} µCi/mL	1.1×10^{-13} µCi/ml[c]
	Gross beta	3.3×10^{-15} µCi/mL	9.6×10^{-12} µCi/ml[d]
	^{137}Cs	1.3×10^{-16} µCi/mL	3.8×10^{-11} µCi/ml
	^{90}Sr	1.1×10^{-16} µCi/mL	9.6×10^{-12} µCi/ml
	^{241}Am	2.0×10^{-17} µCi/mL	1.3×10^{-13} µCi/ml
	^{238}Pu	1.7×10^{-17} µCi/mL	1.2×10^{-13} µCi/ml
	$^{239/240}$Pu	1.6×10^{-17} µCi/mL	1.1×10^{-13} µCi/ml
Air (charcoal cartridge)[e]	^{131}I	2.5×10^{-13} µCi/mL	4.5×10^{-10} µCi/ml
Air (atmospheric moisture)	^{3}H	91 pCi/L_{water} 3.3×10^{-13} µCi/mL_{air}	2.6×10^{6} pCi/L_{water} 1.3×10^{-7} µCi/ml_{air}
Air (precipitation)	^{3}H	94 pCi/L	2.6×10^{6} pCi/L
Milk	^{131}I	0.61 pCi/L	1.0×10^{4} pCi/L
	^{137}Cs	1.0 pCi/L	2.7×10^{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.

		GROSS ALPHA							GROSS BETA						
Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
BOUNDARY															
ARCO	01/05/22	2.63	±	0.28	9.73	±	1.05	Yes	23.70	±	0.75	87.69	±	2.77	Yes
	01/12/22	2.53	±	0.30	9.36	±	1.09	Yes	21.10	±	0.75	78.07	±	2.79	Yes
	01/19/22	5.35	±	0.39	19.80	±	1.44	Yes	53.70	±	1.06	198.69	±	3.92	Yes
	01/26/22	2.21	±	0.38	8.18	±	1.42	Yes	31.60	±	0.80	116.92	±	2.96	Yes
	02/02/22	1.54	±	0.35	5.70	±	1.28	Yes	33.60	±	0.78	124.32	±	2.87	Yes
	02/09/22	1.58	±	0.24	5.85	±	0.90	Yes	32.30	±	0.85	119.51	±	3.15	Yes
	02/16/22	1.15	±	0.37	4.26	±	1.38	Yes	40.30	±	0.88	149.11	±	3.24	Yes
	02/23/22	0.67	±	0.19	2.47	±	0.71	Yes	22.20	±	0.77	82.14	±	2.83	Yes
	03/02/22	1.63	±	0.39	6.03	±	1.42	Yes	41.70	±	0.88	154.29	±	3.24	Yes
	03/09/22	0.63	±	0.33	2.33	±	1.22	No	27.30	±	0.79	101.01	±	2.91	Yes
	03/16/22	0.58	±	0.30	2.14	±	1.10	No	19.00	±	0.68	70.30	±	2.51	Yes
	03/23/22	0.95	±	0.30	3.51	±	1.11	Yes	17.60	±	0.63	65.12	±	2.33	Yes
	03/30/22	1.69	±	0.34	6.25	±	1.24	Yes	21.10	±	0.68	78.07	±	2.50	Yes
ATOMIC CITY	01/05/22	2.50	±	0.31	9.25	±	1.14	Yes	20.20	±	0.79	74.74	±	2.92	Yes
	01/12/22	1.63	±	0.25	6.03	±	0.93	Yes	22.70	±	0.76	83.99	±	2.82	Yes
	01/19/22	6.44	±	0.44	23.83	±	1.63	Yes	65.90	±	1.20	243.83	±	4.44	Yes
	01/26/22	2.53	±	0.40	9.36	±	1.49	Yes	36.60	±	0.84	135.42	±	3.12	Yes
	02/02/22	2.06	±	0.41	7.62	±	1.51	Yes	44.90	±	0.92	166.13	±	3.41	Yes
	02/09/22	1.77	±	0.26	6.55	±	0.96	Yes	37.20	±	0.92	137.64	±	3.39	Yes
	02/16/22	1.14	±	0.40	4.22	±	1.47	No	49.00	±	0.97	181.30	±	3.57	Yes
	02/23/22	0.66	±	0.19	2.46	±	0.72	Yes	25.60	±	0.81	94.72	±	2.98	Yes
	03/02/22	1.75	±	0.40	6.48	±	1.49	Yes	44.10	±	0.92	163.17	±	3.40	Yes
	03/09/22	0.52	±	0.30	1.94	±	1.11	No	25.40	±	0.72	93.98	±	2.68	Yes
	03/16/22	0.29	±	0.28	1.08	±	1.04	No	19.50	±	0.68	72.15	±	2.51	Yes
	03/23/22	1.38	±	0.34	5.11	±	1.24	Yes	19.50	±	0.68	72.15	±	2.51	Yes
	03/30/22	1.45	±	0.36	5.37	±	1.34	Yes	27.50	±	0.79	101.75	±	2.92	Yes
BLUE DOME	01/05/22	1.94	±	0.27	7.18	±	1.00	Yes	23.90	±	0.81	88.43	±	2.98	Yes
	01/12/22	1.03	±	0.23	3.81	±	0.87	Yes	15.70	±	0.73	58.09	±	2.71	Yes
	01/19/22	2.37	±	0.26	8.77	±	0.97	Yes	19.70	±	0.69	72.89	±	2.53	Yes
	01/26/22	1.93	±	0.37	7.14	±	1.37	Yes	25.00	±	0.75	92.50	±	2.79	Yes
	02/02/22	1.04	±	0.33	3.85	±	1.21	Yes	23.80	±	0.73	88.06	±	2.70	Yes
	02/09/22	1.28	±	0.26	4.74	±	0.98	Yes	30.40	±	0.95	112.48	±	3.52	Yes
	02/16/22	1.31	±	0.37	4.85	±	1.37	Yes	35.80	±	0.84	132.46	±	3.12	Yes
	02/23/22	1.44	±	0.24	5.33	±	0.88	Yes	25.00	±	0.79	92.50	±	2.91	Yes
	03/02/22	1.53	±	0.42	5.66	±	1.56	Yes	41.20	±	0.96	152.44	±	3.55	Yes
	03/09/22	1.23	±	0.33	4.55	±	1.22	Yes	24.10	±	0.72	89.17	±	2.65	Yes
	03/16/22	0.62	±	0.30	2.30	±	1.12	No	18.20	±	0.68	67.34	±	2.51	Yes
	03/23/22	0.95	±	0.31	3.50	±	1.13	Yes	16.40	±	0.63	60.68	±	2.35	Yes
	03/30/22	1.67	±	0.37	6.18	±	1.36	Yes	24.30	±	0.77	89.91	±	2.83	Yes
FAA TOWER	01/05/22	1.81	±	0.26	6.70	±	0.97	Yes	19.30	±	0.75	71.41	±	2.76	Yes
	01/12/22	1.60	±	0.25	5.92	±	0.93	Yes	17.70	±	0.71	65.49	±	2.62	Yes
	01/19/22	3.69	±	0.35	13.65	±	1.30	Yes	49.80	±	1.08	184.26	±	4.00	Yes
	01/26/22	0.74	±	0.30	2.73	±	1.12	No	21.20	±	0.69	78.44	±	2.56	Yes
	02/02/22	1.83	±	0.38	6.77	±	1.42	Yes	36.90	±	0.86	136.53	±	3.16	Yes
	02/09/22	1.58	±	0.25	5.85	±	0.94	Yes	33.10	±	0.89	122.47	±	3.29	Yes
	02/16/22	1.19	±	0.39	4.40	±	1.45	Yes	41.20	±	0.92	152.44	±	3.41	Yes
	02/23/22	0.85	±	0.22	3.13	±	0.80	Yes	21.90	±	0.80	81.03	±	2.95	Yes
	03/02/22	0.89	±	0.37	3.29	±	1.38	No	40.40	±	0.90	149.48	±	3.33	Yes
	03/09/22	0.67	±	0.31	2.49	±	1.16	No	24.20	±	0.73	89.54	±	2.71	Yes
	03/16/22	0.58	±	0.28	2.15	±	1.05	No	16.10	±	0.63	59.57	±	2.34	Yes
	03/23/22	1.32	±	0.33	4.88	±	1.21	Yes	17.30	±	0.65	64.01	±	2.40	Yes
	03/30/22	0.42	±	0.30	1.54	±	1.12	No	24.40	±	0.75	90.28	±	2.76	Yes
HOWE	01/05/22	2.70	±	0.30	9.99	±	1.10	Yes	28.30	±	0.83	104.71	±	3.06	Yes
	01/12/22	1.27	±	0.22	4.70	±	0.83	Yes	19.70	±	0.71	72.89	±	2.62	Yes
	01/19/22	4.87	±	0.40	18.02	±	1.48	Yes	57.90	±	1.16	214.23	±	4.29	Yes
	01/26/22	2.30	±	0.40	8.51	±	1.49	Yes	35.10	±	0.85	129.87	±	3.15	Yes
	02/02/22	1.68	±	0.72	6.22	±	2.68	No	29.90	±	1.53	110.63	±	5.66	Yes
a	02/09/22		±		0.00	±	0.00			±		0.00	±	0.00	
	02/16/22	2.65	±	0.49	9.81	±	1.83	Yes	62.10	±	1.12	229.77	±	4.14	Yes

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

Sampling Group and Location		Sampling Date	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			GROSS ALPHA Result > 3s	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			GROSS BETA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			GROSS BETA Result > 3s
		02/23/22	0.75	±	0.15	2.76	±	0.56	Yes	21.70	±	0.59	80.29	±	2.19	Yes
		03/02/22	0.84	±	0.38	3.10	±	1.42	No	42.60	±	0.94	157.62	±	3.47	Yes
		03/09/22	1.24	±	0.39	4.59	±	1.44	Yes	28.60	±	0.86	105.82	±	3.17	Yes
		03/16/22	0.63	±	0.30	2.33	±	1.11	No	19.20	±	0.68	71.04	±	2.53	Yes
		03/23/22	1.00	±	0.30	3.70	±	1.12	Yes	17.00	±	0.63	62.90	±	2.32	Yes
		03/30/22	1.48	±	0.42	5.48	±	1.55	Yes	27.90	±	0.91	103.23	±	3.36	Yes
MONTEVIEW		01/05/22	4.19	±	0.50	15.50	±	1.85	Yes	43.40	±	1.39	160.58	±	5.14	Yes
		01/12/22	2.48	±	0.31	9.18	±	1.15	Yes	26.60	±	0.87	98.42	±	3.21	Yes
		01/19/22	5.67	±	0.41	20.98	±	1.52	Yes	69.40	±	1.21	256.78	±	4.48	Yes
		01/26/22	3.69	±	0.46	13.65	±	1.69	Yes	32.80	±	0.85	121.36	±	3.15	Yes
		02/02/22	6.29	±	0.76	23.27	±	2.80	Yes	69.60	±	1.49	257.52	±	5.51	Yes
		02/09/22	1.63	±	0.30	6.03	±	1.12	Yes	37.80	±	1.09	139.86	±	4.03	Yes
		02/16/22	3.08	±	0.51	11.40	±	1.87	Yes	51.20	±	1.07	189.44	±	3.96	Yes
		02/23/22	1.04	±	0.24	3.85	±	0.89	Yes	31.30	±	0.95	115.81	±	3.50	Yes
		03/02/22	1.40	±	0.46	5.18	±	1.69	Yes	50.80	±	1.08	187.96	±	4.00	Yes
		03/09/22	0.74	±	0.33	2.72	±	1.24	No	25.40	±	0.77	93.98	±	2.86	Yes
		03/16/22	0.96	±	0.34	3.54	±	1.24	No	18.90	±	0.72	69.93	±	2.66	Yes
		03/23/22	0.52	±	0.29	1.91	±	1.07	No	18.50	±	0.66	68.45	±	2.43	Yes
		03/30/22	0.98	±	0.32	3.63	±	1.19	Yes	23.40	±	0.72	86.58	±	2.68	Yes
MUD LAKE		01/05/22	2.91	±	0.33	10.77	±	1.21	Yes	32.30	±	0.93	119.51	±	3.44	Yes
		01/12/22	1.71	±	0.26	6.33	±	0.96	Yes	21.30	±	0.76	78.81	±	2.82	Yes
		01/19/22	4.66	±	0.41	17.24	±	1.53	Yes	63.50	±	1.27	234.95	±	4.70	Yes
		01/26/22	3.22	±	0.45	11.91	±	1.66	Yes	28.80	±	0.84	106.56	±	3.09	Yes
		02/02/22	2.39	±	0.51	8.84	±	1.88	Yes	56.60	±	1.16	209.42	±	4.29	Yes
		02/09/22	1.86	±	0.28	6.88	±	1.05	Yes	36.80	±	0.98	136.16	±	3.61	Yes
		02/16/22	1.88	±	0.42	6.96	±	1.57	Yes	46.40	±	0.96	171.68	±	3.55	Yes
	a	02/23/22														
		03/02/22	1.46	±	0.52	5.40	±	1.93	No	50.30	±	1.22	186.11	±	4.51	Yes
		03/09/22	0.77	±	0.32	2.83	±	1.18	No	26.30	±	0.74	97.31	±	2.75	Yes
		03/16/22	0.44	±	0.28	1.61	±	1.04	No	18.00	±	0.66	66.60	±	2.42	Yes
		03/23/22	0.61	±	0.28	2.25	±	1.02	No	16.10	±	0.61	59.57	±	2.25	Yes
		03/30/22	2.00	±	0.36	7.40	±	1.32	Yes	24.60	±	0.72	91.02	±	2.66	Yes
OFFSITE																
BLACKFOOT		01/05/22	1.79	±	0.25	6.62	±	0.93	Yes	18.80	±	0.71	69.56	±	2.63	Yes
		01/05/22	0.59	±	0.43	2.18	±	1.59	No	14.90	±	1.80	55.13	±	6.66	Yes
		01/12/22	1.49	±	0.24	5.51	±	0.90	Yes	21.60	±	0.76	79.92	±	2.80	Yes
		01/12/22	0.74	±	0.57	2.74	±	2.11	No	17.10	±	2.40	63.27	±	8.88	Yes
		01/19/22	5.88	±	0.42	21.76	±	1.56	Yes	63.10	±	1.17	233.47	±	4.33	Yes
		01/19/22	3.40	±	1.30	12.58	±	4.81	No	50.00	±	5.20	185.00	±	19.24	Yes
		01/26/22	2.67	±	0.43	9.88	±	1.59	Yes	34.50	±	0.87	127.65	±	3.23	Yes
		01/26/22	1.55	±	0.90	5.74	±	3.33	No	29.40	±	3.50	108.78	±	12.95	Yes
		02/02/22	1.39	±	0.39	5.14	±	1.45	Yes	44.70	±	0.94	165.39	±	3.46	Yes
	a	02/02/22		±			±				±			±		
		02/09/22	2.18	±	0.30	8.07	±	1.10	Yes	37.10	±	0.98	137.27	±	3.61	Yes
		02/09/22	1.55	±	0.92	5.74	±	3.40	No	30.80	±	3.60	113.96	±	13.32	Yes
		02/16/22	1.72	±	0.45	6.36	±	1.66	Yes	48.70	±	1.03	180.19	±	3.81	Yes
		02/16/22	-0.09	±	0.73	-0.33	±	2.70	No	47.30	±	4.90	175.01	±	18.13	Yes
		02/23/22	1.13	±	0.23	4.18	±	0.84	Yes	21.80	±	0.77	80.66	±	2.86	Yes
		02/23/22	0.94	±	0.77	3.48	±	2.85	No	20.00	±	2.70	74.00	±	9.99	Yes
		03/02/22	2.55	±	0.44	9.44	±	1.61	Yes	41.40	±	0.92	153.18	±	3.39	Yes
		03/02/22	0.69	±	0.58	2.55	±	2.15	No	33.10	±	3.80	122.47	±	14.06	Yes
		03/09/22	0.68	±	0.32	2.51	±	1.17	No	23.40	±	0.73	86.58	±	2.71	Yes
		03/09/22	0.15	±	0.55	0.56	±	2.04	No	20.70	±	2.70	76.59	±	9.99	Yes
		03/16/22	0.22	±	0.28	0.80	±	1.02	No	17.30	±	0.67	64.01	±	2.46	Yes
		03/16/22	0.70	±	0.62	2.59	±	2.29	No	12.80	±	2.00	47.36	±	7.40	Yes
		03/23/22	1.90	±	0.36	7.03	±	1.33	Yes	16.50	±	0.66	61.05	±	2.43	Yes
		03/23/22	1.39	±	0.83	5.14	±	3.07	No	17.40	±	2.50	64.38	±	9.25	Yes
		03/30/22	1.46	±	0.37	5.40	±	1.35	Yes	23.20	±	0.77	85.84	±	2.85	Yes
		03/30/22	0.20	±	0.54	0.74	±	2.00	No	20.90	±	2.80	77.33	±	10.36	Yes
CRATERS OF THE		01/05/22	1.32	±	0.22	4.88	±	0.83	Yes	11.60	±	0.61	42.92	±	2.25	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 ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
MOON	01/05/22	0.25	±	0.32	0.93	±	1.18	No	10.80	±	1.40	39.96	±	5.18	Yes
	01/12/22	0.93	±	0.22	3.42	±	0.81	Yes	10.10	±	0.63	37.37	±	2.33	Yes
	01/12/22	0.21	±	0.47	0.78	±	1.74	No	14.50	±	2.20	53.65	±	8.14	Yes
	01/19/22	3.30	±	0.32	12.21	±	1.19	Yes	34.30	±	0.90	126.91	±	3.32	Yes
	01/19/22	2.10	±	1.00	7.77	±	3.70	No	33.50	±	3.80	123.95	±	14.06	Yes
	01/26/22	1.88	±	0.34	6.96	±	1.24	Yes	19.20	±	0.65	71.04	±	2.40	Yes
	01/26/22	2.06	±	0.93	7.62	±	3.44	No	20.20	±	2.70	74.74	±	9.99	Yes
	02/02/22	0.46	±	0.29	1.69	±	1.06	No	24.90	±	0.71	92.13	±	2.61	Yes
	02/02/22	1.15	±	0.78	4.26	±	2.89	No	23.60	±	3.00	87.32	±	11.10	Yes
	02/09/22	1.64	±	0.25	6.07	±	0.94	Yes	28.70	±	0.83	106.19	±	3.09	Yes
	02/09/22	1.37	±	0.86	5.07	±	3.18	No	32.20	±	3.70	119.14	±	13.69	Yes
	02/16/22	0.73	±	0.33	2.70	±	1.21	No	28.50	±	0.77	105.45	±	2.83	Yes
	02/16/22	1.02	±	0.88	3.77	±	3.26	No	34.30	±	3.90	126.91	±	14.43	Yes
	02/23/22	0.33	±	0.17	1.23	±	0.61	No	17.20	±	0.70	63.64	±	2.59	Yes
	02/23/22	-0.15	±	0.54	-0.56	±	2.00	No	21.20	±	2.90	78.44	±	10.73	Yes
	03/02/22	1.00	±	0.35	3.70	±	1.29	No	34.90	±	0.82	129.13	±	3.02	Yes
	03/02/22	0.74	±	0.62	2.74	±	2.29	No	38.00	±	4.20	140.60	±	15.54	Yes
	03/09/22	0.94	±	0.31	3.49	±	1.15	Yes	21.90	±	0.69	81.03	±	2.53	Yes
	03/09/22	0.14	±	0.60	0.52	±	2.22	No	24.30	±	3.20	89.91	±	11.84	Yes
	03/16/22	0.81	±	0.29	2.99	±	1.08	No	16.50	±	0.63	61.05	±	2.34	Yes
	03/16/22	-0.36	±	0.52	-1.33	±	1.92	No	16.60	±	2.50	61.42	±	9.25	Yes
	03/23/22	1.16	±	0.31	4.29	±	1.14	Yes	17.50	±	0.63	64.75	±	2.33	Yes
	03/23/22	1.25	±	0.85	4.63	±	3.15	No	19.80	±	2.80	73.26	±	10.36	Yes
	03/30/22	1.24	±	0.33	4.59	±	1.22	Yes	23.50	±	0.72	86.95	±	2.65	Yes
	03/30/22	1.75	±	0.86	6.48	±	3.18	No	20.00	±	2.80	74.00	±	10.36	Yes
DUBOIS	01/05/22	2.70	±	0.30	9.99	±	1.12	Yes	20.70	±	0.76	76.59	±	2.80	Yes
	01/12/22	1.31	±	0.24	4.85	±	0.88	Yes	14.60	±	0.68	54.02	±	2.51	Yes
	01/19/22	3.33	±	0.33	12.32	±	1.22	Yes	42.20	±	1.00	156.14	±	3.69	Yes
	01/26/22	2.09	±	0.39	7.73	±	1.43	Yes	29.40	±	0.80	108.78	±	2.95	Yes
	02/02/22	0.68	±	0.32	2.52	±	1.17	No	27.60	±	0.76	102.12	±	2.81	Yes
	02/09/22	1.83	±	0.29	6.77	±	1.08	Yes	29.80	±	0.94	110.26	±	3.48	Yes
	02/16/22	2.00	±	0.41	7.40	±	1.51	Yes	38.20	±	0.88	141.34	±	3.27	Yes
	02/23/22	1.21	±	0.23	4.48	±	0.86	Yes	24.20	±	0.81	89.54	±	2.99	Yes
	03/02/22	1.14	±	0.43	4.22	±	1.58	No	38.00	±	0.99	140.60	±	3.66	Yes
	03/09/22	0.24	±	0.30	0.89	±	1.11	No	22.80	±	0.74	84.36	±	2.74	Yes
	03/16/22	0.76	±	0.31	2.81	±	1.13	No	17.20	±	0.67	63.64	±	2.46	Yes
	03/23/22	0.55	±	0.29	2.04	±	1.06	No	16.20	±	0.64	59.94	±	2.35	Yes
	03/30/22	1.24	±	0.34	4.59	±	1.27	Yes	25.00	±	0.76	92.50	±	2.80	Yes
DUBOIS (QA)	01/05/22	2.29	±	0.29	8.47	±	1.06	Yes	20.90	±	0.77	77.33	±	2.84	Yes
	01/12/22	1.45	±	0.23	5.37	±	0.85	Yes	15.20	±	0.64	56.24	±	2.36	Yes
	01/19/22	4.51	±	0.38	16.69	±	1.41	Yes	42.60	±	1.01	157.62	±	3.74	Yes
	01/26/22	2.47	±	0.41	9.14	±	1.50	Yes	31.10	±	0.82	115.07	±	3.03	Yes
	02/02/22	1.53	±	0.35	5.66	±	1.29	Yes	28.20	±	0.76	104.34	±	2.81	Yes
	02/09/22	2.85	±	0.33	10.55	±	1.20	Yes	33.30	±	0.93	123.21	±	3.44	Yes
	02/16/22	1.80	±	0.41	6.66	±	1.52	Yes	40.40	±	0.91	149.48	±	3.36	Yes
	02/23/22	1.69	±	0.27	6.25	±	1.01	Yes	28.40	±	0.90	105.08	±	3.32	Yes
	03/02/22	1.21	±	0.36	4.48	±	1.31	Yes	33.90	±	0.81	125.43	±	2.99	Yes
	03/09/22	0.40	±	0.29	1.47	±	1.09	No	23.60	±	0.71	87.32	±	2.63	Yes
	03/16/22	0.33	±	0.31	1.21	±	1.14	No	21.10	±	0.74	78.07	±	2.74	Yes
	03/23/22	1.44	±	0.34	5.33	±	1.26	Yes	18.40	±	0.68	68.08	±	2.50	Yes
	03/30/22	1.65	±	0.37	6.11	±	1.35	Yes	28.60	±	0.79	105.82	±	2.91	Yes
IDAHO FALLS	01/05/22	1.71	±	0.25	6.33	±	0.93	Yes	17.40	±	0.71	64.38	±	2.62	Yes
	01/05/22	0.20	±	0.36	0.74	±	1.33	No	13.90	±	1.70	51.43	±	6.29	Yes
	01/12/22	1.32	±	0.24	4.88	±	0.87	Yes	16.00	±	0.69	59.20	±	2.56	Yes
	01/12/22	0.47	±	0.60	1.74	±	2.22	No	19.00	±	2.70	70.30	±	9.99	Yes
	01/19/22	4.63	±	0.40	17.13	±	1.48	Yes	60.50	±	1.21	223.85	±	4.48	Yes
	01/19/22	0.19	±	0.82	0.70	±	3.03	No	52.20	±	5.40	193.14	±	19.98	Yes
	01/26/22	3.31	±	0.47	12.25	±	1.75	Yes	37.90	±	0.94	140.23	±	3.48	Yes
	01/26/22	0.11	±	0.59	0.41	±	2.18	No	24.30	±	3.10	89.91	±	11.47	Yes
	02/02/22	2.36	±	0.43	8.73	±	1.60	Yes	42.00	±	0.94	155.40	±	3.49	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 ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	02/02/22	3.30	±	1.20	12.21	±	4.44	No	36.20	±	4.10	133.94	±	15.17	Yes
	02/09/22	2.35	±	0.30	8.70	±	1.11	Yes	35.00	±	0.93	129.50	±	3.45	Yes
	02/09/22	0.04	±	0.71	0.15	±	2.63	No	39.50	±	4.30	146.15	±	15.91	Yes
	02/16/22	1.17	±	0.40	4.33	±	1.48	No	46.00	±	0.96	170.20	±	3.54	Yes
	02/16/22	1.70	±	1.00	6.29	±	3.70	No	46.50	±	4.90	172.05	±	18.13	Yes
	02/23/22	0.58	±	0.19	2.15	±	0.69	Yes	20.10	±	0.74	74.37	±	2.74	Yes
	02/23/22	0.54	±	0.74	2.00	±	2.74	No	23.30	±	3.00	86.21	±	11.10	Yes
	03/02/22	1.25	±	0.39	4.63	±	1.46	Yes	39.70	±	0.92	146.89	±	3.39	Yes
	03/02/22	0.55	±	0.71	2.04	±	2.63	No	36.50	±	4.00	135.05	±	14.80	Yes
	03/09/22	0.64	±	0.32	2.35	±	1.17	No	24.60	±	0.74	91.02	±	2.74	Yes
	03/09/22	-0.19	±	0.52	-0.70	±	1.92	No	19.70	±	2.70	72.89	±	9.99	Yes
	03/16/22	1.07	±	0.31	3.96	±	1.15	Yes	16.00	±	0.64	59.20	±	2.38	Yes
	03/16/22	0.13	±	0.57	0.48	±	2.11	No	17.30	±	2.50	64.01	±	9.25	Yes
	03/23/22	0.88	±	0.28	3.24	±	1.02	Yes	15.00	±	0.57	55.50	±	2.12	Yes
	03/23/22	2.30	±	1.00	8.51	±	3.70	No	18.00	±	2.60	66.60	±	9.62	Yes
	03/30/22	1.82	±	0.36	6.73	±	1.32	Yes	24.20	±	0.73	89.54	±	2.71	Yes
	03/30/22	1.17		0.78	4.33	±	2.89	No	20.70	±	2.90	76.59	±	10.73	Yes
IRC	01/05/22	0.66	±	0.42	2.44	±	1.55	No	13.50	±	1.70	49.95	±	6.29	Yes
	01/12/22	1.05	±	0.63	3.89	±	2.33	No	15.70	±	2.30	58.09	±	8.51	Yes
	01/19/22	1.11	±	0.92	4.11	±	3.40	No	46.70	±	4.90	172.79	±	18.13	Yes
	01/26/22	2.90	±	1.10	10.73	±	4.07	No	30.90	±	3.60	114.33	±	13.32	Yes
	02/02/22	1.05	±	0.87	3.89	±	3.22	No	41.20	±	4.50	152.44	±	16.65	Yes
	02/09/22	0.61	±	0.68	2.26	±	2.52	No	24.90	±	3.10	92.13	±	11.47	Yes
	02/16/22	1.30	±	0.92	4.81	±	3.40	No	43.40	±	4.70	160.58	±	17.39	Yes
	02/23/22	0.71	±	0.70	2.63	±	2.59	No	20.50	±	2.80	75.85	±	10.36	Yes
	03/02/22	0.44	±	0.55	1.63	±	2.04	No	36.20	±	4.10	133.94	±	15.17	Yes
	03/09/22	0.11	±	0.58	0.41	±	2.15	No	26.70	±	3.30	98.79	±	12.21	Yes
	03/16/22	0.52	±	0.72	1.92	±	2.66	No	16.80	±	2.50	62.16	±	9.25	Yes
	03/23/22	0.92	±	0.76	3.40	±	2.81	No	19.10	±	2.70	70.67	±	9.99	Yes
	03/30/22	1.81	±	0.87	6.70	±	3.22	No	21.90	±	3.00	81.03	±	11.10	Yes
IRC (NORTH)	01/05/22	1.28	±	0.54	4.74	±	2.00	No	15.30	±	1.80	56.61	±	6.66	Yes
	01/12/22	1.24	±	0.78	4.59	±	2.89	No	20.90	±	3.00	77.33	±	11.10	Yes
	01/19/22	1.11	±	0.99	4.11	±	3.66	No	55.70	±	5.70	206.09	±	21.09	Yes
	01/26/22	0.32	±	0.69	1.18	±	2.55	No	32.60	±	3.80	120.62	±	14.06	Yes
	02/02/22	1.46	±	0.95	5.40	±	3.52	No	38.30	±	4.30	141.71	±	15.91	Yes
	02/09/22	1.21	±	0.89	4.48	±	3.29	No	33.10	±	3.90	122.47	±	14.43	Yes
	02/16/22	0.14	±	0.74	0.52	±	2.74	No	46.30	±	4.90	171.31	±	18.13	Yes
	02/23/22	-0.15	±	0.52	-0.56	±	1.92	No	20.80	±	2.80	76.96	±	10.36	Yes
	03/02/22	1.95	±	0.88	7.22	±	3.26	No	34.10	±	3.90	126.17	±	14.43	Yes
	03/09/22	1.26	±	0.88	4.66	±	3.26	No	22.50	±	3.00	83.25	±	11.10	Yes
	03/16/22	-0.20	±	0.53	-0.74	±	1.96	No	14.60	±	2.30	54.02	±	8.51	Yes
	03/23/22	1.97	±	0.99	7.29	±	3.66	No	22.30	±	3.00	82.51	±	11.10	Yes
	03/30/22	1.55	±	0.83	5.74	±	3.07	No	22.60	±	3.10	83.62	±	11.47	Yes
JACKSON, WY	01/05/22	1.69	±	0.26	6.25	±	0.96	Yes	14.50	±	0.70	53.65	±	2.58	Yes
	01/12/22	1.25	±	0.24	4.63	±	0.90	Yes	25.90	±	0.84	95.83	±	3.11	Yes
	01/19/22	5.32	±	0.44	19.68	±	1.62	Yes	61.30	±	1.25	226.81	±	4.63	Yes
	01/26/22	3.57	±	0.47	13.21	±	1.74	Yes	40.50	±	0.93	149.85	±	3.45	Yes
	02/02/22	2.19	±	0.44	8.10	±	1.64	Yes	38.60	±	0.96	142.82	±	3.55	Yes
	02/09/22	1.60	±	0.28	5.92	±	1.02	Yes	26.90	±	0.89	99.53	±	3.30	Yes
	02/16/22	1.15	±	0.35	4.26	±	1.28	Yes	23.90	±	0.74	88.43	±	2.73	Yes
	02/23/22	0.90	±	0.21	3.33	±	0.78	Yes	20.50	±	0.76	75.85	±	2.81	Yes
	03/02/22	1.69	±	0.44	6.25	±	1.64	Yes	41.90	±	0.99	155.03	±	3.67	Yes
	03/09/22	1.22	±	0.36	4.51	±	1.33	Yes	28.10	±	0.80	103.97	±	2.95	Yes
	03/16/22	1.08	±	0.34	4.00	±	1.24	Yes	17.50	±	0.70	64.75	±	2.59	Yes
	03/23/22	1.53	±	0.33	5.66	±	1.23	Yes	18.60	±	0.65	68.82	±	2.42	Yes
	03/30/22	1.45	±	0.35	5.37	±	1.31	Yes	20.40	±	0.73	75.48	±	2.69	Yes
SUGAR CITY	01/05/22	1.40	±	0.23	5.18	±	0.86	Yes	17.70	±	0.70	65.49	±	2.60	Yes
	01/05/22	0.42	±	0.37	1.55	±	1.37	No	12.90	±	1.60	47.73	±	5.92	Yes
	01/12/22	1.01	±	0.22	3.74	±	0.80	Yes	17.30	±	0.70	64.01	±	2.60	Yes
	01/12/22	0.79	±	0.60	2.92	±	2.22	No	14.70	±	2.30	54.39	±	8.51	Yes

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

Sampling Group and Location		Sampling Date	GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			GROSS ALPHA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s	GROSS BETA Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			GROSS BETA Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
		01/19/22	4.02	±	0.36	14.87	±	1.31	Yes	50.20	±	1.06	185.74	±	3.92	Yes
		01/19/22	4.30	±	1.40	15.91	±	5.18	Yes	48.50	±	5.10	179.45	±	18.87	Yes
		01/26/22	2.41	±	0.38	8.92	±	1.42	Yes	29.60	±	0.77	109.52	±	2.86	Yes
		01/26/22	1.41	±	0.88	5.22	±	3.26	No	33.20	±	3.80	122.84	±	14.06	Yes
		02/02/22	0.58	±	0.33	2.15	±	1.21	No	29.40	±	0.81	108.78	±	2.98	Yes
		02/02/22	1.61	±	0.95	5.96	±	3.52	No	32.10	±	3.80	118.77	±	14.06	Yes
		02/09/22	1.31	±	0.24	4.85	±	0.90	Yes	29.30	±	0.87	108.41	±	3.22	Yes
		02/09/22	0.59	±	0.71	2.18	±	2.63	No	31.60	±	3.60	116.92	±	13.32	Yes
		02/16/22	0.86	±	0.39	3.16	±	1.44	No	39.50	±	0.93	146.15	±	3.45	Yes
		02/16/22	1.12	±	0.85	4.14	±	3.15	No	38.60	±	4.20	142.82	±	15.54	Yes
		02/23/22	0.71	±	0.20	2.62	±	0.74	Yes	22.50	±	0.78	83.25	±	2.88	Yes
		02/23/22	1.58	±	0.86	5.85	±	3.18	No	23.30	±	3.00	86.21	±	11.10	Yes
		03/02/22	1.96	±	0.41	7.25	±	1.50	Yes	34.90	±	0.86	129.13	±	3.20	Yes
		03/02/22	2.48	±	0.95	9.18	±	3.52	No	34.90	±	3.90	129.13	±	14.43	Yes
		03/09/22	0.69	±	0.32	2.54	±	1.17	No	21.90	±	0.72	81.03	±	2.68	Yes
		03/09/22	-0.58	±	0.51	-2.15	±	1.89	No	21.90	±	2.90	81.03	±	10.73	Yes
		03/16/22	0.98	±	0.32	3.62	±	1.18	Yes	17.90	±	0.68	66.23	±	2.51	Yes
		03/16/22	0.78	±	0.76	2.89	±	2.81	No	17.30	±	2.50	64.01	±	9.25	Yes
		03/23/22	0.69	±	0.29	2.53	±	1.08	No	17.60	±	0.64	65.12	±	2.38	Yes
		03/23/22	1.29	±	0.80	4.77	±	2.96	No	17.70	±	2.50	65.49	±	9.25	Yes
		03/30/22	1.71	±	0.35	6.33	±	1.28	Yes	23.20	±	0.71	85.84	±	2.63	Yes
		03/30/22	2.11	±	0.92	7.81	±	3.40	No	25.30	±	3.20	93.61	±	11.84	Yes
ONSITE																
ATR COMPLEX		01/05/22	0.89	±	0.49	3.29	±	1.81	No	20.00	±	2.20	74.00	±	8.14	Yes
	a	01/12/22														
		01/19/22	0.50	±	0.92	1.85	±	3.40	No	55.50	±	5.70	205.35	±	21.09	Yes
	a	01/26/22														
		02/02/22	0.73	±	0.73	2.70	±	2.70	No	24.90	±	3.00	92.13	±	11.10	Yes
		02/09/22	1.00	±	0.85	3.70	±	3.15	No	32.10	±	3.70	118.77	±	13.69	Yes
		02/16/22	-0.27	±	0.66	-1.00	±	2.44	No	41.00	±	4.50	151.70	±	16.65	Yes
		02/23/22	1.43	±	0.90	5.29	±	3.33	No	22.40	±	3.00	82.88	±	11.10	Yes
		03/02/22	0.94	±	0.64	3.48	±	2.37	No	40.00	±	4.30	148.00	±	15.91	Yes
		03/09/22	0.62	±	0.75	2.29	±	2.78	No	27.30	±	3.40	101.01	±	12.58	Yes
		03/16/22	0.22	±	0.58	0.81	±	2.15	No	17.50	±	2.50	64.75	±	9.25	Yes
		03/23/22	1.40	±	0.85	5.18	±	3.15	No	15.30	±	2.40	56.61	±	8.88	Yes
		03/30/22	1.68	±	0.80	6.22	±	2.96	No	21.90	±	2.90	81.03	±	10.73	Yes
CFA		01/05/22	0.15	±	0.34	0.56	±	1.26	No	18.80	±	2.10	69.56	±	7.77	Yes
		01/12/22	0.48	±	0.50	1.78	±	1.85	No	18.70	±	2.50	69.19	±	9.25	Yes
		01/19/22	1.36	±	0.94	5.03	±	3.48	No	53.50	±	5.40	197.95	±	19.98	Yes
		01/26/22	0.57	±	0.68	2.11	±	2.52	No	34.40	±	3.90	127.28	±	14.43	Yes
		02/02/22	2.90	±	1.10	10.73	±	4.07	No	41.20	±	4.40	152.44	±	16.28	Yes
		02/09/22	1.30	±	0.86	4.81	±	3.18	No	36.30	±	4.00	134.31	±	14.80	Yes
		02/16/22	0.40	±	0.76	1.48	±	2.81	No	46.00	±	4.90	170.20	±	18.13	Yes
		02/23/22	1.23	±	0.83	4.55	±	3.07	No	25.30	±	3.20	93.61	±	11.84	Yes
		03/02/22	1.34	±	0.77	4.96	±	2.85	No	42.30	±	4.50	156.51	±	16.65	Yes
		03/09/22	0.89	±	0.77	3.29	±	2.85	No	35.20	±	4.00	130.24	±	14.80	Yes
		03/16/22	0.03	±	0.57	0.11	±	2.11	No	16.20	±	2.40	59.94	±	8.88	Yes
		03/23/22	1.45	±	0.85	5.37	±	3.15	No	20.80	±	2.80	76.96	±	10.36	Yes
		03/30/22	1.56	±	0.81	5.77	±	3.00	No	25.80	±	3.20	95.46	±	11.84	Yes
EBR-I		01/05/22	0.37	±	0.35	1.37	±	1.30	No	13.20	±	1.60	48.84	±	5.92	Yes
		01/12/22	0.46	±	0.49	1.70	±	1.81	No	17.30	±	2.40	64.01	±	8.88	Yes
		01/19/22	0.76	±	0.88	2.81	±	3.26	No	48.80	±	5.10	180.56	±	18.87	Yes
		01/26/22	1.21	±	0.85	4.48	±	3.15	No	26.60	±	3.30	98.42	±	12.21	Yes
		02/02/22	0.84	±	0.77	3.11	±	2.85	No	33.50	±	3.80	123.95	±	14.06	Yes
		02/09/22	1.74	±	0.94	6.44	±	3.48	No	33.90	±	3.90	125.43	±	14.43	Yes
		02/16/22	1.11	±	0.83	4.11	±	3.07	No	37.20	±	4.10	137.64	±	15.17	Yes
		02/23/22	0.38	±	0.65	1.41	±	2.41	No	21.60	±	2.90	79.92	±	10.73	Yes
		03/02/22	2.08	±	0.92	7.70	±	3.40	No	43.40	±	4.60	160.58	±	17.02	Yes
		03/09/22	-0.57	±	0.57	-2.11	±	2.11	No	30.70	±	3.60	113.59	±	13.32	Yes
		03/16/22	0.80	±	0.74	2.96	±	2.74	No	20.80	±	2.90	76.96	±	10.73	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 ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	03/23/22	1.65	±	0.92	6.11	±	3.40	No	19.10	±	2.70	70.67	±	9.99	Yes
	03/30/22	1.47	±	0.88	5.44	±	3.26	No	21.30	±	2.90	78.81	±	10.73	Yes
EFS	01/05/22	4.61	±	0.43	17.06	±	1.59	Yes	45.80	±	1.17	169.46	±	4.33	Yes
a	01/05/22														
	01/12/22	2.48	±	0.28	9.18	±	1.03	Yes	27.90	±	0.79	103.23	±	2.92	Yes
	01/12/22	1.53	±	0.74	5.66	±	2.74	No	22.90	±	2.90	84.73	±	10.73	Yes
	01/19/22	5.93	±	0.39	21.94	±	1.44	Yes	73.50	±	1.14	271.95	±	4.22	Yes
	01/19/22	1.23	±	0.97	4.55	±	3.59	No	52.70	±	5.40	194.99	±	19.98	Yes
	01/26/22	5.68	±	0.55	21.02	±	2.03	Yes	48.30	±	1.01	178.71	±	3.74	Yes
	01/26/22	1.30	±	0.86	4.81	±	3.18	No	31.70	±	3.60	117.29	±	13.32	Yes
	02/02/22	4.70	±	0.77	17.39	±	2.86	Yes	87.60	±	1.70	324.12	±	6.29	Yes
	02/02/22	0.44	±	0.74	1.63	±	2.74	No	31.10	±	3.60	115.07	±	13.32	Yes
	02/09/22	4.77	±	0.68	17.65	±	2.52	Yes	84.90	±	2.26	314.13	±	8.36	Yes
	02/09/22	0.17	±	0.68	0.63	±	2.52	No	30.20	±	3.60	111.74	±	13.32	Yes
	02/16/22	2.25	±	0.52	8.33	±	1.92	Yes	57.80	±	1.18	213.86	±	4.37	Yes
	02/16/22	1.47	±	0.98	5.44	±	3.63	No	41.60	±	4.50	153.92	±	16.65	Yes
	02/23/22	0.85	±	0.20	3.15	±	0.75	Yes	30.10	±	0.84	111.37	±	3.10	Yes
	02/23/22	2.30	±	1.00	8.51	±	3.70	No	24.80	±	3.20	91.76	±	11.84	Yes
	03/02/22	2.71	±	0.60	10.03	±	2.23	Yes	69.40	±	1.38	256.78	±	5.11	Yes
	03/02/22	2.05	±	0.89	7.59	±	3.29	No	41.60	±	4.50	153.92	±	16.65	Yes
	03/09/22	0.87	±	0.34	3.23	±	1.24	No	28.50	±	0.78	105.45	±	2.88	Yes
	03/09/22	-0.42	±	0.53	-1.55	±	1.96	No	20.60	±	2.80	76.22	±	10.36	Yes
	03/16/22	0.97	±	0.34	3.60	±	1.25	No	22.00	±	0.75	81.40	±	2.76	Yes
	03/16/22	-0.08	±	0.59	-0.30	±	2.18	No	17.70	±	2.60	65.49	±	9.62	Yes
	03/23/22	1.22	±	0.32	4.51	±	1.17	Yes	19.20	±	0.65	71.04	±	2.40	Yes
	03/23/22	2.80	±	1.10	10.36	±	4.07	No	21.30	±	2.90	78.81	±	10.73	Yes
	03/30/22	1.33	±	0.37	4.92	±	1.35	Yes	29.40	±	0.82	108.78	±	3.03	Yes
	03/30/22	3.80	±	1.20	14.06	±	4.44	Yes	27.10	±	3.40	100.27	±	12.58	Yes
GATE4	01/05/22	0.26	±	0.35	0.96	±	1.30	No	23.30	±	2.40	86.21	±	8.88	Yes
	01/12/22	0.45	±	0.49	1.67	±	1.81	No	20.50	±	2.70	75.85	±	9.99	Yes
	01/19/22	1.57	±	0.96	5.81	±	3.55	No	45.80	±	4.80	169.46	±	17.76	Yes
	01/26/22	0.58	±	0.76	2.15	±	2.81	No	36.10	±	4.00	133.57	±	14.80	Yes
	02/02/22	2.16	±	0.98	7.99	±	3.63	No	35.60	±	4.00	131.72	±	14.80	Yes
	02/09/22	0.62	±	0.79	2.29	±	2.92	No	36.10	±	4.00	133.57	±	14.80	Yes
	02/16/22	0.89	±	0.92	3.29	±	3.40	No	56.30	±	5.70	208.31	±	21.09	Yes
	02/23/22	1.40	±	0.85	5.18	±	3.15	No	29.30	±	3.50	108.41	±	12.95	Yes
	03/02/22	0.60	±	0.58	2.22	±	2.15	No	42.90	±	4.50	158.73	±	16.65	Yes
	03/09/22	0.32	±	0.76	1.18	±	2.81	No	30.30	±	3.60	112.11	±	13.32	Yes
	03/16/22	0.07	±	0.57	0.26	±	2.11	No	21.10	±	2.80	78.07	±	10.36	Yes
	03/23/22	1.84	±	0.95	6.81	±	3.52	No	21.70	±	2.90	80.29	±	10.73	Yes
	03/30/22	1.96	±	0.86	7.25	±	3.18	No	21.90	±	2.90	81.03	±	10.73	Yes
HIGHWAY 26 REST AREA	01/05/22	0.46	±	0.38	1.70	±	1.41	No	15.20	±	1.80	56.24	±	6.66	Yes
	01/12/22	0.71	±	0.54	2.63	±	2.00	No	16.30	±	2.30	60.31	±	8.51	Yes
	01/19/22	0.56	±	0.78	2.07	±	2.89	No	46.10	±	4.80	170.57	±	17.76	Yes
	01/26/22	0.97	±	0.81	3.59	±	3.00	No	34.50	±	4.00	127.65	±	14.80	Yes
	02/02/22	1.44	±	0.89	5.33	±	3.29	No	29.40	±	3.50	108.78	±	12.95	Yes
	02/09/22	0.57	±	0.74	2.11	±	2.74	No	30.70	±	3.60	113.59	±	13.32	Yes
	02/16/22	1.51	±	0.98	5.59	±	3.63	No	47.90	±	5.00	177.23	±	18.50	Yes
	02/23/22	0.13	±	0.59	0.48	±	2.18	No	21.80	±	2.90	80.66	±	10.73	Yes
	03/02/22	0.60	±	0.61	2.22	±	2.26	No	39.60	±	4.30	146.52	±	15.91	Yes
	03/09/22	0.43	±	0.67	1.59	±	2.48	No	24.70	±	3.10	91.39	±	11.47	Yes
	03/16/22	0.18	±	0.55	0.67	±	2.04	No	12.40	±	2.10	45.88	±	7.77	Yes
	03/23/22	1.70	±	0.91	6.29	±	3.37	No	20.10	±	2.80	74.37	±	10.36	Yes
	03/30/22	1.61	±	0.84	5.96	±	3.11	No	28.00	±	3.40	103.60	±	12.58	Yes
INTEC (NE CORNER)	01/05/22	3.40	±	1.40	12.58	±	5.18	No	17.10	±	3.10	63.27	±	11.47	Yes
	01/12/22	0.24	±	0.49	0.89	±	1.81	No	18.10	±	2.10	66.97	±	7.77	Yes
	01/19/22	1.35	±	0.98	5.00	±	3.63	No	17.90	±	2.50	66.23	±	9.25	Yes
	01/26/22	0.95	±	0.79	3.52	±	2.92	No	19.20	±	2.70	71.04	±	9.99	Yes
	02/02/22	0.20	±	0.67	0.74	±	2.48	No	56.10	±	5.70	207.57	±	21.09	Yes
	02/09/22	0.21	±	0.66	0.78	±	2.44	No	51.70	±	5.40	191.29	±	19.98	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 ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	02/16/22	-0.25	±	0.49	-0.93	±	1.81	No	32.70	±	3.80	120.99	±	14.06	Yes
	02/23/22	1.28	±	0.85	4.74	±	3.15	No	25.40	±	3.20	93.98	±	11.84	Yes
	03/02/22	1.81	±	0.85	6.70	±	3.15	No	27.70	±	3.30	102.49	±	12.21	Yes
	03/09/22	0.90	±	0.82	3.33	±	3.03	No	27.20	±	3.40	100.64	±	12.58	Yes
	03/16/22	1.83	±	0.96	6.77	±	3.55	No	33.40	±	3.80	123.58	±	14.06	Yes
	03/23/22	1.72	±	0.90	6.36	±	3.33	No	32.80	±	3.80	121.36	±	14.06	Yes
	03/30/22	0.14	±	0.53	0.52	±	1.96	No	25.30	±	3.10	93.61	±	11.47	Yes
INTEC (WEST SIDE)	01/05/22	1.30	±	0.55	4.81	±	2.04	No	46.10	±	5.00	170.57	±	18.50	Yes
	01/12/22	0.22	±	0.54	0.81	±	2.00	No	23.80	±	3.10	88.06	±	11.47	Yes
	01/19/22	2.70	±	1.20	9.99	±	4.44	No	25.70	±	3.30	95.09	±	12.21	Yes
	01/26/22	1.28	±	0.88	4.74	±	3.26	No	38.00	±	4.20	140.60	±	15.54	Yes
	02/02/22	2.10	±	1.00	7.77	±	3.70	No	41.90	±	4.50	155.03	±	16.65	Yes
	02/09/22	1.19	±	0.86	4.40	±	3.18	No	29.50	±	3.50	109.15	±	12.95	Yes
	02/16/22	1.48	±	0.98	5.48	±	3.63	No	28.50	±	3.50	105.45	±	12.95	Yes
	02/23/22	0.68	±	0.75	2.52	±	2.78	No	21.00	±	2.90	77.70	±	10.73	Yes
	03/02/22	1.14	±	0.76	4.22	±	2.81	No	16.90	±	2.50	62.53	±	9.25	Yes
	03/09/22	1.60	±	1.00	5.92	±	3.70	No	19.50	±	2.70	72.15	±	9.99	Yes
	03/16/22	0.34	±	0.68	1.26	±	2.52	No	20.30	±	2.80	75.11	±	10.36	Yes
	03/23/22	1.32	±	0.86	4.88	±	3.18	No	27.70	±	3.40	102.49	±	12.58	Yes
	03/30/22	1.41	±	0.76	5.22	±	2.81	No	29.20	±	3.50	108.04	±	12.95	Yes
INTEC (QA)	01/05/22	0.68	±	0.44	2.52	±	1.63	No	18.10	±	2.00	66.97	±	7.40	Yes
	01/12/22	0.44	±	0.47	1.63	±	1.74	No	13.60	±	2.00	50.32	±	7.40	Yes
	01/19/22	-0.16	±	0.74	-0.59	±	2.74	No	48.90	±	5.10	180.93	±	18.87	Yes
	01/26/22	0.36	±	0.65	1.33	±	2.41	No	33.20	±	3.80	122.84	±	14.06	Yes
	02/02/22	0.35	±	0.72	1.30	±	2.66	No	32.20	±	3.70	119.14	±	13.69	Yes
	02/09/22	1.52	±	0.93	5.62	±	3.44	No	32.80	±	3.70	121.36	±	13.69	Yes
	02/16/22	-0.20	±	0.62	-0.74	±	2.29	No	43.40	±	4.60	160.58	±	17.02	Yes
	02/23/22	0.82	±	0.75	3.03	±	2.78	No	24.60	±	3.10	91.02	±	11.47	Yes
	03/02/22	0.52	±	0.58	1.92	±	2.15	No	43.40	±	4.60	160.58	±	17.02	Yes
	03/09/22	0.11	±	0.70	0.41	±	2.59	No	31.10	±	3.60	115.07	±	13.32	Yes
	03/16/22	0.14	±	0.55	0.52	±	2.04	No	18.70	±	2.60	69.19	±	9.62	Yes
	03/23/22	2.70	±	1.10	9.99	±	4.07	No	18.90	±	2.60	69.93	±	9.62	Yes
	03/30/22	3.30	±	1.10	12.21	±	4.07	No	32.80	±	3.80	121.36	±	14.06	Yes
MAIN GATE	01/05/22	2.19	±	0.31	8.10	±	1.15	Yes	23.50	±	0.89	86.95	±	3.29	Yes
	01/12/22	1.66	±	0.21	6.14	±	0.79	Yes	22.60	±	0.65	83.62	±	2.40	Yes
	01/19/22	5.19	±	0.39	19.20	±	1.45	Yes	68.30	±	1.18	252.71	±	4.37	Yes
	01/26/22	2.59	±	0.41	9.58	±	1.52	Yes	35.80	±	0.85	132.46	±	3.15	Yes
	02/02/22	4.37	±	0.54	16.17	±	1.99	Yes	52.10	±	1.08	192.77	±	4.00	Yes
	02/09/22	3.38	±	0.48	12.51	±	1.78	Yes	64.40	±	1.64	238.28	±	6.07	Yes
	02/16/22	0.85	±	0.31	3.15	±	1.15	No	40.60	±	0.76	150.22	±	2.82	Yes
	02/23/22	0.79	±	0.20	2.91	±	0.75	Yes	23.00	±	0.79	85.10	±	2.90	Yes
a	03/02/22												±		
	03/09/22	1.01	±	0.36	3.74	±	1.32	No	27.70	±	0.81	102.49	±	3.00	Yes
	03/16/22	0.37	±	0.30	1.37	±	1.11	No	18.50	±	0.71	68.45	±	2.61	Yes
	03/23/22	0.43	±	0.28	1.59	±	1.04	No	18.30	±	0.65	67.71	±	2.39	Yes
	03/30/22	1.22	±	0.35	4.51	±	1.28	Yes	28.60	±	0.78	105.82	±	2.90	Yes
MFC (NORTH)	01/05/22	0.60	±	0.44	2.22	±	1.63	No	17.40	±	2.00	64.38	±	7.40	Yes
	01/12/22	-0.09	±	0.49	-0.33	±	1.81	No	15.80	±	2.30	58.46	±	8.51	Yes
	01/19/22	1.90	±	1.10	7.03	±	4.07	No	54.10	±	5.60	200.17	±	20.72	Yes
	01/26/22	1.79	±	0.95	6.62	±	3.52	No	29.70	±	3.60	109.89	±	13.32	Yes
	02/02/22	1.68	±	0.97	6.22	±	3.59	No	37.10	±	4.10	137.27	±	15.17	Yes
	02/09/22	1.24	±	0.83	4.59	±	3.07	No	24.80	±	3.10	91.76	±	11.47	Yes
	02/16/22	0.11	±	0.68	0.41	±	2.52	No	31.00	±	3.60	114.70	±	13.32	Yes
	02/23/22	1.21	±	0.83	4.48	±	3.07	No	21.80	±	2.90	80.66	±	10.73	Yes
	03/02/22	0.85	±	0.67	3.15	±	2.48	No	40.40	±	4.40	149.48	±	16.28	Yes
	03/09/22	0.62	±	0.73	2.29	±	2.70	No	24.80	±	3.10	91.76	±	11.47	Yes
	03/16/22	0.28	±	0.67	1.04	±	2.48	No	19.80	±	2.70	73.26	±	9.99	Yes
	03/23/22	0.78	±	0.73	2.89	±	2.70	No	17.20	±	2.50	63.64	±	9.25	Yes
	03/30/22	0.52	±	0.56	1.92	±	2.07	No	21.20	±	2.90	78.44	±	10.73	Yes
MFC (SOUTH)	01/05/22	0.41	±	0.38	1.52	±	1.41	No	16.50	±	1.90	61.05	±	7.03	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 ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	01/12/22	1.01	±	0.65	3.74	±	2.41	No	20.70	±	2.70	76.59	±	9.99	Yes
	01/19/22	1.24	±	0.99	4.59	±	3.66	No	50.10	±	5.20	185.37	±	19.24	Yes
	01/26/22	1.44	±	0.89	5.33	±	3.29	No	33.10	±	3.80	122.47	±	14.06	Yes
	02/02/22	-0.53	±	0.53	-1.96	±	1.96	No	35.70	±	4.00	132.09	±	14.80	Yes
	02/09/22	0.98	±	0.81	3.63	±	3.00	No	27.30	±	3.30	101.01	±	12.21	Yes
	02/16/22	0.34	±	0.77	1.26	±	2.85	No	36.70	±	4.10	135.79	±	15.17	Yes
	02/23/22	0.93	±	0.77	3.44	±	2.85	No	20.60	±	2.80	76.22	±	10.36	Yes
	03/02/22	1.72	±	0.87	6.36	±	3.22	No	36.90	±	4.10	136.53	±	15.17	Yes
	03/09/22	-0.40	±	0.54	-1.48	±	2.00	No	25.20	±	3.20	93.24	±	11.84	Yes
	03/16/22	1.04	±	0.77	3.85	±	2.85	No	18.30	±	2.60	67.71	±	9.62	Yes
	03/23/22	4.20	±	1.30	15.54	±	4.81	Yes	23.40	±	3.10	86.58	±	11.47	Yes
	03/30/22	1.43	±	0.77	5.29	±	2.85	No	21.30	±	2.90	78.81	±	10.73	Yes
NRF	01/05/22	1.27	±	0.58	4.70	±	2.15	No	20.80	±	2.30	76.96	±	8.51	Yes
	01/12/22	1.11	±	0.68	4.11	±	2.52	No	20.60	±	2.80	76.22	±	10.36	Yes
	01/19/22	0.51	±	0.88	1.89	±	3.26	No	46.10	±	4.90	170.57	±	18.13	Yes
	01/26/22	0.44	±	0.70	1.63	±	2.59	No	28.90	±	3.50	106.93	±	12.95	Yes
	02/02/22	-0.55	±	0.60	-2.04	±	2.22	No	40.10	±	4.40	148.37	±	16.28	Yes
	02/09/22	-0.07	±	0.62	-0.26	±	2.29	No	28.10	±	3.40	103.97	±	12.58	Yes
	02/16/22	0.09	±	0.74	0.33	±	2.74	No	38.00	±	4.20	140.60	±	15.54	Yes
	02/23/22	0.30	±	0.69	1.11	±	2.55	No	25.50	±	3.20	94.35	±	11.84	Yes
	03/02/22	2.05	±	0.93	7.59	±	3.44	No	36.50	±	4.10	135.05	±	15.17	Yes
	03/09/22	0.70	±	0.87	2.59	±	3.22	No	35.30	±	4.10	130.61	±	15.17	Yes
	03/16/22	0.53	±	0.66	1.96	±	2.44	No	18.30	±	2.60	67.71	±	9.62	Yes
	03/23/22	2.30	±	1.00	8.51	±	3.70	No	18.10	±	2.60	66.97	±	9.62	Yes
	03/30/22	0.97	±	0.72	3.59	±	2.66	No	24.40	±	3.10	90.28	±	11.47	Yes
RHLLW	01/05/22	1.13	±	0.51	4.18	±	1.89	No	22.50	±	2.40	83.25	±	8.88	Yes
	01/12/22	0.23	±	0.48	0.85	±	1.78	No	20.20	±	2.70	74.74	±	9.99	Yes
	01/19/22	0.54	±	0.77	2.00	±	2.85	No	46.80	±	4.90	173.16	±	18.13	Yes
	01/26/22	0.58	±	0.71	2.15	±	2.63	No	37.00	±	4.10	136.90	±	15.17	Yes
	02/02/22	1.16	±	0.79	4.29	±	2.92	No	24.50	±	3.10	90.65	±	11.47	Yes
	02/09/22	0.31	±	0.63	1.15	±	2.33	No	26.60	±	3.30	98.42	±	12.21	Yes
	02/16/22	2.30	±	1.00	8.51	±	3.70	No	32.40	±	3.70	119.88	±	13.69	Yes
	02/23/22	0.61	±	0.69	2.26	±	2.55	No	24.70	±	3.10	91.39	±	11.47	Yes
	03/02/22	1.21	±	0.72	4.48	±	2.66	No	33.90	±	3.80	125.43	±	14.06	Yes
	03/09/22	1.59	±	0.89	5.88	±	3.29	No	27.30	±	3.40	101.01	±	12.58	Yes
	03/16/22	-0.73	±	0.51	-2.70	±	1.89	No	21.10	±	2.80	78.07	±	10.36	Yes
	03/23/22	2.31	±	0.99	8.55	±	3.66	No	18.60	±	2.60	68.82	±	9.62	Yes
	03/30/22	2.18	±	0.91	8.07	±	3.37	No	30.30	±	3.60	112.11	±	13.32	Yes
RWMC	01/05/22	1.28	±	0.52	4.74	±	1.92	No	17.20	±	1.90	63.64	±	7.03	Yes
	01/12/22	0.69	±	0.61	2.55	±	2.26	No	20.80	±	2.70	76.96	±	9.99	Yes
	01/19/22	-0.05	±	0.70	-0.19	±	2.59	No	55.70	±	5.60	206.09	±	20.72	Yes
	01/26/22	0.38	±	0.65	1.41	±	2.41	No	31.90	±	3.70	118.03	±	13.69	Yes
	02/02/22	2.10	±	1.00	7.77	±	3.70	No	38.70	±	4.20	143.19	±	15.54	Yes
	02/09/22	0.84	±	0.75	3.11	±	2.78	No	32.00	±	3.60	118.40	±	13.32	Yes
	02/16/22	0.77	±	0.80	2.85	±	2.96	No	42.20	±	4.50	156.14	±	16.65	Yes
	02/23/22	1.93	±	0.96	7.14	±	3.55	No	24.30	±	3.10	89.91	±	11.47	Yes
	03/02/22	0.55	±	0.75	2.04	±	2.78	No	44.10	±	4.70	163.17	±	17.39	Yes
	03/09/22	0.56	±	0.77	2.07	±	2.85	No	32.50	±	3.80	120.25	±	14.06	Yes
	03/16/22	1.11	±	0.80	4.11	±	2.96	No	17.20	±	2.50	63.64	±	9.25	Yes
	03/23/22	2.12	±	0.95	7.84	±	3.52	No	13.70	±	2.20	50.69	±	8.14	Yes
	03/30/22	1.18	±	0.84	4.37	±	3.11	No	22.40	±	3.00	82.88	±	11.10	Yes
RWMC (QA)	01/05/22	0.87	±	0.49	3.22	±	1.81	No	15.90	±	1.80	58.83	±	6.66	Yes
	01/12/22	0.72	±	0.63	2.66	±	2.33	No	23.30	±	3.00	86.21	±	11.10	Yes
	01/19/22	0.26	±	0.78	0.96	±	2.89	No	52.40	±	5.40	193.88	±	19.98	Yes
	01/26/22	1.15	±	0.81	4.26	±	3.00	No	35.90	±	4.00	132.83	±	14.80	Yes
	02/02/22	1.45	±	0.95	5.37	±	3.52	No	38.20	±	4.20	141.34	±	15.54	Yes
	02/09/22	0.01	±	0.58	0.04	±	2.15	No	27.70	±	3.30	102.49	±	12.21	Yes
	02/16/22	0.14	±	0.69	0.52	±	2.55	No	45.50	±	4.80	168.35	±	17.76	Yes
	02/23/22	0.95	±	0.79	3.52	±	2.92	No	21.40	±	2.80	79.18	±	10.36	Yes
	03/02/22	1.38	±	0.80	5.11	±	2.96	No	49.40	±	5.10	182.78	±	18.87	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 ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	03/09/22	0.94	±	0.80	3.48	±	2.96	No	30.50	±	3.60	112.85	±	13.32	Yes
	03/16/22	1.65	±	0.87	6.11	±	3.22	No	18.10	±	2.60	66.97	±	9.62	Yes
	03/23/22	1.38	±	0.84	5.11	±	3.11	No	18.80	±	2.70	69.56	±	9.99	Yes
	03/30/22	0.67	±	0.61	2.48	±	2.26	No	24.30	±	3.00	89.91	±	11.10	Yes
RWMC (SOUTH)	01/05/22	0.53	±	0.39	1.96	±	1.44	No	20.00	±	2.10	74.00	±	7.77	Yes
	01/12/22	0.66	±	0.53	2.44	±	1.96	No	18.80	±	2.50	69.56	±	9.25	Yes
	01/19/22	2.40	±	1.10	8.88	±	4.07	No	53.70	±	5.40	198.69	±	19.98	Yes
	01/26/22	1.52	±	0.94	5.62	±	3.48	No	34.60	±	4.00	128.02	±	14.80	Yes
	02/02/22	0.61	±	0.73	2.26	±	2.70	No	32.20	±	3.70	119.14	±	13.69	Yes
	02/09/22	0.01	±	0.60	0.04	±	2.22	No	34.60	±	3.90	128.02	±	14.43	Yes
	02/16/22	0.26	±	0.69	0.96	±	2.55	No	39.20	±	4.30	145.04	±	15.91	Yes
	02/23/22	0.47	±	0.66	1.74	±	2.44	No	24.90	±	3.10	92.13	±	11.47	Yes
	03/02/22	1.47	±	0.84	5.44	±	3.11	No	42.90	±	4.60	158.73	±	17.02	Yes
	03/09/22	1.00	±	0.81	3.70	±	3.00	No	26.50	±	3.30	98.05	±	12.21	Yes
	03/16/22	0.80	±	0.72	2.96	±	2.66	No	17.50	±	2.60	64.75	±	9.62	Yes
	03/23/22	1.71	±	0.90	6.33	±	3.33	No	18.50	±	2.60	68.45	±	9.62	Yes
	03/30/22	2.11	±	0.96	7.81	±	3.55	No	23.90	±	3.20	88.43	±	11.84	Yes
SMC	01/05/22	0.42	±	0.41	1.55	±	1.52	No	23.20	±	2.40	85.84	±	8.88	Yes
	01/12/22	-0.09	±	0.49	-0.33	±	1.81	No	20.00	±	2.70	74.00	±	9.99	Yes
	01/19/22	1.12	±	0.90	4.14	±	3.33	No	40.20	±	4.40	148.74	±	16.28	Yes
	01/26/22	0.92	±	0.78	3.40	±	2.89	No	36.00	±	4.00	133.20	±	14.80	Yes
	02/02/22	1.42	±	0.88	5.25	±	3.26	No	28.90	±	3.50	106.93	±	12.95	Yes
	02/09/22	0.53	±	0.72	1.96	±	2.66	No	36.30	±	4.00	134.31	±	14.80	Yes
	02/16/22	0.39	±	0.76	1.44	±	2.81	No	49.40	±	5.10	182.78	±	18.87	Yes
	02/23/22	0.41	±	0.64	1.52	±	2.37	No	23.80	±	3.00	88.06	±	11.10	Yes
	03/02/22	1.73	±	0.83	6.40	±	3.07	No	43.80	±	4.60	162.06	±	17.02	Yes
	03/09/22	0.62	±	0.75	2.29	±	2.78	No	31.70	±	3.70	117.29	±	13.69	Yes
	03/16/22	0.17	±	0.56	0.63	±	2.07	No	19.00	±	2.70	70.30	±	9.99	Yes
	03/23/22	1.66	±	0.89	6.14	±	3.29	No	19.80	±	2.70	73.26	±	9.99	Yes
	03/30/22	-0.14	±	0.52	-0.52	±	1.92	No	23.30	±	3.00	86.21	±	11.10	Yes
VAN BUREN	01/05/22	2.44	±	0.29	9.03	±	1.08	Yes	18.80	±	0.74	69.56	±	2.74	Yes
	01/05/22	0.05	±	0.29	0.19	±	1.07	No	12.10	±	1.50	44.77	±	5.55	Yes
	01/12/22	1.53	±	0.25	5.66	±	0.91	Yes	20.80	±	0.75	76.96	±	2.77	Yes
	01/12/22	0.48	±	0.50	1.78	±	1.85	No	19.10	±	2.60	70.67	±	9.62	Yes
	01/19/22	4.12	±	0.35	15.24	±	1.30	Yes	51.50	±	1.05	190.55	±	3.89	Yes
	01/19/22	2.20	±	1.10	8.14	±	4.07	No	40.70	±	4.40	150.59	±	16.28	Yes
	01/26/22	1.78	±	0.38	6.59	±	1.42	Yes	32.40	±	0.83	119.88	±	3.08	Yes
	01/26/22	0.42	±	0.68	1.55	±	2.52	No	30.90	±	3.60	114.33	±	13.32	Yes
	02/02/22	1.66	±	0.43	6.14	±	1.61	Yes	40.10	±	0.99	148.37	±	3.66	Yes
	02/02/22	1.23	±	0.92	4.55	±	3.40	No	37.70	±	4.20	139.49	±	15.54	Yes
	02/09/22	1.40	±	0.29	5.18	±	1.06	Yes	35.20	±	1.05	130.24	±	3.89	Yes
	02/09/22	0.15	±	0.68	0.56	±	2.52	No	28.10	±	3.40	103.97	±	12.58	Yes
	02/16/22	0.61	±	0.36	2.27	±	1.32	No	43.30	±	0.90	160.21	±	3.33	Yes
	02/16/22	0.29	±	0.82	1.07	±	3.03	No	44.60	±	4.80	165.02	±	17.76	Yes
	02/23/22	0.64	±	0.20	2.35	±	0.73	Yes	23.00	±	0.79	85.10	±	2.93	Yes
	02/23/22	0.80	±	0.82	2.96	±	3.03	No	26.70	±	3.30	98.79	±	12.21	Yes
	03/02/22	0.87	±	0.38	3.22	±	1.39	No	39.70	±	0.91	146.89	±	3.37	Yes
	03/02/22	0.96	±	0.67	3.55	±	2.48	No	32.50	±	3.70	120.25	±	13.69	Yes
	03/09/22	0.52	±	0.33	1.93	±	1.22	No	28.70	±	0.80	106.19	±	2.96	Yes
	03/09/22	0.61	±	0.74	2.26	±	2.74	No	27.20	±	3.40	100.64	±	12.58	Yes
	03/16/22	0.61	±	0.31	2.26	±	1.13	No	17.90	±	0.69	66.23	±	2.55	Yes
	03/23/22	1.09	±	0.31	4.03	±	1.15	Yes	17.30	±	0.64	64.01	±	2.36	Yes
	03/23/22	2.60	±	1.10	9.62	±	4.07	No	20.30	±	2.80	75.11	±	10.36	Yes
	03/30/22	1.29	±	0.35	4.77	±	1.31	Yes	26.40	±	0.78	97.68	±	2.89	Yes
	03/30/22	0.48	±	0.54	1.78	±	2.00	No	18.90	±	2.70	69.93	±	9.99	Yes
VAN BUREN (QA)	01/05/22	1.89	±	0.26	6.99	±	0.98	Yes	18.00	±	0.73	66.60	±	2.68	Yes
	01/12/22	0.80	±	0.21	2.95	±	0.76	Yes	21.00	±	0.75	77.70	±	2.79	Yes
	01/19/22	3.77	±	0.35	13.95	±	1.31	Yes	48.70	±	1.07	180.19	±	3.96	Yes
	01/26/22	1.68	±	0.37	6.22	±	1.37	Yes	30.60	±	0.80	113.22	±	2.97	Yes
	02/02/22	1.78	±	0.39	6.59	±	1.46	Yes	38.80	±	0.89	143.56	±	3.29	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 ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	02/09/22	1.19	±	0.24	4.40	±	0.87	Yes	26.00	±	0.83	96.20	±	3.06	Yes
	02/16/22	1.27	±	0.41	4.70	±	1.52	Yes	50.10	±	0.99	185.37	±	3.65	Yes
	02/23/22	1.02	±	0.21	3.77	±	0.78	Yes	24.40	±	0.77	90.28	±	2.85	Yes
	03/02/22	1.98	±	0.40	7.33	±	1.47	Yes	42.00	±	0.88	155.40	±	3.26	Yes
	03/09/22	0.38	±	0.31	1.42	±	1.13	No	26.60	±	0.75	98.42	±	2.78	Yes
	03/16/22	0.38	±	0.27	1.42	±	1.00	No	16.00	±	0.63	59.20	±	2.32	Yes
	03/23/22	1.48	±	0.31	5.48	±	1.16	Yes	17.60	±	0.62	65.12	±	2.28	Yes
	03/30/22	1.61	±	0.37	5.96	±	1.38	Yes	26.80	±	0.79	99.16	±	2.93	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 ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
BOUNDARY								
ARCO	01/05/22	-0.37	±	1.11	-1.38	±	4.11	No
	01/12/22	3.38	±	2.32	12.51	±	8.58	No
	01/19/22	1.43	±	2.00	5.29	±	7.40	No
	01/26/22	-0.10	±	1.25	-0.37	±	4.63	No
	02/02/22	-1.88	±	1.27	-6.96	±	4.70	No
	02/09/22	-1.96	±	2.17	-7.25	±	8.03	No
	02/16/22	-2.95	±	2.01	-10.92	±	7.44	No
	02/23/22	0.41	±	2.08	1.52	±	7.70	No
	03/02/22	-0.59	±	1.34	-2.19	±	4.96	No
	03/09/22	0.65	±	1.31	2.40	±	4.85	No
	03/16/22	0.22	±	1.86	0.82	±	6.88	No
	03/23/22	0.75	±	1.31	2.77	±	4.85	No
	03/30/22	1.30	±	1.25	4.81	±	4.63	No
ATOMIC CITY	01/05/22	-0.45	±	1.32	-1.65	±	4.88	No
	01/12/22	3.31	±	2.27	12.25	±	8.40	No
	01/19/22	1.52	±	2.13	5.62	±	7.88	No
	01/26/22	-0.10	±	1.23	-0.37	±	4.55	No
	02/02/22	-2.03	±	1.37	-7.51	±	5.07	No
	02/09/22	-2.01	±	2.23	-7.44	±	8.25	No
	02/16/22	-3.00	±	2.04	-11.10	±	7.55	No
	02/23/22	0.41	±	2.06	1.51	±	7.62	No
	03/02/22	-0.62	±	1.39	-2.28	±	5.14	No
	03/09/22	0.59	±	1.20	2.20	±	4.44	No
	03/16/22	0.22	±	1.83	0.81	±	6.77	No
	03/23/22	0.79	±	1.38	2.90	±	5.11	No
	03/30/22	1.42	±	1.36	5.25	±	5.03	No
BLUE DOME	01/05/22	0.90	±	1.17	3.32	±	4.33	No
	01/12/22	-0.34	±	1.40	-1.25	±	5.18	No
	01/19/22	-0.02	±	1.04	-0.07	±	3.85	No
	01/26/22	1.71	±	1.24	6.33	±	4.59	No
	02/02/22	-0.33	±	1.29	-1.22	±	4.77	No
	02/09/22	0.39	±	1.48	1.44	±	5.48	No
	02/16/22	-1.28	±	1.18	-4.74	±	4.37	No
	02/23/22	-0.55	±	1.16	-2.02	±	4.29	No
	03/02/22	-1.24	±	1.45	-4.59	±	5.37	No
	03/09/22	1.10	±	1.17	4.07	±	4.33	No
	03/16/22	-0.27	±	1.17	-1.01	±	4.33	No
	03/23/22	-0.92	±	1.19	-3.42	±	4.40	No
	03/30/22	0.22	±	1.23	0.83	±	4.55	No
FAA TOWER	01/05/22	0.90	±	1.17	3.31	±	4.33	No
	01/12/22	-0.30	±	1.25	-1.12	±	4.63	No
	01/19/22	-0.02	±	1.18	-0.08	±	4.37	No
	01/26/22	1.67	±	1.21	6.18	±	4.48	No
	02/02/22	-0.31	±	1.22	-1.15	±	4.51	No
	02/09/22	0.33	±	1.25	1.22	±	4.63	No
	02/16/22	-1.35	±	1.24	-5.00	±	4.59	No
	02/23/22	-0.61	±	1.29	-2.25	±	4.77	No
	03/02/22	-1.13	±	1.31	-4.18	±	4.85	No
	03/09/22	1.15	±	1.21	4.26	±	4.48	No
	03/16/22	-0.26	±	1.12	-0.97	±	4.14	No
	03/23/22	-0.92	±	1.19	-3.42	±	4.40	No
	03/30/22	0.22	±	1.18	0.80	±	4.37	No

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

Sampling Group and Location		Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
HOWE		01/05/22	0.84	±	1.10	3.10	±	4.07	No
		01/12/22	-0.29	±	1.18	-1.06	±	4.37	No
		01/19/22	-0.02	±	1.21	-0.08	±	4.48	No
		01/26/22	1.65	±	1.20	6.11	±	4.44	No
		02/02/22	-0.93	±	3.63	-3.43	±	13.43	No
	a	02/09/22							
		02/16/22	-1.37	±	1.26	-5.07	±	4.66	No
		02/23/22	-0.38	±	0.80	-1.39	±	2.95	No
		03/02/22	-1.17	±	1.36	-4.33	±	5.03	No
		03/09/22	1.34	±	1.41	4.96	±	5.22	No
		03/16/22	-0.27	±	1.14	-0.99	±	4.22	No
		03/23/22	-0.89	±	1.15	-3.30	±	4.26	No
		03/30/22	0.27	±	1.49	1.01	±	5.51	No
MONTEVIEW		01/05/22	1.50	±	1.96	5.55	±	7.25	No
		01/12/22	-0.33	±	1.36	-1.22	±	5.03	No
		01/19/22	-0.02	±	1.12	-0.08	±	4.14	No
		01/26/22	1.73	±	1.26	6.40	±	4.66	No
		02/02/22	-0.51	±	2.00	-1.88	±	7.40	No
		02/09/22	0.42	±	1.60	1.56	±	5.92	No
		02/16/22	-1.48	±	1.36	-5.48	±	5.03	No
		02/23/22	-0.64	±	1.36	-2.37	±	5.03	No
		03/02/22	-1.31	±	1.52	-4.85	±	5.62	No
		03/09/22	1.21	±	1.28	4.48	±	4.74	No
		03/16/22	-0.29	±	1.25	-1.08	±	4.63	No
		03/23/22	-0.91	±	1.18	-3.38	±	4.37	No
		03/30/22	0.21	±	1.15	0.78	±	4.26	No
MUD LAKE		01/05/22	0.94	±	1.22	3.46	±	4.51	No
		01/12/22	-0.31	±	1.27	-1.13	±	4.70	No
		01/19/22	-0.02	±	1.32	-0.09	±	4.88	No
		01/26/22	1.85	±	1.34	6.85	±	4.96	No
		02/02/22	-0.39	±	1.51	-1.43	±	5.59	No
		02/09/22	0.36	±	1.36	1.32	±	5.03	No
		02/16/22	-1.31	±	1.21	-4.85	±	4.48	No
	a	02/23/22							
		03/02/22	-1.63	±	1.90	-6.03	±	7.03	No
		03/09/22	1.11	±	1.17	4.11	±	4.33	No
		03/16/22	-0.26	±	1.11	-0.96	±	4.11	No
		03/23/22	-0.87	±	1.12	-3.23	±	4.14	No
		03/30/22	0.20	±	1.09	0.74	±	4.03	No
OFFSITE									
BLACKFOOT		01/05/22	-0.40	±	1.17	-1.46	±	4.33	No
		01/05/22	6.91	±	67.03	25.57	±	247.99	No
		01/12/22	3.36	±	2.31	12.43	±	8.55	No
		01/12/22	-108.09	±	145.78	-399.93	±	539.39	No
		01/19/22	1.52	±	2.12	5.62	±	7.84	No
		01/19/22	-83.71	±	120.88	-309.74	±	447.26	No
		01/26/22	-0.11	±	1.36	-0.41	±	5.03	No
		01/26/22	-29.45	±	114.40	-108.95	±	423.28	No
		02/02/22	-2.10	±	1.41	-7.77	±	5.22	No
		02/09/22	-2.24	±	2.49	-8.29	±	9.21	No
		02/09/22	-53.20	±	123.38	-196.84	±	456.51	No
		02/16/22	-3.40	±	2.32	-12.58	±	8.58	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	2/16/2022	-0.71	±	109.64	-2.63	±	405.67	No
	2/23/2022	0.42	±	2.12	1.55	±	7.84	No
	2/23/2022	-68.02	±	120.90	-251.66	±	447.33	No
	3/2/2022	-0.64	±	1.45	-2.38	±	5.37	No
	3/2/2022	-173.03	±	142.97	-640.21	±	528.99	No
	3/9/2022	0.64	±	1.29	2.37	±	4.77	No
	3/9/2022	-37.42	±	131.98	-138.45	±	488.33	No
	3/16/2022	0.23	±	1.90	0.84	±	7.03	No
	3/16/2022	-65.15	±	107.77	-241.07	±	398.75	No
	3/23/2022	0.83	±	1.45	3.06	±	5.37	No
	3/23/2022	-105.94	±	133.79	-391.98	±	495.02	No
	3/30/2022	1.52	±	1.46	5.62	±	5.40	No
	3/30/2022	190.43	±	143.82	704.59	±	532.13	No
CRATERS OF THE MOON	01/05/22	-0.40	±	1.18	-1.48	±	4.37	No
	01/05/22	-11.78	±	60.41	-43.59	±	223.51	No
	01/12/22	3.68	±	2.53	13.62	±	9.36	No
	01/12/22	-40.59	±	123.63	-150.20	±	457.43	No
	01/19/22	1.51	±	2.12	5.59	±	7.84	No
	01/19/22	115.27	±	130.89	426.50	±	484.29	No
	01/26/22	-0.10	±	1.23	-0.37	±	4.55	No
	01/26/22	-179.65	±	111.65	-664.71	±	413.11	No
	02/02/22	-2.00	±	1.35	-7.40	±	5.00	No
	02/02/22	-3.03	±	135.69	-11.22	±	502.05	No
	02/09/22	-2.05	±	2.28	-7.59	±	8.44	No
	02/09/22	-16.32	±	105.58	-60.38	±	390.65	No
	02/16/22	-3.04	±	2.07	-11.25	±	7.66	No
	02/16/22	-70.59	±	147.89	-261.16	±	547.19	No
	02/23/22	0.41	±	2.08	1.52	±	7.70	No
	02/23/22	-113.79	±	146.59	-421.02	±	542.38	No
	03/02/22	-0.60	±	1.35	-2.22	±	5.00	No
	03/02/22	-66.86	±	147.05	-247.38	±	544.09	No
	03/09/22	0.60	±	1.20	2.21	±	4.44	No
	03/09/22	-102.46	±	159.08	-379.10	±	588.60	No
	03/16/22	0.21	±	1.80	0.79	±	6.66	No
	03/16/22	34.90	±	130.30	129.12	±	482.11	No
	03/23/22	0.75	±	1.31	2.76	±	4.85	No
	03/23/22	-3.48	±	157.53	-12.88	±	582.86	No
	03/30/22	1.34	±	1.29	4.96	±	4.77	No
	03/30/22	-56.69	±	147.46	-209.73	±	545.60	No
DUBOIS	01/05/22	0.88	±	1.15	3.25	±	4.26	No
	01/12/22	-0.31	±	1.29	-1.15	±	4.77	No
	01/19/22	-0.02	±	1.17	-0.08	±	4.33	No
	01/26/22	1.68	±	1.22	6.22	±	4.51	No
	02/02/22	-0.32	±	1.25	-1.18	±	4.63	No
	02/09/22	0.39	±	1.46	1.42	±	5.40	No
	02/16/22	-1.32	±	1.22	-4.88	±	4.51	No
	02/23/22	-0.58	±	1.24	-2.16	±	4.59	No
	03/02/22	-1.39	±	1.62	-5.14	±	5.99	No
	03/09/22	1.22	±	1.29	4.51	±	4.77	No
	03/16/22	-0.27	±	1.17	-1.01	±	4.33	No
	03/23/22	-0.94	±	1.21	-3.47	±	4.48	No
	03/30/22	0.22	±	1.18	0.80	±	4.37	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
DUBOIS (QA)	01/05/22	0.90	±	1.17	3.32	±	4.33	No
	01/12/22	-0.28	±	1.16	-1.04	±	4.29	No
	01/19/22	-0.02	±	1.19	-0.08	±	4.40	No
	02/02/22	-0.31	±	1.22	-1.15	±	4.51	No
	02/09/22	0.35	±	1.33	1.30	±	4.92	No
	02/16/22	-1.33	±	1.23	-4.92	±	4.55	No
	02/23/22	-0.63	±	1.33	-2.32	±	4.92	No
	03/02/22	-1.07	±	1.25	-3.96	±	4.63	No
	03/09/22	1.12	±	1.18	4.14	±	4.37	No
	03/16/22	-0.29	±	1.23	-1.06	±	4.55	No
	03/23/22	-0.95	±	1.22	-3.52	±	4.51	No
	03/30/22	0.21	±	1.14	0.77	±	4.22	No
IDAHO FALLS	01/05/22	0.87	±	1.14	3.22	±	4.22	No
	01/05/22	64.25	±	67.07	237.72	±	248.17	No
	01/12/22	-0.31	±	1.27	-1.14	±	4.70	No
	01/12/22	-1.20	±	146.59	-4.44	±	542.38	No
	01/19/22	-0.02	±	1.25	-0.08	±	4.63	No
	01/19/22	-163.38	±	142.07	-604.51	±	525.66	No
	01/26/22	1.86	±	1.35	6.88	±	5.00	No
	01/26/22	0.69	±	120.53	2.54	±	445.96	No
	02/02/22	-0.34	±	1.31	-1.24	±	4.85	No
	02/02/22	67.80	±	119.42	250.85	±	441.85	No
	02/09/22	0.34	±	1.30	1.27	±	4.81	No
	02/09/22	-126.19	±	137.15	-466.90	±	507.46	No
	02/16/22	-1.33	±	1.22	-4.92	±	4.51	No
	02/16/22	195.09	±	139.73	721.83	±	517.00	No
	02/23/22	-0.57	±	1.21	-2.11	±	4.48	No
	02/23/22	-56.60	±	127.10	-209.43	±	470.27	No
	03/02/22	-1.18	±	1.37	-4.37	±	5.07	No
	03/02/22	-88.61	±	118.05	-327.85	±	436.79	No
	03/09/22	1.16	±	1.23	4.29	±	4.55	No
	03/09/22	-83.50	±	143.77	-308.95	±	531.95	No
	03/16/22	-0.27	±	1.15	-1.00	±	4.26	No
	03/16/22	37.24	±	142.44	137.77	±	527.03	No
	03/23/22	-0.83	±	1.06	-3.06	±	3.92	No
	03/23/22	120.61	±	141.55	446.26	±	523.74	No
	03/30/22	0.21	±	1.14	0.77	±	4.22	No
	03/30/22	-77.61	±	146.56	-287.16	±	542.27	No
IRC	01/05/22	-41.19	±	65.39	-152.39	±	241.94	No
	01/12/22	7.08	±	116.65	26.20	±	431.61	No
	01/19/22	-42.07	±	118.97	-155.67	±	440.19	No
	01/26/22	21.61	±	114.30	79.94	±	422.91	No
	02/02/22	-87.25	±	138.22	-322.81	±	511.41	No
	02/09/22	-6.67	±	114.81	-24.67	±	424.80	No
	02/16/22	-125.33	±	140.53	-463.72	±	519.96	No
	02/23/22	5.79	±	131.89	21.42	±	487.99	No
	03/02/22	1.00	±	145.79	3.71	±	539.42	No
	03/09/22	-78.52	±	136.41	-290.53	±	504.72	No
	03/16/22	-63.44	±	122.43	-234.72	±	452.99	No
	03/23/22	-55.18	±	121.80	-204.16	±	450.66	No
	03/30/22	162.85	±	153.00	602.55	±	566.10	No
IRC (NORTH)	01/05/22	-89.96	±	59.88	-332.85	±	221.56	No
	01/12/22	-183.45	±	141.92	-678.77	±	525.10	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	01/19/22	6.48	±	136.39	23.98	±	504.64	No
	01/26/22	-1.56	±	115.28	-5.76	±	426.54	No
	02/02/22	140.79	±	146.53	520.92	±	542.16	No
	02/09/22	-73.27	±	131.45	-271.10	±	486.37	No
	02/16/22	93.05	±	151.04	344.28	±	558.85	No
	02/23/22	-121.72	±	129.32	-450.36	±	478.48	No
	03/02/22	-7.92	±	130.89	-29.29	±	484.29	No
	03/09/22	-98.69	±	126.35	-365.15	±	467.50	No
	03/16/22	-24.54	±	131.84	-90.78	±	487.81	No
	03/23/22	-4.54	±	113.91	-16.78	±	421.47	No
	03/30/22	52.98	±	151.97	196.01	±	562.29	No
JACKSON, WY	01/05/22	-0.44	±	1.29	-1.62	±	4.77	No
	01/12/22	3.58	±	2.46	13.25	±	9.10	No
	01/19/22	1.76	±	2.47	6.51	±	9.14	No
	01/26/22	-0.11	±	1.35	-0.40	±	5.00	No
	02/02/22	-2.45	±	1.65	-9.07	±	6.11	No
	02/09/22	-2.39	±	2.65	-8.84	±	9.81	No
	02/16/22	-3.23	±	2.20	-11.95	±	8.14	No
	02/23/22	0.42	±	2.14	1.57	±	7.92	No
	03/02/22	-0.74	±	1.66	-2.73	±	6.14	No
	03/09/22	0.65	±	1.31	2.40	±	4.85	No
	03/16/22	0.24	±	2.03	0.90	±	7.51	No
	03/23/22	0.76	±	1.34	2.82	±	4.96	No
	03/30/22	1.51	±	1.45	5.59	±	5.37	No
SUGAR CITY	01/05/22	0.86	±	1.13	3.18	±	4.18	No
	01/05/22	-5.95	±	57.10	-22.03	±	211.25	No
	01/12/22	-0.30	±	1.26	-1.12	±	4.66	No
	01/12/22	-102.82	±	136.82	-380.43	±	506.23	No
	01/19/22	-0.02	±	1.14	-0.08	±	4.22	No
	01/19/22	-20.19	±	121.82	-74.69	±	450.73	No
	01/26/22	1.58	±	1.15	5.85	±	4.26	No
	01/26/22	65.05	±	114.14	240.69	±	422.32	No
	02/02/22	-0.34	±	1.31	-1.24	±	4.85	No
	02/02/22	5.11	±	127.13	18.90	±	470.38	No
	02/09/22	0.34	±	1.30	1.27	±	4.81	No
	02/09/22	-33.57	±	123.10	-124.21	±	455.47	No
	02/16/22	-1.43	±	1.32	-5.29	±	4.88	No
	02/16/22	-109.24	±	134.88	-404.19	±	499.06	No
	02/23/22	-0.58	±	1.22	-2.13	±	4.51	No
	02/23/22	-9.13	±	137.94	-33.79	±	510.38	No
	03/02/22	-1.17	±	1.36	-4.33	±	5.03	No
	03/02/22	-83.25	±	127.30	-308.03	±	471.01	No
	03/09/22	1.20	±	1.27	4.44	±	4.70	No
	03/09/22	-50.64	±	138.04	-187.38	±	510.75	No
	03/16/22	-0.28	±	1.17	-1.02	±	4.33	No
	03/16/22	19.54	±	125.98	72.31	±	466.13	No
	03/23/22	-0.91	±	1.17	-3.36	±	4.33	No
	03/23/22	74.80	±	133.07	276.77	±	492.36	No
	03/30/22	0.20	±	1.11	0.75	±	4.11	No
	03/30/22	-109.55	±	140.29	-405.34	±	519.07	No
ONSITE								
ATR COMPLEX	01/05/22	17.48	±	52.44	64.67	±	194.03	No
	a 01/12/22							

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

Sampling Group and Location		Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
		01/19/22	-95.18	±	157.36	-352.16	±	582.23	No
	a	01/26/22							
		02/02/22	68.56	±	129.27	253.65	±	478.30	No
		02/09/22	-81.83	±	128.27	-302.75	±	474.60	No
		02/16/22	49.85	±	143.04	184.44	±	529.25	No
		02/23/22	-1.53	±	138.35	-5.68	±	511.90	No
		03/02/22	204.87	±	138.14	758.02	±	511.12	No
		03/09/22	4.15	±	122.77	15.34	±	454.25	No
		03/16/22	76.97	±	128.81	284.79	±	476.60	No
		03/23/22	4.47	±	124.07	16.55	±	459.06	No
		03/30/22	-92.55	±	125.07	-342.44	±	462.76	No
CFA		01/05/22	-5.85	±	56.57	-21.65	±	209.31	No
		01/12/22	-28.67	±	141.58	-106.09	±	523.85	No
		01/19/22	-104.89	±	111.69	-388.09	±	413.25	No
		01/26/22	-1.42	±	126.12	-5.24	±	466.64	No
		02/02/22	24.76	±	119.04	91.62	±	440.45	No
		02/09/22	6.72	±	110.33	24.86	±	408.22	No
		02/16/22	53.05	±	122.22	196.30	±	452.21	No
		02/23/22	-168.47	±	146.09	-623.34	±	540.53	No
		03/02/22	72.02	±	140.20	266.48	±	518.74	No
		03/09/22	-147.34	±	132.50	-545.16	±	490.25	No
		03/16/22	-1.15	±	110.01	-4.27	±	407.04	No
		03/23/22	-4.44	±	128.44	-16.42	±	475.23	No
		03/30/22	-24.12	±	143.76	-89.24	±	531.91	No
EBR-I		01/05/22	-59.35	±	67.46	-219.60	±	249.60	No
		01/12/22	-35.12	±	135.17	-129.96	±	500.13	No
		01/19/22	1.69	±	132.41	6.25	±	489.92	No
		01/26/22	51.50	±	111.18	190.55	±	411.37	No
		02/02/22	31.03	±	137.62	114.79	±	509.19	No
		02/09/22	-134.76	±	141.24	-498.61	±	522.59	No
		02/16/22	119.58	±	134.67	442.45	±	498.28	No
		02/23/22	-151.04	±	146.44	-558.85	±	541.83	No
		03/02/22	-50.33	±	148.00	-186.20	±	547.60	No
		03/09/22	-126.32	±	131.03	-467.38	±	484.81	No
		03/16/22	-88.65	±	131.74	-328.02	±	487.44	No
		03/23/22	-19.18	±	95.23	-70.96	±	352.37	No
		03/30/22	87.74	±	144.38	324.65	±	534.21	No
EFS		01/05/22	-0.51	±	1.50	-1.87	±	5.55	No
	a	01/05/22							
		01/12/22	3.06	±	2.10	11.32	±	7.77	No
		01/12/22	97.20	±	123.48	359.63	±	456.88	No
		01/19/22	1.27	±	1.78	4.70	±	6.59	No
		01/19/22	1.04	±	121.04	3.84	±	447.85	No
		01/26/22	-0.11	±	1.35	-0.40	±	5.00	No
		01/26/22	-33.84	±	122.37	-125.19	±	452.77	No
		02/02/22	-3.58	±	2.42	-13.25	±	8.95	No
		02/02/22	138.57	±	144.75	512.71	±	535.58	No
		02/09/22	-5.24	±	5.82	-19.39	±	21.53	No
		02/09/22	-24.96	±	126.69	-92.34	±	468.75	No
		02/16/22	-3.77	±	2.56	-13.95	±	9.47	No
		02/16/22	76.69	±	112.09	283.74	±	414.73	No
		02/23/22	0.39	±	1.98	1.45	±	7.33	No
		02/23/22	-79.82	±	131.49	-295.34	±	486.51	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	03/02/22	-0.89	±	2.01	-3.30	±	7.44	No
	03/02/22	35.37	±	122.18	130.87	±	452.07	No
	03/09/22	0.62	±	1.25	2.29	±	4.63	No
	03/09/22	5.88	±	137.05	21.76	±	507.09	No
	03/16/22	0.24	±	1.97	0.87	±	7.29	No
	03/16/22	2.40	±	114.86	8.90	±	424.98	No
	03/23/22	0.74	±	1.30	2.74	±	4.81	No
	03/23/22	95.63	±	129.13	353.83	±	477.78	No
	03/30/22	1.44	±	1.38	5.33	±	5.11	No
	03/30/22	-60.12	±	159.86	-222.46	±	591.48	No
GATE 4	01/05/22	-26.70	±	70.81	-98.78	±	262.00	No
	01/12/22	6.83	±	115.87	25.27	±	428.72	No
	01/19/22	-266.17	±	139.12	-984.83	±	514.74	No
	01/26/22	-97.64	±	133.45	-361.28	±	493.77	No
	02/02/22	144.96	±	126.51	536.35	±	468.09	No
	02/09/22	-9.47	±	139.66	-35.04	±	516.74	No
	02/16/22	-24.56	±	134.70	-90.89	±	498.39	No
	02/23/22	-39.36	±	115.40	-145.61	±	426.98	No
	03/02/22	118.56	±	120.81	438.67	±	447.00	No
	03/09/22	163.90	±	124.19	606.43	±	459.50	No
	03/16/22	-7.72	±	135.39	-28.56	±	500.94	No
	03/23/22	-10.00	±	140.28	-37.00	±	519.04	No
	03/30/22	-1.16	±	122.22	-4.28	±	452.21	No
HIGHWAY 26 REST AREA	01/05/22	-7.87	±	62.15	-29.13	±	229.96	No
	01/12/22	240.41	±	80.92	889.52	±	299.40	No
	01/19/22	-110.14	±	131.86	-407.52	±	487.88	No
	01/26/22	-35.07	±	132.37	-129.76	±	489.77	No
	02/02/22	-22.03	±	104.87	-81.51	±	388.02	No
	02/09/22	-25.73	±	110.65	-95.18	±	409.41	No
	02/16/22	-62.71	±	121.87	-232.01	±	450.92	No
	02/23/22	10.17	±	152.88	37.64	±	565.66	No
	03/02/22	-12.91	±	125.21	-47.76	±	463.28	No
	03/09/22	-9.03	±	140.62	-33.40	±	520.29	No
	03/16/22	184.35	±	126.22	682.10	±	467.01	No
	03/23/22	9.52	±	137.51	35.21	±	508.79	No
	03/30/22	-160.19	±	130.34	-592.70	±	482.26	No
INTEC (NE CORNER)	01/05/22	-119.67	±	202.22	-442.78	±	748.21	No
	01/12/22	-6.65	±	120.62	-24.62	±	446.29	No
	01/19/22	10.78	±	127.19	39.89	±	470.60	No
	01/26/22	18.97	±	129.02	70.18	±	477.37	No
	02/02/22	-94.33	±	121.22	-349.00	±	448.51	No
	02/09/22	44.87	±	143.64	166.03	±	531.47	No
	02/16/22	1.45	±	82.36	5.38	±	304.72	No
	02/23/22	-95.41	±	115.00	-353.01	±	425.50	No
	03/02/22	-2.79	±	119.96	-10.32	±	443.85	No
	03/09/22	-20.92	±	139.19	-77.41	±	515.00	No
	03/16/22	-100.55	±	137.96	-372.04	±	510.45	No
	03/23/22	-73.91	±	132.46	-273.45	±	490.10	No
	03/30/22	-61.53	±	148.62	-227.67	±	549.89	No
INTEC (WEST SIDE)	01/05/22	-21.72	±	71.23	-80.35	±	263.57	No
	01/12/22	77.36	±	160.63	286.24	±	594.33	No
	01/19/22	3.76	±	119.35	13.91	±	441.60	No
	01/26/22	-76.95	±	132.28	-284.72	±	489.44	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	02/02/22	-174.76	±	141.19	-646.61	±	522.40	No
	02/09/22	-41.28	±	145.46	-152.74	±	538.20	No
	02/16/22	-13.73	±	141.68	-50.80	±	524.22	No
	02/23/22	1.77	±	129.40	6.53	±	478.78	No
	03/02/22	-98.73	±	137.04	-365.31	±	507.05	No
	03/09/22	-8.35	±	136.57	-30.90	±	505.31	No
	03/16/22	1.73	±	147.22	6.40	±	544.71	No
	03/23/22	109.13	±	129.69	403.78	±	479.85	No
	03/30/22	174.82	±	134.15	646.83	±	496.36	No
INTEC (QA)	01/05/22	-4.62	±	71.15	-17.11	±	263.27	No
	01/12/22	147.71	±	122.39	546.53	±	452.84	No
	01/19/22	-131.10	±	128.55	-485.07	±	475.64	No
	01/26/22	-139.96	±	136.50	-517.85	±	505.05	No
	02/02/22	0.96	±	127.01	3.54	±	469.94	No
	02/09/22	-159.85	±	120.50	-591.45	±	445.85	No
	02/16/22	-38.44	±	138.29	-142.21	±	511.67	No
	02/23/22	38.87	±	114.41	143.82	±	423.32	No
	03/02/22	121.98	±	144.82	451.33	±	535.83	No
	03/09/22	-95.04	±	150.08	-351.65	±	555.30	No
	03/16/22	-2.26	±	130.29	-8.35	±	482.07	No
	03/23/22	9.24	±	138.99	34.18	±	514.26	No
	03/30/22	1.54	±	152.62	5.68	±	564.69	No
MAIN GATE	01/05/22	-0.50	±	1.47	-1.84	±	5.44	No
	01/12/22	2.55	±	1.75	9.44	±	6.48	No
	01/19/22	1.45	±	2.03	5.37	±	7.51	No
	01/26/22	-0.10	±	1.27	-0.38	±	4.70	No
	02/02/22	-2.38	±	1.61	-8.81	±	5.96	No
	02/09/22	-3.70	±	4.10	-13.69	±	15.17	No
	02/16/22	-2.28	±	1.55	-8.44	±	5.74	No
	02/23/22	0.42	±	2.11	1.54	±	7.81	No
a	03/02/22							
	03/09/22	0.68	±	1.36	2.50	±	5.03	No
	03/16/22	0.24	±	2.01	0.88	±	7.44	No
	03/23/22	0.76	±	1.34	2.82	±	4.96	No
	03/30/22	1.36	±	1.31	5.03	±	4.85	No
MFC (NORTH)	01/05/22	5.56	±	66.18	20.57	±	244.88	No
	01/12/22	-40.69	±	116.93	-150.54	±	432.64	No
	01/19/22	-10.52	±	143.12	-38.91	±	529.54	No
	01/26/22	-5.76	±	112.79	-21.30	±	417.32	No
	02/02/22	10.89	±	107.12	40.29	±	396.34	No
	02/09/22	-69.13	±	110.62	-255.77	±	409.29	No
	02/16/22	35.41	±	130.36	131.01	±	482.33	No
	02/23/22	115.66	±	143.37	427.94	±	530.47	No
	03/02/22	-79.61	±	134.96	-294.55	±	499.35	No
	03/09/22	-9.92	±	117.98	-36.69	±	436.53	No
	03/16/22	-153.10	±	133.14	-566.47	±	492.62	No
	03/23/22	-62.55	±	123.36	-231.43	±	456.43	No
	03/30/22	-3.50	±	108.69	-12.96	±	402.15	No
MFC (SOUTH)	01/05/22	-10.08	±	67.56	-37.31	±	249.96	No
	01/12/22	-49.56	±	135.00	-183.35	±	499.50	No
	01/19/22	-63.12	±	125.20	-233.53	±	463.24	No
	01/26/22	66.91	±	118.39	247.58	±	438.04	No
	02/02/22	-43.96	±	110.90	-162.66	±	410.33	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	02/09/22	-201.49	±	135.00	-745.51	±	499.50	No
	02/16/22	-3.14	±	138.51	-11.60	±	512.49	No
	02/23/22	71.04	±	109.88	262.84	±	406.56	No
	03/02/22	-20.26	±	142.76	-74.97	±	528.21	No
	03/09/22	-143.64	±	138.14	-531.47	±	511.12	No
	03/16/22	3.94	±	115.88	14.58	±	428.76	No
	03/23/22	18.95	±	123.16	70.12	±	455.69	No
	03/30/22	3.14	±	119.97	11.63	±	443.89	No
NRF	01/05/22	83.43	±	46.14	308.69	±	170.70	No
	01/12/22	-101.88	±	129.75	-376.96	±	480.08	No
	01/19/22	2.61	±	122.40	9.66	±	452.88	No
	01/26/22	11.18	±	135.68	41.36	±	502.02	No
	02/02/22	-198.39	±	136.37	-734.04	±	504.57	No
	02/09/22	-96.80	±	133.02	-358.16	±	492.17	No
	02/16/22	-100.43	±	132.30	-371.59	±	489.51	No
	02/23/22	-56.50	±	130.90	-209.04	±	484.33	No
	03/02/22	-156.84	±	146.75	-580.31	±	542.98	No
	03/09/22	176.70	±	138.62	653.79	±	512.89	No
	03/16/22	-69.92	±	154.76	-258.72	±	572.61	No
	03/23/22	-112.84	±	135.45	-417.51	±	501.17	No
	03/30/22	-154.70	±	145.00	-572.39	±	536.50	No
RHLLW	01/05/22	-15.71	±	63.55	-58.13	±	235.13	No
	01/12/22	-1.51	±	132.69	-5.58	±	490.95	No
	01/19/22	-19.62	±	132.51	-72.60	±	490.29	No
	01/26/22	-227.36	±	131.79	-841.23	±	487.62	No
	02/02/22	208.14	±	107.10	770.12	±	396.27	No
	02/09/22	-35.60	±	138.20	-131.72	±	511.34	No
	02/16/22	-216.00	±	127.47	-799.20	±	471.64	No
	02/23/22	-10.56	±	116.37	-39.06	±	430.57	No
	03/02/22	-222.18	±	151.17	-822.07	±	559.33	No
	03/09/22	-9.14	±	139.92	-33.83	±	517.70	No
	03/16/22	-6.22	±	137.50	-23.02	±	508.75	No
	03/23/22	0.54	±	132.83	2.01	±	491.47	No
	03/30/22	-117.38	±	137.33	-434.31	±	508.12	No
RWMC	01/05/22	-29.79	±	62.21	-110.22	±	230.18	No
	01/12/22	-35.56	±	134.07	-131.58	±	496.06	No
	01/19/22	54.47	±	203.19	201.52	±	751.80	No
	01/26/22	-35.77	±	114.25	-132.33	±	422.73	No
	02/02/22	8.47	±	121.09	31.33	±	448.03	No
	02/09/22	-142.00	±	124.81	-525.40	±	461.80	No
	02/16/22	97.62	±	117.45	361.21	±	434.57	No
	02/23/22	53.67	±	142.05	198.59	±	525.59	No
	03/02/22	-30.59	±	132.95	-113.18	±	491.92	No
	03/09/22	-69.59	±	123.26	-257.46	±	456.06	No
	03/16/22	-34.47	±	127.84	-127.53	±	473.01	No
	03/23/22	-153.22	±	127.23	-566.91	±	470.75	No
	03/30/22	34.43	±	131.44	127.40	±	486.33	No
RWMC (QA)	01/05/22	-41.53	±	70.30	-153.66	±	260.12	No
	01/12/22	147.38	±	136.57	545.31	±	505.31	No
	01/19/22	9.09	±	133.38	33.64	±	493.51	No
	01/26/22	-2.24	±	117.38	-8.28	±	434.31	No
	02/02/22	-7.78	±	125.32	-28.80	±	463.68	No
	02/09/22	16.14	±	120.24	59.70	±	444.89	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	02/16/22	-94.10	±	116.27	-348.18	±	430.20	No
	02/23/22	-1.39	±	141.62	-5.14	±	523.99	No
	03/02/22	164.03	±	123.05	606.91	±	455.29	No
	03/09/22	12.27	±	141.76	45.39	±	524.51	No
	03/16/22	-12.58	±	138.72	-46.53	±	513.26	No
	03/23/22	-118.04	±	145.97	-436.75	±	540.09	No
	03/30/22	-69.89	±	144.29	-258.59	±	533.87	No
RWMC (SOUTH)	01/05/22	-7.53	±	53.67	-27.87	±	198.57	No
	01/12/22	94.96	±	119.80	351.36	±	443.26	No
	01/19/22	-65.28	±	114.54	-241.52	±	423.80	No
	01/26/22	26.56	±	130.74	98.28	±	483.74	No
	02/02/22	-10.62	±	116.12	-39.28	±	429.64	No
	02/09/22	-73.27	±	118.62	-271.09	±	438.89	No
	02/16/22	-132.08	±	137.84	-488.70	±	510.01	No
	02/23/22	-33.78	±	133.23	-124.98	±	492.95	No
	03/02/22	-75.71	±	133.02	-280.12	±	492.17	No
	03/09/22	-46.43	±	126.49	-171.78	±	468.01	No
	03/16/22	-38.27	±	145.24	-141.61	±	537.39	No
	03/23/22	6.50	±	134.08	24.05	±	496.10	No
	03/30/22	-82.91	±	157.71	-306.77	±	583.53	No
SMC	01/05/22	19.41	±	57.78	71.82	±	213.78	No
	01/12/22	-78.01	±	141.52	-288.63	±	523.62	No
	01/19/22	-102.58	±	154.62	-379.55	±	572.09	No
	01/26/22	1.71	±	127.51	6.33	±	471.79	No
	02/02/22	-150.31	±	124.59	-556.15	±	460.98	No
	02/09/22	-110.98	±	114.70	-410.63	±	424.39	No
	02/16/22	-25.42	±	126.09	-94.04	±	466.53	No
	02/23/22	-27.84	±	105.10	-103.02	±	388.87	No
	03/02/22	-19.06	±	127.36	-70.52	±	471.23	No
	03/09/22	4.45	±	113.09	16.46	±	418.43	No
	03/16/22	89.24	±	151.28	330.19	±	559.74	No
	03/23/22	78.98	±	111.26	292.21	±	411.66	No
	03/30/22	-122.59	±	160.38	-453.58	±	593.41	No
VAN BUREN	01/05/22	-0.42	±	1.24	-1.55	±	4.59	No
	01/05/22	0.00	±	60.99	0.00	±	225.64	No
	01/12/22	3.38	±	2.32	12.51	±	8.58	No
	01/12/22	-30.03	±	134.62	-111.10	±	498.09	No
	01/19/22	1.47	±	2.05	5.44	±	7.59	No
	01/19/22	-32.54	±	123.23	-120.41	±	455.95	No
	01/26/22	-0.11	±	1.32	-0.40	±	4.88	No
	01/26/22	6.28	±	124.35	23.22	±	460.10	No
	02/02/22	-2.52	±	1.70	-9.32	±	6.29	No
	02/02/22	53.03	±	129.20	196.19	±	478.04	No
	02/09/22	-2.65	±	2.94	-9.81	±	10.88	No
	02/09/22	130.69	±	136.54	483.55	±	505.20	No
	02/16/22	-2.93	±	1.99	-10.84	±	7.36	No
	02/16/22	-9.63	±	138.87	-35.62	±	513.82	No
	02/23/22	0.42	±	2.15	1.57	±	7.96	No
	02/23/22	-46.69	±	145.01	-172.76	±	536.54	No
	03/02/22	-0.66	±	1.49	-2.44	±	5.51	No
	03/02/22	-6.88	±	105.17	-25.44	±	389.13	No
	03/09/22	0.65	±	1.31	2.39	±	4.85	No
	03/09/22	17.55	±	122.25	64.94	±	452.33	No

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

Sampling Group and Location	Sampling Date	Result ± 1s Uncertainty ($\times 10^{-15}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-11}$ Bq/mL)			Result > 3s
	03/16/22	0.23	±	1.96	0.86	±	7.25	No
	a 03/16/22							
	03/23/22	0.77	±	1.35	2.86	±	5.00	No
	03/23/22	-4.59	±	113.27	-16.99	±	419.10	No
	03/30/22	1.43	±	1.38	5.29	±	5.11	No
	03/30/22	79.23	±	152.13	293.13	±	562.88	No
VAN BUREN (QA)	01/05/22	-0.42	±	1.24	-1.55	±	4.59	No
	01/12/22	3.42	±	2.35	12.65	±	8.70	No
	01/19/22	1.59	±	2.22	5.88	±	8.21	No
	02/02/22	-2.13	±	1.44	-7.88	±	5.33	No
	02/09/22	-2.16	±	2.40	-7.99	±	8.88	No
	02/16/22	-3.06	±	2.09	-11.32	±	7.73	No
	03/02/22	-0.59	±	1.34	-2.19	±	4.96	No
	03/09/22	0.61	±	1.24	2.27	±	4.59	No
	03/16/22	0.22	±	1.81	0.80	±	6.70	No
	03/23/22	0.72	±	1.26	2.65	±	4.66	No
	03/30/22	1.45	±	1.40	5.37	±	5.18	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 ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
BOUNDARY									
ARCO	03/31/22	Americium-241	3.05	±	10.60	11.29	±	39.22	No
		Cesium-137	188.00	±	145.00	695.60	±	536.50	No
		Plutonium-238	2.55	±	12.50	9.44	±	46.25	No
		Plutonium-239/240	2.54	±	17.60	9.40	±	65.12	No
ATOMIC CITY	03/31/22	Americium-241	5.88	±	6.22	21.76	±	23.01	No
		Cesium-137	-237.00	±	151.00	-876.90	±	558.70	No
		Plutonium-238	0.00	±	9.47	0.00	±	35.04	No
		Plutonium-239/240	20.70	±	9.24	76.59	±	34.19	No
BLUE DOME	03/31/22	Cesium-137	10.10	±	145.00	37.37	±	536.50	No
		Strontium-90	66.10	±	6.32	244.57	±	23.38	**Yes**
FAA TOWER	03/31/22	Cesium-137	14.20	±	107.00	52.54	±	395.90	No
		Strontium-90	81.00	±	5.62	299.70	±	20.79	**Yes**
HOWE	03/31/22	Cesium-137	9.16	±	119.00	33.89	±	440.30	No
		Strontium-90	49.50	±	9.35	183.15	±	34.60	**Yes**
MONTEVIEW	03/31/22	Americium-241	4.46	±	5.56	16.50	±	20.57	No
		Cesium-137	-365.00	±	179.00	-1350.50	±	662.30	No
		Plutonium-238	8.97	±	7.18	33.19	±	26.57	No
		Plutonium-239/240	1.79	±	10.70	6.62	±	39.59	No
MUD LAKE	03/31/22	Cesium-137	41.40	±	194.00	153.18	±	717.80	No
OFFSITE									
BLACKFOOT	03/31/22	Americium-241	4.12	±	6.14	15.24	±	22.72	No
		Americium-241	1.50	±	3.10	5.55	±	11.47	No
		Cesium-137	-227.00	±	162.00	-839.90	±	599.40	No
		Cesium-137	-92.00	±	47.00	-340.40	±	173.90	No
		Plutonium-238	9.37	±	6.52	34.67	±	24.12	No
		Plutonium-238	-0.30	±	3.20	-1.11	±	11.84	No
		Plutonium-239/240	4.66	±	9.68	17.24	±	35.82	No
		Plutonium-239/240	1.10	±	3.20	4.07	±	11.84	No
		Strontium-90	65.00	±	32.00	240.50	±	118.40	No
CRATERS OF THE MOON	03/31/22	Cesium-137	-74.50	±	108.00	-275.65	±	399.60	No
DUBOIS	03/31/22	Cesium-137	58.60	±	174.00	216.82	±	643.80	No
		Strontium-90	94.20	±	7.95	348.54	±	29.42	**Yes**
DUBOIS (QA)	03/31/22	Cesium-137	-98.40	±	150.00	-364.08	±	555.00	No
		Strontium-90	63.50	±	7.38	234.95	±	27.31	**Yes**
IDAHO FALLS	03/31/22	Americium-241	-0.70	±	2.60	-2.59	±	9.62	No
		Cesium-137	-65.90	±	176.00	-243.83	±	651.20	No
		Cesium-137	-20.00	±	36.00	-74.00	±	133.20	No
		Plutonium-238	0.80	±	4.90	2.96	±	18.13	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 ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
		Plutonium-239/240	1.80	±	4.90	6.66	±	18.13	No
		Strontium-90	20.00	±	25.00	74.00	±	92.50	No
IRC	03/31/22	Americium-241	-3.80	±	2.60	-14.06	±	9.62	No
		Cesium-137	-58.00	±	35.00	-214.60	±	129.50	No
		Plutonium-238	1.60	±	4.50	5.92	±	16.65	No
		Plutonium-239/240	6.70	±	4.50	24.79	±	16.65	No
		Strontium-90	0.00	±	24.00	0.00	±	88.80	No
IRC (NORTH)	03/31/22	Americium-241	-4.30	±	2.10	-15.91	±	7.77	No
		Cesium-137	-36.00	±	45.00	-133.20	±	166.50	No
		Plutonium-238	2.70	±	3.70	9.99	±	13.69	No
		Plutonium-239/240	3.10	±	3.70	11.47	±	13.69	No
		Strontium-90	25.00	±	26.00	92.50	±	96.20	No
JACKSON, WY	03/31/22	Americium-241	1.49	±	5.17	5.51	±	19.13	No
		Cesium-137	-48.30	±	118.00	-178.71	±	436.60	No
		Plutonium-238	9.40	±	7.35	34.78	±	27.20	No
		Plutonium-239/240	9.35	±	6.54	34.60	±	24.20	No
SUGAR CITY	03/31/22	Americium-241	-0.40	±	2.60	-1.48	±	9.62	No
		Cesium-137	-117.00	±	173.00	-432.90	±	640.10	No
		Cesium-137	-42.00	±	43.00	-155.40	±	159.10	No
		Plutonium-238	-0.90	±	3.00	-3.33	±	11.10	No
		Plutonium-239/240	2.80	±	3.00	10.36	±	11.10	No
		Strontium-90	-26.00	±	27.00	-96.20	±	99.90	No
ONSITE									
ATR COMPLEX	03/31/22	Americium-241	-4.40	±	3.20	-16.28	±	11.84	No
		Cesium-137	37.00	±	52.00	136.90	±	192.40	No
		Plutonium-238	4.10	±	2.80	15.17	±	10.36	No
		Plutonium-239/240	5.40	±	3.20	19.98	±	11.84	No
		Strontium-90	47.00	±	30.00	173.90	±	111.00	No
CFA	03/31/22	Americium-241	0.00	±	4.50	0.00	±	16.65	No
		Cesium-137	-26.00	±	44.00	-96.20	±	162.80	No
		Plutonium-238	-0.40	±	3.70	-1.48	±	13.69	No
		Plutonium-239/240	-0.40	±	3.70	-1.48	±	13.69	No
		Strontium-90	-37.00	±	22.00	-136.90	±	81.40	No
CRATERS OF THE MOON	03/31/22	Americium-241	-2.40	±	2.30	-8.88	±	8.51	No
		Cesium-137	-58.00	±	37.00	-214.60	±	136.90	No
		Plutonium-238	-0.30	±	3.20	-1.11	±	11.84	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 ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
		Plutonium-239/240	0.00	±	3.20	0.00	±	11.84	No
		Strontium-90	-8.00	±	25.00	-29.60	±	92.50	No
EBR-I	03/31/22	Americium-241	2.30	±	3.10	8.51	±	11.47	No
		Cesium-137	-24.00	±	46.00	-88.80	±	170.20	No
		Plutonium-238	1.70	±	2.30	6.29	±	8.51	No
		Plutonium-239/240	3.50	±	2.30	12.95	±	8.51	No
		Strontium-90	41.00	±	27.00	151.70	±	99.90	No
EFS	03/31/22	Americium-241	3.92	±	5.84	14.50	±	21.61	No
		Americium-241	-1.60	±	3.10	-5.92	±	11.47	No
		Cesium-137	-149.00	±	189.00	-551.30	±	699.30	No
		Cesium-137	-72.00	±	54.00	-266.40	±	199.80	No
		Plutonium-238	0.00	±	18.80	0.00	±	69.56	No
		Plutonium-238	1.70	±	3.50	6.29	±	12.95	No
		Plutonium-239/240	5.84	±	16.30	21.61	±	60.31	No
		Plutonium-239/240	0.00	±	3.50	0.00	±	12.95	No
		Strontium-90	7.00	±	30.00	25.90	±	111.00	No
GATE 4	03/31/22	Americium-241	0.20	±	3.30	0.74	±	12.21	No
		Cesium-137	-42.00	±	43.00	-155.40	±	159.10	No
		Plutonium-238	2.60	±	2.60	9.62	±	9.62	No
		Plutonium-239/240	0.70	±	2.60	2.59	±	9.62	No
		Strontium-90	16.00	±	25.00	59.20	±	92.50	No
HIGHWAY 26 REST AREA	03/31/22	Americium-241	-1.30	±	3.00	-4.81	±	11.10	No
		Cesium-137	-58.00	±	43.00	-214.60	±	159.10	No
		Plutonium-238	-1.30	±	3.30	-4.81	±	12.21	No
		Plutonium-239/240	1.90	±	3.30	7.03	±	12.21	No
		Strontium-90	-34.00	±	23.00	-125.80	±	85.10	No
INTEC (NE CORNER)	03/31/22	Americium-241	-1.50	±	3.70	-5.55	±	13.69	No
		Cesium-137	-105.00	±	62.00	-388.50	±	229.40	No
		Plutonium-238	2.90	±	4.00	10.73	±	14.80	No
		Plutonium-239/240	3.30	±	4.00	12.21	±	14.80	No
		Strontium-90	22.00	±	27.00	81.40	±	99.90	No
INTEC (WEST SIDE)	03/31/22	Americium-241	-4.20	±	3.50	-15.54	±	12.95	No
		Cesium-137	-15.00	±	60.00	-55.50	±	222.00	No
		Plutonium-238	7.90	±	4.20	29.23	±	15.54	No
		Plutonium-239/240	1.70	±	3.60	6.29	±	13.32	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 ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
		Strontium-90	32.00	±	28.00	118.40	±	103.60	No
INTEC (QA)	03/31/22	Americium-241	-3.00	±	2.90	-11.10	±	10.73	No
		Cesium-137	-72.00	±	54.00	-266.40	±	199.80	No
		Plutonium-238	6.30	±	4.00	23.31	±	14.80	No
		Plutonium-239/240	2.20	±	3.90	8.14	±	14.43	No
		Strontium-90	-5.00	±	25.00	-18.50	±	92.50	No
MAIN GATE	03/31/22	Americium-241	-13.10	±	16.40	-48.47	±	60.68	No
		Cesium-137	68.10	±	188.00	251.97	±	695.60	No
		Plutonium-238	-13.20	±	14.40	-48.84	±	53.28	No
		Plutonium-239/240	18.40	±	14.40	68.08	±	53.28	No
MFC (NORTH)	03/31/22	Americium-241	-1.20	±	2.40	-4.44	±	8.88	No
		Cesium-137	-37.00	±	54.00	-136.90	±	199.80	No
		Plutonium-238	1.70	±	3.00	6.29	±	11.10	No
		Plutonium-239/240	3.40	±	3.00	12.58	±	11.10	No
		Strontium-90	41.00	±	28.00	151.70	±	103.60	No
MFC (SOUTH)	03/31/22	Americium-241	-0.30	±	4.30	-1.11	±	15.91	No
		Cesium-137	-74.00	±	40.00	-273.80	±	148.00	No
		Plutonium-238	2.60	±	3.60	9.62	±	13.32	No
		Plutonium-239/240	5.40	±	3.70	19.98	±	13.69	No
		Strontium-90	-14.00	±	23.00	-51.80	±	85.10	No
NRF	03/31/22	Americium-241	-2.90	±	2.10	-10.73	±	7.77	No
		Cesium-137	-60.00	±	34.00	-222.00	±	125.80	No
		Plutonium-238	1.40	±	2.70	5.18	±	9.99	No
		Plutonium-239/240	-0.80	±	2.70	-2.96	±	9.99	No
		Strontium-90	16.00	±	28.00	59.20	±	103.60	No
RHLLW	03/31/22	Americium-241	-4.90	±	2.10	-18.13	±	7.77	No
		Cesium-137	13.00	±	33.00	48.10	±	122.10	No
		Plutonium-238	3.40	±	3.30	12.58	±	12.21	No
		Plutonium-239/240	3.40	±	3.30	12.58	±	12.21	No
		Strontium-90	48.00	±	29.00	177.60	±	107.30	No
RWMC	03/31/22	Americium-241	1.80	±	3.40	6.66	±	12.58	No
		Cesium-137	-7.00	±	42.00	-25.90	±	155.40	No
		Plutonium-238	1.30	±	2.80	4.81	±	10.36	No
		Plutonium-239/240	6.10	±	3.30	22.57	±	12.21	No
		Strontium-90	-4.00	±	24.00	-14.80	±	88.80	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 ($\times 10^{-18}$ µCi/mL)			Result ± 1s Uncertainty ($\times 10^{-14}$ Bq/mL)			Result > 3s
RWMC (QA)	03/31/22	Americium-241	1.10	±	3.60	4.07	±	13.32	No
		Cesium-137	-45.00	±	34.00	-166.50	±	125.80	No
		Plutonium-238	1.10	±	3.00	4.07	±	11.10	No
		Plutonium-239/240	4.20	±	3.00	15.54	±	11.10	No
		Strontium-90	9.00	±	26.00	33.30	±	96.20	No
RWMC (SOUTH)	03/31/22	Americium-241	-5.40	±	3.30	-19.98	±	12.21	No
		Cesium-137	18.00	±	58.00	66.60	±	214.60	No
		Plutonium-238	2.30	±	2.50	8.51	±	9.25	No
		Plutonium-239/240	3.40	±	2.50	12.58	±	9.25	No
		Strontium-90	0.00	±	26.00	0.00	±	96.20	No
SMC	03/31/22	Americium-241	-2.30	±	2.40	-8.51	±	8.88	No
		Cesium-137	-23.00	±	56.00	-85.10	±	207.20	No
		Plutonium-238	3.80	±	2.70	14.06	±	9.99	No
		Plutonium-239/240	2.80	±	2.70	10.36	±	9.99	No
		Strontium-90	-12.00	±	25.00	-44.40	±	92.50	No
VAN BUREN	03/31/22	Americium-241	9.20	±	7.36	34.04	±	27.23	No
		Americium-241	-5.40	±	2.30	-19.98	±	8.51	No
		Cesium-137	-129.00	±	156.00	-477.30	±	577.20	No
		Cesium-137	22.00	±	48.00	81.40	±	177.60	No
		Plutonium-238	5.24	±	4.91	19.39	±	18.17	No
		Plutonium-238	1.00	±	2.70	3.70	±	9.99	No
		Plutonium-239/240	4.17	±	5.99	15.43	±	22.16	No
		Plutonium-239/240	3.10	±	2.70	11.47	±	9.99	No
		Strontium-90	44.00	±	34.00	162.80	±	125.80	No
VAN BUREN (QA)	03/31/22	Americium-241	-1.87	±	5.93	-6.92	±	21.94	No
		Cesium-137	-107.00	±	148.00	-395.90	±	547.60	No
		Plutonium-238	17.90	±	8.70	66.23	±	32.19	No
		Plutonium-239/240	-4.93	±	7.64	-18.24	±	28.27	No

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	01/19/22	1.93	±	0.84	7.14	±	3.12	No
	03/16/22	1.60	±	0.65	5.92	±	2.40	No
HOWE	03/09/22	2.54	±	0.81	9.40	±	2.98	**Yes**
OFFSITE								
CRATERS OF THE MOON	02/23/22	4.50		1.70	16.65	±	6.29	No
IDAHO FALLS	01/19/22	1.85	±	1.35	6.85	±	5.00	No
	02/23/22	2.50		1.10	9.25	±	4.07	No
	03/09/22	-0.45	±	0.77	-1.68	±	2.86	No
ONSITE								
EFS	02/16/22	3.08	±	0.84	11.40	±	3.12	**Yes**
	02/16/22	2.40	±	1.10	8.88	±	4.07	No
	03/23/22	1.84	±	0.78	6.81	±	2.88	No
VAN BUREN	02/23/22	3.00	±	1.30	11.10	±	4.81	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	12/29/22	01/05/22	-43.00	±	23.40	-1.59	±	0.87	No
	01/12/22	01/19/22	44.20	±	24.60	1.64	±	0.91	No
	01/19/22	01/26/22	84.80	±	24.90	3.14	±	0.92	**Yes**
	03/02/22	03/09/22	56.20	±	26.00	2.08	±	0.96	No
HOWE	12/29/21	01/05/22	18.90	±	23.90	0.70	±	0.88	No
	01/05/22	01/12/22	-25.10	±	23.40	-0.93	±	0.87	No
	01/19/22	01/26/22	7.89	±	23.80	0.29	±	0.88	No
	03/02/22	03/09/22	57.60	±	25.80	2.13	±	0.95	No
OFFSITE									
IDAHO FALLS	01/01/22	01/31/22	11.10	±	24.10	0.41	±	0.89	No
	02/01/22	02/28/22	56.30	±	25.90	2.08	±	0.96	No
	03/01/22	03/31/22	49.20	±	25.30	1.82	±	0.94	No
ONSITE									
EFS	12/29/21	01/05/22	17.80	±	24.20	0.66	±	0.90	No
	01/05/22	01/12/22	-0.29	±	23.70	-0.01	±	0.88	No
	01/19/22	01/26/22	-16.80	±	23.50	-0.62	±	0.87	No
	03/02/22	03/09/22	42.00	±	24.80	1.55	±	0.92	No
	03/09/22	03/16/22	104.00	±	25.30	3.85	±	0.94	**Yes**
	03/16/22	03/23/22	58.90	±	24.80	2.18	±	0.92	No

Table C-6. Weekly and monthly iodine-131 and cesium-137 concentrations in milk.

		Iodine-131							Cesium-137						
	Sampling	Result ± 1s Uncertainty			Result ± 1s Uncertainty				Result ± 1s Uncertainty			Result ± 1s Uncertainty			
Location	Date	(pCi/L)			(Bq/L)			Result > 3s	(pCi/L)			(Bq/L)			Result > 3s
CONTROL	01/04/22	-0.22	±	1.73	-0.01	±	0.06	No	-0.24	±	1.35	-0.01	±	0.05	No
	02/01/22	-0.54	±	1.17	-0.02	±	0.04	No	2.15	±	1.50	0.08	±	0.06	No
	03/01/22	-1.24	±	1.01	-0.05	±	0.04	No	-0.79	±	0.67	-0.03	±	0.02	No
DIETRICH	01/04/22	-0.42	±	0.97	-0.02	±	0.04	No	0.99	±	0.66	0.04	±	0.02	No
	02/01/22	0.00	±	1.61	0.00	±	0.06	No	0.18	±	1.31	0.01	±	0.05	No
	03/01/22	-0.37	±	1.27	-0.01	±	0.05	No	0.88	±	0.67	0.03	±	0.02	No
HOWE	01/05/22	0.24	±	1.05	0.01	±	0.04	No	-0.20	±	1.54	-0.01	±	0.06	No
	02/02/22	-0.37	±	0.99	-0.01	±	0.04	No	-0.07	±	0.61	0.00	±	0.02	No
	03/03/22	0.55	±	1.35	0.02	±	0.05	No	1.46	±	1.46	0.05	±	0.05	No
MINIDOKA	01/04/22	1.68	±	1.66	0.06	±	0.06	No	-1.39	±	1.35	-0.05	±	0.05	No
	02/01/22	-0.36	±	0.88	-0.01	±	0.03	No	-0.05	±	0.63	0.00	±	0.02	No
	03/01/22	1.39	±	1.35	0.05	±	0.05	No	0.43	±	1.49	0.02	±	0.06	No
MONTEVIEW	01/04/22	-0.78	±	1.73	-0.03	±	0.06	No	1.48	±	1.38	0.05	±	0.05	No
	02/01/22	-0.11	±	0.96	0.00	±	0.04	No	0.30	±	0.62	0.01	±	0.02	No
	03/01/22	-0.04	±	1.03	0.00	±	0.04	No	0.57	±	1.41	0.02	±	0.05	No
RIGBY	01/04/22	-0.07	±	1.17	0.00	±	0.04	No	1.01	±	1.04	0.04	±	0.04	No
	01/11/22	-0.49	±	1.02	-0.02	±	0.04	No	1.91	±	1.47	0.07	±	0.05	No
	01/19/22	0.25	±	0.80	0.01	±	0.03	No	1.33	±	0.69	0.05	±	0.03	No
	01/25/22	0.45		0.88	0.02	±	0.03	No	1.72		0.72	0.06	±	0.03	No
	02/01/22	0.86	±	1.63	0.03	±	0.06	No	1.57	±	1.42	0.06	±	0.05	No
Duplicate	02/01/22	-1.81	±	1.82	-0.07	±	0.07	No	-1.42	±	1.43	-0.05	±	0.05	No
	02/08/22	-1.25	±	1.74	-0.05	±	0.06	No	0.22	±	1.38	0.01	±	0.05	No
	02/16/22	0.20	±	0.91	0.01	±	0.03	No	-2.00	±	1.53	-0.07	±	0.06	No
	02/22/22	-0.14	±	1.06	-0.01	±	0.04	No	-0.56	±	1.45	-0.02	±	0.05	No
	03/01/22	-0.27	±	0.91	-0.01	±	0.03	No	-0.69	±	0.66	-0.03	±	0.02	No
	03/08/22	0.18	±	0.86	0.01	±	0.03	No	0.85	±	0.67	0.03	±	0.02	No
	03/16/22	-0.32	±	0.88	-0.01	±	0.03	No	-0.10	±	0.63	0.00	±	0.02	No
	03/22/22	0.30	±	1.13	0.01	±	0.04	No	-0.01	±	1.46	0.00	±	0.05	No
	03/30/22	0.75	±	0.88	0.03	±	0.03	No	-0.22	±	0.64	-0.01	±	0.02	No
TERRETON	01/05/22	-0.75	±	0.76	-0.03	±	0.03	No	0.79	±	0.66	0.03	±	0.02	No
	01/11/22	1.46	±	1.95	0.05	±	0.07	No	0.55	±	1.08	0.02	±	0.04	No
	01/19/22	0.47	±	0.96	0.02	±	0.04	No	0.59	±	1.46	0.02	±	0.05	No
	01/25/22	1.55		1.07	0.06	±	0.04	No	0.38		1.40	0.01	±	0.05	No
	02/02/22	1.99	±	1.69	0.07	±	0.06	No	0.87	±	1.34	0.03	±	0.05	No
	02/08/22	0.23	±	1.08	0.01	±	0.04	No	-0.63	±	1.46	-0.02	±	0.05	No
	02/16/22	1.84	±	1.66	0.07	±	0.06	No	1.60	±	1.40	0.06	±	0.05	No
	02/22/22	1.55	±	1.25	0.06	±	0.05	No	-0.06	±	1.38	0.00	±	0.05	No
	03/02/22	0.36	±	1.00	0.01	±	0.04	No	-0.66	±	0.66	-0.02	±	0.02	No
Duplicate	03/02/22	-0.42	±	1.15	-0.02	±	0.04	No	0.01	±	0.64	0.00	±	0.02	No
	03/08/22	1.42	±	0.99	0.05	±	0.04	No	0.82	±	0.65	0.03	±	0.02	No
	03/16/22	-0.07	±	0.93	0.00	±	0.03	No	1.33	±	1.37	0.05	±	0.05	No
	03/22/22	0.05	±	0.88	0.00	±	0.03	No	0.19	±	0.62	0.01	±	0.02	No
	03/30/22	-0.41	±	0.82	-0.02	±	0.03	No	0.19	±	0.63	0.01	±	0.02	No

Table C-7. Gamma-emitting radionuclides in large game animals.

Species	Collection Date	Tissue	Analyte	Result ± 1s Uncertainty (pCi/kg wet weight)			Result ± 1s Uncertainty (x 10^{-2} Bq/kg wet weight)			Result > 3s
ELK	01/20/22	Liver	Cesium-137	2.64	±	1.32	9.77	±	4.88	No
			Iodine-131	-16.60	±	12.10	-61.42	±	44.77	No
PRONGHORN	03/16/22	Liver	Cesium-137	-5.58	±	5.74	-20.66	±	21.24	No
			Iodine-131	-2.86	±	27.30	-10.57	±	101.01	No
ELK	01/20/22	Muscle	Cesium-137	4.38	±	1.97	16.21	±	7.29	No
			Iodine-131	3.80	±	13.60	14.06	±	50.32	No
PRONGHORN	03/16/22	Muscle	Cesium-137	2.93	±	1.45	10.85	±	5.36	No
			Iodine-131	-10.07	±	9.47	-37.25	±	35.03	No
ELK	01/20/22	Thyroid	Cesium-137	211.00	±	578.00	780.70	±	2138.60	No
			Iodine-131	720.00	±	2430.00	2664.00	±	8991.00	No
PRONGHORN	03/16/22	Thyroid	Cesium-137	2.06	±	208.00	7.62	±	769.60	No
			Iodine-131	-202.00	±	351.00	-747.40	±	1298.70	No

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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	27500.00	305.5556		
Onsite	268	58506.00	218.3060	26.86255	0.0000
Offsite	129	32822.00	254.4341		
January	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	28	3111.500	111.1250		
Onsite	81	4766.500	58.8457	32.15419	0.0000
Offsite	40	3297.000	82.4250		
February	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	27	2726.000	100.9630		
Onsite	84	5479.500	65.2321	14.38340	0.0008
Offsite	39	3119.500	79.9872		
March	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	35	3186.500	91.04286		
Onsite	103	9950.000	96.60194	0.3565797	0.8367
Offsite	50	4629.500	92.59000		
GROSS BETA					
Quarter	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	90	23542.50	261.5833		
Onsite	268	67906.00	253.3806	9.164573	0.0102
Offsite	129	27379.50	212.2442		
January	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	28	2359.000	84.25000		
Onsite	81	6275.000	77.46914	4.379694	0.1119
Offsite	40	2541.000	63.52500		
February	**Valid N**	**Sum of Ranks**	**Mean Ranks**	**H[a]**	**P[b]**
Boundary	27	2325.000	86.11111		
Onsite	84	6439.000	76.65476	3.668170	0.1598
Offsite	39	2561.000	65.66667		

Table D-1. continued.

March	Valid N	Sum of Ranks	Mean Ranks	H[a]	P[b]
Boundary	35	3377.00	96.4857		
Onsite	103	10401.50	100.9854	5.184180	0.0749
Offsite	50	3987.50	79.7500		

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 first 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 ($x10^{-15}$) (1st Qtr Air LV, Rev 1 in 1st-Qtr-22-LVf-REV2)
Independent (grouping) variable: GeographicName
Kruskal-Wallis test: H (31, N= 487) =61.96099 p =.0008
Include condition: v8='gross alpha'

Depend.: Coded result ($x10^{-15}$)	Arco R:307.31	Atomic City R:308.73	ATR Complex R:182.73	Blackfoot R:263.92	Blue Dome R:292.96	CFA R:212.04	Craters of the Moon R:215.73	Dubois R:277.54	EBR 1 R:205.65	EFS R:316.02	FAA Tower R:254.81	Gate 4 R:201.69	Highway 26 Rest Area R:176.12	Howe R:308.00	Idaho Falls R:229.85	INTEC (NE corner) R:211.19	INTEC (westside) R:263.35	IRC R:201.31	IRC North R:219.96	Jackson WY R:326.92	Main Gate R:299.25	MFC North R:188.12	MFC South R:209.12	Montevie w R:333.04	Mud Lake R:334.23	NRF R:159.69	RHLLW R:215.00	RWMC R:212.85	RWMC South R:213.65	Sugar City R:260.81	SMC R:152.81	Van Buren R:218.06
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	1.000000
ATR Complex	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	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	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	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	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	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	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	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	0.539199	1.000000	1.000000	1.000000	0.322976	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	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	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	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	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	1.000000
INTEC (NE corner)	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
INTEC (westside)	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	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	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	0.747977	1.000000	1.000000	1.000000	1.000000
Jackson WY	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	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	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	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	0.784494	1.000000	1.000000	1.000000	0.508756	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		0.728567	1.000000	1.000000	1.000000	0.471297	1.000000	1.000000	1.000000	1.000000
Mud Lake	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	0.539199	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	0.784494	0.728567		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	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	1.000000
RWMC	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000
RWMC South	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	0.322976	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	0.747977	1.000000	1.000000	1.000000	0.508756	0.471297	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	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	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 first 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 ($x10^{-15}$) (1st Qtr Air LV, Rev 1 in 1st-Qtr-22-LVf-REV2)
Independent (grouping) variable: GeographicName
Kruskal-Wallis test: H (31, N= 487) =28.95581 p =.5715
Include condition: v8='gross beta'

Depend.: Coded result ($x10^{-15}$)	Arco R:252.04	Atomic City R:287.77	ATR Complex R:233.64	Blackfoot R:224.88	Blue Dome R:195.62	CFA R:273.96	Craters of the Moon R:166.65	Dubois R:217.58	EBR 1 R:233.65	EFS R:312.90	FAA Tower R:223.96	Gate 4 R:286.81	Highway 26 Rest Area R:230.23	Howe R:266.67	Idaho Falls R:228.79	INTEC (NE corner) R:238.31	INTEC (westside) R:246.31	IRC R:218.62	IRC North R:238.04	Jackson WY R:232.23	Main Gate R:283.88	MFC North R:214.92	MFC South R:234.65	Monteview R:317.96	Mud Lake R:287.46	NRF R:255.12	RHLLW R:245.73	RWMC R:249.19	RWMC South R:250.92	Sugar City R:216.48	SMC R:264.92	Van Buren R:249.96
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	1.000000	1.000000	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	1.000000	1.000000	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	0.096381	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	0.720602	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	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	1.000000
EFS	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	0.096381	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	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	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	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	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	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	1.000000	1.000000
INTEC (NE corner)	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
INTEC (westside)	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	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	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	1.000000	1.000000
Jackson WY	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	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	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	1.000000	1.000000
MFC South	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	0.720602	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	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	1.000000	1.000000
Mud Lake	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	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	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	1.000000	1.000000
RWMC	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000		1.000000	1.000000	1.000000	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	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	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		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	

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