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February 26, 2015

VIA OVERNIGHT DELIVERY

Mr. Rusty Lundberg
Director of the Utah Division of Radiation Control
State of Utah Department of Environmental Quality
195 North 1950 West
P.O. Box 144850
Salt Lake City, UT 84116-4850

Dear Mr. Lundberg:

Re: State of Utah Radioactive Material License No. UT1900479
White Mesa Mill, Blanding, Utah
Semi-Annual Effluent Monitoring Report for Period
July 1 through December 31, 2014

As required by Utah Administrative Code, R 313-24-4 (incorporating by reference 10 CFR 40.65 (subpart1)), and License Condition 11.3A of State of Utah Radioactive Materials License No. UT1900479, enclosed is the Semi-Annual Effluent Monitoring Report for the White Mesa Mill for the period July 1 through December 31, 2014.

If you have any questions regarding this report, please contact the undersigned at (303) 389-4134.

Yours very truly,

ENERGY FUELS RESOURCES (USA) INC.
Kathy Weinel
Quality Assurance Manager

cc: David C. Frydenlund
Harold R. Roberts
David E. Turk
Frank Filas
Jaime Massey

White Mesa Uranium Mill
Radioactive Materials License UT900479
Semi-Annual Effluent Monitoring Report
(July through December 2014)

Prepared For:
Utah Department of Environmental Quality
Division of Radiation Control

Prepared by:

Energy Fuels Resources (USA) Inc.
225 Union Boulevard, Suite 600
Lakewood, CO 80228

February 26, 2015

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WHITE MESA URANIUM MILL
SEMI-ANNUAL EFFLUENT REPORT, JULY THROUGH DECEMBER 2014

1.0 INTRODUCTION

The White Mesa Mill (the "Mill") has established monitoring programs to evaluate compliance with effluent limitations and to assess the potential for release of radioactive material into the local environment. These monitoring programs were developed and implemented at the time of Mill construction, operated with appropriate adaptation over time, and are consistent with the Mill's State of Utah Radioactive Materials License No. UT1900479 (the "License") and guidelines developed by the United States Nuclear Regulatory Commission ("NRC") (NRC Regulatory Guide 4.14, *Radiological Effluent and Environmental Monitoring at Uranium Mills-Rev. 1, ML003739941)*, 1980).

1.1 Modifications to the Monitoring Programs in 2014

As stated above, the monitoring programs implemented to date are consistent with the Mill's License and guidelines developed by the NRC and described in Regulatory Guide 4.14. The Mill's License was amended by the Division of Radiation Control ("DRC") on July 10, 2014. License Amendment 7 ("Amendment 7") dated July 10, 2014, among other things, modified and expanded the effluent monitoring programs implemented at the Mill. Amendment 7 required additional monitoring beyond what is regularly required by NRC Regulatory Guide 4.14. DRC requested the additional monitoring be documented in a revision to the Mill's Environmental Protection Manual ("EPM"). As required, EFRI submitted a revised EPM for DRC approval on September 8, 2014. A subsequent DRC Request for Information ("RFI") dated October 14, 2014 and e-mail correspondence dated October 20, 2014 added additional monitoring requirements beyond those specified in Amendment 7. EFRI incorporated the modifications resulting from the RFI and e-mail correspondence into an EPM revision submitted to DRC on November 18, 2014. The November 18, 2014 EPM was approved by DRC in a letter dated December 10, 2014. Specific changes to the individual monitoring programs resulting from Amendment 7, the RFI and the e-mail correspondence are discussed in the subsequent sections of this report.

In a letter dated July 23, 2014, DRC stated that because "Tailings Cell 2 is no longer in operation (receiving tailings), the Division of Air Quality and the Division of Radiation Control agree that Subpart W NESHAPs requirements (40 CFR Part 61) no longer apply; however, at this phase of cell 2 closure activities, the requirements of 10 CFR Part 40, Appendix A, Criterion 6 do apply." The July 23, 2014 letter further requires that radon flux measurements for Cell 2 be collected semi-annually in accordance with methodology specified in 40 CFR Part 61, Appendix B, Method 115 and that the measured results be included in the Semi-Annual Effluent Reports submitted to DRC. As a result of the July 23, 2014 letter, Cell 2 radon flux monitoring data are reported herein. Additional details

regarding the monitoring and data collection activities for the Cell 2 radon flux are included in Section 9.0.

As specified by the License and the documents described above, the Mill monitors the following environmental media and conditions:

a) Airborne particulate radionuclide concentrations obtained from the following sampling stations:

- North, east and south of the Mill Site: BHV-1, BHV-2, and BHV-8 (north), BHV-5 and BHV-7 (east), and BHV-4 (south). BHV-1 and BHV-8 serve as surrogates for the nearest resident (BHV-1 and BHV-8 are approximately 1.2 miles north of the Mill, but approximately 0.4 miles closer to the Mill than the nearest resident);
- A background location distant to and west of the Mill (BHV-3) that was monitored for airborne particulates up until November, 1995 (at which time background was established), which is no longer monitored for air particulates; and
- A station specifically requested by the White Mesa Ute Community south of the Mill Site (BVH-6);

b) External (direct) gamma radiation measured at air monitoring stations BHV-1, BHV-2, BHV-3, BHV-4, BHV-5, BHV-6, BHV-7, and BHV-8;

c) Vegetation at three site periphery locations, for uptake of radionuclides;

d) Stack release rates from the Mill's air emissions sources;

e) Surface water at Cottonwood Creek and, when flowing, Westwater Creek, both located west of the Mill;

f) Soil radionuclide activity during the third quarter of each year;

g) Radon-222 at the air particulate monitoring stations (BHV-1 through BHV-8);

h) Radon flux of the Cell 2 cover as specified by the DRC in correspondence dated July 23, 2014;

i) Groundwater (up and down gradient) of the Mill facility; and[1]

j) Seeps and springs in the vicinity of the Mill.[1]

[1] Groundwater sampling and seeps and springs sampling are reported separately pursuant to the Mill's State of Utah Ground Water Discharge Permit No. UGW370004, and are not included with this report.

This semi-annual effluent report provides the results of the specific monitoring and sampling activities that were undertaken during the subject reporting period.

2.0 ENVIRONMENTAL AIR PARTICULATE SAMPLING

2.1 Program Overview

Prior to Amendment 7, the environmental airborne particulate monitoring program at the Mill utilized four air sampling stations. Four high-volume continuous air sampling stations (BHV-1, BHV-2, BHV-4, and BHV-5) were required by the License. In addition to these four environmental air sampling locations, an additional station (BHV-6) was installed at the request of the White Mesa Ute Community. This station began operation in July of 1999 and provides airborne particulate information in the southerly direction between the Mill and the White Mesa Ute Community.

As stated in Section 1.1 above, Amendment 7 expanded the air particulate monitoring program. Amendment 7 included the following expansion of the air particulate monitoring program:

- Addition of two air monitoring stations (BHV-7 and BHV-8);
- Addition of thorium-232 ("Th-232") to the list of air particulate analytes;

These sampling stations serve as sentinels for airborne particulate which could potentially emanate from the Mill site. In addition to its general site monitoring function, BHV-1 and BHV-8 also serve as conservative surrogates for concentrations at the nearest resident, because they are located approximately 1.2 miles north of the Mill just south of the nearest resident but between the Mill and that resident.

With regard to background monitoring, the Mill previously operated a continuous high-volume air sampling station (BHV-3) which was located approximately 3.5 miles west of the Mill site. With the approval of NRC, this station (BHV-3) was removed from the active air monitoring program in November 1995. At that time, NRC determined that a sufficient air monitoring database had been compiled at BHV-3 to establish a representative airborne radionuclide background for the Mill. While air sampling was discontinued at this location, gamma measurements and soil sampling continue at BHV-3.

2.2 Sampling Protocol and Analytical Results

Airborne particulate monitors are operated continuously at each of the high-volume air sampling stations except BHV-3, BHV-7 and BHV-8. As noted above, BHV-3 was removed from the active air monitoring program in November 1995. BHV-7 and BHV-8 are discussed in detail below.

Pursuant to Amendment 7, the associated RFI and e-mail correspondence, EFRI submitted a revised EPM which was approved by DRC letter dated December 10, 2014. Amendment 7 required the implementation of the revised monitoring programs within 90 days of approval of the EPM or March 10, 2015. As a good faith effort, EFRI began procurement of the equipment for the BHV-7 and BHV-8 monitoring stations and began analyzing Th-232 at the existing five stations immediately upon receipt of Amendment 7. Data for Th-232 are presented for the reporting period for the existing five sampling locations (BHV-1, BHV-2, BHV-4, BHV-5 and BHV-6). Installation of the platforms and equipment at BHV-7 and BHV-8 was completed in the fourth quarter prior to the approval for the EPM. Prior to the EPM approval, EFRI tested solar cells as a means of powering BHV-7 and BHV-8. The solar cells were unsuccessful and line power was installed. Due to solar cell power issues, the fourth quarter air particulate data from BHV-7 and BHV-8 is incomplete. The limited amount of usable data for BHV-7 and BHV-8 are included in Attachment B as appropriate. It is important to note that the data collection from BHV-7 and BHV-8 is not required until March 10, 2015.

Particulate sample collection filters are gathered by site technicians weekly in accordance with the Mill's environmental air sampling procedures and are composited on a quarterly basis for laboratory analyses. The collected filters are analyzed for Unat activity, Th-230 activity, Ra-226 activity, Th-232 and Pb-210 activity. Fugitive dust standards for the facility are limited by the Mill's State of Utah Air Approval Order. The specific locations of the Mill's airborne particulate monitoring stations are depicted on the figure entitled Particulate Monitoring Stations included as Attachment A. Station BHV-3, which is no longer sampled for air particulates, is located approximately 3.5 miles west of the Mill facility and is not shown on the Figure.

The analytical results of radionuclide particulate sampling for each monitoring station operated during this reporting period are provided in Attachment B under separate sampling station attachment tabs (Tabs 1-8). Each tab contains graphical illustrations of the radionuclide concentrations in log-scale presentation format. The graphs display reported data over time since the 1981 inception of the Mill's environmental air particulate monitoring program or the installation of the locations, whichever is appropriate. The actual analytical results (and associated QA/QC information) reported by the laboratory for the reporting period are provided under Attachment C. In addition to the analyses for radionuclides, particulate loading is determined for each filter and composited as a quarterly mass-loading estimate for review purposes only. Graphs showing particulate loading at each station and the underlying data are included as Attachment D. As noted above, data for BHV-7 and BHV-8 are included when available. Graphical presentation of radionuclide and particulate data for BHV-7 and BHV-8 is or will be included when two or more data points are available.

The sampling periods beginning December 15, 2014 has been omitted from particulate loading on the graph for BHV-1 in Attachment D. The timer on the airborne particulate monitoring station at BHV-1 malfunctioned, and the data are considered invalid due to

the inability to measure the time sampled. The timer was replaced prior to the next sampling period and all other measurements are valid.

For graphical illustration purposes, values reported at zero, values reported at less than the prescribed detection limit (< 1 x 10^{-16} uCi/ml), and missing values were plotted as 1 x 10^{-16} uCi/ml concentrations. Where other "less than" values were indicated (i.e., where detection limits for the data varied from 1 x 10^{-16} uCi/ml), the detection limit concentration was utilized for plotting the data point. This graphing convention is not utilized to formulate station average information, nor is it intended as a precedent for data treatment. Rather, the intent is to provide a conservative viewable depiction of site airborne radionuclide information. This is considered to be a conservative approach, because the actual concentration below the detection limit cannot be determined and, as a result, the plotted point will be at the same or a higher concentration than the actual activity concentration of the collected sample.

2.3 General Observations

The results of environmental air monitoring for this semi-annual period indicate that for all radionuclides at all monitoring stations, airborne radionuclide particulate activity concentrations were well below regulatory Effluent Concentration Limits ("ECL's") and the Mill's ALARA goals, which are set at 25% of the ECLs.

It is noteworthy and expected that Pb-210 concentrations are elevated when compared to the other parent radionuclide concentrations (i.e. U-nat, Th-230 and Ra-226). This phenomenon is due to the well-established controlling effect experienced worldwide as a result of the ubiquitous presence of radon in the earth's atmosphere. Accordingly, the elevated Pb-210 presence in disequilibrium with parent radionuclides measured here is not associated with uranium milling operations. Rn-222 emanates as a decay-chain progeny of the Ra-226 contained in the soil of the earth's crust and is dispersed generally throughout the earth's atmosphere. The electrically charged short and long-lived decay products of Rn-222 attach to ambient dust particles found naturally in the atmosphere and are carried with the air. Pb-210 is the longest lived of these decay products and is the decay product of the shorter-lived radon progeny. As such, it accumulates as an electrical attachment on the natural ambient dust in the atmosphere and is generally measured at elevated activity when compared to local decay-chain parent radionuclide activity, regardless of uranium milling activity. At the Mill's BHV air monitoring stations, all dust (ambient natural and mill derived) is collected by the sample filter. Because of the natural elevation of Pb-210 accumulated as an attachment to the naturally occurring ambient dust particles collected by the air sampling equipment, Pb-210 is commonly elevated and in disequilibrium when compared to parent radionuclide activity, regardless of the Mill's presence. By way of illustration, average ground-level concentrations have been reported for selected States (NCRP Report 94, 1992) and are summarized in Table 1 in the Tables Tab of this report, demonstrating that elevated Pb-210 activity is present where no uranium milling operations are located nearby. In April 1977, prior to Mill

construction and Mill operations, air particulate Pb-210 was measured at the Mill site to be 1.3E-14 uCi/ml (13.0E-3 pCi/m^3)[2].

2.4 Site Specific Sampling Data

The results of airborne particulate monitoring for the period (without background subtraction) are provided by sampling station and radionuclide in Tables 2 through 6 in the Tables Tab of this report. Along with these data, the tables present comparative ECL's and the ECL percentage measured at each of the monitoring stations sampled during the period. A review of these data support the conclusion that airborne particulates are well controlled at the Mill. In all cases, the measured activity concentrations were well within the ECL, as well as the Mill's ALARA goal (i.e. 25% of the ECL). Lower Limits of Detection consistent with NRC Regulatory Guide 4.14 were maintained by the Mill's contract analytical laboratory for this reporting period.

The data obtained since program inception in 1981 indicates that only one individual quarterly measurement (Th-230 at BHV-5 for the 2nd Quarter of 1996) has ever exceeded the ECL at the Mill. While it is important to consider and evaluate an individual measurement exceeding the ECL, it is the average annual concentration that is of primary significance for public dose estimation purposes. In that instance, the average annual concentration of Th-230 for BHV-5 in 1996 was well below the ECL. Data obtained since program inception in 1981 also indicate that, with very few exceptions, the gross (background inclusive) measurements do not exceed the site's ALARA goal (i.e. only nine of the several thousand total gross radionuclide determinations to date exceeded the Mill's self-imposed 25% ALARA goal).

2.5 Radon-222

With the approval of the NRC, Radon-222 monitoring at BHV stations at the Mill was discontinued in 1995 due to the unavailability of monitoring equipment to detect the revised 10 CFR Part 20 standard. Instead, compliance with these limits and the requirements of R313-15-301 was demonstrated by a calculation, authorized by the NRC and as contemplated by R313-15-302(2)(a) which states "A licensee or registrant shall show compliance with the annual dose limit in Section R313-15-301 by: (a) Demonstrating by measurement or calculation that the total effective dose equivalent to the individual likely to receive the highest dose from the licensed or registered operation does not exceed the annual dose limit;". This calculation is performed by use of the MILDOS code for estimating environmental radiation doses for uranium recovery operations. R313-15-302(2)(a) contemplates demonstrating compliance either through modeling or measurement.

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[2] See the *Environmental Report, White Mesa Uranium Project, San Juan County, Utah for Energy Fuels Nuclear, Inc.* prepared by Dames & Moore, January 30, 1978, Section 2.9.1.1

In order to determine whether or not detection equipment has improved since 1995, EFRI voluntarily began ambient Radon-222 monitoring at the BHV stations in 2013. The Radon-222 data collected from 2013 through present are presented in Attachment J. Fourth quarter 2014 data for BHV-7 and BHV-8 are included but graphical presentation of Radon-222 data for BHV-7 and BHV-8 will be included when two or more data points are available.

As stated in Section 1.1 above, Amendment 7 expanded the Mill's effluent monitoring programs in 2014. Amendment 7 included expanding the monitoring programs to require the collection of Radon-222 data at all of the BHV stations. For BHV stations 1 through 6, EFRI previously calculated Effluent Concentration Limits ("ECLs") using methodology specified in the Semi-annual Effluent Report for July 2008 through December 2008, submitted to DRC on February 27, 2009. ECLs for BHV-7 and BHV-8 have been calculated using the same methodology. The ECLs for all of the BHV stations are included on the data table included in Attachment J.

3.0 EXTERNAL RADIATION (DIRECT GAMMA)

Gamma exposure rate estimates were measured for the reporting period utilizing optically stimulated luminescence dosimeters ("OSLs"). Previously, these dosimeters were located at each of the Mill's high-volume air sampling stations (BHV-1, BHV-2, BHV-4, BHV-5 and BHV-6) and at the designated background monitoring station (BHV-3). As noted in Section 1.1 of this report, Amendment 7 expanded the effluent monitoring programs at the Mill. Amendment 7 included expansion of the gamma exposure monitoring program through the addition of gamma monitoring at the two new air monitoring stations (BHV-7 and BHV-8). Gamma was monitored at the 2 new air monitoring stations in both the third and fourth quarter of 2014. The third quarter OSLs from BHV-7 and BHV-8 were only deployed for a portion of the third quarter because they were placed upon completion of construction of the monitoring station platforms. The OSLs could not be placed prior to the siting and completion of the monitoring stations.

Measurements obtained from location BHV-3 have been designated as background due to BHV-3's remoteness from the Mill site (i.e., BHV-3 is located approximately 3.5 miles west of the Mill site). The results of the environmental OSL measurements and semi-annual cumulative above-background data are provided in Table 6 in the Tables Tab of this report. In addition, measurement data obtained at these locations are graphically presented in Attachment E to this report.

The results for this period indicate that above background measurements for stations BHV-1, BHV-2, BHV-4, BHV-5, BHV-6, BHV-7, and BHV-8 are within regulatory limits. BHV-1 and BHV-8 are at the location of the nearest potential residence. The nearest actual residence is approximately 0.4 miles north of BHV-1 and BHV-8. The annual limit for an individual member of the public is 100 mrem/yr for combined internal and external exposure.

4.0 VEGETATION SAMPLES

Vegetation samples are collected at three locations around the Mill property. The sampling locations are: 1) northeast, 2) northwest and 3) southwest of the Mill facility. The NRC Regulatory Guide 4.14 requires that three samples be collected during the grazing season, without specifying exact months or times during the season. During the 2014 grazing season, samples were collected on April 16, 2014, June 10, 2014, and November 25, 2014. The data from the April and June sampling were included in the January through June 2014 Semi-Annual Effluent Report ("SAER") which was submitted to the DRC on August 29, 2014. Data from the November sampling event are included in this report.

As noted in Section 1.1, Amendment 7 and the associated RFI expanded the vegetation sampling program through the addition of Th-232 and U-Nat. The November 2014 samples were collected prior to the approval of the EPM and U-Nat and Th-232 were not added to the suite of analyses for the November 2014 samples. Implementation of the expanded analyte list will begin with the first samples collected in 2015.

Graphical log-scale presentation of the vegetation sampling results, together with the analytical results reported by the Mill's contract laboratory (including QA/QC information) for this sampling period, are included as Attachment F of this report. The 2014 data results are within the variation of previous sampling episodes.

5.0 STACK SAMPLING

Under Section 5.0 of Tab 1.4 of the Mill's *Environmental Protection Manual,* Revision: EFR-4, 11/14 (the "*Environmental Protection Manual*") as modified in response to DRC e-mail correspondence dated October 20, 2014 , gas stack samples are collected at the Mill in accordance with the schedule shown below:

Stack Sampling Requirements

Frequency	Grizzly Baghouse Stack	North and/or South Yellowcake Dryer Stacks	Yellowcake Packaging Baghouse Stack	Vanadium Dryer Stack	Vanadium Packaging Stack
Quarterly	If operating, U-nat, Th-230, Ra-226, Pb-210, Th-232, Ra-228, and Th-228.	If operating, U-nat, Th-230, Ra-226, Pb-210, Th-232, Ra-228, and Th-228.	If operating, U-nat, Th-230, Ra-226, Pb-210, Th-232, Ra-228, and Th-228.	If operating, U-nat, Th-230, Ra-226, Pb-210, Th-232, Ra-228, and Th-228.	If operating, U-nat, Th-230, Ra-226, Pb-210, Th-232, Ra-228, and Th-228.

The analytical results of stack sampling conducted for the third quarter of 2014 were conducted prior to the DRC e-mail correspondence which expanded the stack sampling program as shown above. The third quarter sampling was threfore compliant with the previous requirement to sample U-Nat only during the first and third quarter sampling events. The third quarter data, as well as data for the first and second quarters of 2014, are provided in Table 8 in the Tables Tab of this report. No drying or packaging were conducted during the fourth quarter of 2014 and therefore, no sampling was completed. The actual analytical results reported by the laboratory for the third quarter of 2014 are provided in Attachment G to this report.

The south yellowcake dryer and yellowcake baghouse operated during the third quarter of 2014. The north yellowcake dryer has not been in operation since the third quarter of 2012, and therefore, has not been sampled since it was last in operation. None of the facilities requiring stack sampling operated during the fourth quarter 2014.

It is also important to note that stack effluent concentrations are not comparable to environmental air sampling station ECL's for regulatory compliance purposes. The ECL is a limit that applies to the receptor locations and is not applicable to effluents from mill processes on the Mill site. These stack release data are more appropriately utilized for dose modeling purposes, and dose modeling is not computed for semi-annual reporting purposes.

6.0 SURFACE WATER MONITORING

Under the License, Part 11.2 B surface water samples are required to be obtained annually from Westwater Canyon and semi-annually from Cottonwood Creek. Sediment samples from Westwater Canyon are taken in place of the Westwater Canyon surface water sample where surface water is not available for sampling. Westwater Canyon surface water was sampled in the third quarter of 2014.

The Mill's *Environmental Protection Manual* requires that samples from Cottonwood Creek be analyzed for TDS and total suspended solids ("TSS") quarterly, and the License, Part 11.2 B requires that samples from Cottonwood Creek be analyzed for dissolved and suspended radionuclides including Gross Alpha, U-nat, Ra-226, and Th-230 semi-annually. In accordance with these requirements, Cottonwood Creek was sampled for TDS and TSS during the third quarter. A fourth quarter sample was not collected from Cottonwood Creek because no water was present during the quarter. Three visits were made to Cottonwood Creek during the fourth quarter. Documentation of the visits and photographs of the conditions are included in Attachment H.

The field data sheets for the surface water sampling events, along with graphs showing current and historic results are included as Attachment H. The results of this sampling indicate that surface water concentrations remain low and within the range of typical background levels.

7.0 SOIL SAMPLING

The previous revision of the Mill's EPM required that surface soils be sampled at the Mill's air monitoring stations (BHV-1, BHV-2, BHV-3, BHV-4, BHV-5 and BHV-6) once per year during August or as soon as possible thereafter, but no later than September 30 of each year. In accordance with the Mill's EPM, surface soils were collected during the third quarter of 2014.

As previously noted in Section 1.1 of this report, Amendment 7 and the associated RFI expanded the Mill's soil sampling program. In addition to continued soil sampling at the existing air monitoring locations (BHV-1 through BHV-6), soil samples will be collected at the two new air monitoring stations (BHV-7 and BHV-8) and at additional locations along the boundary of the Mill. Further, the RFI expended the analytical suite for the soil samples to include Th-232 and Pb-210. Pursuant to the approved EPM, 44 locations will be sampled on the boundary of the Mill. The 2014 soil samples were collected in August 2014 as required by the EPM that was approved at the time. As previously stated, the revised EPM resulting from Amendment 7 was approved on December 10, 2014, well after the annual soil sampling window specified in the approved EPM. Soil samples are collected annually. The expanded soil sampling at BHV-7 and BHV-8 and the 44 boundary locations with the expanded analyte list will be implemented beginning with the annual sampling event of 2015.

In accordance with the Mill's *Environmental Protection Manual*, surface soils were collected in August 2014. The soil samples were analyzed, on a dry basis, for Ra-226 and U-nat. The results of these samplings indicate that soil activity levels at the air monitoring stations remain low and within the range of typical background levels. A graphical presentation of the historical results for soils at the air monitoring stations, together with analytical sample results for the August 2014 sampling are provided in Attachment I.

8.0 METEOROLOGICAL MONITORING

As in prior reporting periods, an independent contractor has prepared the White Mesa Mill Semi-annual Meteorological Monitoring Report for the period of July through December 2014. This information is retained at the Mill site for agency review.

9.0 CELL 2 RADON FLUX

The radon flux from Cell 2 during 2012 was higher than the 20 pCi/(m^2-sec) set out in 40 CFR 61.252(a). Although Cell 2 is no longer in operation, consistent with 40 CFR 61.254b, EFRI chose to perform monthly radon flux monitoring beginning the month immediately following submittal of the report for the year in non-compliance. The result of the 2013 radon-222 flux monitoring for Cell 2 was 20.4 pCi/(m^2-sec) (averaged over 9 monthly sampling events), which slightly exceeds the 20 pCi/(m^2-sec). Monthly sampling for Cell 2 was conducted from April of 2013 through June of 2014. A summary

of the events that gave rise to EFRI's decision to monitor radon flux at Cell 2 monthly consistent with 40 CFR 61.254(b) is set out in Section 4.0 of the June 2014 Monthly Report submitted to DRC July 29, 2014.

EFRI submitted monthly reports from May 2013 through July 2014 summarizing the April 2013 through June 2014 monthly sampling at Cell 2. A summary of the monthly Cell 2 radon flux measurements, as well as the date the EFRI monthly reports were submitted to the Utah Division of Air Quality ("UDAQ"), is included in Attachment K of this report.

EFRI began interim mitigation of radon flux from Cell 2 in 2013, as a result of the 2012 monitoring results, by applying one foot of additional soil cover to areas of Cell 2 with elevated radon. Details of the interim radon mitigation cover construction activities and interim corrective actions are described in the monthly reports. EFRI completed the first phase of the interim cover installation on 12 test areas in September of 2013. The effectiveness of the additional compacted cover at the 12 test areas was evaluated over several months. The additional cover on the 12 test areas was successful in achieving the desired reduction to 20 pCi/(m^2-sec) or lower. As a result, EFRI applied additional random fill at 90% compaction to other areas of Cell 2 to further reduce the radon flux measurements.

Based on the monthly results, EFRI submitted a Request to Cease Monthly Sampling on May 30, 2014 with the April 2014 Monthly Report. On July 23, 2014 EFRI received approval from DRC to cease monthly sampling. The July 23, 2014 letter required that Cell 2 radon flux measurements continue as detailed below.

The July 23, 2014 letter, DRC stated that because "Tailings Cell 2 is no longer in operation (receiving tailings), the Division of Air Quality and the Division of Radiation Control agree that Subpart W NESHAPs requirements (40 CFR Part 61) no longer apply; however, at this phase of cell 2 closure activities, the requirements of 10 CFR Part 40, Appendix A, Criterion 6 do apply."

Further, the DRC July 23, 2014 letter states that "since the MILDOS-Area Models that have been run to show compliance with dose limits for releases from the Mill were based on a limit of 20 picocuries per square meter second (pCi/m^2-sec), in order to ensure compliance with previously analyzed conditions, the DRC will require the licensee to continue to measure the radon flux in accordance with 40 CFR 61, Appendix B, Method 115, "Monitoring for Radon-222 Emissions" (2013). The measured radon flux for Cell 2 shall not exceed a value of 20 (pCi/m^2-sec) until a new MILDOS-Area Model to analyze a higher radon flux is completed and demonstrates compliance with dose limits based on the releases from the Mill. As required by Method 115, a minimum of 100 measurements are required and shall be performed on a semi-annual basis."

EFRI sampled Cell 2 radon flux in July 2014. The measurement was slightly above the 20 pCi/(m^2-sec) standard at 20.4 pCi/(m^2-sec). EFRI immediately began radon

mitigation cover construction activities and contacted DRC. DRC directed EFRI to complete radon mitigation cover construction activities and sample by the end of the calendar year. EFRI completed the
radon mitigation cover construction activities and sampled in September 2014. The September 2014 result was below the standard at 15.8 pCi/(m^2-sec). DRC directed EFRI to average the July and September measurements. The average of the July and September measurements is 18.1 which is below the 20 pCi/(m^2-sec) standard.

The 2012 through 2014 Cell 2 radon flux data are summarized in Attachment K. At the request of DRC, the 2014 data will be reported to UDAQ in a final report submitted on or before March 30, 2015.

10.0 SIGNATURE

This report was prepared by Energy Fuels Resources (USA) Inc. on February 26, 2015.

Energy Fuels Resources (USA) Inc.

By:

Scott A. Bakken
Director, Permitting & Environmental Affairs

TABLES

Table 1- NCRP Report 94-Global Pb-210 Concentration Example

State	Pb-210 Concentration	
	uBq/M^3	uCi/ml
California	600	1.60E-14
Illinois	1500	4.10E-14
Ohio	300	8.10E-15
Massachusetts	700	1.90E-14

Table 2 - Air Monitoring Station Results U-Nat (Comparison to Limits) 3rd and 4th Quarter 2014

Monitoring Station	3rd Qtr.Result (uCi/ml)	4th Qtr.Result (uCi/ml)	Effluent Concentration Limit (ECL) (uCI/ml)	Average Percent ECL
BHV1	1.60E-15	2.00E-16	9.00E-14	1.00E+00
BHV2	5.00E-16	1.00E-16	9.00E-14	3.33E-01
BHV4	6.60E-15	2.00E-16	9.00E-14	3.78E+00
BHV5	1.32E-14	8.00E-16	9.00E-14	7.78E+00
BHV6	1.20E-14	5.00E-16	9.00E-14	6.94E+00
BHV7	NS	NS	9.00E-14	Not Calculated
BHV8	NS	4.00E-16	9.00E-14	4.44E-01

Table 3 - Air Monitoring Station Results Th-230 (Comparison to Limits) 3rd and 4th Quarter 2014

Monitoring Station	3rd Qtr.Result (uCi/ml)	4th Qtr.Result (uCi/ml)	Effluent Concentration Limit (ECL) (uCI/ml)	Average Percent ECL
BHV1	2.00E-16	5.00E-17	2.00E-14	6.25E-01
BHV2	6.00E-17	4.00E-17	2.00E-14	2.50E-01
BHV4	3.00E-16	4.00E-17	2.00E-14	8.50E-01
BHV5	8.00E-16	2.00E-16	2.00E-14	2.50E+00
BHV6	6.00E-16	1.00E-16	2.00E-14	1.75E+00
BHV7	NS	NS	2.00E-14	Not Calculated
BHV8	NS	2.00E-16	2.00E-14	1.00E+00

Table 4 - Air Monitoring Station Results Ra-226 (Comparison to Limits) 3rd and 4th Quarter 2014

Monitoring Station	3rd Qtr.Result (uCi/ml)	4th Qtr.Result (uCi/ml)	Effluent Concentration Limit (ECL) (uCI/ml)	Average Percent ECL
BHV1	2.00E-16	7.00E-17	9.00E-13	1.50E-02
BHV2	4.00E-17	3.00E-17	9.00E-13	3.89E-03
BHV4	3.00E-16	4.00E-17	9.00E-13	1.89E-02
BHV5	1.00E-15	3.00E-16	9.00E-13	7.22E-02
BHV6	6.00E-16	1.00E-16	9.00E-13	3.89E-02
BHV7	NS	NS	9.00E-13	Not Calculated
BHV8	NS	7.00E-17	9.00E-13	7.78E-03

Table 5 - Air Monitoring Station Results Pb-210 (Comparison to Limits) 3rd and 4th Quarter 2014

Monitoring Station	3rd Qtr.Result (uCi/ml)	4th Qtr.Result (uCi/ml)	Effluent Concentration Limit (ECL) (uCI/ml)	Average Percent ECL
BHV1	1.40E-14	2.30E-14	6.00E-13	3.08E+00
BHV2	1.10E-14	2.20E-14	6.00E-13	2.75E+00
BHV4	1.10E-14	1.90E-14	6.00E-13	2.50E+00
BHV5	1.20E-14	2.10E-14	6.00E-13	2.75E+00
BHV6	1.40E-14	2.30E-14	6.00E-13	3.08E+00
BHV7	NS	NS	6.00E-13	Not Calculated
BHV8	NS	9.90E-15	6.00E-13	1.65E+00

Table 6 - Air Monitoring Station Results Th-232 (Comparison to Limits) 3rd and 4th Quarter 2014

Monitoring Station	3rd Qtr.Result (uCi/ml)	4th Qtr.Result (uCi/ml)	Effluent Concentration Limit (ECL) (uCI/ml)	Average Percent ECL
BHV1	7.00E-19	7.00E-18	4.00E-15	9.63E-02
BHV2	9.00E-18	4.00E-18	4.00E-15	1.63E-01
BHV4	1.00E-17	1.00E-17	4.00E-15	2.50E-01
BHV5	5.00E-17	8.00E-18	4.00E-15	7.25E-01
BHV6	0.00E+00	8.00E-18	4.00E-15	1.00E-01
BHV7	NS	NS	4.00E-15	Not Calculated
BHV8	NS	9.00E-18	4.00E-15	2.25E-01

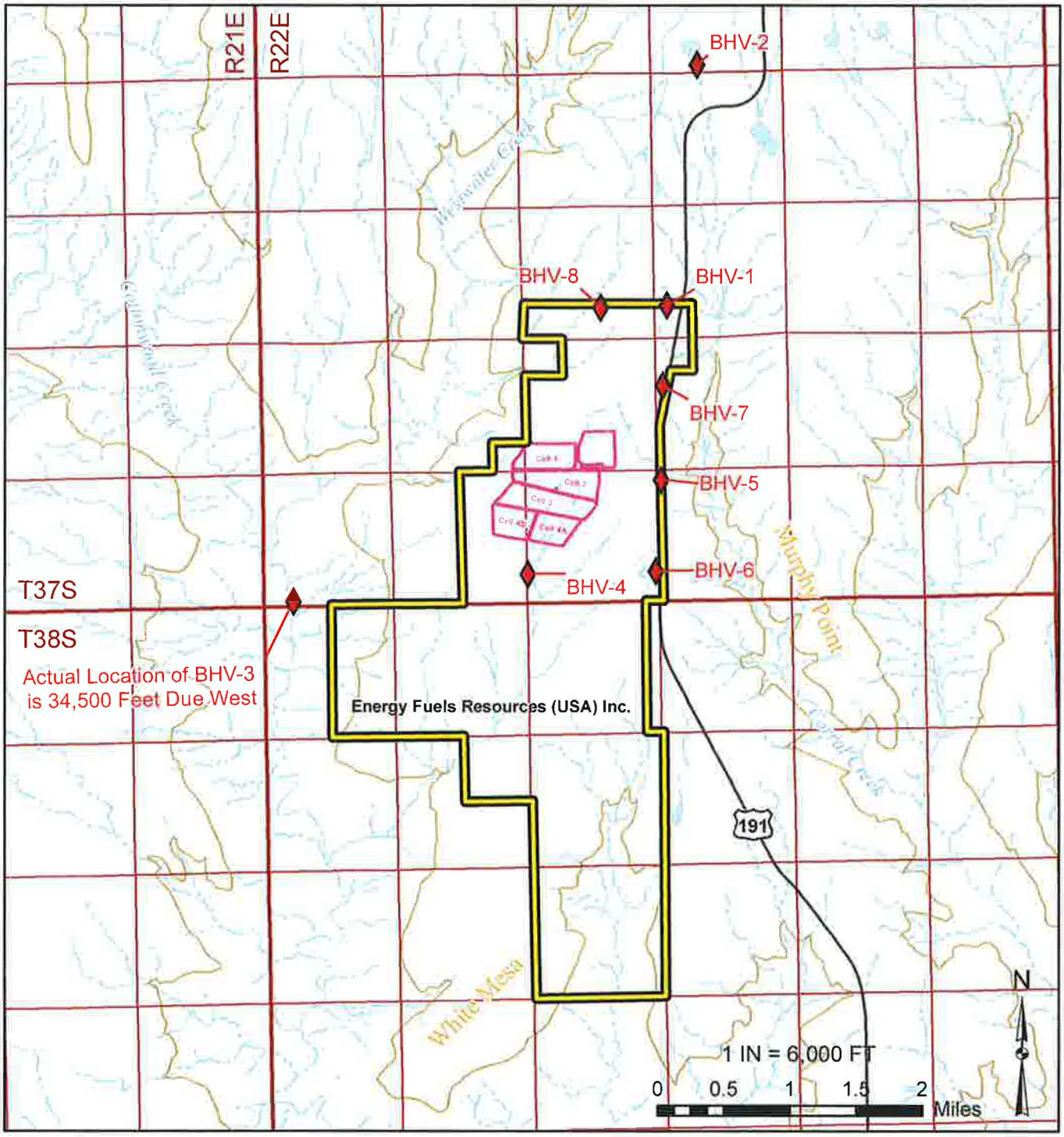
Table 7 - Environmental Optically Stimulated Luminescence Dosimeter Measurements (Gamma)

Monitoring Station	3rd Quarter Result (mrem)	4th Quarter Result (mrem)	3rd Quarter Result Less Background (mrem)	4th Quarter Result Less Background (mrem)	Cumulative Semiannual Estimate (mrem)
BHV1	33	42.4	3.5	6.1	9.6
BHV2	29.3	40.3	0	4	4
BHV3	29.5	36.3	0	0	0
BHV4	28.2	37.9	0	1.6	1.6
BHV5	34.9	43.5	5.4	7.2	12.6
BHV6	28.6	37.1	0	0.8	0.8
BHV7	7.9	37.1	0	0.8	0.8
BHV8	10.8	37.3	0	1	1

Table 8 Stack Effluent Concentrations and Release Rates								
1ST Qtr, 2014								
	U-Nat uCi/cc	U-Nat. uCi/sec	Th-230 uCi/cc	Th-230 uCi/sec	Ra-226 uCi/cc	Ra-226 uCi/sec	Pb-210 uCi/cc	Pb-210 uCi/sec
South YC Dryer, Run 1	2.53E-10	1.65E-04	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
South YC Dryer, Run 2	2.45E-10	1.67E-04	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
Yellowcake Baghouse	9.87E-10	1.83E-03	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
2nd Qtr, 2014								
South YC Dryer, Run 1	1.79E-09	1.04E-03	2.22E-14	1.29E-08	3.40E-14	1.97E-08	No data reported. Samples were lost by the laboratory.	
South YC Dryer, Run 2	2.19E-12	1.25E-06	3.25E-14	1.86E-08	3.44E-14	1.97E-08		
Yellowcake Baghouse	8.48E-10	1.25E-03	2.82E-13	4.17E-07	2.11E-13	3.11E-07		
Grizzly Baghouse	9.10E-12	6.40E-06	2.04E-12	1.43E-06	Not Required	Not Required	Not Required	Not Required
3rd Qtr, 2014								
South YC Dryer, Run 1	1.12E-09	6.34E-04	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
South YC Dryer, Run 2	9.09E-10	5.37E-04	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
Yellowcake Baghouse Run 1	6.34E-10	9.82E-04	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
Yellowcake Baghouse Run 2	3.70E-10	5.99E-04	Not Required	Not Required	Not Required	Not Required	Not Required	Not Required
4th Qtr, 2014								
No stack sampling was conducted as the dryers did not run. No grinding or packaging was completed during the 4th quarter.								

ATTACHMENT A

HIGH VOLUME AIR MONITORING STATIONS



Legend

- Air Monitoring Station
- Property Boundary
- Tailings Cell
- Road
- Canyon Rim
- Township and Range
- Section
- Pond
- Drainage

Coordinate System: NAD 1983 StatePlane Utah South FIPS 4303 Feet

ENERGY FUELS

REVISIONS		Project: WHITE MESA MILL	
Date:	By:	County: San Juan	State: Utah
		Location: -	

ATTACHMENT A

PARTICULATE MONITORING STATIONS

Author: areither	Date: 2/13/2015	Drafted By: areither

S:\Source\UTW\WhiteMesaMill\Maps\Mill_PartMonitoring.mxd / 2/13/2015 2:35:08 PM by areither

ATTACHMENT B

BHV AIR SAMPLING GRAPHS AND DATA TABLES

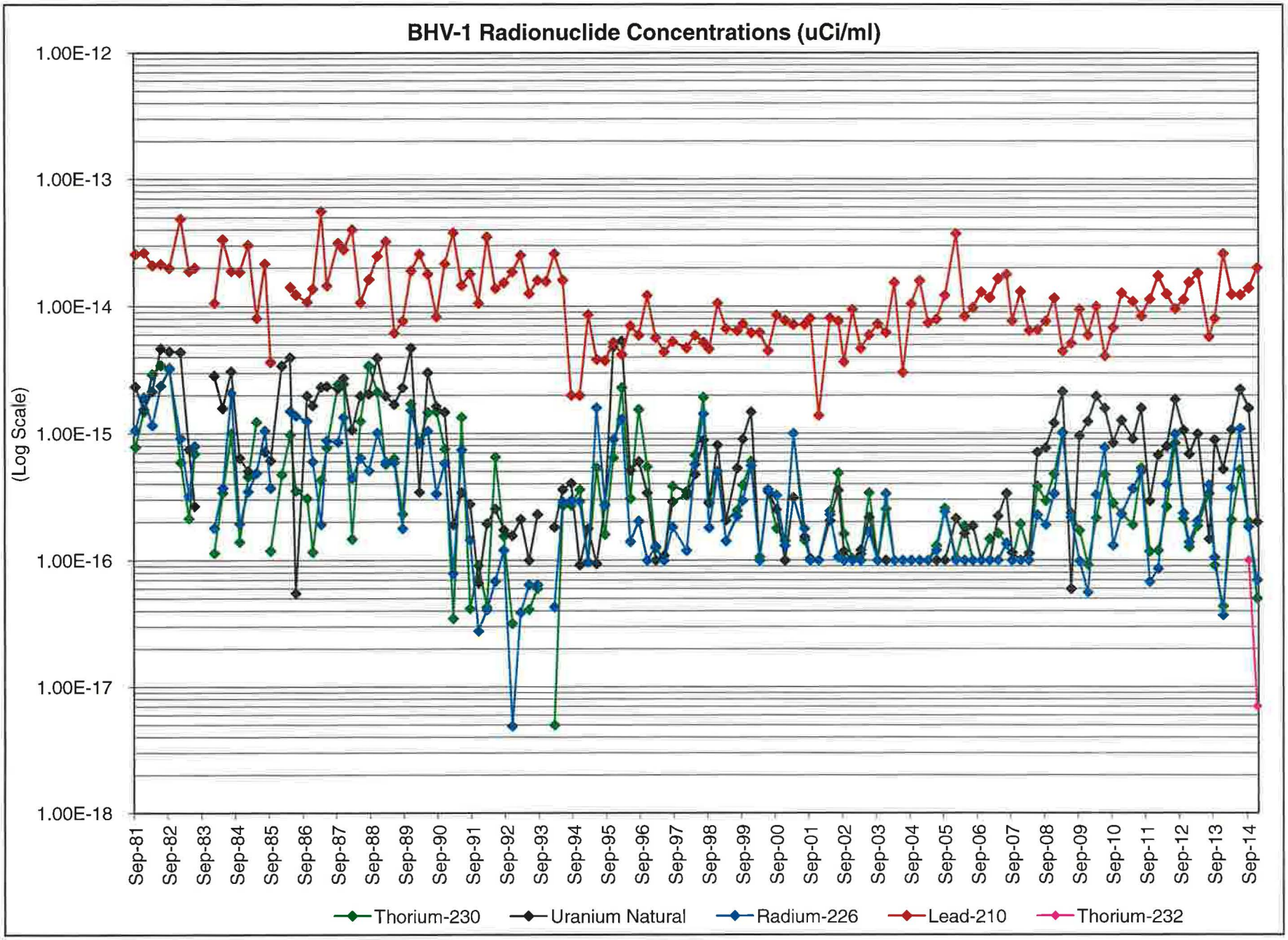
TAB 1

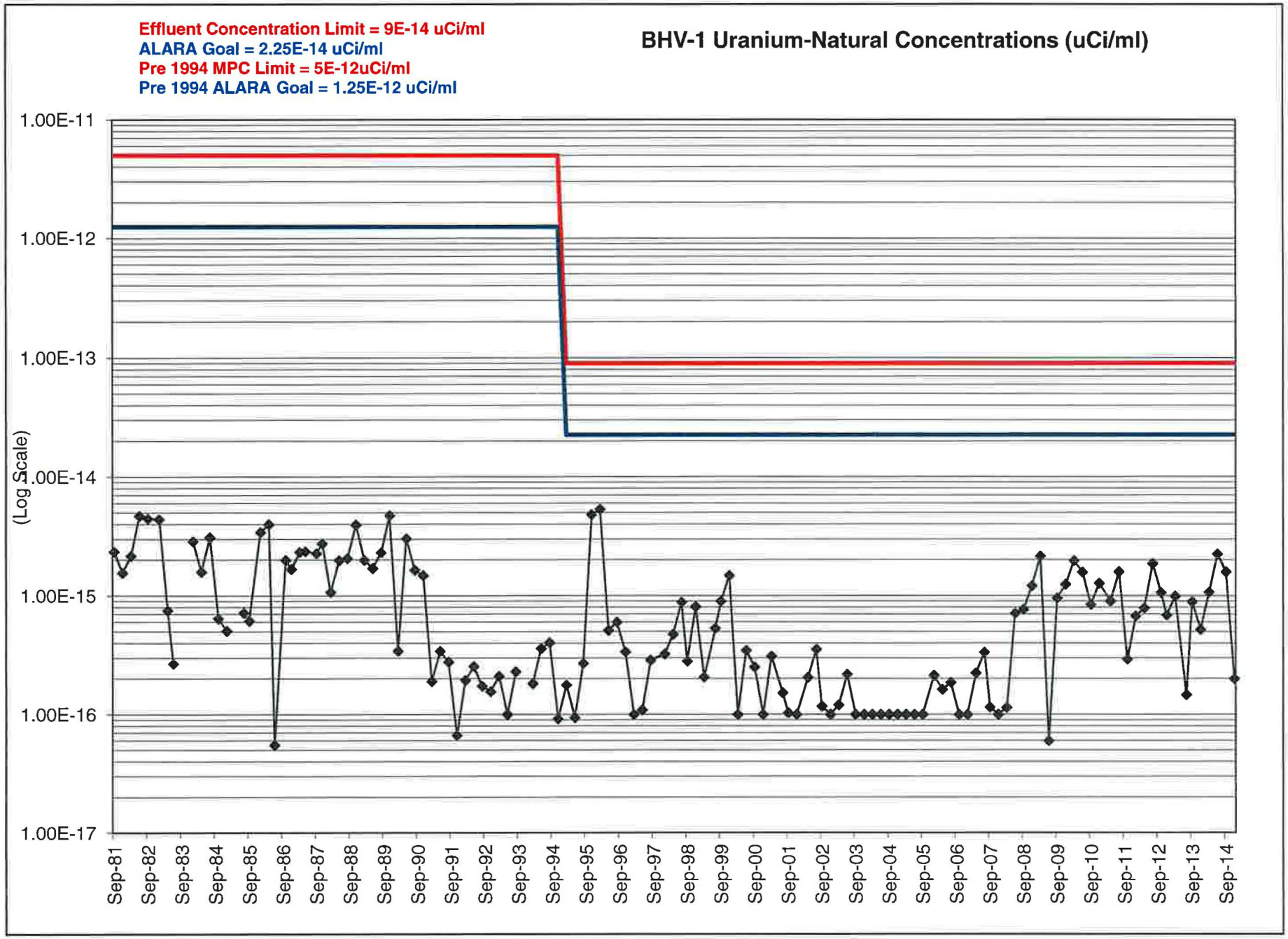
BHV-1 AIR SAMPLING GRAPHS AND DATA TABLE

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-1U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-1T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-1R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-1PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-1T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
9/28/1981	2.35E-15	5.00E-12	1.25E-12	7.82E-16	8.00E-14	2.00E-14	1.06E-15	2.00E-12	5.00E-13	2.57E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
12/14/1981	1.56E-15	5.00E-12	1.25E-12	1.49E-15	8.00E-14	2.00E-14	1.93E-15	2.00E-12	5.00E-13	2.64E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
3/29/1982	2.16E-15	5.00E-12	1.25E-12	2.93E-15	8.00E-14	2.00E-14	1.16E-15	2.00E-12	5.00E-13	2.09E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1982	4.69E-15	5.00E-12	1.25E-12	3.46E-15	8.00E-14	2.00E-14	2.38E-15	2.00E-12	5.00E-13	2.14E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/27/1982	4.45E-15	5.00E-12	1.25E-12	3.29E-15	8.00E-14	2.00E-14	3.23E-15	2.00E-12	5.00E-13	1.99E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/3/1983	4.39E-15	5.00E-12	1.25E-12	5.91E-16	8.00E-14	2.00E-14	9.14E-16	2.00E-12	5.00E-13	4.87E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/4/1983	7.51E-16	5.00E-12	1.25E-12	2.13E-16	8.00E-14	2.00E-14	3.20E-16	2.00E-12	5.00E-13	1.88E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1983	2.68E-16	5.00E-12	1.25E-12	6.92E-16	8.00E-14	2.00E-14	7.92E-16	2.00E-12	5.00E-13	2.00E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/3/1983		5.00E-12	1.25E-12		8.00E-14	2.00E-14	0.00E+00	2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/3/1984	2.87E-15	5.00E-12	1.25E-12	1.14E-16	8.00E-14	2.00E-14	1.79E-16	2.00E-12	5.00E-13	1.06E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/2/1984	1.59E-15	5.00E-12	1.25E-12	3.40E-16	8.00E-14	2.00E-14	3.71E-16	2.00E-12	5.00E-13	3.34E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
7/2/1984	3.10E-15	5.00E-12	1.25E-12	1.00E-15	8.00E-14	2.00E-14	2.09E-15	2.00E-12	5.00E-13	1.88E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/1/1984	6.42E-16	5.00E-12	1.25E-12	1.39E-16	8.00E-14	2.00E-14	1.94E-16	2.00E-12	5.00E-13	1.85E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/2/1985	5.06E-16	5.00E-12	1.25E-12	4.56E-16	8.00E-14	2.00E-14	3.49E-16	2.00E-12	5.00E-13	3.03E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/1/1985	0.00E+00	5.00E-12	1.25E-12	1.23E-15	8.00E-14	2.00E-14	4.88E-16	2.00E-12	5.00E-13	8.06E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
7/1/1985	7.17E-16	5.00E-12	1.25E-12		8.00E-14	2.00E-14	1.05E-15	2.00E-12	5.00E-13	2.15E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/30/1985	6.13E-16	5.00E-12	1.25E-12	1.18E-16	8.00E-14	2.00E-14	3.71E-16	2.00E-12	5.00E-13	3.64E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/2/1986	3.42E-15	5.00E-12	1.25E-12	4.74E-16	8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/1/1986	3.98E-15	5.00E-12	1.25E-12	9.74E-16	8.00E-14	2.00E-14	1.50E-15	2.00E-12	5.00E-13	1.41E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1986	5.51E-17	5.00E-12	1.25E-12	3.52E-16	8.00E-14	2.00E-14	1.37E-15	2.00E-12	5.00E-13	1.23E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/27/1986	1.99E-15	5.00E-12	1.25E-12	3.06E-16	8.00E-14	2.00E-14	1.25E-15	2.00E-12	5.00E-13	1.08E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
12/15/1986	1.67E-15	5.00E-12	1.25E-12	1.16E-16	8.00E-14	2.00E-14	5.98E-16	2.00E-12	5.00E-13	1.37E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
3/16/1987	2.33E-15	5.00E-12	1.25E-12	4.30E-16	8.00E-14	2.00E-14	1.92E-16	2.00E-12	5.00E-13	5.59E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/11/1987	2.36E-15	5.00E-12	1.25E-12	7.69E-16	8.00E-14	2.00E-14	8.76E-16	2.00E-12	5.00E-13	1.45E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/9/1987	2.27E-15	5.00E-12	1.25E-12	2.44E-15	8.00E-14	2.00E-14	8.51E-16	2.00E-12	5.00E-13	3.14E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/2/1987	2.75E-15	5.00E-12	1.25E-12	2.46E-15	8.00E-14	2.00E-14	1.34E-15	2.00E-12	5.00E-13	2.79E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/16/1988	1.07E-15	5.00E-12	1.25E-12	1.47E-16	8.00E-14	2.00E-14	4.44E-16	2.00E-12	5.00E-13	4.01E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/18/1988	1.98E-15	5.00E-12	1.25E-12	1.25E-15	8.00E-14	2.00E-14	6.40E-16	2.00E-12	5.00E-13	1.07E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/15/1988	2.06E-15	5.00E-12	1.25E-12	3.41E-15	8.00E-14	2.00E-14	5.08E-16	2.00E-12	5.00E-13	1.62E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/14/1988	3.94E-15	5.00E-12	1.25E-12	2.12E-15	8.00E-14	2.00E-14	1.01E-15	2.00E-12	5.00E-13	2.47E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/13/1989	1.99E-15	5.00E-12	1.25E-12	5.73E-16	8.00E-14	2.00E-14	5.99E-16	2.00E-12	5.00E-13	3.23E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/15/1989	1.70E-15	5.00E-12	1.25E-12	6.32E-16	8.00E-14	2.00E-14	5.86E-16	2.00E-12	5.00E-13	6.16E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/14/1989	2.31E-15	5.00E-12	1.25E-12	2.31E-16	8.00E-14	2.00E-14	1.77E-16	2.00E-12	5.00E-13	7.65E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/13/1989	4.72E-15	5.00E-12	1.25E-12	1.71E-15	8.00E-14	2.00E-14	1.52E-15	2.00E-12	5.00E-13	1.89E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/12/1990	3.44E-16	5.00E-12	1.25E-12	8.39E-16	8.00E-14	2.00E-14	8.31E-16	2.00E-12	5.00E-13	2.57E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/14/1990	3.03E-15	5.00E-12	1.25E-12	1.47E-15	8.00E-14	2.00E-14	1.04E-15	2.00E-12	5.00E-13	1.79E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/13/1990	1.64E-15	5.00E-12	1.25E-12	1.49E-15	8.00E-14	2.00E-14	3.34E-16	2.00E-12	5.00E-13	8.27E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/12/1990	1.48E-15	5.00E-12	1.25E-12	7.50E-16	8.00E-14	2.00E-14	5.80E-16	2.00E-12	5.00E-13	2.16E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/11/1991	1.90E-16	5.00E-12	1.25E-12	3.48E-17	8.00E-14	2.00E-14	7.91E-17	2.00E-12	5.00E-13	3.79E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/13/1991	3.42E-16	5.00E-12	1.25E-12	1.34E-15	8.00E-14	2.00E-14	7.39E-16	2.00E-12	5.00E-13	1.46E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/12/1991	2.77E-16	5.00E-12	1.25E-12	4.17E-17	8.00E-14	2.00E-14	1.45E-16	2.00E-12	5.00E-13	1.80E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/11/1991	6.65E-17	5.00E-12	1.25E-12	9.13E-17	8.00E-14	2.00E-14	2.77E-17	2.00E-12	5.00E-13	1.06E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/10/1992	1.94E-16	5.00E-12	1.25E-12	4.28E-17	8.00E-14	2.00E-14	4.08E-17	2.00E-12	5.00E-13	3.51E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/11/1992	2.54E-16	5.00E-12	1.25E-12	6.49E-16	8.00E-14	2.00E-14	6.86E-17	2.00E-12	5.00E-13	1.38E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/10/1992	1.73E-16	5.00E-12	1.25E-12	1.55E-16	8.00E-14	2.00E-14	1.20E-16	2.00E-12	5.00E-13	1.53E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/9/1992	1.56E-16	5.00E-12	1.25E-12	3.19E-17	8.00E-14	2.00E-14	4.90E-18	2.00E-12	5.00E-13	1.86E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/9/1993	2.10E-16	5.00E-12	1.25E-12		8.00E-14	2.00E-14	3.89E-17	2.00E-12	5.00E-13	2.52E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/10/1993	1.00E-16	5.00E-12	1.25E-12	4.11E-17	8.00E-14	2.00E-14	6.43E-17	2.00E-12	5.00E-13	1.26E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/10/1993	2.30E-16	5.00E-12	1.25E-12	6.00E-17	8.00E-14	2.00E-14	6.43E-17	2.00E-12	5.00E-13	1.60E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/8/1993		5.00E-12	1.25E-12		8.00E-14	2.00E-14	0.00E+00	2.00E-12	5.00E-13	1.57E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-1U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-1T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-1R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-1PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-1T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
2/7/1994	1.82E-16	5.00E-12	1.25E-12	5.00E-18	8.00E-14	2.00E-14	4.30E-17	2.00E-12	5.00E-13	2.59E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/9/1994	3.60E-16	5.00E-12	1.25E-12	2.70E-16	8.00E-14	2.00E-14	2.87E-16	2.00E-12	5.00E-13	1.60E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/9/1994	4.04E-16	5.00E-12	1.25E-12	2.70E-16	8.00E-14	2.00E-14	2.94E-16	2.00E-12	5.00E-13	2.00E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/7/1994	9.18E-17	5.00E-12	1.25E-12	3.60E-16	8.00E-14	2.00E-14	2.91E-16	2.00E-12	5.00E-13	2.00E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/7/1995	1.77E-16	9.00E-14	2.25E-14	9.70E-17	2.00E-14	5.00E-15	9.70E-17	9.00E-13	2.25E-13	8.60E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/9/1995	9.40E-17	9.00E-14	2.25E-14	5.36E-16	2.00E-14	5.00E-15	1.60E-15	9.00E-13	2.25E-13	3.84E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/9/1995	2.70E-16	9.00E-14	2.25E-14	1.60E-16	2.00E-14	5.00E-15	2.76E-16	9.00E-13	2.25E-13	3.76E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
11/11/1995	4.80E-15	9.00E-14	2.25E-14	6.41E-16	2.00E-14	5.00E-15	8.93E-16	9.00E-13	2.25E-13	5.20E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
2/5/1996	5.34E-15	9.00E-14	2.25E-14	2.30E-15	2.00E-14	5.00E-15	1.30E-15	9.00E-13	2.25E-13	4.20E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/6/1996	5.11E-16	9.00E-14	2.25E-14	3.06E-16	2.00E-14	5.00E-15	1.40E-16	9.00E-13	2.25E-13	7.03E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/5/1996	5.99E-16	9.00E-14	2.25E-14	1.55E-15	2.00E-14	5.00E-15	2.03E-16	9.00E-13	2.25E-13	5.94E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
11/6/1996	3.38E-16	9.00E-14	2.25E-14	5.45E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.22E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
2/6/1997	1.00E-16	9.00E-14	2.25E-14	1.25E-16	2.00E-14	5.00E-15	1.28E-16	9.00E-13	2.25E-13	5.68E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/5/1997	1.09E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	4.39E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/11/1997	2.88E-16	9.00E-14	2.25E-14	3.83E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	5.29E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/5/1998	3.24E-16	9.00E-14	2.25E-14	3.47E-16	2.00E-14	5.00E-15	1.19E-16	9.00E-13	2.25E-13	4.73E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/28/1998	4.75E-16	9.00E-14	2.25E-14	6.73E-16	2.00E-14	5.00E-15	5.69E-16	9.00E-13	2.25E-13	5.94E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/31/1998	8.84E-16	9.00E-14	2.25E-14	1.93E-15	2.00E-14	5.00E-15	1.43E-15	9.00E-13	2.25E-13	5.22E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/28/1998	2.81E-16	9.00E-14	2.25E-14	2.89E-16	2.00E-14	5.00E-15	1.80E-16	9.00E-13	2.25E-13	4.64E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/28/1998	8.08E-16	9.00E-14	2.25E-14	4.93E-16	2.00E-14	5.00E-15	5.01E-16	9.00E-13	2.25E-13	1.06E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/29/1999	2.06E-16	9.00E-14	2.25E-14	2.06E-16	2.00E-14	5.00E-15	1.42E-16	9.00E-13	2.25E-13	6.69E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/3/1999	5.31E-16	9.00E-14	2.25E-14	2.47E-16	2.00E-14	5.00E-15	2.23E-16	9.00E-13	2.25E-13	6.44E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/27/1999	8.98E-16	9.00E-14	2.25E-14	3.90E-16	2.00E-14	5.00E-15	2.96E-16	9.00E-13	2.25E-13	7.29E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/28/1999	1.48E-15	9.00E-14	2.25E-14	6.00E-16	2.00E-14	5.00E-15	5.57E-16	9.00E-13	2.25E-13	6.19E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/27/2000	1.00E-16	9.00E-14	2.25E-14	1.06E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.23E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/26/2000	3.47E-16	9.00E-14	2.25E-14	3.46E-16	2.00E-14	5.00E-15	3.62E-16	9.00E-13	2.25E-13	4.50E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/26/2000	2.51E-16	9.00E-14	2.25E-14	1.78E-16	2.00E-14	5.00E-15	3.25E-16	9.00E-13	2.25E-13	8.55E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/26/2000	1.00E-16	9.00E-14	2.25E-14	1.42E-16	2.00E-14	5.00E-15	1.31E-16	9.00E-13	2.25E-13	7.77E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/26/2001	3.10E-16	9.00E-14	2.25E-14	1.00E-15	2.00E-14	5.00E-15	1.00E-15	9.00E-13	2.25E-13	7.19E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/29/2001	1.52E-16	9.00E-14	2.25E-14	1.44E-16	2.00E-14	5.00E-15	1.77E-16	9.00E-13	2.25E-13	7.21E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/24/2001	1.03E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.09E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2001	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.39E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/1/2002	2.05E-16	9.00E-14	2.25E-14	2.44E-16	2.00E-14	5.00E-15	2.29E-16	9.00E-13	2.25E-13	8.15E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/1/2002	3.55E-16	9.00E-14	2.25E-14	4.85E-16	2.00E-14	5.00E-15	1.06E-16	9.00E-13	2.25E-13	7.65E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2002	1.17E-16	9.00E-14	2.25E-14	1.61E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	3.68E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/30/2002	1.00E-16	9.00E-14	2.25E-14	1.03E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	9.46E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2003	1.20E-16	9.00E-14	2.25E-14	1.12E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	4.68E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2003	2.18E-16	9.00E-14	2.25E-14	3.40E-16	2.00E-14	5.00E-15	1.67E-16	9.00E-13	2.25E-13	5.96E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/29/2003	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.28E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/29/2003	1.00E-16	9.00E-14	2.25E-14	2.54E-16	2.00E-14	5.00E-15	3.35E-16	9.00E-13	2.25E-13	6.25E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/29/2004	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.54E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/27/2004	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	3.04E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/27/2004	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.05E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/27/2004	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.59E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/28/2005	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.42E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/29/2005	1.00E-16	9.00E-14	2.25E-14	1.30E-16	2.00E-14	5.00E-15	1.20E-16	9.00E-13	2.25E-13	7.94E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/26/2005	1.00E-16	9.00E-14	2.25E-14	2.56E-16	2.00E-14	5.00E-15	2.42E-16	9.00E-13	2.25E-13	1.22E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/3/2006	2.13E-16	9.00E-14	2.25E-14	1.04E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	3.73E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/3/2006	1.62E-16	9.00E-14	2.25E-14	1.86E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.36E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/3/2006	1.86E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	9.77E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-1U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-1T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-1R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-1PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-1T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
10/2/2006	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.30E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/1/2007	1.00E-16	9.00E-14	2.25E-14	1.47E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.17E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/2/2007	2.23E-16	9.00E-14	2.25E-14	1.63E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.65E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2007	3.35E-16	9.00E-14	2.25E-14	1.34E-16	2.00E-14	5.00E-15	1.36E-16	9.00E-13	2.25E-13	1.78E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2007	1.15E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.68E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2007	1.00E-16	9.00E-14	2.25E-14	1.93E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2008	1.14E-16	9.00E-14	2.25E-14	1.13E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.44E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2008	7.09E-16	9.00E-14	2.25E-14	3.83E-16	2.00E-14	5.00E-15	2.27E-16	9.00E-13	2.25E-13	6.52E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2008	7.69E-16	9.00E-14	2.25E-14	2.94E-16	2.00E-14	5.00E-15	1.90E-16	9.00E-13	2.25E-13	7.64E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2008	1.21E-15	9.00E-14	2.25E-14	4.76E-16	2.00E-14	5.00E-15	3.34E-16	9.00E-13	2.25E-13	1.16E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/15/2009	2.14E-15	9.00E-14	2.25E-14	1.02E-15	2.00E-14	5.00E-15	1.00E-15	9.00E-13	2.25E-13	4.44E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/15/2009	5.97E-17	9.00E-14	2.25E-14	2.35E-16	2.00E-14	5.00E-15	2.18E-16	9.00E-13	2.25E-13	5.13E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/15/2009	9.55E-16	9.00E-14	2.25E-14	1.71E-16	2.00E-14	5.00E-15	9.87E-17	9.00E-13	2.25E-13	9.47E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/15/2009	1.24E-15	9.00E-14	2.25E-14	9.25E-17	2.00E-14	5.00E-15	5.60E-17	9.00E-13	2.25E-13	5.95E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2010	1.97E-15	9.00E-14	2.25E-14	2.15E-16	2.00E-14	5.00E-15	3.27E-16	9.00E-13	2.25E-13	1.00E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2010	1.58E-15	9.00E-14	2.25E-14	4.71E-16	2.00E-14	5.00E-15	7.70E-16	9.00E-13	2.25E-13	4.07E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2010	8.42E-16	9.00E-14	2.25E-14	2.80E-16	2.00E-14	5.00E-15	1.31E-16	9.00E-13	2.25E-13	6.80E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2010	1.27E-15	9.00E-14	2.25E-14	2.32E-16	2.00E-14	5.00E-15	2.30E-16	9.00E-13	2.25E-13	1.27E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/4/2011	9.01E-16	9.00E-14	2.25E-14	1.90E-16	2.00E-14	5.00E-15	3.64E-16	9.00E-13	2.25E-13	1.09E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/4/2011	1.59E-15	9.00E-14	2.25E-14	5.31E-16	2.00E-14	5.00E-15	4.99E-16	9.00E-13	2.25E-13	8.38E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/3/2011	2.92E-16	9.00E-14	2.25E-14	1.17E-16	2.00E-14	5.00E-15	6.76E-17	9.00E-13	2.25E-13	1.14E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/3/2012	6.73E-16	9.00E-14	2.25E-14	1.19E-16	2.00E-14	5.00E-15	8.58E-17	9.00E-13	2.25E-13	1.73E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/3/2012	7.87E-16	9.00E-14	2.25E-14	2.64E-16	2.00E-14	5.00E-15	3.95E-16	9.00E-13	2.25E-13	1.25E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2012	1.86E-15	9.00E-14	2.25E-14	8.33E-16	2.00E-14	5.00E-15	9.85E-16	9.00E-13	2.25E-13	9.55E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/1/2012	1.06E-15	9.00E-14	2.25E-14	2.11E-16	2.00E-14	5.00E-15	2.34E-16	9.00E-13	2.25E-13	1.13E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2012	6.86E-16	9.00E-14	2.25E-14	1.27E-16	2.00E-14	5.00E-15	1.38E-16	9.00E-13	2.25E-13	1.54E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/25/2013	9.91E-16	9.00E-14	2.25E-14	1.86E-16	2.00E-14	5.00E-15	2.04E-16	9.00E-13	2.25E-13	1.82E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2013	1.46E-16	9.00E-14	2.25E-14	3.34E-16	2.00E-14	5.00E-15	3.91E-16	9.00E-13	2.25E-13	5.78E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2013	8.89E-16	9.00E-14	2.25E-14	9.13E-17	2.00E-14	5.00E-15	1.05E-16	9.00E-13	2.25E-13	8.00E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/30/2013	5.21E-16	9.00E-14	2.25E-14	4.34E-17	2.00E-14	5.00E-15	3.70E-17	9.00E-13	2.25E-13	2.59E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2014	1.07E-15	9.00E-14	2.25E-14	2.07E-16	2.00E-14	5.00E-15	3.69E-16	9.00E-13	2.25E-13	1.24E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2014	2.24E-15	9.00E-14	2.25E-14	5.14E-16	2.00E-14	5.00E-15	1.09E-15	9.00E-13	2.25E-13	1.23E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2014	1.59E-15	9.00E-14	2.25E-14	2.00E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.39E-14	6.00E-13	1.50E-13	1.00E-16	4.00E-15	1.00E-15
12/29/2014	2.00E-16	9.00E-14	2.25E-14	5.00E-17	2.00E-14	5.00E-15	7.00E-17	9.00E-13	2.25E-13	2.00E-14	6.00E-13	1.50E-13	7.00E-18	4.00E-15	1.00E-15


BHV-1 Radionuclide Concentrations (uCi/ml)
(Log Scale)
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
Sep-03
Sep-04
Sep-05
Sep-06
Sep-07
Sep-08
Sep-09
Sep-10
Sep-11
Sep-12
Sep-13
Sep-14
Thorium-230
Uranium Natural
Radium-226
Lead-210
Thorium-232


Effluent Concentration Limit = 9E-14 uCi/ml
ALARA Goal = 2.25E-14 uCi/ml
Pre 1994 MPC Limit = 5E-12uCi/ml
Pre 1994 ALARA Goal = 1.25E-12 uCi/ml
BHV-1 Uranium-Natural Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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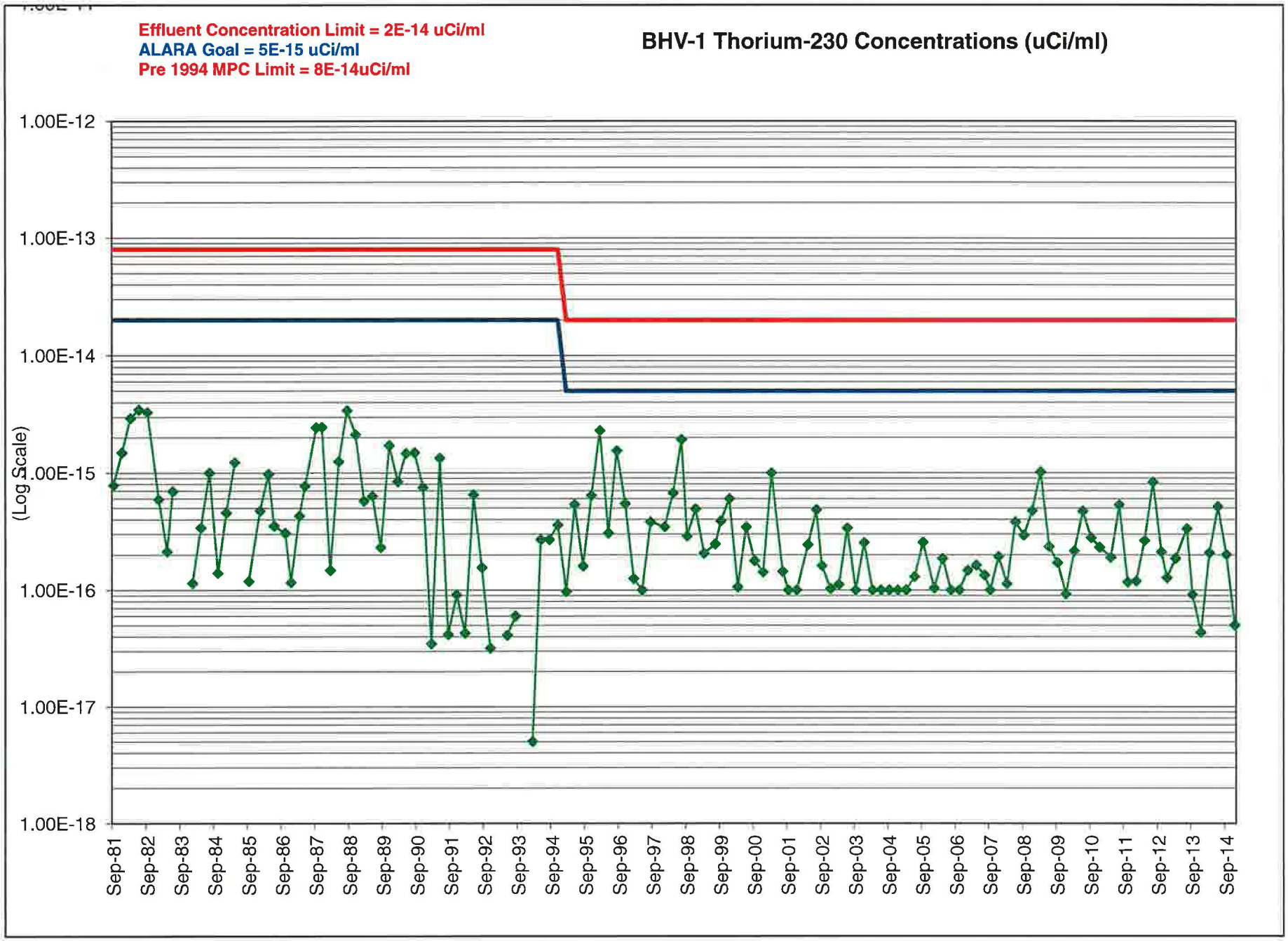
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 2E-14 uCi/ml
ALARA Goal = 5E-15 uCi/ml
Pre 1994 MPC Limit = 8E-14uCi/ml
BHV-1 Thorium-230 Concentrations (uCi/ml)
(Log Scale)
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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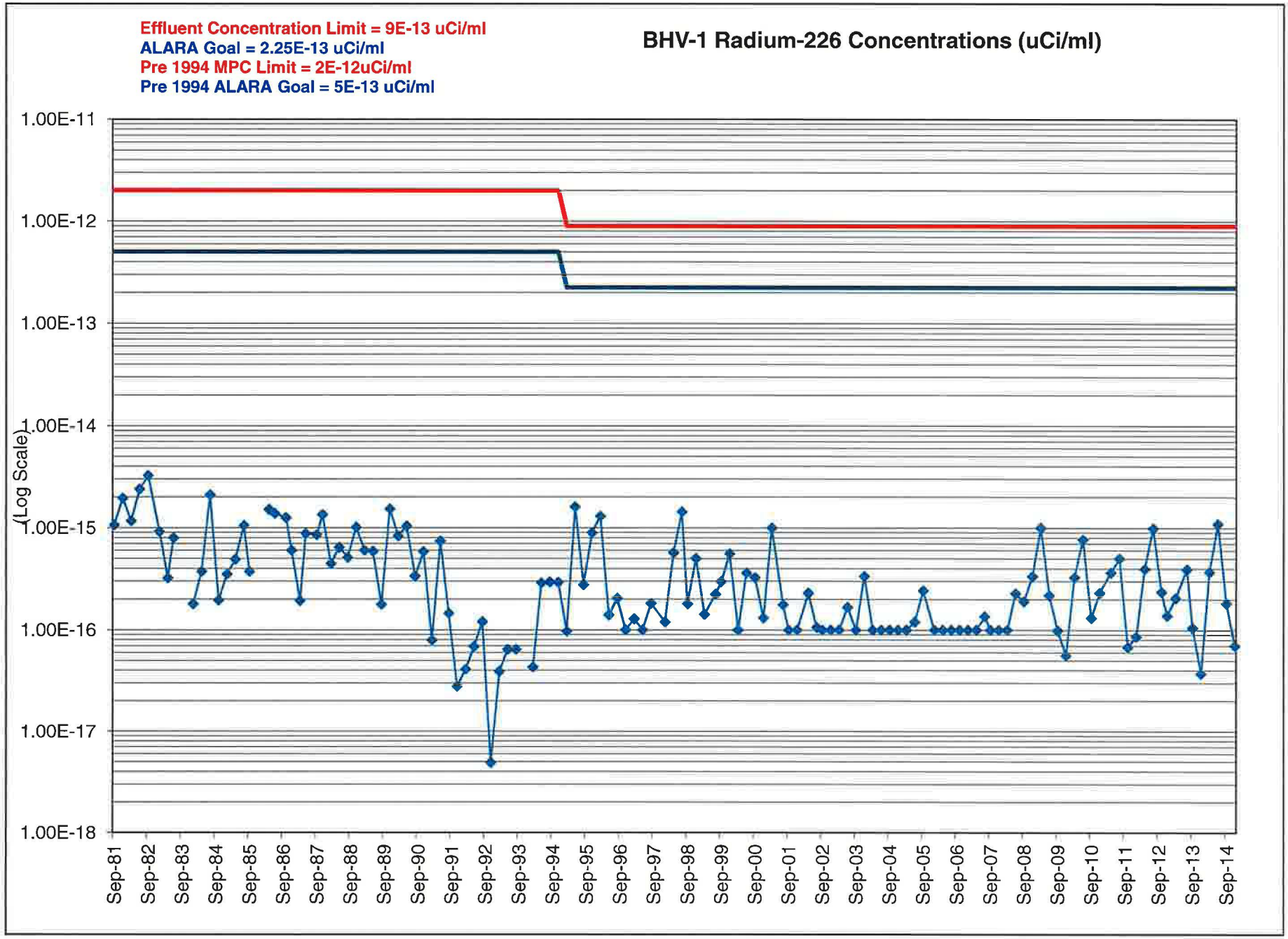
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 9E-13 uCi/ml
ALARA Goal = 2.25E-13 uCi/ml
Pre 1994 MPC Limit = 2E-12uCi/ml
Pre 1994 ALARA Goal = 5E-13 uCi/ml
BHV-1 Radium-226 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
Sep-03
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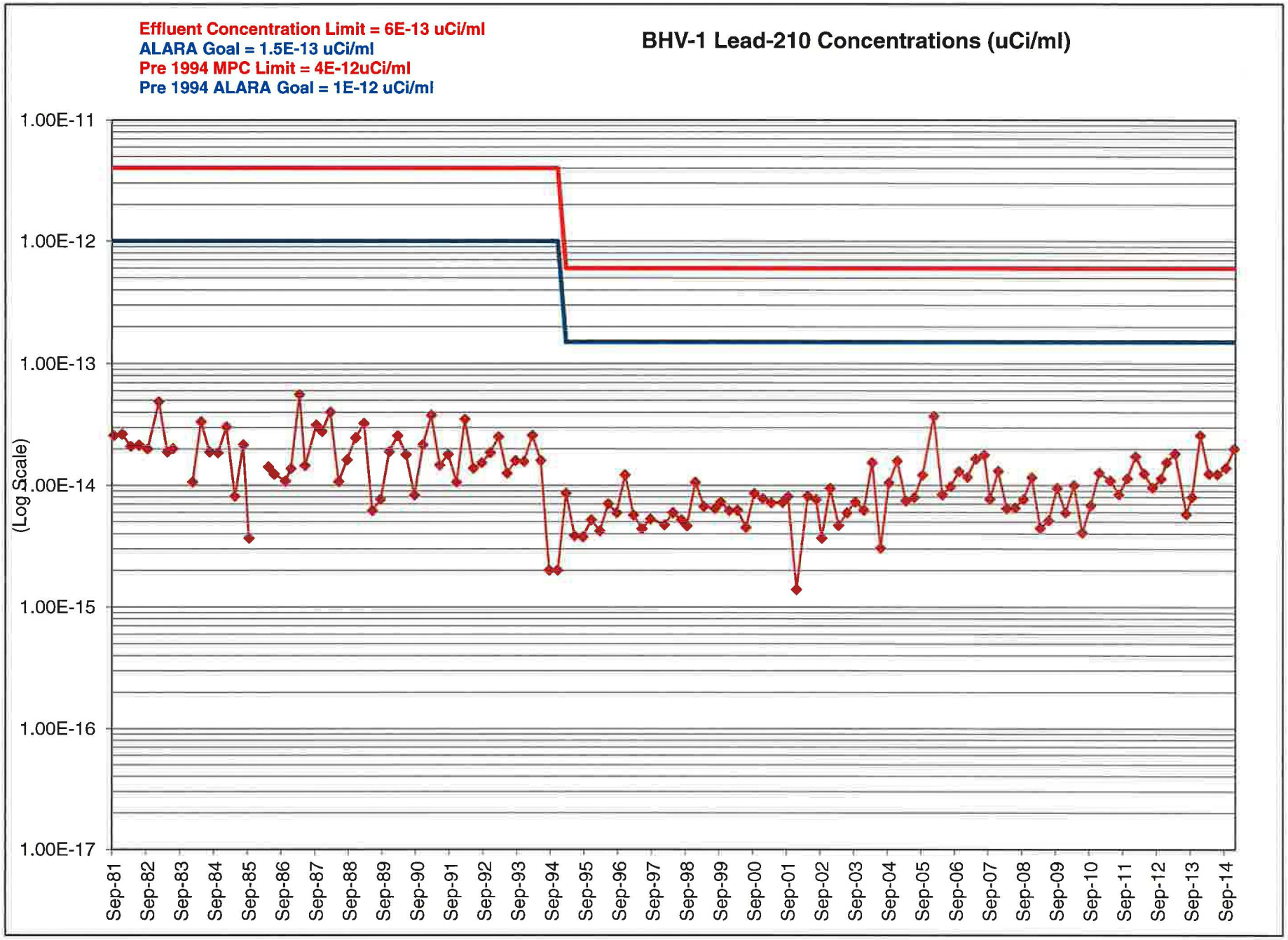
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 6E-13 uCi/ml
ALARA Goal = 1.5E-13 uCi/ml
Pre 1994 MPC Limit = 4E-12uCi/ml
Pre 1994 ALARA Goal = 1E-12 uCi/ml
BHV-1 Lead-210 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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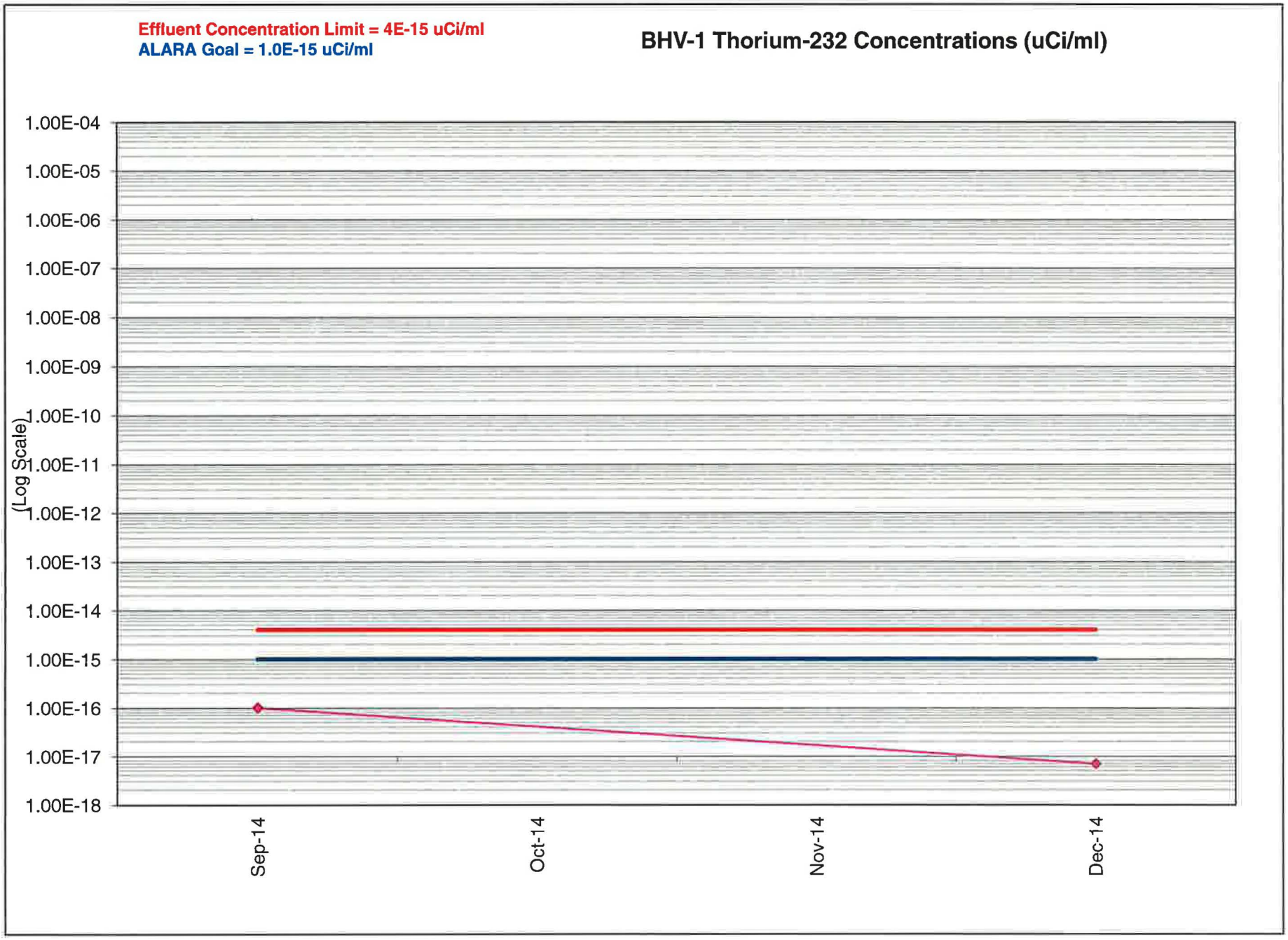
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 4E-15 uCi/ml
ALARA Goal = 1.0E-15 uCi/ml
BHV-1 Thorium-232 Concentrations (uCi/ml)
(Log Scale)
1.00E-04
1.00E-05
1.00E-06
1.00E-07
1.00E-08
1.00E-09
1.00E-10
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-14
Oct-14
Nov-14
Dec-14

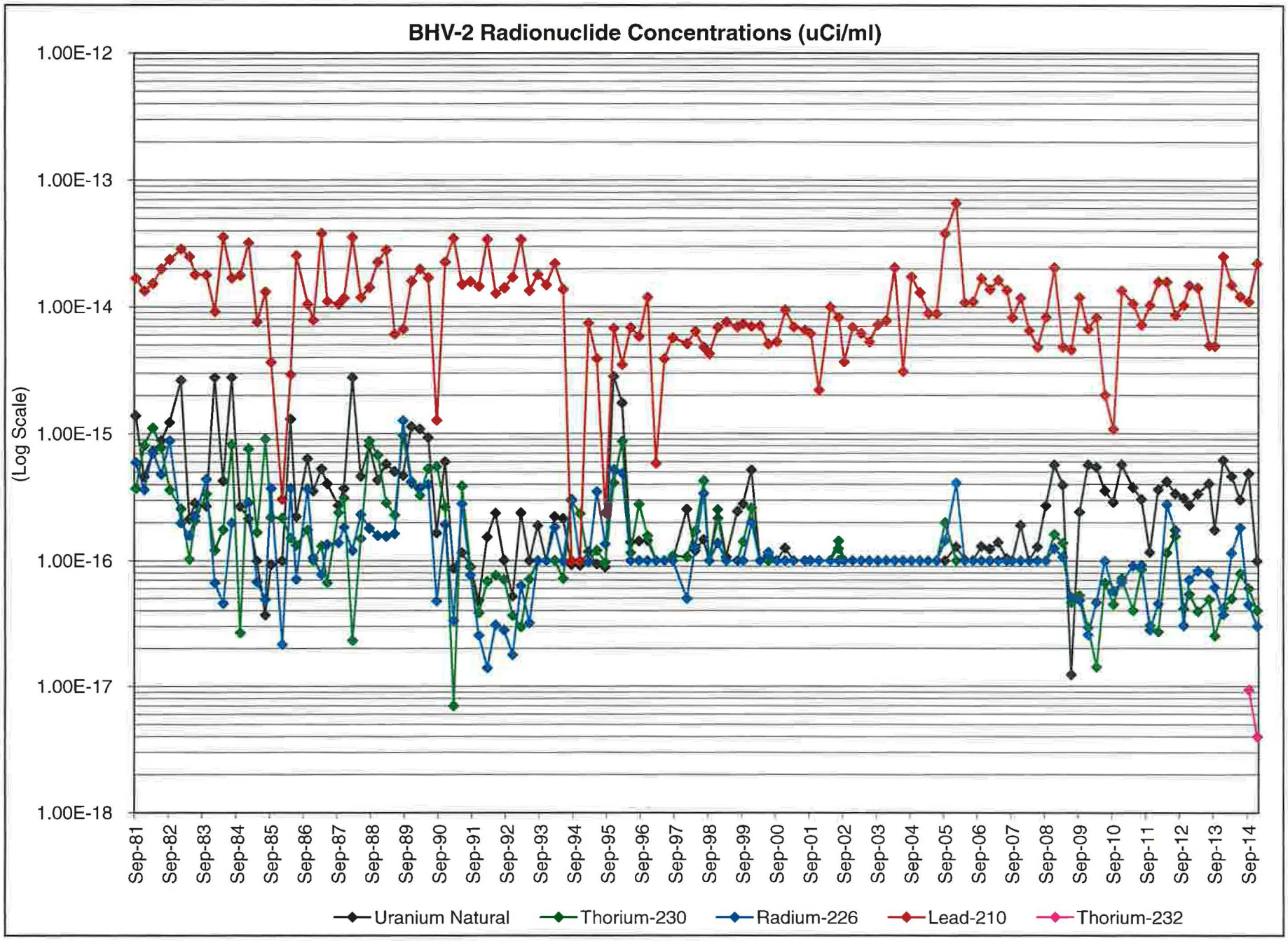
TAB 2

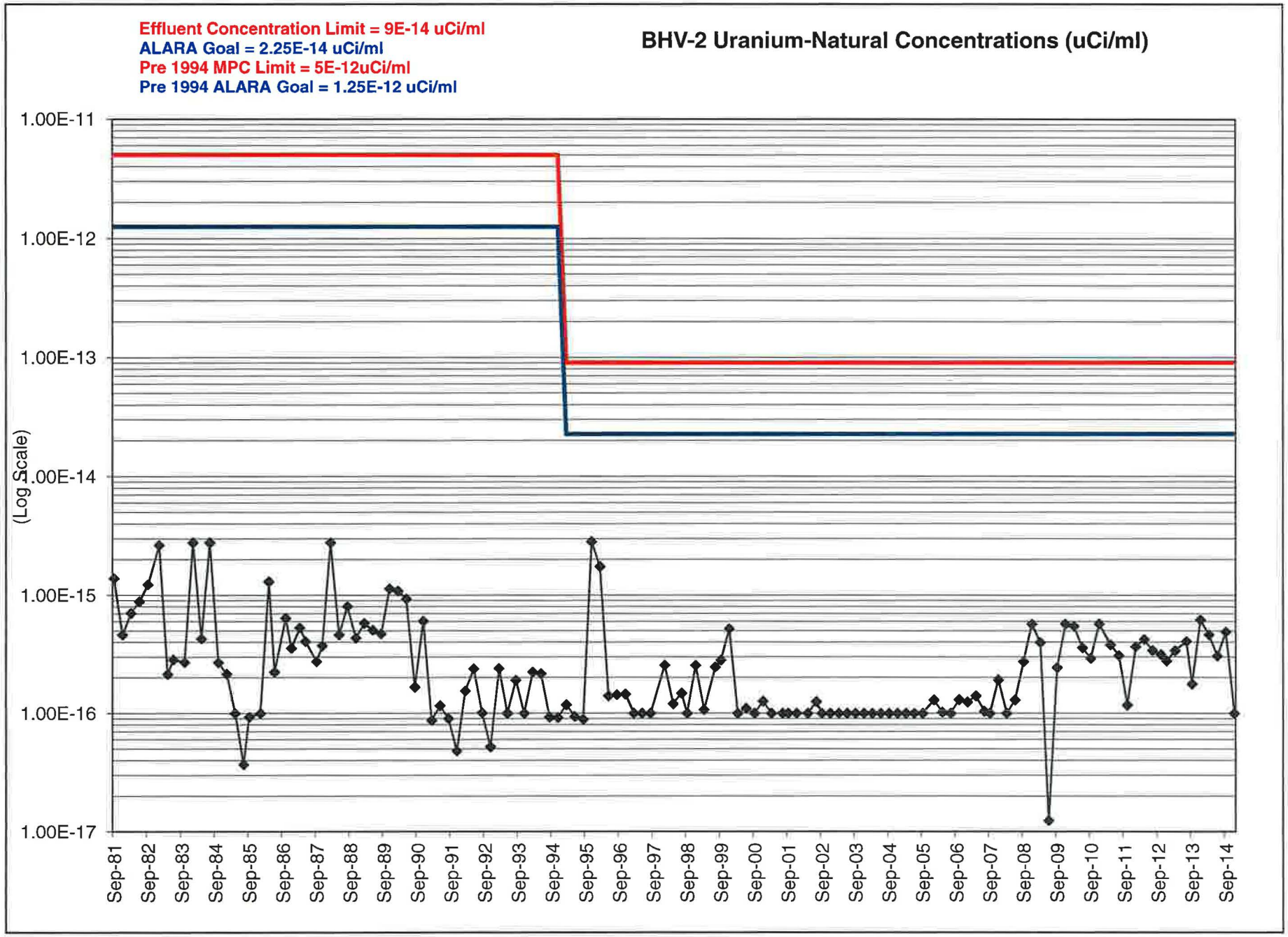
BHV-2 AIR SAMPLING GRAPHS AND DATA TABLE

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-2U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-2T230	Effluent Concentration Limit =	9E-15 uCi/ml	BHV-2R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-2PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-2T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-13 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
9/28/1981	1.39E-15	5.00E-12	1.25E-12	3.69E-16	8.00E-14	2.00E-14	5.92E-16	2.00E-12	5.00E-13	1.67E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
12/14/1981	4.62E-16	5.00E-12	1.25E-12	8.03E-16	8.00E-14	2.00E-14	3.62E-16	2.00E-12	5.00E-13	1.33E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
3/29/1982	7.07E-16	5.00E-12	1.25E-12	1.10E-15	8.00E-14	2.00E-14	7.27E-16	2.00E-12	5.00E-13	1.52E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1982	8.84E-16	5.00E-12	1.25E-12	7.73E-16	8.00E-14	2.00E-14	4.78E-16	2.00E-12	5.00E-13	1.98E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/27/1982	1.23E-15	5.00E-12	1.25E-12	3.60E-16	8.00E-14	2.00E-14	8.73E-16	2.00E-12	5.00E-13	2.35E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/3/1983	2.64E-15	5.00E-12	1.25E-12	2.55E-16	8.00E-14	2.00E-14	1.98E-16	2.00E-12	5.00E-13	2.85E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/4/1983	2.14E-16	5.00E-12	1.25E-12	1.02E-16	8.00E-14	2.00E-14	1.57E-16	2.00E-12	5.00E-13	2.48E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1983	2.85E-16	5.00E-12	1.25E-12	2.06E-16	8.00E-14	2.00E-14	2.24E-16	2.00E-12	5.00E-13	1.79E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/3/1983	2.70E-16	5.00E-12	1.25E-12	3.36E-16	8.00E-14	2.00E-14	4.37E-16	2.00E-12	5.00E-13	1.78E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/3/1984	2.78E-15	5.00E-12	1.25E-12	1.20E-16	8.00E-14	2.00E-14	6.64E-17	2.00E-12	5.00E-13	9.14E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/2/1984	4.28E-16	5.00E-12	1.25E-12	1.75E-16	8.00E-14	2.00E-14	4.57E-17	2.00E-12	5.00E-13	3.55E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
7/2/1984	2.78E-15	5.00E-12	1.25E-12	8.12E-16	8.00E-14	2.00E-14	1.98E-16	2.00E-12	5.00E-13	1.68E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/1/1984	2.69E-16	5.00E-12	1.25E-12	2.66E-17	8.00E-14	2.00E-14	0.00E+00	2.00E-12	5.00E-13	1.77E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/2/1985	2.15E-16	5.00E-12	1.25E-12	7.55E-16	8.00E-14	2.00E-14	2.87E-16	2.00E-12	5.00E-13	3.19E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/1/1985	1.00E-16	5.00E-12	1.25E-12	1.67E-16	8.00E-14	2.00E-14	6.75E-17	2.00E-12	5.00E-13	7.56E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
7/1/1985	3.70E-17	5.00E-12	1.25E-12	9.00E-16	8.00E-14	2.00E-14	4.90E-17	2.00E-12	5.00E-13	1.31E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/30/1985	9.32E-17	5.00E-12	1.25E-12	2.18E-16	8.00E-14	2.00E-14	3.71E-16	2.00E-12	5.00E-13	3.64E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/2/1986	1.00E-16	5.00E-12	1.25E-12	2.16E-16	8.00E-14	2.00E-14	2.15E-17	2.00E-12	5.00E-13	3.04E-16	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/1/1986	1.31E-15	5.00E-12	1.25E-12	1.50E-16	8.00E-14	2.00E-14	3.71E-16	2.00E-12	5.00E-13	2.90E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1986	2.23E-16	5.00E-12	1.25E-12	1.32E-16	8.00E-14	2.00E-14	7.09E-17	2.00E-12	5.00E-13	2.53E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/27/1986	6.41E-16	5.00E-12	1.25E-12	1.74E-16	8.00E-14	2.00E-14	3.67E-16	2.00E-12	5.00E-13	1.04E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
12/15/1986	3.56E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	1.05E-16	2.00E-12	5.00E-13	7.81E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
3/16/1987	5.31E-16	5.00E-12	1.25E-12	1.30E-16	8.00E-14	2.00E-14	7.74E-17	2.00E-12	5.00E-13	3.80E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/11/1987	4.06E-16	5.00E-12	1.25E-12	6.63E-17	8.00E-14	2.00E-14	1.34E-16	2.00E-12	5.00E-13	1.10E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/9/1987	2.74E-16	5.00E-12	1.25E-12	2.38E-16	8.00E-14	2.00E-14	1.38E-16	2.00E-12	5.00E-13	1.04E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/2/1987	3.73E-16	5.00E-12	1.25E-12	3.11E-16	8.00E-14	2.00E-14	1.83E-16	2.00E-12	5.00E-13	1.17E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/16/1988	2.78E-15	5.00E-12	1.25E-12	2.31E-17	8.00E-14	2.00E-14	1.20E-16	2.00E-12	5.00E-13	3.55E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/18/1988	4.63E-16	5.00E-12	1.25E-12	1.49E-16	8.00E-14	2.00E-14	2.30E-16	2.00E-12	5.00E-13	1.18E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/15/1988	8.06E-16	5.00E-12	1.25E-12	8.69E-16	8.00E-14	2.00E-14	1.80E-16	2.00E-12	5.00E-13	1.42E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/14/1988	4.34E-16	5.00E-12	1.25E-12	6.76E-16	8.00E-14	2.00E-14	1.57E-16	2.00E-12	5.00E-13	2.25E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/13/1989	5.80E-16	5.00E-12	1.25E-12	2.85E-16	8.00E-14	2.00E-14	1.55E-16	2.00E-12	5.00E-13	2.80E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/15/1989	5.06E-16	5.00E-12	1.25E-12	2.28E-16	8.00E-14	2.00E-14	1.63E-16	2.00E-12	5.00E-13	6.05E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/14/1989	4.71E-16	5.00E-12	1.25E-12	9.60E-16	8.00E-14	2.00E-14	1.26E-15	2.00E-12	5.00E-13	6.65E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/13/1989	1.14E-15	5.00E-12	1.25E-12	4.08E-16	8.00E-14	2.00E-14	4.18E-16	2.00E-12	5.00E-13	1.59E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/12/1990	1.09E-15	5.00E-12	1.25E-12	3.25E-16	8.00E-14	2.00E-14	3.74E-16	2.00E-12	5.00E-13	1.98E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/14/1990	9.32E-16	5.00E-12	1.25E-12	5.27E-16	8.00E-14	2.00E-14	3.97E-16	2.00E-12	5.00E-13	1.69E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/13/1990	1.66E-16	5.00E-12	1.25E-12	5.49E-16	8.00E-14	2.00E-14	4.75E-17	2.00E-12	5.00E-13	1.27E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/12/1990	6.05E-16	5.00E-12	1.25E-12	2.64E-16	8.00E-14	2.00E-14	1.93E-16	2.00E-12	5.00E-13	2.25E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/11/1991	8.72E-17	5.00E-12	1.25E-12	7.00E-18	8.00E-14	2.00E-14	3.33E-17	2.00E-12	5.00E-13	3.49E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/13/1991	1.16E-16	5.00E-12	1.25E-12	3.86E-16	8.00E-14	2.00E-14	2.80E-16	2.00E-12	5.00E-13	1.50E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/12/1991	9.02E-17	5.00E-12	1.25E-12	8.82E-17	8.00E-14	2.00E-14	7.65E-17	2.00E-12	5.00E-13	1.58E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/11/1991	4.81E-17	5.00E-12	1.25E-12	3.82E-17	8.00E-14	2.00E-14	2.54E-17	2.00E-12	5.00E-13	1.45E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/10/1992	1.54E-16	5.00E-12	1.25E-12	6.82E-17	8.00E-14	2.00E-14	1.40E-17	2.00E-12	5.00E-13	3.41E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/11/1992	2.38E-16	5.00E-12	1.25E-12	7.63E-17	8.00E-14	2.00E-14	3.07E-17	2.00E-12	5.00E-13	1.27E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/10/1992	1.01E-16	5.00E-12	1.25E-12	7.07E-17	8.00E-14	2.00E-14	2.80E-17	2.00E-12	5.00E-13	1.41E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/9/1992	5.20E-17	5.00E-12	1.25E-12	3.65E-17	8.00E-14	2.00E-14	1.78E-17	2.00E-12	5.00E-13	1.71E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/9/1993	2.39E-16	5.00E-12	1.25E-12	2.97E-17	8.00E-14	2.00E-14	6.31E-17	2.00E-12	5.00E-13	3.41E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/10/1993	1.00E-16	5.00E-12	1.25E-12	7.11E-17	8.00E-14	2.00E-14	3.19E-17	2.00E-12	5.00E-13	1.34E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/10/1993	1.90E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	1.80E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-2U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-2T230	Effluent Concentration Limit =	9E-15 uCi/ml	BHV-2R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-2PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-2T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-13 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
11/8/1993	1.00E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	1.49E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/7/1994	2.23E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	1.84E-16	2.00E-12	5.00E-13	2.19E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/9/1994	2.16E-16	5.00E-12	1.25E-12	7.20E-17	8.00E-14	2.00E-14	9.89E-17	2.00E-12	5.00E-13	1.37E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/9/1994	9.29E-17	5.00E-12	1.25E-12	2.96E-16	8.00E-14	2.00E-14	3.04E-16	2.00E-12	5.00E-13	1.00E-16	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/7/1994	9.21E-17	5.00E-12	1.25E-12	2.35E-16	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	1.00E-16	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/7/1995	1.18E-16	9.00E-14	2.25E-14	9.70E-17	2.00E-14	5.00E-15	9.70E-17	9.00E-13	2.25E-13	7.42E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/9/1995	9.40E-17	9.00E-14	2.25E-14	1.20E-16	2.00E-14	5.00E-15	3.50E-16	9.00E-13	2.25E-13	3.90E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/9/1995	8.90E-17	9.00E-14	2.25E-14	9.67E-17	2.00E-14	5.00E-15	1.35E-16	9.00E-13	2.25E-13	2.38E-16	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
11/11/1995	2.83E-15	9.00E-14	2.25E-14	4.09E-16	2.00E-14	5.00E-15	5.23E-16	9.00E-13	2.25E-13	6.77E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
2/5/1996	1.75E-15	9.00E-14	2.25E-14	8.66E-16	2.00E-14	5.00E-15	4.86E-16	9.00E-13	2.25E-13	3.50E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/6/1996	1.40E-16	9.00E-14	2.25E-14	1.15E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.85E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/5/1996	1.43E-16	9.00E-14	2.25E-14	2.78E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	5.83E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
11/6/1996	1.45E-16	9.00E-14	2.25E-14	1.57E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.19E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
2/6/1997	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	5.84E-16	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/5/1997	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	3.89E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/11/1997	1.00E-16	9.00E-14	2.25E-14	1.09E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	5.69E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/5/1998	2.55E-16	9.00E-14	2.25E-14	1.07E-16	2.00E-14	5.00E-15	5.00E-17	9.00E-13	2.25E-13	5.11E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/28/1998	1.20E-16	9.00E-14	2.25E-14	1.71E-16	2.00E-14	5.00E-15	1.28E-16	9.00E-13	2.25E-13	6.40E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/31/1998	1.47E-16	9.00E-14	2.25E-14	4.24E-16	2.00E-14	5.00E-15	3.39E-16	9.00E-13	2.25E-13	4.80E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/28/1998	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	4.26E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/28/1998	2.54E-16	9.00E-14	2.25E-14	2.15E-16	2.00E-14	5.00E-15	1.38E-16	9.00E-13	2.25E-13	6.88E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/29/1999	1.07E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.61E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/3/1999	2.46E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.95E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/27/1999	2.81E-16	9.00E-14	2.25E-14	1.41E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.35E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/28/1999	5.20E-16	9.00E-14	2.25E-14	2.60E-16	2.00E-14	5.00E-15	2.01E-16	9.00E-13	2.25E-13	7.00E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/27/2000	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.12E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/26/2000	1.10E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.16E-16	9.00E-13	2.25E-13	5.07E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/26/2000	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	5.31E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/26/2000	1.26E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	9.45E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/26/2001	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.95E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2001	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.56E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/24/2001	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.16E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2001	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	2.20E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/1/2002	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	9.95E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/1/2002	1.25E-16	9.00E-14	2.25E-14	1.43E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.25E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2002	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	3.69E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/30/2002	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.91E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2003	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.16E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2003	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	5.27E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/29/2003	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.23E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/29/2003	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.80E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/29/2004	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	2.04E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/27/2004	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	3.09E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/27/2004	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.73E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/27/2004	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.30E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/28/2005	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.88E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/29/2005	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.85E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/26/2005	1.00E-16	9.00E-14	2.25E-14	1.99E-16	2.00E-14	5.00E-15	1.44E-16	9.00E-13	2.25E-13	3.81E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/3/2006	1.29E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	4.08E-16	9.00E-13	2.25E-13	6.58E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-2U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-2T230	Effluent Concentration Limit =	9E-15 uCi/ml	BHV-2R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-2PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-2T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-13 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
4/3/2006	1.02E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.08E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/3/2006	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.10E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/2/2006	1.30E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.68E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/1/2007	1.24E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.38E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/2/2007	1.40E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.63E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2007	1.04E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.36E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2007	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.24E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2007	1.91E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.18E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/30/2008	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.49E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2008	1.29E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	4.82E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2008	2.73E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.30E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2008	5.71E-16	9.00E-14	2.25E-14	1.61E-16	2.00E-14	5.00E-15	1.25E-16	9.00E-13	2.25E-13	2.04E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/15/2009	3.96E-16	9.00E-14	2.25E-14	1.38E-16	2.00E-14	5.00E-15	1.07E-16	9.00E-13	2.25E-13	4.81E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/15/2009	1.24E-17	9.00E-14	2.25E-14	4.64E-17	2.00E-14	5.00E-15	5.11E-17	9.00E-13	2.25E-13	4.58E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/15/2009	2.43E-16	9.00E-14	2.25E-14	5.28E-17	2.00E-14	5.00E-15	4.84E-17	9.00E-13	2.25E-13	1.19E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/15/2009	5.72E-16	9.00E-14	2.25E-14	2.94E-17	2.00E-14	5.00E-15	2.57E-17	9.00E-13	2.25E-13	6.70E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2010	5.47E-16	9.00E-14	2.25E-14	1.42E-17	2.00E-14	5.00E-15	4.66E-17	9.00E-13	2.25E-13	8.24E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2010	3.58E-16	9.00E-14	2.25E-14	6.64E-17	2.00E-14	5.00E-15	9.90E-17	9.00E-13	2.25E-13	2.01E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2010	2.91E-16	9.00E-14	2.25E-14	4.48E-17	2.00E-14	5.00E-15	5.72E-17	9.00E-13	2.25E-13	1.08E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2010	5.73E-16	9.00E-14	2.25E-14	7.24E-17	2.00E-14	5.00E-15	6.76E-17	9.00E-13	2.25E-13	1.35E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/4/2011	3.79E-16	9.00E-14	2.25E-14	4.01E-17	2.00E-14	5.00E-15	9.11E-17	9.00E-13	2.25E-13	1.06E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/4/2011	3.07E-16	9.00E-14	2.25E-14	8.54E-17	2.00E-14	5.00E-15	9.21E-17	9.00E-13	2.25E-13	7.21E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/3/2011	1.17E-16	9.00E-14	2.25E-14	3.04E-17	2.00E-14	5.00E-15	2.81E-17	9.00E-13	2.25E-13	1.03E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/3/2012	3.65E-16	9.00E-14	2.25E-14	2.72E-17	2.00E-14	5.00E-15	4.54E-17	9.00E-13	2.25E-13	1.58E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/3/2012	4.22E-16	9.00E-14	2.25E-14	1.15E-16	2.00E-14	5.00E-15	2.77E-16	9.00E-13	2.25E-13	1.58E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2012	3.39E-16	9.00E-14	2.25E-14	1.56E-16	2.00E-14	5.00E-15	1.74E-16	9.00E-13	2.25E-13	8.60E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/1/2012	3.13E-16	9.00E-14	2.25E-14	4.13E-17	2.00E-14	5.00E-15	3.04E-17	9.00E-13	2.25E-13	1.03E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2012	2.76E-16	9.00E-14	2.25E-14	5.41E-17	2.00E-14	5.00E-15	7.05E-17	9.00E-13	2.25E-13	1.48E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/25/2013	3.38E-16	9.00E-14	2.25E-14	3.94E-17	2.00E-14	5.00E-15	8.32E-17	9.00E-13	2.25E-13	1.42E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2013	4.06E-16	9.00E-14	2.25E-14	4.89E-17	2.00E-14	5.00E-15	8.06E-17	9.00E-13	2.25E-13	4.93E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2013	1.76E-16	9.00E-14	2.25E-14	2.52E-17	2.00E-14	5.00E-15	6.13E-17	9.00E-13	2.25E-13	4.90E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/30/2013	6.20E-16	9.00E-14	2.25E-14	4.19E-17	2.00E-14	5.00E-15	3.72E-17	9.00E-13	2.25E-13	2.50E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2014	4.63E-16	9.00E-14	2.25E-14	4.97E-17	2.00E-14	5.00E-15	1.15E-16	9.00E-13	2.25E-13	1.49E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2014	3.04E-16	9.00E-14	2.25E-14	7.92E-17	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.21E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2014	4.89E-16	9.00E-14	2.25E-14	6.01E-17	2.00E-14	5.00E-15	4.47E-17	9.00E-13	2.25E-13	1.10E-14	6.00E-13	1.50E-13	9.35E-18	4.00E-15	1.00E-15
12/29/2014	1.00E-16	9.00E-14	2.25E-14	4.00E-17	2.00E-14	5.00E-15	3.00E-17	9.00E-13	2.25E-13	2.20E-14	6.00E-13	1.50E-13	4.00E-18	4.00E-15	1.00E-15


BHV-2 Radionuclide Concentrations (uCi/ml)
(Log Scale)
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
Sep-03
Sep-04
Sep-05
Sep-06
Sep-07
Sep-08
Sep-09
Sep-10
Sep-11
Sep-12
Sep-13
Sep-14
Uranium Natural
Thorium-230
Radium-226
Lead-210
Thorium-232


Effluent Concentration Limit = 9E-14 uCi/ml
ALARA Goal = 2.25E-14 uCi/ml
Pre 1994 MPC Limit = 5E-12uCi/ml
Pre 1994 ALARA Goal = 1.25E-12 uCi/ml
BHV-2 Uranium-Natural Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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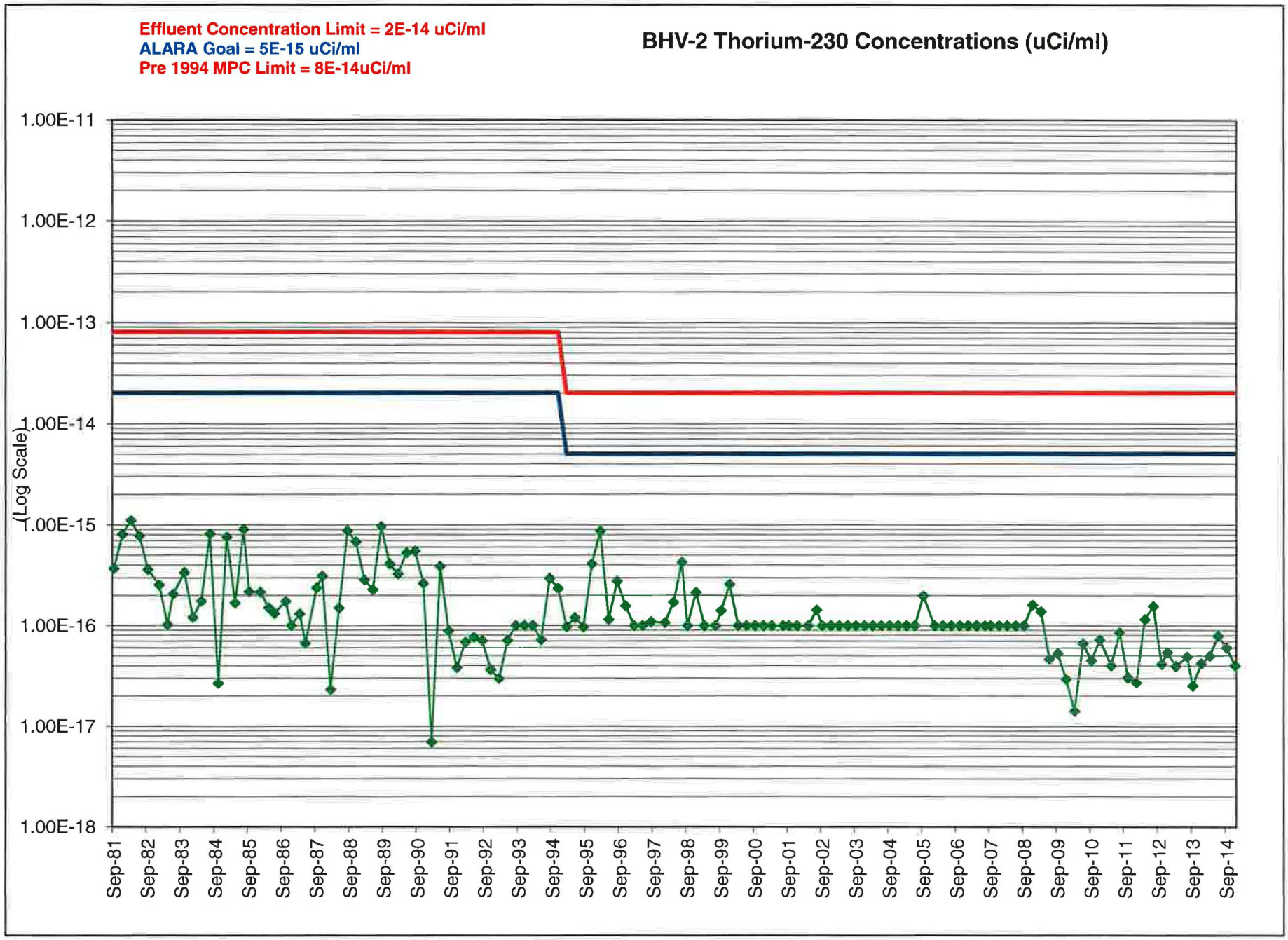
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 2E-14 uCi/ml
ALARA Goal = 5E-15 uCi/ml
Pre 1994 MPC Limit = 8E-14uCi/ml
BHV-2 Thorium-230 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
Sep-03
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Sep-05
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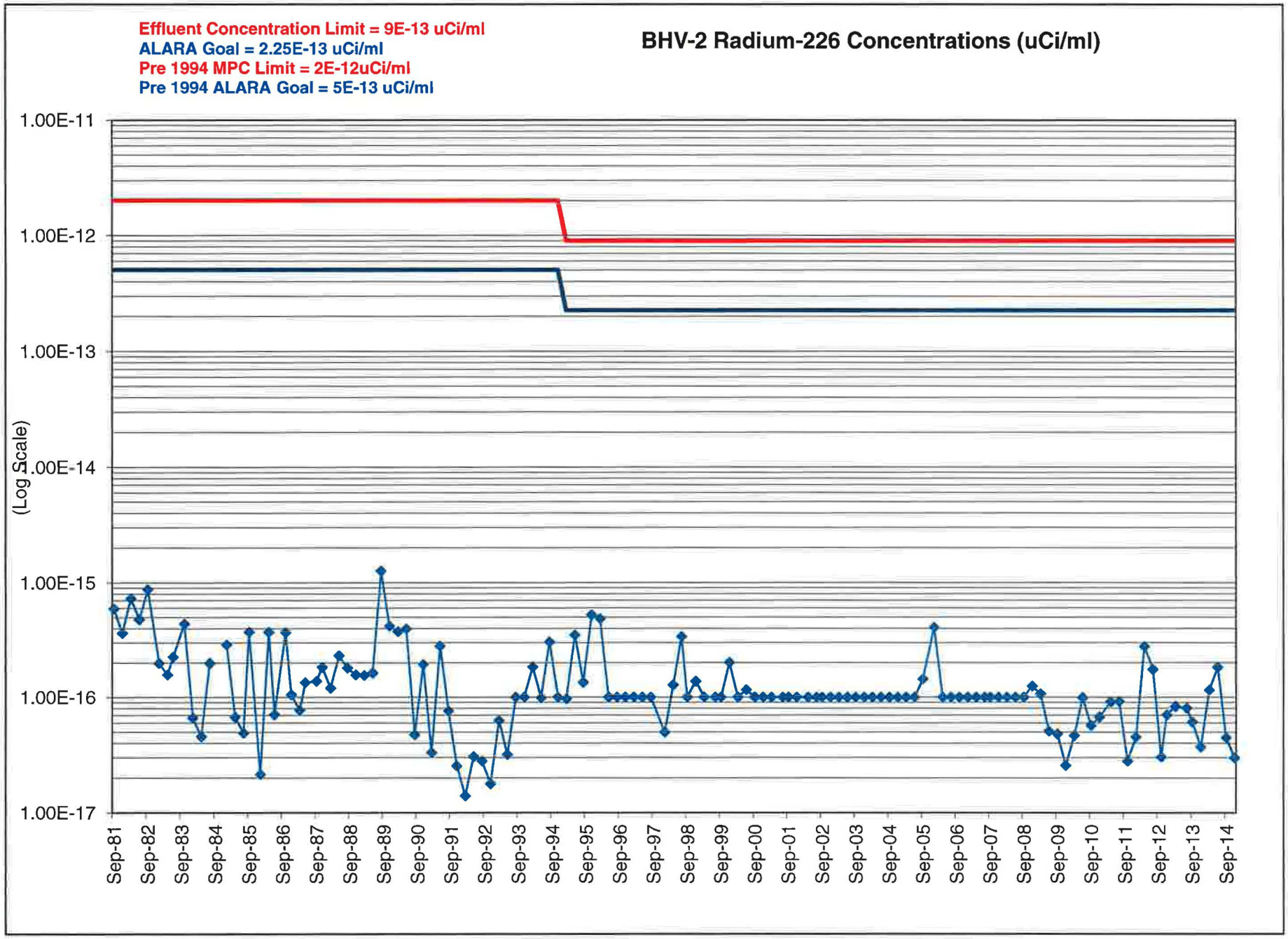
Sep-07
Sep-08
Sep-09
Sep-10
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 9E-13 uCi/ml
ALARA Goal = 2.25E-13 uCi/ml
Pre 1994 MPC Limit = 2E-12uCi/ml
Pre 1994 ALARA Goal = 5E-13 uCi/ml
BHV-2 Radium-226 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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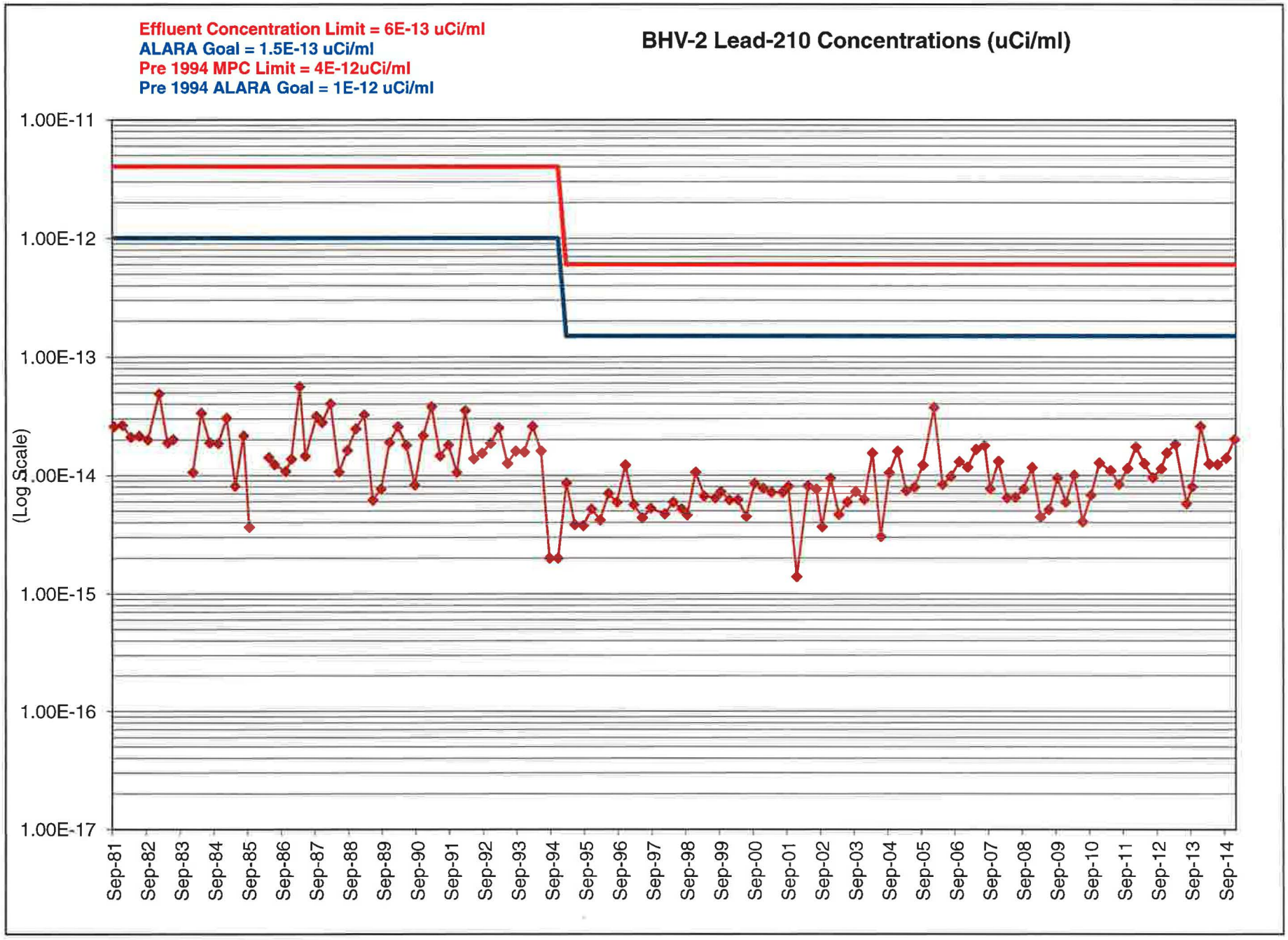
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 6E-13 uCi/ml
ALARA Goal = 1.5E-13 uCi/ml
Pre 1994 MPC Limit = 4E-12uCi/ml
Pre 1994 ALARA Goal = 1E-12 uCi/ml
BHV-2 Lead-210 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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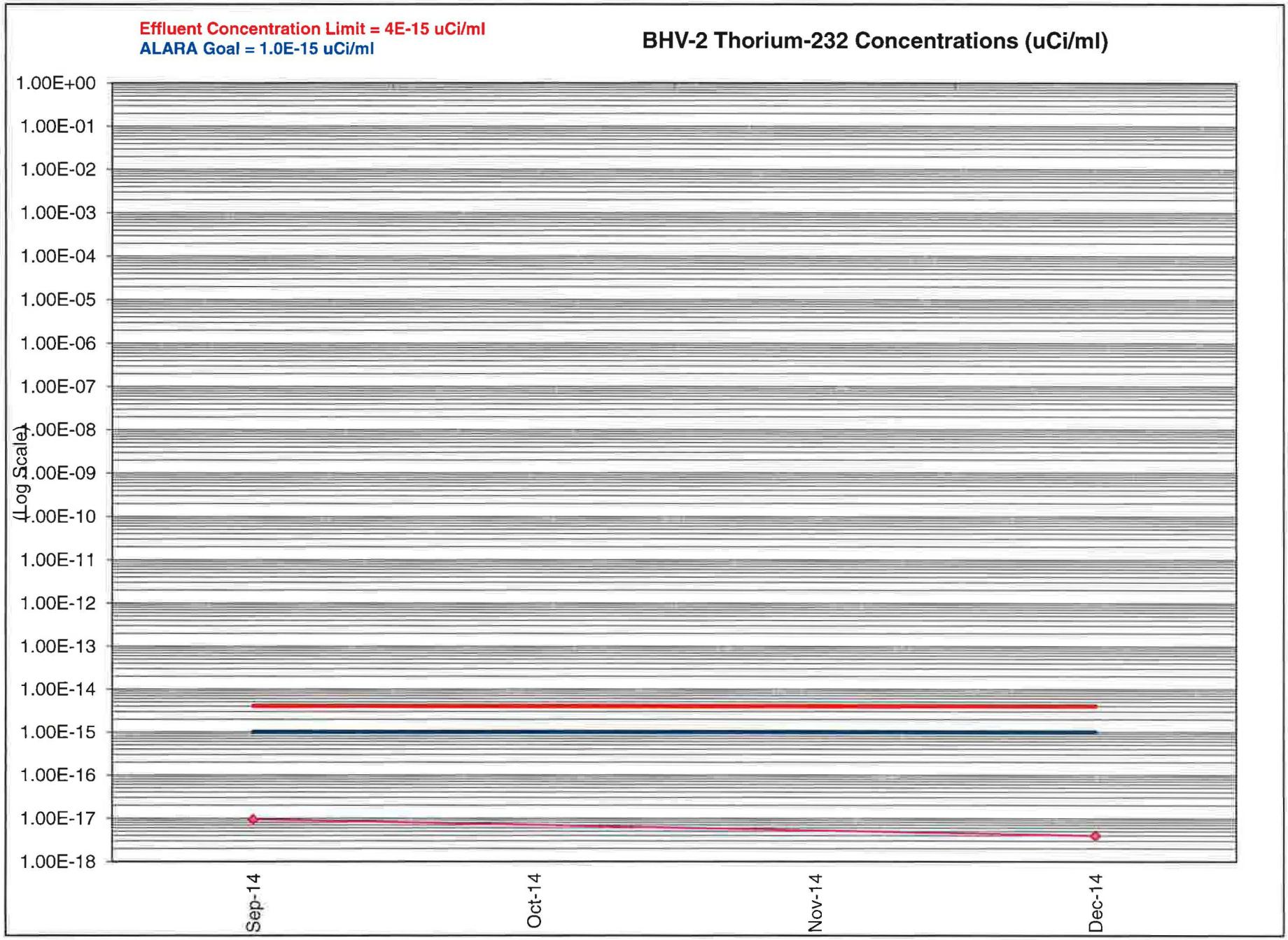
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 4E-15 uCi/ml
ALARA Goal = 1.0E-15 uCi/ml
BHV-2 Thorium-232 Concentrations (uCi/ml)
1.00E+00
1.00E-01
1.00E-02
1.00E-03
1.00E-04
1.00E-05
1.00E-06
1.00E-07
1.00E-08
1.00E-09
1.00E-10
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
(Log Scale)
Sep-14
Oct-14
Nov-14
Dec-14

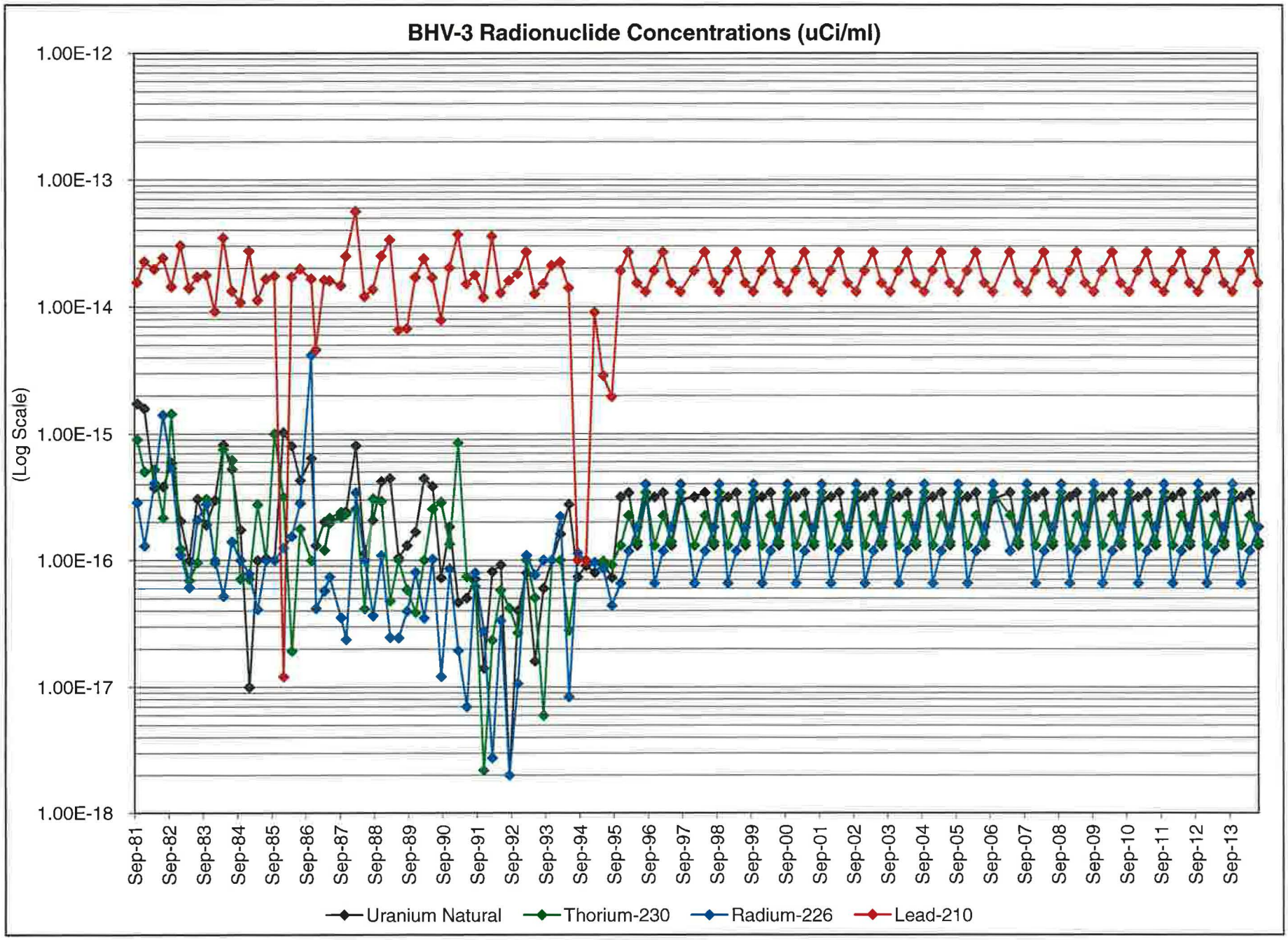
TAB 3

BHV-3 AIR SAMPLING GRAPHS AND DATA TABLE

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-3U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-3T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-3R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-3PB
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
9/28/1981	1.74E-15	5.00E-12	1.25E-12	9.02E-16	8.00E-14	2.00E-14	2.87E-16	2.00E-12	5.00E-13	1.54E-14	4.00E-12	1.00E-12
12/14/1981	1.59E-15	5.00E-12	1.25E-12	5.03E-16	8.00E-14	2.00E-14	1.30E-16	2.00E-12	5.00E-13	2.25E-14	4.00E-12	1.00E-12
3/29/1982	3.76E-16	5.00E-12	1.25E-12	5.25E-16	8.00E-14	2.00E-14	4.08E-16	2.00E-12	5.00E-13	1.96E-14	4.00E-12	1.00E-12
6/30/1982	3.83E-16	5.00E-12	1.25E-12	2.16E-16	8.00E-14	2.00E-14	1.41E-15	2.00E-12	5.00E-13	2.40E-14	4.00E-12	1.00E-12
9/27/1982	5.95E-16	5.00E-12	1.25E-12	1.44E-15	8.00E-14	2.00E-14	5.36E-16	2.00E-12	5.00E-13	1.43E-14	4.00E-12	1.00E-12
1/3/1983	2.05E-16	5.00E-12	1.25E-12	1.23E-16	8.00E-14	2.00E-14	1.10E-16	2.00E-12	5.00E-13	3.01E-14	4.00E-12	1.00E-12
4/4/1983	1.00E-16	5.00E-12	1.25E-12	6.94E-17	8.00E-14	2.00E-14	6.11E-17	2.00E-12	5.00E-13	1.39E-14	4.00E-12	1.00E-12
6/30/1983	3.06E-16	5.00E-12	1.25E-12	9.59E-17	8.00E-14	2.00E-14	2.08E-16	2.00E-12	5.00E-13	1.70E-14	4.00E-12	1.00E-12
10/3/1983	1.91E-16	5.00E-12	1.25E-12	3.05E-16	8.00E-14	2.00E-14	2.79E-16	2.00E-12	5.00E-13	1.76E-14	4.00E-12	1.00E-12
1/3/1984	3.01E-16	5.00E-12	1.25E-12	9.51E-17	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	9.17E-15	4.00E-12	1.00E-12
4/2/1984	8.22E-16	5.00E-12	1.25E-12	7.52E-16	8.00E-14	2.00E-14	5.20E-17	2.00E-12	5.00E-13	3.47E-14	4.00E-12	1.00E-12
7/2/1984	5.29E-16	5.00E-12	1.25E-12	6.18E-16	8.00E-14	2.00E-14	1.40E-16	2.00E-12	5.00E-13	1.32E-14	4.00E-12	1.00E-12
10/1/1984	1.74E-16	5.00E-12	1.25E-12	7.10E-17	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	1.08E-14	4.00E-12	1.00E-12
1/2/1985	1.00E-17	5.00E-12	1.25E-12	7.10E-17	8.00E-14	2.00E-14	7.80E-17	2.00E-12	5.00E-13	2.73E-14	4.00E-12	1.00E-12
4/1/1985	1.00E-16	5.00E-12	1.25E-12	2.76E-16	8.00E-14	2.00E-14	4.10E-17	2.00E-12	5.00E-13	1.12E-14	4.00E-12	1.00E-12
7/1/1985	1.04E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	1.64E-14	4.00E-12	1.00E-12
9/30/1985	1.00E-16	5.00E-12	1.25E-12	1.00E-15	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	1.73E-14	4.00E-12	1.00E-12
1/2/1986	1.03E-15	5.00E-12	1.25E-12	3.17E-16	8.00E-14	2.00E-14	1.25E-16	2.00E-12	5.00E-13	1.21E-17	4.00E-12	1.00E-12
4/1/1986	8.04E-16	5.00E-12	1.25E-12	1.93E-17	8.00E-14	2.00E-14	1.54E-16	2.00E-12	5.00E-13	1.69E-14	4.00E-12	1.00E-12
6/30/1986	4.29E-16	5.00E-12	1.25E-12	1.77E-16	8.00E-14	2.00E-14	2.83E-16	2.00E-12	5.00E-13	1.97E-14	4.00E-12	1.00E-12
10/27/1986	6.45E-16	5.00E-12	1.25E-12	9.89E-17	8.00E-14	2.00E-14	4.16E-15	2.00E-12	5.00E-13	1.64E-14	4.00E-12	1.00E-12
12/15/1986	1.31E-16	5.00E-12	1.25E-12	0.00E+00	8.00E-14	2.00E-14	4.16E-17	2.00E-12	5.00E-13	4.60E-15	4.00E-12	1.00E-12
3/16/1987	2.01E-16	5.00E-12	1.25E-12	1.20E-16	8.00E-14	2.00E-14	5.73E-17	2.00E-12	5.00E-13	1.60E-14	4.00E-12	1.00E-12
5/11/1987	2.16E-16	5.00E-12	1.25E-12	1.96E-16	8.00E-14	2.00E-14	7.38E-17	2.00E-12	5.00E-13	1.59E-14	4.00E-12	1.00E-12
9/9/1987	2.41E-16	5.00E-12	1.25E-12	2.18E-16	8.00E-14	2.00E-14	3.52E-17	2.00E-12	5.00E-13	1.46E-14	4.00E-12	1.00E-12
11/2/1987	2.44E-16	5.00E-12	1.25E-12	2.32E-16	8.00E-14	2.00E-14	2.37E-17	2.00E-12	5.00E-13	2.48E-14	4.00E-12	1.00E-12
2/16/1988	8.08E-16	5.00E-12	1.25E-12	2.55E-16	8.00E-14	2.00E-14	3.42E-16	2.00E-12	5.00E-13	5.61E-14	4.00E-12	1.00E-12
5/18/1988	1.14E-16	5.00E-12	1.25E-12	4.14E-17	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	1.20E-14	4.00E-12	1.00E-12
8/15/1988	2.08E-16	5.00E-12	1.25E-12	3.06E-16	8.00E-14	2.00E-14	3.65E-17	2.00E-12	5.00E-13	1.36E-14	4.00E-12	1.00E-12
11/14/1988	4.21E-16	5.00E-12	1.25E-12	2.93E-16	8.00E-14	2.00E-14	1.09E-16	2.00E-12	5.00E-13	2.48E-14	4.00E-12	1.00E-12
2/13/1989	4.45E-16	5.00E-12	1.25E-12	4.78E-17	8.00E-14	2.00E-14	2.47E-17	2.00E-12	5.00E-13	3.34E-14	4.00E-12	1.00E-12
5/15/1989	1.05E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	2.45E-17	2.00E-12	5.00E-13	6.56E-15	4.00E-12	1.00E-12
8/14/1989	1.31E-16	5.00E-12	1.25E-12	5.85E-17	8.00E-14	2.00E-14	3.97E-17	2.00E-12	5.00E-13	6.75E-15	4.00E-12	1.00E-12
11/13/1989	1.67E-16	5.00E-12	1.25E-12	3.87E-17	8.00E-14	2.00E-14	8.03E-17	2.00E-12	5.00E-13	1.69E-14	4.00E-12	1.00E-12
2/12/1990	4.43E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	3.50E-17	2.00E-12	5.00E-13	2.37E-14	4.00E-12	1.00E-12
5/14/1990	3.84E-16	5.00E-12	1.25E-12	2.54E-16	8.00E-14	2.00E-14	1.02E-16	2.00E-12	5.00E-13	1.68E-14	4.00E-12	1.00E-12
8/13/1990	7.27E-17	5.00E-12	1.25E-12	2.87E-16	8.00E-14	2.00E-14	1.21E-17	2.00E-12	5.00E-13	7.86E-15	4.00E-12	1.00E-12
11/12/1990	1.84E-16	5.00E-12	1.25E-12	1.34E-16	8.00E-14	2.00E-14	8.53E-17	2.00E-12	5.00E-13	2.01E-14	4.00E-12	1.00E-12
2/11/1991	4.66E-17	5.00E-12	1.25E-12	8.48E-16	8.00E-14	2.00E-14	1.94E-17	2.00E-12	5.00E-13	3.69E-14	4.00E-12	1.00E-12
5/13/1991	5.05E-17	5.00E-12	1.25E-12	7.40E-17	8.00E-14	2.00E-14	7.00E-18	2.00E-12	5.00E-13	1.50E-14	4.00E-12	1.00E-12
8/12/1991	7.14E-17	5.00E-12	1.25E-12	6.22E-17	8.00E-14	2.00E-14	7.95E-17	2.00E-12	5.00E-13	1.77E-14	4.00E-12	1.00E-12
11/11/1991	1.41E-17	5.00E-12	1.25E-12	2.19E-18	8.00E-14	2.00E-14	2.75E-17	2.00E-12	5.00E-13	1.18E-14	4.00E-12	1.00E-12
2/10/1992	8.12E-17	5.00E-12	1.25E-12	2.35E-17	8.00E-14	2.00E-14	2.76E-18	2.00E-12	5.00E-13	3.57E-14	4.00E-12	1.00E-12
5/11/1992	9.18E-17	5.00E-12	1.25E-12	5.80E-17	8.00E-14	2.00E-14	3.36E-17	2.00E-12	5.00E-13	1.28E-14	4.00E-12	1.00E-12
8/10/1992	2.00E-18	5.00E-12	1.25E-12	4.19E-17	8.00E-14	2.00E-14	2.00E-18	2.00E-12	5.00E-13	1.59E-14	4.00E-12	1.00E-12
11/9/1992	4.00E-17	5.00E-12	1.25E-12	2.68E-17	8.00E-14	2.00E-14	1.07E-17	2.00E-12	5.00E-13	1.81E-14	4.00E-12	1.00E-12
2/9/1993	7.94E-17	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	1.09E-16	2.00E-12	5.00E-13	2.69E-14	4.00E-12	1.00E-12
5/10/1993	1.60E-17	5.00E-12	1.25E-12	5.07E-17	8.00E-14	2.00E-14	7.64E-17	2.00E-12	5.00E-13	1.26E-14	4.00E-12	1.00E-12
8/10/1993	6.00E-17	5.00E-12	1.25E-12	6.00E-18	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	1.50E-14	4.00E-12	1.00E-12

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-3U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-3T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-3R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-3PB
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
11/8/1993	1.00E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	2.10E-14	4.00E-12	1.00E-12
2/7/1994	1.61E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	2.22E-16	2.00E-12	5.00E-13	2.23E-14	4.00E-12	1.00E-12
5/9/1994	2.77E-16	5.00E-12	1.25E-12	2.80E-17	8.00E-14	2.00E-14	8.37E-18	2.00E-12	5.00E-13	1.40E-14	4.00E-12	1.00E-12
8/9/1994	7.39E-17	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	1.14E-16	2.00E-12	5.00E-13	1.00E-16	4.00E-12	1.00E-12
11/7/1994	9.05E-17	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	1.00E-16	4.00E-12	1.00E-12
2/7/1995	7.99E-17	9.00E-14	2.25E-14	9.60E-17	2.00E-14	5.00E-15	9.60E-17	9.00E-13	2.25E-13	9.05E-15	6.00E-13	1.50E-13
5/9/1995	9.40E-17	9.00E-14	2.25E-14	9.80E-17	2.00E-14	5.00E-15	8.60E-17	9.00E-13	2.25E-13	2.88E-15	6.00E-13	1.50E-13
8/9/1995	7.30E-17	9.00E-14	2.25E-14	9.20E-17	2.00E-14	5.00E-15	4.40E-17	9.00E-13	2.25E-13	1.96E-15	6.00E-13	1.50E-13
11/11/1995	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
2/5/1996	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
5/6/1996	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
8/5/1996	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
11/6/1996	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
2/6/1997	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
5/5/1997	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
8/11/1997	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
1/5/1998	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
4/28/1998	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
7/31/1998	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/28/1998	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/28/1998	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/29/1999	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
7/3/1999	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/27/1999	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/28/1999	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/28/2000	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
6/26/2000	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/26/2000	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/26/2000	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/26/2001	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
7/2/2001	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/24/2001	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/31/2001	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
4/1/2002	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
7/1/2002	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/30/2002	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/30/2002	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/31/2003	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
6/30/2003	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/29/2003	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/29/2003	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/29/2004	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
6/27/2004	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/27/2004	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/27/2004	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/28/2005	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
6/29/2005	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/26/2005	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
1/3/2006	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-3U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-3T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-3R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-3PB
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
4/3/2006	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
7/3/2006	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
10/2/2006	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
1/1/2006	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
4/2/2007	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
7/2/2007	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/30/2007	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/31/2007	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/31/2008	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
6/30/2008	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/30/2008	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/31/2008	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/15/2009	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
6/15/2009	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/15/2009	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/15/2009	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/31/2010	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
6/30/2010	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/30/2010	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/31/2010	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
4/4/2011	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
7/4/2011	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
10/3/2011	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
1/3/2012	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
4/3/2012	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
7/2/2012	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
10/1/2012	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/31/2012	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/25/2013	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
7/2/2013	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/30/2013	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/30/2013	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13
3/31/2014	3.41E-16	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	2.69E-14	6.00E-13	1.50E-13
6/30/2014	1.31E-16	9.00E-14	2.25E-14	1.39E-16	2.00E-14	5.00E-15	1.82E-16	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13
9/30/2014	3.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	3.99E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13
12/29/2014	3.16E-16	9.00E-14	2.25E-14	1.31E-16	2.00E-14	5.00E-15	6.58E-17	9.00E-13	2.25E-13	1.91E-14	6.00E-13	1.50E-13


BHV-3 Radionuclide Concentrations (uCi/ml)
(Log Scale)
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
Sep-03
Sep-04
Sep-05
Sep-06
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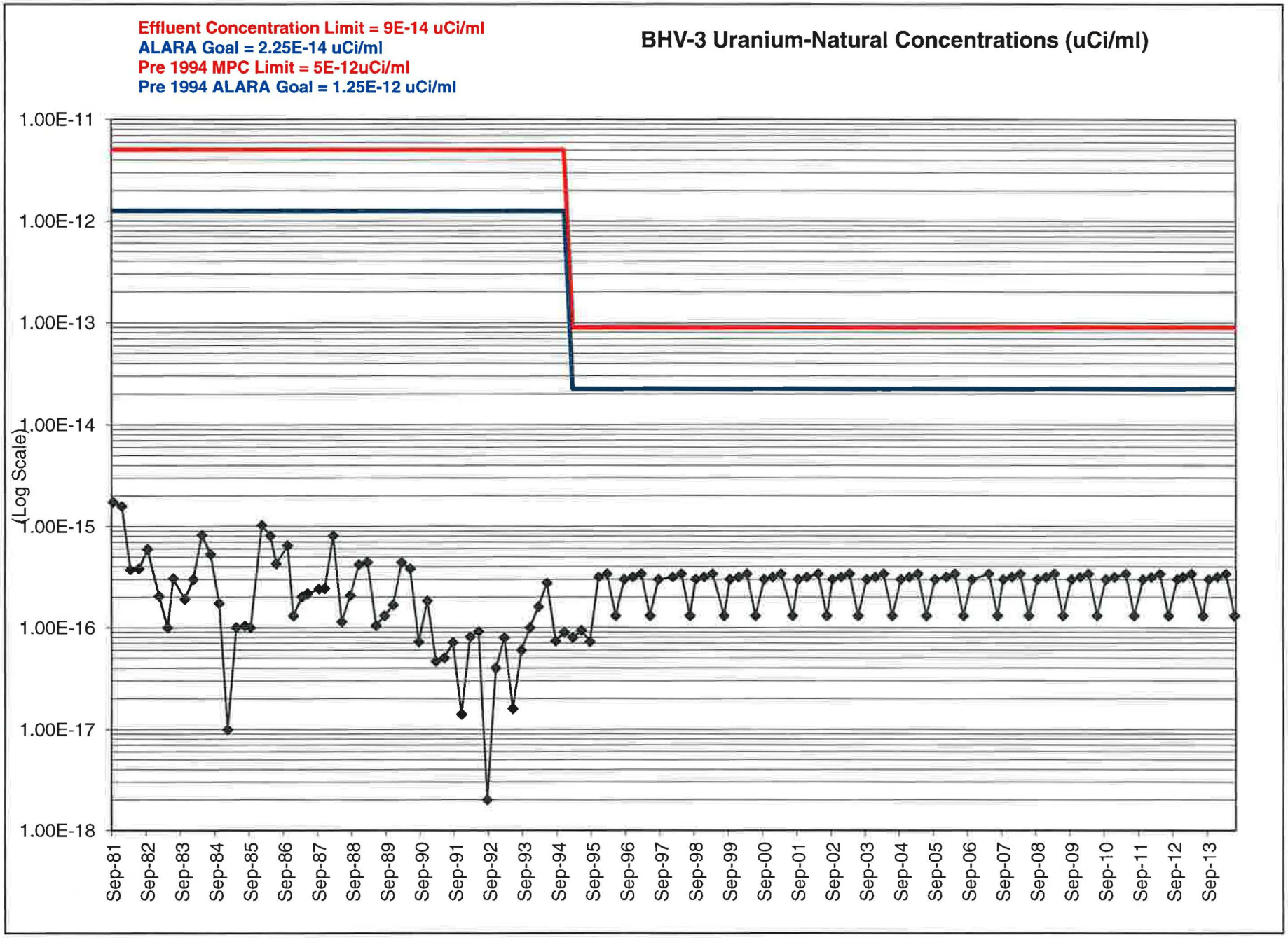
Sep-11
Sep-12
Sep-13
Uranium Natural
Thorium-230
Radium-226
Lead-210


Effluent Concentration Limit = 9E-14 uCi/ml
ALARA Goal = 2.25E-14 uCi/ml
Pre 1994 MPC Limit = 5E-12uCi/ml
Pre 1994 ALARA Goal = 1.25E-12 uCi/ml
BHV-3 Uranium-Natural Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
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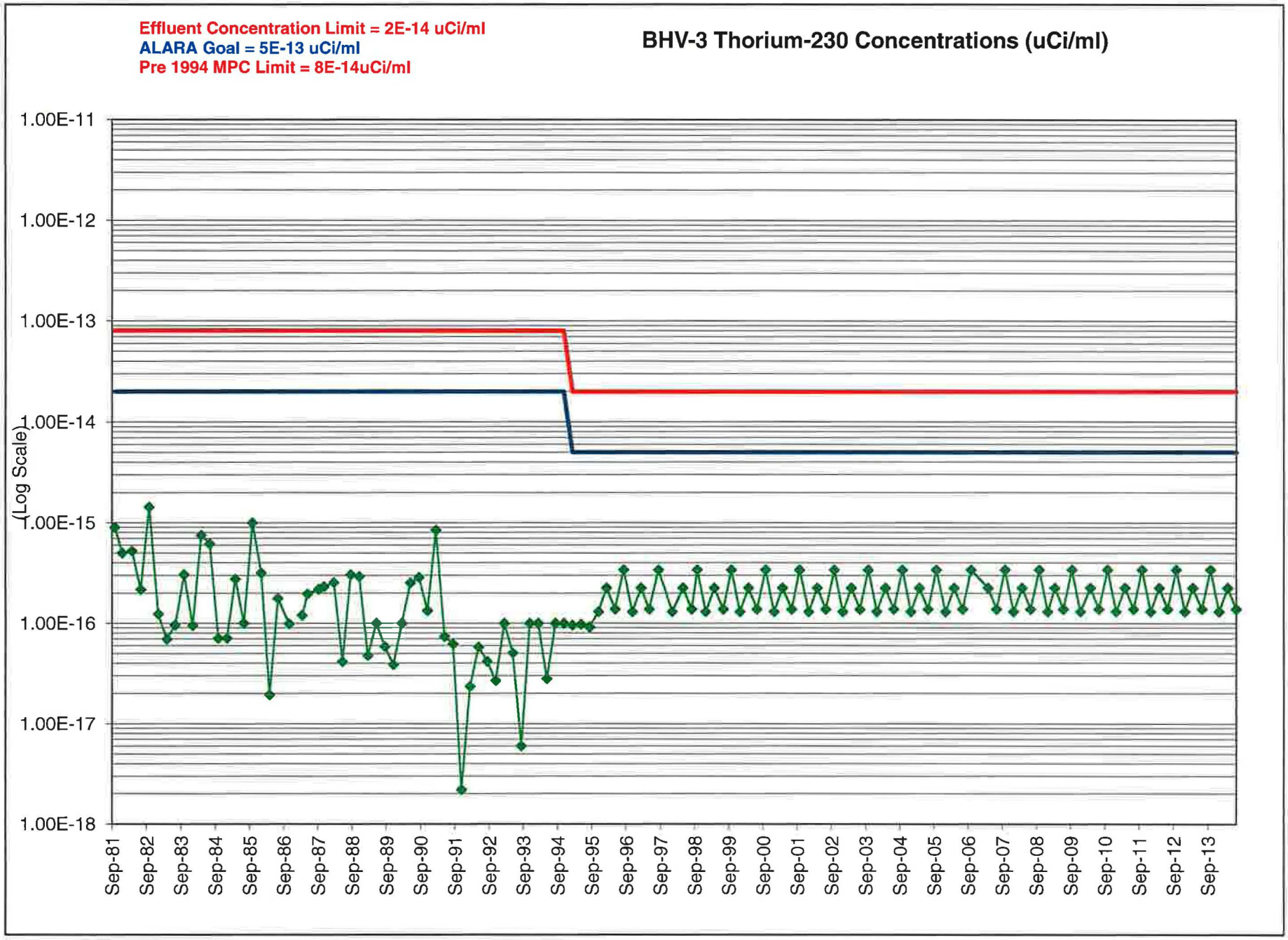
Effluent Concentration Limit = 2E-14 uCi/ml
ALARA Goal = 5E-13 uCi/ml
Pre 1994 MPC Limit = 8E-14uCi/ml
BHV-3 Thorium-230 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
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Sep-91
Sep-92
Sep-93
Sep-94
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Sep-97
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Sep-99
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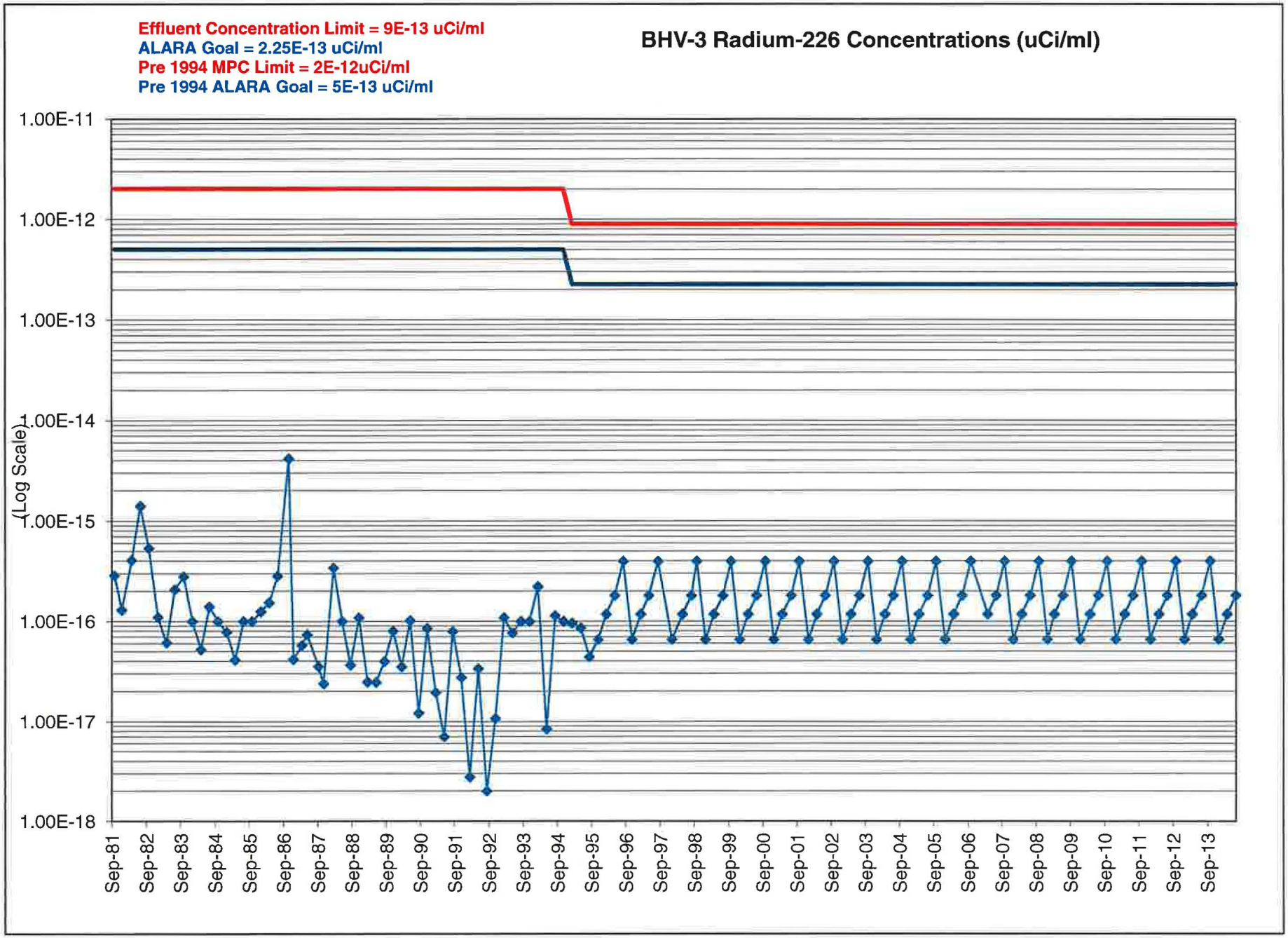
Sep-13


Effluent Concentration Limit = 9E-13 uCi/ml
ALARA Goal = 2.25E-13 uCi/ml
Pre 1994 MPC Limit = 2E-12uCi/ml
Pre 1994 ALARA Goal = 5E-13 uCi/ml
BHV-3 Radium-226 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
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Sep-87
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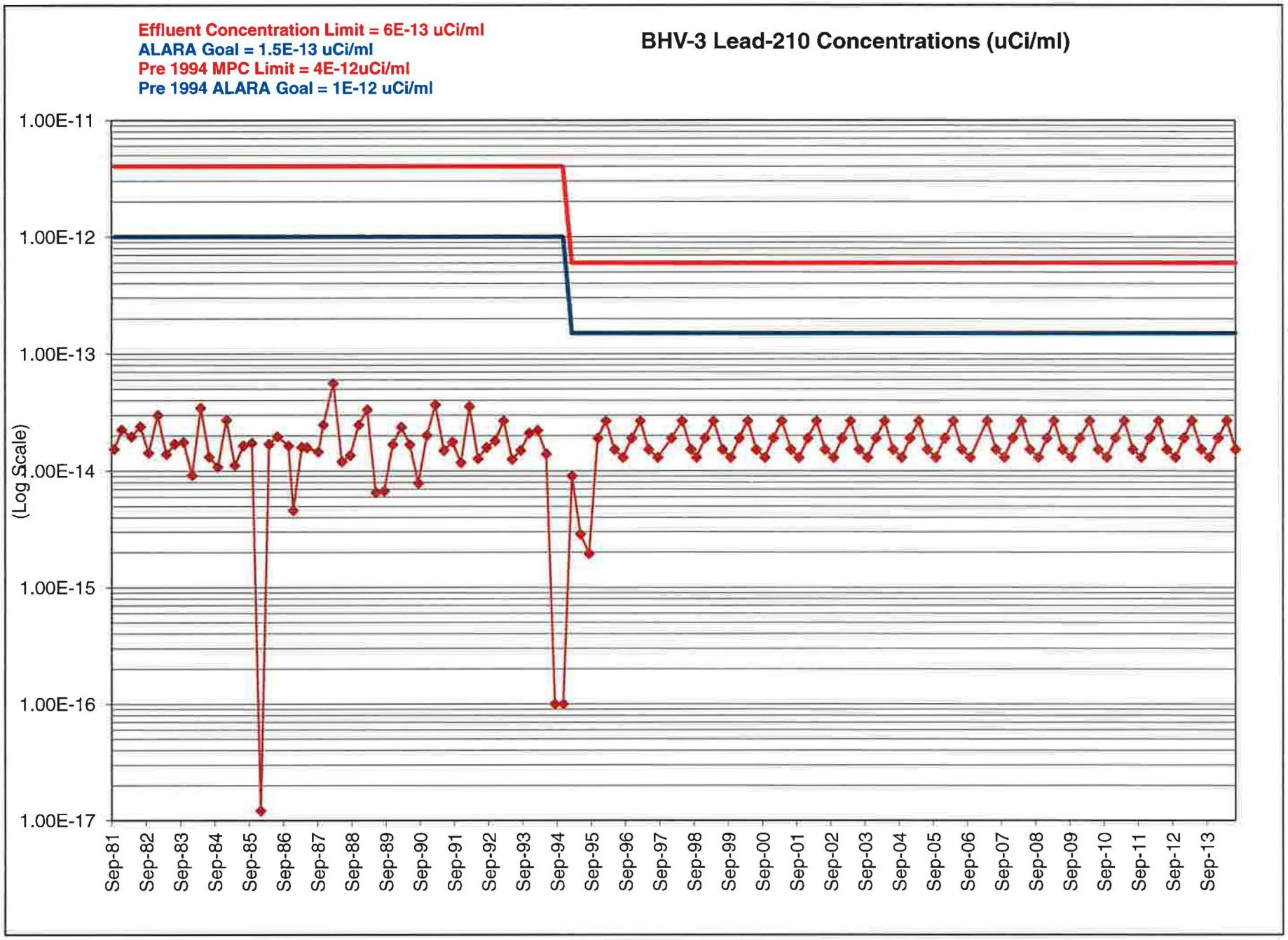
Sep-11
Sep-12
Sep-13


Effluent Concentration Limit = 6E-13 uCi/ml
ALARA Goal = 1.5E-13 uCi/ml
Pre 1994 MPC Limit = 4E-12uCi/ml
Pre 1994 ALARA Goal = 1E-12 uCi/ml
BHV-3 Lead-210 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
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Sep-90
Sep-91
Sep-92
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Sep-97
Sep-98
Sep-99
Sep-00
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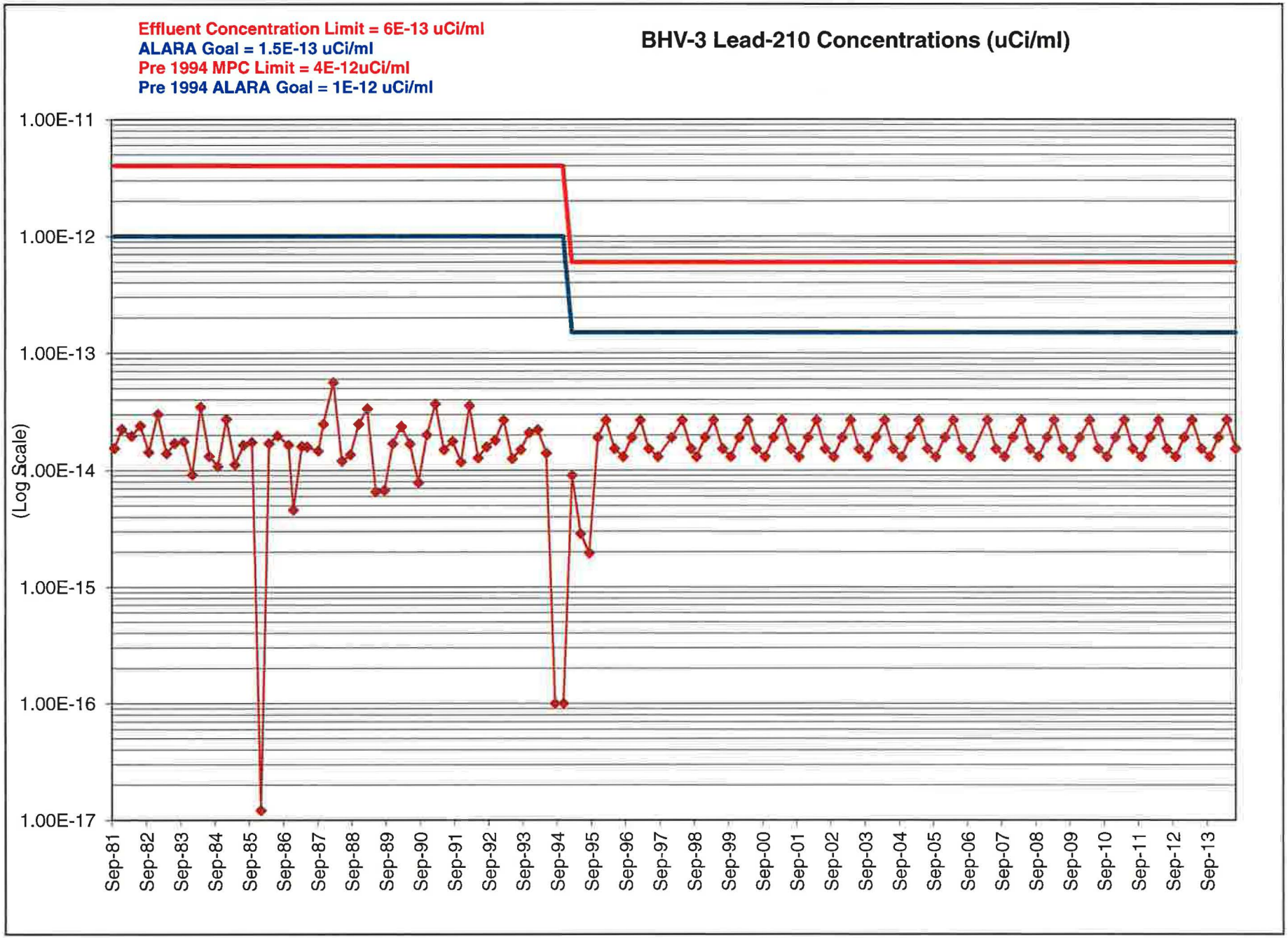
Sep-13


Effluent Concentration Limit = 6E-13 uCi/ml
ALARA Goal = 1.5E-13 uCi/ml
Pre 1994 MPC Limit = 4E-12uCi/ml
Pre 1994 ALARA Goal = 1E-12 uCi/ml
BHV-3 Lead-210 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
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Sep-95
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Sep-97
Sep-98
Sep-99
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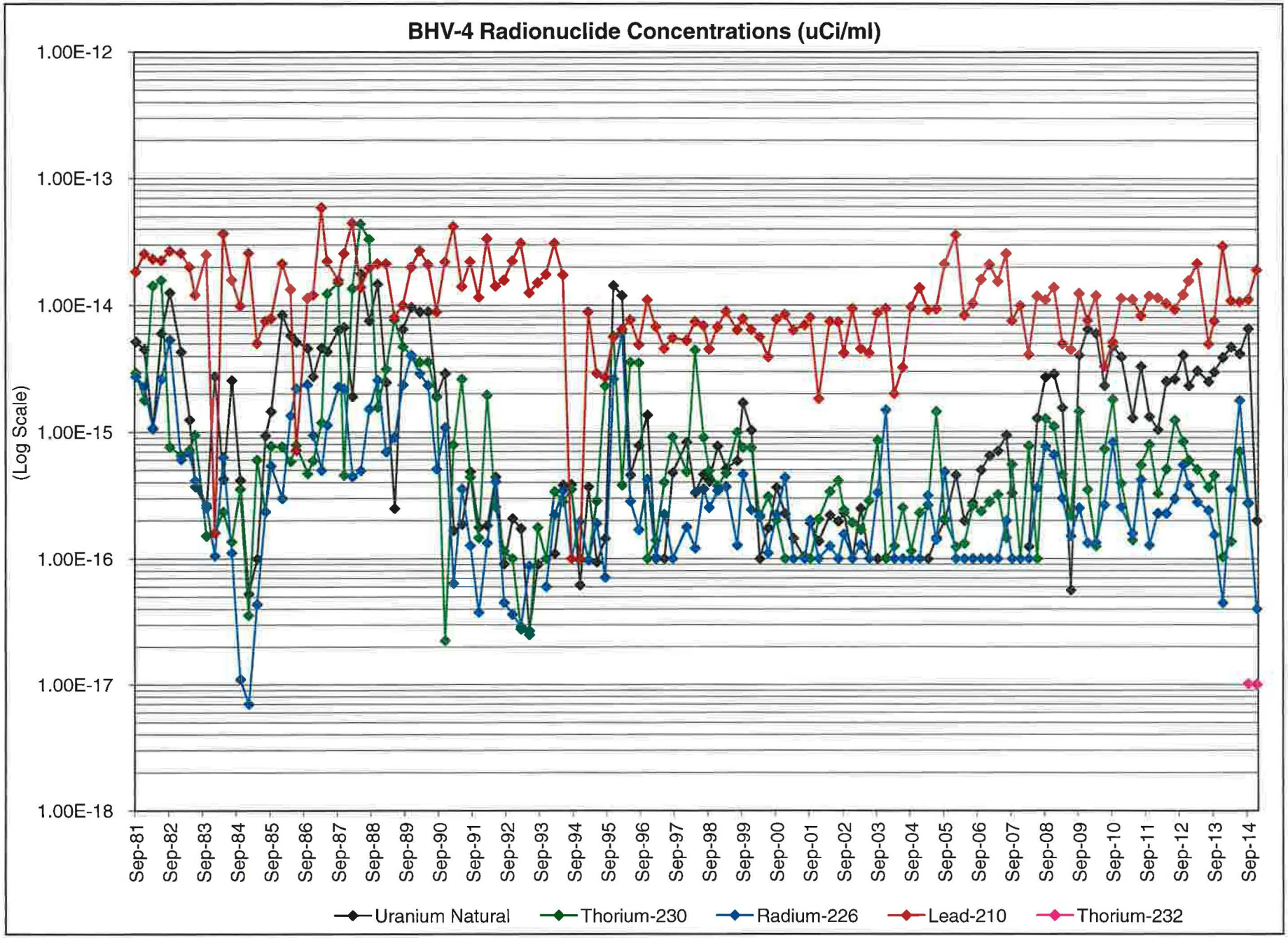
TAB 4

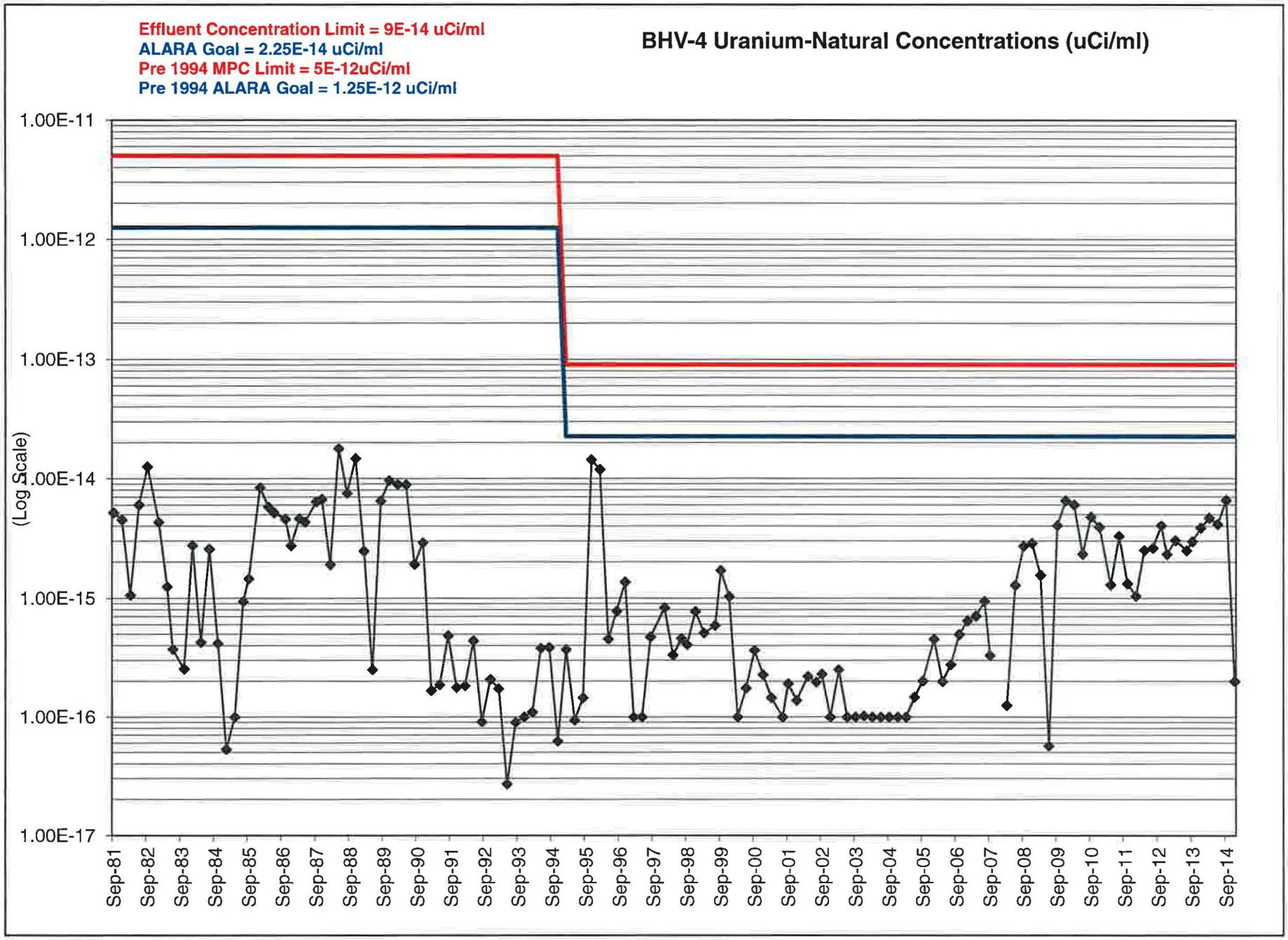
BHV-4 AIR SAMPLING GRAPHS AND DATA TABLE

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-4U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-4T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-4R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-4PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-4T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
9/28/1981	5.20E-15	5.00E-12	1.25E-12	2.93E-15	8.00E-14	2.00E-14	2.74E-15	2.00E-12	5.00E-13	1.84E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
12/14/1981	4.53E-15	5.00E-12	1.25E-12	1.78E-15	8.00E-14	2.00E-14	2.29E-15	2.00E-12	5.00E-13	2.54E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
3/29/1982	1.06E-15	5.00E-12	1.25E-12	1.42E-14	8.00E-14	2.00E-14	1.07E-15	2.00E-12	5.00E-13	2.31E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1982	6.03E-15	5.00E-12	1.25E-12	1.57E-14	8.00E-14	2.00E-14	2.62E-15	2.00E-12	5.00E-13	2.25E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/27/1982	1.26E-14	5.00E-12	1.25E-12	7.58E-16	8.00E-14	2.00E-14	5.35E-15	2.00E-12	5.00E-13	2.68E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/3/1983	4.33E-15	5.00E-12	1.25E-12	6.52E-16	8.00E-14	2.00E-14	6.04E-16	2.00E-12	5.00E-13	2.57E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/4/1983	1.25E-15	5.00E-12	1.25E-12	7.17E-16	8.00E-14	2.00E-14	6.76E-16	2.00E-12	5.00E-13	2.00E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1983	3.73E-16	5.00E-12	1.25E-12	9.43E-16	8.00E-14	2.00E-14	4.13E-16	2.00E-12	5.00E-13	1.20E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/3/1983	2.54E-16	5.00E-12	1.25E-12	1.51E-16	8.00E-14	2.00E-14	2.65E-16	2.00E-12	5.00E-13	2.50E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/3/1984	2.76E-15	5.00E-12	1.25E-12	1.60E-16	8.00E-14	2.00E-14	1.05E-16	2.00E-12	5.00E-13	1.59E-16	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/2/1984	4.27E-16	5.00E-12	1.25E-12	2.33E-16	8.00E-14	2.00E-14	6.28E-16	2.00E-12	5.00E-13	3.67E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
7/2/1984	2.57E-15	5.00E-12	1.25E-12	1.36E-16	8.00E-14	2.00E-14	1.11E-16	2.00E-12	5.00E-13	1.58E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/1/1984	4.18E-16	5.00E-12	1.25E-12	3.54E-16	8.00E-14	2.00E-14	1.10E-17	2.00E-12	5.00E-13	9.83E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/2/1985	5.30E-17	5.00E-12	1.25E-12	3.55E-17	8.00E-14	2.00E-14	7.00E-18	2.00E-12	5.00E-13	2.57E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/1/1985	1.00E-16	5.00E-12	1.25E-12	6.00E-16	8.00E-14	2.00E-14	4.35E-17	2.00E-12	5.00E-13	5.02E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
7/1/1985	9.36E-16	5.00E-12	1.25E-12	2.33E-16	8.00E-14	2.00E-14	2.36E-16	2.00E-12	5.00E-13	7.48E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/30/1985	1.46E-15	5.00E-12	1.25E-12	7.69E-16	8.00E-14	2.00E-14	5.38E-16	2.00E-12	5.00E-13	7.86E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/2/1986	8.40E-15	5.00E-12	1.25E-12	7.60E-16	8.00E-14	2.00E-14	2.99E-16	2.00E-12	5.00E-13	2.12E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/1/1986	5.79E-15	5.00E-12	1.25E-12	5.80E-16	8.00E-14	2.00E-14	1.34E-15	2.00E-12	5.00E-13	1.33E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1986	5.19E-15	5.00E-12	1.25E-12	7.83E-16	8.00E-14	2.00E-14	2.20E-15	2.00E-12	5.00E-13	7.14E-16	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/27/1986	4.60E-15	5.00E-12	1.25E-12	4.67E-16	8.00E-14	2.00E-14	2.37E-15	2.00E-12	5.00E-13	1.13E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
12/15/1986	2.75E-15	5.00E-12	1.25E-12	5.90E-16	8.00E-14	2.00E-14	9.39E-16	2.00E-12	5.00E-13	1.20E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
3/16/1987	4.64E-15	5.00E-12	1.25E-12	1.18E-15	8.00E-14	2.00E-14	4.97E-16	2.00E-12	5.00E-13	5.89E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/11/1987	4.35E-15	5.00E-12	1.25E-12	1.23E-14	8.00E-14	2.00E-14	1.13E-15	2.00E-12	5.00E-13	2.21E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/9/1987	6.39E-15	5.00E-12	1.25E-12	1.50E-14	8.00E-14	2.00E-14	2.26E-15	2.00E-12	5.00E-13	1.57E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/2/1987	6.72E-15	5.00E-12	1.25E-12	4.53E-16	8.00E-14	2.00E-14	2.20E-15	2.00E-12	5.00E-13	2.55E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/16/1988	1.91E-15	5.00E-12	1.25E-12	1.35E-14	8.00E-14	2.00E-14	4.42E-16	2.00E-12	5.00E-13	4.44E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/18/1988	1.78E-14	5.00E-12	1.25E-12	4.39E-14	8.00E-14	2.00E-14	4.92E-16	2.00E-12	5.00E-13	1.38E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/15/1988	7.56E-15	5.00E-12	1.25E-12	3.31E-14	8.00E-14	2.00E-14	1.51E-15	2.00E-12	5.00E-13	1.97E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/14/1988	1.47E-14	5.00E-12	1.25E-12	1.56E-15	8.00E-14	2.00E-14	2.57E-15	2.00E-12	5.00E-13	2.12E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/13/1989	2.47E-15	5.00E-12	1.25E-12	3.14E-15	8.00E-14	2.00E-14	6.94E-16	2.00E-12	5.00E-13	2.12E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/15/1989	2.50E-16	5.00E-12	1.25E-12	7.68E-15	8.00E-14	2.00E-14	9.03E-16	2.00E-12	5.00E-13	8.05E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/14/1989	6.50E-15	5.00E-12	1.25E-12	4.72E-15	8.00E-14	2.00E-14	2.35E-15	2.00E-12	5.00E-13	9.95E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/13/1989	9.63E-15	5.00E-12	1.25E-12	4.05E-15	8.00E-14	2.00E-14	4.03E-15	2.00E-12	5.00E-13	1.99E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/12/1990	8.92E-15	5.00E-12	1.25E-12	3.56E-15	8.00E-14	2.00E-14	2.89E-15	2.00E-12	5.00E-13	2.69E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/14/1990	8.90E-15	5.00E-12	1.25E-12	3.58E-15	8.00E-14	2.00E-14	2.33E-15	2.00E-12	5.00E-13	2.09E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/13/1990	1.92E-15	5.00E-12	1.25E-12	1.87E-15	8.00E-14	2.00E-14	5.06E-16	2.00E-12	5.00E-13	8.86E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/12/1990	2.91E-15	5.00E-12	1.25E-12	2.25E-17	8.00E-14	2.00E-14	1.08E-15	2.00E-12	5.00E-13	2.19E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/11/1991	1.67E-16	5.00E-12	1.25E-12	7.89E-16	8.00E-14	2.00E-14	6.38E-17	2.00E-12	5.00E-13	4.19E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/13/1991	1.87E-16	5.00E-12	1.25E-12	2.61E-15	8.00E-14	2.00E-14	3.54E-16	2.00E-12	5.00E-13	1.40E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/12/1991	4.85E-16	5.00E-12	1.25E-12	4.38E-16	8.00E-14	2.00E-14	1.27E-16	2.00E-12	5.00E-13	2.20E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/11/1991	1.77E-16	5.00E-12	1.25E-12	1.46E-16	8.00E-14	2.00E-14	3.76E-17	2.00E-12	5.00E-13	1.15E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/10/1992	1.83E-16	5.00E-12	1.25E-12	1.95E-15	8.00E-14	2.00E-14	1.33E-16	2.00E-12	5.00E-13	3.35E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/11/1992	4.40E-16	5.00E-12	1.25E-12	2.56E-16	8.00E-14	2.00E-14	4.04E-16	2.00E-12	5.00E-13	1.41E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/10/1992	9.09E-17	5.00E-12	1.25E-12	1.15E-16	8.00E-14	2.00E-14	4.50E-17	2.00E-12	5.00E-13	1.57E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/9/1992	2.07E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	3.62E-17	2.00E-12	5.00E-13	2.24E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/9/1993	1.73E-16	5.00E-12	1.25E-12	2.76E-17	8.00E-14	2.00E-14	2.89E-17	2.00E-12	5.00E-13	3.08E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/10/1993	2.70E-17	5.00E-12	1.25E-12	2.50E-17	8.00E-14	2.00E-14	8.74E-17	2.00E-12	5.00E-13	1.25E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/10/1993	9.00E-17	5.00E-12	1.25E-12	1.76E-16	8.00E-14	2.00E-14	0.00E+00	2.00E-12	5.00E-13	1.50E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/8/1993	1.00E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	6.00E-17	2.00E-12	5.00E-13	1.75E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-4U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-4T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-4R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-4PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-4T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
2/7/1994	1.10E-16	5.00E-12	1.25E-12	3.38E-16	8.00E-14	2.00E-14	2.21E-16	2.00E-12	5.00E-13	3.08E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/9/1994	3.80E-16	5.00E-12	1.25E-12	2.82E-16	8.00E-14	2.00E-14	3.46E-16	2.00E-12	5.00E-13	1.73E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/9/1994	3.85E-16	5.00E-12	1.25E-12	3.53E-16	8.00E-14	2.00E-14	1.00E-16	2.00E-12	5.00E-13	1.00E-16	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/7/1994	6.21E-17	5.00E-12	1.25E-12	9.70E-17	8.00E-14	2.00E-14	1.96E-16	2.00E-12	5.00E-13	1.00E-16	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/7/1995	3.70E-16	9.00E-14	2.25E-14	9.80E-17	2.00E-14	5.00E-15	9.70E-17	9.00E-13	2.25E-13	8.84E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/9/1995	9.40E-17	9.00E-14	2.25E-14	2.86E-16	2.00E-14	5.00E-15	1.90E-16	9.00E-13	2.25E-13	2.90E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/9/1995	1.45E-16	9.00E-14	2.25E-14	2.31E-15	2.00E-14	5.00E-15	7.10E-17	9.00E-13	2.25E-13	2.70E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
11/11/1995	1.43E-14	9.00E-14	2.25E-14	5.70E-15	2.00E-14	5.00E-15	2.61E-15	9.00E-13	2.25E-13	5.60E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
2/5/1996	1.19E-14	9.00E-14	2.25E-14	3.80E-16	2.00E-14	5.00E-15	6.10E-15	9.00E-13	2.25E-13	6.48E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/6/1996	4.55E-16	9.00E-14	2.25E-14	3.57E-15	2.00E-14	5.00E-15	2.84E-16	9.00E-13	2.25E-13	7.68E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/5/1996	7.78E-16	9.00E-14	2.25E-14	3.51E-15	2.00E-14	5.00E-15	1.69E-16	9.00E-13	2.25E-13	4.90E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
11/6/1996	1.36E-15	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	4.21E-16	9.00E-13	2.25E-13	1.10E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
2/6/1997	1.00E-16	9.00E-14	2.25E-14	1.40E-16	2.00E-14	5.00E-15	1.03E-16	9.00E-13	2.25E-13	6.76E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/5/1997	1.00E-16	9.00E-14	2.25E-14	4.00E-16	2.00E-14	5.00E-15	2.24E-16	9.00E-13	2.25E-13	4.55E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/11/1997	4.74E-16	9.00E-14	2.25E-14	9.07E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	5.55E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/5/1998	8.31E-16	9.00E-14	2.25E-14	4.82E-16	2.00E-14	5.00E-15	1.77E-16	9.00E-13	2.25E-13	5.28E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/28/1998	3.32E-16	9.00E-14	2.25E-14	4.43E-15	2.00E-14	5.00E-15	1.21E-16	9.00E-13	2.25E-13	7.43E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/31/1998	4.60E-16	9.00E-14	2.25E-14	9.02E-16	2.00E-14	5.00E-15	3.54E-16	9.00E-13	2.25E-13	6.91E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/28/1998	4.08E-16	9.00E-14	2.25E-14	4.93E-16	2.00E-14	5.00E-15	2.53E-16	9.00E-13	2.25E-13	4.52E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/28/1998	7.72E-16	9.00E-14	2.25E-14	3.75E-16	2.00E-14	5.00E-15	3.43E-16	9.00E-13	2.25E-13	6.73E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/29/1999	5.11E-16	9.00E-14	2.25E-14	4.70E-16	2.00E-14	5.00E-15	3.70E-16	9.00E-13	2.25E-13	8.96E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/3/1999	5.90E-16	9.00E-14	2.25E-14	9.89E-16	2.00E-14	5.00E-15	1.28E-16	9.00E-13	2.25E-13	6.40E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/27/1999	1.70E-15	9.00E-14	2.25E-14	7.50E-16	2.00E-14	5.00E-15	4.61E-16	9.00E-13	2.25E-13	7.86E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/28/1999	1.03E-15	9.00E-14	2.25E-14	7.50E-16	2.00E-14	5.00E-15	2.43E-16	9.00E-13	2.25E-13	6.42E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/27/2000	1.00E-16	9.00E-14	2.25E-14	2.13E-16	2.00E-14	5.00E-15	2.20E-16	9.00E-13	2.25E-13	5.61E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/26/2000	1.75E-16	9.00E-14	2.25E-14	3.08E-16	2.00E-14	5.00E-15	1.11E-16	9.00E-13	2.25E-13	3.92E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/26/2000	3.65E-16	9.00E-14	2.25E-14	2.01E-16	2.00E-14	5.00E-15	2.24E-16	9.00E-13	2.25E-13	7.79E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/26/2000	2.27E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	4.35E-16	9.00E-13	2.25E-13	8.45E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/26/2001	1.45E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.37E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2001	1.00E-16	9.00E-14	2.25E-14	1.05E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.99E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/24/2001	1.91E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	2.01E-16	9.00E-13	2.25E-13	8.04E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2001	1.38E-16	9.00E-14	2.25E-14	2.05E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.83E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/1/2002	2.20E-16	9.00E-14	2.25E-14	3.38E-16	2.00E-14	5.00E-15	1.26E-16	9.00E-13	2.25E-13	7.48E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/1/2002	1.97E-16	9.00E-14	2.25E-14	4.10E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.40E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2002	2.30E-16	9.00E-14	2.25E-14	2.42E-16	2.00E-14	5.00E-15	1.56E-16	9.00E-13	2.25E-13	4.21E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/30/2002	1.00E-16	9.00E-14	2.25E-14	1.92E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	9.42E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2003	2.50E-16	9.00E-14	2.25E-14	1.69E-16	2.00E-14	5.00E-15	1.29E-16	9.00E-13	2.25E-13	4.55E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2003	1.00E-16	9.00E-14	2.25E-14	2.87E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	4.20E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/29/2003	1.00E-16	9.00E-14	2.25E-14	8.53E-16	2.00E-14	5.00E-15	3.32E-16	9.00E-13	2.25E-13	8.69E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/29/2003	1.02E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.49E-15	9.00E-13	2.25E-13	9.45E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/29/2004	1.00E-16	9.00E-14	2.25E-14	1.26E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	2.00E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/27/2004	1.00E-16	9.00E-14	2.25E-14	2.53E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	3.23E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/27/2004	1.00E-16	9.00E-14	2.25E-14	1.15E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	9.68E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/27/2004	1.00E-16	9.00E-14	2.25E-14	2.30E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.37E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/28/2005	1.00E-16	9.00E-14	2.25E-14	2.66E-16	2.00E-14	5.00E-15	3.15E-16	9.00E-13	2.25E-13	9.22E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/29/2005	1.47E-16	9.00E-14	2.25E-14	1.45E-15	2.00E-14	5.00E-15	1.42E-16	9.00E-13	2.25E-13	9.34E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/26/2005	2.01E-16	9.00E-14	2.25E-14	2.06E-16	2.00E-14	5.00E-15	4.80E-16	9.00E-13	2.25E-13	2.12E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/3/2006	4.54E-16	9.00E-14	2.25E-14	1.24E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	3.60E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/3/2006	1.99E-16	9.00E-14	2.25E-14	1.32E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.36E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/3/2006	2.76E-16	9.00E-14	2.25E-14	2.63E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.03E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-4U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-4T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-4R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-4PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-4T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
10/2/2006	4.97E-16	9.00E-14	2.25E-14	2.37E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.60E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/1/2007	6.46E-16	9.00E-14	2.25E-14	2.81E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	2.10E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/2/2007	7.08E-16	9.00E-14	2.25E-14	3.20E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.54E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2007	9.41E-16	9.00E-14	2.25E-14	1.46E-16	2.00E-14	5.00E-15	1.99E-16	9.00E-13	2.25E-13	2.56E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2007	3.30E-16	9.00E-14	2.25E-14	5.50E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.57E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2007	1.42 E-15	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	9.93E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2008	1.25E-16	9.00E-14	2.25E-14	7.72E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	4.09E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2008	1.28E-15	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	3.61E-16	9.00E-13	2.25E-13	1.18E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2008	2.72E-15	9.00E-14	2.25E-14	1.27E-15	2.00E-14	5.00E-15	7.66E-16	9.00E-13	2.25E-13	1.10E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2008	2.88E-15	9.00E-14	2.25E-14	1.10E-15	2.00E-14	5.00E-15	6.56E-16	9.00E-13	2.25E-13	1.38E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/15/2009	1.56E-15	9.00E-14	2.25E-14	4.57E-16	2.00E-14	5.00E-15	2.99E-16	9.00E-13	2.25E-13	4.97E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/15/2009	5.67E-17	9.00E-14	2.25E-14	2.17E-16	2.00E-14	5.00E-15	1.51E-16	9.00E-13	2.25E-13	4.47E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/15/2009	4.05E-15	9.00E-14	2.25E-14	1.45E-15	2.00E-14	5.00E-15	2.52E-16	9.00E-13	2.25E-13	1.24E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/15/2009	6.50E-15	9.00E-14	2.25E-14	3.48E-16	2.00E-14	5.00E-15	1.33E-16	9.00E-13	2.25E-13	7.60E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2010	6.01E-15	9.00E-14	2.25E-14	1.26E-16	2.00E-14	5.00E-15	1.34E-16	9.00E-13	2.25E-13	1.19E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2010	2.33E-15	9.00E-14	2.25E-14	7.29E-16	2.00E-14	5.00E-15	2.66E-16	9.00E-13	2.25E-13	3.27E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2010	4.77E-15	9.00E-14	2.25E-14	1.80E-15	2.00E-14	5.00E-15	8.23E-16	9.00E-13	2.25E-13	5.11E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2010	3.93E-15	9.00E-14	2.25E-14	3.90E-16	2.00E-14	5.00E-15	2.56E-16	9.00E-13	2.25E-13	1.13E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/4/2011	1.29E-15	9.00E-14	2.25E-14	1.40E-16	2.00E-14	5.00E-15	1.58E-16	9.00E-13	2.25E-13	1.11E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/4/2011	3.30E-15	9.00E-14	2.25E-14	5.44E-16	2.00E-14	5.00E-15	4.18E-16	9.00E-13	2.25E-13	8.26E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/3/2011	1.32E-15	9.00E-14	2.25E-14	7.89E-16	2.00E-14	5.00E-15	1.28E-16	9.00E-13	2.25E-13	1.18E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/3/2012	1.04E-15	9.00E-14	2.25E-14	3.25E-16	2.00E-14	5.00E-15	2.28E-16	9.00E-13	2.25E-13	1.14E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/3/2012	2.51E-15	9.00E-14	2.25E-14	5.02E-16	2.00E-14	5.00E-15	2.27E-16	9.00E-13	2.25E-13	1.03E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2012	2.62E-15	9.00E-14	2.25E-14	1.23E-15	2.00E-14	5.00E-15	2.97E-16	9.00E-13	2.25E-13	9.27E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/1/2012	4.05E-15	9.00E-14	2.25E-14	8.33E-16	2.00E-14	5.00E-15	5.43E-16	9.00E-13	2.25E-13	1.21E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2012	2.32E-15	9.00E-14	2.25E-14	5.89E-16	2.00E-14	5.00E-15	3.75E-16	9.00E-13	2.25E-13	1.56E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/25/2013	3.04E-15	9.00E-14	2.25E-14	4.99E-16	2.00E-14	5.00E-15	2.79E-16	9.00E-13	2.25E-13	2.13E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2013	2.50E-15	9.00E-14	2.25E-14	3.62E-16	2.00E-14	5.00E-15	2.40E-16	9.00E-13	2.25E-13	4.93E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2013	2.98E-15	9.00E-14	2.25E-14	4.49E-16	2.00E-14	5.00E-15	1.54E-16	9.00E-13	2.25E-13	7.49E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/30/2013	3.88E-15	9.00E-14	2.25E-14	1.03E-16	2.00E-14	5.00E-15	4.47E-17	9.00E-13	2.25E-13	2.93E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2014	4.69E-15	9.00E-14	2.25E-14	1.37E-16	2.00E-14	5.00E-15	3.53E-16	9.00E-13	2.25E-13	1.08E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2014	4.16E-15	9.00E-14	2.25E-14	6.96E-16	2.00E-14	5.00E-15	1.77E-15	9.00E-13	2.25E-13	1.06E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2014	6.56E-15	9.00E-14	2.25E-14	2.73E-16	2.00E-14	5.00E-15	2.77E-16	9.00E-13	2.25E-13	1.11E-14	6.00E-13	1.50E-13	1.01E-17	4.00E-15	1.00E-15
12/29/2014	2.00E-16	9.00E-14	2.25E-14	4.00E-17	2.00E-14	5.00E-15	4.00E-17	9.00E-13	2.25E-13	1.90E-14	6.00E-13	1.50E-13	1.00E-17	4.00E-15	1.00E-15


BHV-4 Radionuclide Concentrations (uCi/ml)
(Log Scale)
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
Sep-03
Sep-04
Sep-05
Sep-06
Sep-07
Sep-08
Sep-09
Sep-10
Sep-11
Sep-12
Sep-13
Sep-14
Uranium Natural
Thorium-230
Radium-226
Lead-210
Thorium-232


Effluent Concentration Limit = 9E-14 uCi/ml
ALARA Goal = 2.25E-14 uCi/ml
Pre 1994 MPC Limit = 5E-12uCi/ml
Pre 1994 ALARA Goal = 1.25E-12 uCi/ml
BHV-4 Uranium-Natural Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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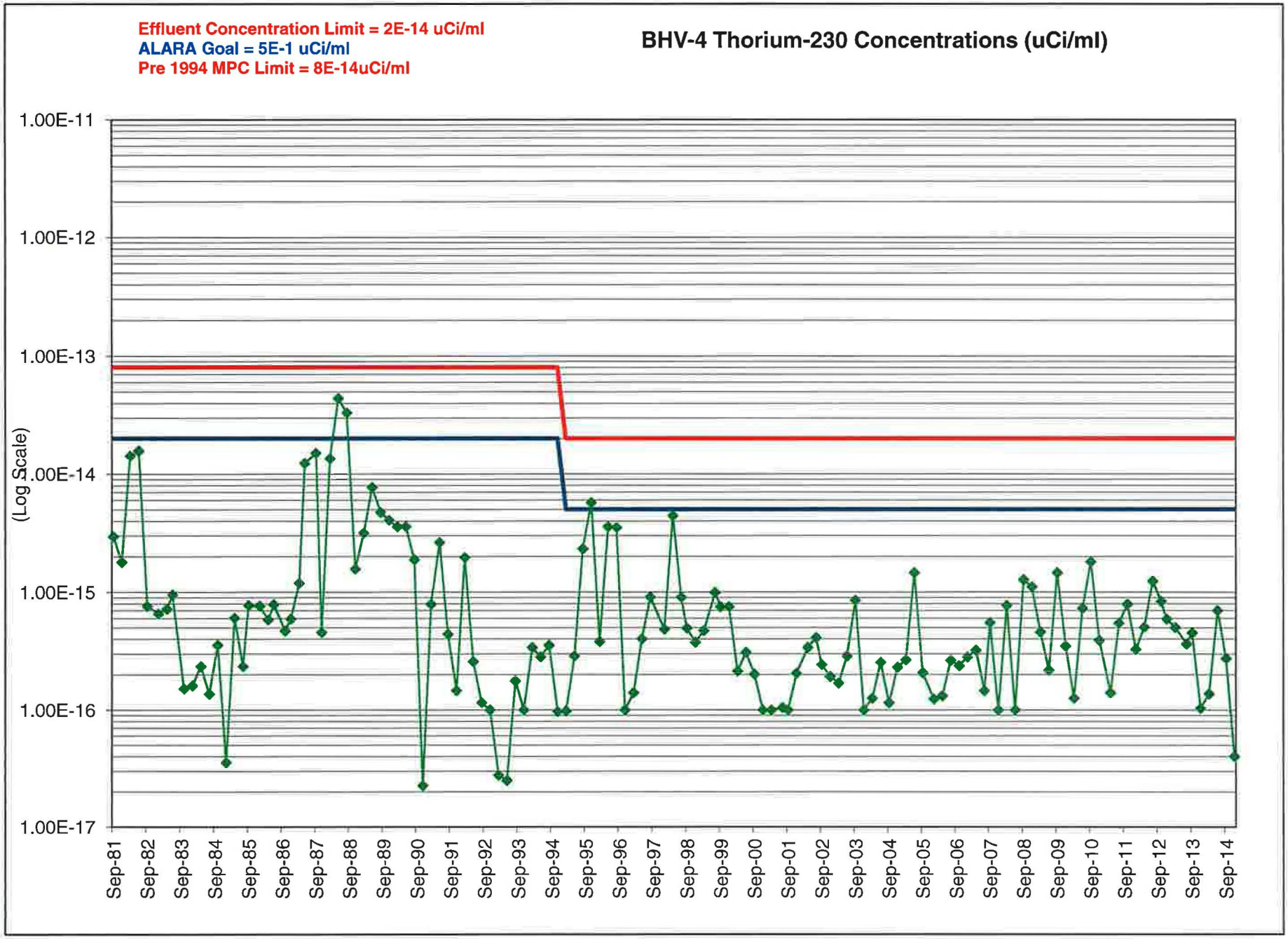
Sep-10
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 2E-14 uCi/ml
ALARA Goal = 5E-1 uCi/ml
Pre 1994 MPC Limit = 8E-14uCi/ml
BHV-4 Thorium-230 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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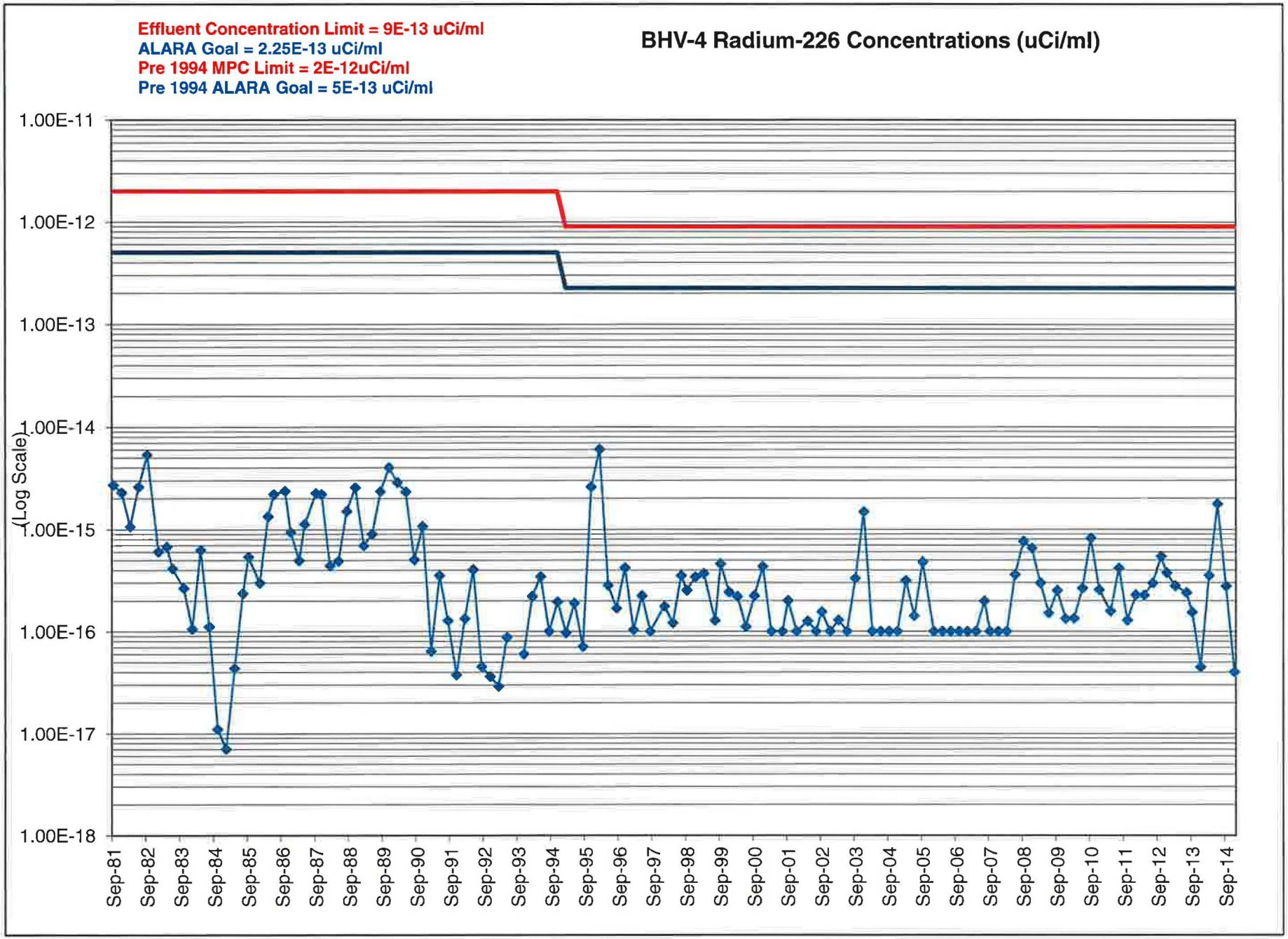
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 9E-13 uCi/ml
ALARA Goal = 2.25E-13 uCi/ml
Pre 1994 MPC Limit = 2E-12uCi/ml
Pre 1994 ALARA Goal = 5E-13 uCi/ml
BHV-4 Radium-226 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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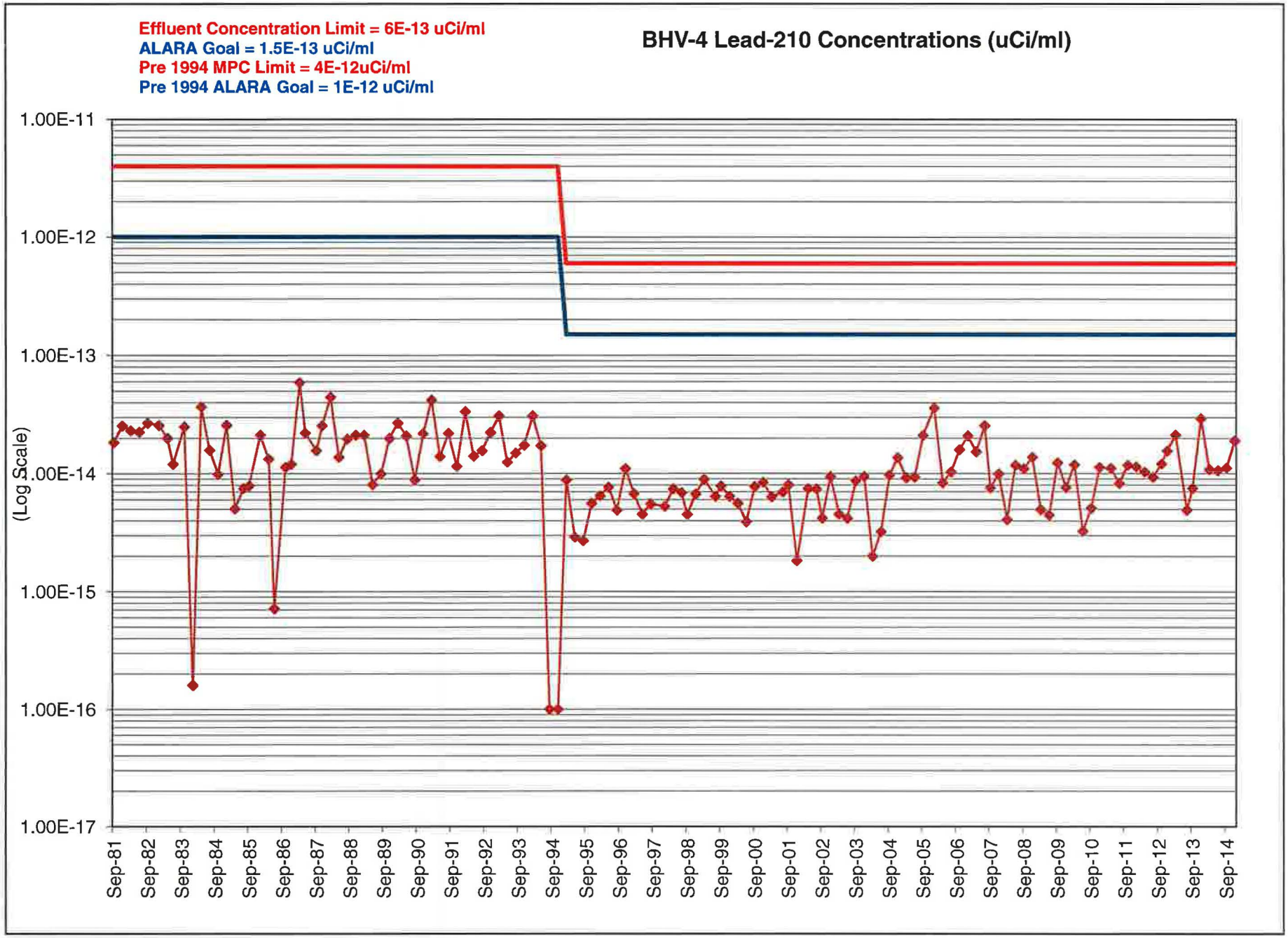
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 6E-13 uCi/ml
ALARA Goal = 1.5E-13 uCi/ml
Pre 1994 MPC Limit = 4E-12uCi/ml
Pre 1994 ALARA Goal = 1E-12 uCi/ml
BHV-4 Lead-210 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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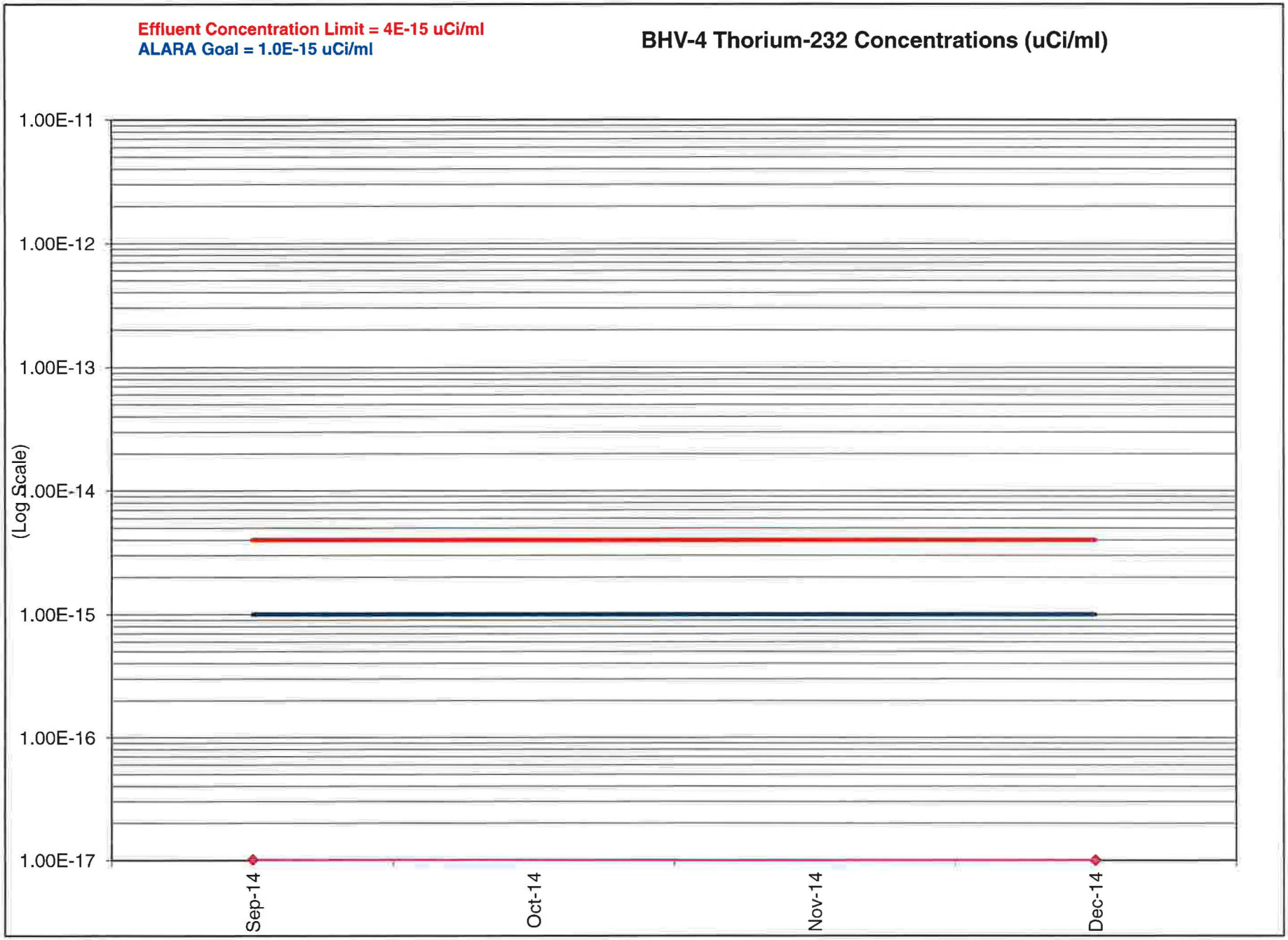
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 4E-15 uCi/ml
ALARA Goal = 1.0E-15 uCi/ml
BHV-4 Thorium-232 Concentrations (uCi/ml)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
(Log Scale)
Sep-14
Oct-14
Nov-14
Dec-14

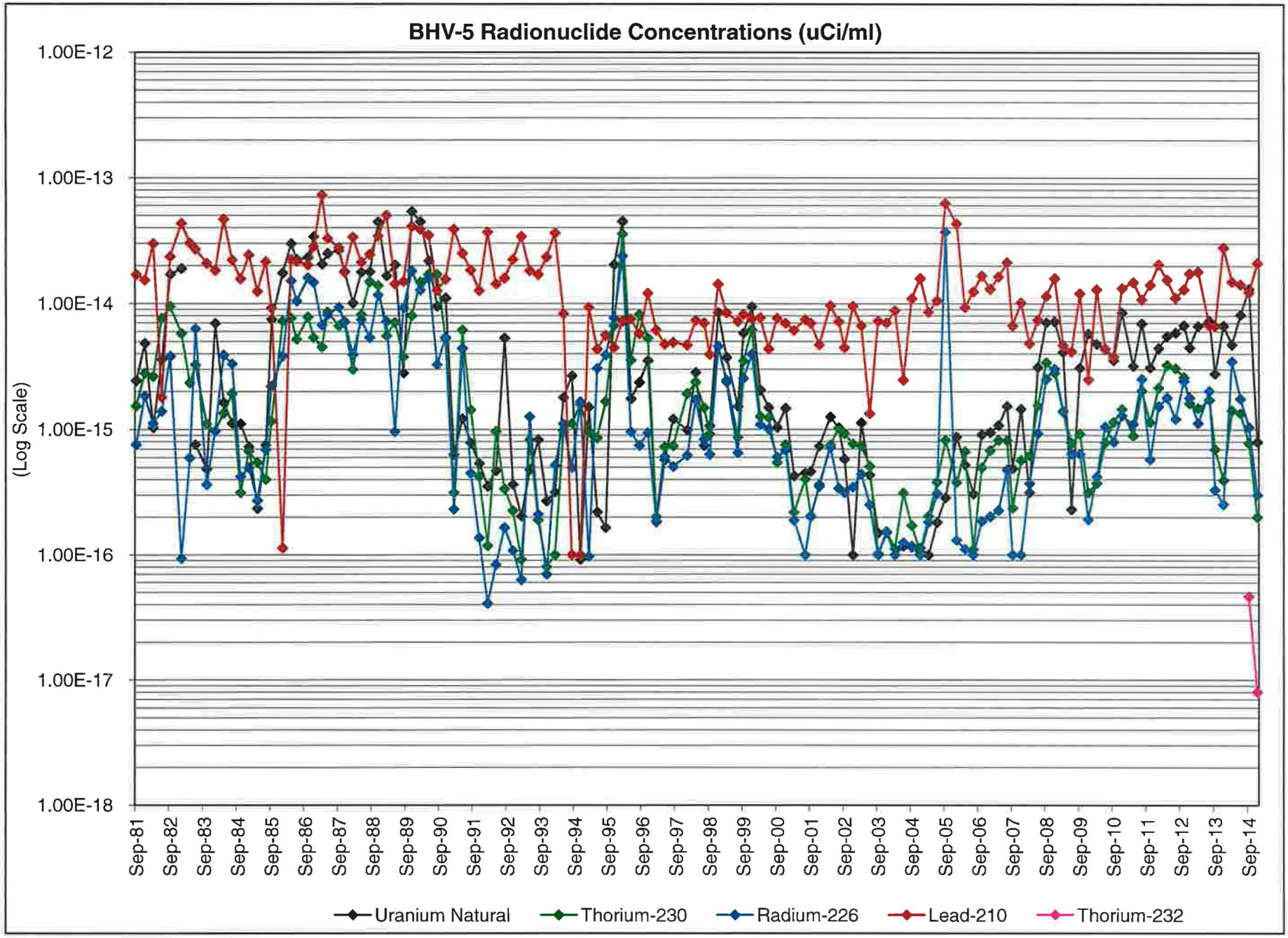
TAB 5

BHV-5 AIR SAMPLING GRAPHS AND DATA TABLE

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-5U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-5T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-5R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-5PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-5T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
9/28/1981	2.44E-15	5.00E-12	1.25E-12	1.53E-15	8.00E-14	2.00E-14	7.54E-16	2.00E-12	5.00E-13	1.69E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
12/14/1981	4.84E-15	5.00E-12	1.25E-12	2.78E-15	8.00E-14	2.00E-14	1.84E-15	2.00E-12	5.00E-13	1.53E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
3/29/1982	1.04E-15	5.00E-12	1.25E-12	2.62E-15	8.00E-14	2.00E-14	1.11E-15	2.00E-12	5.00E-13	2.98E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1982	3.61E-15	5.00E-12	1.25E-12	7.61E-15	8.00E-14	2.00E-14	1.39E-15	2.00E-12	5.00E-13	1.80E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/27/1982	1.71E-14	5.00E-12	1.25E-12	9.46E-15	8.00E-14	2.00E-14	3.80E-15	2.00E-12	5.00E-13	2.35E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/3/1983	1.90E-14	5.00E-12	1.25E-12	5.77E-15	8.00E-14	2.00E-14	9.34E-17	2.00E-12	5.00E-13	4.32E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/4/1983		5.00E-12	1.25E-12	2.33E-15	8.00E-14	2.00E-14	5.93E-16	2.00E-12	5.00E-13	3.01E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1983	7.62E-16	5.00E-12	1.25E-12	3.25E-15	8.00E-14	2.00E-14	6.28E-15	2.00E-12	5.00E-13	2.69E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/3/1983	4.86E-16	5.00E-12	1.25E-12	1.10E-15	8.00E-14	2.00E-14	3.63E-16	2.00E-12	5.00E-13	2.08E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/3/1984	6.96E-15	5.00E-12	1.25E-12	9.69E-16	8.00E-14	2.00E-14	9.60E-16	2.00E-12	5.00E-13	1.83E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/2/1984	1.64E-15	5.00E-12	1.25E-12	1.34E-15	8.00E-14	2.00E-14	3.88E-15	2.00E-12	5.00E-13	4.67E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
7/2/1984	1.12E-15	5.00E-12	1.25E-12	1.92E-15	8.00E-14	2.00E-14	3.31E-15	2.00E-12	5.00E-13	2.21E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/1/1984	1.11E-15	5.00E-12	1.25E-12	3.13E-16	8.00E-14	2.00E-14	4.21E-16	2.00E-12	5.00E-13	1.57E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/2/1985	7.32E-16	5.00E-12	1.25E-12	6.71E-16	8.00E-14	2.00E-14	4.94E-16	2.00E-12	5.00E-13	2.42E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/1/1985	2.36E-16	5.00E-12	1.25E-12	5.43E-16	8.00E-14	2.00E-14	2.71E-16	2.00E-12	5.00E-13	1.25E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
7/1/1985	7.58E-16	5.00E-12	1.25E-12	4.00E-16	8.00E-14	2.00E-14	6.90E-16	2.00E-12	5.00E-13	2.15E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/30/1985	7.47E-15	5.00E-12	1.25E-12	1.16E-15	8.00E-14	2.00E-14	2.19E-15	2.00E-12	5.00E-13	9.20E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/2/1986	1.75E-14	5.00E-12	1.25E-12	7.24E-15	8.00E-14	2.00E-14	3.83E-15	2.00E-12	5.00E-13	1.13E-16	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/1/1986	2.99E-14	5.00E-12	1.25E-12	7.64E-15	8.00E-14	2.00E-14	1.51E-14	2.00E-12	5.00E-13	2.22E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1986	2.23E-14	5.00E-12	1.25E-12	5.19E-15	8.00E-14	2.00E-14	1.05E-14	2.00E-12	5.00E-13	2.16E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/27/1986	2.33E-14	5.00E-12	1.25E-12	7.78E-15	8.00E-14	2.00E-14	1.60E-14	2.00E-12	5.00E-13	2.02E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
12/15/1986	3.40E-14	5.00E-12	1.25E-12	5.35E-15	8.00E-14	2.00E-14	1.47E-14	2.00E-12	5.00E-13	2.82E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
3/16/1987	2.06E-14	5.00E-12	1.25E-12	4.50E-15	8.00E-14	2.00E-14	6.74E-15	2.00E-12	5.00E-13	7.29E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/11/1987	2.50E-14	5.00E-12	1.25E-12	8.54E-15	8.00E-14	2.00E-14	8.15E-15	2.00E-12	5.00E-13	3.28E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/9/1987	2.65E-14	5.00E-12	1.25E-12	6.62E-15	8.00E-14	2.00E-14	9.34E-15	2.00E-12	5.00E-13	2.77E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/2/1987	1.80E-14	5.00E-12	1.25E-12	7.09E-15	8.00E-14	2.00E-14	7.20E-15	2.00E-12	5.00E-13	1.77E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/16/1988	1.01E-14	5.00E-12	1.25E-12	2.98E-15	8.00E-14	2.00E-14	3.93E-15	2.00E-12	5.00E-13	3.36E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/18/1988	1.78E-14	5.00E-12	1.25E-12	8.14E-15	8.00E-14	2.00E-14	7.43E-15	2.00E-12	5.00E-13	2.12E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/15/1988	1.79E-14	5.00E-12	1.25E-12	1.49E-14	8.00E-14	2.00E-14	5.34E-15	2.00E-12	5.00E-13	2.45E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/14/1988	4.46E-14	5.00E-12	1.25E-12	1.39E-14	8.00E-14	2.00E-14	1.17E-14	2.00E-12	5.00E-13	3.43E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/13/1989	1.67E-14	5.00E-12	1.25E-12	5.54E-15	8.00E-14	2.00E-14	7.20E-15	2.00E-12	5.00E-13	5.02E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/15/1989	2.03E-14	5.00E-12	1.25E-12	7.05E-15	8.00E-14	2.00E-14	9.56E-16	2.00E-12	5.00E-13	1.43E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/14/1989	2.81E-15	5.00E-12	1.25E-12	3.78E-15	8.00E-14	2.00E-14	9.26E-15	2.00E-12	5.00E-13	1.50E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/13/1989	5.38E-14	5.00E-12	1.25E-12	8.01E-15	8.00E-14	2.00E-14	1.81E-14	2.00E-12	5.00E-13	4.09E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/12/1990	4.48E-14	5.00E-12	1.25E-12	1.48E-14	8.00E-14	2.00E-14	1.28E-14	2.00E-12	5.00E-13	3.88E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/14/1990	2.18E-14	5.00E-12	1.25E-12	1.70E-14	8.00E-14	2.00E-14	1.59E-14	2.00E-12	5.00E-13	3.49E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/13/1990	9.53E-15	5.00E-12	1.25E-12	1.70E-14	8.00E-14	2.00E-14	3.27E-15	2.00E-12	5.00E-13	1.27E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/12/1990	1.11E-14	5.00E-12	1.25E-12	5.27E-15	8.00E-14	2.00E-14	5.38E-15	2.00E-12	5.00E-13	1.56E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/11/1991	6.35E-16	5.00E-12	1.25E-12	3.13E-16	8.00E-14	2.00E-14	2.31E-16	2.00E-12	5.00E-13	3.89E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/13/1991	1.22E-15	5.00E-12	1.25E-12	6.14E-15	8.00E-14	2.00E-14	4.41E-15	2.00E-12	5.00E-13	2.50E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/12/1991	7.84E-16	5.00E-12	1.25E-12	1.43E-15	8.00E-14	2.00E-14	4.47E-16	2.00E-12	5.00E-13	1.84E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/11/1991	5.37E-16	5.00E-12	1.25E-12	4.20E-16	8.00E-14	2.00E-14	1.37E-16	2.00E-12	5.00E-13	1.27E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/10/1992	3.54E-16	5.00E-12	1.25E-12	1.18E-16	8.00E-14	2.00E-14	4.08E-17	2.00E-12	5.00E-13	3.69E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/11/1992	4.71E-16	5.00E-12	1.25E-12	9.58E-16	8.00E-14	2.00E-14	8.31E-17	2.00E-12	5.00E-13	1.43E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/10/1992	5.32E-15	5.00E-12	1.25E-12	3.36E-16	8.00E-14	2.00E-14	1.65E-16	2.00E-12	5.00E-13	1.59E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/9/1992	3.66E-16	5.00E-12	1.25E-12	2.25E-16	8.00E-14	2.00E-14	1.08E-16	2.00E-12	5.00E-13	2.24E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/9/1993	2.05E-16	5.00E-12	1.25E-12	9.14E-17	8.00E-14	2.00E-14	6.31E-17	2.00E-12	5.00E-13	3.41E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/10/1993	4.80E-16	5.00E-12	1.25E-12	8.25E-16	8.00E-14	2.00E-14	1.26E-15	2.00E-12	5.00E-13	1.83E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/10/1993	8.30E-16	5.00E-12	1.25E-12	1.90E-16	8.00E-14	2.00E-14	2.10E-16	2.00E-12	5.00E-13	1.70E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-5U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-5T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-5R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-5PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-5T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
11/8/1993	2.70E-16	5.00E-12	1.25E-12	8.00E-17	8.00E-14	2.00E-14	7.00E-17	2.00E-12	5.00E-13	2.34E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/7/1994	3.18E-16	5.00E-12	1.25E-12	1.00E-16	8.00E-14	2.00E-14	5.18E-16	2.00E-12	5.00E-13	3.64E-14	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/9/1994	1.80E-15	5.00E-12	1.25E-12	9.78E-16	8.00E-14	2.00E-14	1.10E-15	2.00E-12	5.00E-13	8.30E-15	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/9/1994	2.67E-15	5.00E-12	1.25E-12	1.11E-15	8.00E-14	2.00E-14	4.95E-16	2.00E-12	5.00E-13	1.00E-16	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/7/1994	9.21E-17	5.00E-12	1.25E-12	1.59E-15	8.00E-14	2.00E-14	1.66E-15	2.00E-12	5.00E-13	1.00E-16	4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/7/1995	1.51E-15	9.00E-14	2.25E-14	9.50E-16	2.00E-14	5.00E-15	9.70E-17	9.00E-13	2.25E-13	9.35E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/9/1995	2.21E-16	9.00E-14	2.25E-14	8.56E-16	2.00E-14	5.00E-15	3.06E-15	9.00E-13	2.25E-13	4.34E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/9/1995	1.66E-16	9.00E-14	2.25E-14	1.67E-15	2.00E-14	5.00E-15	3.90E-15	9.00E-13	2.25E-13	5.60E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
11/11/1995	2.04E-14	9.00E-14	2.25E-14	6.70E-15	2.00E-14	5.00E-15	7.65E-15	9.00E-13	2.25E-13	4.47E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
2/5/1996	4.50E-14	9.00E-14	2.25E-14	3.58E-14	2.00E-14	5.00E-15	2.39E-14	9.00E-13	2.25E-13	7.30E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/6/1996	1.76E-15	9.00E-14	2.25E-14	3.57E-15	2.00E-14	5.00E-15	9.55E-16	9.00E-13	2.25E-13	7.54E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/5/1996	2.37E-15	9.00E-14	2.25E-14	8.18E-15	2.00E-14	5.00E-15	7.46E-16	9.00E-13	2.25E-13	5.75E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
11/6/1996	3.53E-15	9.00E-14	2.25E-14	5.31E-15	2.00E-14	5.00E-15	9.39E-16	9.00E-13	2.25E-13	1.21E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
2/6/1997	1.84E-16	9.00E-14	2.25E-14	2.01E-16	2.00E-14	5.00E-15	1.87E-16	9.00E-13	2.25E-13	6.14E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/5/1997	5.75E-16	9.00E-14	2.25E-14	7.24E-16	2.00E-14	5.00E-15	6.07E-16	9.00E-13	2.25E-13	4.75E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/11/1997	1.21E-15	9.00E-14	2.25E-14	7.39E-16	2.00E-14	5.00E-15	5.05E-16	9.00E-13	2.25E-13	4.92E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/5/1998	9.89E-16	9.00E-14	2.25E-14	1.92E-15	2.00E-14	5.00E-15	6.21E-16	9.00E-13	2.25E-13	4.68E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/28/1998	2.84E-15	9.00E-14	2.25E-14	2.38E-15	2.00E-14	5.00E-15	1.72E-15	9.00E-13	2.25E-13	7.35E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/31/1998	7.49E-16	9.00E-14	2.25E-14	1.49E-15	2.00E-14	5.00E-15	8.34E-16	9.00E-13	2.25E-13	7.01E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/28/1998	1.07E-15	9.00E-14	2.25E-14	9.20E-16	2.00E-14	5.00E-15	6.32E-16	9.00E-13	2.25E-13	3.95E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/28/1998	8.51E-15	9.00E-14	2.25E-14	4.58E-15	2.00E-14	5.00E-15	4.58E-15	9.00E-13	2.25E-13	1.43E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/29/1999	3.75E-15	9.00E-14	2.25E-14	2.45E-15	2.00E-14	5.00E-15	2.39E-15	9.00E-13	2.25E-13	8.46E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/3/1999	1.53E-15	9.00E-14	2.25E-14	8.65E-16	2.00E-14	5.00E-15	6.52E-16	9.00E-13	2.25E-13	7.20E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/27/1999	5.83E-15	9.00E-14	2.25E-14	3.52E-15	2.00E-14	5.00E-15	2.55E-15	9.00E-13	2.25E-13	8.22E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/28/1999	9.48E-15	9.00E-14	2.25E-14	6.20E-15	2.00E-14	5.00E-15	3.96E-15	9.00E-13	2.25E-13	7.56E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/27/2000	2.06E-15	9.00E-14	2.25E-14	1.27E-15	2.00E-14	5.00E-15	1.09E-15	9.00E-13	2.25E-13	7.72E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/26/2000	1.50E-15	9.00E-14	2.25E-14	1.24E-15	2.00E-14	5.00E-15	1.01E-15	9.00E-13	2.25E-13	4.36E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/26/2000	1.04E-15	9.00E-14	2.25E-14	5.45E-16	2.00E-14	5.00E-15	6.01E-16	9.00E-13	2.25E-13	7.67E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/26/2000	1.48E-15	9.00E-14	2.25E-14	7.56E-16	2.00E-14	5.00E-15	6.84E-16	9.00E-13	2.25E-13	7.00E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/26/2001	4.27E-16	9.00E-14	2.25E-14	2.19E-16	2.00E-14	5.00E-15	1.89E-16	9.00E-13	2.25E-13	6.13E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2001	4.52E-16	9.00E-14	2.25E-14	4.02E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.48E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/24/2001	4.65E-16	9.00E-14	2.25E-14	2.06E-16	2.00E-14	5.00E-15	2.02E-16	9.00E-13	2.25E-13	6.98E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2001	7.40E-16	9.00E-14	2.25E-14	3.51E-16	2.00E-14	5.00E-15	3.64E-16	9.00E-13	2.25E-13	4.72E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/1/2002	1.26E-15	9.00E-14	2.25E-14	7.53E-16	2.00E-14	5.00E-15	7.19E-16	9.00E-13	2.25E-13	9.65E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/1/2002	1.02E-15	9.00E-14	2.25E-14	1.03E-15	2.00E-14	5.00E-15	3.39E-16	9.00E-13	2.25E-13	7.20E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2002	5.82E-16	9.00E-14	2.25E-14	9.28E-16	2.00E-14	5.00E-15	3.14E-16	9.00E-13	2.25E-13	4.48E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/30/2002	1.00E-16	9.00E-14	2.25E-14	7.67E-16	2.00E-14	5.00E-15	3.48E-16	9.00E-13	2.25E-13	9.56E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2003	1.13E-15	9.00E-14	2.25E-14	7.41E-16	2.00E-14	5.00E-15	4.41E-16	9.00E-13	2.25E-13	6.68E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2003	4.35E-16	9.00E-14	2.25E-14	5.08E-16	2.00E-14	5.00E-15	2.51E-16	9.00E-13	2.25E-13	1.34E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/29/2003	1.51E-16	9.00E-14	2.25E-14	1.02E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.28E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/29/2003	1.52E-16	9.00E-14	2.25E-14	1.54E-16	2.00E-14	5.00E-15	1.51E-16	9.00E-13	2.25E-13	7.02E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/29/2004	1.00E-16	9.00E-14	2.25E-14	1.12E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.82E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/27/2004	1.18E-16	9.00E-14	2.25E-14	3.11E-16	2.00E-14	5.00E-15	1.25E-16	9.00E-13	2.25E-13	2.47E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/27/2004	1.16E-16	9.00E-14	2.25E-14	1.72E-16	2.00E-14	5.00E-15	1.18E-16	9.00E-13	2.25E-13	1.10E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/27/2004	1.14E-16	9.00E-14	2.25E-14	1.06E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.59E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/28/2005	1.00E-16	9.00E-14	2.25E-14	2.04E-16	2.00E-14	5.00E-15	1.83E-16	9.00E-13	2.25E-13	8.57E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/29/2005	1.83E-16	9.00E-14	2.25E-14	3.81E-16	2.00E-14	5.00E-15	3.09E-16	9.00E-13	2.25E-13	1.06E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/26/2005	2.87E-16	9.00E-14	2.25E-14	8.21E-16	2.00E-14	5.00E-15	3.71E-14	9.00E-13	2.25E-13	6.28E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/3/2006	8.74E-16	9.00E-14	2.25E-14	3.79E-16	2.00E-14	5.00E-15	1.31E-16	9.00E-13	2.25E-13	4.32E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-5U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-5T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-5R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-5PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-5T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-15 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
4/3/2006	5.22E-16	9.00E-14	2.25E-14	6.66E-16	2.00E-14	5.00E-15	1.11E-16	9.00E-13	2.25E-13	9.34E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/3/2006	3.08E-16	9.00E-14	2.25E-14	1.10E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.25E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/2/2006	9.14E-16	9.00E-14	2.25E-14	4.95E-16	2.00E-14	5.00E-15	1.86E-16	9.00E-13	2.25E-13	1.67E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/1/2007	9.49E-16	9.00E-14	2.25E-14	6.81E-16	2.00E-14	5.00E-15	2.02E-16	9.00E-13	2.25E-13	1.31E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/2/2007	1.08E-15	9.00E-14	2.25E-14	8.22E-16	2.00E-14	5.00E-15	2.26E-16	9.00E-13	2.25E-13	1.64E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2007	1.54E-15	9.00E-14	2.25E-14	8.16E-16	2.00E-14	5.00E-15	4.76E-16	9.00E-13	2.25E-13	2.12E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2007	4.90E-16	9.00E-14	2.25E-14	2.37E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.65E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2007	1.46E-15	9.00E-14	2.25E-14	5.67E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.02E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2008	3.16E-16	9.00E-14	2.25E-14	6.17E-16	2.00E-14	5.00E-15	3.71E-16	9.00E-13	2.25E-13	4.82E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2008	3.13E-15	9.00E-14	2.25E-14	1.55E-15	2.00E-14	5.00E-15	9.27E-16	9.00E-13	2.25E-13	7.40E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2008	7.08E-15	9.00E-14	2.25E-14	3.41E-15	2.00E-14	5.00E-15	2.52E-15	9.00E-13	2.25E-13	1.15E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2008	7.22E-15	9.00E-14	2.25E-14	2.82E-15	2.00E-14	5.00E-15	3.03E-15	9.00E-13	2.25E-13	1.59E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/15/2009	4.13E-15	9.00E-14	2.25E-14	1.39E-15	2.00E-14	5.00E-15	1.41E-15	9.00E-13	2.25E-13	4.66E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/15/2009	2.31E-16	9.00E-14	2.25E-14	7.79E-16	2.00E-14	5.00E-15	6.37E-16	9.00E-13	2.25E-13	4.18E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/15/2009	3.10E-15	9.00E-14	2.25E-14	9.20E-16	2.00E-14	5.00E-15	6.36E-16	9.00E-13	2.25E-13	1.21E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/15/2009	5.77E-15	9.00E-14	2.25E-14	3.13E-16	2.00E-14	5.00E-15	1.92E-16	9.00E-13	2.25E-13	2.48E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2010	4.78E-15	9.00E-14	2.25E-14	3.73E-16	2.00E-14	5.00E-15	4.19E-16	9.00E-13	2.25E-13	1.30E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2010	4.35E-15	9.00E-14	2.25E-14	7.84E-16	2.00E-14	5.00E-15	1.05E-15	9.00E-13	2.25E-13	4.40E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2010	3.57E-15	9.00E-14	2.25E-14	1.14E-15	2.00E-14	5.00E-15	7.97E-16	9.00E-13	2.25E-13	3.78E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2010	8.52E-15	9.00E-14	2.25E-14	1.45E-15	2.00E-14	5.00E-15	1.29E-15	9.00E-13	2.25E-13	1.33E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/4/2011	3.20E-15	9.00E-14	2.25E-14	8.89E-16	2.00E-14	5.00E-15	1.10E-15	9.00E-13	2.25E-13	1.48E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/4/2011	6.98E-15	9.00E-14	2.25E-14	2.03E-15	2.00E-14	5.00E-15	2.52E-15	9.00E-13	2.25E-13	1.08E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/3/2011	3.11E-15	9.00E-14	2.25E-14	1.14E-15	2.00E-14	5.00E-15	5.75E-16	9.00E-13	2.25E-13	1.41E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/3/2012	4.44E-15	9.00E-14	2.25E-14	2.14E-15	2.00E-14	5.00E-15	1.53E-15	9.00E-13	2.25E-13	2.05E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/3/2012	5.52E-15	9.00E-14	2.25E-14	3.24E-15	2.00E-14	5.00E-15	1.79E-15	9.00E-13	2.25E-13	1.55E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2012	5.87E-15	9.00E-14	2.25E-14	3.06E-15	2.00E-14	5.00E-15	1.21E-15	9.00E-13	2.25E-13	1.11E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/1/2012	6.73E-15	9.00E-14	2.25E-14	2.59E-15	2.00E-14	5.00E-15	2.43E-15	9.00E-13	2.25E-13	1.30E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2012	4.50E-15	9.00E-14	2.25E-14	1.62E-15	2.00E-14	5.00E-15	1.79E-15	9.00E-13	2.25E-13	1.74E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/25/2013	6.66E-15	9.00E-14	2.25E-14	1.48E-15	2.00E-14	5.00E-15	1.12E-15	9.00E-13	2.25E-13	1.80E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2013	7.35E-15	9.00E-14	2.25E-14	1.72E-15	2.00E-14	5.00E-15	2.02E-15	9.00E-13	2.25E-13	6.67E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2013	2.78E-15	9.00E-14	2.25E-14	6.92E-16	2.00E-14	5.00E-15	3.29E-16	9.00E-13	2.25E-13	6.62E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/30/2013	6.70E-15	9.00E-14	2.25E-14	3.93E-16	2.00E-14	5.00E-15	2.53E-16	9.00E-13	2.25E-13	2.78E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2014	4.74E-15	9.00E-14	2.25E-14	1.42E-15	2.00E-14	5.00E-15	3.48E-15	9.00E-13	2.25E-13	1.50E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2014	8.18E-15	9.00E-14	2.25E-14	1.34E-15	2.00E-14	5.00E-15	1.76E-15	9.00E-13	2.25E-13	1.42E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2014	1.32E-14	9.00E-14	2.25E-14	7.76E-16	2.00E-14	5.00E-15	1.04E-15	9.00E-13	2.25E-13	1.23E-14	6.00E-13	1.50E-13	4.66E-17	4.00E-15	1.00E-15
12/29/2014	8.00E-16	9.00E-14	2.25E-14	2.00E-16	2.00E-14	5.00E-15	3.00E-16	9.00E-13	2.25E-13	2.10E-14	6.00E-13	1.50E-13	8.00E-18	4.00E-15	1.00E-15


BHV-5 Radionuclide Concentrations (uCi/ml)
(Log Scale)
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
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Sep-03
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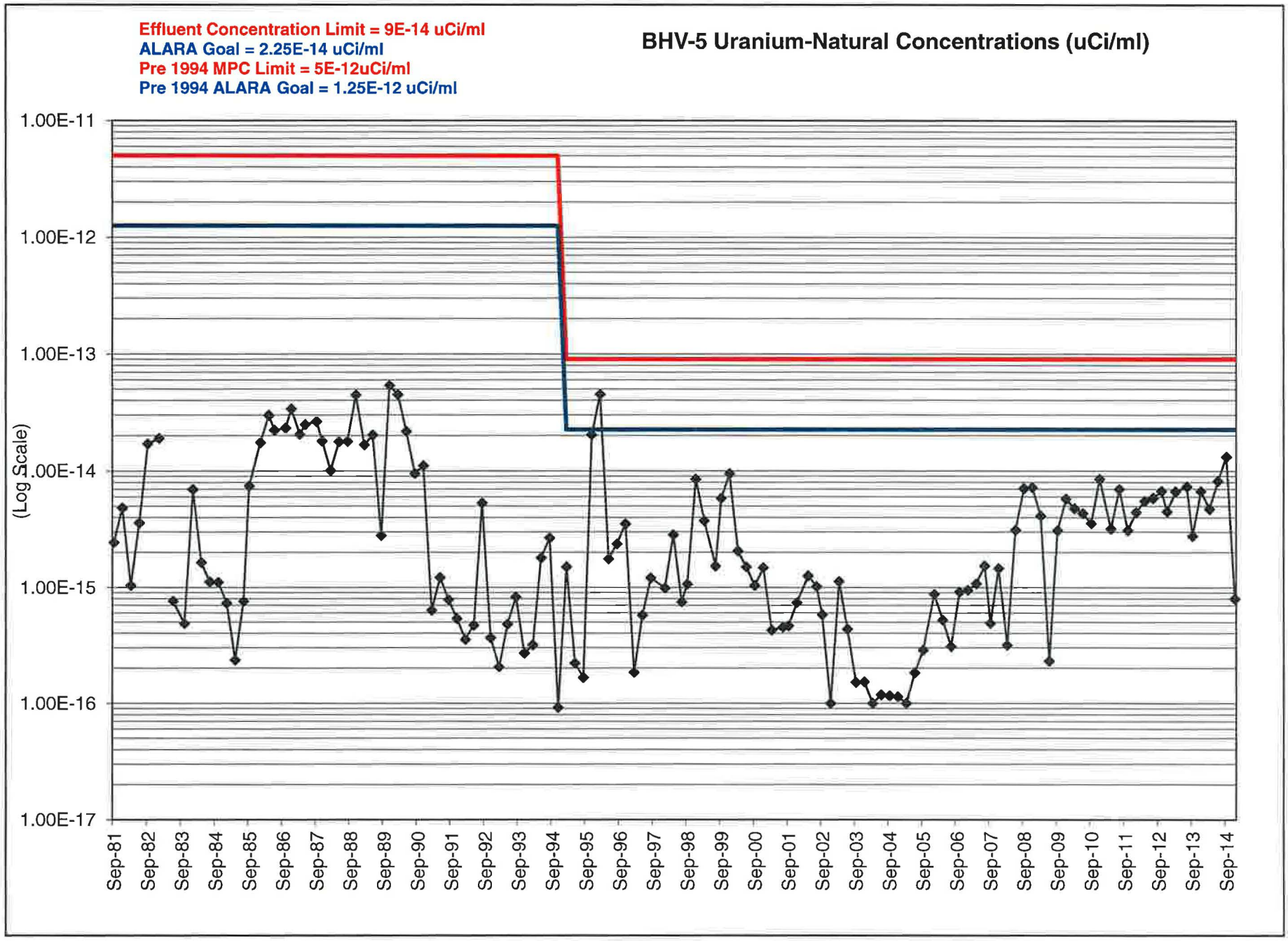
Sep-05
Sep-06
Sep-07
Sep-08
Sep-09
Sep-10
Sep-11
Sep-12
Sep-13
Sep-14
Uranium Natural
Thorium-230
Radium-226
Lead-210
Thorium-232


Effluent Concentration Limit = 9E-14 uCi/ml
ALARA Goal = 2.25E-14 uCi/ml
Pre 1994 MPC Limit = 5E-12uCi/ml
Pre 1994 ALARA Goal = 1.25E-12 uCi/ml
BHV-5 Uranium-Natural Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
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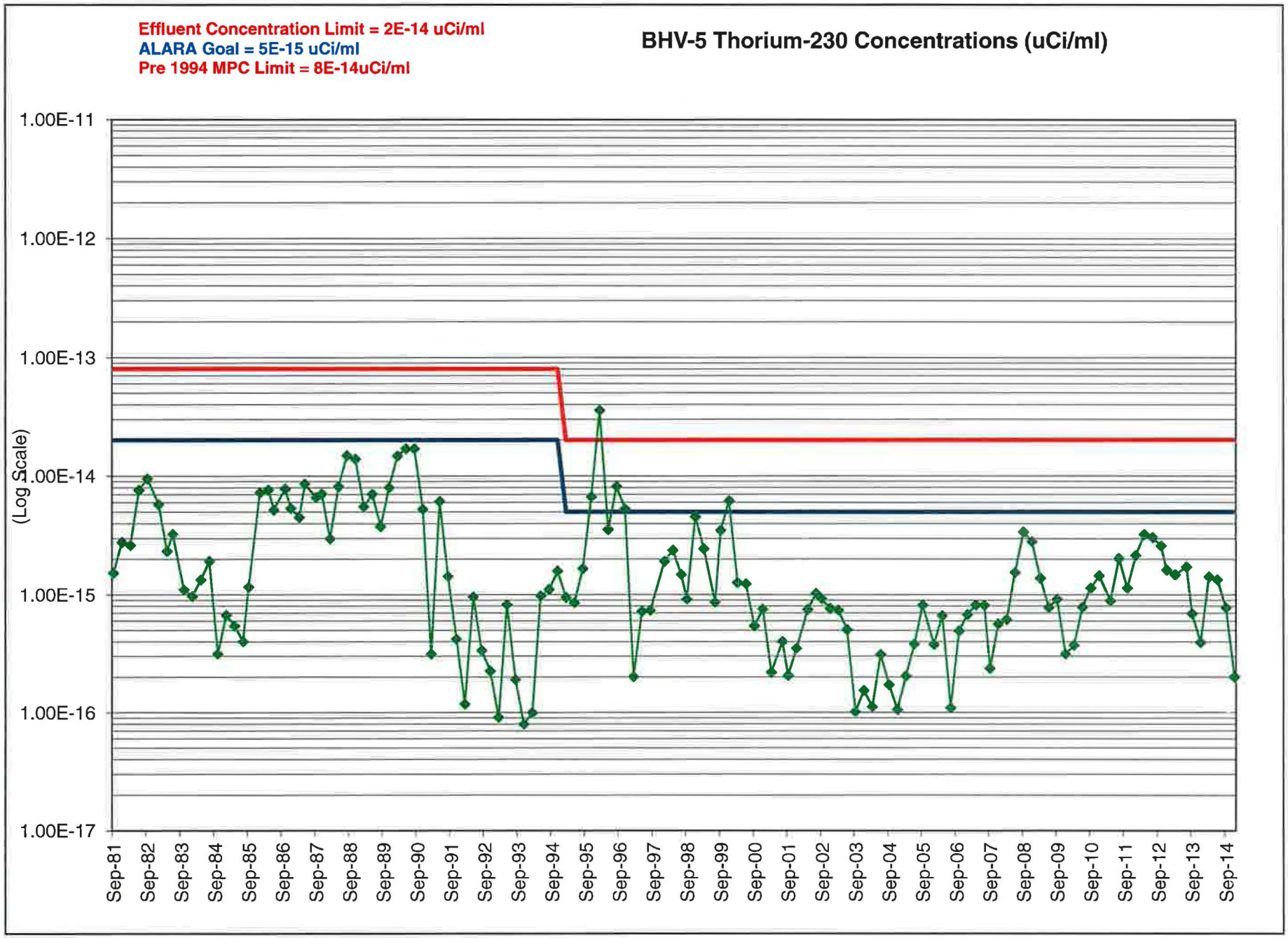
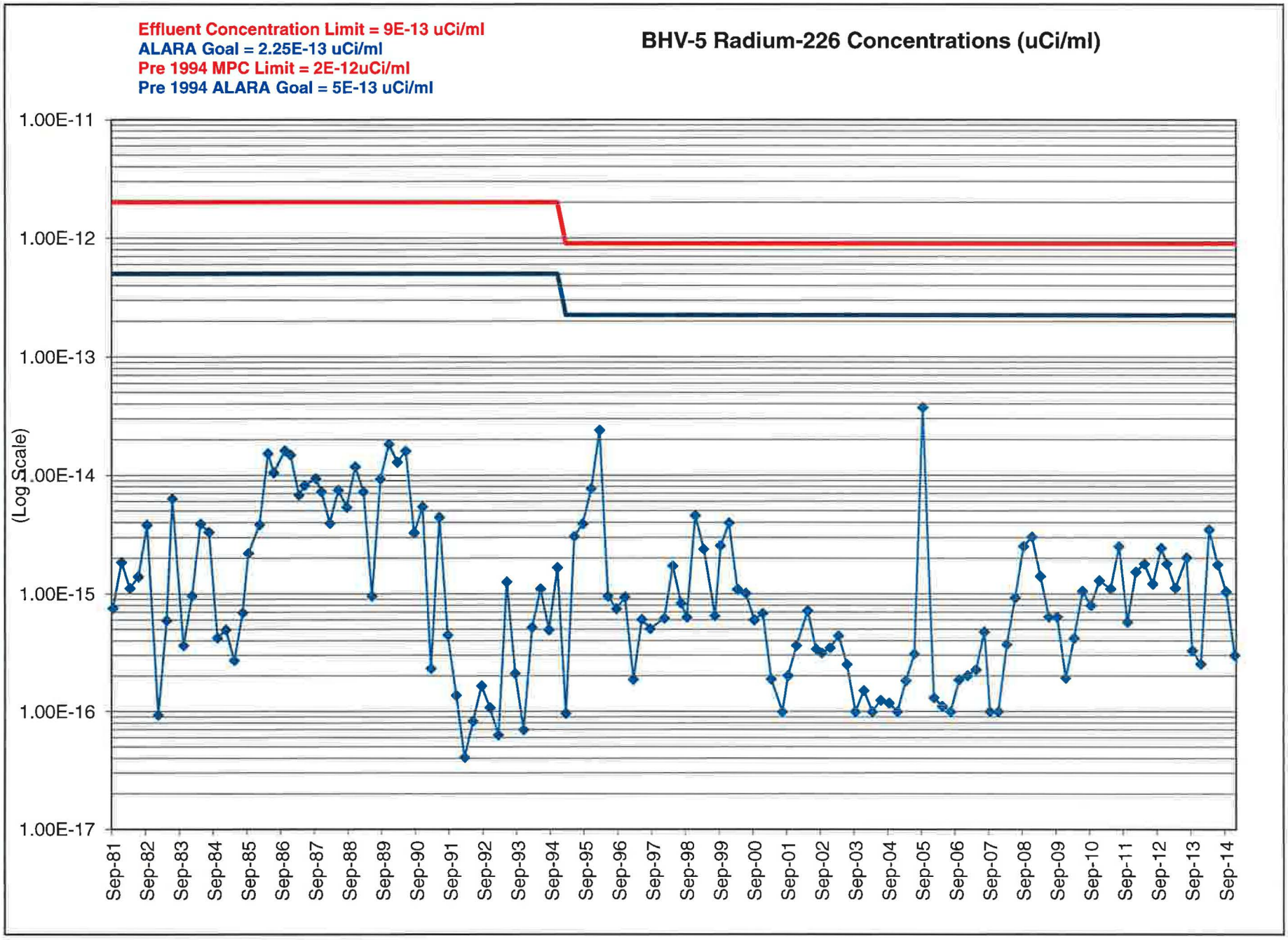
Sep-14


Effluent Concentration Limit = 2E-14 uCi/ml
ALARA Goal = 5E-15 uCi/ml
Pre 1994 MPC Limit = 8E-14uCi/ml
BHV-5 Thorium-230 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
Sep-03
Sep-04
Sep-05
Sep-06
Sep-07
Sep-08
Sep-09
Sep-10
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 9E-13 uCi/ml
ALARA Goal = 2.25E-13 uCi/ml
Pre 1994 MPC Limit = 2E-12uCi/ml
Pre 1994 ALARA Goal = 5E-13 uCi/ml
BHV-5 Radium-226 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
Sep-03
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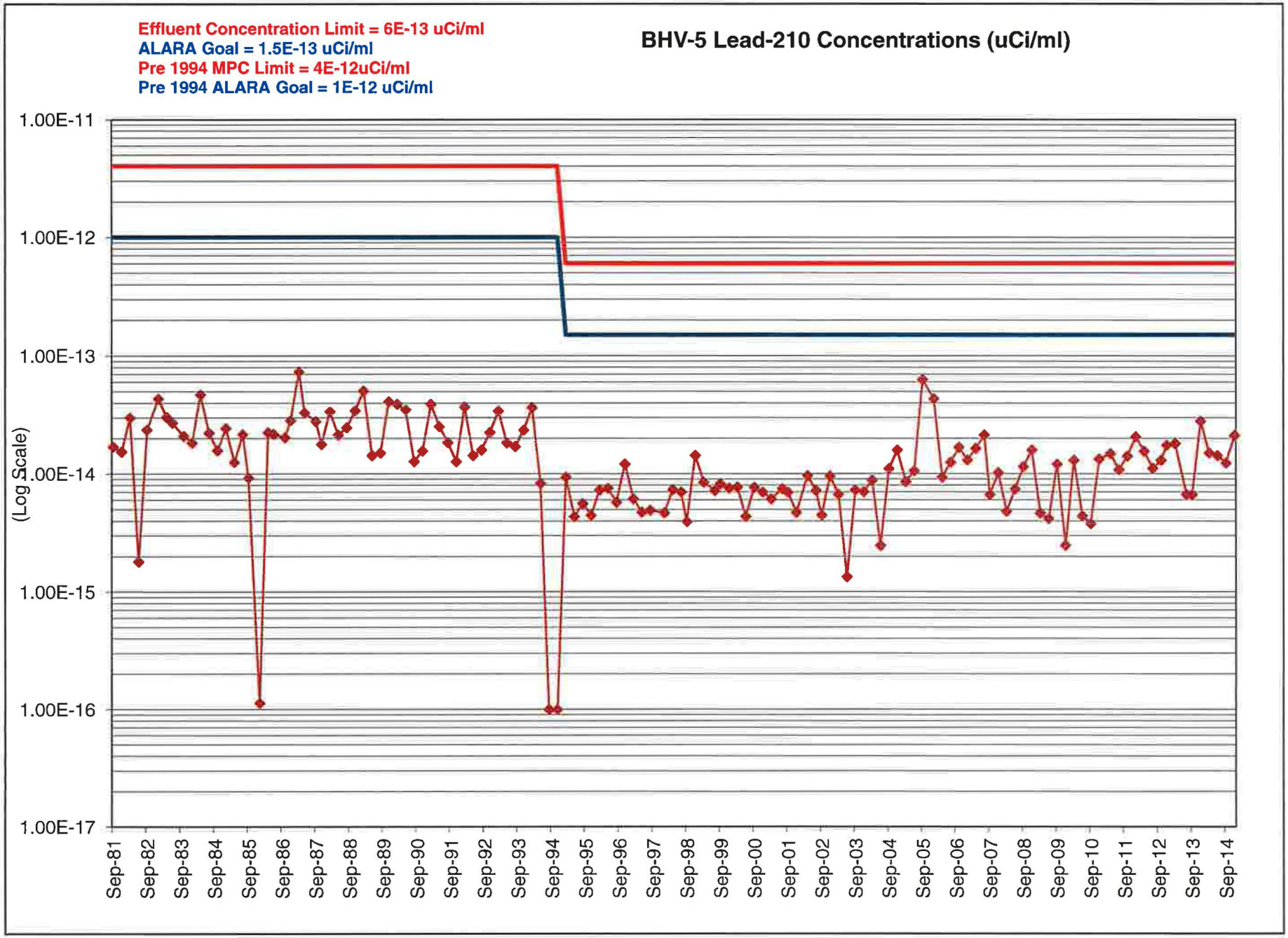
Sep-09
Sep-10
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 6E-13 uCi/ml
ALARA Goal = 1.5E-13 uCi/ml
Pre 1994 MPC Limit = 4E-12uCi/ml
Pre 1994 ALARA Goal = 1E-12 uCi/ml
BHV-5 Lead-210 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
Sep-81
Sep-82
Sep-83
Sep-84
Sep-85
Sep-86
Sep-87
Sep-88
Sep-89
Sep-90
Sep-91
Sep-92
Sep-93
Sep-94
Sep-95
Sep-96
Sep-97
Sep-98
Sep-99
Sep-00
Sep-01
Sep-02
Sep-03
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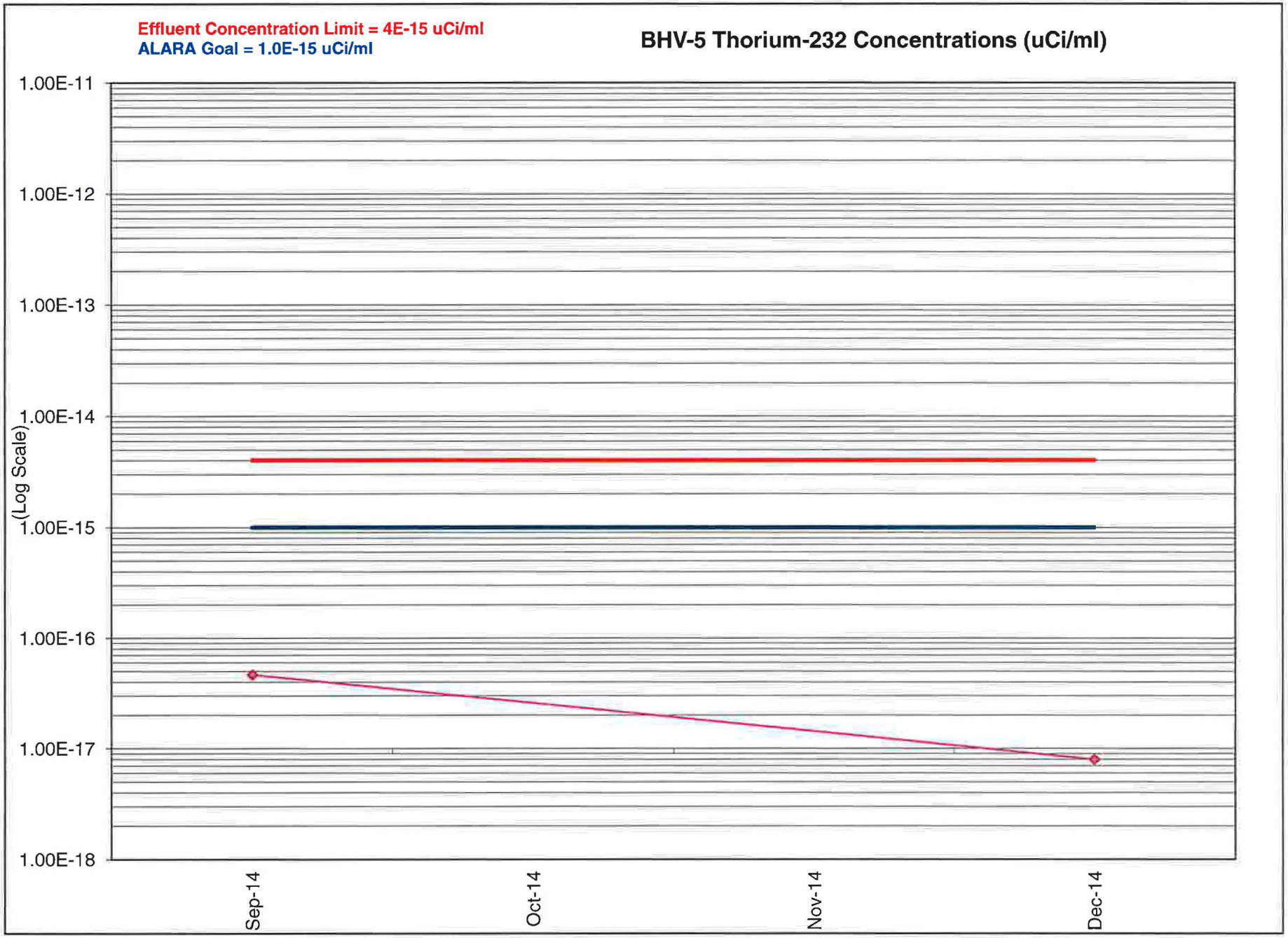
Sep-11
Sep-12
Sep-13
Sep-14


Effluent Concentration Limit = 4E-15 uCi/ml
ALARA Goal = 1.0E-15 uCi/ml
BHV-5 Thorium-232 Concentrations (uCi/ml)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
(Log Scale)
Sep-14
Oct-14
Nov-14
Dec-14

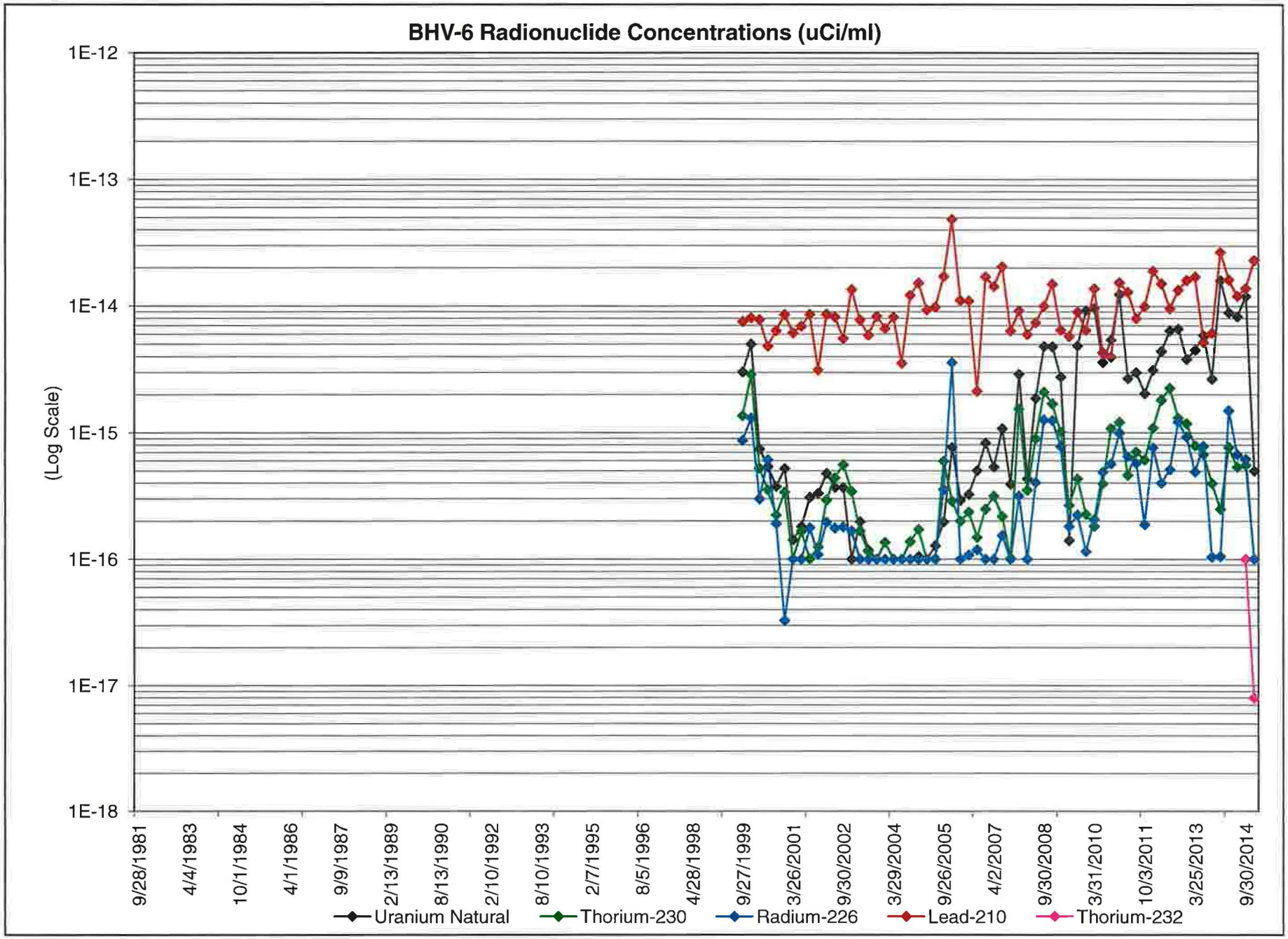
TAB 6

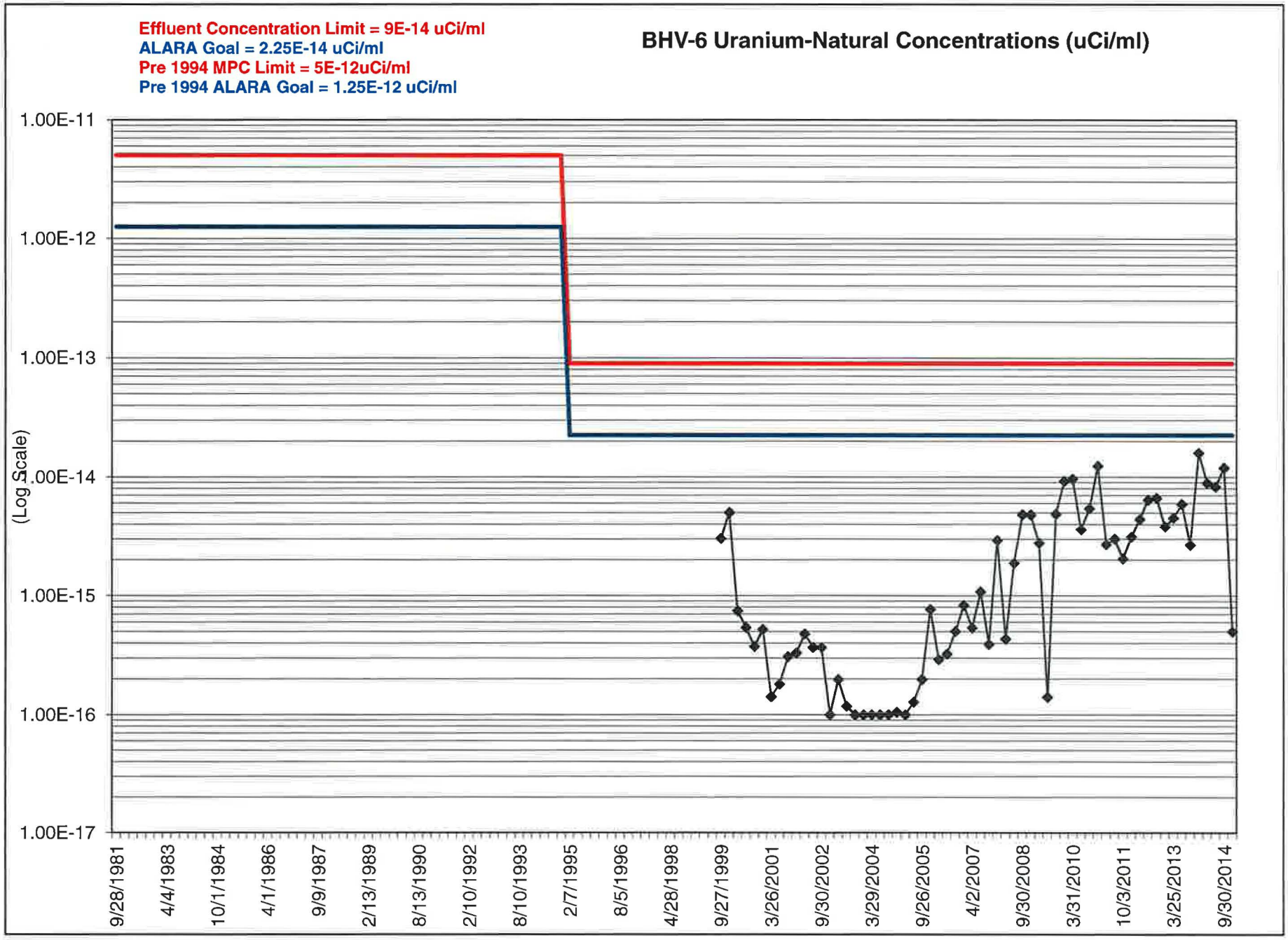
BHV-6 AIR SAMPLING GRAPHS AND DATA TABLE

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-6U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-6T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-6R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-6PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-6T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-13 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
9/28/1981		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
12/14/1981		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
3/29/1982		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1982		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/27/1982		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/3/1983		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/4/1983		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1983		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/3/1983		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/3/1984		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/2/1984		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
7/2/1984		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/1/1984		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/2/1985		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/1/1985		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
7/1/1985		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/30/1985		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
1/2/1986		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
4/1/1986		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
6/30/1986		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
10/27/1986		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
12/15/1986		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
3/16/1987		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/11/1987		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
9/9/1987		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/2/1987		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/16/1988		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/18/1988		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/15/1988		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/14/1988		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/13/1989		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/15/1989		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/14/1989		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/13/1989		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/12/1990		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/14/1990		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/13/1990		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/12/1990		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/11/1991		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/13/1991		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/12/1991		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/11/1991		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/10/1992		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/11/1992		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/10/1992		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/9/1992		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/9/1993		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/10/1993		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/10/1993		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-6U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-6T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-6R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-6PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-6T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-13 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
11/8/1993		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/7/1994		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
5/9/1994		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
8/9/1994		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
11/7/1994		5.00E-12	1.25E-12		8.00E-14	2.00E-14		2.00E-12	5.00E-13		4.00E-12	1.00E-12	Not Analyzed	Not Applicable	Not Applicable
2/7/1995		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/9/1995		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/9/1995		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
11/11/1995		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
2/5/1996		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/6/1996		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/5/1996		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
11/6/1996		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
2/6/1997		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
5/5/1997		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
8/11/1997		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/5/1998		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/28/1998		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/31/1998		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/28/1998		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/28/1998		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/29/1999		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/3/1999		9.00E-14	2.25E-14		2.00E-14	5.00E-15		9.00E-13	2.25E-13		6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/27/1999	3.03E-15	9.00E-14	2.25E-14	1.37E-15	2.00E-14	5.00E-15	8.72E-16	9.00E-13	2.25E-13	7.55E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/28/1999	5.01E-15	9.00E-14	2.25E-14	2.89E-15	2.00E-14	5.00E-15	1.31E-15	9.00E-13	2.25E-13	8.10E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/30/2000	7.46E-16	9.00E-14	2.25E-14	5.25E-16	2.00E-14	5.00E-15	3.00E-16	9.00E-13	2.25E-13	7.83E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/26/2000	5.40E-16	9.00E-14	2.25E-14	3.53E-16	2.00E-14	5.00E-15	6.11E-16	9.00E-13	2.25E-13	4.83E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/25/2000	3.75E-16	9.00E-14	2.25E-14	2.23E-16	2.00E-14	5.00E-15	1.91E-16	9.00E-13	2.25E-13	6.41E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/26/2000	5.21E-16	9.00E-14	2.25E-14	3.39E-16	2.00E-14	5.00E-15	3.28E-17	9.00E-13	2.25E-13	8.57E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/26/2001	1.42E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.15E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2001	1.81E-16	9.00E-14	2.25E-14	1.66E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.95E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/24/2001	3.08E-16	9.00E-14	2.25E-14	1.01E-16	2.00E-14	5.00E-15	1.77E-16	9.00E-13	2.25E-13	8.59E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2001	3.31E-16	9.00E-14	2.25E-14	1.25E-16	2.00E-14	5.00E-15	1.09E-16	9.00E-13	2.25E-13	3.14E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/1/2002	4.77E-16	9.00E-14	2.25E-14	2.94E-16	2.00E-14	5.00E-15	1.96E-16	9.00E-13	2.25E-13	8.61E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/1/2002	3.68E-16	9.00E-14	2.25E-14	4.41E-16	2.00E-14	5.00E-15	1.76E-16	9.00E-13	2.25E-13	8.20E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2002	3.67E-16	9.00E-14	2.25E-14	5.60E-16	2.00E-14	5.00E-15	1.80E-16	9.00E-13	2.25E-13	5.55E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/30/2002	1.00E-16	9.00E-14	2.25E-14	3.43E-16	2.00E-14	5.00E-15	1.67E-16	9.00E-13	2.25E-13	1.35E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2003	1.98E-16	9.00E-14	2.25E-14	1.68E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	7.77E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2003	1.18E-16	9.00E-14	2.25E-14	1.15E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	5.92E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/29/2003	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.30E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/29/2003	1.00E-16	9.00E-14	2.25E-14	1.36E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.66E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/29/2004	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	8.17E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/27/2004	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	3.55E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/27/2004	1.00E-16	9.00E-14	2.25E-14	1.38E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.22E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/27/2004	1.05E-16	9.00E-14	2.25E-14	1.72E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.52E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/28/2005	1.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	9.34E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/29/2005	1.28E-16	9.00E-14	2.25E-14	1.01E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	9.85E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/26/2005	1.98E-16	9.00E-14	2.25E-14	5.98E-16	2.00E-14	5.00E-15	3.55E-16	9.00E-13	2.25E-13	1.71E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/3/2006	7.67E-16	9.00E-14	2.25E-14	2.88E-16	2.00E-14	5.00E-15	3.60E-15	9.00E-13	2.25E-13	4.85E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-6U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-6T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-6R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-6PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-6T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-13 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
4/3/2006	2.92E-16	9.00E-14	2.25E-14	2.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.11E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/3/2006	3.25E-16	9.00E-14	2.25E-14	2.36E-16	2.00E-14	5.00E-15	1.08E-16	9.00E-13	2.25E-13	1.10E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/2/2006	5.03E-16	9.00E-14	2.25E-14	1.49E-16	2.00E-14	5.00E-15	1.19E-16	9.00E-13	2.25E-13	2.13E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/1/2007	8.31E-16	9.00E-14	2.25E-14	2.49E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.70E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/2/2007	5.36E-16	9.00E-14	2.25E-14	3.15E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	1.43E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2007	1.08E-15	9.00E-14	2.25E-14	2.18E-16	2.00E-14	5.00E-15	1.54E-16	9.00E-13	2.25E-13	2.04E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2007	3.92E-16	9.00E-14	2.25E-14	1.02E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	6.38E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2007	2.92E-15	9.00E-14	2.25E-14	1.55E-15	2.00E-14	5.00E-15	3.16E-16	9.00E-13	2.25E-13	9.19E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2008	4.34E-16	9.00E-14	2.25E-14	3.51E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	5.99E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/3102008	1.88E-15	9.00E-14	2.25E-14	9.00E-16	2.00E-14	5.00E-15	4.04E-16	9.00E-13	2.25E-13	7.41E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2008	4.82E-15	9.00E-14	2.25E-14	2.10E-15	2.00E-14	5.00E-15	1.27E-15	9.00E-13	2.25E-13	1.00E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2008	4.80E-15	9.00E-14	2.25E-14	1.70E-15	2.00E-14	5.00E-15	1.25E-15	9.00E-13	2.25E-13	1.49E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/15/2009	2.77E-15	9.00E-14	2.25E-14	1.01E-15	2.00E-14	5.00E-15	7.82E-16	9.00E-13	2.25E-13	6.46E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/15/2009	1.41E-16	9.00E-14	2.25E-14	2.67E-16	2.00E-14	5.00E-15	1.81E-16	9.00E-13	2.25E-13	5.76E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/15/2009	4.87E-15	9.00E-14	2.25E-14	4.32E-16	2.00E-14	5.00E-15	2.23E-16	9.00E-13	2.25E-13	8.98E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/15/2009	9.24E-15	9.00E-14	2.25E-14	2.26E-16	2.00E-14	5.00E-15	1.15E-16	9.00E-13	2.25E-13	6.44E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2010	9.63E-15	9.00E-14	2.25E-14	1.82E-16	2.00E-14	5.00E-15	2.06E-16	9.00E-13	2.25E-13	1.37E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2010	3.62E-15	9.00E-14	2.25E-14	3.94E-16	2.00E-14	5.00E-15	4.89E-16	9.00E-13	2.25E-13	4.30E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2010	5.42E-15	9.00E-14	2.25E-14	1.08E-15	2.00E-14	5.00E-15	5.68E-16	9.00E-13	2.25E-13	3.98E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2010	1.24E-14	9.00E-14	2.25E-14	1.21E-15	2.00E-14	5.00E-15	1.00E-15	9.00E-13	2.25E-13	1.53E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/4/2011	2.70E-15	9.00E-14	2.25E-14	4.62E-16	2.00E-14	5.00E-15	6.51E-16	9.00E-13	2.25E-13	1.29E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/4/2011	3.01E-15	9.00E-14	2.25E-14	7.07E-16	2.00E-14	5.00E-15	5.75E-16	9.00E-13	2.25E-13	7.97E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/3/2011	2.05E-15	9.00E-14	2.25E-14	6.12E-16	2.00E-14	5.00E-15	1.88E-16	9.00E-13	2.25E-13	9.93E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
1/3/2012	3.14E-15	9.00E-14	2.25E-14	1.09E-15	2.00E-14	5.00E-15	7.65E-16	9.00E-13	2.25E-13	1.89E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
4/3/2012	4.41E-15	9.00E-14	2.25E-14	1.82E-15	2.00E-14	5.00E-15	4.00E-16	9.00E-13	2.25E-13	1.50E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2012	6.42E-15	9.00E-14	2.25E-14	2.25E-15	2.00E-14	5.00E-15	5.11E-16	9.00E-13	2.25E-13	9.54E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
10/1/2012	6.63E-15	9.00E-14	2.25E-14	1.31E-15	2.00E-14	5.00E-15	1.22E-15	9.00E-13	2.25E-13	1.34E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/31/2012	3.83E-15	9.00E-14	2.25E-14	1.18E-15	2.00E-14	5.00E-15	9.30E-16	9.00E-13	2.25E-13	1.60E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/25/2013	4.52E-15	9.00E-14	2.25E-14	7.93E-16	2.00E-14	5.00E-15	4.91E-16	9.00E-13	2.25E-13	1.70E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
7/2/2013	5.91E-15	9.00E-14	2.25E-14	6.74E-16	2.00E-14	5.00E-15	7.85E-16	9.00E-13	2.25E-13	5.18E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2013	2.68E-15	9.00E-14	2.25E-14	3.97E-16	2.00E-14	5.00E-15	1.04E-16	9.00E-13	2.25E-13	6.13E-15	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
12/30/2013	1.60E-14	9.00E-14	2.25E-14	2.48E-16	2.00E-14	5.00E-15	1.05E-16	9.00E-13	2.25E-13	2.67E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
3/31/2014	8.92E-15	9.00E-14	2.25E-14	7.68E-16	2.00E-14	5.00E-15	1.50E-15	9.00E-13	2.25E-13	1.61E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
6/30/2014	8.29E-15	9.00E-14	2.25E-14	5.35E-16	2.00E-14	5.00E-15	6.72E-16	9.00E-13	2.25E-13	1.20E-14	6.00E-13	1.50E-13	Not Analyzed	Not Applicable	Not Applicable
9/30/2014	1.20E-14	9.00E-14	2.25E-14	5.54E-16	2.00E-14	5.00E-15	6.18E-16	9.00E-13	2.25E-13	1.38E-14	6.00E-13	1.50E-13	1.00E-16	4.00E-15	1.00E-15
12/29/2014	5.00E-16	9.00E-14	2.25E-14	1.00E-16	2.00E-14	5.00E-15	1.00E-16	9.00E-13	2.25E-13	2.30E-14	6.00E-13	1.50E-13	8.00E-18	4.00E-15	1.00E-15


BHV-6 Radionuclide Concentrations (uCi/ml)
(Log Scale)
1E-12
1E-13
1E-14
1E-15
1E-16
1E-17
1E-18
9/28/1981
4/4/1983
10/1/1984
4/1/1986
9/9/1987
2/13/1989
8/13/1990
2/10/1992
8/10/1993
2/7/1995
8/5/1996
4/28/1998
9/27/1999
3/26/2001
9/30/2002
3/29/2004
9/26/2005
4/2/2007
9/30/2008
3/31/2010
10/3/2011
3/25/2013
9/30/2014
Uranium Natural
Thorium-230
Radium-226
Lead-210
Thorium-232


Effluent Concentration Limit = 9E-14 uCi/ml
ALARA Goal = 2.25E-14 uCi/ml
Pre 1994 MPC Limit = 5E-12uCi/ml
Pre 1994 ALARA Goal = 1.25E-12 uCi/ml
BHV-6 Uranium-Natural Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
9/28/1981
4/4/1983
10/1/1984
4/1/1986
9/9/1987
2/13/1989
8/13/1990
2/10/1992
8/10/1993
2/7/1995
8/5/1996
4/28/1998
9/27/1999
3/26/2001
9/30/2002
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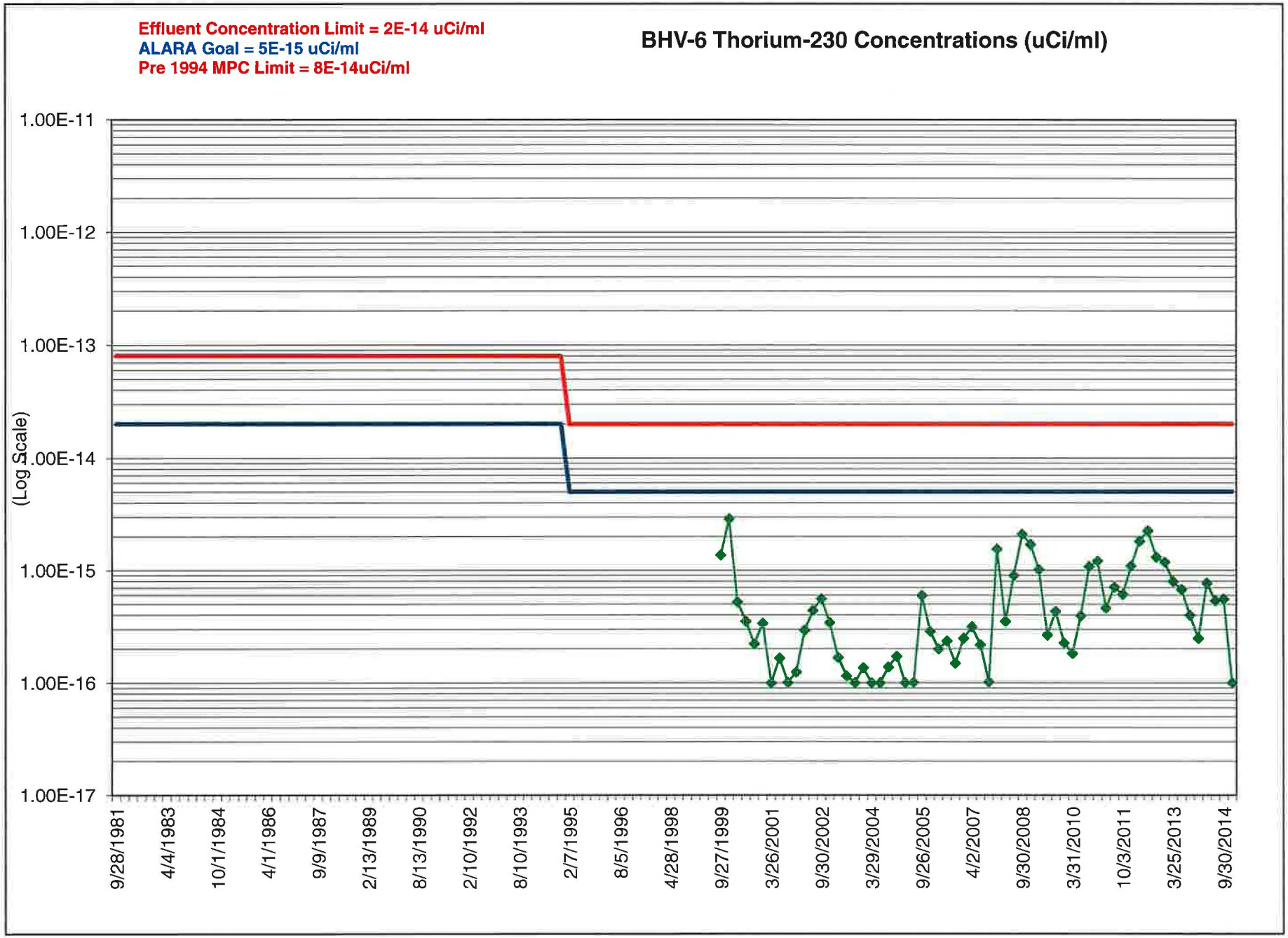
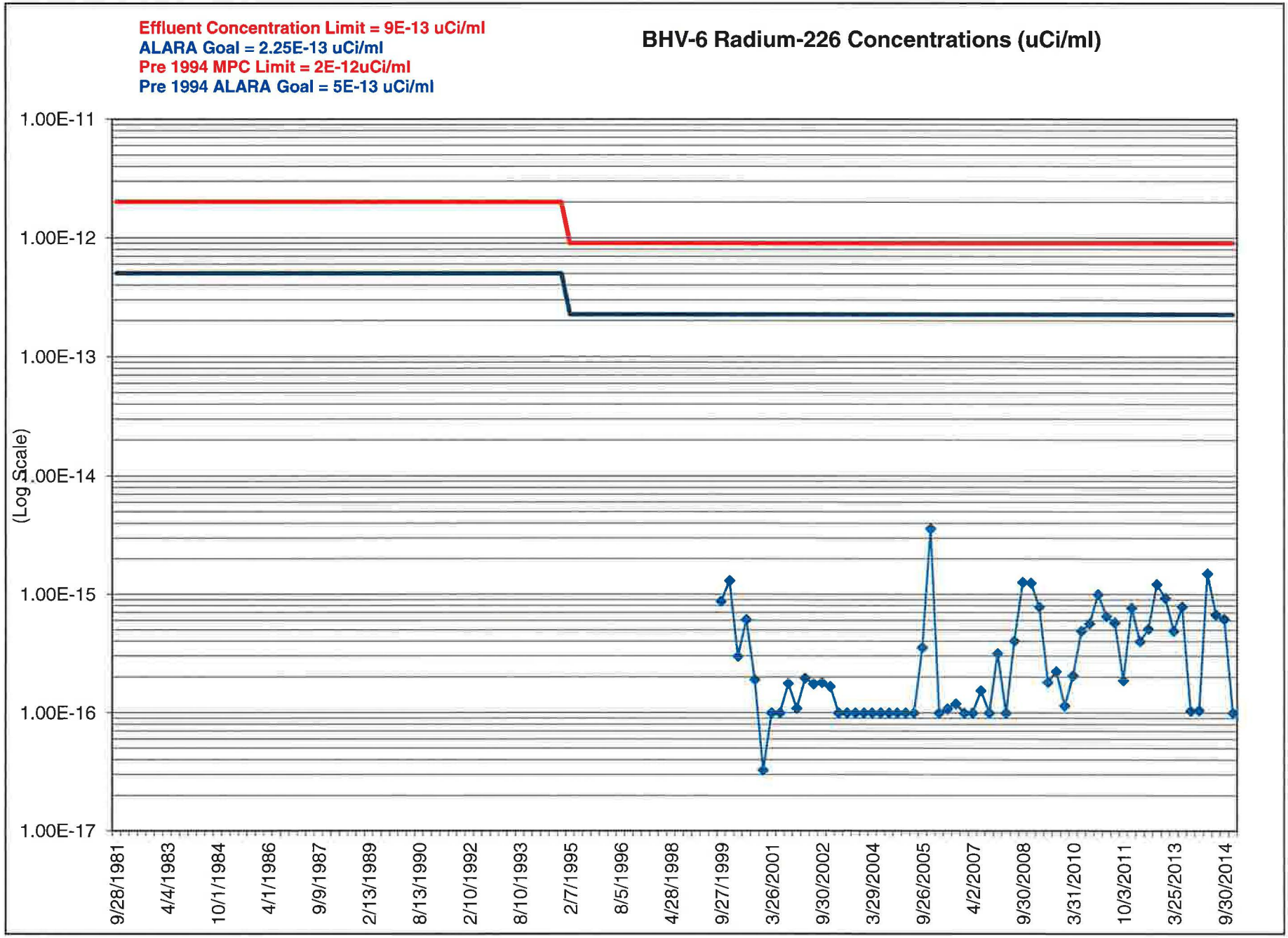
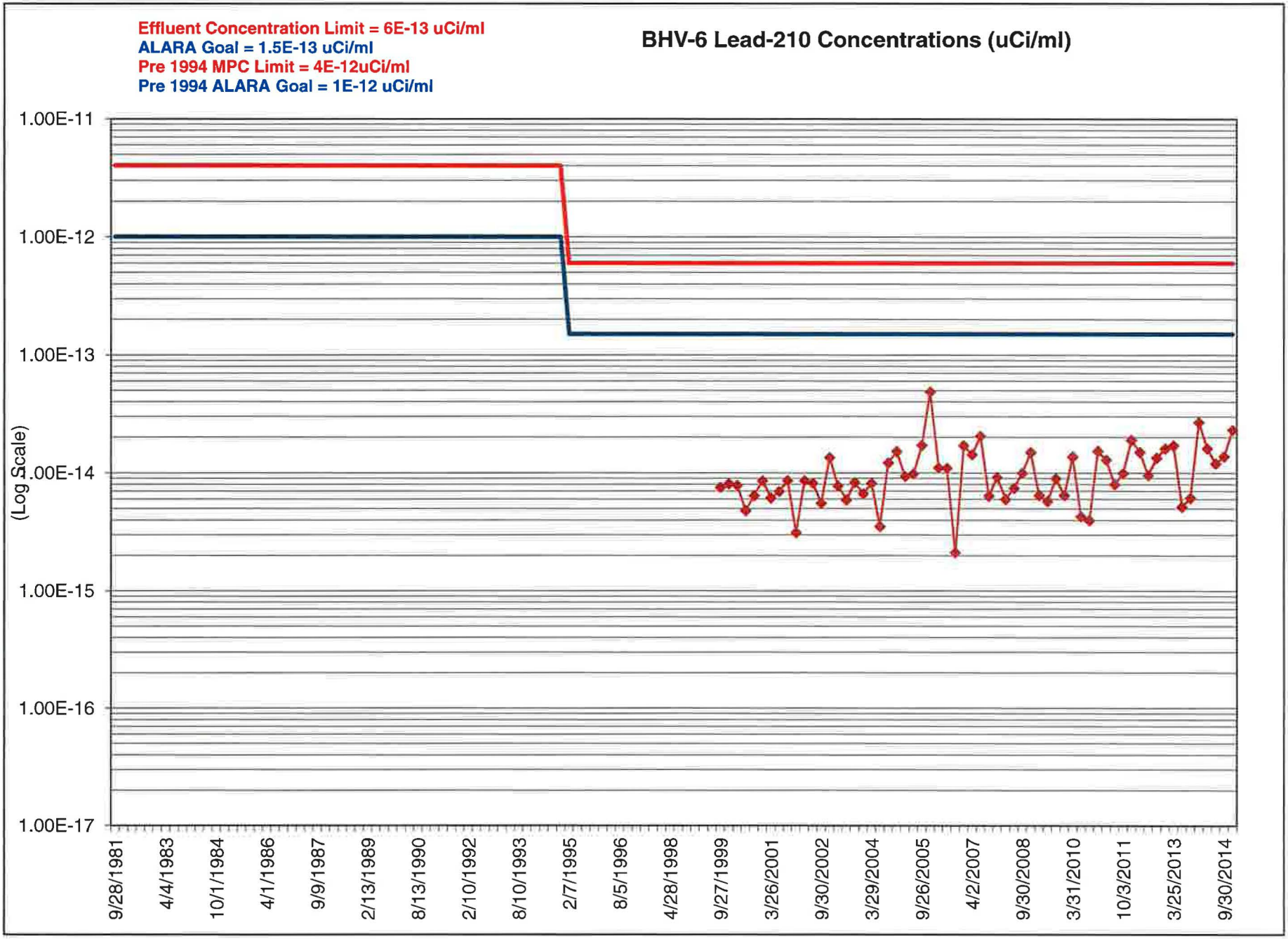
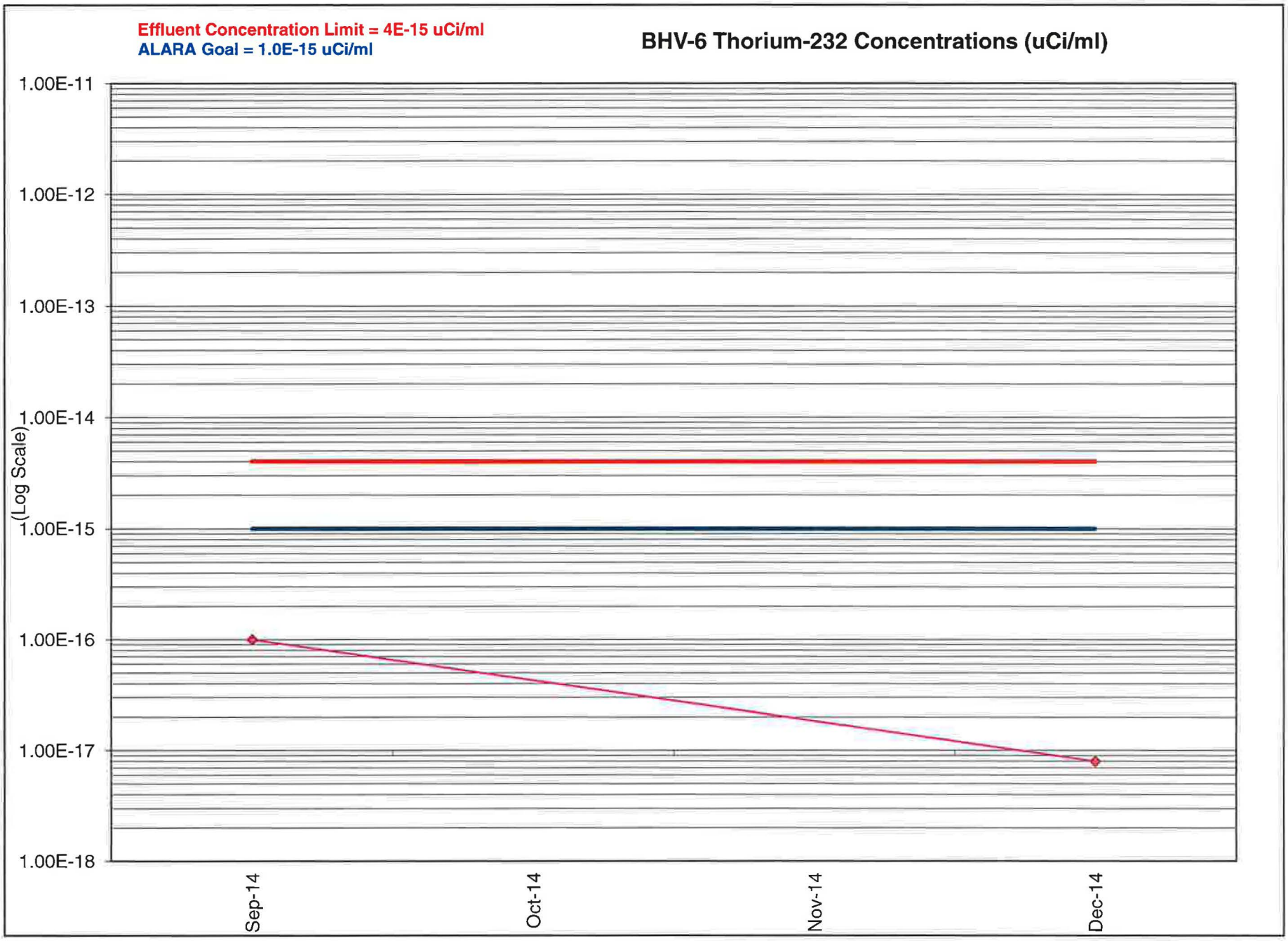
3/25/2013
9/30/2014


Effluent Concentration Limit = 2E-14 uCi/ml
ALARA Goal = 5E-15 uCi/ml
Pre 1994 MPC Limit = 8E-14uCi/ml
BHV-6 Thorium-230 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
9/28/1981
4/4/1983
10/1/1984
4/1/1986
9/9/1987
2/13/1989
8/13/1990
2/10/1992
8/10/1993
2/7/1995
8/5/1996
4/28/1998
9/27/1999
3/26/2001
9/30/2002
3/29/2004
9/26/2005
4/2/2007
9/30/2008
3/31/2010
10/3/2011
3/25/2013
9/30/2014


Effluent Concentration Limit = 9E-13 uCi/ml
ALARA Goal = 2.25E-13 uCi/ml
Pre 1994 MPC Limit = 2E-12uCi/ml
Pre 1994 ALARA Goal = 5E-13 uCi/ml
BHV-6 Radium-226 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
9/28/1981
4/4/1983
10/1/1984
4/1/1986
9/9/1987
2/13/1989
8/13/1990
2/10/1992
8/10/1993
2/7/1995
8/5/1996
4/28/1998
9/27/1999
3/26/2001
9/30/2002
3/29/2004
9/26/2005
4/2/2007
9/30/2008
3/31/2010
10/3/2011
3/25/2013
9/30/2014


Effluent Concentration Limit = 6E-13 uCi/ml
ALARA Goal = 1.5E-13 uCi/ml
Pre 1994 MPC Limit = 4E-12uCi/ml
Pre 1994 ALARA Goal = 1E-12 uCi/ml
BHV-6 Lead-210 Concentrations (uCi/ml)
(Log Scale)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
9/28/1981
4/4/1983
10/1/1984
4/1/1986
9/9/1987
2/13/1989
8/13/1990
2/10/1992
8/10/1993
2/7/1995
8/5/1996
4/28/1998
9/27/1999
3/26/2001
9/30/2002
3/29/2004
9/26/2005
4/2/2007
9/30/2008
3/31/2010
10/3/2011
3/25/2013
9/30/2014


Effluent Concentration Limit = 4E-15 uCi/ml
ALARA Goal = 1.0E-15 uCi/ml
BHV-6 Thorium-232 Concentrations (uCi/ml)
1.00E-11
1.00E-12
1.00E-13
1.00E-14
1.00E-15
1.00E-16
1.00E-17
1.00E-18
(Log Scale)
Sep-14
Oct-14
Nov-14
Dec-14

TAB 7

BHV-7 AIR SAMPLING GRAPHS AND DATA TABLE

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-7U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-7T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-7R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-7PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-7T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-13 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
12/29/2014	NS	9.00E-14	2.25E-14	NS	2.00E-14	5.00E-15	NS	9.00E-13	2.25E-13	NS	6.00E-13	1.50E-13	NS	4.00E-15	1.00E-15

TAB 8

BHV-8 AIR SAMPLING GRAPHS AND DATA TABLE

Date	Effluent Concentration Limit =	9E-14 uCi/ml	BHV-8U	Effluent Concentration Limit =	2E-14 uCi/ml	BHV-8T230	Effluent Concentration Limit =	9E-13 uCi/ml	BHV-8R	Effluent Concentration Limit =	6E-13 uCi/ml	BHV-8PB	Effluent Concentration Limit =	4e-15 uCi/ml	BHV-8T232
	ALARA Goal =	2.25E-14 uCi/ml		ALARA Goal =	5E-13 uCi/ml		ALARA Goal =	2.25E-13 uCi/ml		ALARA Goal =	1.5E-13 uCi/ml		ALARA Goal =	1E-15 uCi/ml	
	Pre 1994 MPC Limit =	5E-12 uCi/ml		Pre 1994 MPC Limit =	8E-14 uCi/ml		Pre 1994 MPC Limit =	2E-12 uCi/ml		Pre 1994 MPC Limit =	4E-12 uCi/ml		Pre 1994 MPC Limit =	Not Applicable	
	Pre 1994 ALARA GOAL =	1.25E-12 uCi/ml					Pre 1994 ALARA GOAL =	5E-13 uCi/ml		Pre 1994 ALARA GOAL =	1E-12 uCi/ml		Pre 1994 ALARA GOAL =	Not Applicable	
	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A	Conc	EFC	EFC A
12/29/2014	4.00E-16	9.00E-14	2.25E-14	2.00E-16	2.00E-14	5.00E-15	7.00E-17	9.00E-13	2.25E-13	9.90E-15	6.00E-13	1.50E-13	9.00E-18	4.00E-15	1.00E-15

ATTACHMENT C

BHV AIR SAMPLING LABORATORY RESULTS AND QA/QC

ANALYTICAL SUMMARY REPORT

February 03, 2015

Energy Fuels Resources (USA) Inc
225 Union Blvd Ste 600
Lakewood, CO 80228-1826

Work Order: C14100198

Project Name: 3rd Quarter Air 2014

Energy Laboratories, Inc. Casper WY received the following 6 samples for Energy Fuels Resources (USA) Inc on 10/3/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14100198-001	BHV-1	09/30/14 00:00	10/03/14	Filter	Client Provided Field Parameters Metals, Total Digestion, Total Metals RAD-AIR, Routine Radiological Reports RAD Alternate Unit Reporting Air Filters Lead 210 Radium 226 Thorium, Isotopic
C14100198-002	BHV-2	09/30/14 00:00	10/03/14	Filter	Same As Above
C14100198-003	BHV-4	09/30/14 00:00	10/03/14	Filter	Same As Above
C14100198-004	BHV-5	09/30/14 00:00	10/03/14	Filter	Same As Above
C14100198-005	BHV-6	09/30/14 00:00	10/03/14	Filter	Same As Above
C14100198-006	Blank	09/30/14 00:00	10/03/14	Filter	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By: Senior Project Specialist

Digitally signed by
Steve Carlston
Date: 2015.02.03 16:28:20 -07:00

CLIENT: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Air 2014
Sample Delivery Group: C14100198

Revised Date: 02/03/15
Report Date: 11/10/14

CASE NARRATIVE

REVISED/SUPPLEMENTAL REPORT
The attached analytical report has been revised from a previously submitted report due to the request by Kathy Weinel on 2/2/2015 for the addition of Th232 to all sample reports. The data presented here is from that additional reporting request. The report has been revised and replaces any previously issued report in its entirety.

ORIGINAL SAMPLE SUBMITTAL(S)
All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)
Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS
Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS
The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES
All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS
Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS
Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS
eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT
eli-r - Energy Laboratories, Inc. - Rapid City, SD
eli-cs - Energy Laboratories, Inc. - College Station, TX

Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

CERTIFICATIONS:
USEPA: WY00002, Radiochemical WY00937; FL-DOH NELAC: E87641, Radiochemical E871017; California: 02118CA; Oregon: WY200001, Radiochemical WY200002; Utah: WY00002; Washington: C836

ISO 17025 DISCLAIMER:
The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER,WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: November 10, 2014
PROJECT: 3rd Quarter Air 2014

SAMPLE ID: BHV-1
REVISED DATE: February 3, 2015

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-001	^{nat}U	1.07E-15	N/A	N/A	1E-16	9E-14	1.19E+00
First Quarter 2014	^{230}Th	2.07E-16	3E-17	1E-17	1E-16	3E-14	6.91E-01
Air Volume in mLs	^{226}Ra	3.69E-16	3E-17	1E-17	1E-16	9E-13	4.11E-02
1.36E+11	^{210}Pb	1.24E-14	2E-16	9E-17	2E-15	6E-13	2.07E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-001	^{nat}U	2.24E-15	N/A	N/A	1E-16	9E-14	2.49E+00
Second Quarter 2014	^{230}Th	5.14E-16	6E-17	1E-17	1E-16	3E-14	1.71E+00
Air Volume in mLs	^{226}Ra	1.09E-15	1E-17	2E-18	1E-16	9E-13	1.22E-01
1.36E+11	^{210}Pb	1.23E-14	2E-16	7E-17	2E-15	6E-13	2.06E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-001	^{nat}U	1.59E-15	N/A	N/A	1E-16	9E-14	1.77E+00
Third Quarter 2014	^{230}Th	2.00E-16	8E-17	6E-17	1E-16	3E-14	6.65E-01
Air Volume in mLs	^{226}Ra	1.82E-16	3E-17	2E-17	1E-16	9E-13	2.02E-02
1.32E+11	^{210}Pb	1.39E-14	2E-16	7E-17	2E-15	6E-13	2.32E+00
	^{232}Th	-7.09E-19	2E-17	6E-17	N/A	6E-15	-1.18E-02

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Air 2014
Lab ID: C14100198-001
Client Sample ID: BHV-1

Revised Date: 02/03/15
Report Date: 11/10/14
Collection Date: 09/30/14
DateReceived: 10/03/14
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	1.6E-15	uCi/mL		1.0E-16		SW6020	10/30/14 16:41 / clm
RADIONUCLIDES - IN AIR							
Lead 210	1.4E-14	uCi/mL				E909.0	10/24/14 06:42 / eli-cs
Lead 210 precision (±)	2.2E-16	uCi/mL				E909.0	10/24/14 06:42 / eli-cs
Lead 210 MDC	6.9E-17	uCi/mL				E909.0	10/24/14 06:42 / eli-cs
Radium 226	1.8E-16	uCi/mL				E903.0	10/27/14 14:06 / rdw
Radium 226 precision (±)	2.7E-17	uCi/mL				E903.0	10/27/14 14:06 / rdw
Radium 226 MDC	1.5E-17	uCi/mL				E903.0	10/27/14 14:06 / rdw
Thorium 230	2.0E-16	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 precision (±)	8.1E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 MDC	5.9E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232	-7.1E-19	uCi/mL	U			E908.0	10/31/14 09:13 / dmf
Thorium 232 precision (±)	1.7E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232 MDC	5.8E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	1840	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 precision (±)	28.9	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 MDC	9.1	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226	24.0	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 precision (±)	3.5	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 MDC	2.0	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230	26.3	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 precision (±)	10.7	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 MDC	7.8	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 232	-0.094	pCi/Filter	U			RADCALC	02/03/15 14:29 / sec
Thorium 232 precision (±)	2.2	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Thorium 232 MDC	7.6	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Uranium, Activity	210	pCi/Filter		0.20		RADCALC	11/07/14 15:23 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	132048600	L				FIELD	09/30/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: November 10, 2014
PROJECT: 3rd Quarter Air 2014

SAMPLE ID: BHV-2
REVISED DATE: February 3, 2015

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-002	^{nat}U	4.63E-16	N/A	N/A	1E-16	9E-14	5.15E-01
First Quarter 2014	^{230}Th	4.97E-17	1E-17	6E-18	1E-16	3E-14	1.66E-01
Air Volume in mLs	^{226}Ra	1.15E-16	9E-18	3E-18	1E-16	9E-13	1.28E-02
1.36E+11	^{210}Pb	1.49E-14	2E-16	9E-17	2E-15	6E-13	2.48E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-002	^{nat}U	3.04E-16	N/A	N/A	1E-16	9E-14	3.38E-01
Second Quarter 2014	^{230}Th	7.92E-17	1E-17	6E-18	1E-16	3E-14	2.64E-01
Air Volume in mLs	^{226}Ra	1.82E-16	5E-18	2E-18	1E-16	9E-13	2.02E-02
1.38E+11	^{210}Pb	1.21E-14	2E-16	7E-17	2E-15	6E-13	2.01E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-002	^{nat}U	4.89E-16	N/A	N/A	1E-16	9E-14	5.43E-01
Third Quarter 2014	^{230}Th	6.01E-17	3E-17	3E-17	1E-16	3E-14	2.00E-01
Air Volume in mLs	^{226}Ra	4.47E-17	2E-17	2E-17	1E-16	9E-13	4.97E-03
1.33E+11	^{210}Pb	1.10E-14	2E-16	7E-17	2E-15	6E-13	1.83E+00
	^{232}Th	9.35E-18	1E-17	3E-17	N/A	6E-15	1.56E-01

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Air 2014
Lab ID: C14100198-002
Client Sample ID: BHV-2

Revised Date: 02/03/15
Report Date: 11/10/14
Collection Date: 09/30/14
DateReceived: 10/03/14
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	4.9E-16	uCi/mL		1.0E-16		SW6020	10/30/14 16:42 / clm
RADIONUCLIDES - IN AIR							
Lead 210	1.1E-14	uCi/mL				E909.0	10/24/14 07:51 / eli-cs
Lead 210 precision (±)	1.9E-16	uCi/mL				E909.0	10/24/14 07:51 / eli-cs
Lead 210 MDC	6.8E-17	uCi/mL				E909.0	10/24/14 07:51 / eli-cs
Radium 226	4.5E-17	uCi/mL				E903.0	10/27/14 14:06 / rdw
Radium 226 precision (±)	1.5E-17	uCi/mL				E903.0	10/27/14 14:06 / rdw
Radium 226 MDC	1.5E-17	uCi/mL				E903.0	10/27/14 14:06 / rdw
Thorium 230	6.0E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 precision (±)	3.2E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 MDC	3.4E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232	9.3E-18	uCi/mL	U			E908.0	10/31/14 09:13 / dmf
Thorium 232 precision (±)	1.5E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232 MDC	3.2E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	1460	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 precision (±)	25.8	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 MDC	9.1	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226	5.9	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 precision (±)	2.0	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 MDC	2.0	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230	8.0	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 precision (±)	4.3	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 MDC	4.5	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 232	1.2	pCi/Filter	U			RADCALC	02/03/15 14:29 / sec
Thorium 232 precision (±)	1.9	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Thorium 232 MDC	4.2	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Uranium, Activity	64.9	pCi/Filter		0.20		RADCALC	11/07/14 15:23 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	132758300	L				FIELD	09/30/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: November 10, 2014
PROJECT: 3rd Quarter Air 2014

SAMPLE ID: BHV-4
REVISED DATE: February 3, 2015

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-003	^{nat}U	4.69E-15	N/A	N/A	1E-16	9E-14	5.21E+00
First Quarter 2014	^{230}Th	1.37E-16	2E-17	1E-17	1E-16	3E-14	4.58E-01
Air Volume in mLs	^{226}Ra	3.53E-16	2E-17	5E-18	1E-16	9E-13	3.93E-02
1.35E+11	^{210}Pb	1.08E-14	2E-16	9E-17	2E-15	6E-13	1.81E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-003	^{nat}U	4.16E-15	N/A	N/A	1E-16	9E-14	4.63E+00
Second Quarter 2014	^{230}Th	6.96E-16	8E-17	8E-18	1E-16	3E-14	2.32E+00
Air Volume in mLs	^{226}Ra	1.77E-15	2E-17	2E-18	1E-16	9E-13	1.97E-01
1.37E+11	^{210}Pb	1.06E-14	2E-16	7E-17	2E-15	6E-13	1.77E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-003	^{nat}U	6.56E-15	N/A	N/A	1E-16	9E-14	7.29E+00
Third Quarter 2014	^{230}Th	2.73E-16	9E-17	5E-17	1E-16	3E-14	9.09E-01
Air Volume in mLs	^{226}Ra	2.77E-16	3E-17	2E-17	1E-16	9E-13	3.08E-02
1.33E+11	^{210}Pb	1.11E-14	2E-16	7E-17	2E-15	6E-13	1.85E+00
	^{232}Th	1.01E-17	2E-17	5E-17	N/A	6E-15	1.69E-01

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Air 2014
Lab ID: C14100198-003
Client Sample ID: BHV-4

Revised Date: 02/03/15
Report Date: 11/10/14
Collection Date: 09/30/14
DateReceived: 10/03/14
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	6.6E-15	uCi/mL		1.0E-16		SW6020	10/30/14 16:46 / clm
RADIONUCLIDES - IN AIR							
Lead 210	1.1E-14	uCi/mL				E909.0	10/24/14 09:00 / eli-cs
Lead 210 precision (±)	2.0E-16	uCi/mL				E909.0	10/24/14 09:00 / eli-cs
Lead 210 MDC	6.8E-17	uCi/mL				E909.0	10/24/14 09:00 / eli-cs
Radium 226	2.8E-16	uCi/mL				E903.0	10/27/14 16:16 / rdw
Radium 226 precision (±)	3.3E-17	uCi/mL				E903.0	10/27/14 16:16 / rdw
Radium 226 MDC	1.6E-17	uCi/mL				E903.0	10/27/14 16:16 / rdw
Thorium 230	2.7E-16	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 precision (±)	9.1E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 MDC	4.9E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232	1.0E-17	uCi/mL	U			E908.0	10/31/14 09:13 / dmf
Thorium 232 precision (±)	2.0E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232 MDC	4.8E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	1480	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 precision (±)	25.9	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 MDC	9.1	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226	36.8	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 precision (±)	4.3	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 MDC	2.1	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230	36.2	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 precision (±)	12.1	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 MDC	6.5	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 232	1.3	pCi/Filter	U			RADCALC	02/03/15 14:29 / sec
Thorium 232 precision (±)	2.6	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Thorium 232 MDC	6.4	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Uranium, Activity	870	pCi/Filter		0.20		RADCALC	11/07/14 15:23 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	132748700	L				FIELD	09/30/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: November 10, 2014
PROJECT: 3rd Quarter Air 2014

SAMPLE ID: BHV-5
REVISED DATE: February 3, 2015

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-004	^{nat}U	4.74E-15	N/A	N/A	1E-16	9E-14	5.27E+00
First Quarter 2014	^{230}Th	1.42E-15	1E-16	2E-17	1E-16	3E-14	4.73E+00
Air Volume in mLs	^{226}Ra	3.48E-15	8E-17	1E-17	1E-16	9E-13	3.86E-01
1.35E+11	^{210}Pb	1.50E-14	2E-16	9E-17	2E-15	6E-13	2.51E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-004	^{nat}U	8.18E-15	N/A	N/A	1E-16	9E-14	9.09E+00
Second Quarter 2014	^{230}Th	1.34E-15	2E-16	2E-17	1E-16	3E-14	4.47E+00
Air Volume in mLs	^{226}Ra	1.76E-15	2E-17	2E-18	1E-16	9E-13	1.96E-01
1.30E+11	^{210}Pb	1.42E-14	2E-16	7E-17	2E-15	6E-13	2.37E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-004	^{nat}U	1.32E-14	N/A	N/A	1E-16	9E-14	1.46E+01
Third Quarter 2014	^{230}Th	7.76E-16	3E-16	1E-16	1E-16	3E-14	2.59E+00
Air Volume in mLs	^{226}Ra	1.04E-15	6E-17	2E-17	1E-16	9E-13	1.15E-01
1.20E+11	^{210}Pb	1.23E-14	2E-16	7E-17	2E-15	6E-13	2.05E+00
	^{232}Th	4.66E-17	6E-17	1E-16	N/A	6E-15	7.77E-01

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Revised Date: 02/03/15
Report Date: 11/10/14
Collection Date: 09/30/14
DateReceived: 10/03/14
Matrix: Filter

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Air 2014
Lab ID: C14100198-004
Client Sample ID: BHV-5

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	1.3E-14	uCi/mL		1.0E-16		SW6020	10/30/14 16:47 / clm
RADIONUCLIDES - IN AIR							
Lead 210	1.2E-14	uCi/mL				E909.0	10/24/14 10:10 / eli-cs
Lead 210 precision (±)	2.1E-16	uCi/mL				E909.0	10/24/14 10:10 / eli-cs
Lead 210 MDC	6.9E-17	uCi/mL				E909.0	10/24/14 10:10 / eli-cs
Radium 226	1.0E-15	uCi/mL				E903.0	10/27/14 16:16 / rdw
Radium 226 precision (±)	6.1E-17	uCi/mL				E903.0	10/27/14 16:16 / rdw
Radium 226 MDC	1.5E-17	uCi/mL				E903.0	10/27/14 16:16 / rdw
Thorium 230	7.8E-16	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 precision (±)	2.5E-16	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 MDC	1.2E-16	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232	4.7E-17	uCi/mL	U			E908.0	10/31/14 09:13 / dmf
Thorium 232 precision (±)	5.7E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232 MDC	1.1E-16	uCi/mL				E908.0	10/31/14 09:13 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	1480	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 precision (±)	24.8	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 MDC	8.3	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226	125	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 precision (±)	7.4	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 MDC	1.9	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230	93.3	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 precision (±)	30.3	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 MDC	14.3	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 232	5.6	pCi/Filter	U			RADCALC	02/03/15 14:29 / sec
Thorium 232 precision (±)	6.8	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Thorium 232 MDC	13.4	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Uranium, Activity	1580	pCi/Filter		0.20		RADCALC	11/07/14 15:23 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	120225200	L				FIELD	09/30/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: November 10, 2014
PROJECT: 3rd Quarter Air 2014

SAMPLE ID: BHV-6
REVISED DATE: February 3, 2015

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-005	^{nat}U	8.92E-15	N/A	N/A	1E-16	9E-14	9.91E+00
First Quarter 2014	^{230}Th	7.68E-16	1E-16	2E-17	1E-16	3E-14	2.56E+00
Air Volume in mLs	^{226}Ra	1.50E-15	4E-17	6E-18	1E-16	9E-13	1.67E-01
1.35E+11	^{210}Pb	1.61E-14	3E-16	9E-17	2E-15	6E-13	2.69E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-005	^{nat}U	8.29E-15	N/A	N/A	1E-16	9E-14	9.21E+00
Second Quarter 2014	^{230}Th	5.35E-16	8E-17	2E-17	1E-16	3E-14	1.78E+00
Air Volume in mLs	^{226}Ra	6.72E-16	1E-17	2E-18	1E-16	9E-13	7.47E-02
1.37E+11	^{210}Pb	1.20E-14	2E-16	7E-17	2E-15	6E-13	2.01E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-005	^{nat}U	1.20E-14	N/A	N/A	1E-16	9E-14	1.33E+01
Third Quarter 2014	^{230}Th	5.54E-16	2E-16	1E-16	1E-16	3E-14	1.85E+00
Air Volume in mLs	^{226}Ra	6.18E-16	5E-17	2E-17	1E-16	9E-13	6.87E-02
1.32E+11	^{210}Pb	1.38E-14	2E-16	7E-17	2E-15	6E-13	2.30E+00
	^{232}Th	0.00E+00	3E-17	1E-16	N/A	6E-15	0.00E+00

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Air 2014
Lab ID: C14100198-005
Client Sample ID: BHV-6

Revised Date: 02/03/15
Report Date: 11/10/14
Collection Date: 09/30/14
DateReceived: 10/03/14
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	1.2E-14	uCi/mL		1.0E-16		SW6020	10/30/14 16:55 / clm
RADIONUCLIDES - IN AIR							
Lead 210	1.4E-14	uCi/mL				E909.0	10/24/14 11:19 / eli-cs
Lead 210 precision (±)	2.2E-16	uCi/mL				E909.0	10/24/14 11:19 / eli-cs
Lead 210 MDC	6.9E-17	uCi/mL				E909.0	10/24/14 11:19 / eli-cs
Radium 226	6.2E-16	uCi/mL				E903.0	10/27/14 16:16 / rdw
Radium 226 precision (±)	4.7E-17	uCi/mL				E903.0	10/27/14 16:16 / rdw
Radium 226 MDC	1.5E-17	uCi/mL				E903.0	10/27/14 16:16 / rdw
Thorium 230	5.5E-16	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 precision (±)	1.9E-16	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 MDC	1.0E-16	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232	0.0E+00	uCi/mL	U			E908.0	10/31/14 09:13 / dmf
Thorium 232 precision (±)	3.0E-17	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232 MDC	1.0E-16	uCi/mL				E908.0	10/31/14 09:13 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	1820	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 precision (±)	28.8	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 MDC	9.1	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226	81.7	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 precision (±)	6.2	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 MDC	2.0	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230	73.3	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 precision (±)	25.1	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 MDC	13.5	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 232	0.0	pCi/Filter	U			RADCALC	02/03/15 14:29 / sec
Thorium 232 precision (±)	3.9	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Thorium 232 MDC	13.5	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Uranium, Activity	1580	pCi/Filter		0.20		RADCALC	11/07/14 15:23 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	132258300	L				FIELD	09/30/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: November 10, 2014
PROJECT: 3rd Quarter Air 2014

SAMPLE ID: Blank
REVISED DATE: February 3, 2015

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-006	^{nat}U	1.46E-17	N/A	N/A	1E-16	9E-14	1.62E-02
First Quarter 2014	^{230}Th	1.98E-18	1E-18	2E-18	1E-16	3E-14	6.60E-03
Air Volume in mLs	^{226}Ra	2.79E-18	2E-18	2E-18	1E-16	9E-13	3.10E-04
1.36E+11	^{210}Pb	-1.20E-17	4E-17	7E-17	2E-15	6E-13	-2.01E-03

Note: This sample uses 136,000,000 L of air volume for comparison purposes.

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-006	^{nat}U	1.90E-17	N/A	N/A	1E-16	9E-14	2.11E-02
Second Quarter 2014	^{230}Th	6.03E-18	2E-18	2E-18	1E-16	3E-14	2.01E-02
Air Volume in mLs	^{226}Ra	5.02E-18	1E-18	1E-18	1E-16	9E-13	5.58E-04
1.36E+11	^{210}Pb	6.18E-18	3E-17	5E-17	2E-15	6E-13	1.03E-03

Note: This sample uses 136,000,000 L of air volume for comparison purposes.

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-006	^{nat}U	2.02E-17	N/A	N/A	1E-16	9E-14	2.24E-02
Third Quarter 2014	^{230}Th	4.46E-18	5E-18	9E-18	1E-16	3E-14	1.49E-02
Air Volume in mLs	^{226}Ra	-1.16E-18	6E-18	1E-17	1E-16	9E-13	-1.29E-04
1.36E+11	^{210}Pb	1.15E-17	3E-17	5E-17	2E-15	6E-13	1.91E-03
	^{232}Th	1.72E-18	4E-18	9E-18	N/A	6E-15	2.86E-02

Note: This sample uses 136,000,000 L of air volume for comparison purposes.

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Air 2014
Lab ID: C14100198-006
Client Sample ID: Blank

Revised Date: 02/03/15
Report Date: 11/10/14
Collection Date: 09/30/14
DateReceived: 10/03/14
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	2.7E-09	uCi/mL	D	5.8E-11		SW6020	11/04/14 03:32 / cp
RADIONUCLIDES - IN AIR							
Lead 210	1.6E-09	uCi/mL	U			E909.0	10/24/14 14:47 / eli-cs
Lead 210 precision (±)	4.0E-09	uCi/mL				E909.0	10/24/14 14:47 / eli-cs
Lead 210 MDC	6.6E-09	uCi/mL				E909.0	10/24/14 14:47 / eli-cs
Radium 226	-1.6E-10	uCi/mL	U			E903.0	10/27/14 16:16 / rdw
Radium 226 precision (±)	7.8E-10	uCi/mL				E903.0	10/27/14 16:16 / rdw
Radium 226 MDC	1.5E-09	uCi/mL				E903.0	10/27/14 16:16 / rdw
Thorium 230	6.1E-10	uCi/mL	U			E908.0	10/31/14 09:13 / dmf
Thorium 230 precision (±)	6.6E-10	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 230 MDC	1.2E-09	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232	2.3E-10	uCi/mL	U			E908.0	10/31/14 09:13 / dmf
Thorium 232 precision (±)	5.0E-10	uCi/mL				E908.0	10/31/14 09:13 / dmf
Thorium 232 MDC	1.2E-09	uCi/mL				E908.0	10/31/14 09:13 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	1.6	pCi/Filter	U			RADCALC	11/07/14 15:23 / sec
Lead 210 precision (±)	4.0	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Lead 210 MDC	6.6	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226	-0.16	pCi/Filter	U			RADCALC	11/07/14 15:23 / sec
Radium 226 precision (±)	0.78	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Radium 226 MDC	1.5	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230	0.61	pCi/Filter	U			RADCALC	11/07/14 15:23 / sec
Thorium 230 precision (±)	0.66	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 230 MDC	1.2	pCi/Filter				RADCALC	11/07/14 15:23 / sec
Thorium 232	0.23	pCi/Filter	U			RADCALC	02/03/15 14:29 / sec
Thorium 232 precision (±)	0.50	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Thorium 232 MDC	1.2	pCi/Filter				RADCALC	02/03/15 14:29 / sec
Uranium, Activity	2.7	pCi/Filter		0.20		RADCALC	11/07/14 15:23 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	1	L				FIELD	09/30/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 02/03/15

Client: Energy Fuels Resources (USA) Inc

Report Date: 11/10/14

Project: 3rd Quarter Air 2014

Work Order: C14100198

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: R192759
Lab ID: MB-42991	3	Method Blank				Run: BERTHOLD 770-1_141021A				10/27/14 14:06
Radium 226		-0.03	pCi/L							U
Radium 226 precision (±)		0.2	pCi/L							
Radium 226 MDC		0.3	pCi/L							
Lab ID: LCS-42991		Laboratory Control Sample				Run: BERTHOLD 770-1_141021A				10/27/14 14:06
Radium 226		120	pCi/L		113	80	120			
Lab ID: C14100779-001FMS		Sample Matrix Spike				Run: BERTHOLD 770-1_141021A				10/27/14 14:06
Radium 226		40	pCi/L		104	70	130			
Lab ID: C14100779-001FMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_141021A				10/27/14 14:06
Radium 226		46	pCi/L		120	70	130	15	20.6	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 02/03/15
Report Date: 11/10/14
Work Order: C14100198

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Air 2014

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: 42892
Lab ID: C14100198-006AMS		Sample Matrix Spike				Run: ALPHANALYST_141024B			10/31/14 09:13	
Thorium 230		50.8	pCi/L		92	70	130			
Lab ID: C14100198-006AMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_141024B			10/31/14 09:13	
Thorium 230		65.6	pCi/L		120	70	130	25	59.9	
Lab ID: MB-42892	6	Method Blank				Run: ALPHANALYST_141024B			10/31/14 09:13	
Thorium 230		0.5	pCi/L							U
Thorium 230 precision (±)		0.7	pCi/L							
Thorium 230 MDC		1	pCi/L							
Thorium 232		0.2	pCi/L							U
Thorium 232 precision (±)		0.5	pCi/L							
Thorium 232 MDC		1	pCi/L							
Lab ID: LCS-42892		Laboratory Control Sample				Run: ALPHANALYST_141024B			10/31/14 09:13	
Thorium 230		17.6	pCi/L		94	80	120			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 02/03/15

Client: Energy Fuels Resources (USA) Inc

Report Date: 11/10/14

Project: 3rd Quarter Air 2014

Work Order: C14100198

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: T_22165
Lab ID: MB-22165	3	Method Blank				Run: SUB-T59476				10/24/14 04:23
Lead 210		-0.8	pCi/L							U
Lead 210 precision (±)		4	pCi/L							
Lead 210 MDC		7	pCi/L							
Lab ID: LCS-22165		Laboratory Control Sample				Run: SUB-T59476				10/24/14 05:32
Lead 210		131	pCi/L		103	80	120			
Lab ID: C14100198-005AMS		Sample Matrix Spike				Run: SUB-T59476				10/24/14 12:28
Lead 210		1.85E-05	pCi/L		103	70	130			
Lab ID: C14100198-005AMSD		Sample Matrix Spike Duplicate				Run: SUB-T59476				10/24/14 13:38
Lead 210		1.84E-05	pCi/L		104	70	130	0.2	15.2	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 02/03/15

Client: Energy Fuels Resources (USA) Inc

Report Date: 11/10/14

Project: 3rd Quarter Air 2014

Work Order: C14100198

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS2-C_141030A	
Lab ID:	**ICV**		Initial Calibration Verification Standard							10/30/14 12:36	
Uranium			0.0465	mg/L	0.00030	93	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							10/30/14 12:38	
Uranium			3.29E-05	mg/L	0.00030						
Lab ID:	**ICSAB**		Interference Check Sample AB							10/30/14 12:40	
Uranium			7.60E-06	mg/L	0.00030						
Method:	**SW6020**										Batch: 42892
Lab ID:	**MB-42892**		Method Blank				Run: ICPMS2-C_141030A			10/30/14 16:36	
Uranium			6E-05	mg/L	4E-05						
Lab ID:	**LCS2-42892**		Laboratory Control Sample				Run: ICPMS2-C_141030A			10/30/14 16:37	
Uranium			0.100	mg/L	4.3E-05	100	85	115			
Lab ID:	**C14100198-002Adil**		Serial Dilution				Run: ICPMS2-C_141030A			10/30/14 16:44	
Uranium			6.57E-10	mg/L	1.5E-10				9.5	20	
Lab ID:	**C14100198-006AMS**		Sample Matrix Spike				Run: ICPMS2-C_141030A			10/30/14 16:59	
Uranium			0.258	mg/L	4.0E-05	101	75	125			
Lab ID:	**C14100198-006AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS2-C_141030A			10/30/14 17:00	
Uranium			0.256	mg/L	4.0E-05	100	75	125	0.9	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Revised Date: 02/03/15

Client: Energy Fuels Resources (USA) Inc

Report Date: 11/10/14

Project: 3rd Quarter Air 2014

Work Order: C14100198

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS2-C_141103A	
Lab ID:	**ICV**		Initial Calibration Verification Standard							11/03/14 13:50	
Uranium			0.0501	mg/L	0.00030	100	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							11/03/14 13:53	
Uranium			1.39E-05	mg/L	0.00030						
Lab ID:	**ICSAB**		Interference Check Sample AB							11/03/14 13:56	
Uranium			2.90E-06	mg/L	0.00030						
Method:	**SW6020**									Batch: 42892	
Lab ID:	**MB-42892**		Method Blank				Run: ICPMS2-C_141103A			11/04/14 03:22	
Uranium			3E-05	mg/L	9E-06						
Lab ID:	**LCS2-42892**		Laboratory Control Sample				Run: ICPMS2-C_141103A			11/04/14 03:25	
Uranium			0.0943	mg/L	4.3E-05	94	85	115			
Lab ID:	**C14100198-006ADIL**		Serial Dilution				Run: ICPMS2-C_141103A			11/04/14 03:36	
Uranium			0.00363	mg/L	0.00043					20	N
Lab ID:	**C14100198-006AMS**		Sample Matrix Spike				Run: ICPMS2-C_141103A			11/04/14 03:40	
Uranium			0.502	mg/L	8.1E-05	105	75	125			
Lab ID:	**C14100198-006AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS2-C_141103A			11/04/14 03:57	
Uranium			0.497	mg/L	8.1E-05	104	75	125	1.0	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

Workorder Receipt Checklist

Energy Fuels Resources (USA) Inc C14100198

Login completed by: Kerri Schroeder
Reviewed by: BL2000\swaldrop
Reviewed Date: 10/6/2014

Date Received: 10/3/2014
Received by: dw
Carrier name: 2Day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	N/A °C		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

CHAIN OF CUSTODY

Samples Shipped to: Energy Laboratories
2393 Salt Creek Hwy
Casper WY, 82601

Contact: Garrin Palmer
Ph: 435 678 4115
gpalmer@energyfuels.com

Chain of Custody/Sampling Analysis Request

Project	Samplers Name	Samplers Signature
3rd Quarter Air 2014	Garrin Palmer	Garrin Palmer

Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
BHV-1	6/30/14 - 9/30/14		U-NAT, TH-230, Ra-226, Pb-210, TH-232
BHV-2	6/30/14 - 9/30/14		U-NAT, TH-230, Ra-226, Pb-210, TH-232
BHV-4	6/30/14 - 9/30/14		U-NAT, TH-230, Ra-226, Pb-210, TH-232
BHV-5	6/30/14 - 9/30/14		U-NAT, TH-230, Ra-226, Pb-210, TH-232
BHV-6	6/30/14 - 9/30/14		U-NAT, TH-230, Ra-226, Pb-210, TH-232
Blank	6/30/14 - 9/30/14		U-NAT, TH-230, Ra-226, Pb-210, TH-232

Comments:

Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time
Garrin Palmer	10/1/2014 1200	Garrin Palmer	
Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time
		[illegible]	915 10-3-14

C14100198

Blanks		Period June 30, 2014-September 30, 2014		
Week #	Filter Number	Start Date	Stop Date	Net
1	8951275	30-Jun-14	07-Jul-14	4.5286
2	8951269	07-Jul-14	14-Jul-14	4.4986
3	8951258	14-Jul-14	21-Jul-14	4.4846
4	8951257	21-Jul-14	28-Jul-14	4.4974
5	8951246	28-Jul-14	04-Aug-14	4.5137
6	8951245	04-Aug-14	11-Aug-14	4.4945
7	8951234	11-Aug-14	18-Aug-14	4.4760
8	8951228	18-Aug-14	25-Aug-14	4.5178
9	8951222	25-Aug-14	02-Sep-14	4.4836
10	8951216	02-Sep-14	08-Sep-14	4.4917
11	8951215	08-Sep-14	15-Sep-14	4.5117
12	8951209	15-Sep-14	22-Sep-14	4.5035
13	8953498	22-Sep-14	29-Sep-14	4.5228
	Totals	91	2184.0	4.5019

ANALYTICAL SUMMARY REPORT

February 08, 2015

Energy Fuels Resources (USA) Inc
225 Union Blvd Ste 600
Lakewood, CO 80228-1826

Work Order: C15010198

Project Name: 4th Quarter Air 2014

Energy Laboratories, Inc. Casper WY received the following 7 samples for Energy Fuels Resources (USA) Inc on 1/9/2015 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C15010198-001	BHV-1	12/29/14 00:00	01/09/15	Filter	Composite of two or more samples Client Provided Field Parameters Metals, Total Digestion, Total Metals RAD-AIR, Routine Radiological Reports RAD Alternate Unit Reporting Air Filters Lead 210 Radium 226 Thorium, Isotopic
C15010198-002	BHV-2	12/29/14 00:00	01/09/15	Filter	Same As Above
C15010198-003	BHV-4	12/29/14 00:00	01/09/15	Filter	Same As Above
C15010198-004	BHV-5	12/29/14 00:00	01/09/15	Filter	Same As Above
C15010198-005	BHV-6	12/29/14 00:00	01/09/15	Filter	Same As Above
C15010198-006	BHV-8	12/29/14 00:00	01/09/15	Filter	Same As Above
C15010198-007	Blanks	12/29/14 00:00	01/09/15	Filter	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Senior Project Specialist

Digitally signed by
Steve Carlston
Date: 2015.02.08 15:51:18 -07:00

CLIENT: Energy Fuels Resources (USA) Inc
Project: 4th Quarter Air 2014
Sample Delivery Group: C15010198

Report Date: 02/08/15

CASE NARRATIVE

ORIGINAL SAMPLE SUBMITTAL(S)
All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)
Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS
Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS
The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES
All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS
Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS
Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS
eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT
eli-r - Energy Laboratories, Inc. - Rapid City, SD
eli-cs - Energy Laboratories, Inc. - College Station, TX

CERTIFICATIONS:
USEPA: WY00002, Radiochemical WY00937; FL-DOH NELAC: E87641, Radiochemical E871017; California: 02118CA; Oregon: WY200001, Radiochemical WY200002; Utah: WY00002; Washington: C836

ISO 17025 DISCLAIMER:
The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER,WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.
Tests associated with analyst identified as ELI-CS were subcontracted to Energy Laboratories, 415 Graham Rd., College Station, TX, EPA Number TX01520.

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: February 8, 2015
PROJECT: 4th Quarter Air 2014

SAMPLE ID: BHV-1

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-001	^{nat}U	1.1E-15	N/A	N/A	1E-16	9E-14	1.2E+00
First Quarter 2014	^{230}Th	2E-16	3E-17	1E-17	1E-16	3E-14	7E-01
Air Volume in mLs	^{226}Ra	4E-16	3E-17	1E-17	1E-16	9E-13	4E-02
1.36E+11	^{210}Pb	1.2E-14	2E-16	9E-17	2E-15	6E-13	2.1E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-001	^{nat}U	2.2E-15	N/A	N/A	1E-16	9E-14	2.5E+00
Second Quarter 2014	^{230}Th	5E-16	6E-17	1E-17	1E-16	3E-14	2E+00
Air Volume in mLs	^{226}Ra	1.1E-15	1E-17	2E-18	1E-16	9E-13	1.2E-01
1.36E+11	^{210}Pb	1.2E-14	2E-16	7E-17	2E-15	6E-13	2.1E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-001	^{nat}U	1.6E-15	N/A	N/A	1E-16	9E-14	1.8E+00
Third Quarter 2014	^{230}Th	2E-16	8E-17	6E-17	1E-16	3E-14	7E-01
Air Volume in mLs	^{226}Ra	2E-16	3E-17	2E-17	1E-16	9E-13	2E-02
1.32E+11	^{210}Pb	1.4E-14	2E-16	7E-17	2E-15	6E-13	2.3E+00
	^{232}Th	-7E-19	2E-17	6E-17	N/A	6E-15	-1E-02

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C15010198-001	^{nat}U	2E-16	N/A	N/A	1E-16	9E-14	2E-01
Fourth Quarter 2014	^{230}Th	5E-17	9E-18	9E-18	1E-16	3E-14	2E-01
Air Volume in mLs	^{226}Ra	7E-17	2E-17	8E-18	1E-16	9E-13	7E-03
1.19E+11	^{210}Pb	2.3E-14	4E-15	8E-17	2E-15	6E-13	3.8E+00
	^{232}Th	7E-18	6E-18	1E-17	N/A	6E-15	1E-01

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 4th Quarter Air 2014
Lab ID: C15010198-001
Client Sample ID: BHV-1

Report Date: 02/08/15
Collection Date: 12/29/14
DateReceived: 01/09/15
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	2.2E-16	uCi/mL		1.0E-16		SW6020	01/14/15 00:08 / clm
RADIONUCLIDES - IN AIR							
Lead 210	2.3E-14	uCi/mL				E909.0	01/25/15 11:08 / eli-cs
Lead 210 precision (±)	3.5E-15	uCi/mL				E909.0	01/25/15 11:08 / eli-cs
Lead 210 MDC	8.2E-17	uCi/mL				E909.0	01/25/15 11:08 / eli-cs
Radium 226	6.7E-17	uCi/mL				E903.0	01/19/15 14:03 / trs
Radium 226 precision (±)	1.5E-17	uCi/mL				E903.0	01/19/15 14:03 / trs
Radium 226 MDC	7.9E-18	uCi/mL				E903.0	01/19/15 14:03 / trs
Thorium 230	4.9E-17	uCi/mL				E908.0	01/20/15 15:31 / dmf
Thorium 230 precision (±)	9.4E-18	uCi/mL				E908.0	01/20/15 15:31 / dmf
Thorium 230 MDC	8.7E-18	uCi/mL				E908.0	01/20/15 15:31 / dmf
Thorium 232	6.8E-18	uCi/mL	U			E908.0	01/20/15 15:31 / dmf
Thorium 232 precision (±)	6.0E-18	uCi/mL				E908.0	01/20/15 15:31 / dmf
Thorium 232 MDC	9.7E-18	uCi/mL				E908.0	01/20/15 15:31 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	2700	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 precision (±)	420	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 MDC	9.8	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226	8.0	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 precision (±)	1.8	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 MDC	0.94	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230	5.9	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 precision (±)	1.1	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 MDC	1.0	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232	0.81	pCi/Filter	U			RADCALC	02/07/15 15:41 / sec
Thorium 232 precision (±)	0.72	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232 MDC	1.2	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Uranium, Activity	26.3	pCi/Filter		0.20		RADCALC	02/07/15 15:41 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	112682700	L				FIELD	12/29/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: February 8, 2015
PROJECT: 4th Quarter Air 2014

SAMPLE ID: BHV-2

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-002	^{nat}U	5E-16	N/A	N/A	1E-16	9E-14	5E-01
First Quarter 2014	^{230}Th	5E-17	1E-17	6E-18	1E-16	3E-14	2E-01
Air Volume in mLs	^{226}Ra	1E-16	9E-18	3E-18	1E-16	9E-13	1E-02
1.36E+11	^{210}Pb	1.5E-14	2E-16	9E-17	2E-15	6E-13	2.5E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-002	^{nat}U	3E-16	N/A	N/A	1E-16	9E-14	3E-01
Second Quarter 2014	^{230}Th	8E-17	1E-17	6E-18	1E-16	3E-14	3E-01
Air Volume in mLs	^{226}Ra	2E-16	5E-18	2E-18	1E-16	9E-13	2E-02
1.38E+11	^{210}Pb	1.2E-14	2E-16	7E-17	2E-15	6E-13	2.0E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-002	^{nat}U	5E-16	N/A	N/A	1E-16	9E-14	5E-01
Third Quarter 2014	^{230}Th	6E-17	3E-17	3E-17	1E-16	3E-14	2E-01
Air Volume in mLs	^{226}Ra	4E-17	2E-17	2E-17	1E-16	9E-13	5E-03
1.33E+11	^{210}Pb	1.1E-14	2E-16	7E-17	2E-15	6E-13	1.8E+00
	^{232}Th	9E-18	1E-17	3E-17	N/A	6E-15	2E-01

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C15010198-002	^{nat}U	1E-16	N/A	N/A	1E-16	9E-14	1E-01
Fourth Quarter 2014	^{230}Th	4E-17	7E-18	6E-18	1E-16	3E-14	1E-01
Air Volume in mLs	^{226}Ra	3E-17	9E-18	8E-18	1E-16	9E-13	4E-03
1.31E+11	^{210}Pb	2.2E-14	3E-15	8E-17	2E-15	6E-13	3.7E+00
	^{232}Th	4E-18	3E-18	5E-18	N/A	6E-15	7E-02

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 4th Quarter Air 2014
Lab ID: C15010198-002
Client Sample ID: BHV-2

Report Date: 02/08/15
Collection Date: 12/29/14
DateReceived: 01/09/15
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	1.2E-16	uCi/mL		1.0E-16		SW6020	01/14/15 00:25 / clm
RADIONUCLIDES - IN AIR							
Lead 210	2.2E-14	uCi/mL				E909.0	01/25/15 12:18 / eli-cs
Lead 210 precision (±)	3.5E-15	uCi/mL				E909.0	01/25/15 12:18 / eli-cs
Lead 210 MDC	8.0E-17	uCi/mL				E909.0	01/25/15 12:18 / eli-cs
Radium 226	3.3E-17	uCi/mL				E903.0	01/19/15 20:06 / trs
Radium 226 precision (±)	9.3E-18	uCi/mL				E903.0	01/19/15 20:06 / trs
Radium 226 MDC	7.5E-18	uCi/mL				E903.0	01/19/15 20:06 / trs
Thorium 230	3.5E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 precision (±)	6.7E-18	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 MDC	5.7E-18	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232	4.0E-18	uCi/mL	U			E908.0	01/21/15 14:03 / dmf
Thorium 232 precision (±)	3.4E-18	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232 MDC	5.3E-18	uCi/mL				E908.0	01/21/15 14:03 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	2940	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 precision (±)	457	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 MDC	10.5	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226	4.3	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 precision (±)	1.2	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 MDC	0.99	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230	4.6	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 precision (±)	0.88	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 MDC	0.75	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232	0.52	pCi/Filter	U			RADCALC	02/07/15 15:41 / sec
Thorium 232 precision (±)	0.44	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232 MDC	0.69	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Uranium, Activity	15.4	pCi/Filter		0.20		RADCALC	02/07/15 15:41 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	123047700	L				FIELD	12/29/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: February 8, 2015
PROJECT: 4th Quarter Air 2014

SAMPLE ID: BHV-4

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-003	^{nat}U	4.7E-15	N/A	N/A	1E-16	9E-14	5.2E+00
First Quarter 2014	^{230}Th	1E-16	2E-17	1E-17	1E-16	3E-14	5E-01
Air Volume in mLs	^{226}Ra	4E-16	2E-17	5E-18	1E-16	9E-13	4E-02
1.35E+11	^{210}Pb	1.1E-14	2E-16	9E-17	2E-15	6E-13	1.8E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-003	^{nat}U	4.2E-15	N/A	N/A	1E-16	9E-14	4.6E+00
Second Quarter 2014	^{230}Th	7E-16	8E-17	8E-18	1E-16	3E-14	2E+00
Air Volume in mLs	^{226}Ra	2E-15	2E-17	2E-18	1E-16	9E-13	2E-01
1.37E+11	^{210}Pb	1.1E-14	2E-16	7E-17	2E-15	6E-13	1.8E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-003	^{nat}U	6.6E-15	N/A	N/A	1E-16	9E-14	7.3E+00
Third Quarter 2014	^{230}Th	3E-16	9E-17	5E-17	1E-16	3E-14	9E-01
Air Volume in mLs	^{226}Ra	3E-16	3E-17	2E-17	1E-16	9E-13	3E-02
1.33E+11	^{210}Pb	1.1E-14	2E-16	7E-17	2E-15	6E-13	1.9E+00
	^{232}Th	1E-17	2E-17	5E-17	N/A	6E-15	2E-01

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C15010198-003	^{nat}U	2E-16	N/A	N/A	1E-16	9E-14	2E-01
Fourth Quarter 2014	^{230}Th	4E-17	9E-18	1E-17	1E-16	3E-14	1E-01
Air Volume in mLs	^{226}Ra	4E-17	1E-17	8E-18	1E-16	9E-13	5E-03
1.29E+11	^{210}Pb	1.9E-14	3E-15	8E-17	2E-15	6E-13	3.1E+00
	^{232}Th	1E-17	2E-18	1E-17	N/A	6E-15	2E-01

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 4th Quarter Air 2014
Lab ID: C15010198-003
Client Sample ID: BHV-4

Report Date: 02/08/15
Collection Date: 12/29/14
DateReceived: 01/09/15
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	2.0E-16	uCi/mL		1.0E-16		SW6020	01/14/15 00:38 / clm
RADIONUCLIDES - IN AIR							
Lead 210	1.9E-14	uCi/mL				E909.0	01/25/15 13:27 / eli-cs
Lead 210 precision (±)	2.9E-15	uCi/mL				E909.0	01/25/15 13:27 / eli-cs
Lead 210 MDC	7.9E-17	uCi/mL				E909.0	01/25/15 13:27 / eli-cs
Radium 226	4.1E-17	uCi/mL				E903.0	01/19/15 20:06 / trs
Radium 226 precision (±)	1.1E-17	uCi/mL				E903.0	01/19/15 20:06 / trs
Radium 226 MDC	7.8E-18	uCi/mL				E903.0	01/19/15 20:06 / trs
Thorium 230	4.5E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 precision (±)	8.5E-18	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 MDC	9.7E-18	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232	1.3E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232 precision (±)	2.4E-18	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232 MDC	1.1E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	2390	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 precision (±)	373	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 MDC	10.2	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226	5.3	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 precision (±)	1.4	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 MDC	1.0	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230	5.8	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 precision (±)	1.1	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 MDC	1.2	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232	1.6	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232 precision (±)	0.31	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232 MDC	1.4	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Uranium, Activity	25.9	pCi/Filter		0.20		RADCALC	02/07/15 15:41 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	121420500	L				FIELD	12/29/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: February 8, 2015
PROJECT: 4th Quarter Air 2014

SAMPLE ID: BHV-5

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-004	^{nat}U	4.7E-15	N/A	N/A	1E-16	9E-14	5.3E+00
First Quarter 2014	^{230}Th	1.4E-15	1E-16	2E-17	1E-16	3E-14	4.7E+00
Air Volume in mLs	^{226}Ra	3.5E-15	8E-17	1E-17	1E-16	9E-13	3.9E-01
1.35E+11	^{210}Pb	1.5E-14	2E-16	9E-17	2E-15	6E-13	2.5E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-004	^{nat}U	8.2E-15	N/A	N/A	1E-16	9E-14	9.1E+00
Second Quarter 2014	^{230}Th	1.3E-15	2E-16	2E-17	1E-16	3E-14	4.5E+00
Air Volume in mLs	^{226}Ra	1.8E-15	2E-17	2E-18	1E-16	9E-13	2.0E-01
1.30E+11	^{210}Pb	1.4E-14	2E-16	7E-17	2E-15	6E-13	2.4E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-004	^{nat}U	1.32E-14	N/A	N/A	1E-16	9E-14	1.46E+01
Third Quarter 2014	^{230}Th	8E-16	3E-16	1E-16	1E-16	3E-14	3E+00
Air Volume in mLs	^{226}Ra	1.0E-15	6E-17	2E-17	1E-16	9E-13	1.2E-01
1.20E+11	^{210}Pb	1.2E-14	2E-16	7E-17	2E-15	6E-13	2.0E+00
	^{232}Th	5E-17	6E-17	1E-16	N/A	6E-15	8E-01

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C15010198-004	^{nat}U	8E-16	N/A	N/A	1E-16	9E-14	9E-01
Fourth Quarter 2014	^{230}Th	2E-16	4E-17	2E-17	1E-16	3E-14	7E-01
Air Volume in mLs	^{226}Ra	3E-16	5E-17	7E-18	1E-16	9E-13	3E-02
1.30E+11	^{210}Pb	2.1E-14	3E-15	8E-17	2E-15	6E-13	3.5E+00
	^{232}Th	8E-18	1E-17	2E-17	N/A	6E-15	1E-01

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 4th Quarter Air 2014
Lab ID: C15010198-004
Client Sample ID: BHV-5

Report Date: 02/08/15
Collection Date: 12/29/14
DateReceived: 01/09/15
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	8.2E-16	uCi/mL		1.0E-16		SW6020	01/14/15 00:41 / clm
RADIONUCLIDES - IN AIR							
Lead 210	2.1E-14	uCi/mL				E909.0	01/25/15 14:36 / eli-cs
Lead 210 precision (±)	3.3E-15	uCi/mL				E909.0	01/25/15 14:36 / eli-cs
Lead 210 MDC	8.2E-17	uCi/mL				E909.0	01/25/15 14:36 / eli-cs
Radium 226	2.6E-16	uCi/mL				E903.0	01/19/15 20:06 / trs
Radium 226 precision (±)	5.0E-17	uCi/mL				E903.0	01/19/15 20:06 / trs
Radium 226 MDC	7.4E-18	uCi/mL				E903.0	01/19/15 20:06 / trs
Thorium 230	2.2E-16	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 precision (±)	4.2E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 MDC	2.1E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232	8.5E-18	uCi/mL	U			E908.0	01/21/15 14:03 / dmf
Thorium 232 precision (±)	1.1E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232 MDC	2.1E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	2730	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 precision (±)	425	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 MDC	10.7	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226	33.1	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 precision (±)	6.5	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 MDC	0.96	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230	28.5	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 precision (±)	5.4	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 MDC	2.7	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232	1.1	pCi/Filter	U			RADCALC	02/07/15 15:41 / sec
Thorium 232 precision (±)	1.5	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232 MDC	2.7	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Uranium, Activity	106	pCi/Filter		0.20		RADCALC	02/07/15 15:41 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	122048500	L				FIELD	12/29/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: February 8, 2015
PROJECT: 4th Quarter Air 2014

SAMPLE ID: BHV-6

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-005	^{nat}U	8.9E-15	N/A	N/A	1E-16	9E-14	9.9E+00
First Quarter 2014	^{230}Th	8E-16	1E-16	2E-17	1E-16	3E-14	3E+00
Air Volume in mLs	^{226}Ra	1.5E-15	4E-17	6E-18	1E-16	9E-13	1.7E-01
1.35E+11	^{210}Pb	1.6E-14	3E-16	9E-17	2E-15	6E-13	2.7E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-005	^{nat}U	8.3E-15	N/A	N/A	1E-16	9E-14	9.2E+00
Second Quarter 2014	^{230}Th	5E-16	8E-17	2E-17	1E-16	3E-14	2E+00
Air Volume in mLs	^{226}Ra	7E-16	1E-17	2E-18	1E-16	9E-13	7E-02
1.37E+11	^{210}Pb	1.2E-14	2E-16	7E-17	2E-15	6E-13	2.0E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-005	^{nat}U	1.20E-14	N/A	N/A	1E-16	9E-14	1.33E+01
Third Quarter 2014	^{230}Th	6E-16	2E-16	1E-16	1E-16	3E-14	2E+00
Air Volume in mLs	^{226}Ra	6E-16	5E-17	2E-17	1E-16	9E-13	7E-02
1.32E+11	^{210}Pb	1.4E-14	2E-16	7E-17	2E-15	6E-13	2.3E+00
	^{232}Th	0E+00	3E-17	1E-16	N/A	6E-15	0E+00

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C15010198-005	^{nat}U	5E-16	N/A	N/A	1E-16	9E-14	5E-01
Fourth Quarter 2014	^{230}Th	1E-16	2E-17	2E-17	1E-16	3E-14	4E-01
Air Volume in mLs	^{226}Ra	1E-16	2E-17	7E-18	1E-16	9E-13	1E-02
1.30E+11	^{210}Pb	2.3E-14	4E-15	8E-17	2E-15	6E-13	3.8E+00
	^{232}Th	8E-18	1E-17	2E-17	N/A	6E-15	1E-01

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 4th Quarter Air 2014
Lab ID: C15010198-005
Client Sample ID: BHV-6

Report Date: 02/08/15
Collection Date: 12/29/14
DateReceived: 01/09/15
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	4.9E-16	uCi/mL		1.0E-16		SW6020	01/14/15 00:45 / clm
RADIONUCLIDES - IN AIR							
Lead 210	2.3E-14	uCi/mL				E909.0	01/25/15 15:46 / eli-cs
Lead 210 precision (±)	3.5E-15	uCi/mL				E909.0	01/25/15 15:46 / eli-cs
Lead 210 MDC	7.8E-17	uCi/mL				E909.0	01/25/15 15:46 / eli-cs
Radium 226	1.1E-16	uCi/mL				E903.0	01/19/15 20:06 / trs
Radium 226 precision (±)	2.4E-17	uCi/mL				E903.0	01/19/15 20:06 / trs
Radium 226 MDC	7.4E-18	uCi/mL				E903.0	01/19/15 20:06 / trs
Thorium 230	1.2E-16	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 precision (±)	2.2E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 MDC	2.0E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232	8.1E-18	uCi/mL	U			E908.0	01/21/15 14:03 / dmf
Thorium 232 precision (±)	1.1E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232 MDC	2.0E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	2930	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 precision (±)	457	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 MDC	10.1	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226	14.7	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 precision (±)	3.1	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 MDC	0.96	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230	15.3	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 precision (±)	2.9	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 MDC	2.6	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232	1.0	pCi/Filter	U			RADCALC	02/07/15 15:41 / sec
Thorium 232 precision (±)	1.4	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232 MDC	2.6	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Uranium, Activity	63.5	pCi/Filter		0.20		RADCALC	02/07/15 15:41 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	122066800	L				FIELD	12/29/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: February 8, 2015
PROJECT: 4th Quarter Air 2014

SAMPLE ID: BHV-8

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
First Quarter 2014	^{nat}U				1E-16	9E-14	
Air Volume in mLs	^{230}Th				1E-16	3E-14	
	^{226}Ra				1E-16	9E-13	
	^{210}Pb				2E-15	6E-13	

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
Second Quarter 2014	^{nat}U				1E-16	9E-14	
Air Volume in mLs	^{230}Th				1E-16	3E-14	
	^{226}Ra				1E-16	9E-13	
	^{210}Pb				2E-15	6E-13	

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
Third Quarter 2014	^{nat}U				1E-16	9E-14	
Air Volume in mLs	^{230}Th				1E-16	3E-14	
	^{226}Ra				1E-16	9E-13	
	^{210}Pb				2E-15	6E-13	
	^{232}Th				N/A	6E-15	

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C15010198-006	^{nat}U	4E-16	N/A	N/A	1E-16	9E-14	5E-01
Fourth Quarter 2014	^{230}Th	2E-16	3E-17	8E-17	1E-16	3E-14	5E-01
Air Volume in mLs	^{226}Ra	7E-17	7E-17	1E-16	1E-16	9E-13	8E-03
6.98E+09	^{210}Pb	9.9E-15	2E-15	1E-15	2E-15	6E-13	1.7E+00
	^{232}Th	9E-18	3E-17	7E-17	N/A	6E-15	1E-01

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 4th Quarter Air 2014
Lab ID: C15010198-006
Client Sample ID: BHV-8

Report Date: 02/08/15
Collection Date: 12/29/14
DateReceived: 01/09/15
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	4.5E-16	uCi/mL		1.0E-16		SW6020	01/16/15 00:26 / clm
RADIONUCLIDES - IN AIR							
Lead 210	9.9E-15	uCi/mL				E909.0	01/25/15 16:55 / eli-cs
Lead 210 precision (±)	1.8E-15	uCi/mL				E909.0	01/25/15 16:55 / eli-cs
Lead 210 MDC	1.1E-15	uCi/mL				E909.0	01/25/15 16:55 / eli-cs
Radium 226	6.8E-17	uCi/mL	U			E903.0	01/19/15 20:07 / trs
Radium 226 precision (±)	6.8E-17	uCi/mL				E903.0	01/19/15 20:07 / trs
Radium 226 MDC	1.0E-16	uCi/mL				E903.0	01/19/15 20:07 / trs
Thorium 230	1.6E-16	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 precision (±)	3.0E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 MDC	7.8E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232	8.8E-18	uCi/mL	U			E908.0	01/21/15 14:03 / dmf
Thorium 232 precision (±)	2.9E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232 MDC	7.2E-17	uCi/mL				E908.0	01/21/15 14:03 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	69.4	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 precision (±)	12.8	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 MDC	7.8	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226	0.48	pCi/Filter	U			RADCALC	02/07/15 15:41 / sec
Radium 226 precision (±)	0.47	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 MDC	0.73	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230	1.1	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 precision (±)	0.21	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 MDC	0.55	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232	0.062	pCi/Filter	U			RADCALC	02/07/15 15:41 / sec
Thorium 232 precision (±)	0.20	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232 MDC	0.50	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Uranium, Activity	3.1	pCi/Filter		0.20		RADCALC	02/07/15 15:41 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	6653900	L				FIELD	12/29/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

HIGH VOLUME AIR SAMPLING REPORT

CLIENT: Energy Fuels Resources (USA) Inc
REPORT DATE: February 8, 2015
PROJECT: 4th Quarter Air 2014

SAMPLE ID: Blanks

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14040336-006	^{nat}U	1E-17	N/A	N/A	1E-16	9E-14	2E-02
First Quarter 2014	^{230}Th	2E-18	1E-18	2E-18	1E-16	3E-14	7E-03
Air Volume in mLs	^{226}Ra	3E-18	2E-18	2E-18	1E-16	9E-13	3E-04
1.36E+11	^{210}Pb	-1E-17	4E-17	7E-17	2E-15	6E-13	-2E-03

Note: This sample uses 136,000,000 L of air volume for comparison purposes.

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14070123-006	^{nat}U	2E-17	N/A	N/A	1E-16	9E-14	2E-02
Second Quarter 2014	^{230}Th	6E-18	2E-18	2E-18	1E-16	3E-14	2E-02
Air Volume in mLs	^{226}Ra	5E-18	1E-18	1E-18	1E-16	9E-13	6E-04
1.36E+11	^{210}Pb	6E-18	3E-17	5E-17	2E-15	6E-13	1E-03

Note: This sample uses 136,000,000 L of air volume for comparison purposes.

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C14100198-006	^{nat}U	2E-17	N/A	N/A	1E-16	9E-14	2E-02
Third Quarter 2014	^{230}Th	4E-18	5E-18	9E-18	1E-16	3E-14	1E-02
Air Volume in mLs	^{226}Ra	-1E-18	6E-18	1E-17	1E-16	9E-13	-1E-04
1.36E+11	^{210}Pb	1E-17	3E-17	5E-17	2E-15	6E-13	2E-03
	^{232}Th	2E-18	4E-18	9E-18	N/A	6E-15	3E-02

Note: This sample uses 136,000,000 L of air volume for comparison purposes.

Quarter/Date Sampled Air Volume	Radionuclide	Concentration µCi/mL	Counting Precision µCi/mL	MDC µCi/mL	L.L.D.+ µCi/mL	Effluent Conc.* µCi/mL	% Effluent Concentration
C15010198-007	^{nat}U	1E-09	N/A	N/A	1E-16	9E-14	1E+06
Fourth Quarter 2014	^{230}Th	4E-10	2E-10	2E-10	1E-16	3E-14	1E+06
Air Volume in mLs	^{226}Ra	1E-09	5E-10	7E-10	1E-16	9E-13	1E+05
1.00E+03	^{210}Pb	-2E-09	4E-09	8E-09	2E-15	6E-13	-4E+05
	^{232}Th	1E-11	1E-10	3E-10	N/A	6E-15	2E+05

Note: This sample uses 136,000,000 L of air volume for comparison purposes.

+LLD's are from NRC Reg. Guide 4.14
*Effluent Concentration from the NEW 10 CFR Part 20 - Appendix B - Table 2
Year for Natural Uranium
Year for Thorium-230, Thorium-232
Week for Radium-226
Day for Lead-210

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 4th Quarter Air 2014
Lab ID: C15010198-007
Client Sample ID: Blanks

Report Date: 02/08/15
Collection Date: 12/29/14
DateReceived: 01/09/15
Matrix: Filter

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
TRACE METALS - IN AIR							
Uranium, Activity	1.3E-09	uCi/mL	D	2.9E-11		SW6020	01/14/15 00:52 / clm
RADIONUCLIDES - IN AIR							
Lead 210	-2.4E-09	uCi/mL	U			E909.0	01/25/15 18:12 / eli-cs
Lead 210 precision (±)	4.4E-09	uCi/mL				E909.0	01/25/15 18:12 / eli-cs
Lead 210 MDC	7.5E-09	uCi/mL				E909.0	01/25/15 18:12 / eli-cs
Radium 226	1.1E-09	uCi/mL				E903.0	01/19/15 20:07 / trs
Radium 226 precision (±)	5.3E-10	uCi/mL				E903.0	01/19/15 20:07 / trs
Radium 226 MDC	7.0E-10	uCi/mL				E903.0	01/19/15 20:07 / trs
Thorium 230	4.4E-10	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 precision (±)	2.2E-10	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 230 MDC	2.4E-10	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232	1.3E-11	uCi/mL	U			E908.0	01/21/15 14:03 / dmf
Thorium 232 precision (±)	1.0E-10	uCi/mL				E908.0	01/21/15 14:03 / dmf
Thorium 232 MDC	2.6E-10	uCi/mL				E908.0	01/21/15 14:03 / dmf
RADIONUCLIDES - IN AIR - PER FILTER							
Lead 210	-2.4	pCi/Filter	U			RADCALC	02/07/15 15:41 / sec
Lead 210 precision (±)	4.4	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Lead 210 MDC	7.5	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226	1.1	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 precision (±)	0.53	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Radium 226 MDC	0.70	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230	0.44	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 precision (±)	0.22	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 230 MDC	0.24	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232	0.013	pCi/Filter	U			RADCALC	02/07/15 15:41 / sec
Thorium 232 precision (±)	0.10	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Thorium 232 MDC	0.26	pCi/Filter				RADCALC	02/07/15 15:41 / sec
Uranium, Activity	1.3	pCi/Filter		0.20		RADCALC	02/07/15 15:41 / sec
CLIENT PROVIDED FIELD PARAMETERS							
Air Filtering Volume	1	L				FIELD	12/29/14 00:00 / ***

*** Field data provided by client

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
U - Not detected at minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Report Date: 02/08/15
Project: 4th Quarter Air 2014
Work Order: C15010198

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: 43644
Lab ID: C15010191-001ADUP	3	Sample Duplicate				Run: G5000W_150113A				01/19/15 14:03
Radium 226		5.92E-08	pCi/L					22	58.4	
Radium 226 precision (±)		1.40E-08	pCi/L							
Radium 226 MDC		8.43E-09	pCi/L							
Lab ID: C15010191-008AMS		Sample Matrix Spike				Run: G5000W_150113A				01/19/15 14:03
Radium 226		102	pCi/L		96	70	130			
Lab ID: LCS-43644		Laboratory Control Sample				Run: G5000W_150113A				01/19/15 20:07
Radium 226		22.9	pCi/L		107	80	120			
Lab ID: MB-43644	3	Method Blank				Run: G5000W_150113A				01/19/15 20:07
Radium 226		0.08	pCi/L							U
Radium 226 precision (±)		0.08	pCi/L							
Radium 226 MDC		0.1	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Report Date: 02/08/15
Project: 4th Quarter Air 2014
Work Order: C15010198

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0										Batch: 43644
Lab ID: C15010191-007AMS		Sample Matrix Spike				Run: ALPHANALYST_150115A				01/20/15 15:31
Thorium 230		1.31E-06	pCi/L		112	70	130			
Lab ID: C15010191-007AMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_150115A				01/20/15 15:31
Thorium 230		1.22E-06	pCi/L		104	70	130	7.4	48	
Lab ID: LCS-43644		Laboratory Control Sample				Run: ALPHANALYST_150115A				01/21/15 14:03
Thorium 230		19.3	pCi/L		105	80	120			
Lab ID: MB-43644	6	Method Blank				Run: ALPHANALYST_150115A				01/21/15 14:03
Thorium 230		0.2	pCi/L							
Thorium 230 precision (±)		0.1	pCi/L							
Thorium 230 MDC		0.2	pCi/L							
Thorium 232		0.1	pCi/L							U
Thorium 232 precision (±)		0.09	pCi/L							
Thorium 232 MDC		0.2	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Report Date: 02/08/15
Project: 4th Quarter Air 2014
Work Order: C15010198

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E909.0										Batch: T_22736
Lab ID: MB-22736	3	Method Blank				Run: SUB-T60924				01/25/15 05:21
Lead 210		-0.9	pCi/L							U
Lead 210 precision (±)		5	pCi/L							
Lead 210 MDC		9	pCi/L							
Lab ID: LCS-22736		Laboratory Control Sample				Run: SUB-T60924				01/25/15 06:30
Lead 210		161	pCi/L		99	80	120			
Lab ID: C15010190-001AMS		Sample Matrix Spike				Run: SUB-T60924				01/25/15 08:49
Lead 210		3.61E-05	pCi/L		94	70	130			
Lab ID: C15010190-001AMSD		Sample Matrix Spike Duplicate				Run: SUB-T60924				01/25/15 09:59
Lead 210		3.74E-05	pCi/L		104	70	130	3.4	41.5	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 4th Quarter Air 2014

Report Date: 02/08/15
Work Order: C15010198

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS2-C_150113B	
Lab ID:	**ICV**		Initial Calibration Verification Standard							01/13/15 15:12	
Uranium			0.0500	mg/L	0.00030	100	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							01/13/15 15:15	
Uranium			1.67E-05	mg/L	0.00030						
Lab ID:	**ICSAB**		Interference Check Sample AB							01/13/15 15:18	
Uranium			5.20E-06	mg/L	0.00030						
Method:	**SW6020**									Batch: 43644	
Lab ID:	**MB-43644**		Method Blank				Run: ICPMS2-C_150113B			01/13/15 23:41	
Uranium			0.0003	mg/L	4E-05						
Lab ID:	**LCS2-43644**		Laboratory Control Sample				Run: ICPMS2-C_150113B			01/13/15 23:44	
Uranium			0.102	mg/L	4.3E-05	102	85	115			
Lab ID:	**C15010197-002ADIL**		Serial Dilution				Run: ICPMS2-C_150113B			01/14/15 00:01	
Uranium			1.63E-10	mg/L	1.5E-10					20	N
Lab ID:	**C15010198-002AMS**		Sample Matrix Spike				Run: ICPMS2-C_150113B			01/14/15 00:28	
Uranium			2.92E-09	mg/L	1.5E-10	96	75	125			
Lab ID:	**C15010198-002AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS2-C_150113B			01/14/15 00:31	
Uranium			2.97E-09	mg/L	1.5E-10	98	75	125	1.7	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 4th Quarter Air 2014

Report Date: 02/08/15
Work Order: C15010198

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Analytical Run: ICPMS2-C_150115B	
Lab ID: ICV		Initial Calibration Verification Standard							01/15/15 14:37	
Uranium		0.0500	mg/L	0.00030	100	90	110			
Lab ID: ICSA		Interference Check Sample A							01/15/15 14:41	
Uranium		1.33E-05	mg/L	0.00030						
Lab ID: ICSAB		Interference Check Sample AB							01/15/15 14:44	
Uranium		3.00E-06	mg/L	0.00030						
Method: SW6020									Batch: 43644	
Lab ID: MB-43644		Method Blank				Run: ICPMS2-C_150115B			01/16/15 00:15	
Uranium		0.0003	mg/L	4E-05						
Lab ID: LCS2-43644		Laboratory Control Sample				Run: ICPMS2-C_150115B			01/16/15 00:19	
Uranium		0.103	mg/L	4.3E-05	103	85	115			
Lab ID: C15010198-006ADIL		Serial Dilution				Run: ICPMS2-C_150115B			01/16/15 00:29	
Uranium		6.20E-07	mg/L	3.0E-08					20	N
Lab ID: C15010198-006AMS		Sample Matrix Spike				Run: ICPMS2-C_150115B			01/16/15 00:33	
Uranium		2.62E-05	mg/L	4.5E-09	102	75	125			
Lab ID: C15010198-006AMSD		Sample Matrix Spike Duplicate				Run: ICPMS2-C_150115B			01/16/15 00:36	
Uranium		2.66E-05	mg/L	4.5E-09	104	75	125	1.6	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

Workorder Receipt Checklist

Energy Fuels Resources (USA) Inc C15010198

Login completed by: Debra Williams
Reviewed by: BL2000\swaldrop
Reviewed Date: 1/14/2015

Date Received: 1/9/2015
Received by: dw
Carrier name: NDA

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	NA °C NA		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

Sheet 1 of 1

C15010198

CHAIN OF CUSTODY

Samples Shipped to: Energy Laboraties
2393 Salt Creek Hwy.
Casper WY, 82601

Contact: Garrin Palmer
Ph: 435 678 2221
gpalmer@energyfuels.com

Chain of Custody/Sampling Analysis Request

Project	Samplers Name	Samplers Signature
4th Quarter Air 2014	Garrin Palmer	

Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
BHV-1	9/29/14 - 12/29/14	NA	U-NAT, TH-230, Ra-226, Pb-210, TH-232
BHV-2	9/29/14 - 12/29/14	NA	U-NAT, TH-230, Ra-226, Pb-210, TH-232
BHV-4	9/29/14 - 12/29/14	NA	U-NAT, TH-230, Ra-226, Pb-210, TH-232
BHV-5	9/29/14 - 12/29/14	NA	U-NAT, TH-230, Ra-226, Pb-210, TH-232
BHV-6	9/29/14 - 12/29/14	NA	U-NAT, TH-230, Ra-226, Pb-210, TH-232
BHV-8	9/29/14 - 12/29/14	NA	U-NAT, TH-230, Ra-226, Pb-210, TH-232
Blanks	9/29/14 - 12/29/14	NA	U-NAT, TH-230, Ra-226, Pb-210, TH-232

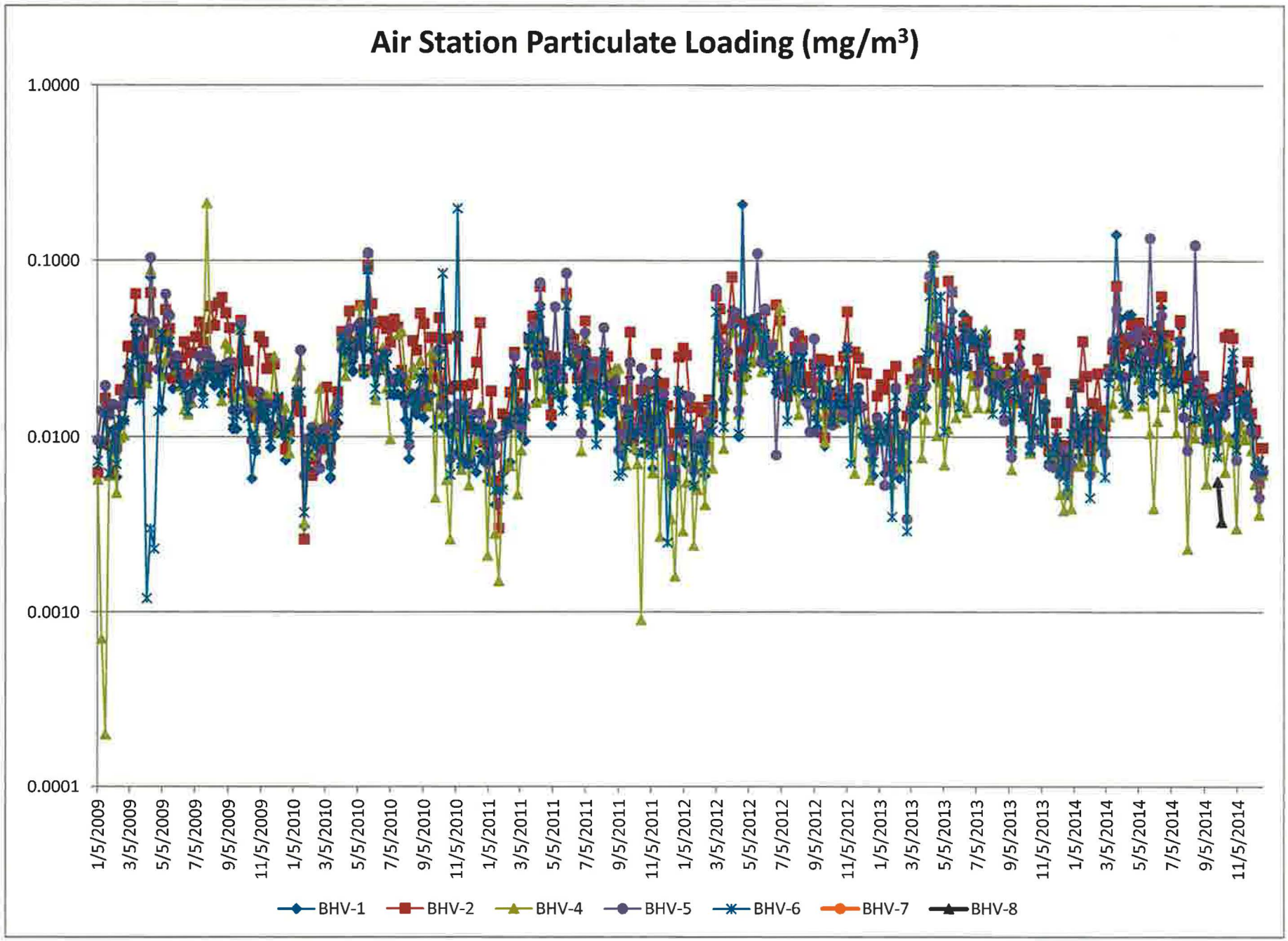
Comments: Please send report to Kathy Weinel at kweinel@energyfuels.com

Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time
Garrin Palmer	1/7/15 1000		
Relinquished By:(Signature)	**Date/Time**	**Received By:(Signature)**	**Date/Time**
		[illegible]	930 1-9-15

Blanks		Period September 29, 2014-December 29th, 2014		
Week #	Filter Number	Start Date	Stop Date	Net
1	8953497	29-Sep-14	06-Oct-14	4.5144
2	8953486	06-Oct-14	13-Oct-14	4.5550
3	8953485	13-Oct-14	20-Oct-14	4.5507
4	8953474	20-Oct-14	27-Oct-14	4.4593
5	8953468	27-Oct-14	03-Nov-14	4.4513
6	8953462	03-Nov-14	10-Nov-14	4.4490
7	8953456	10-Nov-14	18-Nov-14	4.4460
8	8953455	18-Nov-14	24-Nov-14	4.4552
9	8953444	24-Nov-14	01-Dec-14	4.4483
10	8953443	01-Dec-14	08-Dec-14	4.4524
11	8953430	08-Dec-14	15-Dec-14	4.4708
12	8953423	15-Dec-22	22-Dec-14	4.4708
13	8953416	22-Dec-14	29-Dec-14	4.4584
	Totals			4.4755

ATTACHMENT D

AIR PARTICULATE LOADING GRAPHS AND SUPPORTING DATA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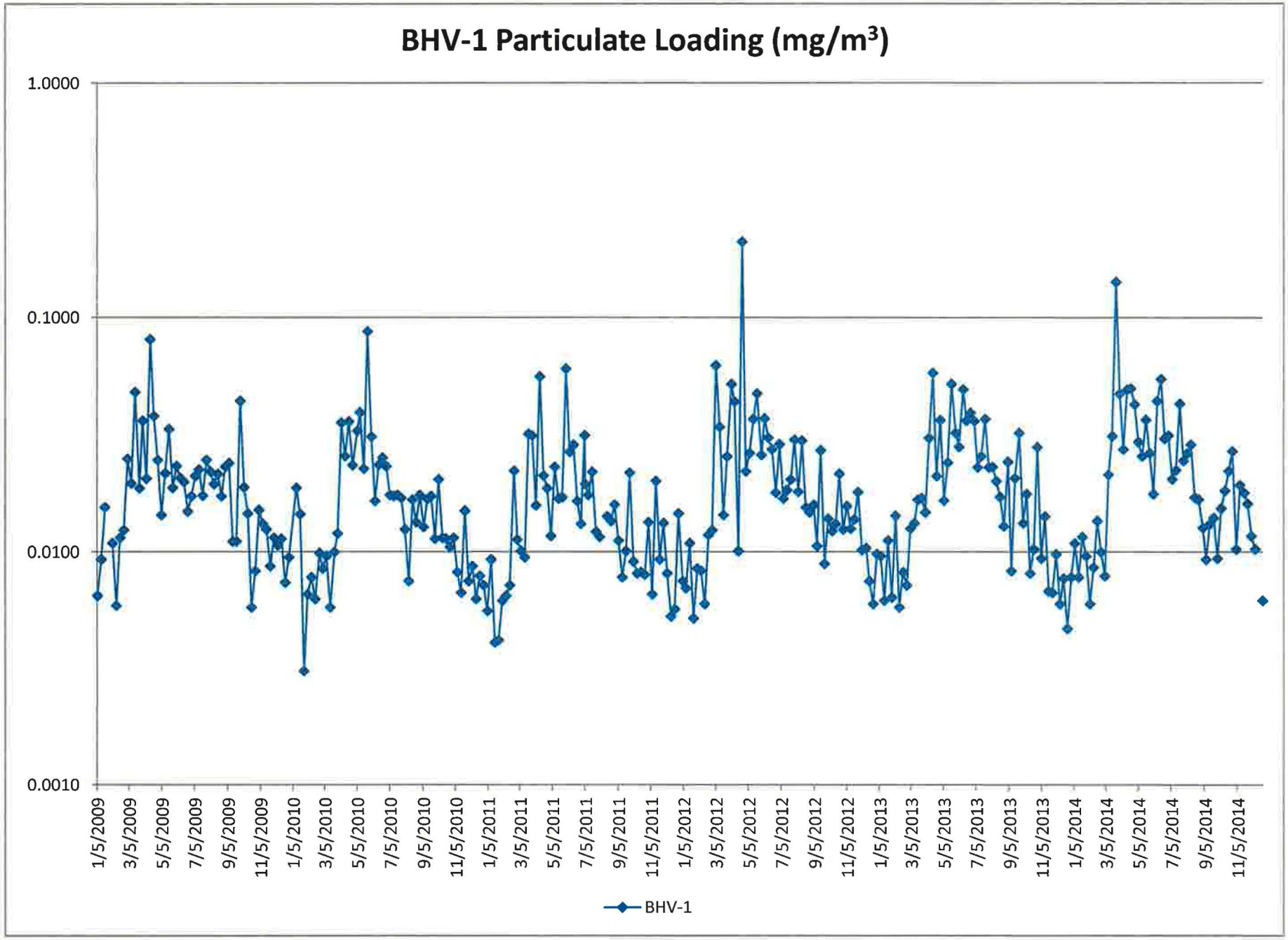
BHV-6
BHV-7
BHV-8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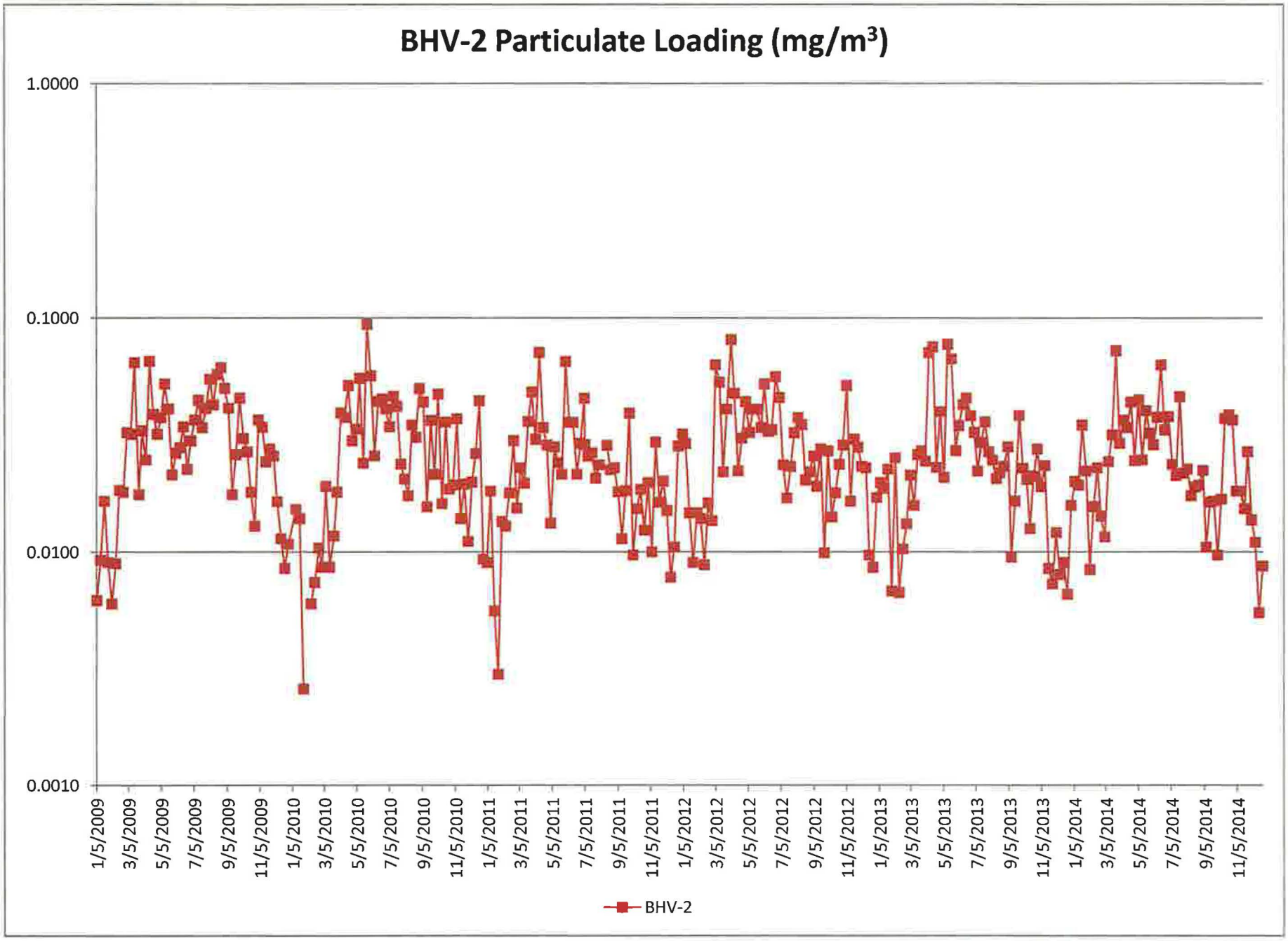
BHV-1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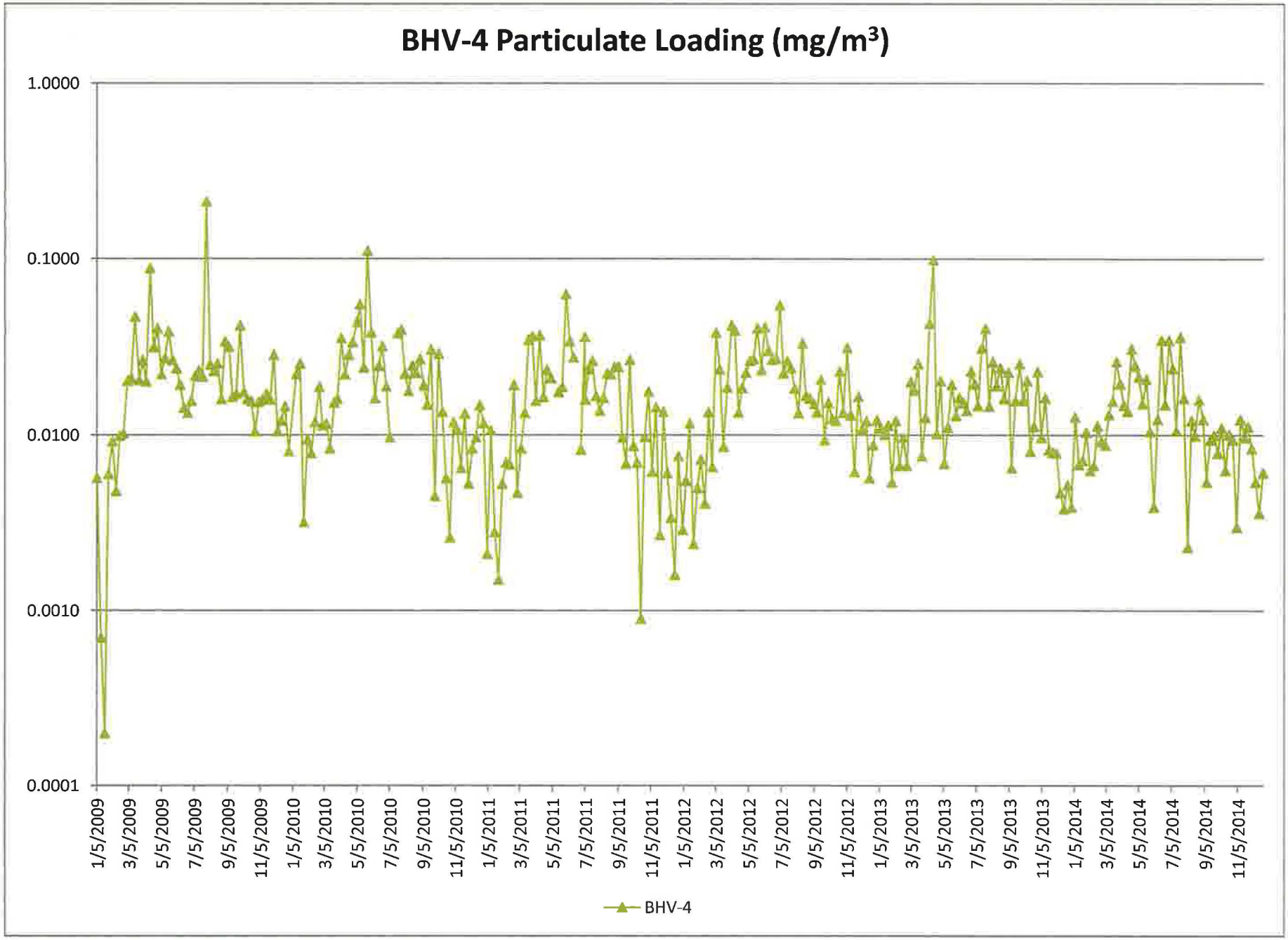
BHV-2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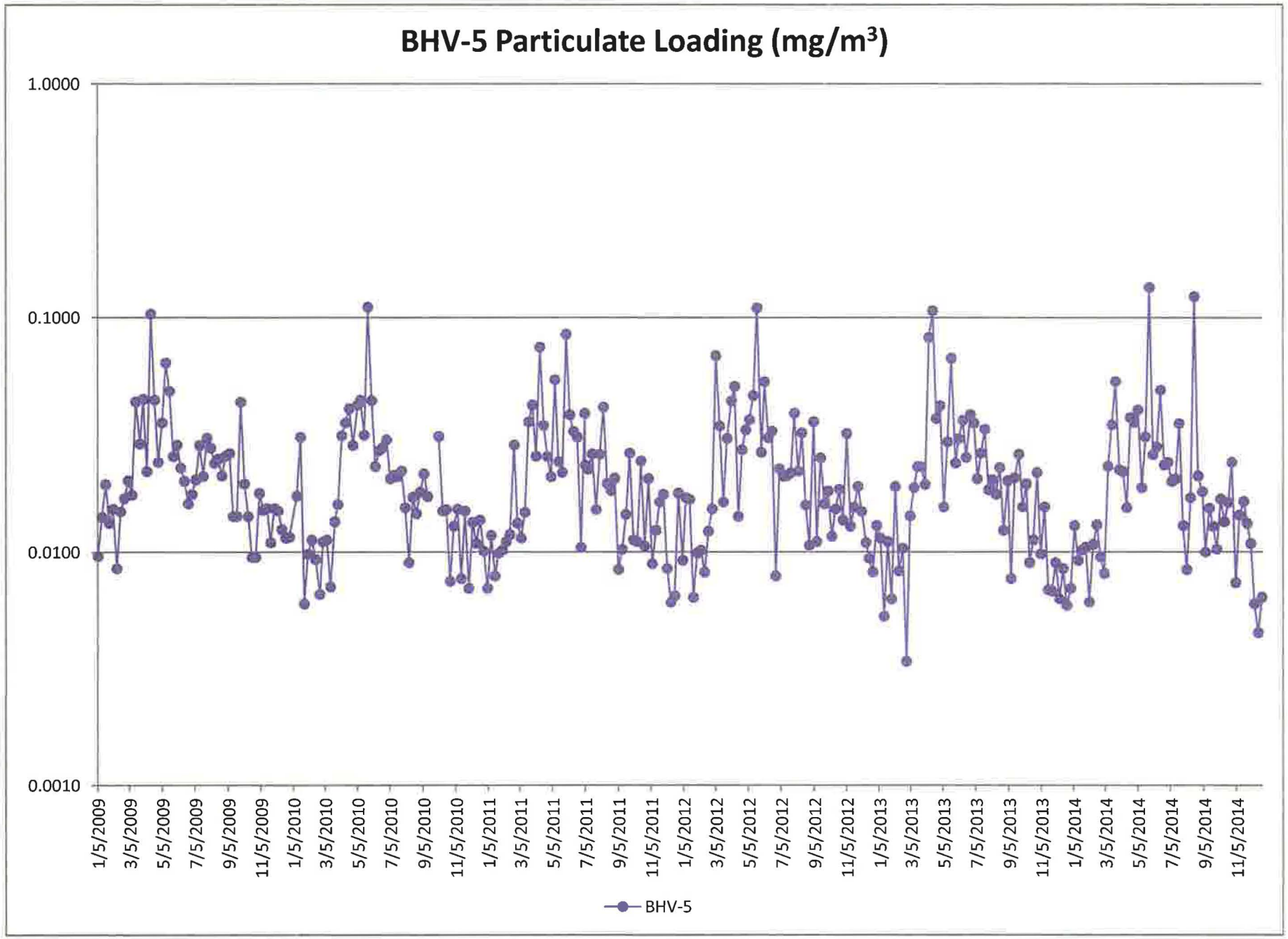
BHV-4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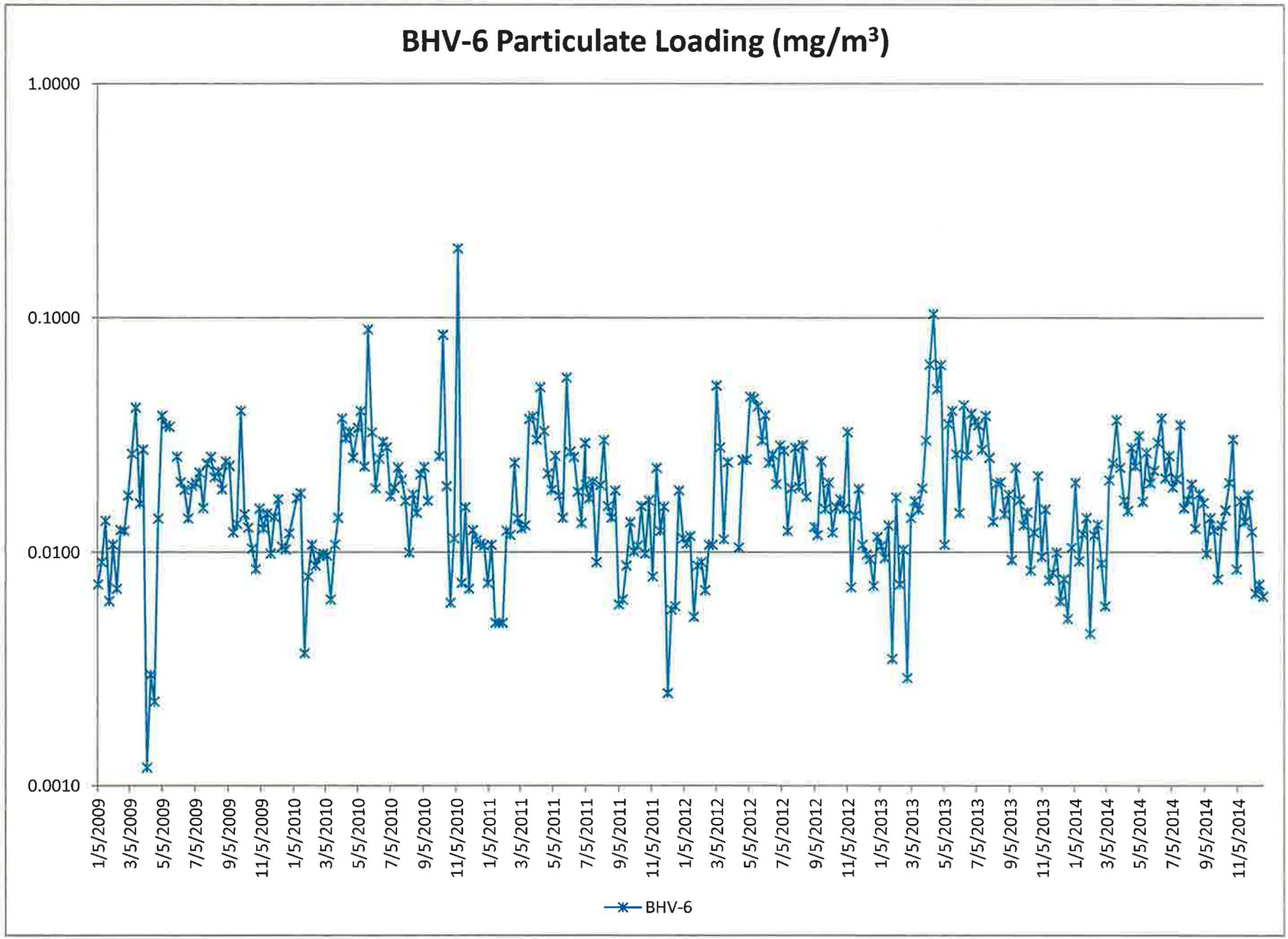
BHV-5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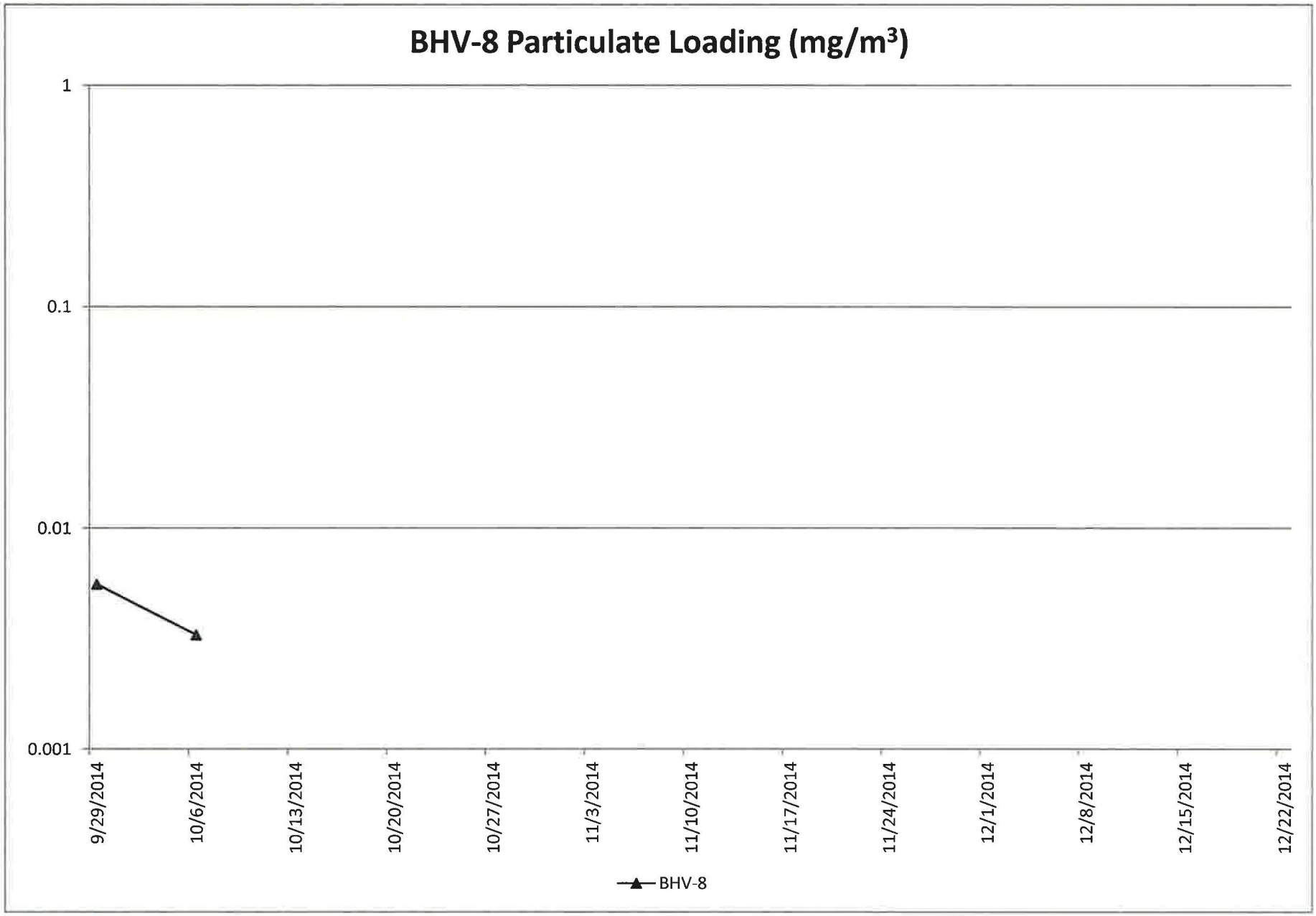
BHV-6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11/10/2014
11/17/2014
11/24/2014
12/1/2014
12/8/2014
12/15/2014
12/22/2014
BHV-8

BHV-1

Energey Fuels Resources - White Mesa Mill
Period: June 30, 2014 - September 30, 2014

Calibration Date: ########
Calibration Slope & Intercept: m= 1.25049 b= -0.0081
Orifice S/N: 8091779

First Monitoring Quarter 2014
Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m³/min)	Qs Std. Flow (m³/min)	Qs Std. Flow (SCFM) (ft³/min)	Total Std. Volume (m³)	[illegible]	[illegible]	Net Weight (mg)	Loading (mg/m³)	Percent Opacity (%)
1	8951281	6/30/2014	7/7/2014	56784.88	56952.93	10083	4.0	4.0	4.0	19.0	292.2	621.03	1.10	0.92	32.48	9273.8	4.5046	4.7971	292.5	0.0315	6001.8
2	8951274	7/7/2014	7/14/2014	56952.93	57122.47	10172.4	4.5	4.0	4.3	20.0	293.2	769.36	1.02	1.05	37.22	10720.6	4.5265	4.7458	219.3	0.0205	6055.0
3	8951263	7/14/2014	7/21/2014	57122.47	57287.16	9881.4	4.5	4.0	4.3	20.0	293.2	769.36	1.02	1.05	37.22	10413.9	4.5295	4.7624	232.9	0.0224	5881.8
4	8951263	7/21/2014	7/28/2014	57287.16	57456.49	10159.8	4.5	4.0	4.3	20.0	293.2	769.36	1.02	1.05	37.22	10707.3	4.5224	4.9827	460.3	0.0430	6047.5
5	8951252	7/28/2014	8/4/2014	57456.49	57624.65	10089.6	4.0	4.0	4.0	22.0	295.2	770.89	1.00	1.02	36.03	10292.9	4.5192	4.7724	253.2	0.0246	6005.7
6	8951251	8/4/2014	8/11/2014	57624.65	57789.8	9909	4.0	4.0	4.0	24.0	297.2	772.92	1.00	1.02	35.95	10087.7	4.4870	4.7533	266.3	0.0264	5898.2
7	8951244	8/11/2014	8/18/2014	57789.8	57958.65	10131	4.0	4.0	4.0	24.0	297.2	768.60	1.00	1.02	35.85	10284.7	4.4676	4.7636	296.0	0.0288	6030.4
8	8951235	8/18/2014	8/25/2014	57958.65	58125.93	10036.8	4.0	4.0	4.0	21.0	294.2	768.60	1.00	1.02	36.03	10241.2	4.4874	4.6624	175.0	0.0171	5974.3
9	8951233	8/25/2014	9/2/2014	58125.93	58318.22	11537.4	3.5	4.0	3.8	24.0	297.2	768.35	0.97	0.98	34.71	11341.0	4.5146	4.7048	190.2	0.0168	6867.5
10	8951227	9/2/2014	9/8/2014	58318.22	58462.18	8637.6	4.0	4.0	4.0	17.2	290.4	768.85	0.99	1.03	36.28	8872.8	4.5058	4.6185	112.7	0.0127	5141.4
11	8951221	9/8/2014	9/15/2014	58462.18	58629.7	10051.2	4.0	4.0	4.0	18.0	291.2	770.89	0.99	1.03	36.27	10324.4	4.5269	4.6229	96.0	0.0093	5982.9
12	8951210	9/15/2014	9/22/2014	58629.7	58797.91	10092.6	4.0	4.0	4.0	20.0	293.2	770.89	0.99	1.02	36.15	10331.3	4.4930	4.6293	136.3	0.0132	6007.5
13	8951208	9/22/2014	9/29/2014	58797.91	58969.1	10271.4	3.5	4.0	3.8	18.0	291.2	620.00	1.07	0.89	31.48	9157.0	4.5048	4.6330	128.2	0.0140	6113.9
					Totals	131053.2							13.18	13.11	462.90	132048.6	58.589	61.448	2858.9	0.2802	
					Averages	10081.0	4.0	4.0	4.0	20.6	293.7	746.85415	1.01	1.01	35.61	10157.6	4.507	4.727	219.9	0.0216	6000.6

Comments:

Insert weekly flow check values in yellow columns.

Blue columns values are calculated

Green columns are calculated averages from the met station.

BHV-2	Energey Fuels Resources - White Mesa Mill Period: June 30, 2014 - September 30, 2014	Calibration Date: ######## Calibration Slope & Intercept: m= 1.25049 b= -0.0081 Orifice S/N: 8091779	First Monitoring Quarter 2014 Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m³/min)	Qs Std. Flow (m³/min)	Qs Std. Flow (SCFM) (ft³/min)	Total Std. Volume (m³)	[illegible]	[illegible]	Net Weight (mg)	Loading (mg/m³)	Percent Quartzsem (%)
1	8951280	6/30/2014	7/7/2014	67075.39	67243.46	10084.2	4.0	4.0	4.0	19.0	292.2	621.03	1.10	0.92	32.48	9274.9	4.5543	4.9055	351.2	0.0379	6002.5
2	8951273	7/7/2014	7/14/2014	67243.46	67413.25	10187.4	4.5	4.0	4.3	20.0	293.2	769.36	1.02	1.05	37.22	10736.4	4.5260	4.7805	254.5	0.0237	6063.9
3	8951265	7/14/2014	7/21/2014	67413.25	67577.6	9861	4.5	4.0	4.3	20.0	293.2	769.36	1.02	1.05	37.22	10392.4	4.4778	4.6982	220.4	0.0212	5869.6
4	8951262	7/21/2014	7/28/2014	67577.6	67747.04	10166.4	4.5	4.0	4.3	20.0	293.2	769.36	1.02	1.05	37.22	10714.3	4.5023	4.9957	493.4	0.0461	6051.4
5	8951253	7/28/2014	8/4/2014	67747.04	67915.22	10090.8	4.0	4.0	4.0	22.0	295.2	770.89	1.00	1.02	36.03	10294.1	4.4999	4.7230	223.1	0.0217	6006.4
6	8951250	8/4/2014	8/11/2014	67915.22	68080.36	9908.4	4.0	4.0	4.0	24.0	297.2	772.92	1.00	1.02	35.95	10087.1	4.5123	4.7402	227.9	0.0226	5897.9
7	8951243	8/11/2014	8/18/2014	68080.36	68249.21	10131	4.0	4.0	4.0	24.0	297.2	768.60	1.00	1.02	35.85	10284.7	4.5610	4.7399	178.9	0.0174	6030.4
8	8951236	8/18/2014	8/25/2014	68249.21	68416.5	10037.4	4.0	4.0	4.0	21.0	294.2	768.60	1.00	1.02	36.03	10241.8	4.4883	4.6817	193.4	0.0189	5974.6
9	8951232	8/25/2014	9/2/2014	68416.5	68609.37	11572.2	4.0	4.0	4.0	24.0	297.2	768.35	1.00	1.02	35.84	11745.8	4.5268	4.7540	227.2	0.0193	6888.2
10	8951226	9/2/2014	9/8/2014	68609.37	68753.2	8629.8	4.0	4.0	4.0	17.2	290.4	768.85	0.99	1.03	36.28	8864.8	4.5116	4.7096	198.0	0.0223	5136.8
11	8951220	9/8/2014	9/15/2014	68753.2	68920.9	10062	4.0	4.0	4.0	18.0	291.2	770.89	0.99	1.03	36.27	10335.5	4.4915	4.6004	108.9	0.0105	5989.3
12	8951211	9/15/2014	9/22/2014	68920.9	69089	10086	4.0	4.0	4.0	20.0	293.2	770.89	0.99	1.02	36.15	10324.5	4.5085	4.6771	168.6	0.0163	6003.6
13	8951207	9/22/2014	9/29/2014	69089	69260.33	10279.8	4.0	4.0	4.0	18.1	291.2	620.00	1.10	0.92	32.51	9462.0	4.5002	4.6565	156.3	0.0165	6118.9
					Totals	131096.4							13.24	13.17	465.05	132758.3	58.661	61.662	3001.8	0.2944	
					Averages	10084.3	4.1	4.0	4.1	20.6	293.7	746.85415	1.02	1.01	35.77	10212.2	4.512	4.743	230.9	0.0226	6002.6

Comments:

Insert weekly flow check values in yellow columns.

Blue columns values are calculated.

Green columns are calculated averages from the met station.

BHV-4

Energey Fuels Resources - White Mesa Mill
Period: July 1, 2014 - September 30, 2014

Calibration Date: ########
Calibration Slope & Intercept: m= 1.25049 b= -0.0081
Orifice S/N: 8091779

First Monitoring Quarter 2014
Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m³/min)	Qs Std. Flow (m³/min)	Qs Std. Flow (SCFM) (ft³/min)	Total Std. Volume (m³)	[illegible]	[illegible]	Net Weight (mg)	Loading (mg/m³)	Percent Quartzite (%)
1	8951279	6/30/2014	7/7/2014	42296.28	42462.69	9984.6	3.5	4.0	3.8	19.0	292.2	621.03	1.07	0.89	31.46	8893.4	4.5313	4.8392	307.9	0.0346	5943.2
2	8951272	7/7/2014	7/14/2014	42462.69	42632.24	10173	5.0	4.0	4.5	20.0	293.2	769.36	1.05	1.08	38.29	11030.1	4.5102	4.7743	264.1	0.0239	6055.4
3	8951266	7/14/2014	7/21/2014	42632.24	42796.96	9883.2	5.0	4.0	4.5	20.0	293.2	769.36	1.05	1.08	38.29	10715.9	4.5033	4.6165	113.2	0.0106	5882.9
4	8951261	7/21/2014	7/28/2014	42796.96	42965.58	10117.2	5.0	4.0	4.5	20.0	293.2	769.36	1.05	1.08	38.29	10969.6	4.4902	4.8851	394.9	0.0360	6022.1
5	8951254	7/28/2014	8/4/2014	42965.58	43132.29	10002.6	4.0	4.0	4.0	22.0	295.2	770.89	1.00	1.02	36.03	10204.2	4.5294	4.6952	165.8	0.0162	5953.9
6	8951249	8/4/2014	8/11/2014	43132.29	43296.75	9867.6	4.0	4.0	4.0	24.0	297.2	772.92	1.00	1.02	35.95	10045.6	4.5221	4.5449	22.8	0.0023	5873.6
7	8951242	8/11/2014	8/18/2014	43296.75	43464.95	10092	4.0	4.0	4.0	24.0	297.2	768.60	1.00	1.02	35.85	10245.1	4.4974	4.6217	124.3	0.0121	6007.1
8	8951237	8/18/2014	8/25/2014	43464.95	43631.9	10017	4.0	4.0	4.0	21.0	294.2	768.60	1.00	1.02	36.03	10221.0	4.4570	4.5577	100.7	0.0099	5962.5
9	8951231	8/25/2014	9/2/2014	43631.9	43824.7	11568	4.0	4.0	4.0	24.0	297.2	768.35	1.00	1.02	35.84	11741.5	4.5152	4.7024	187.2	0.0159	6885.7
10	8951225	9/2/2014	9/8/2014	43824.7	43969.12	8665.2	4.0	4.0	4.0	17.2	290.4	768.85	0.99	1.03	36.28	8901.2	4.5164	4.6257	109.3	0.0123	5157.9
11	8951219	9/8/2014	9/15/2014	43969.12	44136.54	10045.2	4.0	4.0	4.0	18.0	291.2	770.89	0.99	1.03	36.27	10318.2	4.5004	4.5564	56.0	0.0054	5979.3
12	8951212	9/15/2014	9/22/2014	44136.54	44304.61	10084.2	4.0	4.0	4.0	20.0	293.2	770.89	0.99	1.02	36.15	10322.7	4.5051	4.6022	97.1	0.0094	6002.5
13	8951206	9/22/2014	9/29/2014	44304.61	44475.51	10254	3.5	4.0	3.8	18.1	291.2	620.00	1.07	0.89	31.48	9140.3	4.5134	4.6052	91.8	0.0100	6103.6
					Totals	130753.8							13.26	13.20	466.22	132748.7	58.591	60.627	2035.1	0.1987	
					Averages	10058.0	4.2	4.0	4.1	20.6	293.7	746.85415	1.02	1.02	35.86	10211.4	4.507	4.664	156.5	0.0153	5986.9

Comments:

Insert weekly flow check values in yellow columns.

Blue column values are calculated.

Green columns are calculated averages from the met station.

Insert filter weight values into orange columns.

BHV-5	Energey Fuels Resources - White Mesa Mill Period: July 1, 2014 - September 30, 2014	Calibration Date: ######## Calibration Slope & Intercept: m= 1.25049 b= -0.0081 Orifice S/N: 8091779	First Monitoring Quarter 2014 Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m³/min)	Qs Std. Flow (m³/min)	Qs Std. Flow (SCFM) (ft³/min)	Total Std. Volume (m³)	[illegible]	[illegible]	Net Weight (mg)	Loading (mg/m³)	Percent Opacity (%)
1	8951278	6/30/2014	7/7/2014	65981.77	66148.17	9984	4.0	4.0	4.0	19.0	292.2	621.03	1.10	0.92	32.48	9182.7	4.5318	4.7543	222.5	0.0242	5942.9
2	8951271	7/7/2014	7/14/2014	66148.17	66318.14	10198.2	4.0	4.0	4.0	20.0	293.2	769.36	0.99	1.02	36.11	10428.9	4.4954	4.7053	209.9	0.0201	6070.4
3	8951267	7/14/2014	7/21/2014	66318.14	66482.82	9880.8	4.0	4.0	4.0	20.0	293.2	769.36	0.99	1.02	36.11	10104.3	4.5141	4.7224	208.3	0.0206	5881.4
4	8951260	7/21/2014	7/28/2014	66482.82	66651.23	10104.6	4.0	4.0	4.0	20.0	293.2	769.36	0.99	1.02	36.11	10333.2	4.5334	4.9003	366.9	0.0355	6014.6
5	8951255	7/28/2014	8/4/2014	66651.23	66818.36	10027.8	3.5	4.0	3.8	22.0	295.2	770.89	0.96	0.99	34.89	9907.1	4.5052	4.6342	129.0	0.0130	5968.9
6	8951248	8/4/2014	8/11/2014	66818.36	66982.7	9860.4	4.0	4.0	4.0	24.0	297.2	772.92	1.00	1.02	35.95	10038.2	4.4967	4.5808	84.1	0.0084	5869.3
7	8951241	8/11/2014	8/18/2014	66982.7	67151.55	10131	4.0	4.0	4.0	24.0	297.2	768.60	1.00	1.02	35.85	10284.7	4.4891	4.6646	175.5	0.0171	6030.4
8	8951238	8/18/2014	8/25/2014	67151.55	67153.78	133.8	4.0	4.0	4.0	21.0	294.2	768.60	1.00	1.02	36.03	136.5	4.4886	4.5054	16.8	0.1231	79.6
9	8951230	8/25/2014	9/2/2014	67153.78	67343.73	11397	3.0	4.0	3.5	24.0	297.2	768.35	0.94	0.95	33.54	10825.7	4.5269	4.7563	229.4	0.0212	6783.9
10	8951224	9/2/2014	9/8/2014	67343.73	67487.95	8653.2	4.0	4.0	4.0	17.2	290.4	768.85	0.99	1.03	36.28	8888.8	4.4966	4.6588	162.2	0.0182	5150.7
11	8951218	9/8/2014	9/15/2014	67487.95	67655.53	10054.8	4.0	4.0	4.0	18.0	291.2	770.89	0.99	1.03	36.27	10328.1	4.4947	4.5984	103.7	0.0100	5985.0
12	8951213	9/15/2014	9/22/2014	67655.53	67823.13	10056	4.0	4.0	4.0	20.0	293.2	770.89	0.99	1.02	36.15	10293.8	4.4867	4.6452	158.5	0.0154	5985.7
13	8951205	9/22/2014	9/29/2014	67823.13	67994.66	10291.8	4.0	4.0	4.0	18.1	291.2	620.00	1.10	0.92	32.51	9473.1	4.5291	4.6510	121.9	0.0129	6126.1
					Totals	120773.4							13.06	12.98	458.30	120225.2	58.588	60.777	2188.7	0.3397	
					Averages	9290.3	3.9	4.0	3.9	20.6	293.7	746.85415	1.00	1.00	35.25	9248.1	4.507	4.675	168.4	0.0261	5529.9

Comments:

Insert weekly flow check values in yellow columns.

Blue column values are calculated.

Green columns are calculated averages from the met station.

[illegible]

BHV-6	Energey Fuels Resources - White Mesa Mill Period: July 1, 2014 - September 30, 2014	Calibration Date: ######## Calibration Slope & Intercept: m= 1.25049 b= -0.0081 Orifice S/N: 8091779	First Monitoring Quarter 2014 Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m^3/min)	Qs Std. Flow (m^3/min)	Qs Std. Flow (SCFM) (ft³/min)	Total Std. Volume (m^3)	[illegible]	[illegible]	Net Weight (mg)	Loading (mg/m³)	Percent Overstrain (%)
1	8951277	6/30/2014	7/7/2014	1845.68	2009.87	9851.4	4.5	4.0	4.3	19.0	292.2	621.03	1.14	0.95	33.47	9338.0	4.5223	4.7643	242.0	0.0259	5863.9
2	8951270	7/7/2014	7/14/2014	2009.87	2179.38	10170.6	4.5	4.0	4.3	20.0	293.2	769.36	1.02	1.05	37.22	10718.7	4.5054	4.7089	203.5	0.0190	6053.9
3	8951268	7/14/2021	7/21/2014	2179.38	2344.08	9882	4.5	4.0	4.3	20.0	293.2	769.36	1.02	1.05	37.22	10414.6	4.4810	4.6963	215.3	0.0207	5882.1
4	8951259	7/21/2014	7/28/2014	2344.08	2512.57	10109.4	4.5	4.0	4.3	20.0	293.2	769.36	1.02	1.05	37.22	10654.2	4.5102	4.8826	372.4	0.0350	6017.5
5	8951256	7/28/2014	8/4/2014	2512.57	2679.53	10017.6	4.0	4.0	4.0	22.0	295.2	770.89	1.00	1.02	36.03	10219.5	4.5304	4.6887	158.3	0.0155	5962.9
6	8951247	8/4/2014	8/11/2014	2679.53	2843.96	9865.8	4.0	4.0	4.0	24.0	297.2	772.92	1.00	1.02	35.95	10043.7	4.4902	4.6591	168.9	0.0168	5872.5
7	8951240	8/11/2014	8/18/2014	2843.96	3012.81	10131	4.0	4.0	4.0	24.0	297.2	768.60	1.00	1.02	35.85	10284.7	4.4712	4.6724	201.2	0.0196	6030.4
8	8951239	8/18/2014	8/25/2014	3012.81	3180.08	10036.2	4.0	4.0	4.0	21.0	294.2	768.60	1.00	1.02	36.03	10240.6	4.4953	4.6258	130.5	0.0127	5973.9
9	8951229	8/25/2014	9/2/2014	3180.08	3372.94	11571.6	3.5	4.0	3.8	24.0	297.2	768.35	0.97	0.98	34.71	11374.7	4.5183	4.7211	202.8	0.0178	6887.9
10	8951223	9/2/2014	9/8/2014	3372.94	3516.91	8638.2	4.0	4.0	4.0	17.2	290.4	768.85	0.99	1.03	36.28	8873.4	4.5065	4.6514	144.9	0.0163	5141.8
11	8951217	9/8/2014	9/15/2014	3516.91	3684.48	10054.2	4.0	4.0	4.0	18.0	291.2	770.89	0.99	1.03	36.27	10327.5	4.4949	4.5968	101.9	0.0099	5984.6
12	8951214	9/15/2014	9/22/2014	3684.48	3852.57	10085.4	4.0	4.0	4.0	20.0	293.2	770.89	0.99	1.02	36.15	10323.9	4.4965	4.6423	145.8	0.0141	6003.2
13	8951204	9/22/2014	9/29/2014	3852.57	4023.59	10261.2	4.0	4.0	4.0	18.1	291.2	620.00	1.10	0.92	32.51	9444.9	4.5339	4.6517	117.8	0.0125	6107.9
					Totals	130674.6							13.24	13.16	464.91	132258.3	58.556	60.961	2405.3	0.2358	
					Averages	10051.9	4.1	4.0	4.1	20.6	293.7	746.85415	1.02	1.01	35.76	10173.7	4.504	4.689	185.0	0.0181	5983.3

Comments:

Insert weekly flow check values in yellow columns.

Blue column values are calculated.

Green columns are calculated averages from the met station.

Insert filter weight values into orange columns.

BHV-1

Energey Fuels Resources - White Mesa Mill
Period: September 29, 2014 - December 29th, 2014

Calibration Date: 7/10/2013
Calibration Slope & Intercept: m= 1.25049 b= -0.0081
Orifice S/N: 8091779

First Monitoring Quarter 2014
Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m^3/min)	Qs Std. Flow (m^3/min)	Qs Std. Flow (SCFM) (ft^3/min)	Total Std. Volume (m^3)	Tare Weight (g)	Gross Weight (g)	Net Weight (mg)	Loading (mg/m^3)	Percent Onstream (%)
1	8953499	9/29/2014	10/6/2014	58969.1	59132.64	9812.4	4.0	4.0	4.0	12.8	285.9	626.77	1.09	0.93	32.99	9165.4	4.5538	4.6399	86.1	0.0094	97.3
2	8953492	10/6/2014	10/13/2014	59132.64	59304.77	10327.8	4.0	4.0	4.0	18.9	292.1	619.76	1.10	0.92	32.45	9490.1	4.5416	4.6876	146.0	0.0154	102.5
3	8953491	10/13/2014	10/20/2014	59304.77	59442.13	8241.6	4.0	4.0	4.0	12.8	286.0	621.03	1.09	0.93	32.83	7662.2	4.5179	4.6583	140.4	0.0183	81.8
4	8953480	10/20/2027	10/27/2014	59442.13	59607.24	9906.6	4.0	4.0	4.0	13.8	287.0	621.03	1.09	0.93	32.77	9193.9	4.5320	4.7363	204.3	0.0222	98.3
5	8953479	10/27/2014	11/3/2014	59607.24	59776.37	10147.8	5.0	4.0	4.5	10.7	283.8	620.26	1.15	0.99	34.92	10034.9	4.4506	4.7220	271.4	0.0270	100.7
6	8953496	11/3/2014	11/10/2014	59776.37	59946.06	10181.4	4.0	4.0	4.0	7.4	280.6	623.06	1.08	0.94	33.20	9572.7	4.4684	4.5668	98.4	0.0103	101.0
7	8953467	11/10/2014	11/18/2014	59946.06	60138.92	11571.6	4.0	4.0	4.0	3.4	276.6	619.76	1.07	0.94	33.35	10928.7	4.4385	4.6492	210.7	0.0193	114.8
8	8953457	11/18/2014	11/24/2014	60138.92	60280.53	8496.6	4.5	4.0	4.3	1.0	274.1	623.82	1.10	0.98	34.64	8335.0	4.4611	4.6100	148.9	0.0179	84.3
9	8953454	11/24/2014	12/1/2014	60280.53	60448.46	10075.8	4.0	4.0	4.0	2.9	276.0	622.30	1.07	0.95	33.46	9545.1	4.4419	4.5959	154.0	0.0161	100.0
10	8953445	12/1/2014	12/8/2014	60448.46	60617.68	10153.2	4.0	4.0	4.0	5.3	278.5	622.80	1.08	0.94	33.32	9580.4	4.4480	4.5600	112.0	0.0117	100.7
11	8953431	12/8/2014	12/15/2014	60617.68	60785.24	10053.6	4.0	4.0	4.0	1.5	274.6	620.77	1.07	0.95	33.50	9537.0	4.4470	4.5450	98.0	0.0103	99.7
12	8953431	12/15/2014	12/22/2014	60785.24	60785.24	0	4.0	4.0	4.0	0.3	273.4	617.22	1.07	0.95	33.48	0.0	4.4568	4.4569	0.1	#DIV/0!	0.0
13	8953429	12/22/2014	12/29/2014	60785.24	60953.59	10101	4.0	4.0	4.0	-3.1	270.1	617.47	1.06	0.95	33.69	9637.2	4.4636	4.5233	59.7	0.0062	100.2
					Totals	119069.4							14.14	12.31	434.61	112682.7	58.221	59.951	1730.0	#DIV/0!	
					Averages	9159.2	4.1	4.0	4.1	6.7	279.9	621.23462	1.09	0.95	33.43	8667.9	4.479	4.612	133.1	#DIV/0!	90.9

Comments:

insert weekly flow check values in yellow columns.

Blue column values are calculated.

Green columns are calculated averages from the met station.

Insert filter weight values into orange columns.

BHV-2

Energey Fuels Resources - White Mesa Mill
Period: September 29 , 2014 - December 29th, 2014

Calibration Date: #########
Calibration Slope & Intercept: m= 1.25049 b= -0.0081
Orifice S/N: 8091779

First Monitoring Quarter 2014
Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m³/min)	Qs Std. Flow (m³/min)	Qs Std. Flow (SCFM) (ft³/min)	Total Std. Volume (m³)	Tare Weight (g)	Gross Weight (g)	Net Weight (mg)	Loading (mg/m³)	Percent Onstream (%)
1	8953500	9/29/2014	10/6/2014	69260.33	69423.39	9783.6	3.5	4.0	3.8	12.8	285.9	620.77	1.06	0.90	31.79	8807.3	4.5276	4.6134	85.8	0.0097	97.1
2	8953495	10/6/2014	10/13/2014	69423.39	69595.95	10353.6	4.0	4.0	4.0	18.9	292.1	619.76	1.10	0.92	32.45	9513.8	4.5369	4.6967	159.8	0.0168	102.7
3	8953490	10/13/2014	10/20/2014	69595.95	69761.34	9923.4	4.0	4.0	4.0	12.8	286.0	621.03	1.09	0.93	32.83	9226.0	4.5130	4.8559	342.9	0.0372	98.4
4	8953481	10/20/2014	10/27/2014	69761.34	69926.35	9900.6	3.5	4.0	3.8	13.8	287.0	621.03	1.06	0.90	31.74	8898.6	4.5098	4.8525	342.7	0.0385	98.2
5	8953478	10/27/2014	11/3/2014	69926.35	70096.29	10196.4	4.5	4.0	4.3	10.7	283.9	620.26	1.12	0.96	33.94	9800.0	4.4417	4.7999	358.2	0.0366	101.2
6	8953470	11/3/2014	11/10/2014	70096.29	70265.14	10131	4.0	4.0	4.0	7.4	280.6	623.06	1.08	0.94	33.20	9525.4	4.4508	4.6237	172.9	0.0182	100.5
7	8953466	11/10/2014	11/18/2014	70265.14	70458.32	11590.8	4.0	4.0	4.0	3.4	276.6	619.76	1.07	0.94	33.35	10946.8	4.4459	4.6446	198.7	0.0182	115.0
8	8953458	11/18/2014	11/24/2014	70458.32	70599.61	8477.4	4.0	4.0	4.0	1.0	274.2	623.82	1.07	0.95	33.61	8068.6	4.4333	4.5565	123.2	0.0153	84.1
9	8953453	11/24/2014	12/1/2014	70599.61	70767.49	10072.8	4.5	4.0	4.3	2.9	276.1	622.30	1.10	0.98	34.48	9834.0	4.4840	4.7489	264.9	0.0269	99.9
10	8953446	12/1/2014	12/8/2014	70767.49	70936.57	10144.8	4.0	4.0	4.0	5.3	278.5	622.80	1.08	0.94	33.32	9572.4	4.4555	4.5870	131.5	0.0137	100.6
11	8953441	12/8/2014	12/15/2014	70936.57	71104.01	10046.4	4.0	4.0	4.0	1.5	274.6	620.77	1.07	0.95	33.50	9530.2	4.4478	4.5527	104.9	0.0110	99.7
12	8953432	12/15/2014	12/22/2014	71104.01	71271.9	10073.4	4.0	4.0	4.0	0.3	273.4	617.22	1.07	0.95	33.48	9548.9	4.4752	4.5275	52.3	0.0055	99.9
13	8953428	12/22/2014	12/29/2014	71271.9	71442.67	10246.2	4.0	4.0	4.0	-3.1	270.1	617.47	1.06	0.95	33.69	9775.7	4.4832	4.5684	85.2	0.0087	101.6
					Totals	130940.4							14.04	12.22	431.40	123047.7	58.205	60.628	2423.0	0.2562	
					Averages	10072.3	4.0	4.0	4.0	6.7	279.9	620.77308	1.08	0.94	33.18	9465.2	4.477	4.664	186.4	0.0197	99.9

Comments:

Insert weekly flow check values in yellow columns.

Blue column values are calculated.

Green columns are calculated averages from the met station.

Insert filter weight values into orange columns.

BHV-4

Energey Fuels Resources - White Mesa Mill
Period: September 29, 2014 - December 29th, 2014

Calibration Date: #######
Calibration Slope & Intercept: m= 1.25049 b= -0.0081
Orifice S/N: 8091779

First Monitoring Quarter 2014
Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m³/min)	Qs Std. Flow (m³/min)	Qs Std. Flow (SCFM) (ft³/min)	Total Std. Volume (m³)	Tare Weight (g)	Gross Weight (g)	Net Weight (mg)	Loading (mg/m³)	Percent Unstream (%)
1	8951201	9/29/2014	10/6/2014	44475.51	44640.2	9881.4	4.0	4.0	4.0	12.8	285.9	620.77	1.09	0.93	32.83	9185.3	4.4960	4.5686	72.6	0.0079	98.0
2	8953494	10/6/2014	10/13/2014	44640.2	44811.45	10275	4.0	4.0	4.0	18.9	292.1	619.76	1.10	0.92	32.45	9441.6	4.5335	4.6370	103.5	0.0110	101.9
3	8953489	10/13/2014	10/20/2014	44811.45	44977.72	9976.2	4.0	4.0	4.0	12.8	286.0	621.03	1.09	0.93	32.83	9275.1	4.5203	4.5789	58.6	0.0063	99.0
4	8953482	10/20/2014	10/27/2014	44977.72	45143.03	9918.6	4.0	4.0	4.0	13.8	287.0	621.03	1.09	0.93	32.78	9205.3	4.5423	4.6353	93.0	0.0101	98.4
5	8953477	10/27/2014	11/3/2014	45143.03	45312.85	10189.2	4.0	4.0	4.0	10.7	283.9	620.26	1.09	0.93	32.93	9502.3	4.4372	4.5266	89.4	0.0094	101.1
6	8953471	11/3/2014	11/10/2014	45312.85	45481.7	10131	4.0	4.0	4.0	7.4	280.6	623.06	1.08	0.94	33.20	9525.4	4.4381	4.4669	28.8	0.0030	100.5
7	8953465	11/10/2014	11/18/2014	45481.7	45668.66	11217.6	4.0	4.0	4.0	3.4	276.6	619.76	1.07	0.94	33.35	10594.3	4.4612	4.5919	130.7	0.0123	111.3
8	8953459	11/18/2014	11/24/2014	45668.66	45786.95	7097.4	4.0	4.0	4.0	1.0	274.2	623.82	1.07	0.95	33.61	6755.2	4.4495	4.5149	65.4	0.0097	70.4
9	8953452	11/24/2014	12/1/2014	45786.95	45958.9	10317	4.0	4.0	4.0	2.9	276.1	622.30	1.07	0.95	33.45	9773.5	4.4702	4.5794	109.2	0.0112	102.4
10	8953447	12/1/2014	12/8/2014	45958.9	46124.05	9909	4.0	4.0	4.0	5.3	278.5	622.80	1.08	0.94	33.32	9349.9	4.4502	4.5283	78.1	0.0084	98.3
11	8953440	12/8/2014	12/15/2014	46124.05	46294.78	10243.8	4.0	4.0	4.0	1.5	274.6	620.77	1.07	0.95	33.50	9717.5	4.4603	4.5125	52.2	0.0054	101.6
12	8953433	12/15/2014	12/22/2014	46294.78	46459.46	9880.8	4.0	4.0	4.0	0.3	273.4	617.22	1.07	0.95	33.48	9366.4	4.4660	4.5000	34.0	0.0036	98.0
13	8953427	12/22/2014	12/29/2014	46459.46	46629.41	10197	4.0	4.0	4.0	-3.1	270.1	617.47	1.06	0.95	33.69	9728.8	4.4792	4.5381	58.9	0.0061	101.2
					Totals	129234.0							14.04	12.22	431.44	121420.5	58.204	59.178	974.4	0.1043	
					Averages	9941.1	4.0	4.0	4.0	6.7	279.9	620.77331	1.08	0.94	33.19	9340.0	4.477	4.552	75.0	0.0080	98.6

Comments:

Insert weekly flow check values in yellow columns.

Blue column values are calculated.

Green columns are calculated averages from the met station.

Insert filter weight values into orange columns.

BHV-5

Energy Fuels Resources - White Mesa Mill
Period: September 29, 2014 - December 29th, 2014

Calibration Date: ########
Calibration Slope & Intercept: m= 1.25049 b= -0.0081
Orifice S/N: 8091779

First Monitoring Quarter 2014
Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m³/min)	Qs Std. Flow (m³/min)	Qs Std. Flow (SCFM) (ft³/min)	Total Std. Volume (m³)	Tare Weight (g)	Gross Weight (g)	Net Weight (mg)	Loading (mg/m³)	Percent Opacity (%)
1	8951202	9/29/2014	10/6/2014	67994.66	68158.82	9849.6	4.5	4.0	4.3	12.8	285.9	620.77	1.13	0.96	33.83	9435.9	4.5047	4.6018	97.1	0.0103	97.7
2	8953495	10/6/2014	10/13/2014	68158.82	68330.49	10300.2	4.0	4.0	4.0	18.9	292.1	619.76	1.10	0.92	32.45	9464.8	4.5369	4.6967	159.8	0.0169	102.2
3	8953488	10/13/2014	10/20/2014	68330.49	68496.77	9976.8	4.0	4.0	4.0	12.8	286.0	621.03	1.09	0.93	32.83	9275.6	4.5445	4.6699	125.4	0.0135	99.0
4	8953483	10/20/2014	10/27/2014	68496.77	68661.66	9893.4	4.0	4.0	4.0	13.8	287.0	621.03	1.09	0.93	32.78	9181.9	4.5328	4.6823	149.5	0.0163	98.1
5	8953476	10/27/2014	11/3/2014	68661.66	68832	10220.4	4.0	4.0	4.0	10.7	283.9	620.26	1.09	0.93	32.93	9531.4	4.4451	4.6758	230.7	0.0242	101.4
6	8953472	11/3/2014	11/10/2014	68832	69000.79	10127.4	4.0	4.0	4.0	7.4	280.6	623.06	1.08	0.94	33.20	9522.0	4.4452	4.5158	70.6	0.0074	100.5
7	8953464	11/10/2017	11/18/2014	69000.79	69192.71	11515.2	4.0	4.0	4.0	3.4	276.6	619.76	1.07	0.94	33.36	10876.2	4.4297	4.5866	156.9	0.0144	114.2
8	8953460	11/18/2014	11/24/2014	69192.71	69312.24	7171.8	4.0	4.0	4.0	1.0	274.2	623.82	1.07	0.95	33.61	6826.0	4.4292	4.5418	112.6	0.0165	71.1
9	8953451	11/24/2014	12/1/2014	69312.24	69484.12	10312.8	4.0	4.0	4.0	2.9	276.1	622.30	1.07	0.95	33.45	9769.5	4.4743	4.6043	130.0	0.0133	102.3
10	8953448	12/1/2014	12/8/2014	69484.12	69649.47	9921	4.0	4.0	4.0	5.3	278.5	622.80	1.08	0.94	33.32	9361.3	4.4448	4.5470	102.2	0.0109	98.4
11	8953439	12/8/2014	12/15/2014	69649.47	69820	10231.8	4.0	4.0	4.0	1.5	274.6	620.77	1.07	0.95	33.50	9706.1	4.4482	4.5067	58.5	0.0060	101.5
12	8953434	12/15/2014	12/22/2014	69820	69984.78	9886.8	4.0	4.0	4.0	0.3	273.4	617.22	1.07	0.95	33.48	9372.1	4.4602	4.5022	42.0	0.0045	98.1
13	8953426	12/22/2014	12/29/2014	69984.78	70154.68	10194	4.0	4.0	4.0	-3.1	270.1	617.47	1.06	0.95	33.69	9725.9	4.4725	4.5351	62.6	0.0064	101.1
					Totals	129601.2							14.08	12.25	432.44	122048.5	58.168	59.666	1497.9	0.1607	
					Averages	9969.3	4.0	4.0	4.0	6.7	279.9	620.77308	1.08	0.94	33.26	9388.3	4.474	4.590	115.2	0.0124	98.9

Comments:

Insert weekly flow check values in yellow columns.

Blue column values are calculated.

Green columns are calculated averages from the met station.

Insert filter weight values into orange columns.

BHV-6

Energey Fuels Resources - White Mesa Mill
Period: September 29, 2014 - December 29th, 2014

Calibration Date: ########
Calibration Slope & Intercept: m= 1.25049 b= -0.0081
Orifice S/N: 8091779

First Monitoring Quarter 2014
Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m³/min)	Qs Std. Flow (m³/min)	Qs Std. Flow (SCFM) (ft³/min)	Total Std. Volume (m³)	Tare Weight (g)	Gross Weight (g)	Net Weight (mg)	Loading (mg/m³)	Percent Opacity (%)
1	8951203	9/29/2014	10/6/2014	4023.59	4188.22	9877.8	4.0	4.0	4.0	12.8	285.9	620.77	1.09	0.93	32.83	9182.0	4.5300	4.6007	70.7	0.0077	98.0
2	8953496	10/6/2014	10/13/2014	4188.22	4359.49	10276.2	4.0	4.0	4.0	18.9	292.1	619.76	1.10	0.92	32.45	9442.7	4.5452	4.6692	124.0	0.0131	101.9
3	8953487	10/13/2014	10/20/2014	4359.49	4525.76	9976.2	4.0	4.0	4.0	12.8	286.0	621.03	1.09	0.93	32.83	9275.1	4.5148	4.6554	140.6	0.0152	99.0
4	8953484	10/20/2014	10/27/2014	4525.76	4691.08	9919.2	4.0	4.0	4.0	13.8	287.0	621.03	1.09	0.93	32.78	9205.9	4.5420	4.7253	183.3	0.0199	98.4
5	8953475	10/27/2014	11/3/2014	4691.08	4860.93	10191	4.5	4.0	4.3	10.7	283.9	620.26	1.12	0.96	33.94	9794.8	4.4492	4.7469	297.7	0.0304	101.1
6	8953473	11/3/2014	11/10/2014	4860.93	5029.82	10133.4	4.0	4.0	4.0	7.4	280.6	623.06	1.08	0.94	33.20	9527.6	4.4599	4.5409	81.0	0.0085	100.5
7	8953463	11/10/2014	11/18/2014	5029.82	5222.11	11537.4	4.0	4.0	4.0	3.4	276.6	619.76	1.07	0.94	33.35	10896.4	4.4520	4.6331	181.1	0.0166	114.5
8	8953461	11/18/2014	11/24/2014	5222.11	5341.28	7150.2	4.0	4.0	4.0	1.0	274.2	623.82	1.07	0.95	33.61	6805.4	4.4370	4.5295	92.5	0.0136	70.9
9	8953450	11/24/2014	12/1/2014	5341.28	5512.94	10299.6	4.0	4.0	4.0	2.9	276.1	622.30	1.07	0.95	33.45	9757.0	4.4556	4.6269	171.3	0.0176	102.2
10	8953449	12/1/2014	12/8/2014	5512.94	5678.45	9930.6	4.0	4.0	4.0	5.3	278.5	622.80	1.08	0.94	33.32	9370.3	4.4667	4.5823	115.6	0.0123	98.5
11	8953438	12/8/2014	12/15/2014	5678.45	5848.89	10226.4	4.0	4.0	4.0	1.5	274.6	620.77	1.07	0.95	33.50	9700.9	4.4571	4.5220	64.9	0.0067	101.5
12	8953435	12/15/2014	12/22/2014	5848.89	6013.84	9897	4.0	4.0	4.0	0.3	273.4	617.22	1.07	0.95	33.48	9381.7	4.4281	4.4965	68.4	0.0073	98.2
13	8953427	12/22/2014	12/29/2014	6013.84	6183.76	10195.2	4.0	4.0	4.0	-3.1	270.1	617.47	1.06	0.95	33.69	9727.0	4.4553	4.5187	63.4	0.0065	101.1
					Totals	129610.2							14.08	12.25	432.44	122066.8	58.193	59.847	1654.5	0.1754	
					Averages	9970.0	4.0	4.0	4.0	6.7	279.9	620.77308	1.08	0.94	33.26	9389.8	4.476	4.604	127.3	0.0135	98.9

Comments:

Insert weekly flow check values in yellow columns.

Blue column values are calculated.

Green columns are calculated averages from the met station.

Insert filter weight values into orange columns.

BHV-8

Energey Fuels Resources - White Mesa Mill
Period: September 29th, 2014 - December 29th, 2014

Calibration Date: ########
Calibration Slope & Intercept: m= 1.25049 b= -0.0081
Orifice S/N: 8091779

First Monitoring Quarter 2014
Updated: 7/30/14

Week #	Filter Number	Start Date	Stop Date	Start Time	Stop Time	Total Time (min)	ΔH Starting Manometer (in. H_2O)	ΔH Stopping Manometer (in. H_2O)	ΔH Average Manometer (in. H_2O)	Ta Wkly. Avg. Temp. (°C)	Ta Wkly. Avg. Temp. (K)	Pa Wkly. Avg. Pressure (mmHg)	Qa Act. Flow (m^3/min)	Qs Std. Flow (m^3/min)	Qs Std. Flow (SCFM) (ft^3/min)	Total Std. Volume (m^3)	Tare Weight (g)	Gross Weight (g)	Net Weight (mg)	Loading (mg/m^3)	Percent Onstream (%)
1	8953437	12/15/2014	12/22/2014	0	17.9	1074	4.0	4.0	4.0	0.3	273.4	617.22	1.07	0.95	33.48	1018.1	4.4632	4.4689	5.7	0.0056	10.7
2	8953424	12/22/2014	12/29/2014	17.9	116.35	5907	4.0	4.0	4.0	-3.1	270.1	617.47	1.06	0.95	33.69	5635.8	4.4681	4.4867	18.6	0.0033	58.6
3						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
4						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
5						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
6						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
7						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
8						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
9						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
10						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
11						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
12						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
13						0			#DIV/0!		273.2		#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!			0.0	#DIV/0!	0.0
					Totals	6981.0							#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	8.931	8.956	24.3	#DIV/0!	
					Averages	537.0	4.0	4.0	#DIV/0!	-1.4	272.9	617.345	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	4.466	4.478	1.9	#DIV/0!	5.3

Comments:

Insert weekly flow check values in yellow columns.

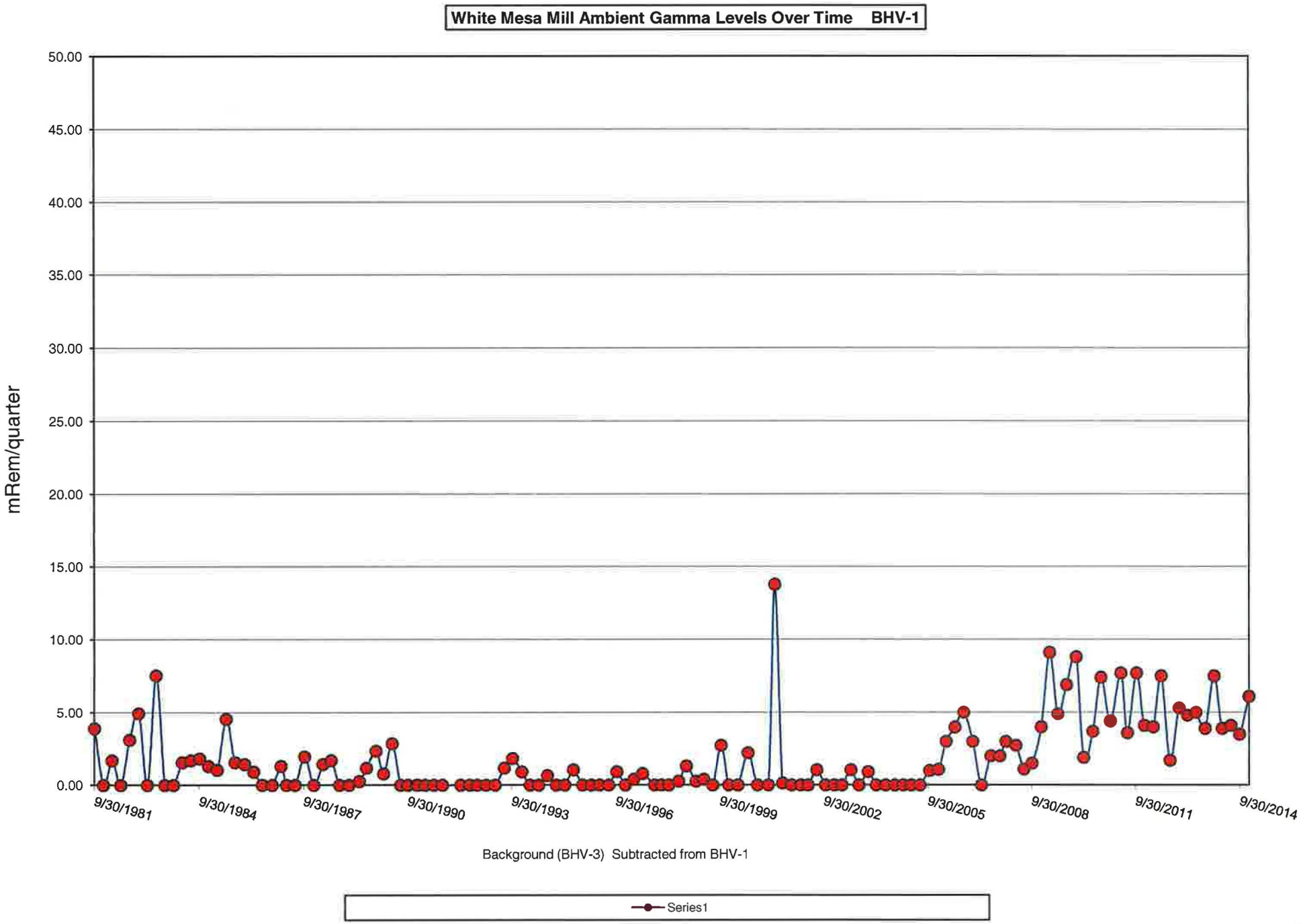
Blue column values are calculated.

Green columns are calculated averages from the met station.

Insert filter weight values into orange columns.

ATTACHMENT E

ENVIRONMENTAL GAMMA GRAPHS AND SUPPORTING DATA


White Mesa Mill Ambient Gamma Levels Over Time BHV-1
mRem/quarter
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45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
9/30/1981
9/30/1984
9/30/1987
9/30/1990
9/30/1993
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9/30/1999
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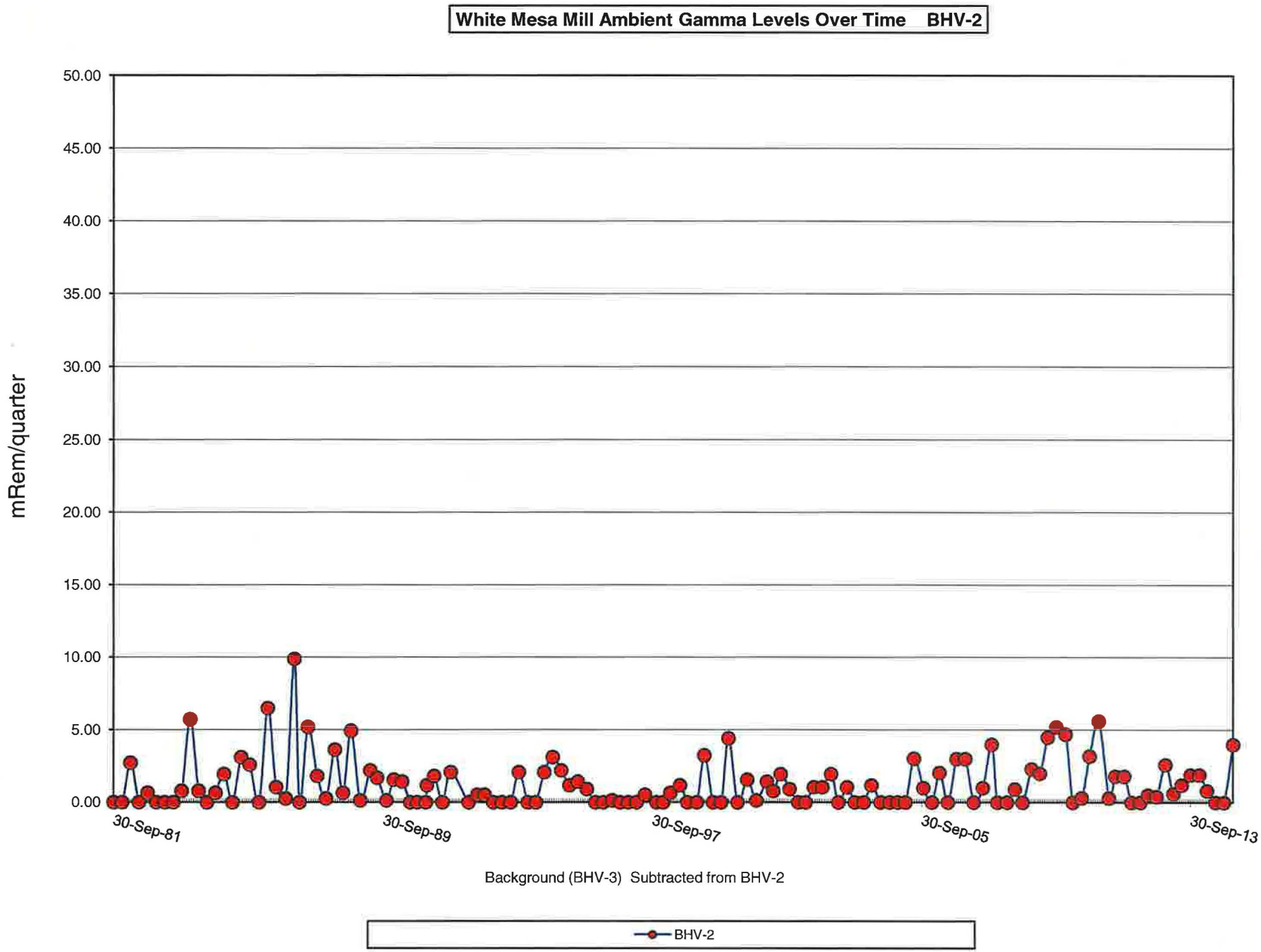
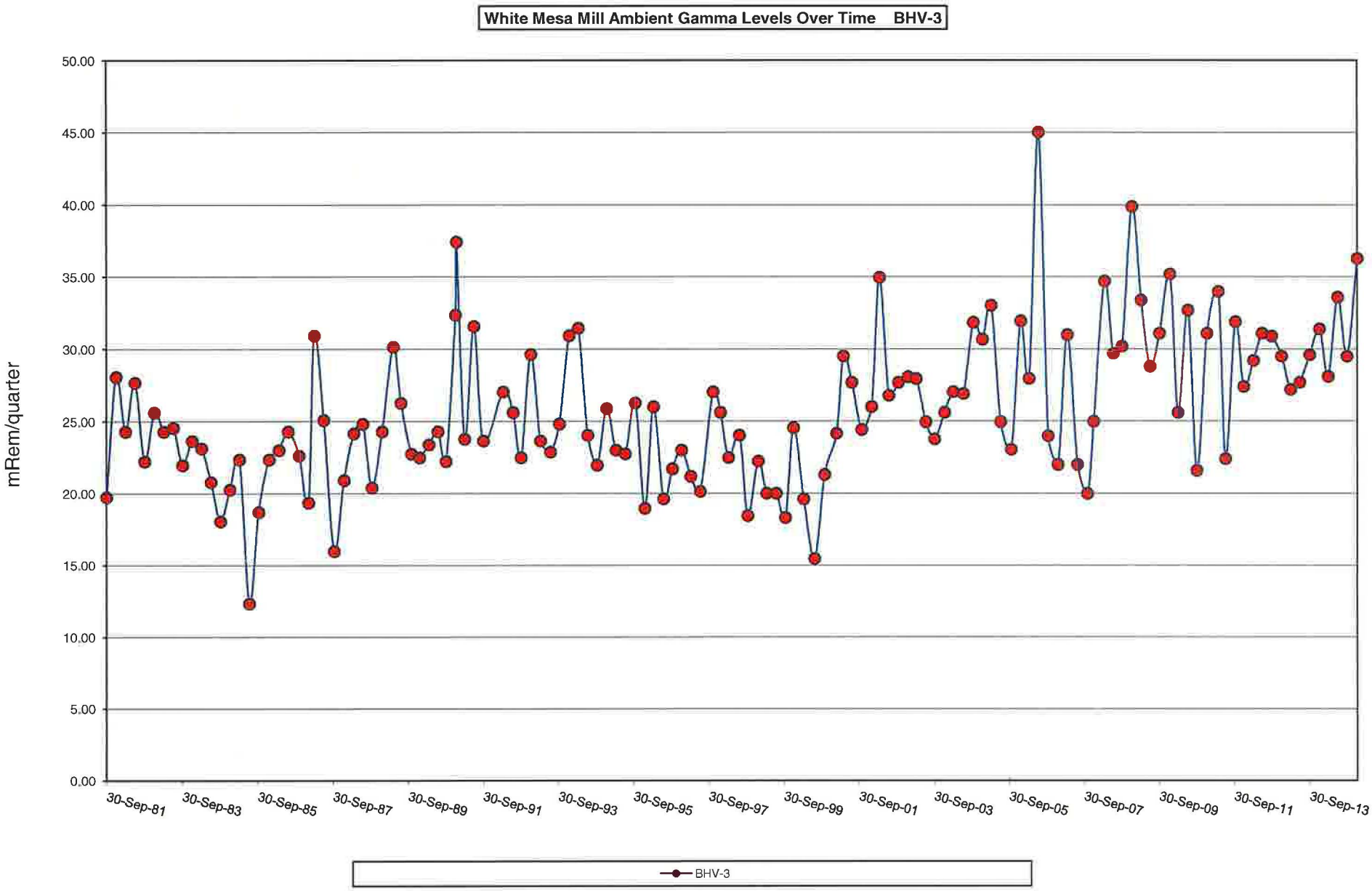
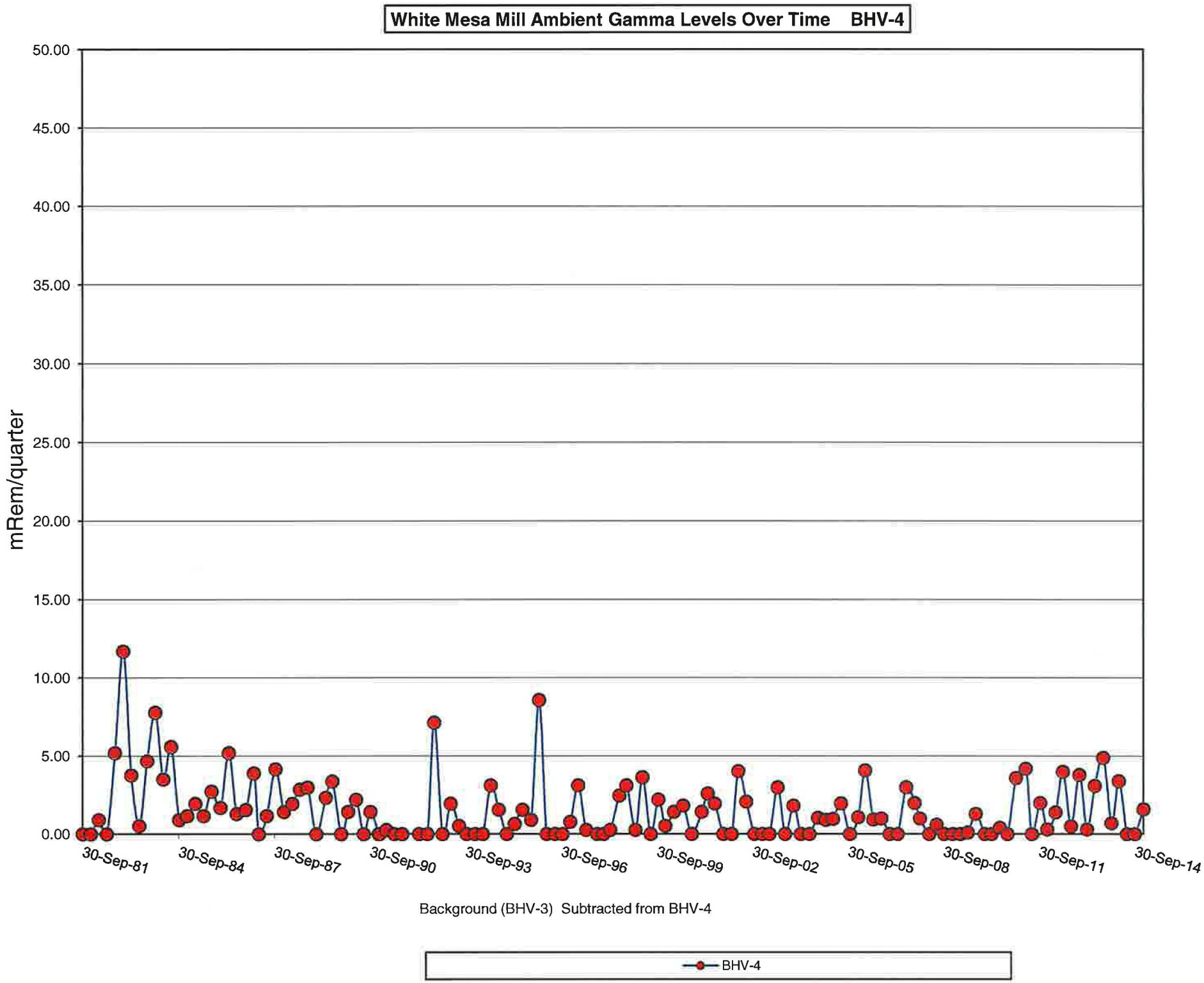
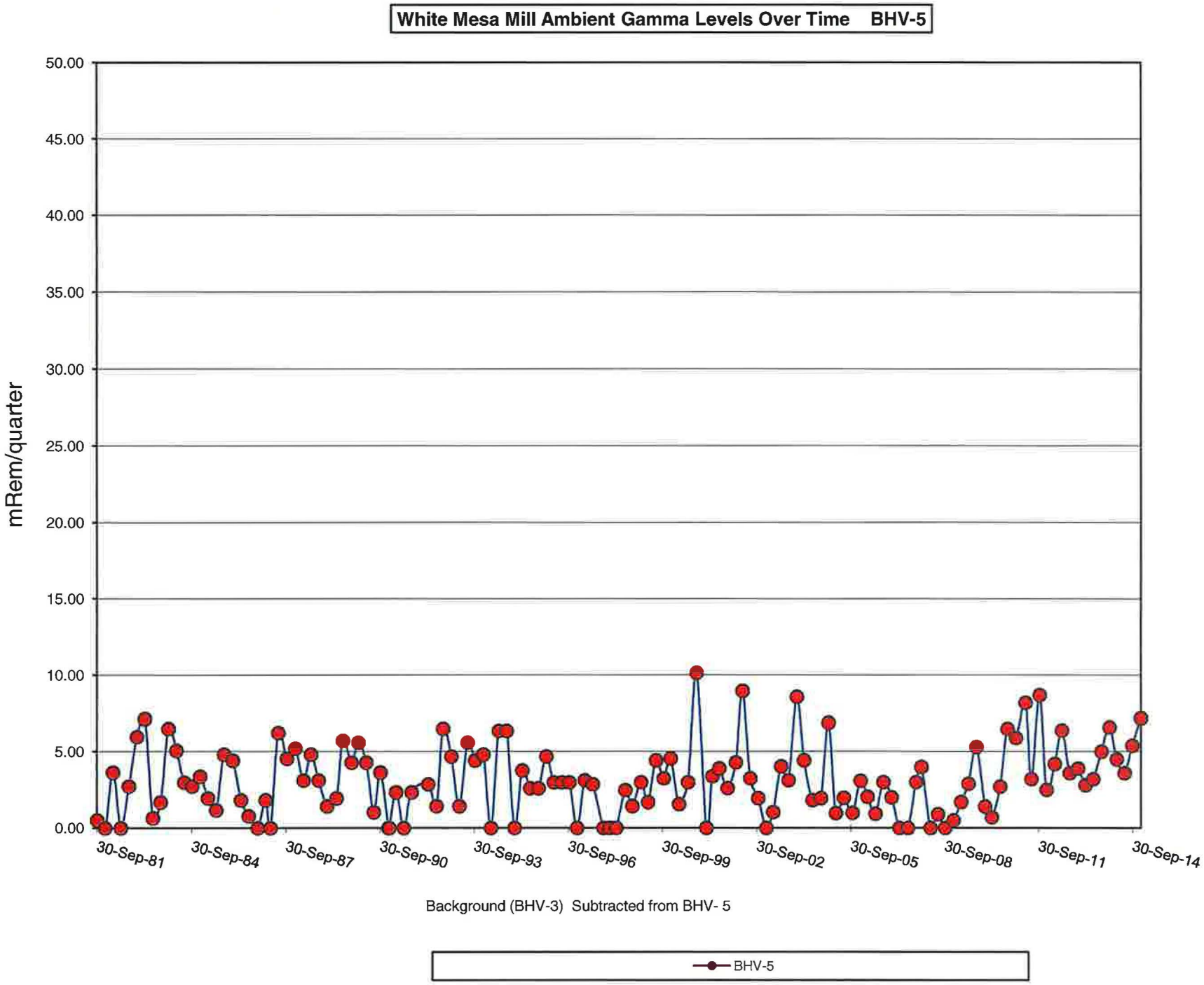
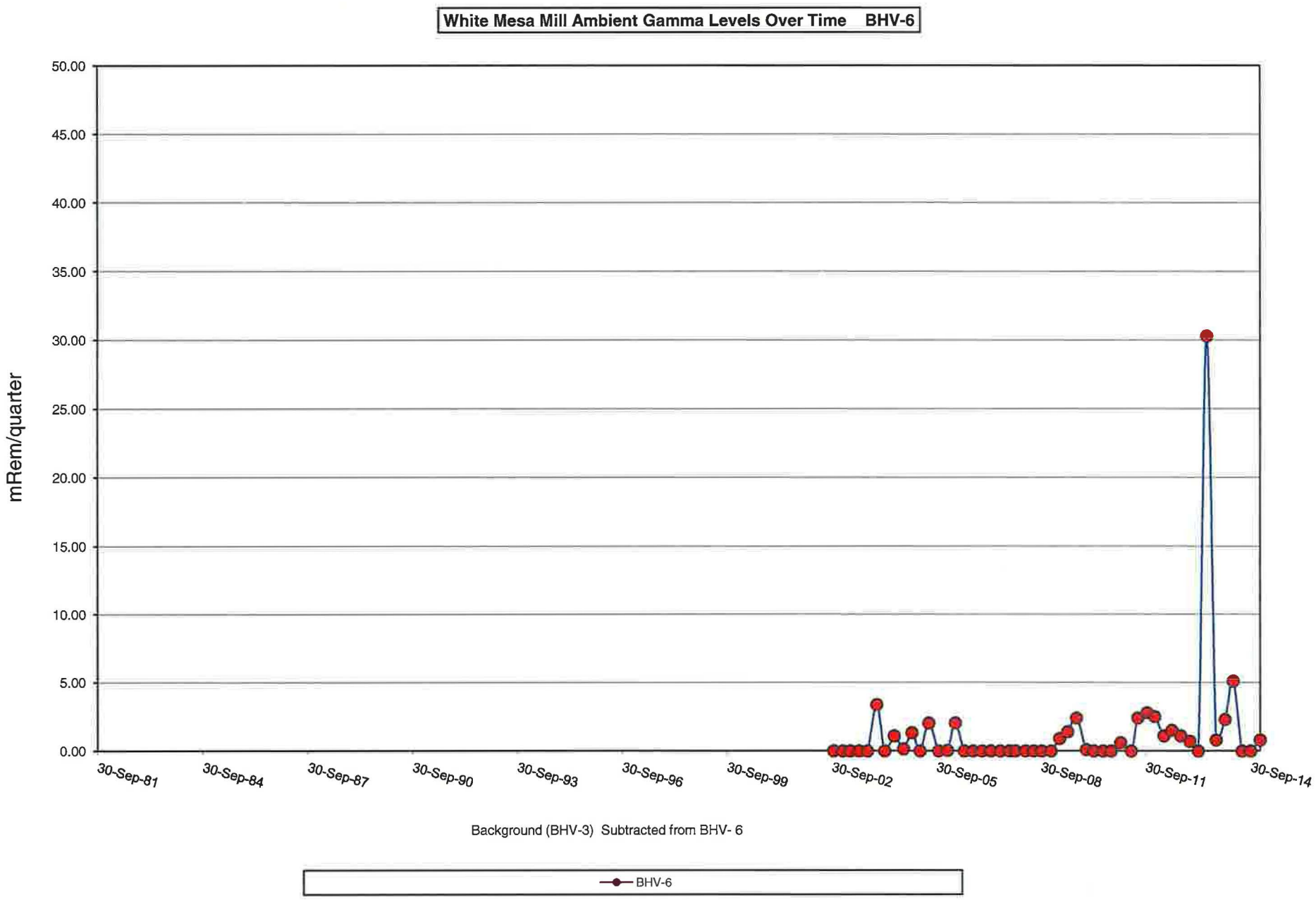
9/30/2005
9/30/2008
9/30/2011
9/30/2014
Background (BHV-3) Subtracted from BHV-1
Series1

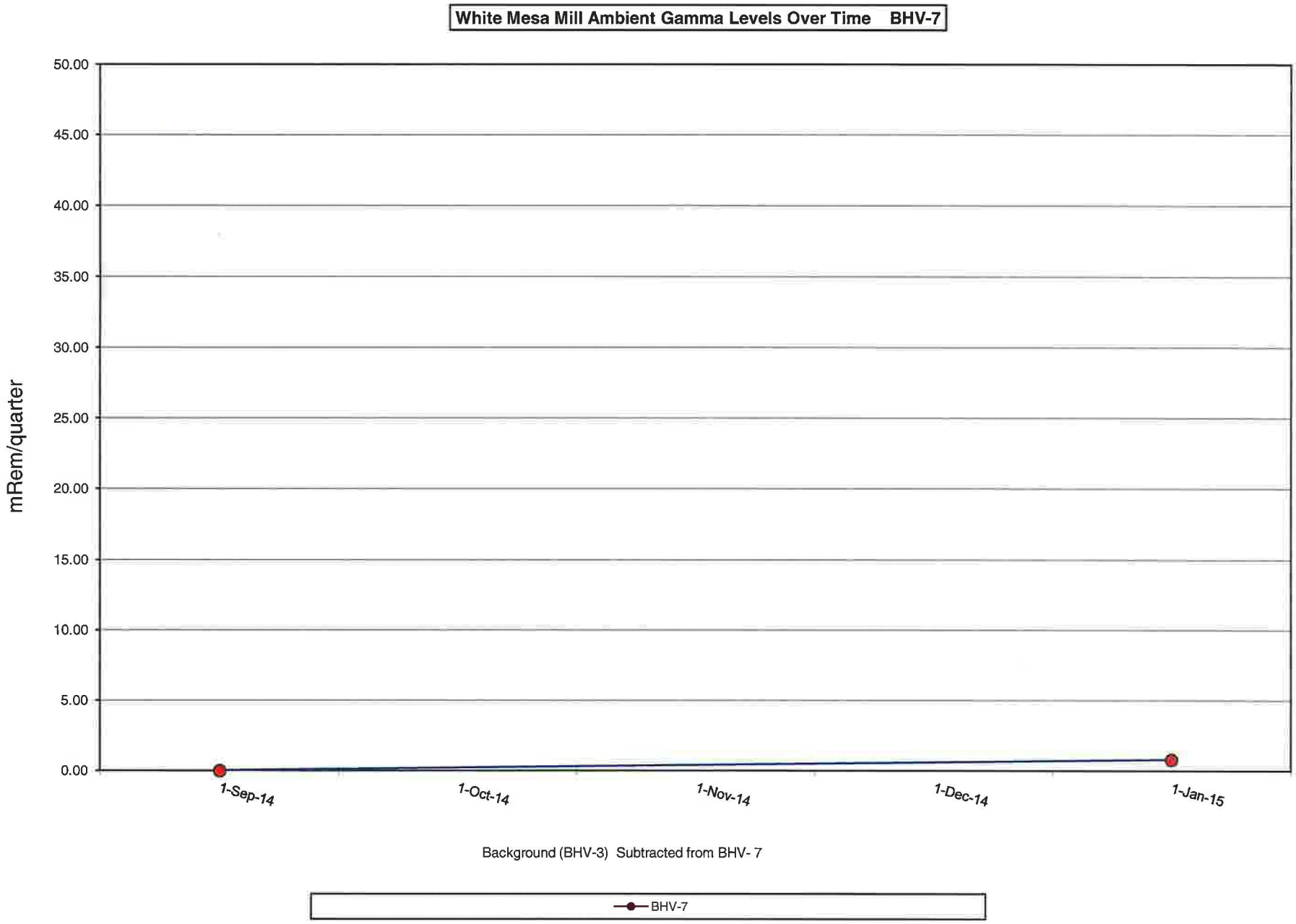

White Mesa Mill Ambient Gamma Levels Over Time BHV-2
mRem/quarter
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
30-Sep-81
30-Sep-89
30-Sep-97
30-Sep-05
30-Sep-13
Background (BHV-3) Subtracted from BHV-2
BHV-2

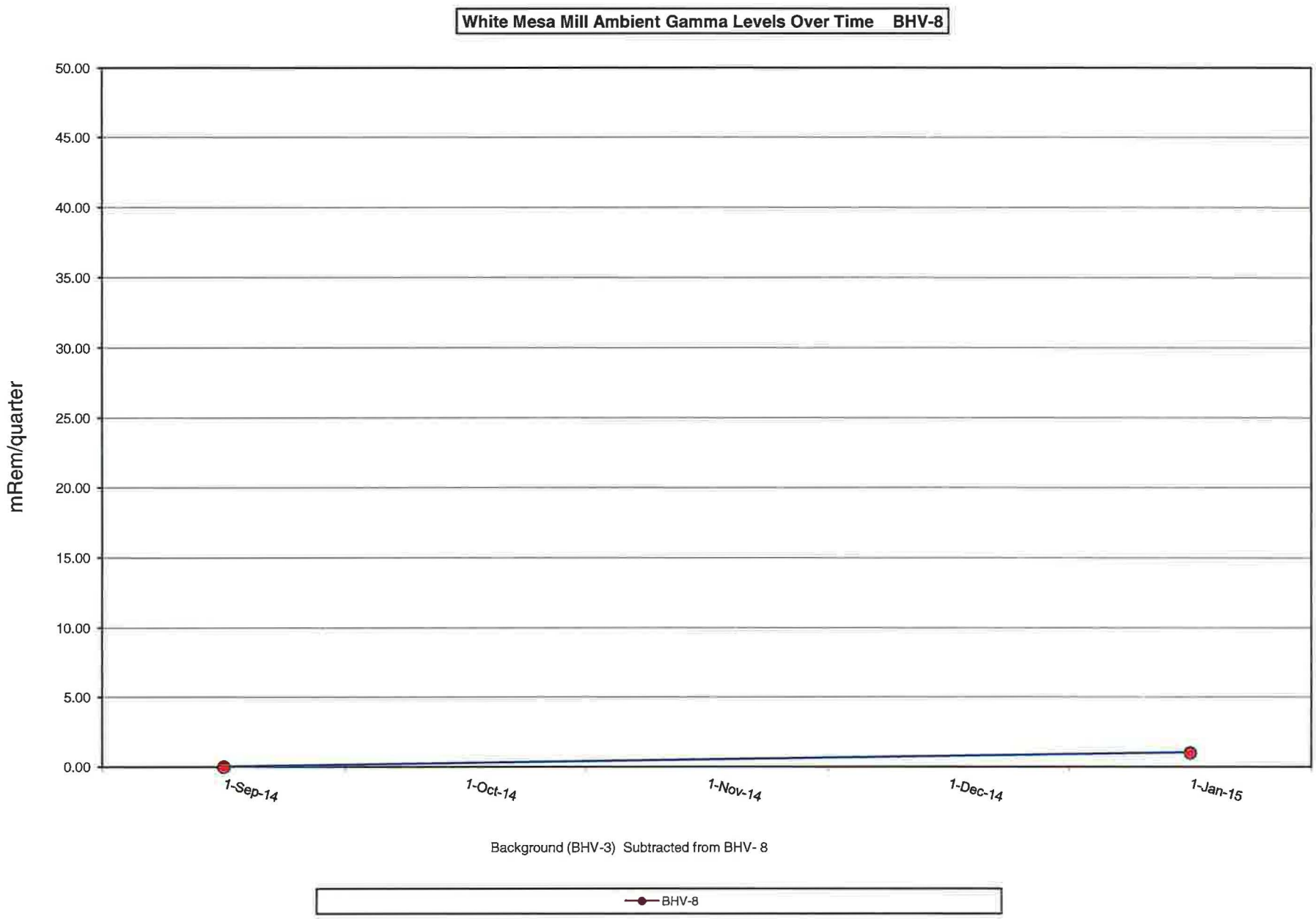

White Mesa Mill Ambient Gamma Levels Over Time BHV-3
mRem/quarter
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
30-Sep-81
30-Sep-83
30-Sep-85
30-Sep-87
30-Sep-89
30-Sep-91
30-Sep-93
30-Sep-95
30-Sep-97
30-Sep-99
30-Sep-01
30-Sep-03
30-Sep-05
30-Sep-07
30-Sep-09
30-Sep-11
30-Sep-13
BHV-3


White Mesa Mill Ambient Gamma Levels Over Time BHV-4
mRem/quarter
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
30-Sep-81
30-Sep-84
30-Sep-87
30-Sep-90
30-Sep-93
30-Sep-96
30-Sep-99
30-Sep-02
30-Sep-05
30-Sep-08
30-Sep-11
30-Sep-14
Background (BHV-3) Subtracted from BHV-4
BHV-4


White Mesa Mill Ambient Gamma Levels Over Time BHV-5
mRem/quarter
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
30-Sep-81
30-Sep-84
30-Sep-87
30-Sep-90
30-Sep-93
30-Sep-96
30-Sep-99
30-Sep-02
30-Sep-05
30-Sep-08
30-Sep-11
30-Sep-14
Background (BHV-3) Subtracted from BHV- 5
BHV-5


White Mesa Mill Ambient Gamma Levels Over Time BHV-6
mRem/quarter
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
30-Sep-81
30-Sep-84
30-Sep-87
30-Sep-90
30-Sep-93
30-Sep-96
30-Sep-99
30-Sep-02
30-Sep-05
30-Sep-08
30-Sep-11
30-Sep-14
Background (BHV-3) Subtracted from BHV- 6
BHV-6


White Mesa Mill Ambient Gamma Levels Over Time BHV-7
mRem/quarter
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
1-Sep-14
1-Oct-14
1-Nov-14
1-Dec-14
1-Jan-15
Background (BHV-3) Subtracted from BHV- 7
BHV-7


White Mesa Mill Ambient Gamma Levels Over Time BHV-8
mRem/quarter
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
1-Sep-14
1-Oct-14
1-Nov-14
1-Dec-14
1-Jan-15
Background (BHV-3) Subtracted from BHV- 8
BHV-8

White Mesa Mill Third Quarter 2014 Environmental Spherical Gamma Monitor Results

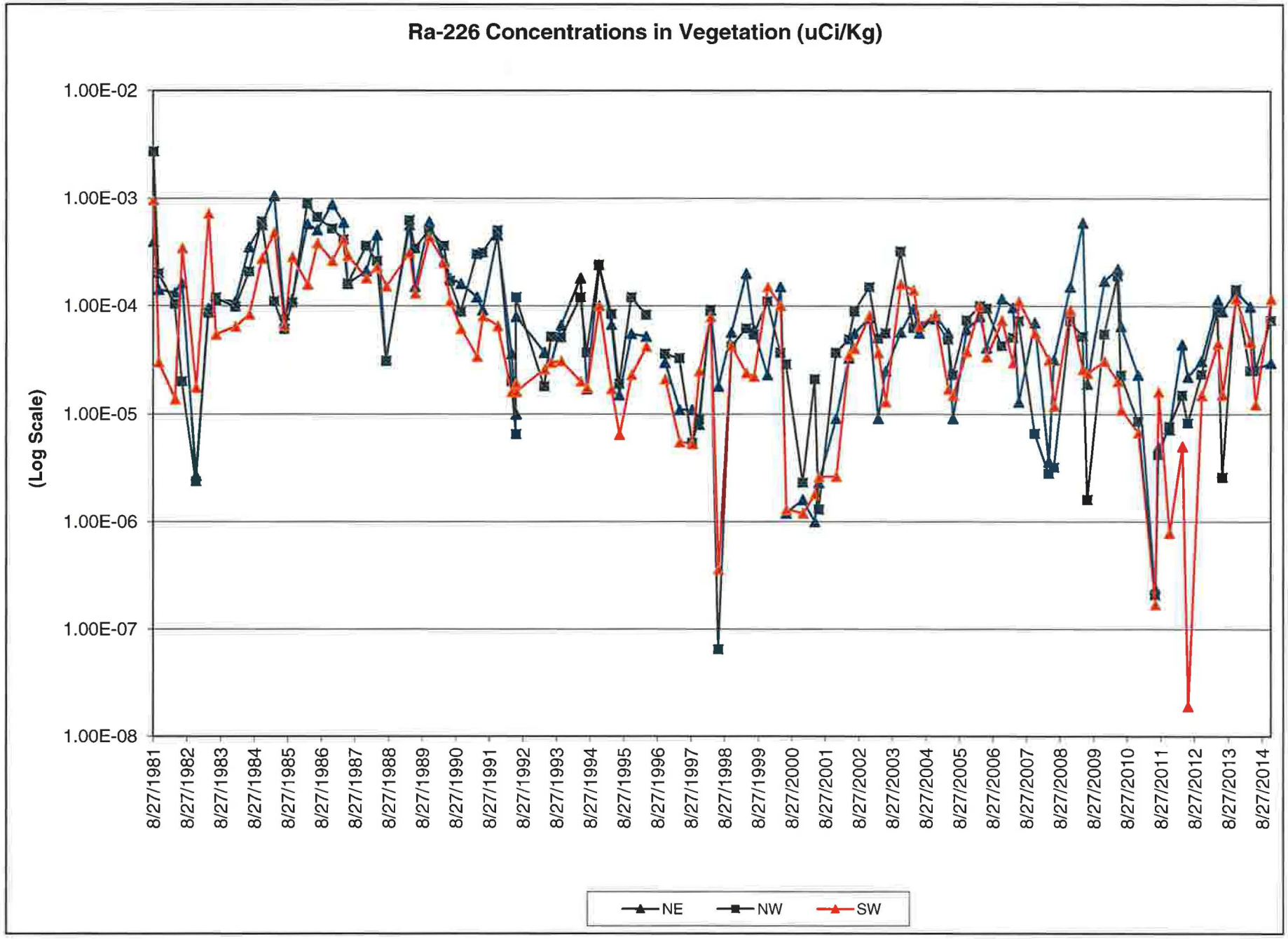
Badge Number	Location	Date Issued	Date Returned	Total Days Badge at WMM	Mean Ambient Dose Equivalent	mRem / hour	mRem / Day	mRem / Week
Control	Administration Vault	6/27/2014	9/25/2014	90	32.4	0.02	0.360	2.52
1	V2O5 Control Room	6/27/2014	9/25/2014	90	50.7	0.02	0.563	3.94
2	BHV-6	6/27/2014	9/25/2014	90	28.6	0.01	0.318	2.22
3	Ore Stor. - Barrel Area	6/27/2014	9/25/2014	90	193.6	0.09	2.151	15.06
4	Vanadium Precip.Area	6/27/2014	9/25/2014	90	138.6	0.06	1.540	10.78
5	Yellowcake Drying Area	6/27/2014	9/25/2014	90	0	0.00	0.000	0.00
6	Leach	6/27/2014	9/25/2014	90	313.4	0.15	3.482	24.38
7	SAG Mill Control Room	6/27/2014	9/25/2014	90	353.3	0.16	3.926	27.48
8	Yellowcake Precip.	6/27/2014	9/25/2014	90	0	0.00	0.000	0.00
9	Central Control Room	6/27/2014	9/25/2014	90	94.3	0.04	1.048	7.33
10	Ore pad - decontamination pad	6/27/2014	9/25/2014	90	112.8	0.05	1.253	8.77
11	North East Corner Ore Pad	6/27/2014	9/25/2014	90	328.4	0.15	3.649	25.54
12	Met. Lab	6/27/2014	9/25/2014	90	81.4	0.04	0.904	6.33
13	Filter Press Room	6/27/2014	9/25/2014	90	185	0.09	2.056	14.39
14	BHV-1	6/27/2014	9/25/2014	90	33	0.02	0.367	2.57
15	BHV-2	6/27/2014	9/25/2014	90	29.3	0.01	0.326	2.28
16	BHV-3	6/27/2014	9/25/2014	90	29.5	0.01	0.328	2.29
17	BHV-4	6/27/2014	9/25/2014	90	28.2	0.01	0.313	2.19
18	BHV-5	6/27/2014	9/25/2014	90	34.9	0.02	0.388	2.71
19	SAG Mill	6/27/2014	9/25/2014	90	357.4	0.17	3.971	27.80
20	Tails	6/27/2014	9/25/2014	90	57.7	0.03	0.641	4.49
21	CCD	6/27/2014	9/25/2014	90	94.3	0.04	1.048	7.33
22	North SX	6/27/2014	9/25/2014	90	69.3	0.03	0.770	5.39
23	Administration Building	6/27/2014	9/25/2014	90	41.2	0.02	0.458	3.20
24	Admin Parking Lot	6/27/2014	9/25/2014	90	75.3	0.03	0.837	5.86
25	Yellowcake Packaging	6/27/2014	9/25/2014	90	0	0.00	0.000	0.00
26	Yellowcake Storage	6/27/2014	9/25/2014	90	0	0.00	0.000	0.00
27	Bucking Room	6/27/2014	9/25/2014	90	164.4	0.08	1.827	12.79
28	Mill Lunch Room	6/27/2014	9/25/2014	90	56.4	0.03	0.627	4.39
29	South SX	6/27/2014	9/25/2014	90	101.5	0.05	1.128	7.89
30	Mtce. Super.'s Office	6/27/2014	9/25/2014	90	41.8	0.02	0.464	3.25
31	Ore Feed Grizzly	6/27/2014	9/25/2014	90	364.8	0.17	4.053	28.37
32	Scalehouse	6/27/2014	9/25/2014	90	198.9	0.09	2.210	15.47
33	Sample Plant (OBS)	6/27/2014	9/25/2014	90	216.4	0.10	2.404	16.83
34	Front Gate	6/27/2014	9/25/2014	90	345.4	0.16	3.838	26.86
45	AF - Barrel Dump Station	6/27/2014	9/25/2014	90	0	0.00	0.000	0.00
46	AF Circuit - South	6/27/2014	9/25/2014	90	47.2	0.02	0.524	3.67
47	AF Circuit - North	6/27/2014	9/25/2014	90	0	0.00	0.000	0.00
51	North Control # 1	6/27/2014	9/25/2014	90	36.3	0.02	0.403	2.82
52	North Control # 2	6/27/2014	9/25/2014	90	32.1	0.01	0.357	2.50
53	CaF2 Barrel Dump Station - Operator Station	6/27/2014	9/25/2014	90	0	0.00	0.000	0.00
64	KF Barrel Dump Station	6/27/2014	9/25/2014	90	260.5	0.12	2.894	20.26
70	BHV-7	9/3/2014	9/25/2014	22	7.9	0.01	0.359	2.51
71	BHV-8	9/3/2014	9/25/2014	22	10.8	0.02	0.491	3.44

White Mesa Mill Fourth Quarter 2014 Environmental Spherical Gamma Monitor Results

Badge Number	Location	Date Issued	Date Returned	Total Days Badge at WMM	Mean Ambient Dose Equivalent	mRem / hour	mRem / Day	mRem / Week
Control	Administration Vault	9/25/2014	1/2/2015	99	42.4	0.02	0.428	3.00
1	V2O5 Control Room	9/25/2014	1/2/2015	99	56.7	0.02	0.573	4.01
2	BHV-6	9/25/2014	1/2/2015	99	37.1	0.02	0.375	2.62
3	Ore Stor. - Barrel Area	9/25/2014	1/2/2015	99	174.4	0.07	1.762	12.33
4	Vanadium Precip.Area	9/25/2014	1/2/2015	99	161.7	0.07	1.633	11.43
5	Yellowcake Drying Area	9/25/2014	1/2/2015	99	382.9	0.16	3.868	27.07
6	Leach	9/25/2014	1/2/2015	99	108.7	0.05	1.098	7.69
7	SAG Mill Control Room	9/25/2014	1/2/2015	99	292.5	0.12	2.955	20.68
8	Yellowcake Precip.	9/25/2014	1/2/2015	99	459.8	0.19	4.644	32.51
9	Central Control Room	9/25/2014	1/2/2015	99	129.3	0.05	1.306	9.14
10	Ore pad - decontamination pad	9/25/2014	1/2/2015	99	131.5	0.06	1.328	9.30
11	North East Corner Ore Pad	9/25/2014	1/2/2015	99	355.5	0.15	3.591	25.14
12	Met. Lab	9/25/2014	1/2/2015	99	102	0.04	1.030	7.21
13	Filter Press Room	9/25/2014	1/2/2015	99	193.6	0.08	1.956	13.69
14	BHV-1	9/25/2014	1/2/2015	99	42.4	0.02	0.428	3.00
15	BHV-2	9/25/2014	1/2/2015	99	40.3	0.02	0.407	2.85
16	BHV-3	9/25/2014	1/2/2015	99	36.3	0.02	0.367	2.57
17	BHV-4	9/25/2014	1/2/2015	99	37.9	0.02	0.383	2.68
18	BHV-5	9/25/2014	1/2/2015	99	43.5	0.02	0.439	3.08
19	SAG Mill	9/25/2014	1/2/2015	99	329.1	0.14	3.324	23.27
20	Tails	9/25/2014	1/2/2015	99	68.4	0.03	0.691	4.84
21	CCD	9/25/2014	1/2/2015	99	124.7	0.05	1.260	8.82
22	North SX	9/25/2014	1/2/2015	99	163.9	0.07	1.656	11.59
23	Administration Building	9/25/2014	1/2/2015	99	53.1	0.02	0.536	3.75
24	Admin Parking Lot	9/25/2014	1/2/2015	99	90.5	0.04	0.914	6.40
25	Yellowcake Packaging	9/25/2014	1/2/2015	99	534.7	0.23	5.401	37.81
26	Yellowcake Storage	9/25/2014	1/2/2015	99	669.5	0.28	6.763	47.34
27	Bucking Room	9/25/2014	1/2/2015	99	133.8	0.06	1.352	9.46
28	Mill Lunch Room	9/25/2014	1/2/2015	99	76.7	0.03	0.775	5.42
29	South SX	9/25/2014	1/2/2015	99	140.4	0.06	1.418	9.93
30	Mtce. Super.'s Office	9/25/2014	1/2/2015	99	56.7	0.02	0.573	4.01
31	Ore Feed Grizzly	9/25/2014	1/2/2015	99	425.6	0.18	4.299	30.09
32	Scalehouse	9/25/2014	1/2/2015	99	236.1	0.10	2.385	16.69
33	Sample Plant (OBS)	9/25/2014	1/2/2015	99	227.8	0.10	2.301	16.11
34	Front Gate	9/25/2014	1/2/2015	99	219	0.09	2.212	15.48
45	AF - Barrel Dump Station	9/25/2014	1/2/2015	99	137.4	0.06	1.388	9.72
46	AF Circuit - South	9/25/2014	1/2/2015	99	44.6	0.02	0.451	3.15
47	AF Circuit - North	9/25/2014	1/2/2015	99	77.9	0.03	0.787	5.51
51	North Control # 1	9/25/2014	1/2/2015	99	43	0.02	0.434	3.04
52	North Control # 2	9/25/2014	1/2/2015	99	39.7	0.02	0.401	2.81
53	CaF2 Barrel Dump Station - Operator Station	9/25/2014	1/2/2015	99	98.3	0.04	0.993	6.95
64	KF Barrel Dump Station	9/25/2014	1/2/2015	99	418	0.18	4.222	29.56
70	BHV-7	9/25/2014	1/2/2015	99	37.1	0.02	0.375	2.62
71	BHV-8	9/25/2014	1/2/2015	99	37.3	0.02	0.377	2.64

ATTACHMENT F

VEGETATION GRAPHS, DATA TABLE, LABORATORY RESULTS AND QA/QC


Ra-226 Concentrations in Vegetation (uCi/Kg)
(Log Scale)
1.00E-02
1.00E-03
1.00E-04
1.00E-05
1.00E-06
1.00E-07
1.00E-08
8/27/1981
8/27/1982
8/27/1983
8/27/1984
8/27/1985
8/27/1986
8/27/1987
8/27/1988
8/27/1989
8/27/1990
8/27/1991
8/27/1992
8/27/1993
8/27/1994
8/27/1995
8/27/1996
8/27/1997
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8/27/1999
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8/27/2003
8/27/2004
8/27/2005
8/27/2006
8/27/2007
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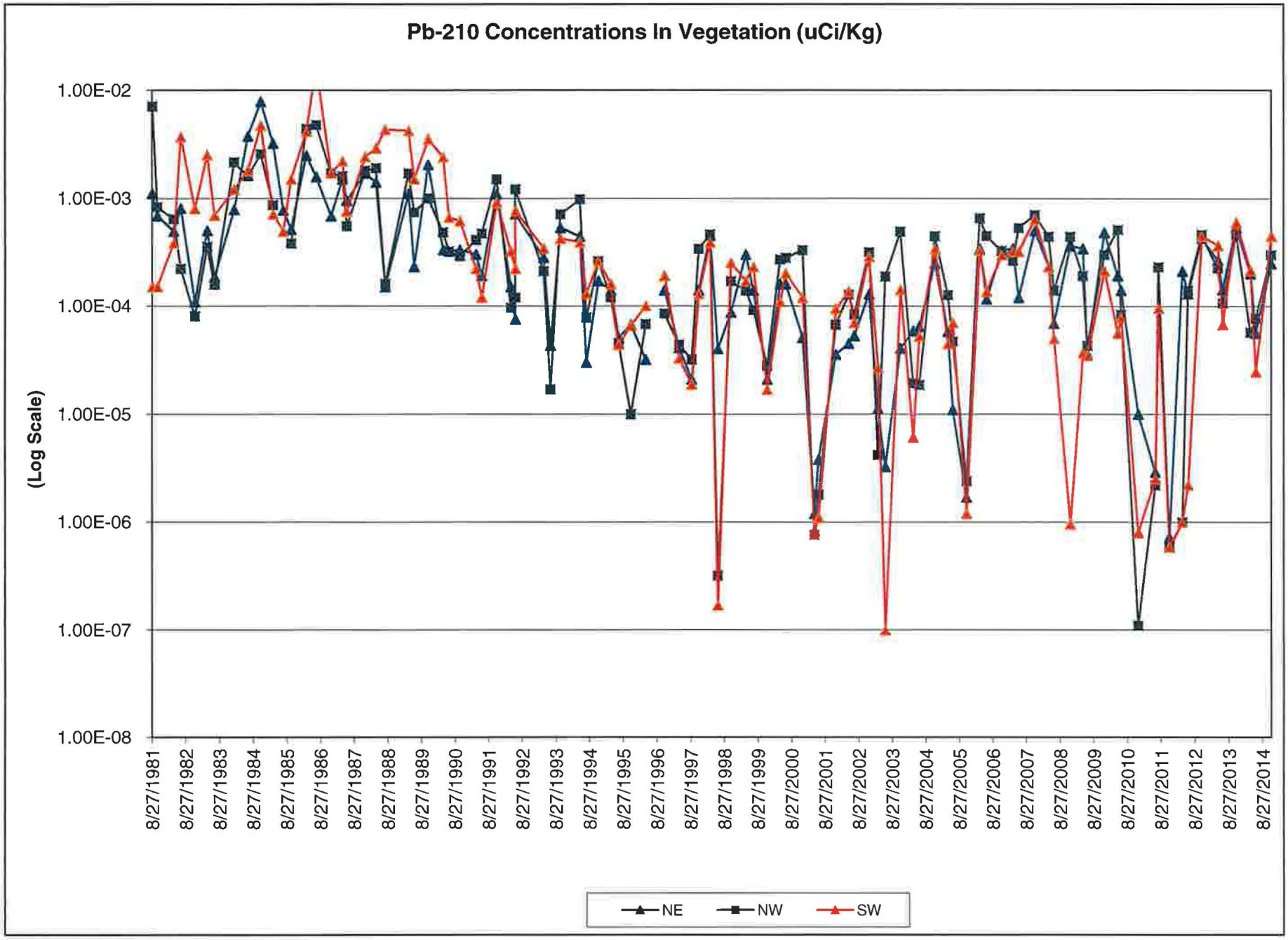
8/27/2013
8/27/2014
NE
NW
SW


Pb-210 Concentrations In Vegetation (uCi/Kg)
(Log Scale)
1.00E-02
1.00E-03
1.00E-04
1.00E-05
1.00E-06
1.00E-07
1.00E-08
8/27/1981
8/27/1982
8/27/1983
8/27/1984
8/27/1985
8/27/1986
8/27/1987
8/27/1988
8/27/1989
8/27/1990
8/27/1991
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8/27/2000
8/27/2001
8/27/2002
8/27/2003
8/27/2004
8/27/2005
8/27/2006
8/27/2007
8/27/2008
8/27/2009
8/27/2010
8/27/2011
8/27/2012
8/27/2013
8/27/2014
NE
NW
SW

WHITE MESA MILL
FORAGE RADIONUCLIDE DATA
NORTHEAST OF MILL

SAMPLED QTR.	SAMPLED DATE	Ra-226	Ra-226	LLD	Pb-210	Pb-210	LLD	U-NAT	U-NAT	LLD	Th-232	Th-232	LLD
		VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (5.0E-08)	VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (1.0E-06)	VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (2.0E-07)	VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (2.0E-07)†
3rd '81	27-Aug-81	3.90E-04	1.00E-05	5.00E-08	1.10E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
4th '81	20-Oct-81	1.40E-04	1.00E-05	5.00E-08	6.80E-04	8.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '82	15-Apr-82	1.31E-04	1.30E-05	1.00E-06	4.90E-04	7.00E-05	8.00E-05	NS	NA	NA	NS	NA	NA
3rd '82	01-Jul-82	1.60E-04	1.00E-05	5.00E-08	8.00E-04	1.70E-04	1.00E-07	NS	NA	NA	NS	NA	NA
4th '82	30-Nov-82	2.67E-06	1.07E-06	1.00E-06	1.08E-04	9.00E-06	1.00E-05	NS	NA	NA	NS	NA	NA
2nd '83	13-Apr-83	9.36E-05	6.20E-06	8.00E-09	4.97E-04	9.30E-05	1.00E-04	NS	NA	NA	NS	NA	NA
3rd '83	01-Jul-83	1.12E-04	1.20E-05	6.00E-06	1.84E-04	1.20E-05	1.00E-06	NS	NA	NA	NS	NA	NA
4th '83	30-Jan-84	1.09E-04	8.00E-06	4.00E-06	7.80E-04	6.20E-05	6.00E-05	NS	NA	NA	NS	NA	NA
2nd '84	28-Jun-84	3.47E-04	1.20E-05	2.00E-09	3.75E-03	1.60E-04	4.00E-08	NS	NA	NA	NS	NA	NA
4th '84	14-Nov-84	5.61E-04	1.99E-04	2.00E-07	7.82E-03	3.30E-04	7.00E-08	NS	NA	NA	NS	NA	NA
2nd '85	27-Mar-85	1.05E-03	3.00E-05	2.00E-06	3.22E-03	1.40E-04	2.00E-05	NS	NA	NA	NS	NA	NA
3rd '85	15-Jul-85	8.20E-05	7.00E-06	3.00E-06	7.70E-04	1.30E-04	2.00E-04	NS	NA	NA	NS	NA	NA
4th '85	09-Oct-85	1.15E-04	1.00E-05	3.00E-06	5.10E-04	3.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
2nd '86	24-Mar-86	5.72E-04	2.10E-05	4.00E-06	2.49E-03	1.00E-04	1.00E-05	NS	NA	NA	NS	NA	NA
3rd '86	10-Jul-86	5.01E-04	1.30E-05	3.00E-06	1.57E-03	1.70E-03	2.00E-04	NS	NA	NA	NS	NA	NA
4th '86	18-Dec-86	8.70E-04	5.00E-05	3.00E-06	6.80E-04	3.00E-05	3.00E-06	NS	NA	NA	NS	NA	NA
2nd '87	20-Apr-87	5.90E-04	7.00E-05	5.00E-08	1.50E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '87	05-Jun-87	1.60E-04	3.00E-05	5.00E-08	9.50E-04	4.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
4th '87	22-Dec-87	2.10E-04	4.00E-05	5.00E-08	1.70E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '88	19-Apr-88	4.50E-04	7.00E-05	5.00E-08	1.40E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '88	28-Jul-88	3.20E-05	2.20E-05	5.00E-08	1.50E-04	4.40E-04	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '89	07-Apr-89	5.60E-04	4.00E-05	***	1.10E-03	1.00E-01	***	NS	NA	NA	NS	NA	NA
3rd '89	06-Jun-89	1.50E-04	2.00E-05	***	2.30E-04	2.00E-05	***	NS	NA	NA	NS	NA	NA
4th '89	07-Nov-89	6.00E-04	5.00E-05	7.00E-06	2.04E-03	7.00E-05	1.40E-05	NS	NA	NA	NS	NA	NA
1st '90	17-Apr-90	2.60E-04	3.00E-05	4.00E-06	3.30E-04	2.00E-05	2.20E-05	NS	NA	NA	NS	NA	NA
2nd '90	20-Jun-90	1.80E-04	2.00E-05	5.00E-08	3.20E-04	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '90	17-Oct-90	1.60E-04	2.00E-05	5.00E-08	3.30E-04	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
1st '91	10-Apr-91	1.20E-04	2.00E-05	5.00E-06	3.00E-04	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '91	11-Jun-91	9.10E-05	1.60E-05	2.00E-07	1.90E-04	2.00E-05	2.00E-07	NS	NA	NA	NS	NA	NA
3rd '91	20-Nov-91	4.50E-04	4.00E-05	5.00E-08	1.09E-03	5.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
1st '92	22-Apr-92	3.60E-05	1.00E-05	2.00E-06	1.50E-04	2.00E-05	1.00E-05	NS	NA	NA	NS	NA	NA
2nd '92	10-Jun-92	1.00E-05	7.00E-06	2.00E-07	7.50E-05	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '92	10-Jun-92	7.90E-05	3.50E-05	3.00E-06	7.10E-04	7.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
1st '93	13-Apr-93	3.70E-05	2.20E-05	3.00E-06	2.80E-04	3.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
2nd '93	26-Jun-93	3.00E-05	1.50E-05	3.00E-06	4.30E-05	3.50E-05	2.00E-05	NS	NA	NA	NS	NA	NA
3rd '93	12-Oct-93	6.60E-05	2.70E-05	3.00E-06	5.30E-04	6.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
1st '94	11-May-94	1.80E-04	4.00E-05	3.00E-05	4.40E-04	6.00E-05	2.00E-04	NS	NA	NA	NS	NA	NA
2nd '94	19-Jul-94	1.71E-05	1.20E-06	9.00E-08	3.00E-05	6.10E-06	4.45E-06	NS	NA	NA	NS	NA	NA
3rd '94	28-Nov-94	2.40E-04	1.50E-05	1.70E-07	1.70E-04	1.10E-05	8.30E-07	NS	NA	NA	NS	NA	NA
1st '95	11-Apr-95	6.70E-05	5.40E-06	1.60E-07	1.40E-04	1.30E-05	7.90E-07	NS	NA	NA	NS	NA	NA
2nd '95	06-Jul-95	1.50E-05	1.50E-06	1.50E-07	5.10E-05	4.50E-06	7.60E-07	NS	NA	NA	NS	NA	NA
3rd '95	15-Nov-95	5.50E-05	5.00E-06	1.80E-07	6.70E-05	1.00E-05	8.80E-07	NS	NA	NA	NS	NA	NA
1st '96	23-Apr-96	5.20E-05	2.50E-06	1.50E-07	3.20E-05	4.50E-06	1.80E-07	NS	NA	NA	NS	NA	NA
2nd '96 *	31-Jul-96							NS	NA	NA	NS	NA	NA
3rd '96	14-Nov-96	3.00E-05	2.50E-06	1.80E-07	1.40E-04	7.10E-06	9.30E-07	NS	NA	NA	NS	NA	NA
1st '97	21-Apr-97	1.10E-05	4.70E-07	1.21E-07	4.10E-05	3.60E-06	6.10E-07	NS	NA	NA	NS	NA	NA
3rd '97	05-Sep-97	1.10E-05	4.30E-07	1.33E-07	2.10E-05	7.30E-07	6.66E-07	NS	NA	NA	NS	NA	NA
4th '97	20-Nov-97	8.00E-06	1.20E-06	5.60E-07	1.40E-04	4.60E-06	1.10E-07	NS	NA	NA	NS	NA	NA
1st '98	23-Mar-98	<9.10E-05	9.10E-05	9.10E-05	<4.50E-04	4.50E-04	4.50E-04	NS	NA	NA	NS	NA	NA
2nd '98	16-Jun-98	1.80E-05	1.20E-06	6.30E-08	4.00E-05	1.80E-06	3.20E-07	NS	NA	NA	NS	NA	NA
4th '98	05-Nov-98	5.70E-05	1.00E-06	8.20E-08	8.70E-05	5.00E-06	4.10E-07	NS	NA	NA	NS	NA	NA
2nd '99	15-Apr-99	2.00E-04	3.00E-06	1.20E-07	3.00E-04	1.00E-05	6.00E-05	NS	NA	NA	NS	NA	NA
3rd '99	07-Jul-99	6.03E-05	1.40E-06	8.30E-08	1.40E-04	4.70E-06	4.20E-07	NS	NA	NA	NS	NA	NA
4th '99	02-Dec-99	2.30E-05	1.00E-06	2.30E-07	2.10E-05	1.00E-06	1.10E-06	NS	NA	NA	NS	NA	NA
2nd '00	21-Apr-00	1.50E-04	3.00E-06	1.20E-07	1.60E-04	8.00E-06	5.90E-07	NS	NA	NA	NS	NA	NA
2nd '00	22-Jun-00	1.20E-06	1.00E-07	2.80E-07	1.60E-04	1.00E-05	1.40E-06	NS	NA	NA	NS	NA	NA
4th '00	21-Dec-00	1.60E-06	1.10E-06	3.70E-07	5.10E-05	5.00E-06	1.90E-06	NS	NA	NA	NS	NA	NA
1st '01	30-Apr-01	1.00E-06	1.00E-07	2.40E-07	<1.2E-06	1.00E-07	2.40E-07	NS	NA	NA	NS	NA	NA
2nd '01	14-Jun-01	2.30E-06	2.00E-07	9.90E-08	3.80E-06	2.00E-07	5.00E-07	NS	NA	NA	NS	NA	NA
4th '01	17-Dec-01	9.10E-06	2.40E-06	1.20E-07	3.57E-05	2.97E-06	6.00E-07	NS	NA	NA	NS	NA	NA
1st '02	07-May-02	3.30E-05	1.80E-06	7.60E-07	4.50E-05	2.61E-06	1.00E-05	NS	NA	NA	NS	NA	NA
2nd '02	07-Jul-02	5.55E-05	2.81E-06	7.60E-07	5.31E-05	3.90E-06	1.00E-05	NS	NA	NA	NS	NA	NA
4th '02	15-Dec-02	7.75E-05	3.60E-06	7.60E-07	1.29E-04	6.15E-06	1.00E-05	NS	NA	NA	NS	NA	NA
1st '03	21-Mar-03	9.10E-06	1.30E-06	3.60E-07	1.13E-05	1.61E-06	3.36E-06	NS	NA	NA	NS	NA	NA
2nd '03	10-Jun-03	2.50E-05	1.30E-06	3.60E-07	3.26E-06	2.00E-06	7.38E-08	NS	NA	NA	NS	NA	NA

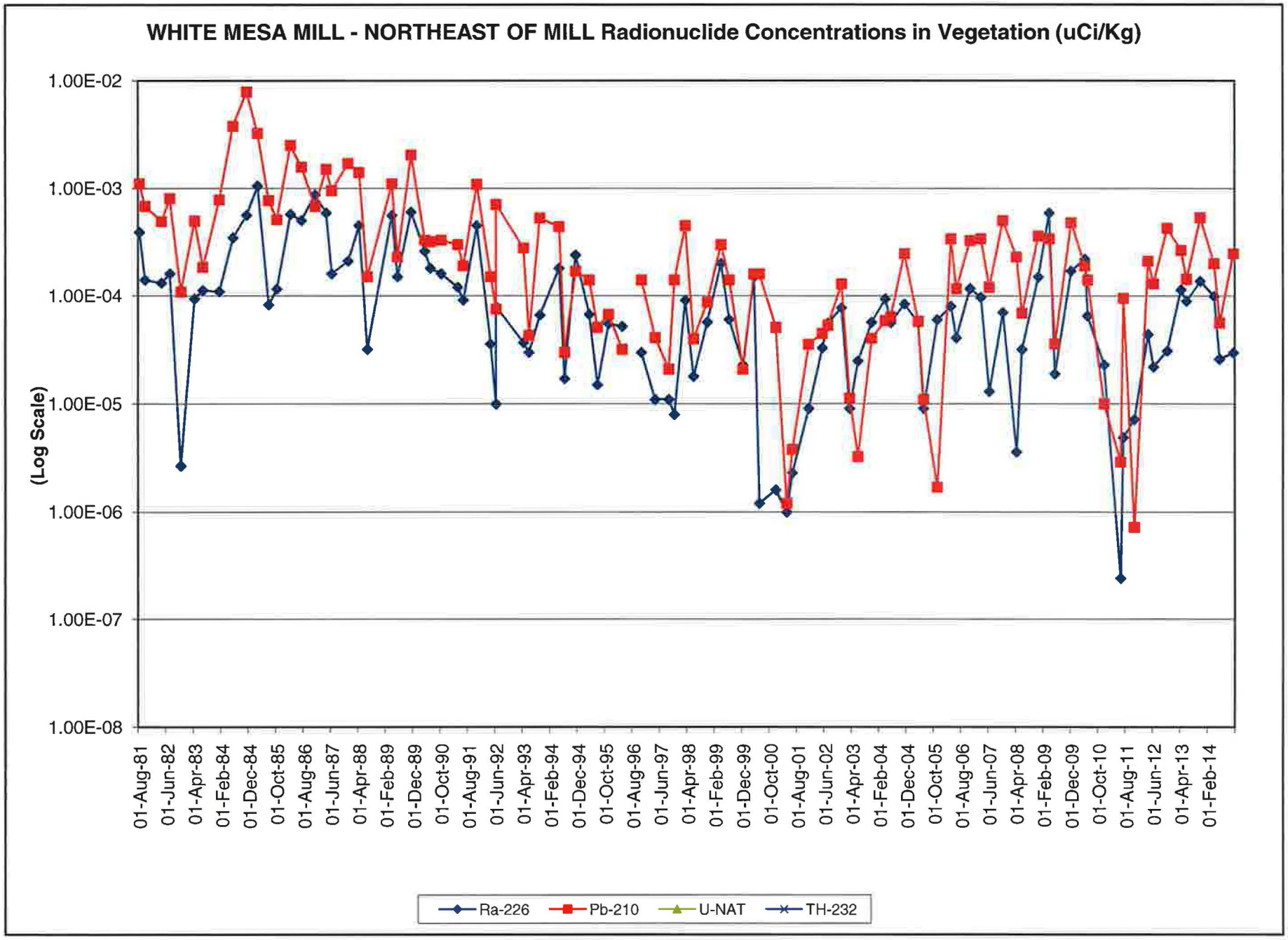
4th '03	20-Nov-03	5.70E-05	3.50E-06	1.50E-07	4.05E-05	5.82E-06	8.30E-07	NS	NA	NA	NS	NA	NA
1st '04	08-Apr-04	9.38E-05	3.70E-06	1.10E-07	5.88E-05	3.00E-06	5.50E-07	NS	NA	NA	NS	NA	NA
2nd '04	12-Jun-04	5.63E-05	3.40E-06	1.80E-07	6.42E-05	5.90E-06	9.00E-07	NS	NA	NA	NS	NA	NA
4th '04	30-Nov-04	8.41E-05	5.50E-06	2.00E-08	2.48E-04	1.40E-05	3.00E-07	NS	NA	NA	NS	NA	NA
1st '05	21-Apr-05	5.60E-05	3.00E-06	1.40E-07	5.80E-05	4.00E-06	6.90E-07	NS	NA	NA	NS	NA	NA
2nd '05	13-Jun-05	9.10E-06	1.50E-06	1.80E-07	1.10E-05	1.20E-05	9.00E-07	NS	NA	NA	NS	NA	NA
4th '05	10-Nov-05	6.00E-05	3.00E-06	1.10E-10	1.70E-06	6.40E-07	5.50E-10	NS	NA	NA	NS	NA	NA
1st '06	03-Apr-06	8.00E-05	5.00E-06	5.00E-08	3.40E-04	1.20E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '06	16-Jun-06	4.10E-05	3.10E-06	5.00E-08	1.16E-04	6.10E-06	1.00E-06	NS	NA	NA	NS	NA	NA
4th '06	28-Nov-06	1.17E-04	4.60E-06	1.90E-07	3.28E-04	9.50E-06	9.50E-07	NS	NA	NA	NS	NA	NA
1st '07	30-Mar-07	9.70E-05	4.40E-06	1.90E-07	3.40E-04	8.70E-06	8.4-07	NS	NA	NA	NS	NA	NA
2nd '07	1-Jun-07	1.30E-05	1.60E-06	1.90E-07	1.20E-04	6.60E-06	9.70E-07	NS	NA	NA	NS	NA	NA
4th '07	23-Nov-07	7.00E-05	8.20E-06	2.00E-07	5.00E-04	2.00E-05	1.20E-06	NS	NA	NA	NS	NA	NA
1st '08	22-Apr-08	3.60E-06	3.00E-06	5.20E-07	2.30E-04	1.40E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '08	18-Jun-08	3.20E-05	3.20E-06	1.80E-06	6.90E-05	3.50E-05	5.50E-05	NS	NA	NA	NS	NA	NA
4th '08	12-Dec-08	1.50E-04	5.20E-06	9.90E-07	3.60E-04	2.90E-05	3.90E-05	NS	NA	NA	NS	NA	NA
1st '09	28-Apr-09	5.90E-04	1.35E-05	1.50E-06	3.40E-04	1.30E-05	1.50E-06	NS	NA	NA	NS	NA	NA
2nd '09	17-Jun-09	1.90E-05	1.45E-06	4.90E-07	3.60E-05	1.10E-05	1.80E-05	NS	NA	NA	NS	NA	NA
4th '09	18-Dec-09	1.70E-04	5.90E-06		4.80E-04	1.20E-05		NS	NA	NA	NS	NA	NA
1st '10	13-May-10	2.20E-04	7.20E-06	1.10E-06	1.90E-04	1.90E-05	2.90E-05	NS	NA	NA	NS	NA	NA
2nd '10	18-Jun-10	6.50E-05	3.40E-06	7.60E-07	1.40E-04	1.90E-05	2.90E-05	NS	NA	NA	NS	NA	NA
4th '10	20-Dec-10	2.30E-05	1.70E-06	5.20E-07	1.00E-05	1.50E-06	2.30E-06	NS	NA	NA	NS	NA	NA
2nd '11	23-Jun-11	2.40E-07	1.40E-07	1.80E-07	<2.9E-06	1.70E-06	2.90E-06	NS	NA	NA	NS	NA	NA
3rd '11	27-Jul-11	4.90E-06	6.30E-07	3.20E-07	9.50E-05	2.10E-06	2.50E-06	NS	NA	NA	NS	NA	NA
4th '11	23-Nov-11	7.20E-06	7.50E-07	2.90E-07	8.80E-08	4.30E-07	7.20E-07	NS	NA	NA	NS	NA	NA
2nd '12	11-Apr-12	4.40E-05	1.90E-06	3.60E-07	2.10E-04	2.00E-06	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '12	11-Jun-12	2.20E-05	8.40E-07	1.10E-07	1.30E-04	7.60E-06	5.90E-06	NS	NA	NA	NS	NA	NA
4th '12	06-Nov-12	3.10E-05	4.82E-07	4.63E-08	4.26E-04	3.72E-06	6.52E-07	NS	NA	NA	NS	NA	NA
2nd '13	30-Apr-13	1.14E-04	1.74E-06	5.34E-07	2.65E-04	4.41E-06	5.37E-06	NS	NA	NA	NS	NA	NA
3rd '13	20-Jun-13	8.91E-05	2.16E-06	1.42E-06	1.42E-04	3.68E-06	6.17E-06	NS	NA	NA	NS	NA	NA
4th '13	14-Nov-13	1.37E-04	3.87E-06	4.71E-06	5.33E-04	1.45E-05	2.27E-05	NS	NA	NA	NS	NA	NA
2nd '14	16-Apr-14	9.90E-05	1.01E-06	3.91E-07	1.99E-04	3.14E-06	3.38E-06	NS	NA	NA	NS	NA	NA
3rd '14	10-Jun-14	2.60E-05	8.46E-07	9.19E-07	5.60E-05	3.08E-06	7.12E-06	NS	NA	NA	NS	NA	NA
4th '14	25-Nov-14	2.98E-05	1.23E-06	1.30E-06	2.46E-04	5.38E-06	7.41E-06	NS	NA	NA	NS	NA	NA

*2nd quarter of 1996 San Juan County, Utah, was declared a disaster area due to drought, no samples were collected during this period

† NRC Regulatory Guide does not specify a Lower Limit of Detection (LLD) for Thorium 232 in vegetation (or any matrix). The LLD for Thorium 230 was used.

NS = Not Sampled

NA = Not Applicable


WHITE MESA MILL - NORTHEAST OF MILL Radionuclide Concentrations in Vegetation (uCi/Kg)
(Log Scale)
1.00E-02
1.00E-03
1.00E-04
1.00E-05
1.00E-06
1.00E-07
1.00E-08
01-Aug-81
01-Jun-82
01-Apr-83
01-Feb-84
01-Dec-84
01-Oct-85
01-Aug-86
01-Jun-87
01-Apr-88
01-Feb-89
01-Dec-89
01-Oct-90
01-Aug-91
01-Jun-92
01-Apr-93
01-Feb-94
01-Dec-94
01-Oct-95
01-Aug-96
01-Jun-97
01-Apr-98
01-Feb-99
01-Dec-99
01-Oct-00
01-Aug-01
01-Jun-02
01-Apr-03
01-Feb-04
01-Dec-04
01-Oct-05
01-Aug-06
01-Jun-07
01-Apr-08
01-Feb-09
01-Dec-09
01-Oct-10
01-Aug-11
01-Jun-12
01-Apr-13
01-Feb-14
Ra-226
Pb-210
U-NAT
TH-232

WHITE MESA MILL
FORAGE RADIONUCLIDE DATA
NORTHWEST OF MILL

SAMPLED QTR.	SAMPLED DATE	Ra-226	Ra-226	LLD	Pb-210	Pb-210	LLD	U-NAT	U-NAT	LLD	Th-232	Th-232	LLD
		VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (5.0E-08)	VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (1.0E-06)	VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (2.0E-07)	VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (2.0E-07)†
3rd '81	27-Aug-81	2.73E-03	5.00E-05	5.00E-08	7.10E-03	3.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
4th '81	20-Oct-81	2.00E-04	1.00E-05	5.00E-08	8.30E-04	5.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '82	15-Apr-82	1.04E-04	9.00E-06	7.00E-06	6.40E-04	5.00E-05	4.00E-05	NS	NA	NA	NS	NA	NA
3rd '82	01-Jul-82	2.00E-05	1.00E-05	5.00E-08	2.20E-04	9.00E-05	1.00E-07	NS	NA	NA	NS	NA	NA
4th '82	30-Nov-82	2.36E-06	9.50E-07	1.00E-06	8.00E-05	1.00E-05	1.00E-05	NS	NA	NA	NS	NA	NA
2nd '83	13-Apr-83	8.58E-05	1.36E-05	2.00E-08	3.53E-04	1.90E-05	1.00E-05	NS	NA	NA	NS	NA	NA
3rd '83	01-Jul-83	1.19E-04	1.10E-05	5.00E-06	1.58E-04	1.30E-05	1.00E-05	NS	NA	NA	NS	NA	NA
4th '83	30-Jan-84	9.78E-05	7.00E-06	2.00E-06	2.16E-03	3.40E-04	3.00E-04	NS	NA	NA	NS	NA	NA
2nd '84	28-Jun-84	2.08E-04	1.00E-05	3.00E-09	1.60E-03	7.00E-05	3.00E-08	NS	NA	NA	NS	NA	NA
4th '84	14-Nov-84	6.05E-04	1.64E-04	2.00E-07	2.58E-03	1.10E-04	3.00E-08	NS	NA	NA	NS	NA	NA
2nd '85	27-Mar-85	1.10E-04	8.00E-06	3.00E-06	8.63E-04	4.20E-05	3.00E-05	NS	NA	NA	NS	NA	NA
3rd '85	15-Jul-85	6.10E-05	6.00E-06	2.00E-06	5.40E-04	5.00E-05	5.00E-05	NS	NA	NA	NS	NA	NA
4th '85	09-Oct-85	1.07E-04	6.00E-06	2.00E-06	3.80E-04	3.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
2nd '86	24-Mar-86	8.86E-04	1.80E-05	2.00E-06	4.40E-03	1.90E-04	3.00E-05	NS	NA	NA	NS	NA	NA
3rd '86	10-Jul-86	6.66E-04	1.80E-05	3.00E-06	4.78E-03	2.10E-04	6.00E-05	NS	NA	NA	NS	NA	NA
4th '86	18-Dec-86	5.20E-04	1.00E-04	3.00E-06	1.70E-03	1.00E-04	6.00E-05	NS	NA	NA	NS	NA	NA
2nd '87	20-Apr-87	4.10E-04	1.00E-04	5.00E-08	1.60E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '87	05-Jun-87	1.60E-04	3.00E-05	5.00E-08	5.50E-04	4.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
4th '87	22-Dec-87	3.60E-04	5.00E-05	5.00E-08	1.80E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '88	19-Apr-88	2.60E-04	5.00E-05	5.00E-08	1.90E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '88	28-Jul-88	3.10E-05	1.90E-05	5.00E-08	1.60E-04	4.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '89	07-Apr-89	6.20E-04	5.00E-05	***	1.70E-03	1.00E-04	***	NS	NA	NA	NS	NA	NA
3rd '89	06-Jun-89	3.40E-04	3.00E-05	***	7.40E-04	3.00E-05	***	NS	NA	NA	NS	NA	NA
4th '89	07-Nov-89	5.10E-04	6.00E-05	7.00E-06	1.00E-03	7.00E-05	1.40E-05	NS	NA	NA	NS	NA	NA
1st '90	17-Apr-90	3.60E-04	3.00E-05	4.00E-06	4.80E-04	2.00E-05	2.20E-05	NS	NA	NA	NS	NA	NA
2nd '90	20-Jun-90	1.70E-04	2.00E-05	5.00E-08	3.20E-04	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '90	17-Oct-90	8.80E-05	1.60E-05	5.00E-08	2.90E-04	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
1st '91	10-Apr-91	3.00E-04	3.00E-05	5.00E-06	4.10E-04	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '91	11-Jun-91	3.10E-04	3.00E-05	2.00E-07	4.70E-04	2.00E-05	2.00E-07	NS	NA	NA	NS	NA	NA
3rd '91	20-Nov-91	5.00E-04	4.00E-05	5.00E-08	1.50E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
1st '92	22-Apr-92	2.00E-05	8.00E-06	2.00E-06	9.60E-05	1.40E-05	1.00E-05	NS	NA	NA	NS	NA	NA
2nd '92	10-Jun-92	6.50E-06	6.00E-06	2.00E-06	1.20E-04	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '92	10-Jun-92	1.20E-04	4.00E-05	3.00E-06	1.21E-03	8.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
1st '93	13-Apr-93	1.80E-05	1.70E-05	3.00E-06	2.10E-04	3.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
2nd '93	26-Jun-93	5.20E-05	1.90E-05	3.00E-06	1.70E-05	3.60E-05	2.00E-05	NS	NA	NA	NS	NA	NA
3rd '93	12-Oct-93	5.10E-05	2.30E-05	3.00E-06	7.10E-04	6.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
1st '94	11-May-94	1.20E-04	1.00E-05	3.00E-05	9.80E-04	1.60E-04	2.00E-04	NS	NA	NA	NS	NA	NA
2nd '94	19-Jul-94	3.73E-05	1.60E-06	8.40E-08	7.80E-05	7.10E-06	4.20E-07	NS	NA	NA	NS	NA	NA
3rd '94	28-Nov-94	2.40E-04	1.50E-05	1.70E-07	2.60E-04	1.30E-05	8.30E-07	NS	NA	NA	NS	NA	NA
1st '95	11-Apr-95	8.40E-05	6.10E-06	1.50E-07	1.20E-04	1.10E-05	7.50E-05	NS	NA	NA	NS	NA	NA
2nd '95	06-Jul-95	1.90E-05	1.50E-06	1.40E-07	4.50E-05	4.30E-06	7.20E-07	NS	NA	NA	NS	NA	NA
3rd '95	15-Nov-95	1.20E-04	6.80E-06	1.40E-07	1.00E-05	5.80E-06	7.10E-07	NS	NA	NA	NS	NA	NA
1st '96	23-Apr-96	8.30E-05	3.30E-06	1.90E-07	6.80E-05	6.30E-06	1.80E-07	NS	NA	NA	NS	NA	NA
2nd '96 *	31-Jul-96							NS	NA	NA	NS	NA	NA
3rd '96	14-Nov-96	3.60E-05	2.50E-06	1.60E-07	8.50E-05	5.60E-06	8.40E-07	NS	NA	NA	NS	NA	NA
1st '97	21-Apr-97	3.30E-05	2.30E-06	1.70E-07	4.40E-05	4.80E-06	8.40E-07	NS	NA	NA	NS	NA	NA
3rd '97	05-Sep-97	5.40E-06	3.50E-07	1.56E-07	3.20E-05	9.00E-07	7.83E-07	NS	NA	NA	NS	NA	NA
4th '97	20-Nov-97	8.90E-06	7.20E-07	5.40E-07	3.40E-04	6.70E-06	1.10E-07	NS	NA	NA	NS	NA	NA
1st '98	23-Mar-98	<9.20E-05	9.20E-05	9.20E-05	<4.60E-04	4.60E-04	4.60E-04	NS	NA	NA	NS	NA	NA
2nd '98	16-Jun-98	< 6.50E-08	6.50E-08	6.50E-08	<3.20E-07	3.20E-07	3.20E-07	NS	NA	NA	NS	NA	NA
4th '98	05-Nov-98	4.20E-05	1.00E-06	1.10E-07	1.70E-04	1.00E-05	5.50E-07	NS	NA	NA	NS	NA	NA
2nd '99	15-Apr-99	6.20E-05	1.00E-06	1.00E-07	1.40E-04	7.00E-06	1.00E-07	NS	NA	NA	NS	NA	NA
3rd '99	07-Jul-99	5.45E-05	1.40E-06	8.30E-08	9.20E-05	4.00E-06	4.20E-07	NS	NA	NA	NS	NA	NA
4th '99	02-Dec-99	1.10E-04	3.00E-06	2.20E-07	2.80E-05	1.00E-06	1.10E-06	NS	NA	NA	NS	NA	NA
2nd '00	21-Apr-00	3.70E-05	1.00E-06	2.40E-07	2.70E-04	1.00E-05	1.20E-06	NS	NA	NA	NS	NA	NA
2nd '00	22-Jun-00	2.90E-05	1.00E-06	3.30E-07	2.80E-04	2.00E-05	1.70E-06	NS	NA	NA	NS	NA	NA
4th '00	21-Dec-00	2.30E-06	1.40E-06	3.70E-07	3.30E-04	5.00E-05	1.90E-06	NS	NA	NA	NS	NA	NA
1st '01	30-Apr-01	2.10E-05	1.00E-06	1.50E-07	<7.6E-07	N/A	7.60E-07	NS	NA	NA	NS	NA	NA
2nd '01	14-Jun-01	1.30E-06	4.00E-08	1.20E-07	1.80E-06	3.00E-08	5.90E-07	NS	NA	NA	NS	NA	NA
4th '01	17-Dec-01	3.70E-05	7.67E-07	8.30E-08	6.72E-05	2.62E-06	6.00E-07	NS	NA	NA	NS	NA	NA
1st '02	07-May-02	4.90E-05	2.40E-06	7.60E-07	1.28E-04	5.61E-06	1.00E-05	NS	NA	NA	NS	NA	NA
2nd '02	07-Jul-02	8.88E-05	4.32E-06	7.60E-07	8.33E-05	4.32E-06	1.00E-05	NS	NA	NA	NS	NA	NA
4th '02	15-Dec-02	1.50E-04	6.20E-06	7.60E-07	3.16E-04	1.07E-05	1.00E-05	NS	NA	NA	NS	NA	NA
1st '03	21-Mar-03	5.00E-05	3.40E-06	2.71E-06	<4.2e-6		4.20E-06	NS	NA	NA	NS	NA	NA
2nd '03	10-Jun-03	5.60E-05	2.00E-06	4.10E-07	1.88E-04	5.14E-06	8.20E-08	NS	NA	NA	NS	NA	NA

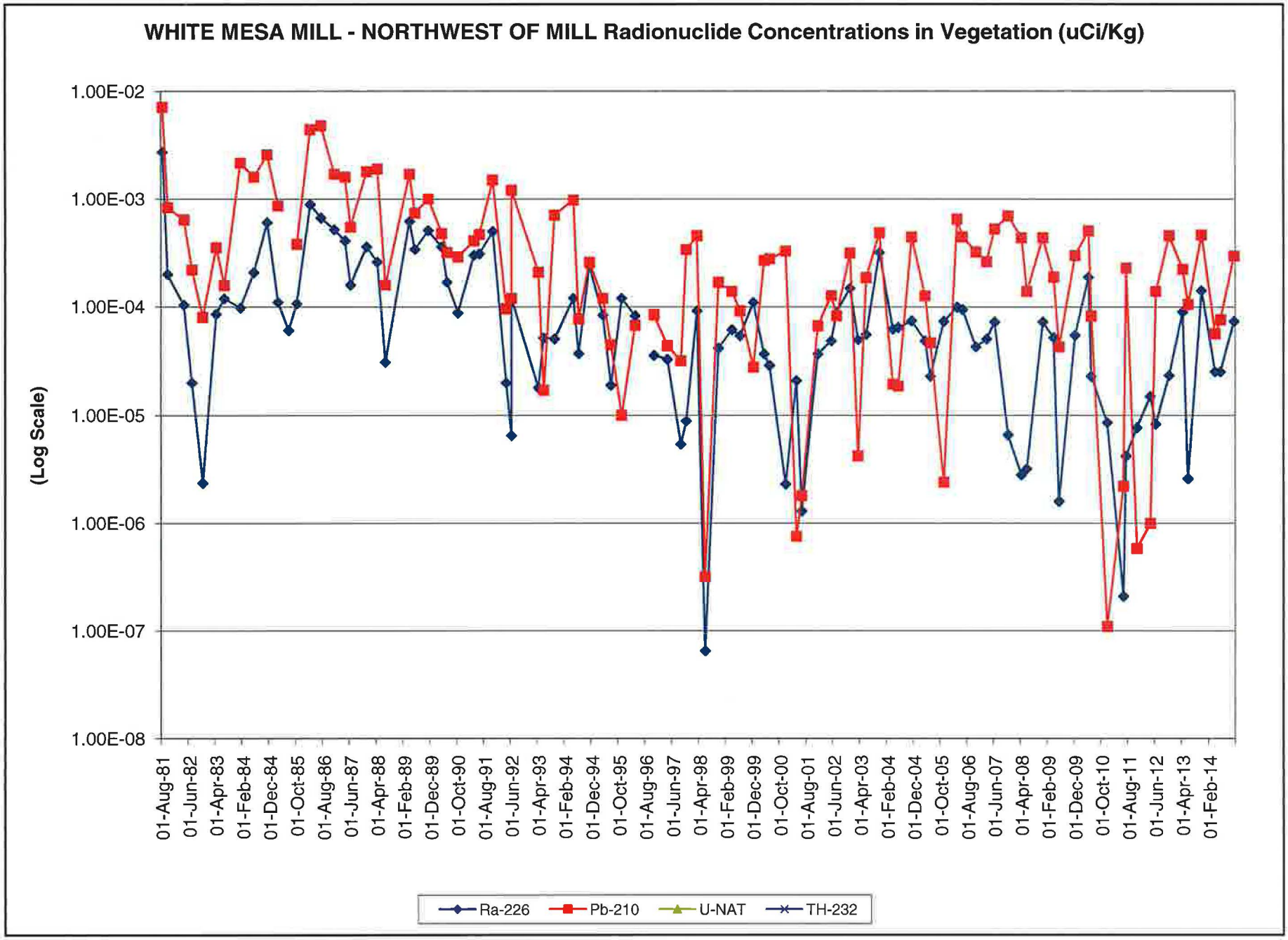
4th '03	20-Nov-03	3.20E-04	8.20E-06	1.70E-07	4.89E-04	1.25E-05	8.30E-07	NS	NA	NA	NS	NA	NA
1st '04	08-Apr-04	6.29E-05	4.10E-06	2.00E-07	1.94E-05	4.00E-06	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '04	12-Jun-04	6.51E-05	3.40E-06	1.30E-07	1.87E-05	3.90E-06	6.50E-07	NS	NA	NA	NS	NA	NA
4th '04	30-Nov-04	7.50E-05	4.60E-06	2.00E-08	4.45E-04	1.40E-05	3.00E-07	NS	NA	NA	NS	NA	NA
1st '05	21-Apr-05	4.90E-05	2.70E-06	1.30E-07	1.27E-04	4.80E-06	6.50E-07	NS	NA	NA	NS	NA	NA
2nd '05	13-Jun-05	2.30E-05	2.10E-06	1.50E-07	4.70E-05	5.10E-06	7.60E-07	NS	NA	NA	NS	NA	NA
4th '05	10-Nov-05	7.40E-05	3.50E-06	1.20E-10	2.40E-06	8.10E-08	5.80E-10	NS	NA	NA	NS	NA	NA
1st '06	03-Apr-06	1.00E-04	6.00E-06	5.00E-08	6.54E-04	1.50E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '06	16-Jun-06	9.50E-05	5.90E-06	5.00E-08	4.48E-04	1.40E-05	1.00E-06	NS	NA	NA	NS	NA	NA
4th '06	28-Nov-06	8.13E-05	4.10E-06	2.20E-07	3.25E-04	1.12E-06	1.00E-05	NS	NA	NA	NS	NA	NA
1st '07	30-Mar-07	4.30E-05	2.60E-06	1.70E-07	2.64E-04	7.20E-06	8.60E-07	NS	NA	NA	NS	NA	NA
2nd '07	1-Jun-07	5.10E-05	3.20E-06	2.30E-07	5.30E-04	1.40E-06	1.20E-06	NS	NA	NA	NS	NA	NA
4th '07	23-Nov-07	7.30E-05	6.60E-06	5.00E-08	7.00E-04	2.20E-05	1.10E-06	NS	NA	NA	NS	NA	NA
1st '08	22-Apr-08	2.80E-06	2.80E-06	7.20E-07	4.40E-04	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '08	18-Jun-08	3.20E-06	3.30E-06	1.80E-06	1.40E-04	3.30E-05	5.50E-05	NS	NA	NA	NS	NA	NA
4th '08	12-Dec-08	7.30E-05	3.20E-06	7.40E-07	4.40E-04	2.50E-05	3.20E-05	NS	NA	NA	NS	NA	NA
1st '09	28-Apr-09	5.25E-05	3.60E-06	1.10E-06	1.90E-04	1.50E-05	2.20E-05	NS	NA	NA	NS	NA	NA
2nd '09	17-Jun-09	2.30E-05	1.60E-05	5.20E-07	4.30E-05	1.00E-05	1.70E-05	NS	NA	NA	NS	NA	NA
4th '09	18-Dec-09	5.50E-05	3.50E-06		3.00E-04	1.10E-05		NS	NA	NA	NS	NA	NA
1st '10	13-May-10	1.90E-04	6.10E-06	9.40E-07	5.10E-04	2.40E-05	3.10E-05	NS	NA	NA	NS	NA	NA
2nd '10	18-Jun-10	2.30E-05	2.00E-06	7.70E-07	8.30E-05	1.80E-05	2.90E-05	NS	NA	NA	NS	NA	NA
4th '10	20-Dec-10	8.60E-06	9.10E-07	3.90E-07	1.10E-07	6.80E-07	1.10E-06	NS	NA	NA	NS	NA	NA
2nd '11	23-Jun-11	2.10E-07	1.20E-07	1.40E-07	<2.2E-06	1.30E-06	2.20E-06	NS	NA	NA	NS	NA	NA
3rd '11	28-Jul-11	4.20E-06	5.40E-07	2.70E-07	2.30E-04	2.50E-06	2.30E-06	NS	NA	NA	NS	NA	NA
4th '11	23-Nov-11	7.70E-06	6.80E-07	2.30E-07	<5.8E-08	3.40E-07	5.80E-07	NS	NA	NA	NS	NA	NA
2nd '12	11-Apr-12	1.50E-05	9.50E-07	2.60E-07	<7.0E-07	6.00E-07	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '12	11-Jun-12	8.30E-06	5.40E-07	1.20E-07	1.40E-04	8.30E-06	6.50E-06	NS	NA	NA	NS	NA	NA
4th '12	06-Nov-12	2.34E-05	4.10E-07	7.71E-08	4.59E-04	3.83E-06	6.18E-07	NS	NA	NA	NS	NA	NA
2nd'13	30-Apr-13	9.04E-05	1.68E-06	8.58E-07	2.24E-04	4.46E-06	4.68E-06	NS	NA	NA	NS	NA	NA
3rd '13	20-Jun-13	2.58E-06	9.59E-07	8.06E-07	1.06E-04	2.30E-06	3.28E-06	NS	NA	NA	NS	NA	NA
4th '13	14-Nov-13	1.43E-04	3.70E-06	2.17E-06	4.65E-04	1.17E-05	1.80E-05	NS	NA	NA	NS	NA	NA
2nd '14	16-Apr-14	2.53E-05	6.29E-07	5.51E-07	5.70E-05	2.21E-06	4.52E-06	NS	NA	NA	NS	NA	NA
3rd '14	10-Jun-14	2.53E-05	5.55E-07	5.77E-07	7.68E-05	2.08E-06	3.66E-06	NS	NA	NA	NS	NA	NA
4th '14	25-Nov-14	7.41E-05	1.90E-06	1.53E-06	2.98E-04	6.48E-06	1.06E-05	NS	NA	NA	NS	NA	NA

*2nd quarter of 1996 San Juan County, Utah, was declared a disaster area due to drought, no samples were collected during this period

† NRC Regulatory Guide does not specify a Lower Limit of Detection (LLD) for Thorium 232 in vegetation (or any matrix). The LLD for Thorium 230 was used.

NS = Not Sampled

NA = Not Applicable


WHITE MESA MILL - NORTHWEST OF MILL Radionuclide Concentrations in Vegetation (uCi/Kg)
(Log Scale)
1.00E-02
1.00E-03
1.00E-04
1.00E-05
1.00E-06
1.00E-07
1.00E-08
01-Aug-81
01-Jun-82
01-Apr-83
01-Feb-84
01-Dec-84
01-Oct-85
01-Aug-86
01-Jun-87
01-Apr-88
01-Feb-89
01-Dec-89
01-Oct-90
01-Aug-91
01-Jun-92
01-Apr-93
01-Feb-94
01-Dec-94
01-Oct-95
01-Aug-96
01-Jun-97
01-Apr-98
01-Feb-99
01-Dec-99
01-Oct-00
01-Aug-01
01-Jun-02
01-Apr-03
01-Feb-04
01-Dec-04
01-Oct-05
01-Aug-06
01-Jun-07
01-Apr-08
01-Feb-09
01-Dec-09
01-Oct-10
01-Aug-11
01-Jun-12
01-Apr-13
01-Feb-14
Ra-226
Pb-210
U-NAT
TH-232

WHITE MESA MILL
FORAGE RADIONUCLIDE DATA
SOUTHWEST OF MILL

SAMPLED QTR.	SAMPLED DATE	Ra-226	Ra-226	LLD	Pb-210	Pb-210	LLD	U-NAT	U-NAT	LLD	Th-232	Th-232	LLD
		VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (5.0E-08)	VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (1.0E-06)	VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (2.0E-07)	VALUE (uCi/Kg)	ERROR (uCi/Kg)	uCi/Kg (2.0E-07)†
3rd '81	27-Aug-81	9.50E-04	2.00E-05	5.00E-08	1.50E-04	1.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
4th '81	20-Oct-81	3.00E-05	3.00E-06	5.00E-08	1.50E-04	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '82	15-Apr-82	1.37E-05	3.00E-06	3.00E-06	3.80E-04	4.00E-05	4.00E-05	NS	NA	NA	NS	NA	NA
3rd '82	01-Jul-82	3.40E-04	2.00E-05	5.00E-08	3.68E-03	2.70E-04	1.00E-07	NS	NA	NA	NS	NA	NA
4th '82	30-Nov-82	1.75E-05	3.00E-06	2.00E-06	7.92E-04	4.00E-06	2.00E-05	NS	NA	NA	NS	NA	NA
2nd '83	13-Apr-83	7.13E-04	7.30E-05	9.00E-08	2.51E-03	3.00E-04	3.00E-04	NS	NA	NA	NS	NA	NA
3rd '83	01-Jul-83	5.39E-05	4.50E-06	2.00E-06	6.88E-04	4.30E-05	4.00E-05	NS	NA	NA	NS	NA	NA
4th '83	30-Jan-84	6.40E-05	7.00E-06	4.00E-06	1.20E-03	1.00E-04	4.00E-05	NS	NA	NA	NS	NA	NA
2nd '84	28-Jun-84	8.27E-05	6.30E-06	3.00E-09	1.80E-03	1.00E-04	9.00E-08	NS	NA	NA	NS	NA	NA
4th '84	14-Nov-84	2.72E-04	1.48E-04	2.00E-07	4.70E-03	7.20E-04	3.00E-07	NS	NA	NA	NS	NA	NA
2nd '85	27-Mar-85	4.73E-04	1.60E-07	3.00E-06	7.07E-04	3.60E-05	3.00E-05	NS	NA	NA	NS	NA	NA
3rd '85	15-Jul-85	6.60E-05	7.00E-06	4.00E-06	4.90E-04	3.00E-05	3.00E-05	NS	NA	NA	NS	NA	NA
4th '85	09-Oct-85	2.83E-04	2.00E-05	7.00E-06	1.50E-03	1.00E-04	7.00E-05	NS	NA	NA	NS	NA	NA
2nd '86	24-Mar-86	1.57E-04	1.00E-05	4.00E-06	4.14E-03	1.80E-04	3.00E-05	NS	NA	NA	NS	NA	NA
3rd '86	10-Jul-86	3.78E-04	1.00E-05	2.00E-06	1.65E-02	7.00E-04	1.00E-04	NS	NA	NA	NS	NA	NA
4th '86	18-Dec-86	2.60E-04	2.00E-05	2.00E-06	1.70E-03	1.00E-04	1.00E-04	NS	NA	NA	NS	NA	NA
2nd '87	20-Apr-87	4.10E-04	7.00E-05	5.00E-08	2.20E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '87	05-Jun-87	2.90E-04	4.00E-05	5.00E-08	7.50E-04	5.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
4th '87	22-Dec-87	1.80E-04	3.00E-05	5.00E-08	2.40E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '88	19-Apr-88	2.30E-04	5.00E-05	5.00E-08	2.90E-03	1.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '88	28-Jul-88	1.50E-04	3.00E-05	5.00E-08	4.30E-03	2.00E-04	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '89	07-Apr-89	3.10E-04	4.00E-05	***	4.20E-03	1.00E-04	***	NS	NA	NA	NS	NA	NA
3rd '89	06-Jun-89	1.30E-04	2.00E-05	***	1.50E-03	1.00E-04	***	NS	NA	NA	NS	NA	NA
4th '89	07-Nov-89	4.30E-04	5.00E-05	1.40E-05	3.50E-03	1.40E-04	2.70E-05	NS	NA	NA	NS	NA	NA
1st '90	17-Apr-90	2.50E-04	3.00E-05	5.00E-06	2.39E-03	5.00E-05	2.50E-05	NS	NA	NA	NS	NA	NA
2nd '90	20-Jun-90	1.10E-04	2.00E-05	5.00E-08	6.60E-04	3.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '90	17-Oct-90	6.10E-05	1.40E-05	5.00E-08	6.10E-04	3.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
1st '91	10-Apr-91	3.40E-05	1.10E-05	5.00E-06	2.20E-04	1.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '91	11-Jun-91	8.00E-05	6.00E-06	2.00E-07	1.20E-04	1.00E-05	2.00E-07	NS	NA	NA	NS	NA	NA
3rd '91	20-Nov-91	6.50E-05	1.40E-05	5.00E-08	9.10E-04	5.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
1st '92	22-Apr-92	1.60E-05	7.00E-06	2.00E-06	3.20E-04	2.00E-05	1.00E-05	NS	NA	NA	NS	NA	NA
2nd '92	10-Jun-92	1.90E-05	1.00E-05	2.00E-07	2.20E-04	2.00E-05	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '92	10-Jun-92	1.60E-05	1.80E-05	3.00E-06	7.60E-04	6.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
1st '93	13-Apr-93	2.60E-05	2.00E-05	3.00E-06	3.40E-04	3.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
2nd '93	26-Jun-93	3.00E-05	1.40E-05	3.00E-06	0.00E+00	3.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
3rd '93	12-Oct-93	3.10E-05	1.60E-05	3.00E-06	4.20E-04	6.00E-05	2.00E-05	NS	NA	NA	NS	NA	NA
1st '94	11-May-94	2.00E-05	5.00E-06	3.00E-05	3.90E-04	8.00E-05	2.00E-04	NS	NA	NA	NS	NA	NA
2nd '94	19-Jul-94	1.75E-05	1.70E-06	7.60E-08	1.30E-04	7.80E-06	3.80E-07	NS	NA	NA	NS	NA	NA
3rd '94	28-Nov-94	1.00E-04	9.00E-06	1.50E-07	2.60E-04	1.20E-05	7.40E-07	NS	NA	NA	NS	NA	NA
1st '95	11-Apr-95	1.70E-05	1.50E-06	1.60E-07	1.60E-04	1.50E-05	8.10E-07	NS	NA	NA	NS	NA	NA
2nd '95	06-Jul-95	6.40E-06	6.00E-07	1.40E-07	4.40E-05	4.20E-06	7.00E-07	NS	NA	NA	NS	NA	NA
3rd '95	15-Nov-95	2.30E-05	2.20E-06	1.70E-07	6.60E-05	9.60E-06	8.30E-07	NS	NA	NA	NS	NA	NA
1st '96	23-Apr-96	4.20E-05	2.20E-06	1.70E-07	1.00E-04	6.70E-06	1.80E-07	NS	NA	NA	NS	NA	NA
2nd '96 *	31-Jul-96							NS	NA	NA	NS	NA	NA
3rd '96	14-Nov-96	2.10E-05	2.00E-06	1.60E-07	1.90E-04	7.30E-06	8.20E-07	NS	NA	NA	NS	NA	NA
1st '97	21-Apr-97	5.50E-06	4.20E-07	1.40E-07	3.30E-05	3.90E-06	7.00E-07	NS	NA	NA	NS	NA	NA
3rd '97	05-Sep-97	5.30E-06	3.20E-07	1.26E-07	1.90E-05	6.90E-07	6.34E-07	NS	NA	NA	NS	NA	NA
4th '97	20-Nov-97	2.50E-05	9.50E-07	5.90E-07	1.30E-04	4.70E-06	1.20E-07	NS	NA	NA	NS	NA	NA
1st '98	23-Mar-98	<7.90E-05	7.90E-05	7.90E-05	<3.90E-04	3.90E-04	3.90E-04	NS	NA	NA	NS	NA	NA
2nd '98	16-Jun-98	3.60E-07	1.40E-07	3.30E-08	<1.7E-07	1.70E-07	1.70E-07	NS	NA	NA	NS	NA	NA
4th '98	05-Nov-98	4.30E-05	1.00E-06	7.60E-08	2.50E-04	1.00E-05	3.80E-07	NS	NA	NA	NS	NA	NA
2nd '99	15-Apr-99	2.40E-05	1.00E-06	1.20E-07	1.70E-04	8.00E-06	6.20E-07	NS	NA	NA	NS	NA	NA
3rd '99	07-Jul-99	2.23E-05	8.60E-07	1.20E-07	2.30E-04	7.00E-06	5.90E-07	NS	NA	NA	NS	NA	NA
4th '99	02-Dec-99	1.50E-04	3.00E-06	2.00E-07	1.70E-05	1.00E-06	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '00	21-Apr-00	1.00E-04	2.00E-06	1.20E-07	1.10E-04	7.00E-06	6.10E-07	NS	NA	NA	NS	NA	NA
2nd '00	22-Jun-00	1.30E-06	1.00E-07	2.40E-07	2.00E-04	1.00E-05	1.20E-06	NS	NA	NA	NS	NA	NA
4th '00	21-Dec-00	1.20E-06	9.00E-07	2.40E-07	1.20E-04	3.00E-05	1.20E-06	NS	NA	NA	NS	NA	NA
1st '01	30-Apr-01	1.80E-06	1.00E-07	1.70E-07	<8.3E-07	N/A	8.30E-07	NS	NA	NA	NS	NA	NA
2nd '01	14-Jun-01	2.60E-06	2.00E-07	9.90E-08	1.10E-06	2.00E-08	5.00E-07	NS	NA	NA	NS	NA	NA
4th '01	17-Dec-01	2.63E-06	4.60E-05	1.20E-07	9.40E-05	3.72E-06	6.00E-07	NS	NA	NA	NS	NA	NA
1st '02	07-May-02	3.50E-05	2.20E-06	7.60E-07	1.36E-04	5.61E-06	1.00E-05	NS	NA	NA	NS	NA	NA
2nd '02	07-Jul-02	4.02E-05	2.34E-06	7.60E-07	7.04E-05	4.11E-06	1.00E-05	NS	NA	NA	NS	NA	NA
4th '02	15-Dec-02	8.10E-05	3.90E-06	7.60E-07	2.87E-04	8.54E-06	1.00E-05	NS	NA	NA	NS	NA	NA
1st '03	21-Mar-03	3.70E-05	2.60E-06	2.41E-06	2.69E-05	2.01E-06	3.73E-06	NS	NA	NA	NS	NA	NA
2nd '03	10-Jun-03	1.30E-05	1.00E-06	5.20E-07	<1.00E-07		1.00E-07	NS	NA	NA	NS	NA	NA
4th '03	20-Nov-03	1.60E-04	1.30E-05	1.20E-07	1.42E-04	6.42E-06	5.90E-07	NS	NA	NA	NS	NA	NA

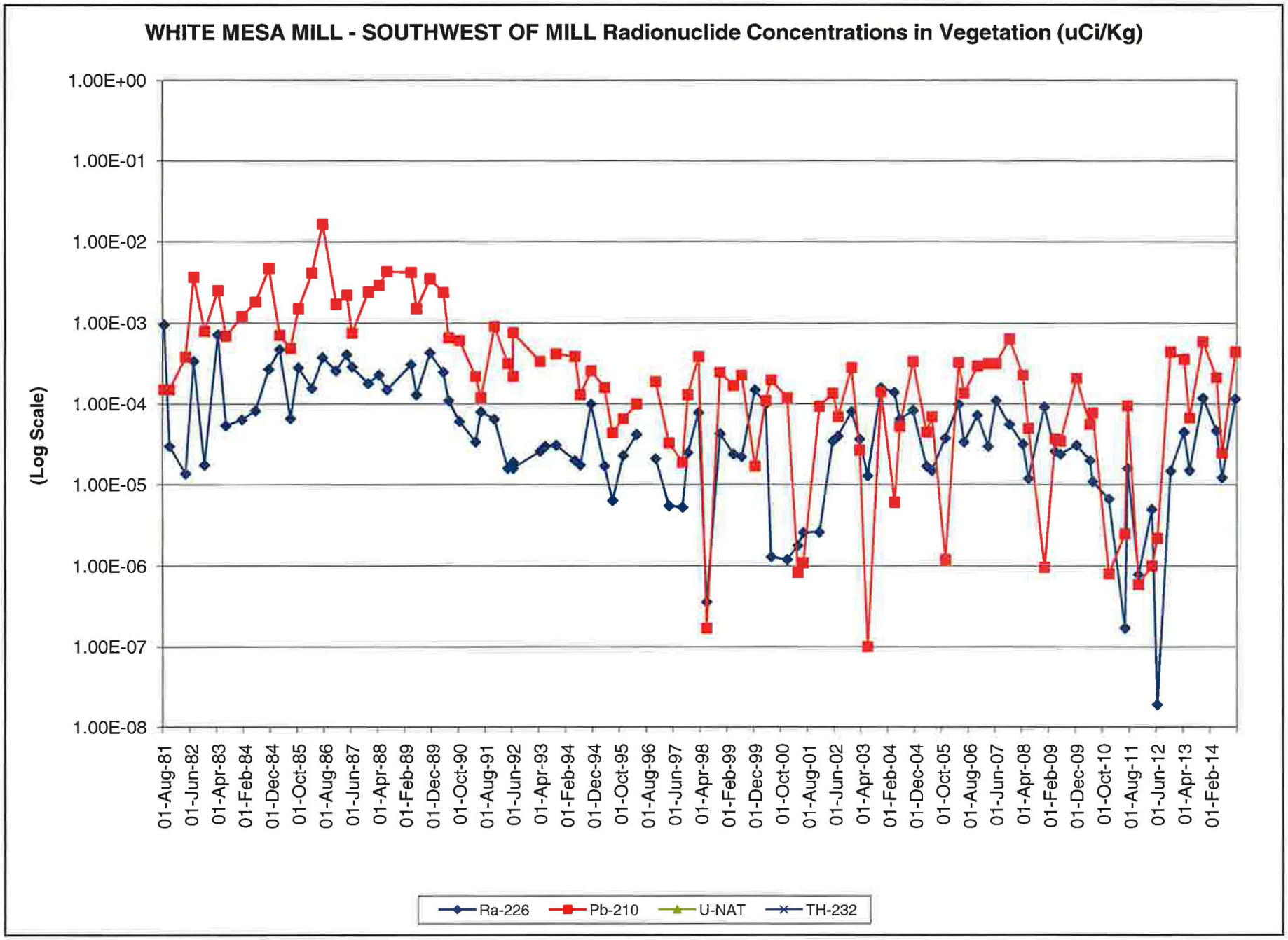
1st '04	08-Apr-04	1.40E-04	7.70E-06	1.10E-07	6.10E-06	2.70E-06	5.50E-07	NS	NA	NA	NS	NA	NA
2nd '04	12-Jun-04	6.51E-05	3.20E-06	1.50E-07	5.27E-05	4.90E-06	7.60E-07	NS	NA	NA	NS	NA	NA
4th '04	30-Nov-04	8.40E-05	5.70E-06	3.00E-08	3.39E-04	1.60E-05	3.00E-07	NS	NA	NA	NS	NA	NA
1st '05	21-Apr-05	1.70E-05	1.60E-06	1.30E-07	4.50E-05	3.50E-06	6.50E-07	NS	NA	NA	NS	NA	NA
2nd '05	13-Jun-05	1.50E-05	1.60E-06	1.40E-07	7.00E-05	5.10E-06	6.90E-07	NS	NA	NA	NS	NA	NA
4th '05	10-Nov-05	3.80E-05	2.10E-06	8.60E-10	1.20E-06	4.80E-08	4.30E-10	NS	NA	NA	NS	NA	NA
1st '06	03-Apr-06	1.00E-04	6.00E-06	5.00E-08	3.30E-04	1.10E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '06	16-Jun-06	3.40E-05	2.50E-06	5.00E-08	1.37E-04	6.00E-06	1.00E-06	NS	NA	NA	NS	NA	NA
4th '06	28-Nov-06	7.31E-05	3.20E-06	1.60E-07	2.98E-04	8.50E-06	8.20E-07	NS	NA	NA	NS	NA	NA
1st '07	30-Mar-07	3.00E-05	2.20E-06	1.70E-07	3.20E-04	7.90E-06	8.40E-07	NS	NA	NA	NS	NA	NA
2nd '07	1-Jun-07	1.10E-04	4.60E-06	2.3-07	3.20E-04	1.10E-05	1.10E-06	NS	NA	NA	NS	NA	NA
4th '07	23-Nov-07	5.60E-05	5.20E-06	5.00E-08	6.40E-04	1.90E-05	1.00E-06	NS	NA	NA	NS	NA	NA
1st '08	22-Apr-08	3.20E-05	2.30E-06	7.20E-07	2.30E-04	1.50E-05	1.00E-06	NS	NA	NA	NS	NA	NA
2nd '08	18-Jun-08	1.25E-05	2.20E-06	1.80E-06	5.00E-05	3.00E-05	4.80E-03	NS	NA	NA	NS	NA	NA
4th '08	12-Dec-08	9.20E-05	4.10E-06	9.60E-07	4.10E-04	3.00E-05	4.00E-05	NS	NA	NA	NS	NA	NA
1st '09	28-Apr-09	2.60E-05	2.90E-06	1.40E-06	3.70E-05	1.50E-06	2.50E-05	NS	NA	NA	NS	NA	NA
2nd '09	17-Jun-09	2.40E-05	1.40E-06	3.90E-07	3.50E-05	7.90E-06	1.30E-05	NS	NA	NA	NS	NA	NA
4th '09	18-Dec-09	3.10E-05	2.30E-06		2.10E-04	8.40E-06		NS	NA	NA	NS	NA	NA
1st '10	13-May-10	2.00E-05	2.10E-06	9.40E-07	5.60E-05	1.50E-05	2.40E-05	NS	NA	NA	NS	NA	NA
2nd '10	18-Jun-10	1.10E-05	1.30E-06	6.60E-07	7.80E-05	1.60E-05	2.50E-05	NS	NA	NA	NS	NA	NA
4th '10	20-Dec-10	6.70E-06	9.10E-07	4.80E-07	8.00E-07	7.90E-07	1.30E-06	NS	NA	NA	NS	NA	NA
2nd '11	23-Jun-11	<1.7E-07	6.90E-08	1.70E-07	<2.5E-06	1.50E-06	2.50E-06	NS	NA	NA	NS	NA	NA
3rd '11	27-Jul-11	1.60E-05	1.00E-06	2.60E-07	9.50E-05	1.60E-06	1.70E-06	NS	NA	NA	NS	NA	NA
4th '11	23-Nov-11	7.80E-07	2.50E-07	2.30E-07	<5.9E-07	3.50E-07	5.90E-07	NS	NA	NA	NS	NA	NA
2nd '12	11-Apr-12	5.00E-06	6.00E-07	3.00E-07	<7.0E-07	7.00E-07	1.00E-06	NS	NA	NA	NS	NA	NA
3rd '12	11-Jun-12	1.90E-08	6.20E-08	1.10E-07	<2.5E-07	1.30E-06	2.20E-06	NS	NA	NA	NS	NA	NA
4th '12	06-Nov-12	1.49E-05	3.41E-07	4.25E-08	4.45E-04	4.01E-06	8.57E-07	NS	NA	NA	NS	NA	NA
2nd '13	30-Apr-13	4.50E-05	1.19E-06	5.39E-07	3.62E-04	6.30E-06	9.90E-06	NS	NA	NA	NS	NA	NA
3rd '13	20-Jun-13	1.51E-05	1.06E-06	1.96E-06	6.71E-05	2.93E-06	6.24E-06	NS	NA	NA	NS	NA	NA
4th '13	14-Nov-13	1.18E-04	3.39E-06	2.97E-06	5.92E-04	1.27E-05	1.62E-05	NS	NA	NA	NS	NA	NA
2nd '14	16-Apr-14	4.65E-05	1.08E-06	7.35E-07	2.13E-04	5.93E-06	1.31E-05	NS	NA	NA	NS	NA	NA
3rd '14	10-Jun-14	1.23E-05	4.97E-07	6.97E-07	2.46E-05	1.84E-06	4.63E-06	NS	NA	NA	NS	NA	NA
4th '14	25-Nov-14	1.16E-04	2.25E-06	1.53E-06	4.43E-04	1.04E-05	1.94E-05	NS	NA	NA	NS	NA	NA

*2nd quarter of 1996 San Juan County, Utah, was declared a disaster area due to drought, no samples were collected during this period

† NRC Regulatory Guide does not specify a Lower Limit of Detection (LLD) for Thorium 232 in vegetation (or any matrix). The LLD for Thorium 230 was used.

NS = Not Sampled

NA = Not Applicable


WHITE MESA MILL - SOUTHWEST OF MILL Radionuclide Concentrations in Vegetation (uCi/Kg)
(Log Scale)
1.00E+00
1.00E-01
1.00E-02
1.00E-03
1.00E-04
1.00E-05
1.00E-06
1.00E-07
1.00E-08
01-Aug-81
01-Jun-82
01-Apr-83
01-Feb-84
01-Dec-84
01-Oct-85
01-Aug-86
01-Jun-87
01-Apr-88
01-Feb-89
01-Dec-89
01-Oct-90
01-Aug-91
01-Jun-92
01-Apr-93
01-Feb-94
01-Dec-94
01-Oct-95
01-Aug-96
01-Jun-97
01-Apr-98
01-Feb-99
01-Dec-99
01-Oct-00
01-Aug-01
01-Jun-02
01-Apr-03
01-Feb-04
01-Dec-04
01-Oct-05
01-Aug-06
01-Jun-07
01-Apr-08
01-Feb-09
01-Dec-09
01-Oct-10
01-Aug-11
01-Jun-12
01-Apr-13
01-Feb-14
Ra-226
Pb-210
U-NAT
TH-232

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 13, 2015

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Vegetation Analysis

Client Sample ID:	North East	Project:	DNMI00101
Sample ID:	362137001	Client ID:	DNMI001
Matrix:	Vegetation		
Collect Date:	25-NOV-14 09:00		
Receive Date:	01-DEC-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "As Received"												
Lead-210		0.000246	+/-5.38E-06	7.41E-06	1.00E-06	uCi/kg		KSD1	01/11/15	1410	1442680	1
GFPC, Total Alpha Radium, solid "As Received"												
Total Radium		2.98E-05	+/-1.23E-06	1.30E-06	5.00E-08	uCi/kg		AF1	01/07/15	1652	1442685	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	KYW2	12/08/14	2007	1441817

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 900.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "As Received"			104	(25%-125%)
Barium Carrier	GFPC, Total Alpha Radium, solid "As Received"			93.9	(25%-125%)

Notes:
Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

GEL LABORATORIES LLC

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Certificate of Analysis

Report Date: January 13, 2015

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Vegetation Analysis

Client Sample ID:	North West	Project:	DNMI00101
Sample ID:	362137002	Client ID:	DNMI001
Matrix:	Vegetation		
Collect Date:	25-NOV-14 09:30		
Receive Date:	01-DEC-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "As Received"												
Lead-210		0.000298	+/-6.84E-06	1.06E-05	1.00E-06	uCi/kg		KSD1	01/11/15	1410	1442680	1
GFPC, Total Alpha Radium, solid "As Received"												
Total Radium		7.41E-05	+/-1.90E-06	1.53E-06	5.00E-08	uCi/kg		AF1	01/07/15	1652	1442685	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	KYW2	12/08/14	2007	1441817

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 900.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "As Received"			98.4	(25%-125%)
Barium Carrier	GFPC, Total Alpha Radium, solid "As Received"			101	(25%-125%)

Notes:
Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Certificate of Analysis

Report Date: January 13, 2015

Company :	Energy Fuels Resources (USA), Inc.
Address :	225 Union Boulevard Suite 600 Lakewood, Colorado 80228
Contact:	Ms. Kathy Weinel
Project:	Vegetation Analysis

Client Sample ID:	South West	Project:	DNMI00101
Sample ID:	362137003	Client ID:	DNMI001
Matrix:	Vegetation		
Collect Date:	25-NOV-14 10:15		
Receive Date:	01-DEC-14		
Collector:	Client		

Parameter	Qualifier	Result	Uncertainty	MDC	RL	Units	DF	Analyst	Date	Time	Batch	Method
Rad Gas Flow Proportional Counting												
GFPC, Pb210, Solid "As Received"												
Lead-210		0.000443	+/-1.04E-05	1.94E-05	1.00E-06	uCi/kg		KSD1	01/11/15	1410	1442680	1
GFPC, Total Alpha Radium, solid "As Received"												
Total Radium		0.000116	+/-2.25E-06	1.53E-06	5.00E-08	uCi/kg		AF1	01/07/15	1652	1442685	2

The following Prep Methods were performed:

Method	Description	Analyst	Date	Time	Prep Batch
Dry Soil Prep	Dry Soil Prep GL-RAD-A-021	KYW2	12/08/14	2007	1441817

The following Analytical Methods were performed:

Method	Description	Analyst Comments
1	DOE RP280 Modified	
2	EPA 900.1 Modified	

Surrogate/Tracer Recovery	Test	Result	Nominal	Recovery%	Acceptable Limits
Lead Carrier	GFPC, Pb210, Solid "As Received"			64.8	(25%-125%)
Barium Carrier	GFPC, Total Alpha Radium, solid "As Received"			105	(25%-125%)

Notes:
Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

GEL Laboratories LLC
a member of The GEL Group INC

PO Box 30712 Charleston, SC 29417
2040 Savage Road Charleston, SC 29407
P 843.556.8171 F 843.766.1178

www.gel.com

January 13, 2015

Ms. Kathy Weinel
Energy Fuels Resources (USA), Inc.
225 Union Boulevard
Suite 600
Lakewood, Colorado 80228

Re: Vegetation Analysis
Work Order: 362137

Dear Ms. Weinel:

GEL Laboratories, LLC (GEL) appreciates the opportunity to provide the enclosed analytical results for the sample(s) we received on December 01, 2014. This original data report has been prepared and reviewed in accordance with GEL's standard operating procedures.

Our policy is to provide high quality, personalized analytical services to enable you to meet your analytical needs on time every time. We trust that you will find everything in order and to your satisfaction. If you have any questions, please do not hesitate to call me at (843) 556-8171, ext. 4487.

Sincerely,

Sylainna Rivers

Sylainna Rivers
Project Manager

Purchase Order: DW16138
Enclosures

Receipt Narrative
for
Energy Fuels Resources (USA), Inc.
SDG: 362137

January 13, 2015

Laboratory Identification:

GEL Laboratories LLC
2040 Savage Road
Charleston, South Carolina 29407
(843) 556-8171

Summary:

Sample receipt: The samples arrived at GEL Laboratories LLC, Charleston, South Carolina on December 01, 2014 for analysis. The samples were delivered with proper chain of custody documentation and signatures. All sample containers arrived without any visible signs of tampering or breakage. There are no additional comments concerning sample receipt.

Sample Identification: The laboratory received the following samples:

Laboratory ID	Client ID
362137001	North East
362137002	North West
362137003	South West

Case Narrative:

Sample analyses were conducted using methodology as outlined in GEL's Standard Operating Procedures. Any technical or administrative problems during analysis, data review, and reduction are contained in the analytical case narratives in the enclosed data package.

The enclosed data package contains the following sections: Case Narrative, Chain of Custody, Cooler Receipt Checklist, Data Package Qualifier Definitions and data from the following fractions: Radiochemistry.

Sylainna Rivers

Sylainna Rivers
Project Manager

362137

Sheet 2 of 2

CHAIN OF CUSTODY

Samples Shipped to: Gel Laboratories
2040 Savage Road
Charleston, SC 29407

Contact: Garrin Palmer
Ph: 435 678 2221
gpalmer@energyfuels.com

Chain of Custody/Sampling Analysis Request

Project	Samplers Name	Samplers Signature
Late Fall Vegetation 2014	Garrin Palmer	Garrin Palmer

Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
North East	11/25/2014	900	Ra 226, PB 210
North West	11/25/2014	930	Ra 226, PB 210
South West	11/25/2014	1015	Ra 226, PB 210
			* Weights: N.E .- 5300 Grams, N.W .- 5235 Grams, S.W. - 5130 Grams

Comments: Please send report to Kathy Weinel at kweinel@energyfuels.com

Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time
Garrin Palmer	11/25/14 1200	Alex Mack	9:20 12/1/14
Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time

GEL Laboratories LLC

SAMPLE RECEIPT & REVIEW FORM

Client: DNMI	SDG/AR/COC/Work Order:
Received By: SHANTA MACK	Date Received: 12-1-14 @ 5:20

Suspected Hazard Information	Yes	No	*If Net Counts > 100cpm on samples not marked "radioactive", contact the Radiation Safety Group for further investigation.
COC/Samples marked as radioactive?		—	Maximum Net Counts Observed* (Observed Counts - Area Background Counts): 36 cpm
Classified Radioactive II or III by RSO?		—	If yes, Were swipes taken of sample contatiners < action levels?
COC/Samples marked containing PCBs?		—	
Package, COC, and/or Samples marked as beryllium or asbestos containing?		—	If yes, samples are to be segregegated as Safety Controlled Samples, and opened by the GEL Safety Group.
Shipped as a DOT Hazardous?		—	Hazard Class Shipped: UN#:
Samples identified as Foreign Soil?		—	

	Sample Receipt Criteria	Yes	NA	No	Comments/Qualifiers (Required for Non-Conforming Items)
1	Shipping containers received intact and sealed?	—			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
2	Samples requiring cold preservation within (0 ≤ 6 deg. C)?*		—		Preservation Method: Ice bags Blue ice Dry ice (None) Other (describe) *all temperatures are recorded in Celsius 21C
2a	Daily check performed and passed on IR temperature gun?	—			Temperature Device Serial #: 130532792 Secondary Temperature Device Serial # (If Applicable):
3	Chain of custody documents included with shipment?	—			
4	Sample containers intact and sealed?	—			Circle Applicable: Seals broken Damaged container Leaking container Other (describe)
5	Samples requiring chemical preservation at proper pH?		—		Sample ID's, containers affected and observed pH: If Preservation added, Lot#:
6	VOA vials free of headspace (defined as < 6mm bubble)?		—		Sample ID's and containers affected:
7	Are Encore containers present?			—	(If yes, immediately deliver to Volatiles laboratory)
8	Samples received within holding time?	—			ID's and tests affected:
9	Sample ID's on COC match ID's on bottles?	—			Sample ID's and containers affected:
10	Date & time on COC match date & time on bottles?	—			Sample ID's affected:
11	Number of containers received match number indicated on COC?	—			Sample ID's affected:
12	Are sample containers identifiable as GEL provided?			—	
13	COC form is properly signed in relinquished/received sections?	—			
14	Carrier and tracking number.				Circle Applicable: FedEx Air FedEx Ground UPS Field Services Courier Other 1Z187444129638 7571

Comments (Use Continuation Form if needed):

PM (or PMA) review: Initials SL Date 12/1/14 Page 1 of 1

GL-CHL-SR-001

GEL Laboratories LLC - Login Review Report

GEL Work Order/SDG: 362137 **Late Fall Vegetation 2014**
Client SDG: 362137
Project Manager: Sylainna Rivers
Project Name: DNMI00101 Vegetation Analysis
Purchase Order: DW16138
Package Level: LEVEL3
EDD Format: EIM_DNMI

Work Order Due Date: 09-JAN-15
Package Due Date: 06-JAN-15
EDD Due Date: 09-JAN-15
Due Date: 09-JAN-15
SXK1

Collector: C
Prelogin #: 20141224461
Project Workdef ID: 1310529
SDG Status: Closed
Logged by:

GEL ID	Client Sample ID	Client Sample Desc.	Collect Date & Time	Receive Date & Time	Time Zone	# of Cont.	Lab Matrix	Fax Due Date	Days to Process	CofC #	Prelog Group	Lab QC	Field QC
362137001	North East		25-NOV-14 09:00	01-DEC-14 09:20	-2	1	VEGETATION		30		1		
362137002	North West		25-NOV-14 09:30	01-DEC-14 09:20	-2	1	VEGETATION		30		1		
362137003	South West		25-NOV-14 10:15	01-DEC-14 09:20	-2	1	VEGETATION		30		1		

Client Sample ID	Status	Tests/Methods	Product Reference	Fax Date	PM Comments	Aux Data		Receive Codes
-001 North East	REVW	GFPC, Total Alpha Radium, solid				Temperature (C)	21	
	REVW	GFPC, Pb210, Solid						
	REVW	Laboratory Composite - Dry prep instructions						
-002 North West	REVW	GFPC, Total Alpha Radium, solid				Temperature (C)	21	
	REVW	GFPC, Pb210, Solid						
	REVW	Laboratory Composite - Dry prep instructions						
-003 South West	REVW	GFPC, Total Alpha Radium, solid				Temperature (C)	21	
	REVW	GFPC, Pb210, Solid						
	REVW	Laboratory Composite - Dry prep instructions						

Product: LABCOMP_S **Workdef ID:** 1310628 **In Product Group?** No **Group Name:** **Group Reference:**
Method:
Product Description: Laboratory Composite - Dry prep instructions
Samples: 001, 002, 003
Parmname Check: All parmnames scheduled properly

Path: Rad Prep SPRP
Product Reference:
Moisture Correction: "As Received"

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
							No

GEL Laboratories LLC - Login Review Report

Product: GFC_PBS **Workdef ID:** 1310600 **In Product Group?** No **Group Name:** **Group Reference:**

Method: DOE RP280 Modified
Product Description: GFPC, Pb210, Solid
Samples: 001, 002, 003
Parmname Check: All parmnames scheduled properly

Path: Standard
Product Reference:
Moisture Correction: "As Received"

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
14255-04-0	Lead-210	.000001	uCi/kg	REG	Y	Y	Yes

Product: GFCTORAS **Workdef ID:** 1310679 **In Product Group?** No **Group Name:** **Group Reference:**

Method: EPA 900.1 Modified
Product Description: GFPC, Total Alpha Radium, solid
Samples: 001, 002, 003
Parmname Check: All parmnames scheduled properly

Path: Standard
Product Reference:
Moisture Correction: "As Received"

CAS #	Parmname	Client RDL or PQL & Unit	Reporting Units	Parm Function	Included in Sample?	Included in QC?	Custom List?
	Total Radium	.00000005	uCi/kg	REG	Y	Y	Yes

Contingent Tests

Action	Product Name	Description	Samples

Login Requirements:

Requirement	Include?	Comments
Are these vegetation sample?	Y	FOR VEGETATION: After logging in, change from DRY to WET in sample inquiry.
Login Reminder?	Y	FOR VEGETATION: After logging in, change from DRY to WET in sample inquiry. Log with lab comp.

Peer Review by:_____ Work Order (SDG#), PO# Checked?_____ C of C signed in receiver location? _____

Radiochemistry Case Narrative
Energy Fuels Resources (DNMI)
SDG 362137

Method/Analysis Information

Product:	**GFPC, Pb210, Solid**
Analytical Method:	DOE RP280 Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	1442680
Prep Batch Number:	1441817

Sample ID	Client ID
362137001	North East
362137002	North West
362137003	South West
1203226607	MB for batch 1442680
1203226610	Laboratory Control Sample (LCS)
1203226608	362137001(North East) Sample Duplicate (DUP)
1203226609	362137001(North East) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-018 REV# 13.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 362137001 (North East).

QC Information
All of the QC samples meet the required acceptance limits with the following exceptions: The blank, 1203226607 (MB), did not meet the detection limit due to keeping the blank volume consistent with the other sample aliquots. All other samples met the detection limits. The sample and the duplicate, 1203226608 (North EastDUP) and 362137001 (North East), did not meet the relative percent difference requirement; however, they do meet the relative error ratio requirement with a value of 1.5611.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Recounts
Samples 1203226609 (North EastMS) and 1203226610 (LCS) were recounted due to high recovery. The recounts are reported.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Sample-Specific MDA/MDC
The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Method/Analysis Information

Product:	**GFPC, Total Alpha Radium, solid**
Analytical Method:	EPA 900.1 Modified
Prep Method:	Dry Soil Prep
Analytical Batch Number:	1442685
Prep Batch Number:	1441817

Sample ID	Client ID
362137001	North East
362137002	North West
362137003	South West
1203226628	MB for batch 1442685
1203226631	Laboratory Control Sample (LCS)
1203226629	362137001(North East) Sample Duplicate (DUP)
1203226630	362137001(North East) Matrix Spike (MS)

The samples in this SDG were analyzed on an "as received" basis.

SOP Reference
Procedure for preparation, analysis and reporting of analytical data are controlled by GEL Laboratories LLC as Standard Operating Procedure (SOP). The data discussed in this narrative has been analyzed in accordance with GL-RAD-A-010 REV# 15.

Calibration Information:

Calibration Information
All initial and continuing calibration requirements have been met.

Standards Information
Standard solutions for these analysis are NIST traceable or verified with a NIST traceable standard and used before the expiration dates.

Sample Geometry
All counting sources were prepared in the same geometry as the calibration standards.

Quality Control (QC) Information:

Blank Information
The blank volume is representative of the sample volume in this batch.

Designated QC
The following sample was used for QC: 362137001 (North East).

QC Information
All of the QC samples meet the required acceptance limits with the following exceptions: The blank 1203226628 (MB) activity is greater than the MDC but is less than five percent of the lowest activity in the batch.

Technical Information:

Holding Time
All sample procedures for this sample set were performed within the required holding time.

Sample Re-prep/Re-analysis
None of the samples in this sample set required reprep or reanalysis.

Chemical Recoveries
All chemical recoveries meet the required acceptance limits for this sample set.

Recounts
Sample 1203226628 (MB) was recounted to confirm the results. The recount is reported.

Miscellaneous Information:

Data Exception (DER) Documentation
Data exception reports are generated to document any procedural anomalies that may deviate from referenced SOP or contractual documents. A data exception report (DER) was not generated for this SDG.

Sample-Specific MDA/MDC
The MDA/MDC reported on the certificate of analysis is a sample-specific MDA/MDC.

Additional Comments
Additional comments were not required for this sample set.

Qualifier Information

Manual qualifiers were not required.

Certification Statement

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless otherwise noted in the analytical case narrative.

GEL LABORATORIES LLC

2040 Savage Road Charleston SC 29407 - (843) 556-8171 - www.gel.com

Qualifier Definition Report
for

DNMI001 Energy Fuels Resources (USA), Inc.

Client SDG: 362137 GEL Work Order: 362137

The Qualifiers in this report are defined as follows:

* A quality control analyte recovery is outside of specified acceptance criteria

** Analyte is a surrogate compound

U Analyte was analyzed for, but not detected above the CRDL.

Review/Validation

GEL requires all analytical data to be verified by a qualified data reviewer. In addition, all CLP-like deliverables receive a third level review of the fractional data package.

The following data validator verified the information presented in this data report:

Signature: Heather G. McCarty **Name: Heather McCarty**

Date: 13 JAN 2015 **Title: Analyst II**

GEL LABORATORIES LLC

2040 Savage Road Charleston, SC 29407 - (843) 556-8171 - www.gel.com

QC Summary

Report Date: January 13, 2015

Energy Fuels Resources (USA), Inc.
225 Union Boulevard
Suite 600
Lakewood, Colorado

Contact: **Ms. Kathy Weinel**

Workorder: **362137**

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date Time
Rad Gas Flow										
Batch 1442680										
QC1203226608 362137001 DUP										
Lead-210		0.000246		0.000336	uCi/kg	30.8*		(0%-20%)	KSD1	01/11/15 14:10
	Uncertainty	+/-5.38E-06		+/-6.28E-06						
QC1203226610 LCS										
Lead-210	0.00515			0.0063	uCi/kg		122	(75%-125%)		01/12/15 09:49
	Uncertainty			+/-7.52E-05						
QC1203226607 MB										
Lead-210			U	-9.53E-06	uCi/kg					01/11/15 14:10
	Uncertainty			+/-3.58E-06						
QC1203226609 362137001 MS										
Lead-210	0.00529	0.000246		0.00663	uCi/kg		121	(75%-125%)		01/12/15 09:49
	Uncertainty	+/-5.38E-06		+/-7.27E-05						
Batch 1442685										
QC1203226629 362137001 DUP										
Total Radium		2.98E-05		3.51E-05	uCi/kg	16.4		(0%-20%)	AF1	01/07/15 16:52
	Uncertainty	+/-1.23E-06		+/-1.31E-06						
QC1203226631 LCS										
Total Radium	0.002			0.00199	uCi/kg		99.8	(75%-125%)		01/07/15 16:52
	Uncertainty			+/-3.03E-05						
QC1203226628 MB										
Total Radium				1.38E-06	uCi/kg					01/12/15 14:19
	Uncertainty			+/-3.86E-07						
QC1203226630 362137001 MS										
Total Radium	0.00208	2.98E-05		0.0019	uCi/kg		90.2	(75%-125%)		01/07/15 16:52
	Uncertainty	+/-1.23E-06		+/-2.98E-05						

Notes:

Counting Uncertainty is calculated at the 68% confidence level (1-sigma).

The Qualifiers in this report are defined as follows:

- ** Analyte is a surrogate compound
- < Result is less than value reported
- > Result is greater than value reported
- A The TIC is a suspected aldol-condensation product
- B For General Chemistry and Organic analysis the target analyte was detected in the associated blank.
- BD Results are either below the MDC or tracer recovery is low
- C Analyte has been confirmed by GC/MS analysis
- D Results are reported from a diluted aliquot of the sample
- F Estimated Value
- H Analytical holding time was exceeded

QC Summary

Workorder: 362137

Parmname	NOM	Sample	Qual	QC	Units	RPD%	REC%	Range	Anlst	Date	Time

K	Analyte present. Reported value may be biased high. Actual value is expected to be lower.
L	Analyte present. Reported value may be biased low. Actual value is expected to be higher.
M	M if above MDC and less than LLD
M	Matrix Related Failure
N/A	RPD or %Recovery limits do not apply.
N1	See case narrative
ND	Analyte concentration is not detected above the detection limit
NJ	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Q	One or more quality control criteria have not been met. Refer to the applicable narrative or DER.
R	Sample results are rejected
U	Analyte was analyzed for, but not detected above the CRDL.
UI	Gamma Spectroscopy--Uncertain identification
UJ	Gamma Spectroscopy--Uncertain identification
UL	Not considered detected. The associated number is the reported concentration, which may be inaccurate due to a low bias.
X	Consult Case Narrative, Data Summary package, or Project Manager concerning this qualifier
Y	QC Samples were not spiked with this compound
^	RPD of sample and duplicate evaluated using +/-RL. Concentrations are <5X the RL. Qualifier Not Applicable for Radiochemistry.
h	Preparation or preservation holding time was exceeded

N/A indicates that spike recovery limits do not apply when sample concentration exceeds spike conc. by a factor of 4 or more or %RPD not applicable.
^ The Relative Percent Difference (RPD) obtained from the sample duplicate (DUP) is evaluated against the acceptance criteria when the sample is greater than five times (5X) the contract required detection limit (RL). In cases where either the sample or duplicate value is less than 5X the RL, a control limit of +/- the RL is used to evaluate the DUP result.
* Indicates that a Quality Control parameter was not within specifications.
For PS, PSD, and SDILT results, the values listed are the measured amounts, not final concentrations.

Where the analytical method has been performed under NELAP certification, the analysis has met all of the requirements of the NELAC standard unless qualified on the QC Summary.

ATTACHMENT G

STACK SAMPLE LABORATORY RESULTS

THIRD QUARTER
RADIONUCLIDE EMISSIONS TEST
CONDUCTED AT
ENERGY FUELS RESOURCES
SOUTH YELLOW CAKE SCRUBBER
YELLOW CAKE DRYER BAGHOUSE

BLANDING, UTAH

July 29-30, 2014

by:

TETCO
391 East 620 South
American Fork, UT 84003
Phone (801) 492-9106
Fax (801) 492-9107 fax

Prepared for:

Energy Fuels Resources
6425 S Hwy 91
Blanding, Utah 84511

Date of Report:

September 10, 2014

CERTIFICATION OF REPORT INTEGRITY

Technical Emissions Testing Company (TETCO) certifies that this report represents the truth as well as can be derived by the methods employed. Every effort was made to obtain accurate and representative data and to comply with procedures set forth in the Federal Register.

Dean Kitchen

Reviewer:_____

Date:_____

Jeff Graton

Reviewer:_____

Date: 9/11/2014

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INTRODUCTION

Test Purpose

This test project was conducted to determine the total radionuclide emissions from the South Yellow Cake Scrubber and the Yellow Cake Dryer Baghouse exhausts in terms of Curies per dry standard cubic foot (Ci/dscf).

These tests were for U-Nat only.

Test Location and Type of Process

Energy Fuels Resources is located about 5 miles south of Blanding, Utah. Uranium ore is processed into yellow cake, which is shipped to other facilities for additional processing. There are two yellow cake dryers with individual scrubbers. Both dryer enclosures discharge into the Yellow Cake Dryer Baghouse. The packaging enclosure also discharges into the Yellow Cake Dryer Baghouse. The South Yellow Cake (SYC) dryer was the only operating dryer at the time of the test. The North Yellow Cake dryer is currently not operational. The Grizzly Baghouse serves as the main dust control device for the raw ore unloading and conveying to the processing building.

Stack schematics are shown as Figures 1 and 2 in Appendix D.

Test Dates

The first test run on the SYC Scrubber was completed July 29, 2014 and the second run on July 30, 2014.

One run was completed on the Yellow Cake Dryer Baghouse July 29, and the second run was completed July 30, 2014.

Pollutants Tested and Methods Applied

The tests were a determination of radionuclide emissions in accordance with EPA Method 5/114.

Test run filters and front wash residues were sent to Test America located in Richland, Washington for radionuclide analysis.

Test Participants

Test Facility	Garrin Palmer	
State Agency	None	
TETCO	Doug Olsen Kawai McNamara	Mike McNamara

Deviations From EPA Methods

None.

Quality Assurance

Testing procedures and sample recovery techniques were according to those outlined in the Federal Register and the *Quality Assurance Handbook for Air Pollution Measurement Systems*.

SUMMARY OF RESULTS

Emission Results

Table I presents the findings of the test in Curies per dry standard cubic foot. Tables IV and V in Appendix A have more detailed information.

Table I. Measured Radionuclide Emissions

Run #	South Yellow Cake Scrubber		Yellow Cake Dryer Baghouse	
	pCi/dscf	pCi/hr	pCi/dscf	pCi/hr
1	31.67	2.278E +06	17.95	3.534E+06
2	25.74	1.925E+06	10.47	2.154E+06 [1]
AVE	**28.70**	**2.101E+05**	**27.92**	**2.844E+06**

1 Test run 2 on the Yellow Cake Dryer Baghouse was completed without any barrels being filled.

Process Data

The process was operated according to standard procedures. All pertinent process data was available for recording by agency personnel. Scrubber water flow, pressure drop readings (Δp) were recorded and are found in Appendix D. The Dryer Baghouse pressure drop readings (Δp) were recorded and are found on the test run sheets. Production data will be submitted by Energy Fuels Resources.

Description of Collected Samples

The test filters for the South Yellow Cake Scrubber were heavily covered with a greenish, gray colored particulate. The front washes were cloudy in appearance.

The test filters for the Yellow Cake Dryer Baghouse were lightly colored with a tan colored particulate. The front wash was clear in appearance.

Discussion of Errors or Irregularities

None

Percent Isokinetic Sampling

Each test run was isokinetic within the ±10% of 100% criterion specified in the Federal Register. Isokinetic values for each test run are presented in Table II.

Table II. Percent Isokinetic Sampling

Run #	South Yellow Cake Scrubber	Yellow Cake Dryer Baghouse
1	97	99
2	93	97

SOURCE OPERATION

Process Control Devices Operation

All process control devices were operated normally. Recorded scrubber water flow, pressure and baghouse Δp readings were recorded and are found on the test run sheets or in Appendix D.

Process Representativeness

The facility was operated normally. Production data was retained by Energy Fuels Resources.

SAMPLING AND ANALYSIS PROCEDURES

Sampling Port Location

The inside diameter of the South Yellow Cake Scrubber stack is 12.75 inches. The two, four-inch diameter sample port are located 28.24 diameters (30 feet) downstream from the last disturbance and 6.59 diameters (7 feet) upstream from the next disturbance. Figure 1 in Appendix D is a schematic of the stack.

The inside diameter of the Yellow Cake Dryer Baghouse stack is 16.0 inches. The two, four-inch diameter sample ports are located 28.38 diameters (454 inches) downstream from the last disturbance and 3.56 diameters (57 inches) upstream from the next disturbance. The sample port locations are depicted in Figure 2 in Appendix D.

Sampling Point Location

Table III shows the distance of each sampling point from the inside wall according to EPA Method 1. Each point is marked and identified with a wrapping of glass tape and numbered. These points are determined by measuring the distance from the inside wall.

Table III. Sampling Point Location

Sample Point	Distance (inches) from Inside Wall	
	SYC Scrubber	Dryer Baghouse
1	0.85	0.70
2	3.19	2.34
3	9.56	4.74
4	11.90	11.26
5		13.66
6		15.30

Sampling Train Description

To determine the actual emission rates for this stack, 40 CFR 60, Appendix A, Methods 1-5/114 were followed.

All sampling trains were made of inert materials, (Teflon, stainless steel and glass) to prevent interference of the sampled gas and particulate. The stack analyzers used to conduct Methods 1-

5/114 are constructed to meet the specifications outlined in the CFR. The temperature sensors are K-type thermocouples. Heater, vacuum and pitot line connections have been designed to be interchangeable with all units used by the tester. A 316 stainless steel probe liner was used for the tests. Figure 4 in Appendix E is a sketch of the Methods 5/114 sampling train.

Sample boxes were prepared for testing by following the prescribed procedures outlined in Methods 5/114.

Sampling and Analytical Procedures

All sampling and analytical test procedures were as specified in 40 CFR 60, Appendix A, Methods 5/114.

Quality Assurance

All equipment setup, sampling procedures, sample recovery and equipment calibrations were carried out according to the procedures specified in 40 CFR 60 and the *Quality Assurance Handbook for Air Pollution Measurement Systems*.

APPENDIX

A: Complete Results and Sample Calculations
B: Raw Field Data
C: Laboratory Data and Chain of Custody
D: Raw Production Data
E: Calibration Procedures and Results
F: Related Correspondence

APPENDIX A

Table IV Complete Results, South Yellow Cake Scrubber
Table V Complete Results, Yellow Cake Dryer Baghouse

Nomenclature
Sample Equations

TABLE IV
COMPLETE RESULTS
ENERGY FUELS CORPORATION, BLANDING, UTAH
SOUTH YELLOWCAKE SCRUBBER EXHAUST

Symbol	Description	Dimensions	Run #1	Run #2	
Date			7/29/14	7/30/14	
Filter #			6211	6227	
Begin	Time Test Began		7:58	7:39	
End	Time Test Ended		16:04	15:42	
Pb_m	Meter Barometric Pressure	In. Hg. Abs	24.65	24.55	
ΔH	Orifice Pressure Drop	In. H_2O	1.264	1.202	
Y	Meter Calibration Y Factor	dimensionless	1.002	1.002	
Vm	Volume Gas Sampled--Meter Conditions	cf	339.892	341.040	
T_m	Avg Meter Temperature	°F	87.9	88.0	
$\sqrt{\Delta P}$	Sq Root Velocity Head	Root In. H_2O	0.4911	0.5063	
Wt_{wc}	Weight Water Collected	Grams	367.5	294.6	
T_t	Duration of Test	Minutes	480	480	
C_p	Pitot Tube Coefficient	Dimensionless	0.84	0.84	
D_n	Nozzle Diameter	Inches	0.2810	0.2810	
CO_2	Volume % Carbon Dioxide	Percent	2.00	1.80	
O_2	Volume % Oxygen	Percent	16.90	16.80	
N_2 & CO	Volume % Nitrogen and Carbon Monoxide	Percent	81.10	81.40	
Vm_{std}	Volume Gas Sampled (Standard)	dscf	271.414	271.130	
Vw	Volume Water Vapor	scf	17.328	13.890	
$Bw_{s\ (measured)}$	Fraction H_2O in Stack Gas (Measured)	Fraction	0.060	0.049	
$Bw_{s\ (saturated)}$	Fraction H_2O in Stack Gas (Saturated)	Fraction	0.159	0.159	
Bw_s	Fraction H_2O in Stack Gas *	Fraction	0.060	0.049	
X_d	Fraction of Dry Gas	Fraction	0.940	0.951	
M_d	Molecular Wt. Dry Gas	lb/lbmol	29.00	28.96	
M_s	Molecular Wt. Stack Gas	lb/lbmol	28.34	28.43	
%I	Percent Isokinetic	Percent	97.1	93.3	**AVG**
T_s	Avg Stack Temperature	°F	124.5	124.5	**124.5**
A_s	Stack Cross Sectional Area	Sq. Ft.	0.887	0.887	
P_G	Stack Static Pressure	In. H_2O	-0.280	-0.280	
Pb_p	Sample Port Barometric Pressure	In. Hg. Abs	24.58	24.48	
P_s	Stack Pressure	In. Hg. Abs	24.559	24.459	
Q_s	Stack Gas Volumetric Flow Rate (Std)	dscfm	1.20E+03	1.25E+03	**1.22E+03**
Q_a	Stack Gas Volumetric Flow Rate (Actual)	cfm	1.72E+03	1.77E+03	**1.75E+03**
V_s	Velocity of Stack Gas	fpm	1.94E+03	2.00E+03	**1.97E+03**
Curies	Radionuclides per sample	pCi	8596.0	6978.0	
Crad	Concentration of Radionuclides	pCi/dscf	31.671	25.737	**28.704**
ERrad	Emission Rate of Radionuclides	pCi/hr	2.278E+06	1.925E+06	**2.101E+06**

* If the measured moisture content is greater than the saturated moisture level (supersaturated), the saturated moisture value will be used in all calculations (40 CFR 60, Method 4, Section 12.1.7).

TABLE V
COMPLETE RESULTS, PM
ENERGY FUELS CORPORATION, BLANDING, UTAH
YELLOW CAKE DRYER BAGHOUSE

Symbol	Description	Dimensions	Run #1	Run #2
Date	Date		7/29/14	7/30/14
Filter #			6212	6226
Begin	Time Test Began		12:04	7:41
End	Time Test Ended		14:06	9:44
Pb_m	Meter Barometric Pressure	In. Hg. Abs	24.65	24.55
ΔH	Orifice Pressure Drop	In. H_2O	1.533	1.670
Y	Meter Calibration Y Factor	dimensionless	1.002	1.002
Vm	Volume Gas Sampled--Meter Conditions	cf	94.689	97.156
T_m	Avg Meter Temperature	°F	77.7	78.6
$\sqrt{\Delta P}$	Sq Root Velocity Head	Root In. H_2O	0.8152	0.8444
Wt_{wc}	Weight Water Collected	Grams	33.1	27.2
T_t	Duration of Test	Minutes	120	120
C_p	Pitot Tube Coefficient	Dimensionless	0.84	0.84
D_n	Nozzle Diameter	Inches	0.2245	0.2245
CO_2	Volume % Carbon Dioxide	Percent	0.00	0.00
O_2	Volume % Oxygen	Percent	20.90	20.90
N_2 & CO	Volume % Nitrogen and Carbon Monoxide	Percent	79.10	79.10
Vm_{std}	Volume Gas Sampled (Standard)	dscf	77.108	78.698
Vw	Volume Water Vapor	scf	1.561	1.282
Bw_s	Fraction H_2O in Stack Gas	Fraction	0.020	0.016
X_d	Fraction of Dry Gas	Fraction	0.980	0.984
M_d	Molecular Wt. Dry Gas	lb/lbmol	28.84	28.84
M_s	Molecular Wt. Stack Gas	lb/lbmol	28.62	28.66
%I	Percent Isokinetic	Percent	99.4	97.2
T_s	Avg Stack Temperature	°F	112.4	103.3
A_s	Stack Cross Sectional Area	Sq. Ft.	1.396	1.396
P_G	Stack Static Pressure	In. H_2O	-0.55	-1.30
Pb_p	Sample Port Barometric Pressure	In. Hg. Abs	24.58	24.48
P_s	Stack Pressure	In. Hg. Abs	24.540	24.384
Q_s	Stack Gas Volumetric Flow Rate (Std)	dscfm	3.28E+03	3.43E+03
Q_a	Stack Gas Volumetric Flow Rate (Actual)	cfm	4.43E+03	4.56E+03
V_s	Velocity of Stack Gas	fpm	3.17E+03	3.27E+03
Curies	Radionuclides per sample	pCi	1383.7	824.2
Crad	Concentration of Radionuclides	pCi/dscf	17.9450	10.4730
ERrad	Emission Rate of Radionuclides	pCi/hr	3.534E+06	2.154E+06

General Nomenclature

$\%I$ = percent isokinetic, percent

$A_s = (D_s^2 / 4) \cdot \pi$

$AS\Delta P$ = see $\sqrt{\Delta P}$

Btu = unit heat value (British thermal unit)

B_{ws} = fraction of water in stack gas (may have designation of "measured" or "saturated")
"measured" represents measured moisture based upon sample volume and water collected
"saturated" is a calculated value based upon stack pressure and temperature

C_0 = average of initial and final system zero gas calibration bias checks (ppm, percent)

C_{avg} = average gas concentration (as measured)

C_B = concentration of particulate matter, back half (gr/dscf,lb/dscf, etc.)

C_{cond} = concentration of condensibles (grain/dscf)

C_{cors} = concentration of coarse particulate (gr/dscf)

C_{Dir} = measured concentration of a calibration gas when introduced in direct calibration mode

C_{fa} = concentration of particulate matter, front half, actual stack flow (gr /acf)

C_F = concentration of particulate matter, front half (gr/dscf,lb/dscf, etc.)

C_{gas} = C_{avg} corrected for initial and final system bias checks (Equation 7E-5)

C_m = average of initial and final system upscale gas calibration bias checks (ppm, percent)

C_{ma} = actual concentration of upscale calibration gas

C_{metal} = concentration of metals (ppm, $\mu g/ft^3$, etc.) atomic symbol replaces "metal"

CO_2 = percent carbon dioxide in the stack gas

C_p = pitot tube coefficient (0.84)

C_{PM10} = concentration of PM_{10} particulate (gr/dscf)

C_{rad} = concentration of radionuclides (pCi/dscf)

CS = measured concentration of a calibration gas when introduced in system calibration mode

C_X = Any species symbol may replace X. Units may be expressed as ppm, lb/dscf, etc.

$C_{X\ (corr)}$ = actual gas concentration corrected to required percent O_2

Curies = Measured radionuclides per sample. Units may be pCi or uCi.

D_c = jet diameter (cm)

D/F = Dioxins and Furans (See laboratory report for D/F descriptions and nomenclacture)

ΔH = orifice pressure drop (inches H_2O)

$\Delta H_@$ = orifice pressure (inches H_2O)

ΔH_d = orifice pressure head (inches H_2O) needed for impactor flow rate

D_n = nozzle diameter (inches)

ΔP = stack flow pressure differential (inches H_2O)

Dp_{50} = 50% effective cutoff diameter of particle (cm)

D_s = diameter of the stack (feet)

EA = percent excess air

ER_B = emission rate of back half particulate (lb/hr)

ER_{cond} = emission rate of condensibles (lb/hr)

ER_{cors} = emission rate of coarse particulate (lb/hr)

ER_F = emission rate of front half particulate (lb/hr)

ER_{gas} = emission rate of a gas (lb/hr)

ER_{mmBtu} = emission rate per mmBtu of fuel

ER_{PM10} = emission rate of PM_{10} particulate (lb/hr)

ER_{rad} = emission rate of radionuclides (pCi/hr)

ER_X = emission rate of compound which replaces X. Units are usually in lb/hr.

F_D = Dry based fuel factor. Ratio of the gas volume of the products of combustion to the heat content
See 40 CFR 60, Appendix A, Method 19, Table 19-2 for fuel factor values.

K_c = Cunningham slip correction factor

λ = mean free path of molecules in gas phase (cm)

mmBtu = million Btu

General Nomenclature

M_{cond} = mass of condensibles (milligrams)
M_{cors} = mass of coarse particulate (milligrams)
M_d = molecular weight of stack gas, dry basis (lb/lb-mol)
M_F = mass of particulate on filter (mg)
M_{FP} = mass of particulate matter on filter and probe (mg)
mmBtu = million Btu
M_P = mass of particulate matter in probe and front wash (mg)
M_{PM10} = mass of PM_{10} particulate (milligrams)
M_s = molecular weight of stack gas, wet basis (lb/lbmol)
M_X = mass of species "X". Units may vary and other descriptive subscripts may apply.
μ_s = gas viscosity (poise)
M_{wx} = molecular weight of gas species (g/gmol)
N = number of jets per plate
N_2 = percent nitrogen in the stack gas
O_2 = percent oxygen in the stack gas
$\sqrt{\Delta P}$ = average of the square roots of ΔP (may also be referred to as $AS\Delta P$)
$\sqrt{\Delta P_1}$ = square root of ΔP at point 1 of the current test, Method 201A
$\sqrt{\Delta P_1'}$ = square root of ΔP at point 1 of the previous traverse, Method 201A
$\sqrt{\Delta P'_{ave}}$ = average of the square roots of ΔP from the previous traverse, Method 201A
Pb_m = absolute barometric pressure at the dry gas meter (inches Hg)
Pb_p = absolute barometric pressure at the sample location (inches Hg)
P_G = stack static pressure (inches H_2O)
P_s = absolute stack pressure (inches Hg)
P_{std} = absolute pressure at standard conditions (29.92 inches Hg.)
θ = time of test (minutes)
θ_1 = sample time (duration in minutes) at first sample point for Method 201A
θ_n = sample time (duration in minutes) at sample point "n" for Method 201A
θ_{test} = target test time for Method 201A (minutes)
Q_a = stack gas volumetric flow rate (acfm)
Q_s = stack gas volumetric flow rate (dscfm)
Q_{sc} = actual gas flow rate through the cyclone (acfm)
Q_{sce} = actual gas flow rate through the impactor (acfm)
Q_W = wet stack gas std. volumetric flow (ft^3/min, wscfm)
R = gas constant (21.85 inches Hg*ft^3/(lbmol*R))
ρ_p = particle density (1 g/cm^3)
ρ_s = stack gas density (g/cm^3)
T_m = stack temperature (^oF)
T_s = stack temperature (^oF)
T_{std} = absolute temperature at standard conditions (528^oR)
Tt = Duration of test run in minutes. Also see θ
u_m = mean molecular speed (cm/s)
Vm = sample volume (ft^3) at meter conditions
Vm_{std} = volume standard (dscf), sample volume adjusted to 68^oF and 29.92 inches Hg.
V_s = velocity of stack gas (fpm)
V_w = volume water vapor (scf) at 68^oF and 29.92 inches Hg.
Wt_{wc} = weight of the condensed water collected (grams)
X_d = fraction of dry gas
Y = meter calibration Y-factor (dimensionless)
ψ = dimensionless inertial impaction parameter, 0.14

General Sample Equations

$$\%I = Vm_{std} \cdot (T_s + 460) \cdot 1039 / (\theta \cdot V_s \cdot P_s \cdot X_d \cdot D_n^2)$$

$$A_s = (D_s^2 / 4) \cdot \pi$$

$$B_{ws} = V_w / (Vm_{std} + V_w)$$

$$C_B = M_B \cdot 0.01543 / Vm_{std}$$

$$C_{cond} = M_{cond} \cdot 0.01543 / Vm_{std}$$

$$C_{cors} = M_{cors} \cdot 0.01543 / Vm_{std}$$

$$C_{fa} = T_{std} \cdot C_{fp} \cdot P_s \cdot X_d / [P_{std} \cdot (T_m + 460)]$$

$$C_f = M_{fp} \cdot 0.01543 / Vm_{std}$$

$$C_{PM10} = M_{PM10} \cdot 0.01543 / Vm_{std}$$

$$C_{rad} = Curies/Vm_{std}$$

$$C_{gas\ (corr)} = C_{gas} \cdot (20.9 - \text{desired } \%O_2) / (20.9 - \text{actual } \%O_2)$$

$$_{casc}\ Dp_{50} = \sqrt{[\mu s \cdot \psi \cdot N \cdot \pi \cdot D_c^3 \cdot 18 / (K_c \cdot \rho_p \cdot Q_{sce} \cdot 4)]}$$

$$_{PM_{10}}\ Dp_{50} = 0.15625 \cdot [(T_s + 460) / (M_s \cdot P_s)]^{0.2091} \cdot (\mu_s / Q_{sc})^{0.7091}$$

$$ER_{cond} = C_{cond} \cdot Q_s \cdot 0.00857$$

$$ER_{cors} = C_{cors} \cdot Q_s \cdot 0.00857$$

$$ER_F = C_f \cdot Q_s \cdot 0.00857$$

$$ER_{gas} = P_{std} \cdot Q_s \cdot M_{wgas} \cdot C_{gas} \cdot 60 / (R \cdot T_{std} \cdot 10^6)$$

$$ER_{gas} = C_{gas(lb/dscf)} \cdot Qs \cdot 60$$

(Either ER_{gas} equation gives equivalent lb/hr values to 3 sig. figures)

$$ER_{mmBtu} = C_{gas(lb/dscf)} \cdot F_d \cdot (20.9/(20.9 - \%O_2)$$, Method 19 Equation 19-1

$$ER_{PM10} = C_{PM10} \cdot Q_s \cdot 0.00857$$

$$ER_{rad} = C_{rad} \cdot Qs \cdot 60$$

$$K_c = 1 + 2 \cdot \lambda \cdot 1.257 / Dp_{50}$$

$$\lambda = \mu_s / (0.499 \cdot \rho_s \cdot u_m)$$

$$M_d = CO_2 \cdot 0.44 + O_2 \cdot 0.32 + N_2 \cdot 0.28$$

$$M_s = (M_d \cdot X_d) + (18 \cdot B_{ws})$$

$$\mu_s = [51.05 + 0.207 \cdot (T_s + 460) + 3.24 \cdot 10^{-5} \cdot (T_s + 460)_2 + 0.53147 \cdot \%O_2 - 74.143 \cdot B_{ws}] \cdot 10^{-6}$$

$$P_s = Pb_p + (P_G / 13.6)$$

$$\theta_1 = (\sqrt{\Delta P_1'} / \sqrt{\Delta P'_{ave}}) \cdot (\theta_{test} / pts)$$

$$\theta_n = \theta_1 \cdot \sqrt{\Delta P_n} / \sqrt{\Delta P_1}$$

$$Q_a = V_s \cdot A_s$$

$$Q_s = Qa \cdot Xd \cdot Ps \cdot T_{std} / [(Ts + 460) \cdot P_{std}]$$

$$Q_{sc} = [(T_s + 460) \cdot P_{std} / (T_{std} \cdot P_s)] \cdot [(Vm_{std} + V_w) / \theta]$$

$$Q_{sce} = [(T_s + 460) \cdot P_{std} / (T_{std} \cdot P_s)] \cdot [(Vm_{std} + V_w) / \theta]$$

$$Q_W = Q_s / X_d$$

$$\rho_s = P_s \cdot M_s \cdot 3386.39 \cdot 10^{-6} / [R \cdot (T_s + 460) / 1.8]$$

$$u_m = 100 \cdot \sqrt{\{[R \cdot (T_s + 460) / 1.8 \cdot 8 \cdot 10^3] / [\pi \cdot M_s]\}}$$

$$Vm_{std} = Vm \cdot Y \cdot T_{std} \cdot (Pb_m + \Delta H / 13.6) / [P_{std} \cdot (T_m + 460)]$$

$$V_s = 85.49 \cdot 60 \cdot Cp \cdot \sqrt{\Delta P} \cdot \sqrt{[(T_s + 460) / (P_s \cdot M_s)]}$$

$$V_w = Wt_{wc} \cdot 0.04715$$

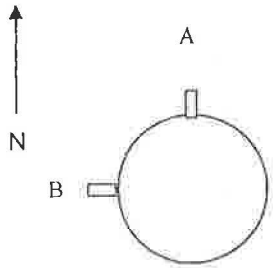
$$X_d = 1 - B_{ws}$$

APPENDIX B

South Yellow Cake Scrubber
- Preliminary Velocity Traverse and Sampling Point Location Data
- Particulate Field Data

Yellow Cake Dryer Baghouse
- Preliminary Velocity Traverse and Sampling Point Location Data
- Particulate Field Data

South Yellow Cake Dryer Scrubber



Stack Dia 12.75 Reference 0

Ports are 7' Upstream from next disturbance

Ports are 30' Downstream from last disturbance

Facility Energy Fuels

Stack Identification South Yellow Cake Dryer Scrubber

Date _____

Barometric Pressure

Pb_m _____ in Hg Pb_p _____ in Hg

Static Pressure (P_G) _____ in H_2O

Estimated Moisture (Bw_s) 4-6% %

Sample Height from Ground 70 feet

Comments: _____

Traverse Point	Percent Diameter	Distance From: ID	Distance From: Reference	Ports A	B	C	D	E	F
1	6.7	0.85	0.85						
2	25.0	3.19	3.19						
3	75.0	9.56	9.56						
4	93.3	11.90	11.90						

Averages:

T_S _____ ∠ Flow _____

ΔP _____ √ΔP _____

KEY => T_S ∠ Flow ΔP

M5 Field Data Sheet

Filter 6211 TETCO Sample Box H/A

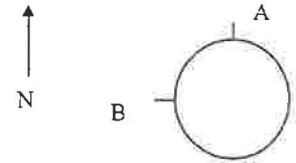
Page 1 of 1 Run # 1

Plant: Energy Fuels

Date: 7/24/14

Location: South Yellow Cake Dryer Scrubber

Operator: [illegible]



Stack Diameter 12.75" Port Reference 0"

Ports are 7' Upstream from next disturbance

Ports are 30' Downstream from last disturbance

Traverse Point	Time Clock	Time Min (θ)	DGM (ft³)	ΔP (in H₂O)	ΔH (in H₂O) Desired	ΔH (in H₂O) Actual	Vacuum (in Hg)	Temperatures (°F) Stack (T_s)	Probe	Probe out	Oven	Effluent	DGM Temp (T_m) Out	In
1	7:58	0	530.104	[illegible]	1.41	1.41	2	121	236	250	251	63	77	77
1		20	545.001	.23	1.47	1.47	2	121	230	240	241	52	81	85
1		40	560.385	.23	1.47	1.47	2	123	237	238	240	53	86	89
2		60	575.815	.25	1.61	1.61	3	123	260	235	245	53	87	90
2		80	591.842	.24	1.55	1.55	3	124	258	235	260	53	88	91
2		100	607.382	.23	1.25	1.25	3	123	248	252	252	53	88	90
3		120	621.734	.24	1.31	1.31	3	124	238	245	245	54	88	89
3		140	636.050	.26	1.43	1.43	3	125	257	245	250	57	88	90
3		160	650.843	.26	1.43	1.43	3	125	240	254	250	59	89	89
4		180	665.852	.25	1.37	1.37	4	126	235	250	254	61	87	89
4		200	680.529	.24	1.14	1.14	4	126	256	231	246	60	87	89
4		220	694.349	.26	1.24	1.24	4	127	249	255	255	63	87	89
1	12:04	240	708.468	.26	1.24	1.24	4	127	250	235	260	63	85	85
1		260	722.687	.23	1.09	1.09	4	126	251	245	247	47	86	88
1		280	736.133	.23	1.09	1.09	4	126	255	247	255	49	87	89
2		300	749.128	.22	1.04	1.04	4	126	260	240	257	50	87	89
2		320	762.011	.24	1.13	1.13	4	125	265	240	245	58	88	90
2		340	775.261	.24	1.13	1.13	5	126	261	255	260	57	89	90
3		360	788.700	.25	1.18	1.18	5	126	258	245	255	50	91	91
3		380	802.474	.23	1.09	1.09	5	124	241	237	236	52	90	91
3		400	815.875	.24	1.13	1.13	5	124	251	245	251	52	89	90
4		420	829.257	.25	1.18	1.18	5	121	243	239	248	52	89	90
4		440	842.851	.25	1.18	1.18	5	124	257	246	255	53	89	90
4		460	856.445	.25	1.18	1.18	5	123	235	240	240	55	88	90
	16:04	480	869.996											
Total			339.892	11.7872		30.34		2988					4221	
Average				.4911		1.264		124.5					87.9	

Assumed Moisture 4-6 %

Probe 186 Cp 0.84

Nozzle Calibration .281 .281 .281 .281

Avg D_n .281 inches

Gas Bag 1-07

Console 3

Y-Factor 1.002

$\Delta H_@$ 1.655 in H_2O

Barometric Pressures

Pb_m 24.65 in Hg

Pb_p 24.58 in Hg

P_g (.28.D) in H_2O

Leak Check:	Pre	Post
ft³/min	0.008	0.005
vac in Hg	23	12
Pitot Rate	0.0	0.0
In H_2O	9.5	9.5

Water Collected 367.5 g

Time Sampled 480 min

Review [illegible]

K = @T_{in}

K = @T_m

Additional (Extra) Leak Check Information

	DGM before Leak Check	Vac ("Hg)	Rate (ft³/min)	DGM After Leak Check	Vac ("Hg)	Rate (ft³/min)

M5 Field Data Sheet

Filter 6227 TETCO Sample Box H/4

Page 1 of 1 Run # 2

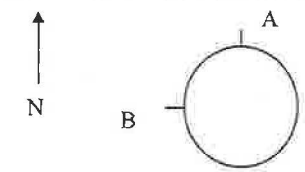
Plant: Energy Fuels

Date: 7/30/31

Location: South Yellow Cake Dryer Scrubber

Operator:

Traverse Point	Time Clock	Time Min (θ)	DGM (ft³)	ΔP (in H₂O)	ΔH (in H₂O) Desired	ΔH (in H₂O) Actual	Vacuum (in Hg)	Temperatures (°F) Stack (T_s)	Probe	Probe out	Oven	Effluent	DGM Temp (T_m) Out	In
1	7:39	0	870.804	.24	1.09	1.09	2	117	238	242	242	62	75	75
1		20	884.121	.24	1.09	1.09	2	119	265	248	248	53	78	80
1		40	898.262	.23	1.07	1.07	2	121	266	245	241	50	82	86
2		60	912.275	.25	1.17	1.17	2	120	267	240	245	52	86	87
2		80	926.312	.25	1.17	1.17	2	121	268	240	237	53	88	91
2		100	939.939	.23	1.07	1.07	2	121	265	255	257	57	89	90
3		120	953.612	.24	1.12	1.12	2	122	257	245	245	55	89	90
3		140	967.385	.24	1.12	1.12	2	122	249	240	242	57	88	90
3		160	980.967	.25	1.17	1.17	2	124	249	249	245	59	88	90
4		180	994.988	.25	1.17	1.17	3	125	246	255	256	61	88	90
4		200	1009.153	.23	1.08	1.08	3	124	241	249	245	61	88	90
4		220	1023.351	.23	1.08	1.08	3	124	261	255	254	62	87	89
1	11:42	240	1037.039	.26	1.23	1.23	3	125	263	263	264	64	87	87
1		260	1051.417	.29	1.37	1.37	3	126	235	243	245	52	87	87
1066.376 1		280	~~1068.876~~	.29	1.37	1.37	3	127	267	249	248	51	87	90
2		300	1081.335	.28	1.32	1.32	4	127	267	255	254	53	88	91
2		320	1096.138	.28	1.32	1.32	4	127	268	250	258	55	89	91
2		340	1110.821	.27	1.27	1.27	4	126	265	250	253	55	89	91
3		360	1125.515	.27	1.27	1.27	4	124	260	249	243	58	89	91
3		380	1140.045	.28	1.32	1.32	4	128	265	255	255	60	89	91
3		400	1154.697	.27	1.27	1.27	4	129	265	258	261	61	89	91
4		420	1169.202	.26	1.22	1.22	4	129	256	259	262	63	89	91
4		440	1183.000	.26	1.22	1.22	4	129	255	258	261	63	89	91
4		460	1196.966	.27	1.27	1.27	4	128	250	250	250	65	89	91
	15:42	480	1211.844											
Total			341.040	12.1506		28.85		2987					4222	
Average				5063		1.202		124.5					88.0	



Stack Diameter 12.75" Port Reference 0"

Ports are 7' Upstream from next disturbance

Ports are 30' Downstream from last disturbance

Assumed Moisture 4-6 %

Probe 1B6 Cp 0.84

Nozzle Calibration .281 .281 .281 .281

Avg D_n .281 inches

Gas Bag C-07

Console 3

Y-Factor 1.002

$\Delta H_@$ 1.655 in H_2O

Barometric Pressures

Pb_m 24.55 in Hg

Pb_p 24.48 in Hg

P_G -0.28 in H_2O

Leak Check:	Pre	Post
ft³/min	0.008	0.006
vac in Hg	23	13

Pitot Rate	0.0	0.0
In H_2O	9.5	9.5

Water Collected 294.6 g

Time Sampled 480 min

Review

K = @T_m

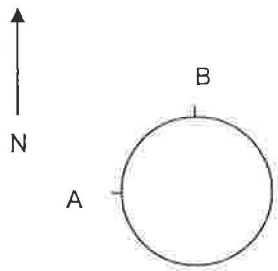
K = @T_m

Additional (Extra) Leak Check Information

	DGM before Leak Check	Vac ("Hg)	Rate (ft³/min)	DGM After Leak Check	Vac ("Hg)	Rate (ft³/min)

Yellow Cake Dryer Baghouse

Prelim 6 pts blank



Stack Dia 16 Reference: 0

Ports are 57" Upstream from next disturbance

Ports are 468" Downstream from last disturbance

Facility Denison Mines

Stack Identification North Yellow Cake Dryer Baghouse

Date 7/29/14

Barometric Pressure

Pb_m 24.65 in Hg Pb_p 24.58 in Hg

Static Pressure (P_G) -.55 in H_2O

Estimated Moisture (Bw_s) 1 %

Sample Height from Ground _____ feet

Comments:

Traverse Point	Percent Diameter	Distance From: ID	Distance From: Reference	Ports A	Ports B	Ports C	Ports D	Ports E	Ports F
1	4.4	0.70	0.70	113 .65	111 .50				
2	14.6	2.34	2.34	113 .65	111 .51				
3	29.6	4.74	4.74	113 .66	111 .74				
4	70.4	11.26	11.26	113 .77	112 .76				
5	85.4	13.66	13.66	114 .63	112 .75				
6	95.6	15.30	15.30	114 .65	112 .74				

Averages:

T_s _____ ∠ Flow _____

ΔP _____ √ΔP _____

KEY => T_s ∠ Flow ΔP

_____ Field Data Sheet

Filter ~~6225~~ 6212 TETCO Sample Box B

Page 1 of 1 Run # 1

Plant: Denison Mines

Date: 7/29/14

Location: Yellowcake Dryer Baghouse

Operator: M. McNamee/

N

B

A

Stack Diameter 16" Port Reference 0.0"

Ports are 57" Upstream from next disturbance

Ports are 468" Downstream from last disturbance

	Traverse Point	Time Clock	Time Min (θ)	DGM (ft³)	ΔP (in H₂O)	ΔH (in H₂O) Desired	ΔH (in H₂O) Actual	Vacuum (in Hg)	Temperatures (°F) Stack (T_s)	Probe	Probe Out	Filter	Effluent	DGM Temp (T_m) Out	In
B	1	12:04	0	850.238	.50	1.15	1.15	4	111	263	229	229	67	69	68
	2		10	857.000	.51	1.17	1.17	4	111	243	233	233	57	73	68
	3		20	863.855	.74	1.70	1.70	5	111	255	245	245	46	79	68
	4		30	872.235	.76	1.74	1.74	5	112	252	245	245	46	84	69
	5		40	880.850	.75	1.72	1.72	5	112	237	230	230	46	86	71
	6		50	889.250	.74	1.70	1.70	5	112	245	240	240	47	87	72
A	1	13:06	60	897.595	.65	1.49	1.49	4	113	261	252	252	54	83	73
	2		70	905.140	.65	1.49	1.49	4	113	265	252	252	51	86	73
	3		80	913.215	.66	1.52	1.52	4	113	266	248	248	52	88	74
	4		90	921.125	.77	1.77	1.77	5	113	259	249	249	53	89	74
	5		100	929.550	.63	1.45	1.45	4	114	255	253	253	52	90	75
	6		110	937.240	.65	1.49	1.49	4	114	264	264	251	53	90	75
		14:06	120	944.972											
Total				94.689	9.7818	18.390			1349					1864	
Average					.8152	1.533			112.4					77.7	

Assumed Moisture 1 %

Probe 276 Cp 0.84

Nozzle Calibration

.224 .224 .225 .225

Avg D_n .2245 inches

Gas Bag Ambient Air

Console 9

Y-Factor 1.002

$\Delta H_@$ 1.652 in H_2O

Barometric Pressures

Pb_m 24.65 in Hg

Pb_p 24.58 in Hg

P_g -.55 in H_2O

Leak Check:	Pre	Post
ft³/min	0.012	0.002
vac in Hg	22.0	9.0
Pitot Rate	0.0	0.0
In H_2O	8.0	7.0

Water Collected 33.1 g

Time Sampled 120 min

Review

K = @T_m

K = @T_m

Comments:

Time	Baghouse ΔP
12:06	4.5
12:21	4.5
12:36	4.5
12:51	4.5

Time	Baghouse ΔP
13:07	~~4.5~~ 4.5
13:22	4.5
13:37	4.5
13:52	4.5

7 Bags

_____ Field Data Sheet

Filter 6226 TETCO Sample Box B

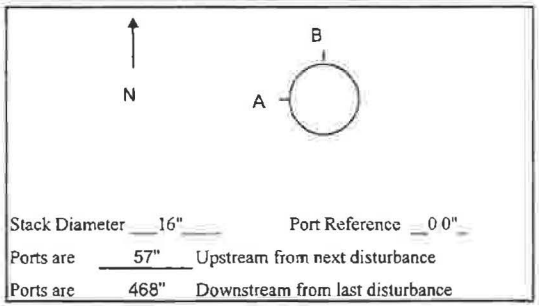
Page 1 of 1 Run # 2

Plant: Denison Mines

Date: 7/30/14

Location: Yellowcake Dryer Baghouse

Operator: M. McLamalia



Stack Diameter 16" Port Reference 0 0"

Ports are 57" Upstream from next disturbance

Ports are 468" Downstream from last disturbance

	Traverse Point	Time Clock	Time Min (θ)	DGM (ft³)	ΔP (in H₂O)	ΔH (in H₂O) Desired	ΔH (in H₂O) Actual	Vacuum (in Hg)	Temperatures (°F) Stack (T_s)	Probe	Probe Out	Filter	Effluent	DGM Temp (T_m) Out	In
A	1	7:41	0	945.837	.61	1.40	1.40	3	99	244	226	226	66	72	72
	2		10	953.130	.61	1.42	1.42	3	100	260	252	252	56	75	72
	3		20	960.810	.60	1.40	1.40	2	101	270	262	262	52	80	71
	4		30	968.150	.61	1.42	1.42	4	101	269	270	270	51	84	71
	5		40	975.710	.60	1.40	1.40	4	101	270	256	256	52	86	72
	6		50	983.120	.60	1.40	1.40	4	101	270	255	255	51	87	72
B	1	8:44	60	990.565	.83	1.94	1.94	5	105	267	255	255	55	82	73
	2		70	999.280	.84	1.95	1.95	5	105	258	251	251	53	86	74
	3		80	1008.035	.83	1.94	1.94	5	106	253	248	248	55	88	74
	4		90	1016.870	.83	1.94	1.94	5	107	243	247	247	58	90	75
	5		100	1025.550	.83	1.94	1.94	5	107	254	251	251	59	90	75
	6		110	1034.300	.82	1.90	1.90	5	107	232	245	245	58	90	75
		9:44	120	1042.993											
Total				97.156	10.1331		20.050		1240					1886	
Average					.8444		1.670		103.3					78.6	

Assumed Moisture 1 %

Probe 276 Cp 0.84

Nozzle Calibration

.224 .224 .225 .225

Avg D_n .22475 inches

Gas Bag Ambient Air

Console 9

Y-Factor 1.002

$\Delta H_@$ 1.672 in H_2O

Barometric Pressures

Pb_m 24.55 in Hg

Pb_p 24.48 in Hg

P_G -.55 in H_2O

Leak Check	Pre	Post
ft³/min	0.003	0.002
vac in Hg	22.0	8.0
Pitot Rate	0.0	0.0
In H_2O	7.0	8.0

Water Collected 27.2 g

Time Sampled 120 min

Review [illegible]

K = @T_m

K = @T_m

Comments:

Time	Baghouse ΔP	Time	Baghouse ΔP
7:43	4.0	8:50	4.5
7:59	4.2	9:07	4.5
8:16	4.2	9:25	4.5
8:35	4.2	9:42	4.5

APPENDIX C

South Yellow Cake Scrubber
- Sample Recovery
- Gas Analysis Data (ORSAT)

Yellow Cake Dryer Baghouse
- Sample Recovery
- Gas Analysis Data (Ambient)

Chain of Custody

Lab Analysis

South Yellow Cake Dryer Scrubber

METHOD 5

Facility: Energy Fuels

Date: 7/29/14

Stack Identification: SYC Scrubber

IMPINGERS

Run: 1

Sample Box: A/J

6211

Heavy Dust on filter green/gray in color

	Impinger Number 1	2	3	4	5	6
Initial Volume of liquid (H_2O) in impingers, (ml)	drop out	100	drop out	100	—	Silica Gel
Final (g)	665.8	743.8	578.2	609.5	525.0	1015.8
Initial (g)	498.0	620.1	560.5	607.4	521.0	963.6
Net (g)	167.8	123.7	17.7	2.2	4.0	52.2

Total (g) 367.5

IMPINGERS

Run: _____

Sample Box: A/J

	Impinger Number 1	2	3	4	5	6
Initial Volume of liquid (H_2O) in impingers, (ml)	drop out	100	drop out	100	—	Silica Gel
Final (g)	639.7	685.4	577.8	610.0	526.9	989.9
Initial (g)	502.1	598.6	565.2	609.4	524.8	937.3
Net (g)	137.6	86.8	12.6	~~2.1~~ 0.6	2.1	52.6

Total (g) 294.4

IMPINGERS

Run: _____

Sample Box: _____

	Impinger Number 1	2	3	4	5	6
Initial Volume of liquid (H_2O) in impingers, (ml)	drop out	100	drop out	100	—	Silica Gel
Final (g)						
Initial (g)						
Net (g)						

Total (g) _____

IMPINGERS

Run: _____

Sample Box: _____

	Impinger Number 1	2	3	4	5	6
Initial Volume of liquid (H_2O) in impingers, (ml)	drop out	100	drop out	100	—	Silica Gel
Final (g)						
Initial (g)						
Net (g)						

Total (g) _____

Plant Enemy Fuels

Analytical Method ORSAT

Location SYC

Date 7/29/14

Test No. 1

Gas Bag No. C-07

Ambient Temp 95

Operator [illegible]

Gas	RUN 1 Actual Reading	RUN 1 Net	RUN 2 Actual Reading	RUN 2 Net	RUN 3 Actual Reading	RUN 3 Net	Average Net Volume
CO_2	2.0	2.0	2.0	2.0	2.0	2.0	2.0
O_2 (Net is Actual O_2 Reading Minus Actual CO_2 Reading).	18.9	16.9	18.9	16.9	18.9	16.9	16.9
N_2 (Net is 100 Minus Actual O_2 Reading).							

Date 7/30/14

Test No. 2

Gas Bag No. C-07

Ambient Temp 75

Operator [illegible]

Gas	RUN 1 Actual Reading	RUN 1 Net	RUN 2 Actual Reading	RUN 2 Net	RUN 3 Actual Reading	RUN 3 Net	Average Net Volume
CO_2	1.8	1.8	1.8	1.8	1.8	1.8	1.8
O_2 (Net is Actual O_2 Reading Minus Actual CO_2 Reading).	18.6	16.8	18.6	16.8	18.6	16.8	16.8
N_2 (Net is 100 Minus Actual O_2 Reading).							

Date

Test No.

Gas Bag No.

Ambient Temp

Operator

Gas	RUN 1 Actual Reading	RUN 1 Net	RUN 2 Actual Reading	RUN 2 Net	RUN 3 Actual Reading	RUN 3 Net	Average Net Volume
CO_2							
O_2 (Net is Actual O_2 Reading Minus Actual CO_2 Reading).							
N_2 (Net is 100 Minus Actual O_2 Reading).							

CO is not measured, as it has the same molecular weight as N_2

Yellow Cake Dryer Baghouse

Method 5

Facility: Energy Fuels

Stack Identification: Yellow Cake Baghouse

Date: 7/29/14

Method: 5

IMPINGERS

Run: 1

Sample Box: B

Filter Number: ~~6225~~ 6212

Slight Bullseye. Grey in color

	Impinger Number 1	2	3	4	5	6
Initial Volume of liquid (H_2O) in impingers, (ml)	100	100	-	SG		
Final (g)	647.3	688.9	613.0	963.3		
Initial (g)	640.3	683.2	610.2	945.7		
Net (g)	7.0	5.7	2.8	17.0		

Total (g) 33.1

Initials

IMPINGERS

Run: 2

Sample Box: B

Filter Number: 6226

Very Light Bullsete of Filter Light gray in color

Have to look Real hard To see.

	Impinger Number 1	2	3	4	5	6
Initial Volume of liquid (H_2O) in impingers, (ml)	100	100	-	SG		
Final (g)	647.6	697.0	614.8	968.5		
Initial (g)	647.3	688.9	613.0	951.5		
Net (g)	0.3	8.1	1.8	17.0		

Total (g) 27.2

Initials

IMPINGERS

Run: _____

Sample Box: _____

Filter Number:

	Impinger Number 1	2	3	4	5	6
Initial Volume of liquid (H_2O) in impingers, (ml)	100	100	-	SG		
Final (g)						
Initial (g)						
Net (g)						

Total (g) _____

Initials

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client	Project Manager	Date	Chain of Custody Number
Tetco	Dean Kitchen	7/31/2014	
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 **of** 1
391 East 620 South	801-492-9106		

City	State	Zip Code	Site Contact	Lab Contact
American Fork	Ut	84003	Scott Christensen, Garren Palmer	

Project Name and Location (State)	Carrier/Waybill Number
Energy Fuels 2014 3rd Quarter	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): U-Nat	TH-230	Ra-226	Lead-210									Special Instructions/ Conditions of Receipt
R1 SYC Scrubber filter (6211) & beaker	7/29/14	8:00	X												X												
R2 SYC Scrubber filter (6227) & beaker	7/30/14	8:00	X												X												
R1 Dryer BH filter (6212) and beaker	7/29/14	10:00	X												X												
R1 Dryer BH filter (6226) and beaker	7/30/14	8:00	X												X												

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other as per method

QC Requirements (Specify)

Relinquished By	Date	Time	Received By	Date	Time
1. [signature]	7/31/14	12	1.		
2.			2.		
3.			3.		

Comments

When Complete Email to: Dean or Paul tetco@tetco-ut.com

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Analytical Data Package Prepared For

Denison Mines (USA) Corp.

Radiochemical Analysis By

TestAmerica Inc

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Assigned Laboratory Code:

Data Package Contains 15 *Pages*

Report No.: 61982

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
48564		R1 DRYER BH-FILTER(6212) AND B	J4H060419-3	M4J841AD	9M4J8410	4219057
		R1 DRYER BH-FILTER(6226) AND B	J4H060419-4	M4J851AD	9M4J8510	4219057
		R1 SYC SCRUBBER FILTER(6211)&	J4H060419-1	M4J821AD	9M4J8210	4219057
		R2 SYC SCRUBBER FILTER(6227)&	J4H060419-2	M4J831AD	9M4J8310	4219057

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Certificate of Analysis

August 27, 2014

Denison Mines (USA) Corp
1050 17th Street, Suite 950
Denver, CO 80265

Attention: Dean Kitchen

Date Received at Lab	:	August 5, 2014
Project Name	:	Energy Fuels 2014 3rd Quarter
Sample Type	:	Four (4) Stack Filter Samples
SDG Number	:	48564

CASE NARRATIVE

I. Introduction

On August 5, 2014, four stack filter samples were received at TestAmerica's Richland laboratory for radiochemical analysis. Upon receipt, the samples were assigned the TestAmerica identification numbers as described on the cover page of the Analytical Data Package report form. The samples were assigned to Lot Numbers J4H060419.

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information; analytical results and the appropriate associated statistical uncertainties.

The analysis requested was:

Alpha Spectroscopy
Uranium-234, -235, -238 by method RL-ALP-004

IV. Quality Control

The analytical result for each analysis performed includes a minimum of one laboratory control sample (LCS), and one reagent blank sample analysis. Any exceptions have been noted in the "Comments" section.

V. Comments

Alpha Spectroscopy

Uranium-234, 235, 238
The achieved MDA of the batch exceeds the detection limit due to the reduced aliquot sizes taken due to historical process knowledge. Data is accepted. Except as noted; the LCS, batch blank and sample results are within acceptance limits.

I certify that this Certificate of Analysis is in compliance with the SOW and/or NELAC, both technically and for completeness, for other than the conditions detailed above. The Laboratory Manager or a designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Reviewed and approved:

Robin Ebert Mays
Robin Ebert-Mays
Project Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**TestAmerica Richland's SOP No.**
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/?n), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Report Definitions

Action Lev	An agreed upon activity level used to trigger some action when the final result is greater than or equal to the Action Level. Often the Action Level is related to the Decision Limit.
Batch	The QC preparation batch number that relates laboratory samples to QC samples that were prepared and analyzed together.
Bias	Defined by the equation (Result/Expected)-1 as defined by ANSI N13.30.
COC No	Chain of Custody Number assigned by the Client or TestAmerica.
Count Error (#s)	Poisson counting statistics of the gross sample count and background. The uncertainty is absolute and in the same units as the result. For Liquid Scintillation Counting (LSC) the batch blank count is the background.
Total Uncert (#s) ***u_c - Combined Uncertainty.***	All known uncertainties associated with the preparation and analysis of the sample are propagated to give a measure of the uncertainty associated with the result, *u_c the combined uncertainty*. The uncertainty is absolute and in the same units as the result.
(#s), Coverage Factor	The coverage factor defines the width of the confidence interval, 1, 2 or 3 standard deviations.
CRDL (RL)	Contractual Required Detection Limit as defined in the Client's Statement Of Work or TestAmerica "default" nominal detection limit. Often referred to the reporting level (RL)
Lc	Decision Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume associated with the sample. The Type I error probability is approximately 5%. Lc=(1.645 * Sqrt(2*(BkgrndCnt/BkgrndCntMin)/SCntMin)) * (ConvFct/(Eff*Yld*Abn*Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability. Lc cannot be calculated when the background count is zero.
Lot-Sample No	The number assigned by the LIMS software to track samples received on the same day for a given client. The sample number is a sequential number assigned to each sample in the Lot.
MDC|MDA	Detection Level based on instrument background or blank, adjusted by the Efficiency, Chemical Yield, and Volume with a Type I and II error probability of approximately 5%. MDC = (4.65 * Sqrt((BkgrndCnt/BkgrndCntMin)/SCntMin) + 2.71/SCntMin) * (ConvFct/(Eff * Yld * Abn * Vol) * IngrFct). For LSC methods the batch blank is used as a measure of the background variability.
Primary Detector	The instrument identifier associated with the analysis of the sample aliquot.
Ratio U-234/U-238	The U-234 result divided by the U-238 result. The U-234/U-238 ratio for natural uranium in NIST SRM 4321C is 1.038.
Rst/MDC	Ratio of the Result to the MDC. A value greater than 1 may indicate activity above background at a high level of confidence. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Rst/TotUcert	Ratio of the Result to the Total Uncertainty. If the uncertainty has a coverage factor of 2 a value greater than 1 may indicate activity above background at approximately the 95% level of confidence assuming a two-sided confidence interval. Caution should be used when applying this factor and it should be used in concert with the qualifiers associated with the result.
Report DB No	Sample Identifier used by the report system. The number is based upon the first five digits of the **Work Order** Number.
RER	The equation Replicate Error Ratio = (S-D)/[sqrt($TPUs^2$ + $TPUd^2$)] as defined by ICPT BOA where S is the original sample result, D is the result of the duplicate, TPUs is the total uncertainty of the original sample and TPUd is the total uncertainty of the duplicate sample.
SDG	Sample Delivery Group Number assigned by the Client or assigned by TestAmerica upon sample receipt.
Sum Rpt Alpha Spec Rst(s)	The sum of the reported alpha spec results for tests derived from the same sample excluding duplicate result where the results are in the same units.
Work Order	The LIMS software assign test specific identifier.
Yield	The recovery of the tracer added to the sample such as Pu-242 used to trace a Pu-239/40 method.

Sample Results Summary

TestAmerica Inc

Ordered by Method, Batch No., Client Sample ID.

Date: 27-Aug-14

Report No. : 61982

SDG No: 48564

Batch	Client Id Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	MDL	CRDL	RER2
4219057 FFSR									
R1 DRYER BH-FILTER(6212) AND B									
	M4J841AD	U-234	5.92E-04 +- 1.7E-04		uCi/Sample	78%	4.87E-05	9.00E-15	
		U-235	4.17E-05 +- 3.9E-05		uCi/Sample	78%	3.94E-05	9.00E-15	
		U-238	7.50E-04 +- 2.0E-04		uCi/Sample	78%	3.47E-05	9.00E-15	
R1 DRYER BH-FILTER(6226) AND B									
	M4J851AD	U-234	4.55E-04 +- 1.4E-04		uCi/Sample	82%	5.39E-05	9.00E-15	
		U-235	2.02E-05 +- 2.5E-05	U	uCi/Sample	82%	3.46E-05	9.00E-15	
		U-238	3.49E-04 +- 1.2E-04		uCi/Sample	82%	4.73E-05	9.00E-15	
R1 SYC SCRUBBER FILTER(6211)&									
	M4J821AD	U-234	4.43E-03 +- 7.7E-04		uCi/Sample	89%	2.64E-05	9.00E-15	
		U-235	1.26E-04 +- 5.8E-05		uCi/Sample	89%	2.64E-05	9.00E-15	
		U-238	4.04E-03 +- 7.1E-04		uCi/Sample	89%	3.26E-05	9.00E-15	
R2 SYC SCRUBBER FILTER(6227)&									
	M4J831AD	U-234	4.04E-03 +- 8.4E-04		uCi/Sample	43%	9.29E-05	9.00E-15	
		U-235	1.58E-04 +- 9.4E-05		uCi/Sample	43%	6.66E-05	9.00E-15	
		U-238	2.78E-03 +- 6.1E-04		uCi/Sample	43%	7.05E-05	9.00E-15	

No. of Results: 12

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

QC Results Summary

Date: 27-Aug-14

TestAmerica Inc

Ordered by Method, Batch No, QC Type,.

Report No. : 61982 **SDG No.:** 48564

Batch Work Order	Parameter	Result +- Uncertainty (2s)	Qual	Units	Tracer Yield	LCS Recovery	Bias	MDL
FFSR								
4219057 BLANK QC,								
M4KVM1AA	U-234	7.31E-08 +- 4.9E-08		uCi/Sample	76%			3.73E-08
	U-235	0.00E+00 +- 1.5E-08	U	uCi/Sample	76%			2.03E-08
	U-238	2.93E-08 +- 3.0E-08	U	uCi/Sample	76%			3.01E-08
4219057 LCS,								
M4KVM1AC	U-234	1.06E-06 +- 2.6E-07		uCi/Sample	69%	114%	0.1	4.45E-08
	U-238	1.06E-06 +- 2.6E-07		uCi/Sample	69%	109%	0.1	4.77E-08

No. of Results: 5

TestAmerica Inc

rptSTLRchQcSummary V5.3.3 A2002

Bias - (Result/Expected)-1 as defined by ANSI N13.30.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 27-Aug-14

Lab Name:	TestAmerica Inc	**SDG:**	48564	**Collection Date:**	7/29/2014 10:00:00 AM
Lot-Sample No.:	J4H060419-3	**Report No. :**	61982	**Received Date:**	8/5/2014 10:45:00 AM
Client Sample ID:	R1 DRYER BH-FILTER(6212) AND B	**COC No. :**		**Matrix:**	OTHER SOLI

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4219057	FFSR			**Work Order:**	M4J841AD		**Report DB ID:**	9M4J8410				
U-234	**5.92E-04**		1.4E-04	1.7E-04	4.87E-05	uCi/Sample	78%	*(12.1)*	8/20/14 06:26 p	1.0	0.00097	ALP215
						1.28E-05	9.00E-15	*(6.9)*		Sample	Sample	
U-235	**4.17E-05**		3.9E-05	3.9E-05	3.94E-05	uCi/Sample	78%	*(1.1)*	8/20/14 06:26 p	1.0	0.00097	ALP215
						9.59E-06	9.00E-15	*(2.1)*		Sample	Sample	
U-238	**7.50E-04**		1.6E-04	2.0E-04	3.47E-05	uCi/Sample	78%	*(21.6)*	8/20/14 06:26 p	1.0	0.00097	ALP215
						8.06E-06	9.00E-15	*(7.5)*		Sample	Sample	

Ratio U-234/238 = 0.8

No. of Results: 3 **Comments:**

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 27-Aug-14

Lab Name:	TestAmerica Inc	**SDG:**	48564	**Collection Date:**	7/30/2014 8:00:00 AM
Lot-Sample No.:	J4H060419-4	**Report No. :**	61982	**Received Date:**	8/5/2014 10:45:00 AM
Client Sample ID:	R1 DRYER BH-FILTER(6226) AND B	**COC No. :**		**Matrix:**	OTHER SOLI

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4219057	FFSR			**Work Order:**	M4J851AD		**Report DB ID:**	9M4J8510				
U-234	**4.55E-04**		1.2E-04	1.4E-04	5.39E-05	uCi/Sample	82%	*(8.4)*	8/20/14 06:27 p	1.0	0.00113	ALP216
						1.54E-05	9.00E-15	*(6.7)*		Sample	Sample	
U-235	**2.02E-05**	U	2.5E-05	2.5E-05	3.46E-05	uCi/Sample	82%	*0.58*	8/20/14 06:27 p	1.0	0.00113	ALP216
						8.58E-06	9.00E-15	*(1.6)*		Sample	Sample	
U-238	**3.49E-04**		1.0E-04	1.2E-04	4.73E-05	uCi/Sample	82%	*(7.4)*	8/20/14 06:27 p	1.0	0.00113	ALP216
						1.31E-05	9.00E-15	*(6.)*		Sample	Sample	

Ratio U-234/238 = 1.3

No. of Results: 3 **Comments:**

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 27-Aug-14

Lab Name:	TestAmerica Inc	**SDG:**	48564	**Collection Date:**	7/29/2014 8:00:00 AM
Lot-Sample No.:	J4H060419-1	**Report No. :**	61982	**Received Date:**	8/5/2014 10:45:00 AM
Client Sample ID:	R1 SYC SCRUBBER FILTER(6211)&	**COC No. :**		**Matrix:**	OTHER SOLI

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4219057	FFSR			**Work Order:** M4J821AD			**Report DB ID:** 9M4J8210					
U-234	**4.43E-03**		3.2E-04	7.7E-04	2.64E-05	uCi/Sample	89%	*(167.8)*	8/20/14 06:23 p	1.0	0.00126	ALP211
						6.42E-06	9.00E-15	*(11.5)*		Sample	Sample	
U-235	**1.26E-04**		5.4E-05	5.8E-05	2.64E-05	uCi/Sample	89%	*(4.8)*	8/20/14 06:23 p	1.0	0.00126	ALP211
						6.42E-06	9.00E-15	*(4.4)*		Sample	Sample	
U-238	**4.04E-03**		3.1E-04	7.1E-04	3.26E-05	uCi/Sample	89%	*(123.8)*	8/20/14 06:23 p	1.0	0.00126	ALP211
						8.58E-06	9.00E-15	*(11.4)*		Sample	Sample	

Ratio U-234/238 = 1.1

No. of Results: 3 **Comments:**

FORM I

SAMPLE RESULTS

Date: 27-Aug-14

Lab Name:	TestAmerica Inc	**SDG:**	48564	**Collection Date:**	7/30/2014 8:00:00 AM
Lot-Sample No.:	J4H060419-2	**Report No. :**	61982	**Received Date:**	8/5/2014 10:45:00 AM
Client Sample ID:	R2 SYC SCRUBBER FILTER(6227)&	**COC No. :**		**Matrix:**	OTHER SOLI

Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4219057	FFSR			**Work Order:**	M4J831AD		**Report DB ID:**	9M4J8310				
U-234	**4.04E-03**		4.5E-04	8.4E-04	9.29E-05	uCi/Sample	43%	*(43.5)*	8/20/14 06:25 p	1.0	0.00114	ALP214
						2.66E-05	9.00E-15	*(9.6)*		Sample	Sample	
U-235	**1.58E-04**		9.0E-05	9.4E-05	6.66E-05	uCi/Sample	43%	*(2.4)*	8/20/14 06:25 p	1.0	0.00114	ALP214
						1.72E-05	9.00E-15	*(3.4)*		Sample	Sample	
U-238	**2.78E-03**		3.7E-04	6.1E-04	7.05E-05	uCi/Sample	43%	*(39.4)*	8/20/14 06:25 p	1.0	0.00114	ALP214
						1.85E-05	9.00E-15	*(9.)*		Sample	Sample	

Ratio U-234/238 = 1.5

No. of Results: 3 **Comments:**

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

BLANK RESULTS

Date: 27-Aug-14

Lab Name: TestAmerica Inc

Matrix: OTHER SOLI

SDG: 48564

Report No. : 61982

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 4219057	FFSR			**Work Order:**	M4KVM1AA		**Report DB ID:**	M4KVM1AB				
U-234	7.31E-08		4.7E-08	4.9E-08	3.73E-08	uCi/Sample	76%	(2.)	8/20/14 06:28 p	1.0	1.12	ALP218
					9.39E-09	9.00E-15		(3.)		Sample	Sample	
U-235	0.00E+00	U	0.0E+00	1.5E-08	2.03E-08	uCi/Sample	76%	0.	8/20/14 06:28 p	1.0	1.12	ALP218
					5.00E-09	9.00E-15		0.		Sample	Sample	
U-238	2.93E-08	U	3.0E-08	3.0E-08	3.01E-08	uCi/Sample	76%	0.97	8/20/14 06:28 p	1.0	1.12	ALP218
					7.00E-09	9.00E-15		(1.9)		Sample	Sample	
								Ratio U-234/238 = 2.5				

No. of Results: 3 **Comments:**

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

LCS RESULTS

Date: 27-Aug-14

Lab Name: TestAmerica Inc

SDG: 48564

Matrix: OTHER SOLI

Report No. : 61982

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 4219057	FFSR			**Work Order:**	M4KVM1AC		**Report DB ID:**	M4KVM1CS					
U-234	1.06E-06		1.9E-07	2.6E-07	4.45E-08	uCi/Sample	69%	9.29E-07	2.88E-08	114%	8/20/14 10:21 p	1.05	ALP211
							Rec Limits:	75	125	0.1		Sample	
U-238	1.06E-06		1.9E-07	2.6E-07	4.77E-08	uCi/Sample	69%	9.73E-07	3.02E-08	109%	8/20/14 10:21 p	1.05	ALP211
							Rec Limits:	75	125	0.1		Sample	

No. of Results: 2 **Comments:**

Chain of Custody Record

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124 (1007)

Client: Tetco	Project Manager: Dean Kitchen	Date: 7/31/2014	Chain of Custody Number:
Address: 391 East 620 South	Telephone Number (Area Code)/Fax Number: 801-492-9106	Lab Number:	Page 1 of 1
City: American Fork; State: Ut; Zip Code: 84003	Site Contact: Scott Christensen, Garren Palmer; Lab Contact:		
Project Name and Location (State): Energy Fuels 2014 3rd Quarter	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): U-Nat	Th-230	Ra-226	Lead-210	Special Instructions/ Conditions of Receipt
R1 SYC Scrubber filter (6211) & beaker	7/29/14	8:00	X										X				M4J82
R2 SYC Scrubber filter (6227) & beaker	7/30/14	8:00	X										X				M4J83
R1 Dryer BH filter (6212) and beaker	7/29/14	10:00	X										X				M4J84
R1 Dryer BH filter (6226) and beaker	7/30/14	8:00	X										X				M4J85

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other as per method

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	7/31/14	12P	1. Received By: [signature] J. Bock TAL	8-5-14	1045
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments: When Complete Email to: Dean or Paul tetco@tetco-ut.com

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

J4H060419

J4G060419
SDG: 48564

~~Due 9/3/14~~ JF 8/6/14 Due 9/2/14

J4H060419

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Sample Check-in List

Date/Time Received: 8-5-14 / 1045 Container GM Screen Result: (Airlock) 40 cpm Initials [B]
Sample GM Screen Result (Sample Receiving) 60 cpm Initials [B]

Client: DEW SDG #: 48564 SAF #: _____ NA [B]

Lot Number: JYHD 60419

Chain of Custody # N/A

Shipping Container ID or Air Bill Number: _____ NA [B]

Samples received inside shipping container/cooler/box Yes [B] Continue with 1 through 4. Initial appropriate response.
No [ ] Go to 5, add comment to #16.

1. Custody Seals on shipping container intact? Yes [ ] No [ ] No Custody Seal [B]
2. Custody Seals dated and signed? Yes [ ] No [ ] No Custody Seal [B]
3. Cooler temperature: _____ °C NA [B]
4. Vermiculite/packing materials is NA [ ] Wet [ ] Dry [B]

Item 5 through 16 for samples. Initial appropriate response.

5. Chain of Custody record present? Yes [B] No [ ]
6. Number of samples received (Each sample may contain multiple bottles): 4
7. Containers received: 4x Glitter; 4x 250 mLg
8. Sample holding times exceeded? NA [ ] Yes [ ] No [B]
9. Samples have: ____ tape ____ hazard labels ____ custody seals [B] appropriate sample labels
10. Matrix: [B] A (FLT, Wipe, Solid, Soil) ____ I (Water) [B] S (Air, Niosh 7400) ____ T (Biological, Ni-63)
11. Samples:
    [B] are in good condition ____ are leaking ____ are broken
    ____ have air bubbles (Only for samples requiring no head space) ____ Other _____
12. Sample pH appropriate for analysis requested Yes [ ] No [ ] NA [B]
    (If acidification is necessary go to pH area & document sample ID, initial pH, amount of HNO_3 added and pH after addition on table)
13. Were any anomalies identified in sample receipt? Yes [ ] No [B]
14. Description of anomalies (include sample numbers): NA [B]
15. Sample Location, Sample Collector Listed on COC? * Yes [ ] No [B]
    *For documentation only. No corrective action needed.
16. Additional Information: N/A

[ ] Client/Courier denied temperature check. [ ] Client/Courier unpack cooler.

Sample Check-in List completed by Sample Custodian:
Signature: [signature] Date: 8-5-14

Client Notification needed? Yes [ ] No [ ] Date: _____
By: _____
Person contacted: _____

[✓] No action necessary; process as is

Project Manager [signature] Date 8/27/14

APPENDIX D

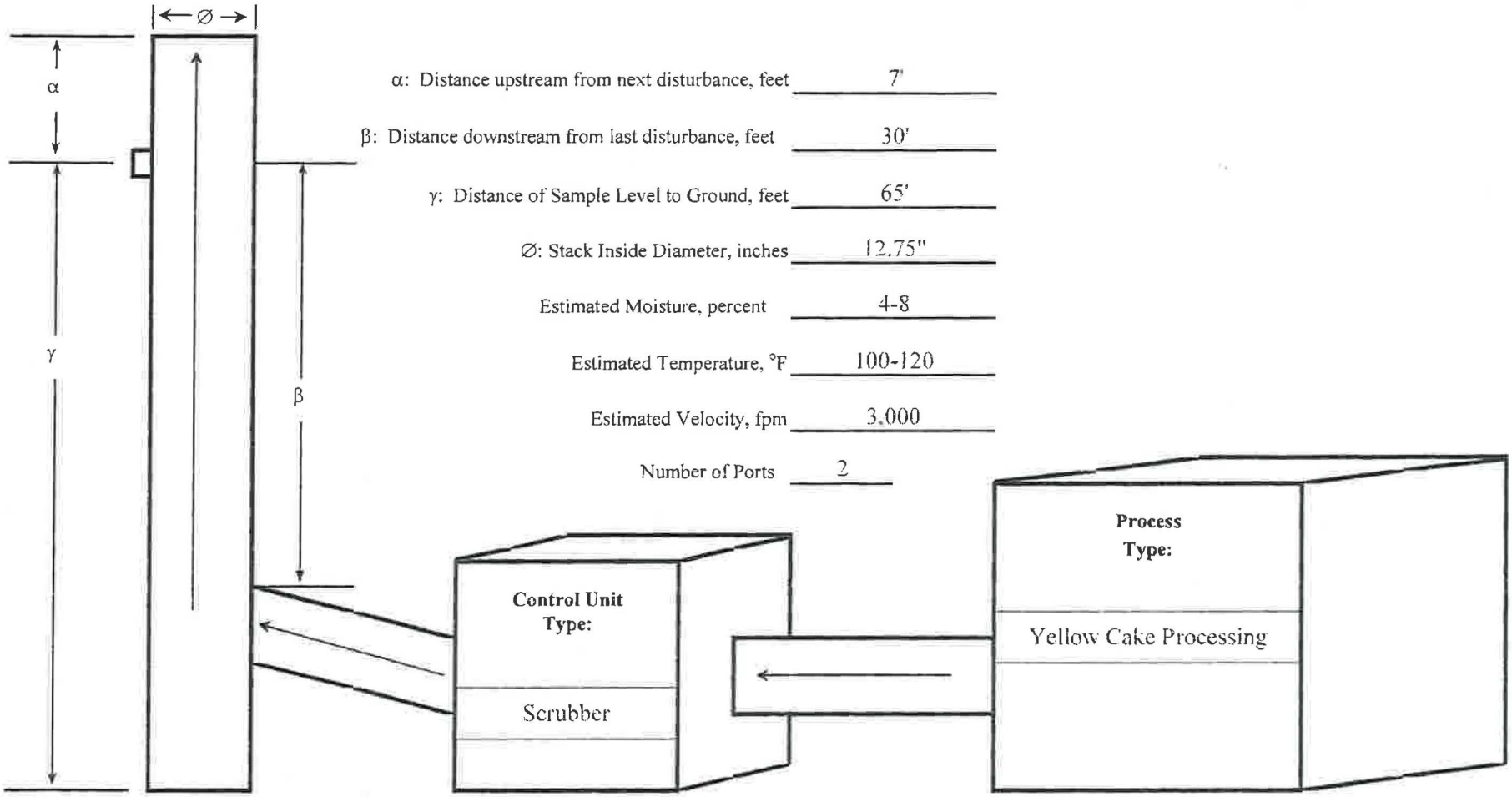
South Yellow Cake Scrubber
Figure 1. Facility Schematic Representation

Yellow Cake Dryer Baghouse
Figure 2. Facility Schematic Representation

Process Data
(Retained by Energy Fuels Resources)

Facility: Energy Fuels Resources

Stack Identification: South Yellow Cake Scrubber



α: Distance upstream from next disturbance, feet 7'

β: Distance downstream from last disturbance, feet 30'

γ: Distance of Sample Level to Ground, feet 65'

Ø: Stack Inside Diameter, inches 12.75"

Estimated Moisture, percent 4-8

Estimated Temperature, °F 100-120

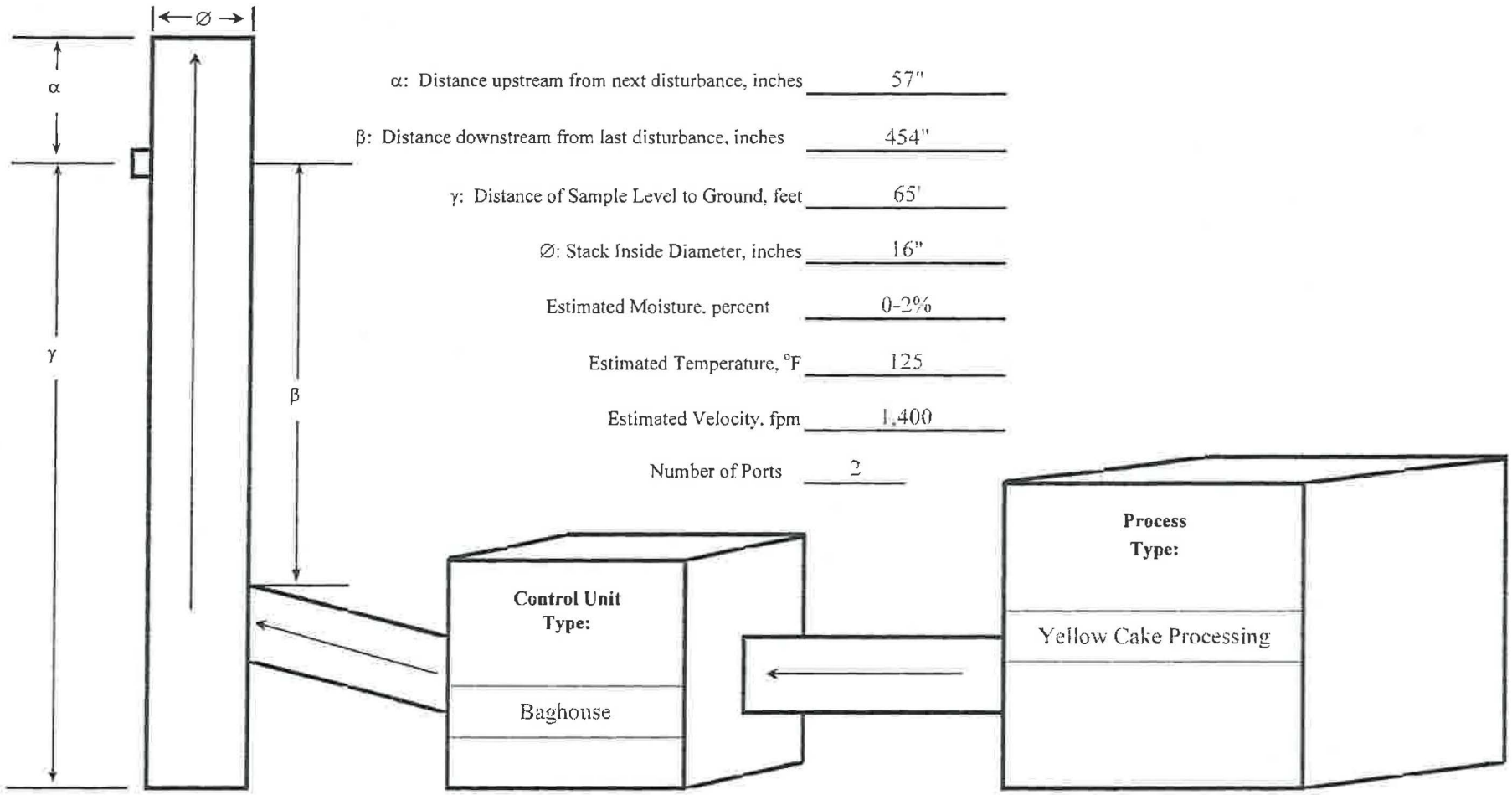
Estimated Velocity, fpm 3,000

Number of Ports 2

Figure 1. Facility Schematic Representation

Facility: Energy Fuels Resources

Stack Identification: Yellow Cake Dryer Baghouse



α: Distance upstream from next disturbance, inches 57"

β: Distance downstream from last disturbance, inches 454"

γ: Distance of Sample Level to Ground, feet 65'

⌀: Stack Inside Diameter, inches 16"

Estimated Moisture, percent 0-2%

Estimated Temperature, °F 125

Estimated Velocity, fpm 1,400

Number of Ports 2

Figure 2. Facility Schematic Representation

Energy Fuels Resources, Blanding, UT Process Data

Source: South Yellow Cake			Date: 7/24/14	
	Scrubber Flow GPM			
Time	#1		#2	ΔP
8:00	3.3	7.1	32.2	20.5
8:30	3.3	7.1	32.2	20.5
9:00	3.3	7.2	32.3	20.4
9:30	3.3	7.1	32.3	20.4
10:00	3.3	7.1	32.2	20.4
10:30	3.3	7.1	32.2	20.3
11:00	3.3	7.1	32.2	20.4
11:30	3.2	7.1	32.3	20.3
12:00	3.2	7.1	32.3	20.3
12:30	3.2	7.1	32.3	20.4
13:00	3.2	7.2	32.3	20.4
13:30	3.2	7.1	32.3	20.44
14:00	3.2	7.0	32.3	20.44
14:30	3.2	7.0	32.3	20.43
15:00	3.2	7.1	32.2	20.5
15:30	3.2	7.1	32.3	20.4
16:00	3.2	7.1	32.3	20.4

1 of 2

Energy Fuels Resources, Blanding, UT Process Data

Source: South Yellow Cake			Date: 7/30/14	
	Scrubber Flow GPM			
Time	#1		#2	ΔP
7:30	3.1	7.0	32.4	20.6
8:00	3.1	7.1	32.4	20.6
8:30	3.1	7.0	32.3	20.5
9:00	4.0	6.6	33.2	20.3
9:30	4.0	6.6	33.2	20.4
10:00	4.0	6.5	33.1	20.4
10:30	3.9	6.5	33.0	20.4
11:00	4.0	6.6	33.1	20.3
11:30	3.9	6.5	33.1	20.3
12:00	3.9	6.6	33.0	20.4
12:30	4.0	6.5	33.1	20.5
13:00	4.9	6.5	33.1	20.6
13:30	3.8	6.5	33.0	20.5
14:00	3.8	6.5	33.1	20.6
14:30	3.8	6.5	33.1	20.5
15:00	3.8	6.5	33.1	20.6
15:30	3.8	6.6	33.1	20.5
16:00	33.1	6.5	33.2	20.4

APPENDIX E

Calibration of the console dry gas meter(s), pitot tubes, nozzles diameters, and temperature sensors were carried out in accordance with the procedures outlined in the Quality Assurance Handbook. The appropriate calibration data are presented in the following pages. The nozzle calibrations are recorded on the first page of the field data sheets.

Figure 3 Schematic of Method 5/114 Sampling Train
Meter Box Calibration Data and Calculations Forms
Post-test Dry Gas Meter Calibration Data Forms
Type S Pitot Tube Inspection Data
Sample Box Temperature Sensor Calibration

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record data and information in the GREEN cells, YELLOW cells are calculated.

ENVIRONMENTAL SUPPLY COMPANY

Facility **New Calibration 2014**

DATE: 12/20/2013 | METER SERIAL #: 1522688 | BAROMETRIC PRESSURE (in Hg): INITIAL 25.55, FINAL 25.55, AVG (P_{bar}) 25.55

METER PART #: Console 3 | CRITICAL ORIFICE SET SERIAL #: 1453S | EQUIPMENT ID #: Console #3

IF Y VARIATION EXCEEDS 2.00%, ORIFICE SHOULD BE RECALIBRATED

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT³) INITIAL	DGM READINGS (FT³) FINAL	DGM READINGS (FT³) NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM OUTLET INITIAL	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	$\Delta H_@$
30	1	0.8137	13	309.703	315.060	5.357	75	77	78	77	78	78	5.00	2.90	4.5278	4.4955	0.993		1.706
	2	0.8137	13	315.060	320.956	5.896	75	79	81	79	82	80.25	5.50	2.90	4.9526	4.9450	0.996		1.699
	3	0.8137	13	320.956	326.293	5.337	75	82	83	82	82	82.25	5.00	2.90	4.4756	4.4965	1.004		1.692
																AVG =	0.998	-0.39	
19	1	0.5317	13	66.801	74.063	8.262	75	70	71	71	72	71.00	12.00	1.20	7.0409	7.050	1.001		1.667
	2	0.5317	13	74.063	81.662	7.599	75	71	72	72	72	71.75	11.00	1.20	6.4668	6.4625	0.999		1.664
	3	0.5317	13	286.80	292.304	5.504	75	72	73	72	73	72.50	8.00	1.20	4.6773	4.70	1.005		1.662
																AVG =	1.002	0.00	
12	1	0.3307	13	292.50	298.092	5.592	75	74	74	74	74	74.00	13.00	0.45	4.7286	4.7503	1.005		1.603
	2	0.3307	13	298.092	303.676	5.584	75	74	75	74	75	74.50	13.00	0.45	4.7174	4.7503	1.007		1.602
	3	0.3307	13	303.676	309.260	5.584	75	75	73	74	74	74.00	13.00	0.45	4.7218	4.7503	1.006		1.603
																AVG =	1.006	0.40	

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:
The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = **1.002**

AVERAGE $\Delta H_@$ = **1.655**

(1) $$Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions
K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)
T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

(2) $$Vcr_{(std)} = K' * \frac{Pbar * \Theta}{\sqrt{Tamb}}$$

= Volume of gas sample passed through the critical orifice, corrected to standard conditions
T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)
K' = Average K' factor from Critical Orifice Calibration

(3) $$Y = \frac{Vcr_{(std)}}{Vm_{(std)}}$$

= DGM calibration factor

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr}(std)}\right)^2 \Delta H \left(\frac{V_m(std)}{V_m}\right)$$

Temperature Sensors

Reference °F	In °F	Out °F
33	34	34
67	68	68
202	203	203

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record data and information in the GREEN cells, YELLOW cells are calculated.

ENVIRONMENTAL SUPPLY COMPANY

2014 Pre-Calibration Console 9

DATE: 1/6/2014 | METER SERIAL #: 1297-3245 | BAROMETRIC PRESSURE (in Hg): INITIAL 25.45, FINAL 25.45, AVG (P_{bar}) 25.45

METER PART #: Console 9 | CRITICAL ORIFICE SET SERIAL #: 1453S | EQUIPMENT ID #: Console 9

IF Y VARIATION EXCEEDS 2.00%, ORIFICE SHOULD BE RECALIBRATED

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	DGM READINGS (FT^3) NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM OUTLET INITIAL	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	$\Delta H_@$
30	1	0.8137	12	88.612	94.007	5.395	65	78	79	75	75	76.75	5.00	3.00	4.5641	4.5203	0.993		1.743
	2	0.8137	12	94.007	99.387	5.380	65	79	79	75	75	77.00	5.00	3.00	4.5393	4.5203	0.996		1.742
	3	0.8137	12	99.387	104.803	5.416	65	79	80	75	75	77.25	5.00	3.00	4.5676	4.5203	0.990		1.741
																AVG =	0.993	-0.96	
19	1	0.5317	12	105.106	110.310	5.204	70	75	76	69	71	72.75	7.50	1.20	4.4031	4.4097	1.001		1.652
	2	0.5317	12	110.310	115.878	5.568	70	76	78	71	71	74.00	8.00	1.20	4.70	4.7036	1.001		1.648
	3	0.5317	12	115.878	121.084	5.206	70	78	80	71	71	75.00	7.50	1.20	4.3862	4.4097	1.005		1.645
																AVG =	1.003	0.02	
12	1	0.3307	12	121.205	126.327	5.122	72	76	76	71	72	73.75	12.00	0.44	4.3161	4.380	1.016		1.565
	2	0.3307	12	126.327	131.458	5.131	72	76	76	72	72	74.00	12.00	0.44	4.3217	4.380	1.013		1.565
	3	0.3307	12	131.458	137.053	5.595	72	76	76	72	72	74.00	13.00	0.44	4.7125	4.7460	1.007		1.565
																AVG =	1.012	0.94	

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:
The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std). and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = **1.002**

AVERAGE $\Delta H_@$ = **1.652**

(1) $$Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions
K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)
T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

(2) $$Vcr_{(std)} = K' * \frac{Pbar * \Theta}{\sqrt{Tamb}}$$

= Volume of gas sample passed through the critical orifice, corrected to standard conditions
T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)
K' = Average K' factor from Critical Orifice Calibration

(3) $$Y = \frac{Vcr_{(std)}}{Vm_{(std)}}$$

= DGM calibration factor

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr}(std)}\right)^2 \Delta H \left(\frac{V_m(std)}{V_m}\right)$$

Temperature Sensors

Reference °F	In °F	Out °F
32	33	33
72	73	73
201	202	203

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

ENVIRONMENTAL SUPPLY COMPANY

1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record data and information in the GREEN cells, YELLOW cells are calculated.

Facility: Energy Fuels
SYC Scrubber

DATE: 7/31/2014
METER PART #: Console 3
METER SERIAL #: 1522588
CRITICAL ORIFICE SET SERIAL #: 1453S
EQUIPMENT ID #: Console #3

	INITIAL	FINAL	AVG (P_{bar})
BAROMETRIC PRESSURE (in Hg):	25.55	25.55	25.55

IF Y VARIATION EXCEEDS 2.00%, ORIFICE SHOULD BE RECALIBRATED

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM OUTLET INITIAL	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	$\Delta H_@$
	1					.0						0							
	2					.0						0							
	3					.0						0.00							
																AVG =			
19	1	0.5317	13	13.103	18.269	5.166	85	78	79	80	84	80.25	7.50	1.20	4.3271	4.3656	1.009		1.669
	2	0.5317	13	18.269	23.764	5.495	85	79	79	84	86	82.00	8.00	1.20	4.5878	4.6566	1.015		1.663
	3	0.5317	13	23.764	28.921	5.157	85	79	79	86	88	83.00	7.50	1.20	4.2977	4.3656	1.016		1.660
																AVG =	1.013	0.00	
25	1	0.6808	12			.0						0.00							
	2	0.6808	12			.0						0.00							
	3	0.6808	12			.0						0.00							
																AVG =			

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:
The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = 1.013

AVERAGE $\Delta H_@$ = 1.664

(1) $$Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions
K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)
T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

(2) $$Vcr_{(std)} = K' * \frac{Pbar * \Theta}{\sqrt{Tamb}}$$

= Volume of gas sample passed through the critical orifice, corrected to standard conditions
T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)
K' = Average K' factor from Critical Orifice Calibration

(3) $$Y = \frac{Vcr_{(std)}}{Vm_{(std)}}$$

= DGM calibration factor

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr}(std)}\right)^2 \Delta H \left(\frac{V_m(std)}{V_m}\right)$$

Temperature Sensors

Reference °F	In °F	Out °F
34	35	35
67	68	68
202	203	203

METHOD 5 DRY GAS METER CALIBRATION USING CRITICAL ORIFICES

1) Select three critical orifices to calibrate the dry gas meter which bracket the expected operating range.
2) Record barometric pressure before and after calibration procedure.
3) Run at tested vacuum (from Orifice Calibration Report), for a period of time necessary to achieve a minimum total volume of 5 cubic feet.
4) Record data and information in the GREEN cells, YELLOW cells are calculated.

ENVIRONMENTAL SUPPLY COMPANY

Energy Fuels
Dryer Baghouse

DATE: 7/31/2014 | METER SERIAL #: 1297-3245 | BAROMETRIC PRESSURE (in Hg): INITIAL 25.55, FINAL 25.55, AVG (P_{bar}) 25.55

METER PART #: Console 9 | CRITICAL ORIFICE SET SERIAL #: 1453S | EQUIPMENT ID #: Console 9

IF Y VARIATION EXCEEDS 2.00%, ORIFICE SHOULD BE RECALIBRATED

ORIFICE #	RUN #	K' FACTOR (AVG)	TESTED VACUUM (in Hg)	DGM READINGS (FT^3) INITIAL	DGM READINGS (FT^3) FINAL	DGM READINGS (FT^3) NET (V_m)	TEMPERATURES °F AMBIENT	DGM INLET INITIAL	DGM INLET FINAL	DGM OUTLET INITIAL	DGM OUTLET FINAL	DGM AVG	ELAPSED TIME (MIN) θ	DGM ΔH (in H_2O)	(1) V_m (STD)	(2) V_{cr} (STD)	(3) Y	Y VARIATION (%)	$\Delta H_@$
19	1	0.5317	12	50.500	56.712	5.212	77	77	80	76	77	77.50	7.50	2.05	4.3987	4.3980	1.000		2.830
	2	0.5317	12	55.712	61.584	5.872	78	80	81	77	77	78.75	8.50	2.05	4.9442	4.9798	1.007		2.829
	3	0.5317	12	61.584	67.802	6.218	78	81	82	77	78	79.50	9.00	2.05	5.2282	5.2727	1.009		2.825
																AVG =	1.005	0.00	
	1					.0						0.00							
	2					.0						0.00							
	3					.0						0.00							
																AVG =			
	1					.0						0.00							
	2					.0						0.00							
	3					.0						0.00							
																AVG =			

USING THE CRITICAL ORIFICES AS CALIBRATION STANDARDS:
The following equations are used to calculate the standard volumes of air passed through the DGM, V_m (std), and the critical orifice, V_{cr} (std), and the DGM calibration factor, Y. These equations are automatically calculated in the spreadsheet above.

AVERAGE DRY GAS METER CALIBRATION FACTOR, Y = **1.005**

AVERAGE $\Delta H_@$ = **2.828**

(1) $$Vm_{(std)} = K_1 * Vm * \frac{Pbar + (\Delta H / 13.6)}{Tm}$$

= Net volume of gas sample passed through DGM, corrected to standard conditions
K_1 = 17.64 °R/in. Hg (English), 0.3858 °K/mm Hg (Metric)
T_m = Absolute DGM avg. temperature (°R - English, °K - Metric)

(2) $$Vcr_{(std)} = K' * \frac{Pbar * \Theta}{\sqrt{Tamb}}$$

= Volume of gas sample passed through the critical orifice, corrected to standard conditions
T_{amb} = Absolute ambient temperature (°R - English, °K - Metric)
K' = Average K' factor from Critical Orifice Calibration

(3) $$Y = \frac{Vcr_{(std)}}{Vm_{(std)}}$$

= DGM calibration factor

$$\Delta H_@ = \left(\frac{0.75\,\theta}{V_{cr}(std)}\right)^2 \Delta H \left(\frac{V_m(std)}{V_m}\right)$$

Temperature Sensors

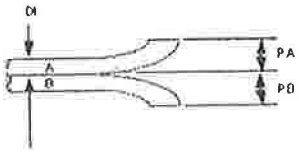
Reference °F	In °F	Out °F
32	33	33
72	73	73
201	202	203

Type S Pitot Tube Inspection Data

Date: 12/12/13

Pitot Tube Identification: 18-G

Technician: M. McNamara



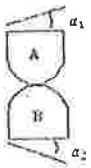
Dt= .375 in.

Is $P_A = P_B$? Yes

Is $1.05 \cdot D_t \le D_t \le 1.50 \cdot D_t$? Yes

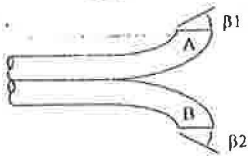
P_A = .496 in.

P_B = .496 in.



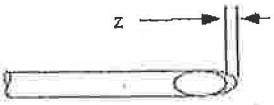
$\alpha_1 < 10°$ α_1 = 1 °

$\alpha_2 < 10°$ α_2 = 1 °

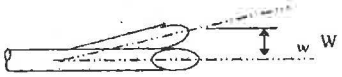


$\beta_1 < 5°$ β_1 = 2 °

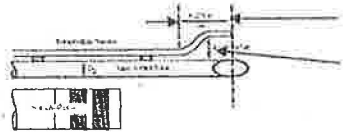
$\beta_2 < 5°$ β_2 = 2 °



$Z \le 0.125$ in. Z = .001 in.

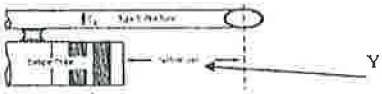


$W \le 0.03125$ in. W = .008 in.



W > 3 inches W = 6.5 in

Z > 3/4 inch Z = 1 in.



Y ≥ 3 inches Y = 3.5 in.

The pitot tube meets the specifications for a calibration factor of 0.84? Yes

Temperature Sensor Calibration

Reference:

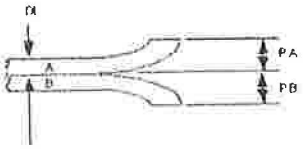
	Temperature Source (Medium)	Temperature Reference (°F)	Temperature Sensor (°F)	Temperature Difference (°F)
Probe	AIR	72	72	0
	Continuity			Yes
	Heat Check 248		Yes	250
Stack	AIR	72	72	0
	ICE WATER	33	34	1
	BOIL WATER	202	202	0
	SILICONE OIL			

Type S Pitot Tube Inspection Data

Date: 12-13-13

Pitot Tube Identification: 27-G

Technician: M. McNamara



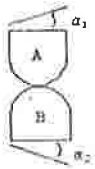
Dt= .375 in.

Is $P_A = P_B$? Yes

Is $1.05 \cdot D_t \le D_t \le 1.50 \cdot D_t$? Yes

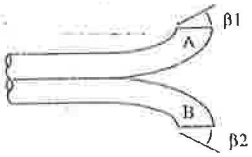
P_A = .452 in.

P_B = .452 in



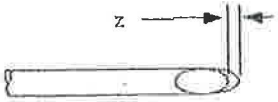
$\alpha_1 < 10°$ α_1 = 0 °

$\alpha_2 < 10°$ α_2 = 0 °



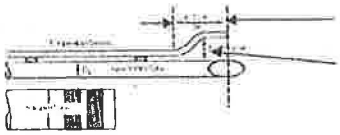
$\beta_1 < 5°$ β_1 = 1 °

$\beta_2 < 5°$ β_2 = 1 °



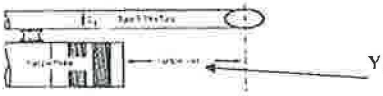
Z ≤ 0.125 in Z = .016 in

W ≤ 0.03125 in. W = .008 in.



W > 3 inches W = 7 in.

Z > 3/4 inch Z = 1 in.



Y ≥ 3 inches Y = 3.5 in.

The pitot tube meets the specifications for a calibration factor of 0.84? Yes

Temperature Sensor Calibration

Reference:

	Temperature Source (Medium)	Temperature Reference (°F)	Temperature Sensor (°F)	Temperature Difference (°F)
Probe	AIR	68	66	2
	Continuity			Yes
	Heat Check 248	250	Yes	
Stack	AIR	68	66	2
	ICE WATER	33	32	1
	BOIL WATER	204	203	1
	SILICONE OIL			

TETCO

Sample Box Temperature Sensor Calibration

Date: 12/13/13 Calibrator: Dean Kitchen Reference: Omega CL3512A

Unit ID	Thermocouple Location	Temperature Source (Medium)	Temperature Reference (°F)	Temperature Sensor (°F)	Temperature Difference (°F)
A	Oven	Water	32	34	2
		Water	204	203	-1
	Oven (4)	Water	33	34	1
		Water	204	202	-2
	Impinger Out	Water	33	34	1
		Water	204	203	-1
B	Oven	Water	33	33	0
		Water	204	202	-2
	Oven (4)	Water	33	34	1
		Water	203	203	0
	Impinger Out	Water	32	33	1
		Water	204	202	-2
C	Oven	Water	32	33	1
		Water	204	203	-1
	Oven (4)	Water	33	34	1
		Water	204	204	0
	Impinger Out	Water	33	33	0
		Water	203	202	-1
D	Oven	Water	33	34	1
		Water	203	203	0
	Oven (4)	Water	33	34	1
		Water	204	204	0
	Impinger Out	Water	33	33	0
		Water	204	202	-2
E	Oven	Water	33	34	1
		Water	203	202	-1
	Oven (4)	Water	33	33	0
		Water	204	203	-1
	Impinger Out	Water	33	34	1
		Water	204	203	-1
F	Oven	Water	33	34	1
		Water	204	202	-2
	Oven (4)	Water	33	34	1
		Water	204	202	-2
	Impinger Out	Water	33	33	0
		Water	203	202	-1
	Impinger Out G	Water	33	34	1
		Water	204	203	-1
	Impinger Out H	Water	33	34	1
		Water	204	202	-2
	Impinger Out I	Water	33	33	0
		Water	204	202	-2
	Impinger Out J	Water	33	34	1
		Water	203	202	-1

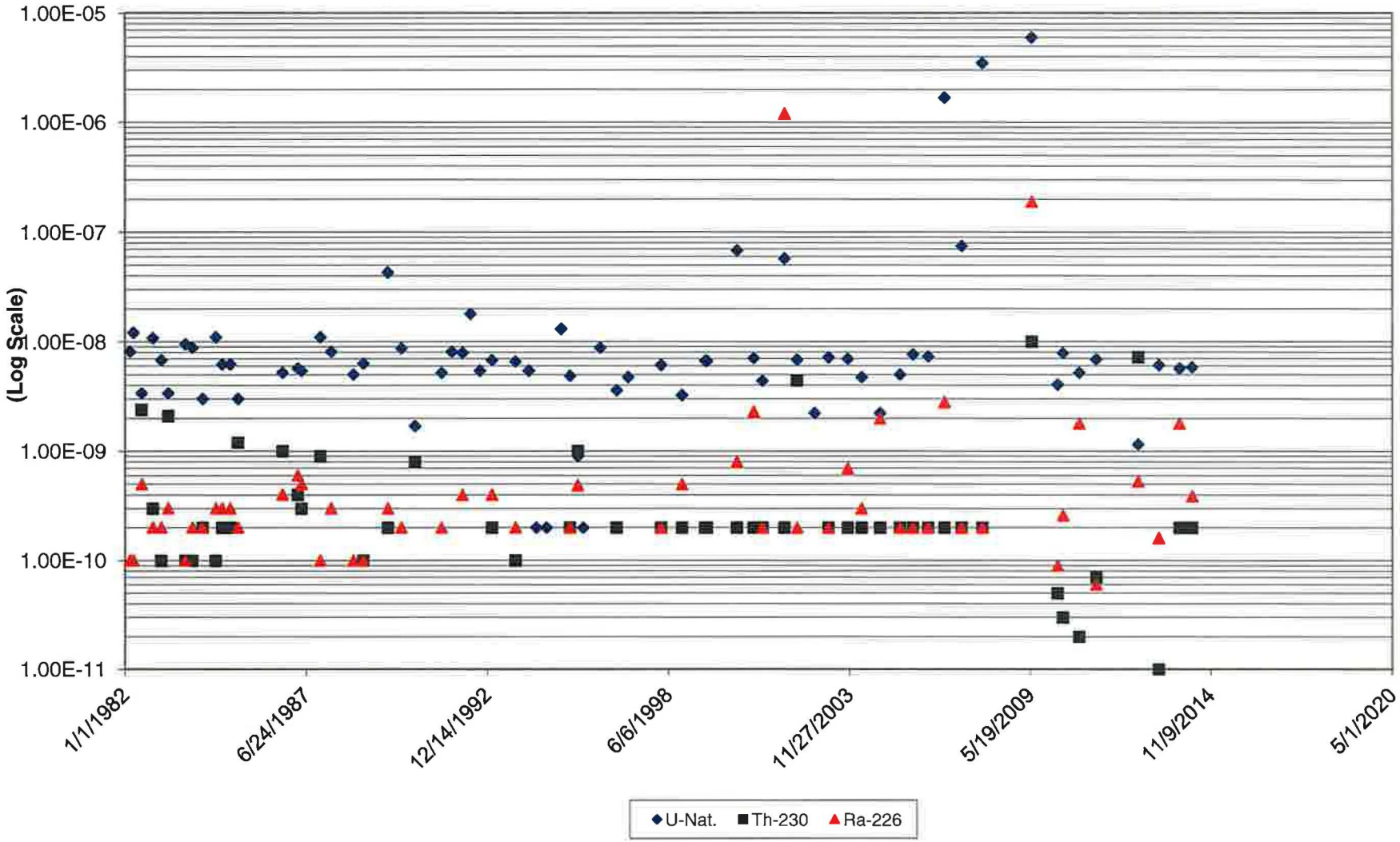
APPENDIX F

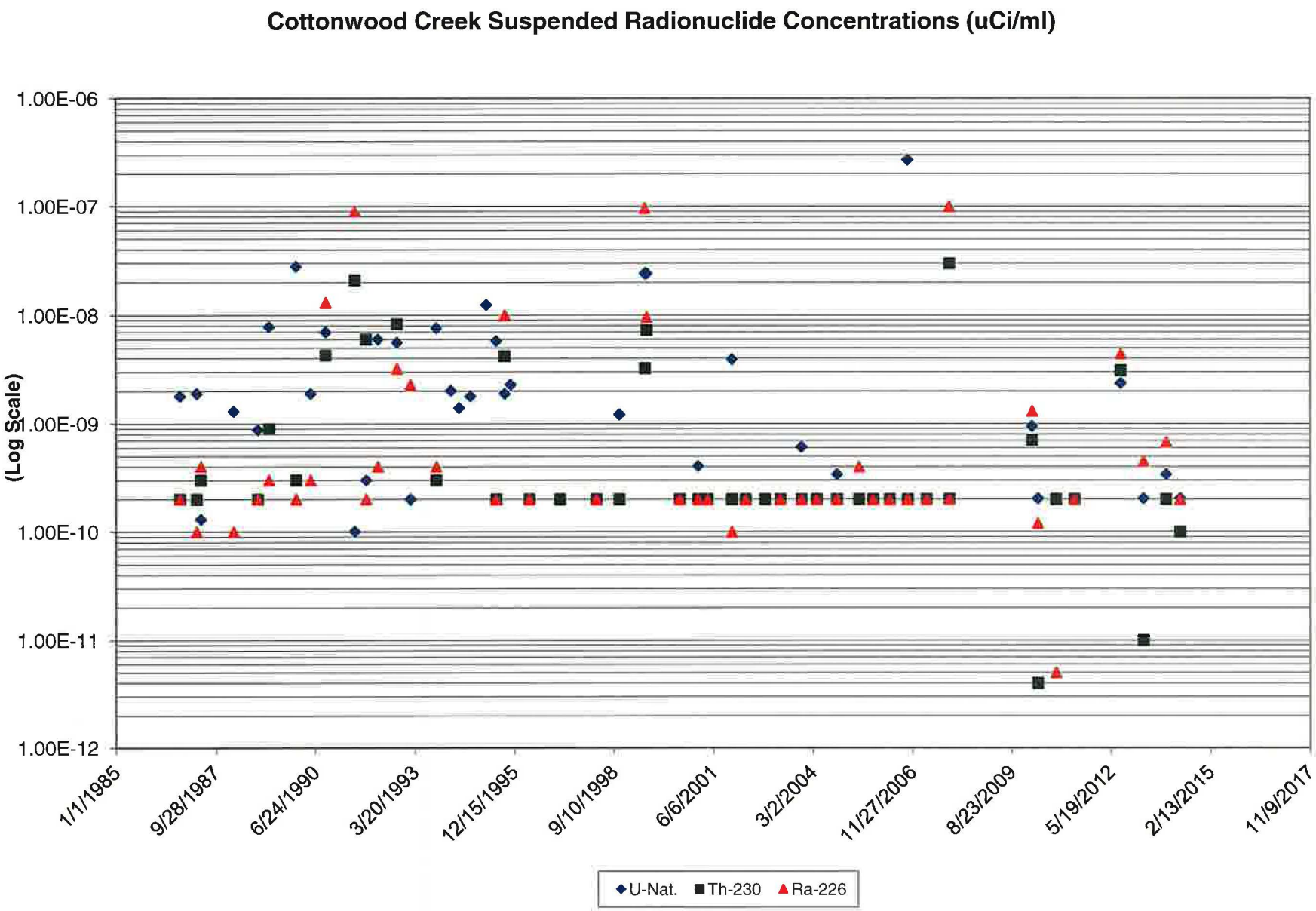
The testing followed the same procedures as outlined in previous protocols and tests at this facility.

ATTACHMENT H

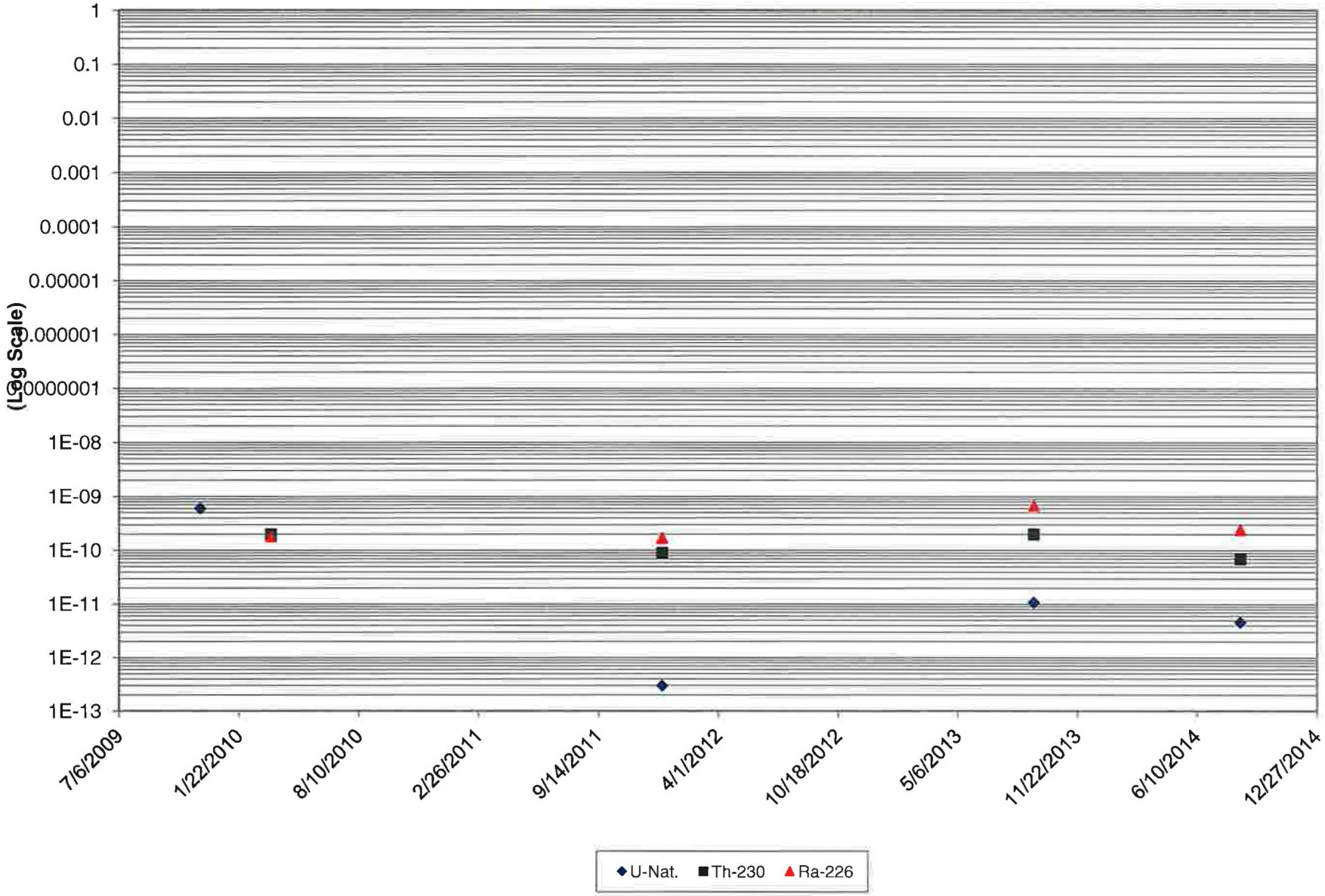
SURFACE WATER GRAPHS AND FIELD DATA SHEETS

Cottonwood Creek Dissolved Radionuclide Concentrations (uCi/ml)

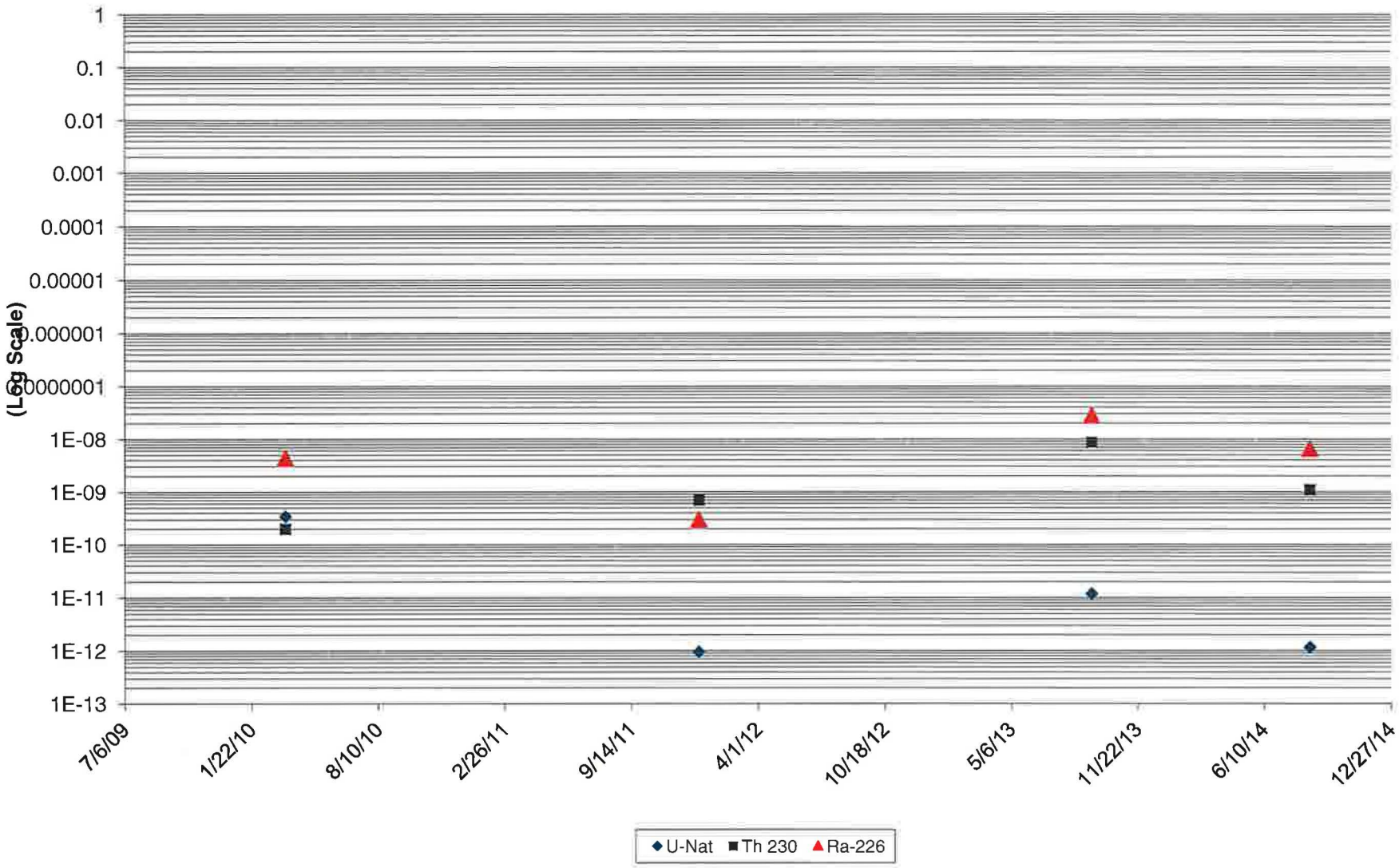



Cottonwood Creek Suspended Radionuclide Concentrations (uCi/ml)
(Log Scale)
1.00E-06
1.00E-07
1.00E-08
1.00E-09
1.00E-10
1.00E-11
1.00E-12
1/1/1985
9/28/1987
6/24/1990
3/20/1993
12/15/1995
9/10/1998
6/6/2001
3/2/2004
11/27/2006
8/23/2009
5/19/2012
2/13/2015
11/9/2017
U-Nat.
Th-230
Ra-226

Westwater Creek Dissolved Radionuclide Concentrations
(uCi/ml)



Westwater Creek Suspended Radionuclide Concentrations (uCi/ml)



ANALYTICAL SUMMARY REPORT

September 24, 2014

Energy Fuels Resources (USA) Inc
225 Union Blvd Ste 600
Lakewood, CO 80228-1826

Work Order: C14080858

Project Name: 3rd Quarter Surface Water 2014

Energy Laboratories, Inc. Casper WY received the following 1 sample for Energy Fuels Resources (USA) Inc on 8/21/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14080858-001	Westwater Canyon	08/20/14 8:00	08/21/14	Surface Water	Sample Filtering Uranium, Dissolved Uranium, Suspended Digestion, Total Metals Gross Alpha, Gross Beta Radium 226, Dissolved Radium 226, Suspended Thorium, Isotopic Thorium, Suspended Isotopic

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Kathryn Hamre
Report Proofing Specialist

Digitally signed by
Kathy Hamre
Date: 2014.09.24 12:22:13 -06:00

CLIENT: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014
Sample Delivery Group: C14080858

Report Date: 09/24/14

CASE NARRATIVE

ORIGINAL SAMPLE SUBMITTAL(S)
All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)
Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS
Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS
The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES
All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS
Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS
Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS
eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT
eli-r - Energy Laboratories, Inc. - Rapid City, SD
eli-cs - Energy Laboratories, Inc. - College Station, TX

CERTIFICATIONS:
USEPA: WY00002, Radiochemical WY00937; FL-DOH NELAC: E87641, Radiochemical E871017; California: 02118CA; Oregon: WY200001, Radiochemical WY200002; Utah: WY00002; Washington: C836

ISO 17025 DISCLAIMER:
The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER,WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014
Lab ID: C14080858-001
Client Sample ID: Westwater Canyon

Report Date: 09/24/14
Collection Date: 08/20/14 08:00
DateReceived: 08/21/14
Matrix: Surface Water

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS - DISSOLVED							
Uranium	0.0046	mg/L		0.0003		E200.8	09/05/14 07:50 / cp
METALS - SUSPENDED							
Uranium	0.0017	mg/L		0.0003		E200.8	09/23/14 10:56 / cp
RADIONUCLIDES - DISSOLVED							
Gross Alpha	7.5	pCi/L				E900.0	09/04/14 17:49 / trs
Gross Alpha precision (±)	1.3	pCi/L				E900.0	09/04/14 17:49 / trs
Gross Alpha MDC	1.3	pCi/L				E900.0	09/04/14 17:49 / trs
Radium 226	0.24	pCi/L				E903.0	09/08/14 15:56 / lmc
Radium 226 precision (±)	0.14	pCi/L				E903.0	09/08/14 15:56 / lmc
Radium 226 MDC	0.18	pCi/L				E903.0	09/08/14 15:56 / lmc
Thorium 230	0.07	pCi/L	U			E908.0	08/27/14 09:06 / dmf
Thorium 230 precision (±)	0.05	pCi/L				E908.0	08/27/14 09:06 / dmf
Thorium 230 MDC	0.07	pCi/L				E908.0	08/27/14 09:06 / dmf
RADIONUCLIDES - SUSPENDED							
Radium 226	6.5	pCi/L				E903.0	09/08/14 22:54 / lmc
Radium 226 precision (±)	0.84	pCi/L				E903.0	09/08/14 22:54 / lmc
Radium 226 MDC	0.37	pCi/L				E903.0	09/08/14 22:54 / lmc
Thorium 230	1.1	pCi/L				E908.0	09/02/14 17:26 / dmf
Thorium 230 precision (±)	0.4	pCi/L				E908.0	09/02/14 17:26 / dmf
Thorium 230 MDC	0.3	pCi/L				E908.0	09/02/14 17:26 / dmf

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014

Report Date: 09/24/14
Work Order: C14080858

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**E200.8**									Analytical Run: ICPMS4-C_140904B	
Lab ID:	**ICV**		Initial Calibration Verification Standard							09/04/14 12:58	
Uranium			0.0497	mg/L	0.00030	99	90	110			
Method:	**E200.8**									Batch: R190755	
Lab ID:	**LRB**		Method Blank				Run: ICPMS4-C_140904B			09/04/14 14:00	
Uranium			ND	mg/L	9E-06						
Lab ID:	**LFB**		Laboratory Fortified Blank				Run: ICPMS4-C_140904B			09/04/14 14:08	
Uranium			0.0514	mg/L	0.00030	103	85	115			
Lab ID:	**C14081041-001AMS**		Sample Matrix Spike				Run: ICPMS4-C_140904B			09/05/14 07:30	
Uranium			0.0627	mg/L	0.00030	111	70	130			
Lab ID:	**C14081041-001AMSD**		Sample Matrix Spike Duplicate				Run: ICPMS4-C_140904B			09/05/14 07:34	
Uranium			0.0629	mg/L	0.00030	111	70	130	0.3	20	
Method:	**E200.8**									Analytical Run: ICPMS4-C_140923A	
Lab ID:	**ICV**		Initial Calibration Verification Standard							09/23/14 03:03	
Uranium			0.0489	mg/L	0.00030	98	90	110			
Method:	**E200.8**									Batch: 42386	
Lab ID:	**MB-42386**		Method Blank				Run: ICPMS4-C_140923A			09/23/14 10:44	
Uranium			0.0002	mg/L	9E-06						
Lab ID:	**LCS2-42386**		Laboratory Control Sample				Run: ICPMS4-C_140923A			09/23/14 10:48	
Uranium			0.0960	mg/L	0.00030	96	85	115			

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014

Report Date: 09/24/14
Work Order: C14080858

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E900.0										Batch: GrAB-1830
Lab ID: Th230-GrAB-1830		Laboratory Control Sample				Run: TENNELEC-3_140828A			09/04/14 17:49	
Gross Alpha		115	pCi/L		99	80	120			
Lab ID: MB-GrAB-1830	3	Method Blank				Run: TENNELEC-3_140828A			09/04/14 17:49	
Gross Alpha		2	pCi/L							
Gross Alpha precision (±)		0.7	pCi/L							
Gross Alpha MDC		1	pCi/L							
Lab ID: C14080858-001BDUP	3	Sample Duplicate				Run: TENNELEC-3_140828A			09/04/14 17:49	
Gross Alpha		7.30	pCi/L					2.3	48.6	
Gross Alpha precision (±)		1.51	pCi/L							
Gross Alpha MDC		1.62	pCi/L							
Lab ID: C14080914-001EMS		Sample Matrix Spike				Run: TENNELEC-3_140828A			09/04/14 17:49	
Gross Alpha		537	pCi/L		85	70	130			
Lab ID: C14080914-001EMSD		Sample Matrix Spike Duplicate				Run: TENNELEC-3_140828A			09/04/14 17:49	
Gross Alpha		564	pCi/L		90	70	130	4.9	18.3	

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014

Report Date: 09/24/14
Work Order: C14080858

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: 42386
Lab ID: C14080858-001CMS		Sample Matrix Spike				Run: BERTHOLD 770-2_140902A				09/08/14 22:54
Radium 226		27	pCi/L		106	70	130			
Lab ID: C14080858-001CMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_140902A				09/08/14 22:54
Radium 226		30	pCi/L		126	70	130	13	21.6	
Lab ID: LCS-42386		Laboratory Control Sample				Run: BERTHOLD 770-2_140902A				09/08/14 22:54
Radium 226		14	pCi/L		103	80	120			
Lab ID: MB-42386	3	Method Blank				Run: BERTHOLD 770-2_140902A				09/08/14 22:54
Radium 226		0.2	pCi/L							U
Radium 226 precision (±)		0.2	pCi/L							
Radium 226 MDC		0.3	pCi/L							
Method: E903.0										Batch: RA226-7346
Lab ID: C14081072-001EMS		Sample Matrix Spike				Run: BERTHOLD 770-2_140902B				09/08/14 19:33
Radium 226		26	pCi/L		93	70	130			
Lab ID: C14081072-001EMSD		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-2_140902B				09/08/14 19:33
Radium 226		27	pCi/L		95	70	130	2.1	17.8	
Lab ID: LCS-RA226-7346		Laboratory Control Sample				Run: BERTHOLD 770-2_140902B				09/08/14 19:33
Radium 226		14	pCi/L		98	80	120			
Lab ID: MB-RA226-7346	3	Method Blank				Run: BERTHOLD 770-2_140902B				09/08/14 19:33
Radium 226		0.6	pCi/L							
Radium 226 precision (±)		0.1	pCi/L							
Radium 226 MDC		0.1	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014

Report Date: 09/24/14
Work Order: C14080858

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E908.0									Batch: RA-TH-ISO-2091	
Lab ID: C14080858-001BMS		Sample Matrix Spike				Run: ALPHANALYST_140825A			08/27/14 09:06	
Thorium 230		17	pCi/L		102	70	130			
Lab ID: C14080858-001BMSD		Sample Matrix Spike Duplicate				Run: ALPHANALYST_140825A			08/27/14 09:06	
Thorium 230		16	pCi/L		98	70	130	4.7	30.7	
Method: E908.0									Batch: 42386	
Lab ID: C14080858-001CMS		Sample Matrix Spike				Run: EGG-ORTEC_140828A			09/02/14 17:26	
Thorium 230		31	pCi/L		103	70	130			
Lab ID: C14080858-001CMSD		Sample Matrix Spike Duplicate				Run: EGG-ORTEC_140828A			09/02/14 17:26	
Thorium 230		29	pCi/L		96	70	130	7.5	40.6	
Lab ID: LCS-42386		Laboratory Control Sample				Run: EGG-ORTEC_140828A			09/02/14 17:26	
Thorium 230		24	pCi/L		82	80	120			
Lab ID: MB-42386	3	Method Blank				Run: EGG-ORTEC_140828A			09/02/14 17:26	
Thorium 230		0.8	pCi/L							U
Thorium 230 precision (±)		0.6	pCi/L							
Thorium 230 MDC		0.9	pCi/L							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.
U - Not detected at minimum detectable concentration

Workorder Receipt Checklist

Energy Fuels Resources (USA) Inc C14080858

Login completed by: Kerri Schroeder
Date Received: 8/21/2014
Reviewed by: BL2000\cwagner
Received by: tmm
Reviewed Date: 8/21/2014
Carrier name: NDA

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	6.8°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

Sample filtered and preserved in lab for dissolved and suspended parameters.

Sheet 1 of 1

CHAIN OF CUSTODY

Samples Shipped to: Energy Laboratories
2393 Salt Creek Hwy
Casper WY, 82601

Contact: Garrin Palmer
Ph: 435 678 4115
gpalmer@energyfuels.com

Chain of Custody/Sampling Analysis Request

Project	Samplers Name	Samplers Signature
3rd Quarter Surface Water 2014	Garrin Palmer	

Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
Westwater Canyon	8/20/2014	800	TDS
			TSS
			Dissolved Gross Alpha
			Suspended U-nat
			Dissolved U-nat
			Suspended Ra-226
			Dissolved Ra-226
			Suspended Th-230
			Dissolved Th-230
			*Samples were not field filtered or preserved.
			Please add sample to previous Westwater Canyon
			that was sampled on 8/15. Thanks

Comments:

Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time
Garrin Palmer	8/20/2014 1230		8-21-14 915
Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time

UPS
6.8

C14080858

ANALYTICAL SUMMARY REPORT

August 22, 2014

Energy Fuels Resources (USA) Inc
225 Union Blvd Ste 600
Lakewood, CO 80228-1826

Work Order: C14080731

Project Name: 3rd Quarter Surface Water 2014

Energy Laboratories, Inc. Casper WY received the following 2 samples for Energy Fuels Resources (USA) Inc on 8/19/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14080731-001	CottonWood Creek	08/15/14 8:00	08/19/14	Aqueous	Solids, Total Dissolved Solids, Total Suspended
C14080731-002	Westwater Canyon	08/15/14 8:30	08/19/14	Aqueous	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.08.22 16:02:39 -06:00

CLIENT: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014
Sample Delivery Group: C14080731

Report Date: 08/22/14

CASE NARRATIVE

ORIGINAL SAMPLE SUBMITTAL(S)
All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)
Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS
Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS
The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES
All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS
Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS
Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS
eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT
eli-r - Energy Laboratories, Inc. - Rapid City, SD
eli-cs - Energy Laboratories, Inc. - College Station, TX

CERTIFICATIONS:
USEPA: WY00002, Radiochemical WY00937; FL-DOH NELAC: E87641, Radiochemical E871017; California: 02118CA; Oregon: WY200001, Radiochemical WY200002; Utah: WY00002; Washington: C836

ISO 17025 DISCLAIMER:
The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER,WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014
Lab ID: C14080731-001
Client Sample ID: CottonWood Creek

Report Date: 08/22/14
Collection Date: 08/15/14 08:00
DateReceived: 08/19/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	271	mg/L		16		A2540 C	08/20/14 14:53 / alp
Solids, Total Suspended TSS @ 105 C	7500	mg/L		200		A2540 D	08/20/14 09:41 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014
Lab ID: C14080731-002
Client Sample ID: Westwater Canyon

Report Date: 08/22/14
Collection Date: 08/15/14 08:30
DateReceived: 08/19/14
Matrix: Aqueous

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Solids, Total Dissolved TDS @ 180 C	375	mg/L		13		A2540 C	08/20/14 14:53 / alp
Solids, Total Suspended TSS @ 105 C	3090	mg/L		100		A2540 D	08/20/14 09:42 / alp

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014

Report Date: 08/22/14
Work Order: C14080731

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 C									Batch: TDS140820A	
Lab ID: MB-1_140820A		Method Blank				Run: BAL-19_140820B			08/20/14 14:51	
Solids, Total Dissolved TDS @ 180 C		ND	mg/L	7						
Lab ID: LCS-2_140820A		Laboratory Control Sample				Run: BAL-19_140820B			08/20/14 14:53	
Solids, Total Dissolved TDS @ 180 C		1990	mg/L	10	99	90	110			
Lab ID: C14080731-001A DUP		Sample Duplicate				Run: BAL-19_140820B			08/20/14 14:53	
Solids, Total Dissolved TDS @ 180 C		276	mg/L	10				1.6	5	
Lab ID: C14080731-002A MS		Sample Matrix Spike				Run: BAL-19_140820B			08/20/14 14:53	
Solids, Total Dissolved TDS @ 180 C		1500	mg/L	10	101	90	110			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: 3rd Quarter Surface Water 2014

Report Date: 08/22/14
Work Order: C14080731

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: A2540 D										Batch: TSS140820A
Lab ID: MB-1_140820A		Method Blank				Run: BAL-19_140820A				08/20/14 09:40
Solids, Total Suspended TSS @ 105 C		ND	mg/L	2						
Lab ID: LCS-2_140820A		Laboratory Control Sample				Run: BAL-19_140820A				08/20/14 09:40
Solids, Total Suspended TSS @ 105 C		98.0	mg/L	10	98	80	120			
Lab ID: C14080668-001B DUP		Sample Duplicate				Run: BAL-19_140820A				08/20/14 09:41
Solids, Total Suspended TSS @ 105 C		ND	mg/L	10					5	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Workorder Receipt Checklist

Energy Fuels Resources (USA) Inc C14080731

Login completed by: Jillian Anderson
Date Received: 8/19/2014
Reviewed by: BL2000\khamre
Received by: tmm
Reviewed Date: 8/19/2014
Carrier name: NDA

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Applicable ☐
Container/Temp Blank temperature:	2.6°C On Ice		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

C14080731

Sheet 1 of 1

CHAIN OF CUSTODY

Samples Shipped to: [redacted]
Energy Lab

Contact: Garrin Palmer
Ph: 435 678 4115
gpalmer@energyfuels.com

Chain of Custody/Sampling Analysis Request

Project	Samplers Name	Samplers Signature
3rd Quarter Surface Water 2014	Garrin Palmer	

Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
CottonWood Creek	8/15/2014	800	Total Dissolved Solids ,Total Suspended Solids
Westwater Canyon	8/15/2014	830	Total Dissolved Solids ,Total Suspended Solids

Comments:

Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time
Garrin Palmer	8/18/2014 1230		
Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time
			8-19-14 9:15

Attachment A

FIELD WATER ANALYSIS SURFACE WATER
WHITE MESA MILL

LOCATION (Circle one): Cottonwood Creek Westwater Canyon Other (describe)_____

DATE: 8/15/14 BY: G.P. (Sampler's initials)

pH BUFFER 7.0 7.0 pH BUFFER 4.0 4.0

SPECIFIC CONDUCTIVITY 999 µMHOs

STEAM DEPTH: 6 inches

pH of WATER 8.77 TEMP 17.65

COND µmhos 239 COND µmhos 325

pH Units 8.77 pH units 8.77

Temp °C 17.65 Temp °C 17.65

COND µmhos 312 COND µmhos 340

pH units 8.77 pH units 8.77

Temp °C 17.64 Temp °C 17.65

Comments:

Arrived on site at 0750. Garrin, Tanner, David present for sampling. Parameters were taken and A grab sample was collected at 0800. Left site at 0810.

Attachment A

FIELD WATER ANALYSIS SURFACE WATER
WHITE MESA MILL

LOCATION (Circle one): Cottonwood Creek (Westwater Canyon) Other (describe) _____

DATE: 8/15/14 BY: G.P. (Sampler's initials)

pH BUFFER 7.0 7.0 pH BUFFER 4.0 4.0

SPECIFIC CONDUCTIVITY 999 µMHOs

STEAM DEPTH: 3 inches

pH of WATER 8.64 TEMP 17.00

COND µmhos 409	COND µmhos 413
pH Units 8.63	pH units 8.64
Temp °C 17.00	Temp °C 17.03
COND µmhos 412	COND µmhos 413
pH units 8.63	pH units 8.65
Temp °C 16.98	Temp °C 17.00

Comments:

Arrived on site at 0815. Garrin, Tanner, David present for sampling. Parameters were taken and a grab sample was collected at 0830. Left site at 0840.

Attachment A

FIELD WATER ANALYSIS SURFACE WATER
WHITE MESA MILL

LOCATION (Circle one): Cottonwood Creek (Westwater Canyon) Other (describe)_____

DATE: 12/10/14 BY: G.P. (Sampler's initials)

pH BUFFER 7.0 7.0 pH BUFFER 4.0 4.0

SPECIFIC CONDUCTIVITY 999 µMHOs

STEAM DEPTH: NA

pH of WATER _____ TEMP _____

COND µmhos _____ COND µmhos _____

pH Units _____ pH units _____

Temp °C _____ Temp °C _____

COND µmhos _____ COND µmhos _____

pH units _____ pH units _____

Temp °C _____ Temp °C _____

Comments:

Arrived on site at 1315. Creek was dry. See photo.

12/16/14 Arrived on site at 1415. Creek was dry. See photo.

12/31/14 Arrived on site at 1000. Creek was dry. See photo.

12/10/13
1315

12/16/14
1415

12/31/14
1000

Attachment A

FIELD WATER ANALYSIS SURFACE WATER
WHITE MESA MILL

LOCATION (Circle one) Cottonwood Creek Westwater Canyon Other (describe)_____

DATE: 12/10/14 BY: G.P. (Sampler's initials)

pH BUFFER 7.0 7.0 pH BUFFER 4.0 4.0

SPECIFIC CONDUCTIVITY 999 µMHOs

STEAM DEPTH: NA

pH of WATER _____ TEMP _____

COND µmhos _____ COND µmhos _____

pH Units _____ pH units _____

Temp °C _____ Temp °C _____

COND µmhos _____ COND µmhos _____

pH units _____ pH units _____

Temp °C _____ Temp °C _____

Comments:

Arrived on site at 1300. Creek was dry. See photo.

12/16/14 Arrived on site at 1400. Creek was dry. See photo.

12/31/14 Arrived on site at 0945. Creek was dry. See photo.

12/10/14
1300

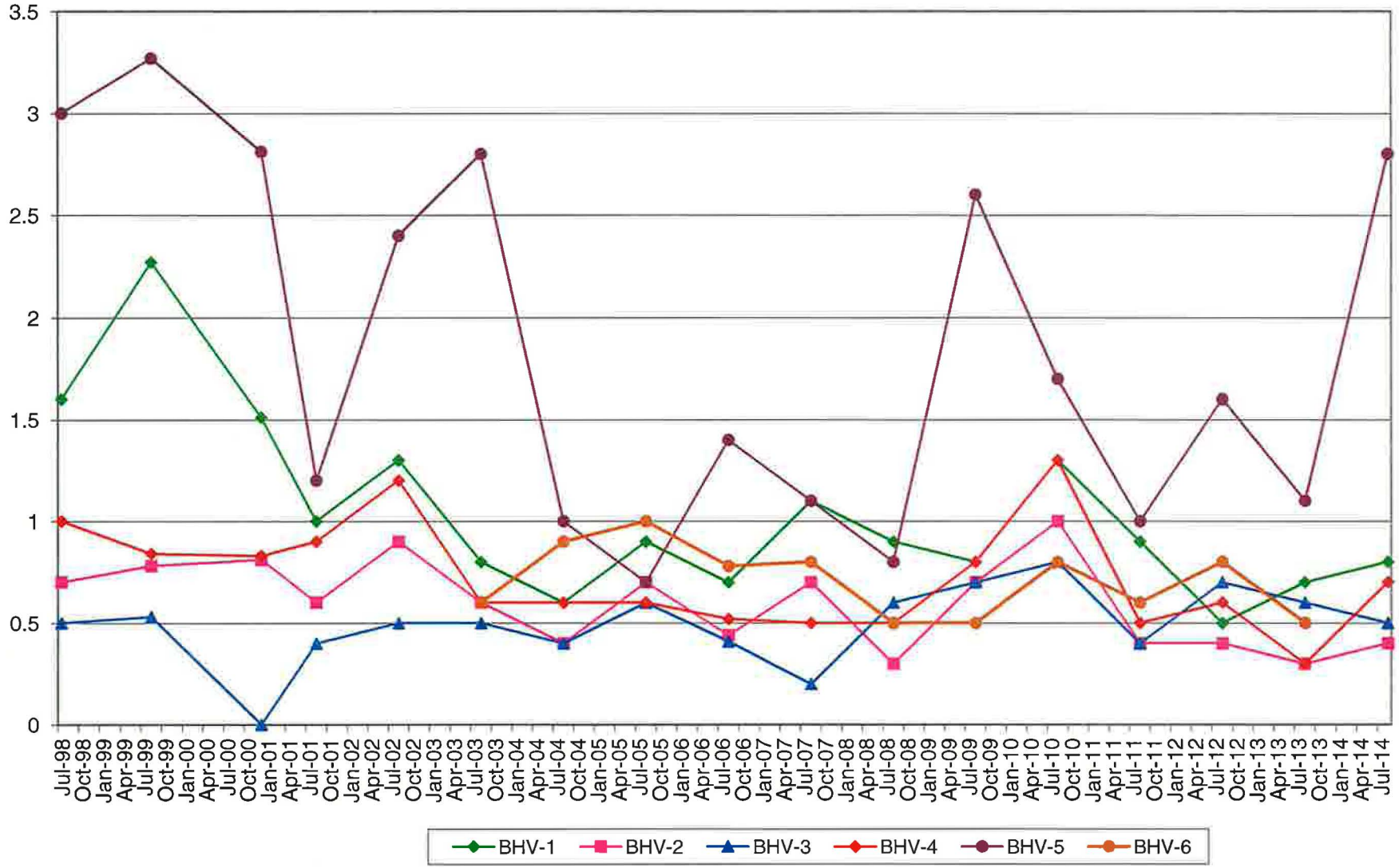
12/18/14
1400

12/31/14
0945

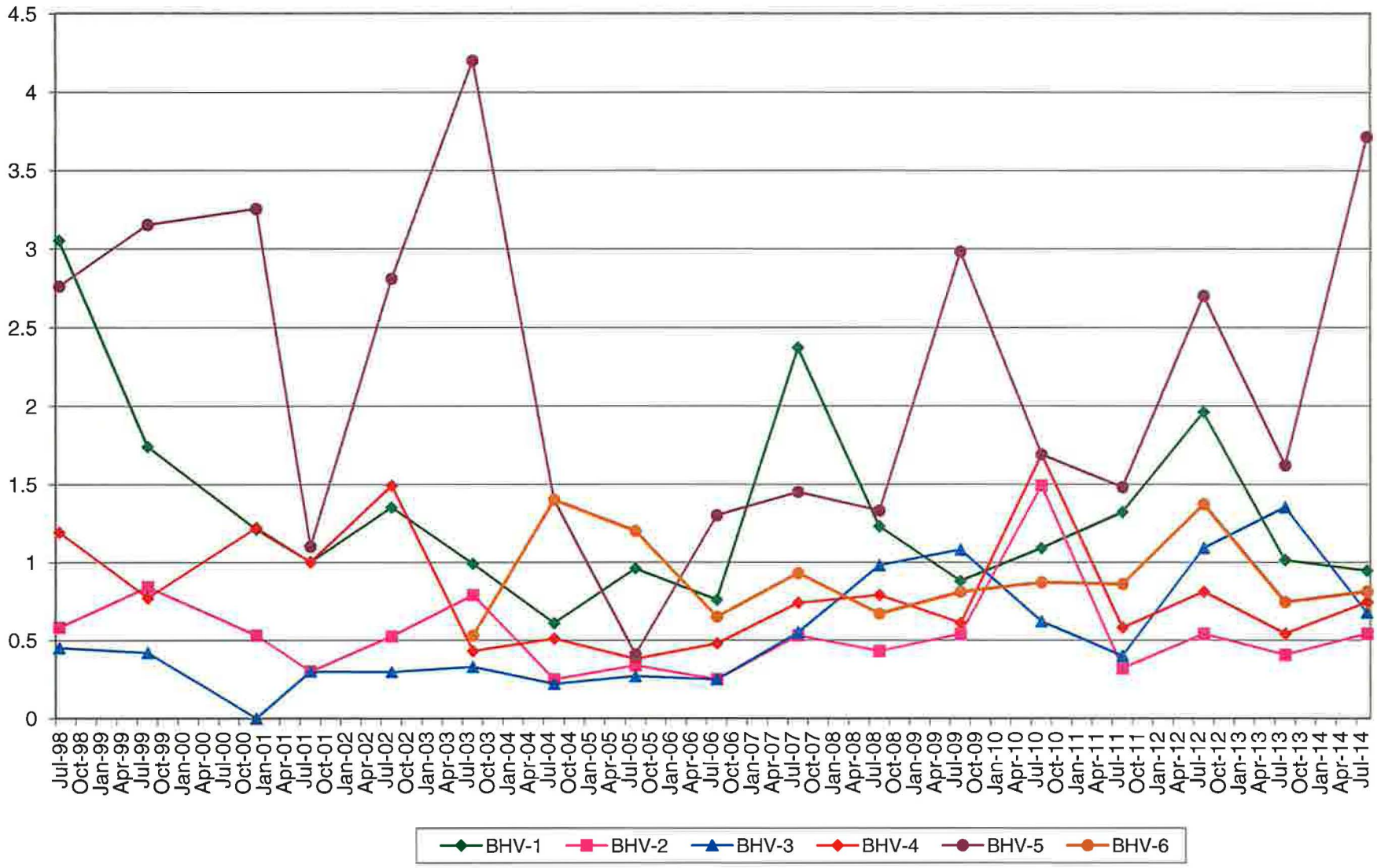
ATTACHMENT I

SOIL SAMPLE GRAPHS, DATA TABLE, LABORATORY RESULTS AND QA/QC

Radium-226 Concentrations In Soil (pCi/g)



Uranium-Nat. Concentrations In Soil (pCi/g)



WHITE MESA MILL
Soil Sampling Results
(pCi/g)

Date	BHV-1		BHV-2		BHV-3		BHV-4		BHV-5		BHV-6	
	Ra-226	U-Nat	Ra-226	U-Nat	Ra-226	U-Nat	Ra-226	U-Nat	Ra-226	U-Nat	Ra-226	U-Nat
9/7/80	0.650	0.420	0.340	0.420	0.420	0.420	0.410	12.194	0.230	14.89	-	-
9/8/81	0.400	1.800	0.300	0.600	0.300	0.600	0.200	3.000	0.300	0.600	-	-
12/3/81	0.790	0.770	0.440	0.560	0.890	0.420	0.750	0.630	0.550	0.420	-	-
6/30/82	0.423	0.384	0.412	0.180	0.265	0.207	0.478	0.260	0.449	0.216	-	-
5/5/83	0.471	0.410	0.569	0.550	0.461	0.340	0.643	0.340	0.147	0.140	-	-
6/4/84	0.713	0.866	0.618	0.683	0.489	0.471	0.124	0.324	0.132	0.310	-	-
10/12/84	2.960	0.886	2.330	0.069	2.880	0.721	3.490	0.804	2.550	0.817	-	-
8/28/85	1.630	0.800	2.190	0.424	2.270	0.424	4.330	0.294	1.280	0.577	-	-
8/1/86	0.369	0.654	0.466	0.866	0.382	0.694	0.396	0.826	0.728	0.836	-	-
8/17/87	0.600	0.800	1.500	0.900	0.800	0.600	1.200	0.700	1.500	1.300	-	-
8/28/88	1.500	1.600	1.300	0.700	0.600	0.900	1.000	1.300	3.800	5.000	-	-
8/25/88	1.200	1.600	1.100	3.000	0.800	1.000	1.100	1.400	2.900	5.700	-	-
8/1/90	2.900	5.800	1.000	1.400	0.800	1.400	1.800	1.300	3.700	3.200	-	-
8/5/91	3.900	8.800	1.700	2.600	2.600	5.700	1.800	2.600	2.500	4.400	-	-
8/13/92	1.200	2.200	0.900	1.400	0.800	1.200	0.900	0.900	1.100	1.800	-	-
8/13/93	2.000	1.700	1.400	1.700	1.100	1.900	0.800	1.600	4.800	3.500	-	-
8/3/94	1.000	1.600	0.700	0.800	0.700	0.900	0.700	1.100	3.000	3.800	-	-
8/28/95	2.810	4.700	0.680	0.200	0.880	0.650	0.580	0.240	2.800	1.600	-	-
8/13/96	1.700	2.150	0.600	0.460	0.300	0.210	0.500	0.520	1.900	2.010	-	-
8/1/97	0.540	0.310	0.560	0.160	0.410	0.270	0.410	0.260	1.700	1.500	-	-
7/1/98	1.600	3.050	0.700	0.580	0.500	0.450	1.000	1.190	3.000	2.760	-	-
8/24/99	2.270	1.740	0.780	0.840	0.530	0.420	0.840	0.770	3.270	3.150	-	-
12/1/00	1.510	1.210	0.810	0.530	*	*	0.830	1.220	2.810	3.250	-	-
8/23/01	1.000	1.000	0.600	0.300	0.400	0.300	0.900	1.000	1.200	1.100	-	-
8/1/02	1.300	1.350	0.900	0.524	0.500	0.297	1.200	1.490	2.400	2.810	60.00	0.550
8/5/03	0.800	0.990	0.600	0.790	0.500	0.330	0.600	0.4300	0.280	0.420	0.600	0.530
8/9/04	0.600	0.610	0.400	0.250	0.400	0.220	0.600	0.5100	1.000	1.400	0.900	1.400
8/3/05	0.900	0.960	0.700	0.340	0.600	0.270	0.600	0.3800	0.700	0.410	1.000	1.200
8/7/06	0.700	0.760	0.440	0.250	0.410	0.250	0.520	0.480	1.400	1.300	0.780	0.650
8/8/07	1.100	2.370	0.700	0.530	0.200	0.550	0.500	0.740	1.100	1.450	0.800	0.930
8/20/08	0.900	1.230	0.300	0.430	0.600	0.980	0.500	0.790	0.800	1.330	0.500	0.670
8/10/09	0.800	0.880	0.700	0.540	0.700	1.080	0.800	0.610	2.600	2.980	0.500	0.810
8/2/10	1.3	1.090	1.0	1.490	0.8	0.62	1.3	1.69	1.7	1.69	0.8	0.87
8/23/11	0.9	1.320	0.4	0.320	0.4	0.4	0.5	0.58	1.0	1.48	0.6	0.86
8/20/12	0.5	1.960	0.4	0.540	0.7	1.09	0.6	0.81	1.6	2.70	0.8	1.37
8/21/13	0.7	1.013	0.3	0.405	0.6	1.35	0.3	0.54	1.1	1.62	0.5	0.743
8/25/14	0.8	0.945	0.4	0.54	0.5	0.675	0.7	0.743	2.8	3.71	0.4	0.81

*Data not available.

ANALYTICAL SUMMARY REPORT

September 26, 2014

Energy Fuels Resources (USA) Inc
225 Union Blvd Ste 600
Lakewood, CO 80228-1826

Work Order: C14081042

Project Name: Annual Soils 2014

Energy Laboratories, Inc. Casper WY received the following 7 samples for Energy Fuels Resources (USA) Inc on 8/27/2014 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C14081042-001	BHV-1	08/25/14 8:57	08/27/14	Soil	Uranium, Total Percent Moisture Digestion, Total Metals Digestion For RadioChemistry Radium 226
C14081042-002	BHV-2	08/25/14 9:07	08/27/14	Soil	Same As Above
C14081042-003	BHV-3 Black Mesa	08/25/14 9:25	08/27/14	Soil	Same As Above
C14081042-004	BHV-4	08/25/14 8:30	08/27/14	Soil	Same As Above
C14081042-005	BHV-5	08/25/14 8:48	08/27/14	Soil	Same As Above
C14081042-006	BHV-6	08/25/14 8:41	08/27/14	Soil	Same As Above
C14081042-007	BHV-65	08/25/14 9:07	08/27/14	Soil	Same As Above

The results as reported relate only to the item(s) submitted for testing. The analyses presented in this report were performed at Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Radiochemistry analyses were performed at Energy Laboratories, Inc., 2325 Kerzell Lane, Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

If you have any questions regarding these test results, please call.

Report Approved By:

Report Proofing Specialist

Digitally signed by
Sheri M. Mead
Date: 2014.09.26 12:32:03 -06:00

CLIENT: Energy Fuels Resources (USA) Inc
Project: Annual Soils 2014
Sample Delivery Group: C14081042

Report Date: 09/26/14

CASE NARRATIVE

ORIGINAL SAMPLE SUBMITTAL(S)
All original sample submittals have been returned with the data package.

SAMPLE TEMPERATURE COMPLIANCE: 4°C (±2°C)
Temperature of samples received may not be considered properly preserved by accepted standards. Samples that are hand delivered immediately after collection shall be considered acceptable if there is evidence that the chilling process has begun.

GROSS ALPHA ANALYSIS
Method 900.0 for gross alpha and gross beta is intended as a drinking water method for low TDS waters. Data provided by this method for non potable waters should be viewed as inconsistent.

RADON IN AIR ANALYSIS
The desired exposure time is 48 hours (2 days). The time delay in returning the canister to the laboratory for processing should be as short as possible to avoid excessive decay. Maximum recommended delay between end of exposure to beginning of counting should not exceed 8 days.

SOIL/SOLID SAMPLES
All samples reported on an as received basis unless otherwise indicated.

ATRAZINE, SIMAZINE AND PCB ANALYSIS
Data for PCBs, Atrazine and Simazine are reported from EPA 525.2. PCB data reported by ELI reflects the results for seven individual Aroclors. When the results for all seven are ND (not detected), the sample meets EPA compliance criteria for PCB monitoring.

SUBCONTRACTING ANALYSIS
Subcontracting of sample analyses to an outside laboratory may be required. If so, ENERGY LABORATORIES will utilize its branch laboratories or qualified contract laboratories for this service. Any such laboratories will be indicated within the Laboratory Analytical Report.

BRANCH LABORATORY LOCATIONS
eli-b - Energy Laboratories, Inc. - Billings, MT
eli-g - Energy Laboratories, Inc. - Gillette, WY
eli-h - Energy Laboratories, Inc. - Helena, MT
eli-r - Energy Laboratories, Inc. - Rapid City, SD
eli-cs - Energy Laboratories, Inc. - College Station, TX

CERTIFICATIONS:
USEPA: WY00002, Radiochemical WY00937; FL-DOH NELAC: E87641, Radiochemical E871017; California: 02118CA; Oregon: WY200001, Radiochemical WY200002; Utah: WY00002; Washington: C836

ISO 17025 DISCLAIMER:
The results of this Analytical Report relate only to the items submitted for analysis.

ENERGY LABORATORIES, INC. - CASPER,WY certifies that certain method selections contained in this report meet requirements as set forth by the above accrediting authorities. Some results requested by the client may not be covered under these certifications. All analysis data to be submitted for regulatory enforcement should be certified in the sample state of origin. Please verify ELI's certification coverage by visiting www.energylab.com

ELI appreciates the opportunity to provide you with this analytical service. For additional information and services visit our web page www.energylab.com.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Annual Soils 2014
Lab ID: C14081042-001
Client Sample ID: BHV-1

Report Date: 09/26/14
Collection Date: 08/25/14 08:57
DateReceived: 08/27/14
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	2.8	%		0.1		D2974	08/28/14 11:50 / dm
METALS - TOTAL							
Uranium	1.4	mg/kg-dry	D	0.1		SW6020	09/26/14 03:11 / cp
Uranium, Activity	0.9	pCi/g-dry	D	0.1		SW6020	09/26/14 03:11 / cp
RADIONUCLIDES							
Radium 226	0.8	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 precision (±)	0.08	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 MDC	0.05	pCi/g-dry				E903.0	09/10/14 09:28 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Annual Soils 2014
Lab ID: C14081042-002
Client Sample ID: BHV-2

Report Date: 09/26/14
Collection Date: 08/25/14 09:07
DateReceived: 08/27/14
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	6.4	%		0.1		D2974	08/28/14 11:50 / dm
METALS - TOTAL							
Uranium	0.8	mg/kg-dry	D	0.1		SW6020	09/26/14 03:18 / cp
Uranium, Activity	0.5	pCi/g-dry	D	0.1		SW6020	09/26/14 03:18 / cp
RADIONUCLIDES							
Radium 226	0.4	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 precision (±)	0.06	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 MDC	0.05	pCi/g-dry				E903.0	09/10/14 09:28 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Annual Soils 2014
Lab ID: C14081042-003
Client Sample ID: BHV-3 Black Mesa

Report Date: 09/26/14
Collection Date: 08/25/14 09:25
DateReceived: 08/27/14
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	1.4	%		0.1		D2974	08/28/14 11:50 / dm
METALS - TOTAL							
Uranium	1.0	mg/kg-dry	D	0.1		SW6020	09/26/14 03:21 / cp
Uranium, Activity	0.7	pCi/g-dry	D	0.1		SW6020	09/26/14 03:21 / cp
RADIONUCLIDES							
Radium 226	0.5	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 precision (±)	0.07	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 MDC	0.04	pCi/g-dry				E903.0	09/10/14 09:28 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Annual Soils 2014
Lab ID: C14081042-004
Client Sample ID: BHV-4

Report Date: 09/26/14
Collection Date: 08/25/14 08:30
DateReceived: 08/27/14
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	2.9	%		0.1		D2974	08/28/14 11:50 / dm
METALS - TOTAL							
Uranium	1.1	mg/kg-dry	D	0.1		SW6020	09/26/14 03:25 / cp
Uranium, Activity	0.8	pCi/g-dry	D	0.1		SW6020	09/26/14 03:25 / cp
RADIONUCLIDES							
Radium 226	0.7	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 precision (±)	0.08	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 MDC	0.05	pCi/g-dry				E903.0	09/10/14 09:28 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Annual Soils 2014
Lab ID: C14081042-005
Client Sample ID: BHV-5

Report Date: 09/26/14
Collection Date: 08/25/14 08:48
DateReceived: 08/27/14
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	2.1	%		0.1		D2974	08/28/14 11:50 / dm
METALS - TOTAL							
Uranium	5.5	mg/kg-dry	D	0.1		SW6020	09/26/14 03:42 / cp
Uranium, Activity	3.7	pCi/g-dry	D	0.1		SW6020	09/26/14 03:42 / cp
RADIONUCLIDES							
Radium 226	2.8	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 precision (±)	0.2	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 MDC	0.05	pCi/g-dry				E903.0	09/10/14 09:28 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Annual Soils 2014
Lab ID: C14081042-006
Client Sample ID: BHV-6

Report Date: 09/26/14
Collection Date: 08/25/14 08:41
DateReceived: 08/27/14
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	3.2	%		0.1		D2974	08/28/14 11:50 / dm
METALS - TOTAL							
Uranium	1.2	mg/kg-dry	D	0.1		SW6020	09/26/14 03:46 / cp
Uranium, Activity	0.8	pCi/g-dry	D	0.1		SW6020	09/26/14 03:46 / cp
RADIONUCLIDES							
Radium 226	0.4	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 precision (±)	0.07	pCi/g-dry				E903.0	09/10/14 09:28 / lmc
Radium 226 MDC	0.05	pCi/g-dry				E903.0	09/10/14 09:28 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Annual Soils 2014
Lab ID: C14081042-007
Client Sample ID: BHV-65

Report Date: 09/26/14
Collection Date: 08/25/14 09:07
DateReceived: 08/27/14
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	6.4	%		0.1		D2974	08/28/14 11:51 / dm
METALS - TOTAL							
Uranium	0.6	mg/kg-dry	D	0.1		SW6020	09/26/14 03:49 / cp
Uranium, Activity	0.4	pCi/g-dry	D	0.1		SW6020	09/26/14 03:49 / cp
RADIONUCLIDES							
Radium 226	0.5	pCi/g-dry				E903.0	09/10/14 11:30 / lmc
Radium 226 precision (±)	0.07	pCi/g-dry				E903.0	09/10/14 11:30 / lmc
Radium 226 MDC	0.05	pCi/g-dry				E903.0	09/10/14 11:30 / lmc

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MDC - Minimum detectable concentration
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.
D - RL increased due to sample matrix.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Annual Soils 2014

Report Date: 09/26/14
Work Order: C14081042

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: E903.0										Batch: 42452
Lab ID: C14081042-003AMS1		Sample Matrix Spike				Run: BERTHOLD 770-1_140904A				09/10/14 09:28
Radium 226		1.8	pCi/g-dry		77	70	130			
Lab ID: C14081042-003AMS1		Sample Matrix Spike Duplicate				Run: BERTHOLD 770-1_140904A				09/10/14 09:28
Radium 226		1.9	pCi/g-dry		84	70	130	6.5	23.5	
Lab ID: LCS1-42452		Laboratory Control Sample				Run: BERTHOLD 770-1_140904A				09/10/14 09:28
Radium 226		1.6	pCi/g-dry		96	80	120			
Lab ID: MB-42452	3	Method Blank				Run: BERTHOLD 770-1_140904A				09/10/14 11:30
Radium 226		0.02	pCi/g-dry							
Radium 226 precision (±)		0.008	pCi/g-dry							
Radium 226 MDC		0.010	pCi/g-dry							

Qualifiers:

RL - Analyte reporting limit.
MDC - Minimum detectable concentration
ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Casper, WY Branch

Client: Energy Fuels Resources (USA) Inc
Project: Annual Soils 2014

Report Date: 09/26/14
Work Order: C14081042

Analyte		Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method:	**SW6020**									Analytical Run: ICPMS2-C_140925A	
Lab ID:	**ICV**		Initial Calibration Verification Standard							09/25/14 15:10	
Uranium			0.0506	mg/L	0.00030	101	90	110			
Lab ID:	**ICSA**		Interference Check Sample A							09/25/14 15:13	
Uranium			1.74E-05	mg/L	0.00030						
Lab ID:	**ICSAB**		Interference Check Sample AB							09/25/14 15:17	
Uranium			4.50E-06	mg/L	0.00030						
Method:	**SW6020**									Batch: 42703	
Lab ID:	**MB-42703**		Method Blank				Run: ICPMS2-C_140925A			09/26/14 02:57	
Uranium			0.003	mg/kg-dry	0.003						
Lab ID:	**LFB-42703**		Laboratory Fortified Blank				Run: ICPMS2-C_140925A			09/26/14 03:01	
Uranium			25.5	mg/kg-dry	0.15	103	75	125			
Lab ID:	**LCS3-42703**		Laboratory Control Sample				Run: ICPMS2-C_140925A			09/26/14 03:04	
Uranium			122	mg/kg-dry	0.37	119	75	125			
Lab ID:	**C14081042-001BDIL**		Serial Dilution				Run: ICPMS2-C_140925A			09/26/14 03:14	
Uranium			1.35	mg/kg-dry	0.75					10	N
Lab ID:	**C14081042-007BMS3**		Sample Matrix Spike				Run: ICPMS2-C_140925A			09/26/14 03:53	
Uranium			26.4	mg/kg-dry	0.15	103	75	125			
Lab ID:	**C14081042-007BMSD**		Sample Matrix Spike Duplicate				Run: ICPMS2-C_140925A			09/26/14 03:56	
Uranium			26.1	mg/kg-dry	0.15	102	75	125	1.2	20	

Qualifiers:

RL - Analyte reporting limit.

MDC - Minimum detectable concentration

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

Workorder Receipt Checklist

Energy Fuels Resources (USA) Inc C14081042

Login completed by: Debra Williams
Reviewed by: BL2000\cwagner
Reviewed Date: 8/28/2014

Date Received: 8/27/2014
Received by: tmm
Carrier name: 2Day

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Applicable ☑
Container/Temp Blank temperature:	NA°C NA		
Water - VOA vials have zero headspace?	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	Not Applicable ☑

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Contact and Corrective Action Comments:

None

Sheet 1 of 1

CHAIN OF CUSTODY C14081042

Samples Shipped to: Energy Laboratories
2393 Salt Creek Hwy
Casper WY, 82601

Contact: Garrin Palmer
Ph: 435 678 4115
gpalmer@energyfuels.com

Chain of Custody/Sampling Analysis Request

Project	Samplers Name	Samplers Signature
Annual Soils 2014	Garrin Palmer	

Sample ID	Date Collected	Time Collected	Laboratory Analysis Requested
BHV-1	8/25/2014	857	Ra-226, U-Nat
BHV-2	8/25/2014	907	Ra-226, U-Nat
BHV-3-Black Mesa	8/25/2014	925	Ra-226, U-Nat
BHV-4	8/25/2014	830	Ra-226, U-Nat
BHV-5	8/25/2014	848	Ra-226, U-Nat
BHV-6	8/25/2014	841	Ra-226, U-Nat
BHV-65	8/25/2014	907	Ra-226, U-Nat

Comments:

Relinquished By:(Signature)	Date/Time	Received By:(Signature)	Date/Time
Garrin Palmer	8/25/2014 1200	[signature]	8-27-14 9:15
Relinquished By:(Signature) [signature]	Date/Time	Received By:(Signature)	Date/Time

ATTACHMENT J

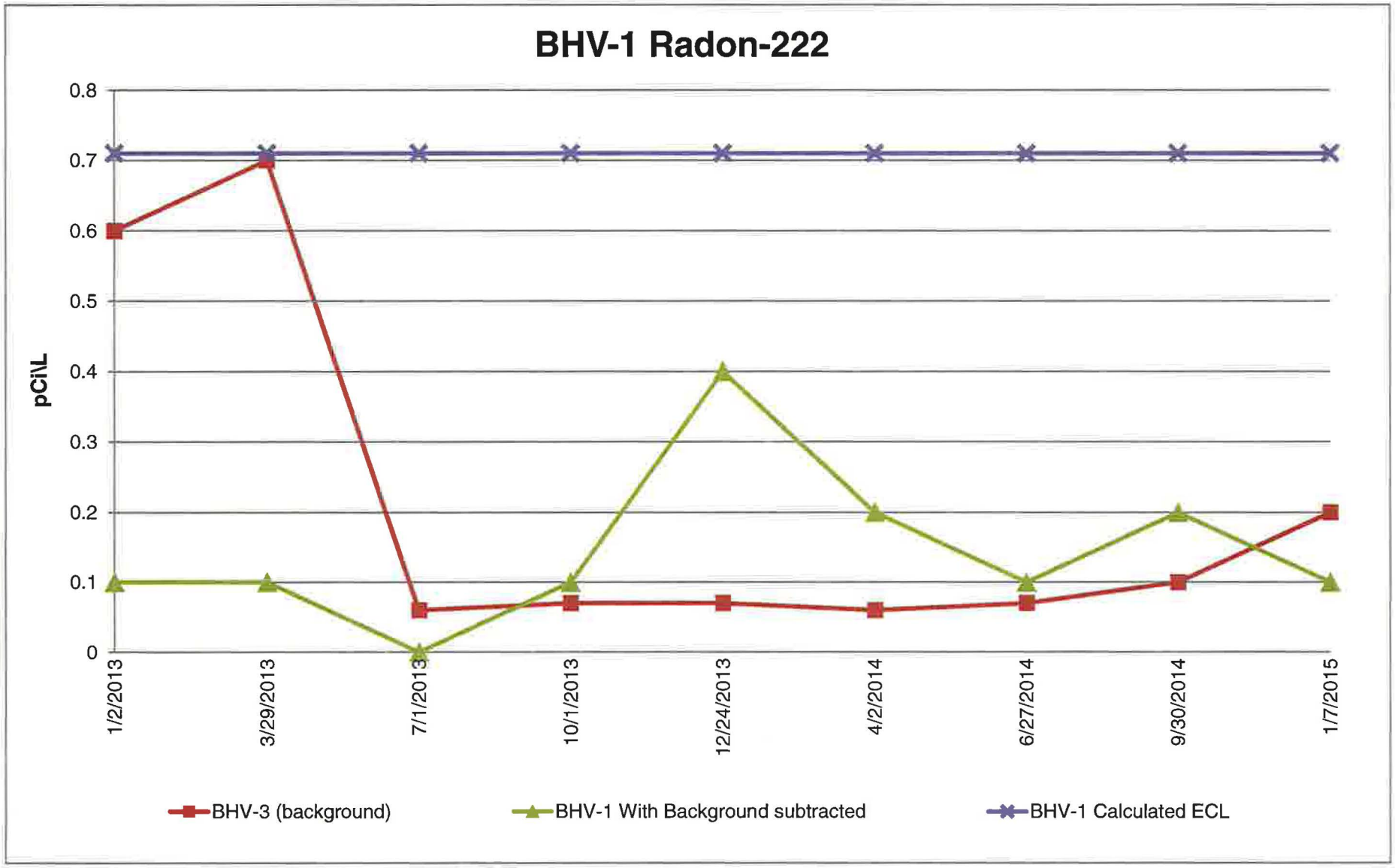
RADON MONITORING GRAPHS AND DATA

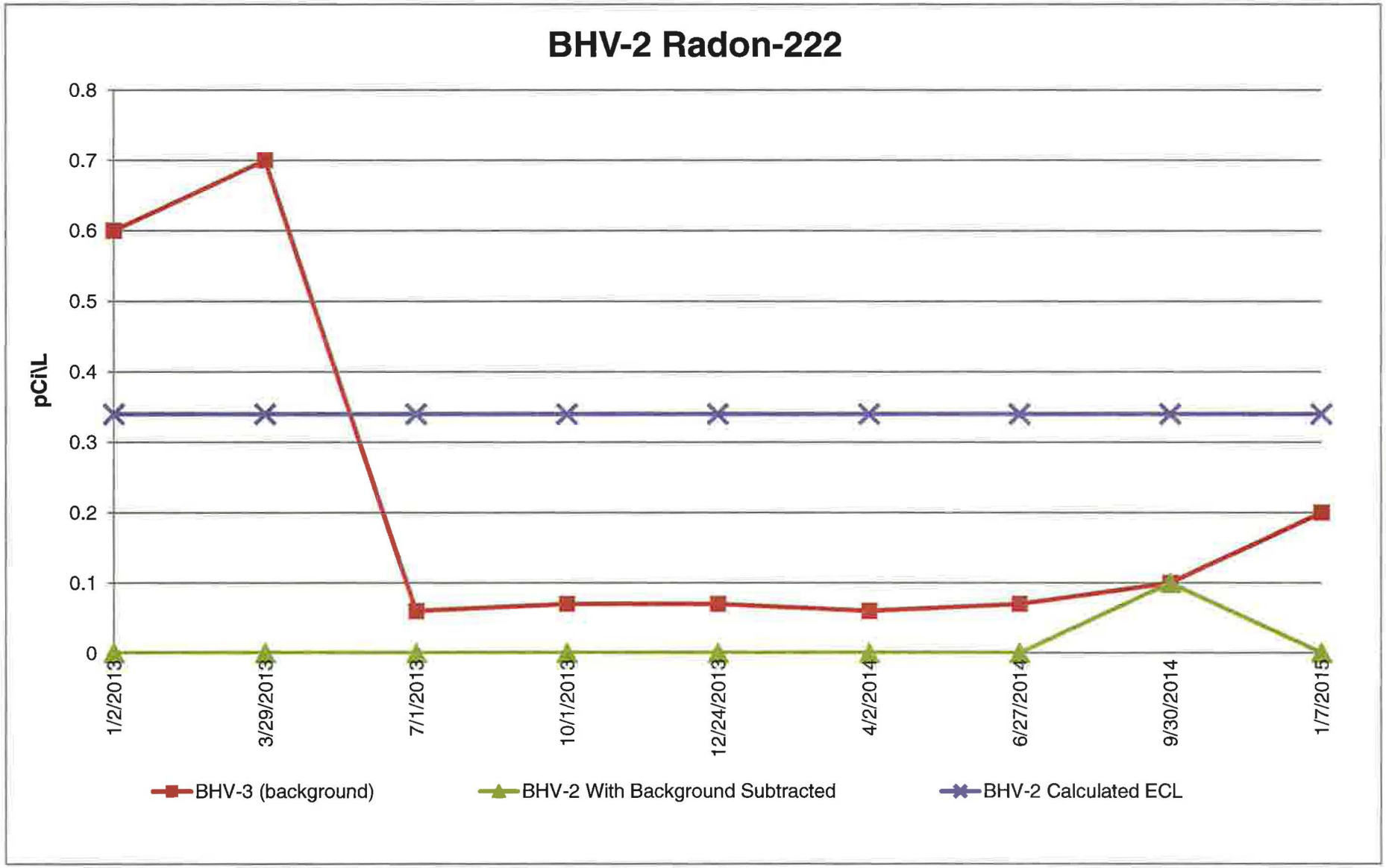
White Mesa Mill Radon Sampling Results

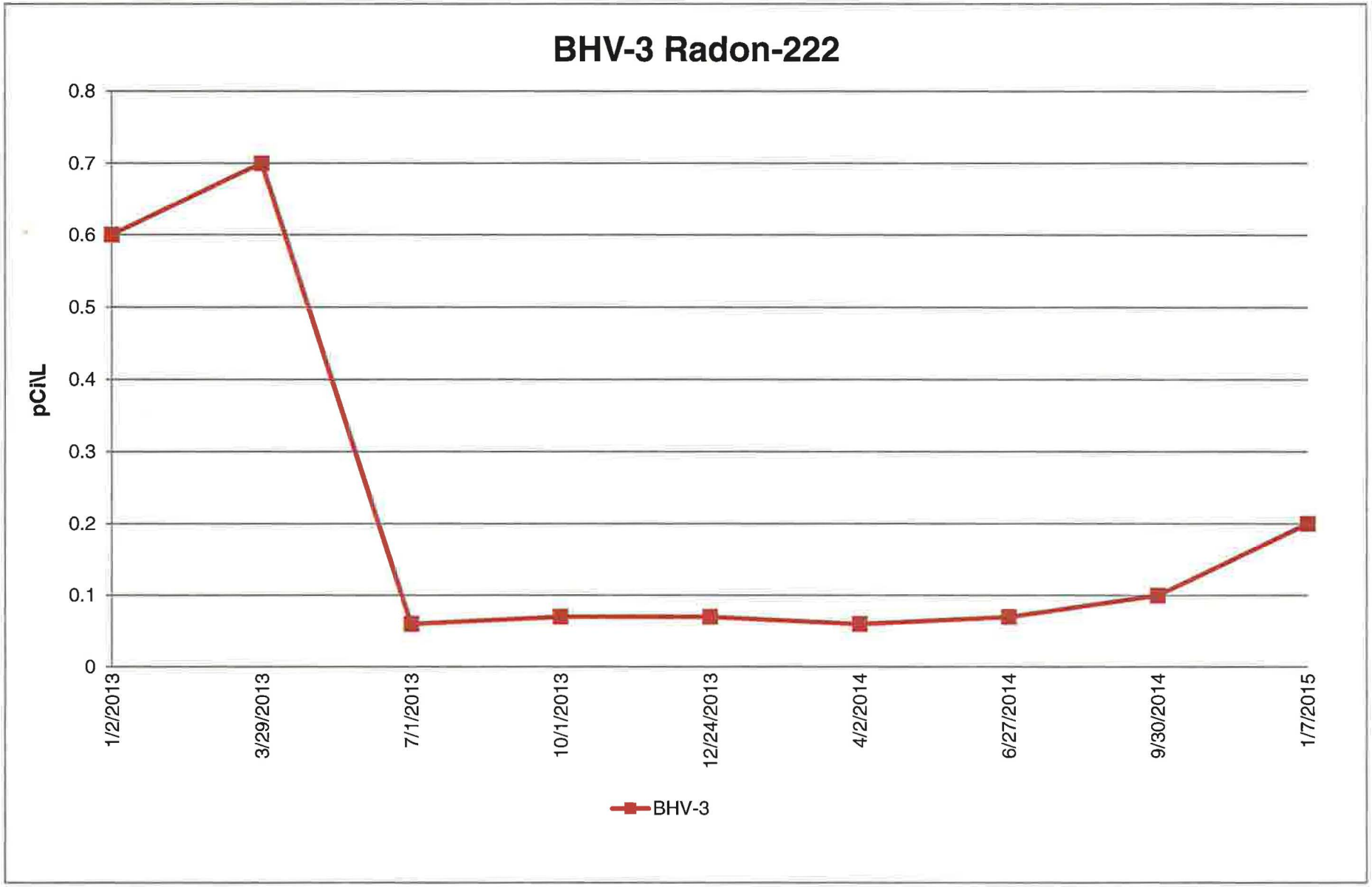
Date	BHV-1 (pCi/L)	BHV-1 Calculated ECL	BHV-2 (pCi-/L)	BHV-2 Calculated ECL	BHV-3 (pCi/L)	BHV-4 (pCi/L)	BHV-4 Calculated ECL	BHV-5 (pCi/L)	BHV-5 Calculated ECL	BHV-6 (pCi/L)	BHV-6 Calculated ECL	BHV-7 (pCi/L)	BHV-7 Calculated ECL	BHV-8 (pCi/L)	BHV-8 Calculated ECL
1/2/2013	0.1	0.71	0	0.34	0.6	0.4	0.5	0	1.43	0.4	0.83	NS	-	NS	-
3/29/2013	0.1	0.71	0	0.34	0.7	0.3	0.5	0.5	1.43	0.1	0.83	NS	-	NS	-
7/1/2013	0	0.71	0	0.34	0.06	0	0.5	0	1.43	0	0.83	NS	-	NS	-
10/1/2013	0.1	0.71	0	0.34	0.07	0	0.5	NA	1.43	0	0.83	NS	-	NS	-
12/24/2013	0.4	0.71	0	0.34	0.07	0.33	0.5	0.43	1.43	0.73	0.83	NS	-	NS	-
4/2/2014	0.2	0.71	0	0.34	0.06	0.04	0.5	0.54	1.43	0.24	0.83	NS	-	NS	-
6/27/2014	0.1	0.71	0	0.34	0.07	0	0.5	0.03	1.43	0.03	0.83	NS	-	NS	-
9/30/2014	0.2	0.71	0.1	0.34	0.1	0.2	0.5	0.3	1.43	0.2	0.83	NS	-	NS	-
1/7/2015	0.1	0.71	0	0.34	0.2	0.3	0.5	0.6	1.43	0.2	0.83	0.2	1.12	0.1	0.71

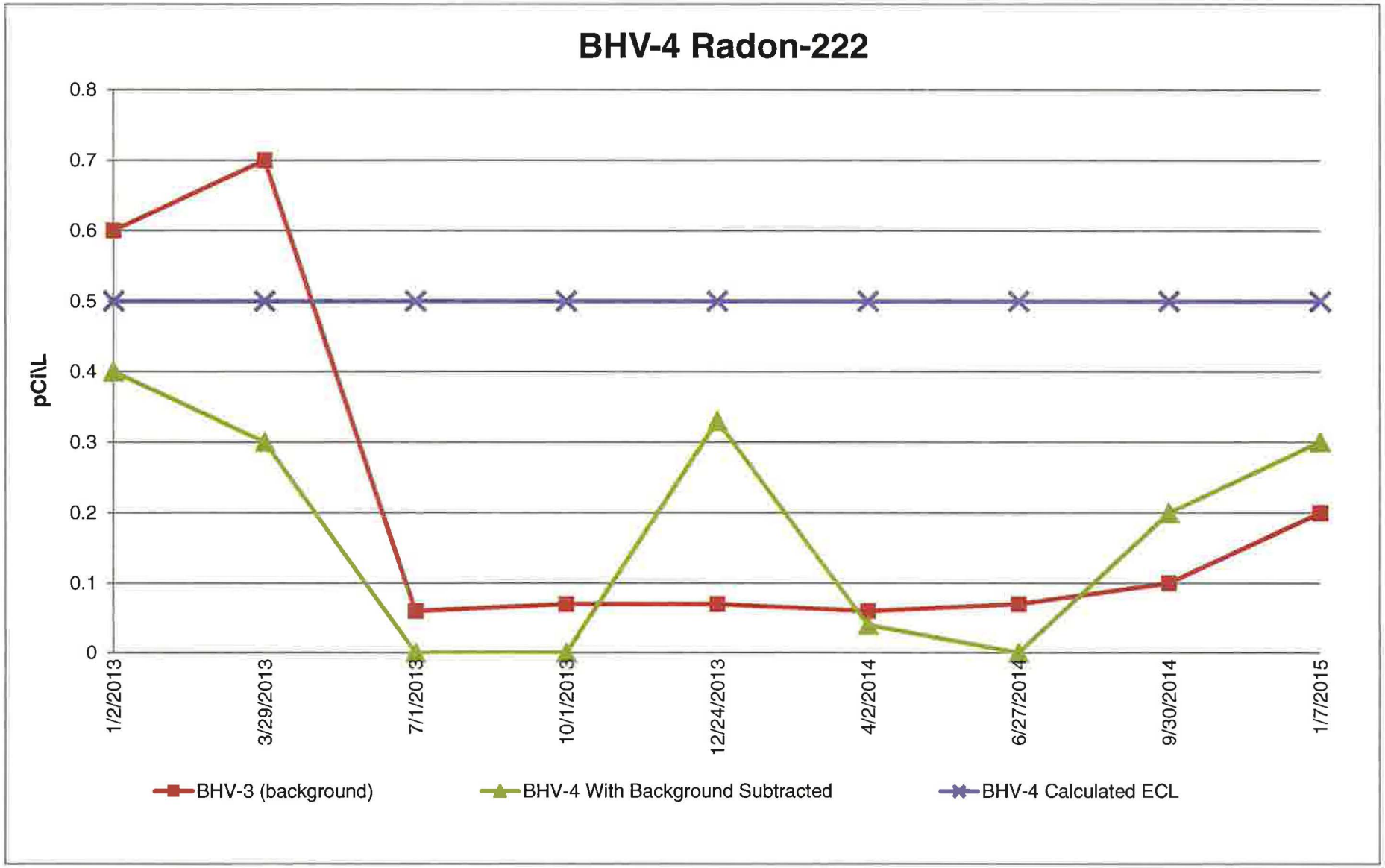
NA - Not Available - the canister was damaged. No data reported.

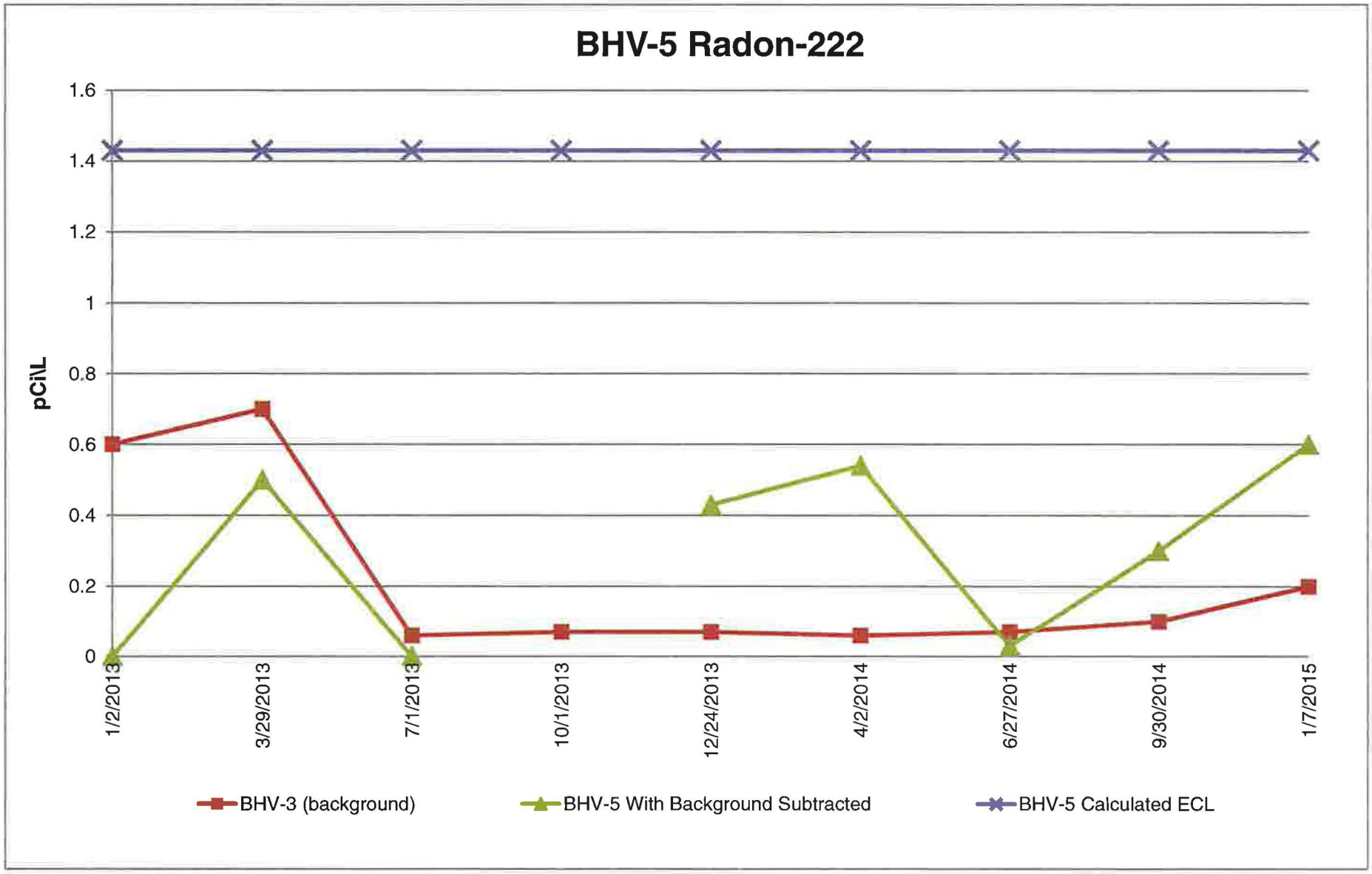
NS - Not Sampled - EFRI installed and began radon sampling at BHV-7 and BHV-8 in the fourth quarter of 2014.

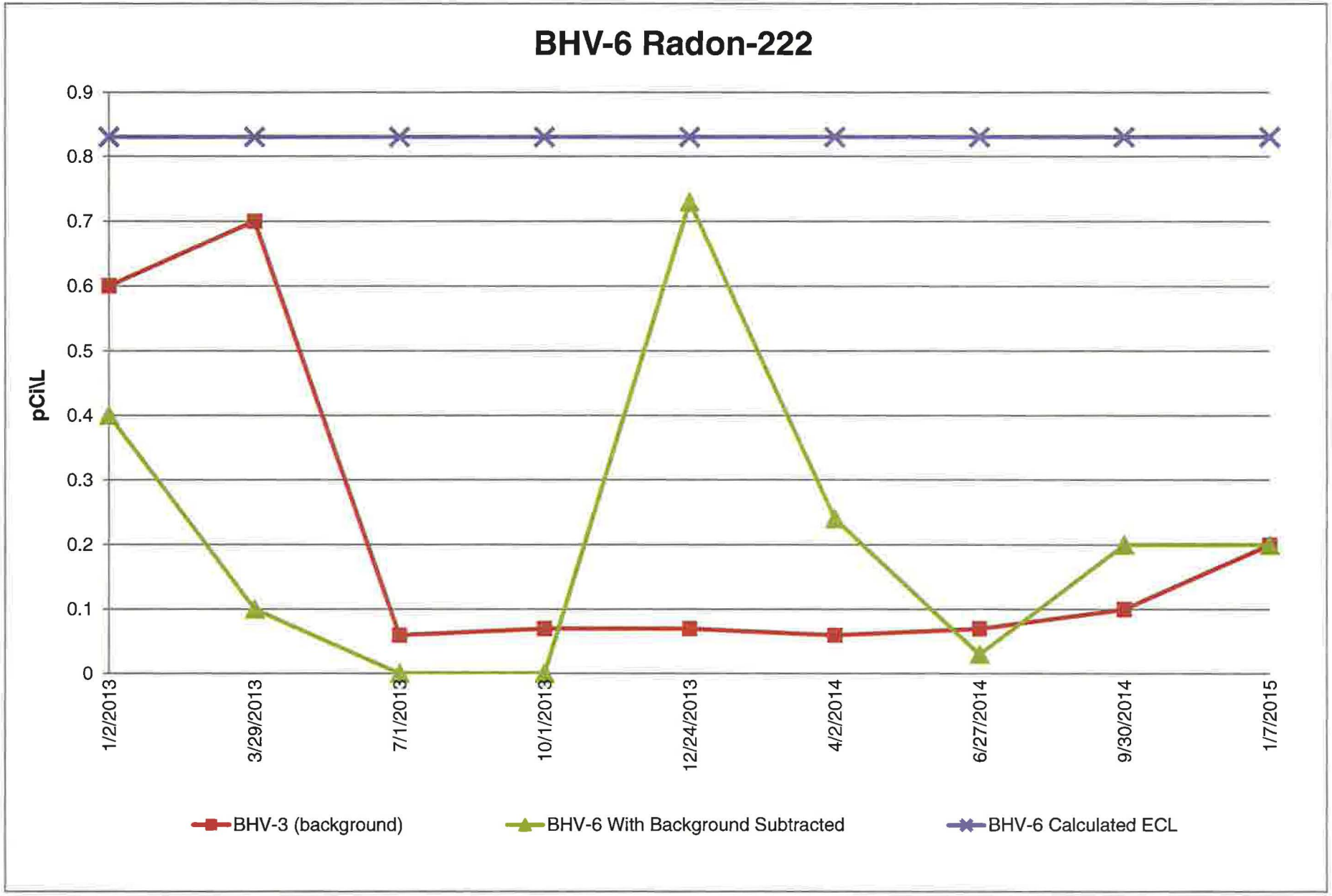

BHV-1 Radon-222
pCi\L
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1/2/2013
3/29/2013
7/1/2013
10/1/2013
12/24/2013
4/2/2014
6/27/2014
9/30/2014
1/7/2015
BHV-3 (background)
BHV-1 With Background subtracted
BHV-1 Calculated ECL


BHV-2 Radon-222
pCi\L
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1/2/2013
3/29/2013
7/1/2013
10/1/2013
12/24/2013
4/2/2014
6/27/2014
9/30/2014
1/7/2015
BHV-3 (background)
BHV-2 With Background Subtracted
BHV-2 Calculated ECL


BHV-3 Radon-222
pCi\L
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1/2/2013
3/29/2013
7/1/2013
10/1/2013
12/24/2013
4/2/2014
6/27/2014
9/30/2014
1/7/2015
BHV-3


BHV-4 Radon-222
pCi\L
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1/2/2013
3/29/2013
7/1/2013
10/1/2013
12/24/2013
4/2/2014
6/27/2014
9/30/2014
1/7/2015
BHV-3 (background)
BHV-4 With Background Subtracted
BHV-4 Calculated ECL


BHV-5 Radon-222
pCi\L
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
1/2/2013
3/29/2013
7/1/2013
10/1/2013
12/24/2013
4/2/2014
6/27/2014
9/30/2014
1/7/2015
BHV-3 (background)
BHV-5 With Background Subtracted
BHV-5 Calculated ECL


BHV-6 Radon-222
pCi\L
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
1/2/2013
3/29/2013
7/1/2013
10/1/2013
12/24/2013
4/2/2014
6/27/2014
9/30/2014
1/7/2015
BHV-3 (background)
BHV-6 With Background Subtracted
BHV-6 Calculated ECL

ATTACHMENT K

CELL 2 RADON FLUX DATA

Table 1

Cell 2 Monthly Radon Flux Sampling		
Sampling Event	Result (pCi/(m2 -sec))	Monthly Report Submittal Date
2012 Average	**25.9**	
April 2013	18.0	May 29, 2013
May 2013	22.6	June 20, 2013
June 2013	23.2	July 25, 2013
July 2013	24.2	August 20, 2013
August 2013	30.2	September 23, 2013
September 2013	17.0	October 23, 2013
October 2013	19.0	November 15, 2013
November 2013	19.5	December 17, 2013
December 2013	10.0	January 15, 2014
2013 Average	**20.4**	
January 2014	9.8	February 27, 2014
February 2014	11.0	March 27, 2014
March 2014	16.4	April 25, 2014
April 2014	13.3	May 30, 2014
May 2014	16.7	June 25, 2014
June 2014	15.0	July 29, 2014
July 2014*	20.4	July-December 2014 SAER
September 2014*	15.8	July-December 2014 SAER
2014 Average	**14.7**	
July-December 2014 Average	**18.1**	

* - Per the DRC letter dated July 23, 2014, Cell 2 is no longer in operation and therefore radon flux sample results are now included in the Semi-Annual Effluent Monitoring Report per the Environmental Protection Manual and license condition 11.9.

National Emission Standards for Hazardous Air Pollutants
2014 Radon Flux Measurement Program

White Mesa Mill
6425 South Highway 191
Blanding, Utah 84511

July 2014 Sampling Results
Cell 2

Prepared for: Energy Fuels Resources (USA) Inc.
6425 S. Highway 191
P.O. Box 809
Blanding, Utah 84511

Prepared by: Tellco Environmental
P.O. Box 3987
Grand Junction, Colorado 81502

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Appendix A. Charcoal Canister Analyses Support Documents

Appendix B. Recount Data Analyses

Appendix C. Radon Flux Sample Laboratory Data, Including Blanks

Appendix D. Sample Locations Map (Figure 2)

1. INTRODUCTION

During July 14-15, 2014 Tellco Environmental, LLC (Tellco) of Grand Junction, Colorado, provided support to Energy Fuels Resources (USA) Inc. (Energy Fuels) to conduct radon flux measurements at its White Mesa Mill site regarding the required National Emission Standards for Hazardous Air Pollutants (NESHAPs) Radon Flux Measurements. These measurements are required of Energy Fuels to show compliance with Federal Regulations (further discussed in Section 3 below). The standard is not an average per facility, but is an average per radon source. The standard allows mill owners or operators the option of either making a single set of measurements to represent the year or making multiple measurements over a one year period (e.g., weekly, monthly, or quarterly intervals).

Energy Fuels is presently performing radon flux measurements on a monthly basis at Cell 2. Prior to 2012, Energy Fuels had been making a single set of measurements to represent the radon flux each year; however, as the radon flux levels began exceeding the regulatory standard of 20 picoCuries per square meter per second (pCi/m^2-s) in 2012, Energy Fuels responded by opting to make the radon flux measurements on a more frequent basis.

Also, in response to the increase in the radon flux rates, Energy Fuels has placed approximately 19,432 cubic meters of additional material, varying in depth from approximately 31-61 centimeters, throughout an area of approximately 50,130 square meters (m^2). In March 2014, Energy Fuels suspended the placement of additional cover materials at Cell 2 because the average flux rate had been below the regulatory standard for several months.

Tellco was contracted to provide radon canisters, equipment, and canister-placement personnel as well as lab analysis of samples collected. Energy Fuels personnel provided support for loading and unloading charcoal from the canisters. This report details the procedures employed by Energy Fuels and Tellco to obtain the results presented in Section 9.0 of this report. This report presents the radon flux measurements results only for Cell 2 for July 2014; no radon flux measurements were performed for Cell 3 during July 2014.

2. SITE DESCRIPTION

The White Mesa Mill facility is located in San Juan County in southeastern Utah, six miles south of Blanding, Utah. The mill began operations in 1980 for the purpose of extracting uranium and vanadium from feed stocks. Processing effluents from the operation are deposited in lined cells, which vary in depth. Cell 1, Cell 4A, and Cell 4B did not require radon flux sampling, as explained in Section 3 below.

Cell 2, which has a total area of approximately 270,624 m^2, has been filled and covered with interim cover. This cell is comprised of one region, an interim soil cover of varying thickness, which requires NESHAPs radon flux monitoring. There were no apparent exposed tailings within Cell 2 during the July 2014 sampling.

Cell 3, which has a total area of approximately 288,858 m^2, is nearly filled with tailings sand and is undergoing pre-closure activities. This cell is comprised of two source regions that require NESHAPs

radon monitoring: a soil cover region of varying thickness and an exposed tailings "beaches" region. The remaining area is covered by standing liquid in lower elevation areas.

3. REGULATORY REQUIREMENTS FOR THE SITE

Radon emissions from the uranium mill tailings at this site are regulated by the State of Utah's Division of Radiation Control and administered by the Utah Division of Air Quality under generally applicable standards set by the U.S. Environmental Protection Agency (EPA) for Operating Mills. Applicable regulations are specified in 40 CFR Part 61, Subpart W, National Emission Standards for Radon Emissions from Operating Mill Tailings, with technical procedures in Appendix B. At present, there are no Subpart T uranium mill tailings at this site. These regulations are a subset of the NESHAPs. According to subsection 61.252 Standard, (a) radon-222 emissions to ambient air from an existing uranium mill tailings pile shall not exceed an average of 20 pCi/m^2-s for each pile (or cell). Subsection 61.253, Determining Compliance, states that: "Compliance with the emission standard in this subpart shall be determined annually through the use of Method 115 of Appendix B." Cell 1 is completely covered with standing liquid and therefore no radon flux measurements are required on Cell 1. The repaired Cell 4A, and newly constructed Cell 4B, were both constructed after December 15, 1989 and each was constructed with less than 40 acres surface area. Cell 4A and 4B comply with the requirements of 40 CFR 61.252(b), therefore no radon flux measurements are required on either Cell 4A or 4B.

4. SAMPLING METHODOLOGY

Radon emissions were measured using Large Area Activated Charcoal Canisters (canisters) in conformance with 40 CFR, Part 61, Appendix B, Method 115, Restrictions to Radon Flux Measurements, (EPA, 2013). These are passive gas adsorption sampling devices used to determine the flux rate of radon-222 gas from a surface. The canisters were constructed using a 10-inch diameter PVC end cap containing a bed of 180 grams of activated, granular charcoal. The prepared charcoal was placed in the canisters on a support grid on top of a ½ inch thick layer of foam and secured with a retaining ring under 1½ inches of foam (see Figure 1, page 10).

One hundred sampling locations were distributed throughout Cell 2 (consisting of one region) as depicted on the Sample Locations Map (see Figure 2, Appendix D). Each charged canister was placed directly onto the surface (open face down) and exposed to the surface for 24 hours. Radon gas adsorbed onto the charcoal and the subsequent radioactive decay of the entrained radon resulted in radioactive lead-214 and bismuth-214. These radon progeny isotopes emit characteristic gamma photons that can be detected through gamma spectroscopy. The original total activity of the adsorbed radon was calculated from these gamma ray measurements using calibration factors derived from cross-calibration of standard sources containing known total activities of radium-226 with geometry identical to the counted samples and from the principles of radioactive decay.

After approximately 24 hours, the exposed charcoal was transferred to a sealed plastic sample container (to prevent radon loss and/or further exposure during transport), identified and labeled, and transported to the Tellco laboratory in Grand Junction, Colorado for analysis. Upon completion of on-site activities, the field equipment was alpha and beta-gamma scanned by Energy Fuels Radiation Safety personnel for possible contamination resulting from fieldwork activities. All of the field equipment used was subsequently released for unrestricted use. Tellco personnel maintained custody of the samples from collection through analysis.

5. FIELD OPERATIONS

5.1 Equipment Preparation

All charcoal was dried at 110°C before use in the field. Unused charcoal and recycled charcoal were treated the same. 180-gram aliquots of dried charcoal were weighed and placed in sample containers.

Proper balance operation was verified daily by checking a standard weight. The balance readout agreed with the known standard weight to within ± 0.1 percent.

After acceptable balance check, empty containers were individually placed on the balance and the scale was re-zeroed with the container on the balance. Unexposed and dried charcoal was carefully added to the container until the readout registered 180 grams. The lid was immediately placed on the container and sealed with plastic tape. The balance was checked for readout drift between readings.

Sealed containers with unexposed charcoal were placed individually in the shielded counting well, with the bottom of the container centered over the detector, and the background count rate was documented. Three five-minute background counts were conducted on ten percent of the containers, selected at random to represent the "batch". If the background counts were too high to achieve an acceptable lower limit of detection (LLD), the entire charcoal batch was labeled non-conforming and recycled through the heating/drying process.

5.2 Sample Locations, Identification, and Placement

On July 14, 2014, 100 sampling locations were spread out throughout the Cell 2 covered region. The same sampling locations that were established for previous samplings of Cell 2 were used for the placement of the canisters, although the actual sample identification numbers (IDs) are different. An individual ID was assigned to each sample point, using a sequential alphanumeric system indicating the charcoal batch and physical location within the region (e.g., K01…K100). This ID was written on an adhesive label and affixed to the top of the canister. The sample ID, date, and time of placement were recorded on the radon flux measurements data sheets for the set of one hundred measurements.

Prior to placing a canister at each sample location, the retaining ring, screen, and foam pad of each canister were removed to expose the charcoal support grid. A pre-measured charcoal charge was selected from a batch, opened and distributed evenly across the support grid. The canister was then reassembled and placed face down on the surface at each sampling location. Care was exercised not to push the device into the soil surface. The canister rim was "sealed" to the surface using a berm of local borrow material.

Five canisters (blanks) were similarly processed and these canisters were kept inside an airtight plastic bag during the 24-hour testing period.

5.3 Sample Retrieval

On July 15, 2014 at the end of the 24-hour testing period, all canisters were retrieved, disassembled and each charcoal sample was individually poured through a funnel into a container. Identification numbers were transferred to the appropriate container, which was sealed and placed in a box for

transport. Retrieval date and time were recorded on the same data sheets as the sample placement information. The blank samples were similarly processed.

All 100 charcoal samples from Cell 2 covered region were successfully retrieved and containerized during the retrieval and unloading process.

Tellco personnel maintained custody of the samples from collection through lab analysis.

5.4 Environmental Conditions

A rain gauge and thermometer were placed at Cell 2 to monitor rainfall and air temperatures during sampling; additionally, Energy Fuels maintains an onsite rain gauge.

In accordance with 40 CFR, Part 61, Appendix B, Method 115:

- Canisters were not placed within 24 hours of rainfall at the site.
- After the completion of the placement of the canisters, the rain gauge measured approximately 0.08 inches of rainfall that occurred overnight while the canisters were emplaced.
- The criteria regarding minimum ambient air temperature and frozen ground do not apply when performing sampling on a monthly basis; however, the minimum air temperature during the sampling period was 63 degrees F, and the ground was not frozen at any of the sample locations.

6. SAMPLE ANALYSIS

6.1 Apparatus

Apparatus used for the analysis:

- Single- or multi-channel pulse height analysis system, Ludlum Model 2200 with a Teledyne 3" x 3" sodium iodide, thallium-activated (NaI(Tl)) detector.
- Lead shielded counting well approximately 40 cm deep with 5-cm thick lead walls and a 7-cm thick base and 5 cm thick top.
- National Institute of Standards and Technology (NIST) traceable aqueous solution radium-226 absorbed onto 180 grams of activated charcoal.
- Ohaus Model C501 balance with 0.1-gram sensitivity.

6.2 Sample Inspection and Documentation

Once in the laboratory, the integrity of each charcoal container was verified by visual inspection of the plastic container. Laboratory personnel checked for damaged or unsealed containers and verified that the data sheet was complete.

All of the 100 sample containers and 5 blank containers received and inspected at the Tellco analytical laboratory were ultimately verified as valid and no damaged or unsealed containers were observed.

6.3 Background and Sample Counting

The gamma ray counting system was checked daily, including background and radium-226 source measurements prior to and after each counting session. Based on calibration statistics, using two sources with known radium-226 content, background and source control limits were established for each Ludlum/Teledyne system with shielded counting well (see Appendix A).

Gamma ray counting of exposed charcoal samples included the following steps:

- The length of count time was determined by the activity of the sample being analyzed, according to a data quality objective of a minimum of 1,000 accrued counts for any given sample.
- The sample container was centered on the NaI gamma detector and the shielded well door was closed.
- The sample was counted over a determined count length and then the mid-sample count time, date, and gross counts were documented on the radon flux measurements data sheet and used in the calculations.
- The above steps were repeated for each exposed charcoal sample.
- Approximately 10 percent of the containers counted were selected for recounting. These containers were recounted on the next day following the original count.

7. QUALITY CONTROL (QC) AND DATA VALIDATION

Charcoal flux measurement QC samples included the following intra-laboratory analytical frequency objectives:

- Blanks, 5 percent, and
- Recounts, 10 percent

All sample data were subjected to validation protocols that included assessments of sensitivity, precision, accuracy, and completeness. All method-required data quality objectives (EPA, 2013) were attained.

7.1 Sensitivity

A total of five blanks were analyzed by measuring the radon progeny activity in samples subjected to all aspects of the measurement process, excepting exposure to the source region. These blank sample measurements comprised approximately 5 percent of the field measurements. Analysis of the five blank samples measured radon flux rates ranging from approximately 0.00 to 0.01 pCi/m^2-s, with an average of approximately 0.01 pCi/m^2-s. The lower limit of detection (LLD) was approximately 0.03 pCi/m^2-s.

7.2 Precision

Ten recount measurements, distributed throughout the sample set, were performed by replicating analyses of individual field samples (see Appendix B). These recount measurements comprised approximately 10 percent of the total number of samples analyzed. The precision of all recount measurements, expressed as relative percent difference (RPD), ranged from less than 0.1 percent to 6.9 percent with an overall average precision of approximately 2.5 percent RPD.

7.3 Accuracy

Accuracy of field measurements was assessed daily by counting two laboratory control samples with known Ra-226 content. Accuracy of these lab control sample measurements, expressed as percent bias, ranged from approximately -3.5 percent to +1.0 percent. The arithmetic average bias of the lab control sample measurements was approximately -1.6 percent (see Appendix A).

7.4 Completeness

All 100 of the samples from the Cell 2 cover region were verified, representing 100 percent completeness.

8. CALCULATIONS

Radon flux rates were calculated for charcoal collection samples using calibration factors derived from cross-calibration to sources with known total activity with identical geometry as the charcoal containers. A yield efficiency factor was used to calculate the total activity of the sample charcoal containers. Individual field sample result values presented were not reduced by the results of the field blank analyses.

In practice, radon flux rates were calculated by a database computer program. The algorithms utilized by the data base program were as follows:

Equation 8.1:

$$\text{pCi Rn-222/m}^2\text{sec} = \frac{N}{[Ts*A*b*0.5^{(d/91.75)}]}$$

where: N = net sample count rate, cpm under 220-662 keV peak
Ts = sample duration, seconds
b = instrument calibration factor, cpm per pCi; values used:
0.1698, for M-01/D-21 and
0.1703, for M-02/D-20
d = decay time, elapsed hours between sample mid-time and count mid-time
A = area of the canister, m^2

Equation 8.2:

$$\text{Error}, 2\sigma = 2 \times \frac{\sqrt{\frac{\text{Gross Sample, cpm}}{\text{Sample Count, t, min}} + \frac{\text{Background Sample, cpm}}{\text{Background Count, t, min}}}}{\text{Net, cpm}} \times \text{Sample Concentration}$$

Equation 8.3:

$$\text{LLD} = \frac{2.71 + (4.65)(S_b)}{[Ts*A*b*0.5^{(d/9T.75)}]}$$

where: 2.71 = constant
4.65 = confidence interval factor
S_b = standard deviation of the background count rate
Ts = sample duration, seconds
b = instrument calibration factor, cpm per pCi; values used:
0.1698, for M-01/D-21 and
0.1703, for M-02/D-20
d = decay time, elapsed hours between sample mid-time and count mid-time
A = area of the canister, m^2

9. RESULTS

9.1 Mean Radon Flux

Referencing 40 CFR, Part 61, Subpart W, Appendix B, Method 115 - Monitoring for Radon-222 Emissions, Subsection 2.1.7 - Calculations, "the mean radon flux for each region of the pile and for the total pile shall be calculated and reported as follows:

(a) The individual radon flux calculations shall be made as provided in Appendix A EPA 86(1). The mean radon flux for each region of the pile shall be calculated by summing all individual flux measurements for the region and dividing by the total number of flux measurements for the region.

(b) The mean radon flux for the total uranium mill tailings pile shall be calculated as follows:

$$J_s = \frac{J_1A_1 + \ldots J_2A_2 [+] \ldots J_iA_i}{A_t}$$

Where: J_s = Mean flux for the total pile (pCi/m^2-s)
J_i = Mean flux measured in region i (pCi/m^2-s)
A_i = Area of region i (m^2)
A_t = Total area of the pile (m^2)"

40 CFR 61, Subpart W, Appendix B, Method 115, Subsection 2.1.8, Reporting states "The results of individual flux measurements, the approximate locations on the pile, and the mean radon flux for each region and the mean radon flux for the total stack [pile] shall be included in the emission test report. Any condition or unusual event that occurred during the measurements that could significantly affect the results should be reported."

9.2 Site Results

Site Specific Sample Results (reference Appendix C)

(a) The mean radon flux for the Cell 2 region at the site is as follows:

Cell 2 - Cover Region = 20.4 pCi/m^2-s (based on 270,624 m^2 area)

Note: Reference Appendix C of this report for the entire summary of individual measurement results.

(b) Using the data presented above, the calculated mean radon flux for Cell 2 is as follows:

Cell 2 = 20.4 pCi/m^2-s

$$\frac{(20.4)(270{,}624)}{270{,}624} = 20.4$$

As shown above, the arithmetic mean radon flux of the samples for Cell 2 at Energy Fuels' White Mesa milling facility slightly exceeds the U.S. Nuclear Regulatory Commission and EPA standard of 20 pCi/m^2-s. The July 2014 sampling results for Cell 2 are higher than the June 2014 results.

Appendix C presents the summary of individual measurement results, including blank sample analysis.

Sample locations are depicted on Figure 2, which is included in Appendix D. The map was produced by Tellco.

References

U. S. Environmental Protection Agency, *Radon Flux Measurements on Gardinier and Royster Phosphogypsum Piles Near Tampa and Mulberry, Florida*, EPA 520/5-85-029, NTIS #PB86-161874, January 1986.

U. S. Environmental Protection Agency, *Title 40, Code of Federal Regulations*, July 2013.

U. S. Nuclear Regulatory Commission, *Radiological Effluent and Environmental Monitoring at Uranium Mills*, Regulatory Guide 4.14, April 1980.

U. S. Nuclear Regulatory Commission, *Title 10, Code of Federal Regulations*, Part 40, Appendix A, January 2013.

Figure 1

Large Area Activated Charcoal Canisters Diagram

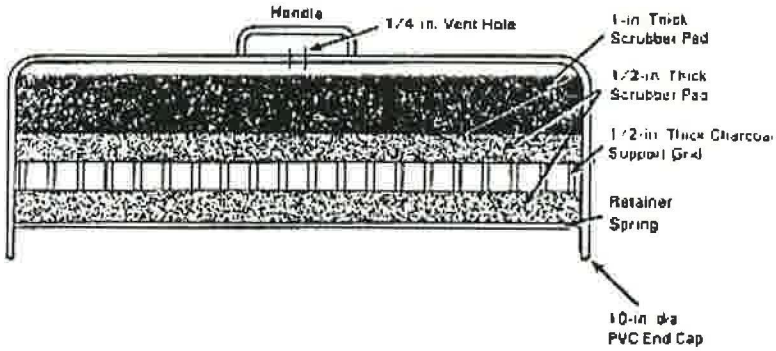


FIGURE 1 Large-Area Radon Collector

Appendix A

Charcoal Canister Analyses Support Documents

ACCURACY APPRAISAL TABLE
JULY 2014 SAMPLING

ENERGY FUELS RESOURCES
WHITE MESA MILL, BLANDING, UTAH
2014 NESHAPs RADON FLUX MEASUREMENTS
CELL 2
SAMPLING DATES: 07/14/14-07/15/14

SYSTEM I.D.	COUNT DATE	Bkg Counts (1 min. each) #1	#2	#3	Source Counts (1 min. each) #1	#2	#3	AVG NET cpm	YIELD cpm/pCi	FOUND pCi	SOURCE ID	KNOWN pCi	% BIAS
M-01/D-21	7/16/2014	126	149	142	10209	10268	10141	10067	0.1708	58940	GS-04	59300	-0.6%
M-01/D-21	7/16/2014	132	131	134	10194	10141	10286	10075	0.1708	58985	GS-04	59300	-0.5%
M-01/D-21	7/17/2014	140	147	131	10337	10042	10199	10053	0.1708	58860	GS-04	59300	-0.7%
M-01/D-21	7/17/2014	126	135	122	10155	10196	10224	10064	0.1708	58923	GS-04	59300	-0.6%
M-01/D-21	7/16/2014	126	149	142	10366	10377	10407	10244	0.1708	59979	GS-05	59300	1.1%
M-01/D-21	7/16/2014	132	131	134	10201	10097	10048	9983	0.1708	58448	GS-05	59300	-1.4%
M-01/D-21	7/17/2014	140	147	131	10148	10100	10136	9989	0.1708	58482	GS-05	59300	-1.4%
M-01/D-21	7/17/2014	126	135	122	10121	10212	10277	10076	0.1708	58991	GS-05	59300	-0.5%
M-02/D-20	7/16/2014	124	154	142	10144	10055	10015	9931	0.1727	57506	GS-04	59300	-3.0%
M-02/D-20	7/16/2014	134	130	139	10125	10194	10335	10084	0.1727	58388	GS-04	59300	-1.5%
M-02/D-20	7/17/2014	139	118	114	10217	10208	10047	10034	0.1727	58099	GS-04	59300	-2.0%
M-02/D-20	7/17/2014	120	143	139	10037	10067	9957	9886	0.1727	57246	GS-04	59300	-3.5%
M-02/D-20	7/16/2014	124	154	142	9954	10154	10116	9935	0.1727	57526	GS-05	59300	-3.0%
M-02/D-20	7/16/2014	134	130	139	10200	9964	10190	9984	0.1727	57809	GS-05	59300	-2.5%
M-02/D-20	7/17/2014	139	118	114	10004	10034	10222	9963	0.1727	57690	GS-05	59300	-2.7%
M-02/D-20	7/17/2014	120	143	139	10090	10198	10161	10016	0.1727	57995	GS-05	59300	-2.2%
								AVERAGE PERCENT BIAS FOR ALL ANALYTICAL SESSIONS:					-1.6%

CHARCOAL CANISTER ANALYSIS SYSTEM

SITE LOCATION: White Mesa Mill, Blanding, UT

CLIENT: Energy Fuels Resources (USA)

Calibration Check Log

System ID: M-01/D-21 Calibration Date: 6/27/14 Due Date: 6/27/15

Scaler S/N: 51572 High Voltage: 1137 Window: 4.42 Thrshld: 2.20

Detector S/N: 041533 Source ID/SN: Ra^{226}/GS-04 Source Activity: 59.3KpCi

Blank Canister Bkgd. Range, cpm: 2 σ = 98 to 161 3 σ = 83 to 176

Gross Source Range, cpm: 2 σ = 9801 to 10587 3 σ = 9604 to 10783

Technician: DL Cogr

All counts times are one minute.

	Date	By	Background Counts (1 min. each)				Source Counts (1 min. each)				ok?
			#1	#2	#3	Avg.	#1	#2	#3	Average	Y/N
Pre	7/16/14	DLCogr	126	149	142	139	10209	10268	10141	10206	Y
Post	7/16/14	DLCogr	132	131	134	132	10194	10141	10286	10207	Y
Pre	7/17/14	DLCogr	140	147	131	139	10337	10042	10199	10193	Y
Post	7/17/14	DLCogr	126	135	122	128	10155	10196	10224	10192	Y

Y/N: Y = average background and source cpm falls within the control limits.
N = average background and source cpm does not fall within the control limits.

The acceptable ranges were determined from prior background and source check data.

CHARCOAL CANISTER ANALYSIS SYSTEM

SITE LOCATION: White Mesa Mill, Blanding, UT

CLIENT: Energy Fuels Resources (USA)

Calibration Check Log

System ID: M-01/D-21 Calibration Date: 6/27/14 Due Date: 6/27/15

Scaler S/N: 51572 High Voltage: 1137 Window: 4.42 Thrshld: 2.20

Detector S/N: 041533 Source ID/SN: Ra^{224}/GS-05 Source Activity: 59.3KpCi

Blank Canister Bkgd. Range, cpm: 2 σ = 98 to 161 3 σ = 83 to 176

Gross Source Range, cpm: 2 σ = 9811 to 10585 3 σ = 9618 to 10779

Technician: DC Cooper

All counts times are one minute.

	Date	By	Background Counts (1 min. each)				Source Counts (1 min. each)				ok?
			#1	#2	#3	Avg.	#1	#2	#3	Average	Y/N
Pre	7/16/14	DCoop	126	149	142	139	10366	10377	10407	10383	Y
Post	7/16/14	DCoop	132	131	134	132	10201	10097	10048	10115	Y
Pre	7/17/14	DCoop	140	147	131	139	10148	10100	10136	10128	Y
Post	7/17/14	DCoop	126	135	122	128	10121	10212	10277	10203	Y

Y/N: Y = average background and source cpm falls within the control limits.
N = average background and source cpm does not fall within the control limits.

The acceptable ranges were determined from prior background and source check data.

CHARCOAL CANISTER ANALYSIS SYSTEM

SITE LOCATION: White Mesa Mill, Blanding, UT

CLIENT: Energy Fuels Resources (USA)

Calibration Check Log

System ID: M-02/D-20 Calibration Date: 6/27/14 Due Date: 6/27/15

Scaler S/N: 51563 High Voltage: 850 Window: 4.42 Thrshld: 2.20

Detector S/N: 041532 Source ID/SN: Ra^{224}/GS-04 Source Activity: 59.3KpCi

Blank Canister Bkgd. Range, cpm: 2 σ = 93 to 155 3 σ = 77 to 171

Gross Source Range, cpm: 2 σ = 9806 to 10635 3 σ = 9599 to 10843

Technician: DL Coon

All counts times are one minute.

	Date	By	Background Counts (1 min. each)				Source Counts (1 min. each)				ok?
			#1	#2	#3	Avg.	#1	#2	#3	Average	Y/N
Pre	7/16/14	DLCoon	124	154	142	140	10144	10055	10015	10071	Y
Post	7/16/14	DLCoon	134	130	139	134	10125	10194	10335	10218	Y
Pre	7/17/14	DLCoon	139	118	114	124	10217	10208	10047	10157	Y
Post	7/17/14	DLCoon	120	143	139	134	10037	10067	9957	10020	Y

Y/N: Y = average background and source cpm falls within the control limits.
N = average background and source cpm does not fall within the control limits.

The acceptable ranges were determined from prior background and source check data.

CHARCOAL CANISTER ANALYSIS SYSTEM

SITE LOCATION: White Mesa Mill, Blanding, UT

CLIENT: Energy Fuels Resources (USA)

Calibration Check Log

System ID: M-02/D-20 Calibration Date: 6/27/14 Due Date: 6/27/15

Scaler S/N: 51563 High Voltage: 850 Window: 4.42 Thrshld: 2.20

Detector S/N: 041532 Source ID/SN: Ra^{226}/GS-05 Source Activity: 59.3 KpCi

Blank Canister Bkgd. Range, cpm: 2 σ = 93 to 155 3 σ = 77 to 171

Gross Source Range, cpm: 2 σ = 9915 to 10545 3 σ = 9757 to 10702

Technician: DL Coop

All counts times are one minute.

	Date	By	Background Counts (1 min. each)				Source Counts (1 min. each)				ok?
			#1	#2	#3	Avg.	#1	#2	#3	Average	Y/N
Pre	7/16/14	DLCoop	124	154	142	140	9954	10154	10116	10075	Y
Post	7/16/14	DLCoop	134	130	139	134	10200	9964	10190	10118	Y
Pre	7/17/14	DLCoop	139	118	114	124	10004	10034	10222	10087	Y
Post	7/17/14	DLCoop	120	143	139	134	10090	10198	10161	10150	Y

Y/N: Y = average background and source cpm falls within the control limits.
N = average background and source cpm does not fall within the control limits.

The acceptable ranges were determined from prior background and source check data.

BALANCE OPERATION DAILY CHECK

Balance Model: Ohaus Port-o-gram SN: 12307

Standard Weight (g): 300.0g

Date	Pre-check (g)	Post-check (g)	O.K. ± 0.1 % ?	By
7/16/14	300.0	300.0	yes	DL Cooper
7/17/14	300.0	300.0	yes	DL Cooper

Appendix B

Recount Data Analyses

CLIENT: ENERGY FUELS RESOURCES PROJECT: RADON FLUX MEASUREMENTS, WHITE MESA MILL PROJECT NO.: 14004.07

PILE: 2 BATCH: K SURFACE: SOIL AIR TEMP MIN: 63°F WEATHER: RAINED 0.08 in. AFTER PLACEMENT
AREA: COVER DEPLOYED: 7 14 14 RETRIEVED: 7 15 14 CHARCOAL BKG: 149 cpm Wt. Out: 180.0 g.
FIELD TECHNICIANS: CS,DLC COUNTED BY: DLC DATA ENTRY BY: DLC TARE WEIGHT: 29.2 g.
COUNTING SYSTEM I.D.: M01/D21, M02/D20 CAL. DUE: 6/27/15

RECOUNT CANISTER ANALYSIS:

GRID LOCATION	SAMPLE I. D.	HR	MIN	RETRIV HR	RETRIV MIN	ANALYSIS MO	ANALYSIS DA	ANALYSIS YR	MID-TIME HR	MID-TIME MIN	CNT (MIN)	GROSS COUNTS	GROSS WT IN	RADON pCi/m²s	± pCi/m²s	LLD pCi/m²s	PRECISION % RPD
K10	K10	8	0	8	15	7	16	14	9	24	1	20715	224.5	34.9	3.5	0.03	
K10	K10	8	0	8	15	7	17	14	7	3	1	18094	224.5	35.9	3.6	0.04	2.8%
K20	K20	8	16	8	36	7	16	14	9	32	1	17664	215.6	29.5	3.0	0.03	
K20	K20	8	16	8	36	7	17	14	7	3	1	15072	215.6	29.6	3.0	0.04	0.3%
K30	K30	8	35	8	57	7	16	14	9	39	1	10778	218.4	17.9	1.8	0.03	
K30	K30	8	35	8	57	7	17	14	7	5	1	9612	218.4	18.8	1.9	0.04	4.9%
K40	K40	8	50	8	31	7	16	14	9	47	1	1260	220.0	1.9	0.2	0.03	
K40	K40	8	50	8	31	7	17	14	7	5	1	1061	220.0	1.9	0.2	0.04	0.0%
K50	K50	9	7	8	59	7	16	14	9	55	1	2882	222.6	4.7	0.5	0.03	
K50	K50	9	7	8	59	7	17	14	7	6	1	2590	222.6	4.9	0.5	0.04	4.2%
K60	K60	9	44	9	23	7	16	14	10	4	1	15062	219.5	25.8	2.6	0.03	
K60	K60	9	44	9	23	7	17	14	7	6	1	12786	219.5	25.6	2.6	0.04	0.8%
K70	K70	10	5	9	40	7	16	14	10	12	1	5890	221.6	9.9	1.0	0.03	
K70	K70	10	5	9	40	7	17	14	7	8	1	5081	221.6	10.0	1.0	0.04	1.0%
K80	K80	10	14	9	31	7	16	14	10	21	1	2413	223.2	4.0	0.4	0.03	
K80	K80	10	14	9	31	7	17	14	7	8	1	2122	223.2	4.0	0.4	0.04	0.0%
K90	K90	9	47	9	25	7	16	14	10	28	1	5922	222.9	10.0	1.0	0.03	
K90	K90	9	47	9	25	7	17	14	7	9	1	4883	222.9	9.6	1.0	0.04	4.1%
K100	K100	9	27	9	15	7	16	14	10	38	1	1017	219.2	1.5	0.2	0.03	
K100	K100	9	27	9	15	7	17	14	7	10	2	1658	219.2	1.4	0.1	0.04	6.9%

AVERAGE PERCENT PRECISION FOR THE CELL 2 COVER REGION: 2.5%

Appendix C

Radon Flux Sample Laboratory Data (including Blanks)

CLIENT: ENERGY FUELS RESOURCES PROJECT: RADON FLUX MEASUREMENTS, WHITE MESA MILL PROJECT NO.: 14004.07

PILE: 2 BATCH: K SURFACE: SOIL AIR TEMP MIN: 63°F WEATHER: RAINED 0.08 in. AFTER PLACEMENT
AREA: COVER DEPLOYED: 7 14 14 RETRIEVED: 7 15 14 CHARCOAL BKG: 149 cpm Wt. Out: 180.0 g.
FIELD TECHNICIANS: CS,DLC COUNTED BY: DLC DATA ENTRY BY: DLC TARE WEIGHT: 29.2 g.
COUNTING SYSTEM I.D.: M01/D21, M02/D20 CAL. DUE: 6/27/15

GRID LOCATION	SAMPLE I. D.	DEPLOY HR	DEPLOY MIN	RETRIV HR	RETRIV MIN	ANALYSIS MO	ANALYSIS DA	ANALYSIS YR	MID-TIME HR	MID-TIME MIN	CNT (MIN)	GROSS COUNTS	GROSS WT IN	RADON pCi/m²s	± pCi/m²s	LLD pCi/m²s	COMMENTS:
K01	K01	7	45	8	14	7	16	14	9	16	1	1925	222.9	3.0	0.3	0.03	
K02	K02	7	47	8	15	7	16	14	9	16	1	5965	220.1	9.8	1.0	0.03	
K03	K03	7	49	8	16	7	16	14	9	18	1	2444	226.8	3.9	0.4	0.03	
K04	K04	7	51	8	17	7	16	14	9	18	1	17376	221.5	29.0	2.9	0.03	
K05	K05	7	54	8	18	7	16	14	9	20	2	1258	221.8	0.8	0.1	0.03	
K06	K06	7	56	8	19	7	16	14	9	20	2	1811	218.7	1.3	0.1	0.03	
K07	K07	7	57	8	20	7	16	14	9	23	1	2282	219.8	3.6	0.4	0.03	
K08	K08	7	58	8	21	7	16	14	9	23	1	12106	224.8	20.1	2.0	0.03	
K09	K09	7	59	8	22	7	16	14	9	24	1	1536	219.1	2.3	0.2	0.03	
K10	K10	8	0	8	15	7	16	14	9	24	1	20715	224.5	34.9	3.5	0.03	
K11	K11	8	2	8	17	7	16	14	9	26	1	16404	228.1	27.6	2.8	0.03	
K12	K12	8	3	8	19	7	16	14	9	26	1	24812	223.5	41.8	4.2	0.03	
K13	K13	8	5	8	21	7	16	14	9	27	1	25101	218.7	42.4	4.2	0.03	
K14	K14	8	6	8	23	7	16	14	9	27	1	10508	220.8	17.5	1.8	0.03	
K15	K15	8	8	8	25	7	16	14	9	29	1	9501	216.5	15.9	1.6	0.03	
K16	K16	8	10	8	28	7	16	14	9	29	1	2927	219.1	4.7	0.5	0.03	
K17	K17	8	11	8	30	7	16	14	9	30	1	22145	218.9	37.3	3.7	0.03	
K18	K18	8	13	8	32	7	16	14	9	30	1	23035	223.1	38.6	3.9	0.03	
K19	K19	8	15	8	34	7	16	14	9	32	1	22270	217.1	37.5	3.7	0.03	
K20	K20	8	16	8	36	7	16	14	9	32	1	17664	215.6	29.5	3.0	0.03	
K21	K21	8	17	8	38	7	16	14	9	33	1	16125	219.2	27.0	2.7	0.03	
K22	K22	8	19	8	40	7	16	14	9	33	1	22159	218.4	37.1	3.7	0.03	
K23	K23	8	21	8	42	7	16	14	9	35	1	14030	219.9	23.5	2.3	0.03	
K24	K24	8	23	8	44	7	16	14	9	35	1	12556	218.1	20.9	2.1	0.03	
K25	K25	8	24	8	46	7	16	14	9	36	1	21037	216.0	35.3	3.5	0.03	
K26	K26	8	26	8	48	7	16	14	9	36	1	1242	217.0	1.8	0.2	0.03	
K27	K27	8	28	8	51	7	16	14	9	38	1	21036	220.2	35.2	3.5	0.03	
K28	K28	8	30	8	53	7	16	14	9	38	1	11960	218.6	19.9	2.0	0.03	
K29	K29	8	33	8	55	7	16	14	9	39	1	15656	218.5	26.2	2.6	0.03	
K30	K30	8	35	8	57	7	16	14	9	39	1	10778	218.4	17.9	1.8	0.03	
K31	K31	8	37	8	59	7	16	14	9	41	1	20877	233.2	35.0	3.5	0.03	
K32	K32	8	39	8	23	7	16	14	9	41	1	20735	220.7	35.6	3.6	0.03	
K33	K33	8	41	8	24	7	16	14	9	42	1	8346	223.6	14.2	1.4	0.03	
K34	K34	8	42	8	25	7	16	14	9	42	1	3211	224.3	5.3	0.5	0.03	
K35	K35	8	44	8	26	7	16	14	9	44	1	15435	228.1	26.6	2.7	0.03	
K36	K36	8	45	8	27	7	16	14	9	44	1	27567	227.2	47.5	4.7	0.03	
K37	K37	8	46	8	28	7	16	14	9	45	1	15612	226.2	26.9	2.7	0.03	

CLIENT: ENERGY FUELS RESOURCES PROJECT: RADON FLUX MEASUREMENTS, WHITE MESA MILL PROJECT NO.: 14004.07

PILE: 2 BATCH: K SURFACE: SOIL AIR TEMP MIN: 63°F WEATHER: RAINED 0.08 in. AFTER PLACEMENT
AREA: COVER DEPLOYED: 7 14 14 RETRIEVED: 7 15 14 CHARCOAL BKG: 149 cpm Wt. Out: 180.0 g.
FIELD TECHNICIANS: CS,DLC COUNTED BY: DLC DATA ENTRY BY: DLC TARE WEIGHT: 29.2 g.
COUNTING SYSTEM I.D.: M01/D21, M02/D20 CAL. DUE: 6/27/15

GRID LOCATION	SAMPLE I. D.	DEPLOY HR	DEPLOY MIN	RETRIV HR	RETRIV MIN	ANALYSIS MO	ANALYSIS DA	ANALYSIS YR	MID-TIME HR	MID-TIME MIN	CNT (MIN)	GROSS COUNTS	GROSS WT IN	RADON pCi/m²s	± pCi/m²s	LLD pCi/m²s	COMMENTS:
K38	K38	8	48	8	29	7	16	14	9	45	1	1032	219.9	1.5	0.2	0.03	
K39	K39	8	49	8	30	7	16	14	9	47	1	19370	227.2	33.4	3.3	0.03	
K40	K40	8	50	8	31	7	16	14	9	47	1	1260	220.0	1.9	0.2	0.03	
K41	K41	8	52	8	32	7	16	14	9	48	1	1343	221.5	2.1	0.2	0.03	
K42	K42	8	54	8	33	7	16	14	9	48	1	1005	222.6	1.5	0.1	0.03	
K43	K43	8	56	8	34	7	16	14	9	50	2	1218	223.4	0.8	0.1	0.03	
K44	K44	8	57	8	35	7	16	14	9	50	1	39500	223.0	68.3	6.8	0.03	
K45	K45	8	59	8	36	7	16	14	9	52	1	78101	224.7	135.8	13.6	0.03	
K46	K46	9	0	8	55	7	16	14	9	52	1	5347	220.1	8.9	0.9	0.03	
K47	K47	9	1	8	56	7	16	14	9	54	1	39922	219.4	68.4	6.8	0.03	
K48	K48	9	3	8	57	7	16	14	9	54	1	59251	223.9	101.3	10.1	0.03	
K49	K49	9	5	8	58	7	16	14	9	55	1	8699	221.8	14.7	1.5	0.03	
K50	K50	9	7	8	59	7	16	14	9	55	1	2882	222.6	4.7	0.5	0.03	
K51	K51	9	9	9	0	7	16	14	9	57	1	10325	221.2	17.5	1.8	0.03	
K52	K52	9	27	9	1	7	16	14	9	57	1	13843	216.4	23.8	2.4	0.03	
K53	K53	9	29	9	2	7	16	14	9	58	1	9796	218.0	16.8	1.7	0.03	
K54	K54	9	31	9	3	7	16	14	9	58	1	17744	220.1	30.6	3.1	0.03	
K55	K55	9	33	9	14	7	16	14	10	1	1	4614	218.5	7.7	0.8	0.03	
K56	K56	9	36	9	16	7	16	14	10	1	1	40087	215.4	69.0	6.9	0.03	
K57	K57	9	38	9	18	7	16	14	10	3	1	28740	220.7	49.5	5.0	0.03	
K58	K58	9	40	9	19	7	16	14	10	3	1	9901	215.8	16.9	1.7	0.03	
K59	K59	9	42	9	21	7	16	14	10	4	1	6633	215.1	11.2	1.1	0.03	
K60	K60	9	44	9	23	7	16	14	10	4	1	15062	219.5	25.8	2.6	0.03	
K61	K61	9	46	9	25	7	16	14	10	6	1	5085	212.9	8.6	0.9	0.03	
K62	K62	9	48	9	26	7	16	14	10	6	1	2127	212.7	3.4	0.3	0.03	
K63	K63	9	50	9	28	7	16	14	10	7	1	2156	215.2	3.5	0.3	0.03	
K64	K64	9	52	9	30	7	16	14	10	7	1	32969	216.4	56.7	5.7	0.03	
K65	K65	9	54	9	31	7	16	14	10	9	1	9281	222.6	15.8	1.6	0.03	
K66	K66	9	57	9	33	7	16	14	10	9	1	20501	220.0	35.2	3.5	0.03	
K67	K67	9	59	9	34	7	16	14	10	10	1	17337	217.1	29.8	3.0	0.03	
K68	K68	10	1	9	37	7	16	14	10	10	1	3275	216.4	5.4	0.5	0.03	
K69	K69	10	3	9	38	7	16	14	10	12	1	3048	219.2	5.0	0.5	0.03	
K70	K70	10	5	9	40	7	16	14	10	12	1	5890	221.6	9.9	1.0	0.03	
K71	K71	10	7	9	41	7	16	14	10	13	1	20114	218.6	34.7	3.5	0.03	
K72	K72	10	9	9	43	7	16	14	10	13	1	27916	216.6	48.1	4.8	0.03	
K73	K73	10	11	9	44	7	16	14	10	15	1	15128	229.3	26.0	2.6	0.03	
K74	K74	10	14	9	45	7	16	14	10	15	1	4636	223.1	7.8	0.8	0.03	

CLIENT: ENERGY FUELS RESOURCES PROJECT: RADON FLUX MEASUREMENTS, WHITE MESA MILL PROJECT NO.: 14004.07

PILE: 2 BATCH: K SURFACE: SOIL AIR TEMP MIN: 63°F WEATHER: RAINED 0.08 in. AFTER PLACEMENT
AREA: COVER DEPLOYED: 7 14 14 RETRIEVED: 7 15 14 CHARCOAL BKG: 149 cpm Wt. Out: 180.0 g.
FIELD TECHNICIANS: CS,DLC COUNTED BY: DLC DATA ENTRY BY: DLC TARE WEIGHT: 29.2 g.
COUNTING SYSTEM I.D.: M01/D21, M02/D20 CAL. DUE: 6/27/15

GRID LOCATION	SAMPLE I. D.	DEPLOY HR	DEPLOY MIN	RETRIV HR	RETRIV MIN	ANALYSIS MO	ANALYSIS DA	ANALYSIS YR	MID-TIME HR	MID-TIME MIN	CNT (MIN)	GROSS COUNTS	GROSS WT IN	RADON pCi/m²s	± pCi/m²s	LLD pCi/m²s	COMMENTS:
K75	K75	10	16	9	46	7	16	14	10	16	1	4344	220.8	7.3	0.7	0.03	
K76	K76	10	18	9	48	7	16	14	10	16	1	1349	219.9	2.1	0.2	0.03	
K77	K77	10	20	9	34	7	16	14	10	19	2	1177	224.2	0.8	0.1	0.03	
K78	K78	10	18	9	33	7	16	14	10	18	1	1384	221.9	2.2	0.2	0.03	
K79	K79	10	16	9	32	7	16	14	10	21	1	2806	222.6	4.7	0.5	0.03	
K80	K80	10	14	9	31	7	16	14	10	21	1	2413	223.2	4.0	0.4	0.03	
K81	K81	10	11	9	30	7	16	14	10	22	1	5503	223.9	9.4	0.9	0.03	
K82	K82	10	8	9	29	7	16	14	10	22	1	13304	222.2	23.0	2.3	0.03	
K83	K83	10	5	9	28	7	16	14	10	24	1	16586	220.5	28.8	2.9	0.03	
K84	K84	10	3	9	27	7	16	14	10	24	1	1718	230.3	2.7	0.3	0.03	
K85	K85	10	0	9	45	7	16	14	10	25	1	4924	224.0	8.2	0.8	0.03	
K86	K86	9	58	9	46	7	16	14	10	25	1	8062	220.5	13.6	1.4	0.03	
K87	K87	9	56	9	47	7	16	14	10	27	1	3401	217.4	5.6	0.6	0.03	
K88	K88	9	54	9	48	7	16	14	10	27	1	6191	219.4	10.3	1.0	0.03	
K89	K89	9	50	9	26	7	16	14	10	28	1	18252	219.8	31.5	3.2	0.03	
K90	K90	9	47	9	25	7	16	14	10	28	1	5922	222.9	10.0	1.0	0.03	
K91	K91	9	45	9	24	7	16	14	10	30	1	2238	223.0	3.6	0.4	0.03	
K92	K92	9	43	9	23	7	16	14	10	30	1	4228	220.4	7.1	0.7	0.03	
K93	K93	9	41	9	22	7	16	14	10	31	1	7611	225.5	13.0	1.3	0.03	
K94	K94	9	39	9	21	7	16	14	10	31	1	1022	233.3	1.5	0.2	0.03	
K95	K95	9	37	9	20	7	16	14	10	33	1	1042	222.7	1.5	0.2	0.03	
K96	K96	9	35	9	19	7	16	14	10	34	3	1014	221.7	0.3	0.0	0.03	
K97	K97	9	33	9	18	7	16	14	10	36	1	2379	217.5	3.9	0.4	0.03	
K98	K98	9	31	9	17	7	16	14	10	36	1	2515	223.2	4.1	0.4	0.03	
K99	K99	9	29	9	16	7	16	14	10	38	1	1309	228.8	2.0	0.2	0.03	
K100	K100	9	27	9	15	7	16	14	10	38	1	1017	219.2	1.5	0.1	0.03	

AVERAGE RADON FLUX RATE FOR THE CELL 2 COVER REGION: 20.4 pCi/m²s

0.3 MIN
135.8 MAX

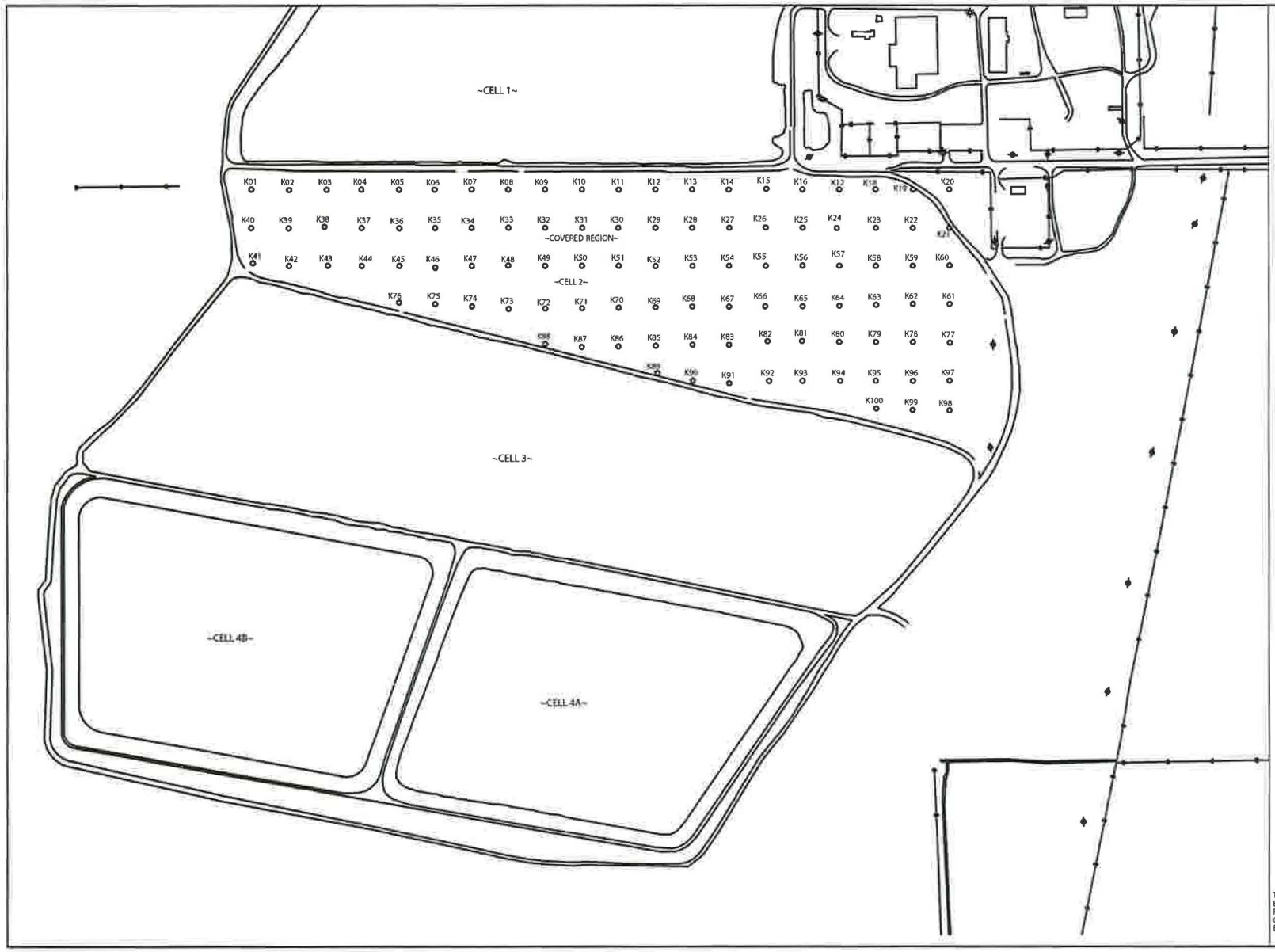
BLANK CANISTER ANALYSIS:

GRID LOCATION	SAMPLE I. D.			RETRIV HR	RETRIV MIN	ANALYSIS MO	ANALYSIS DA	ANALYSIS YR	MID-TIME HR	MID-TIME MIN	CNT (MIN)	GROSS COUNTS	GROSS WT IN	RADON pCi/m²s	± pCi/m²s	LLD pCi/m²s	COMMENTS:
K BLANK 1	K BLANK 1	7	30	8	34	7	16	14	8	20	10	1574	209.8	0.01	0.02	0.03	CONTROL
K BLANK 2	K BLANK 2	7	30	8	34	7	16	14	8	20	10	1541	208.6	0.01	0.02	0.03	CONTROL
K BLANK 3	K BLANK 3	7	30	8	34	7	16	14	8	34	10	1566	208.5	0.01	0.02	0.03	CONTROL
K BLANK 4	K BLANK 4	7	30	8	34	7	16	14	8	34	10	1487	208.0	0.00	0.02	0.03	CONTROL
K BLANK 5	K BLANK 5	7	30	8	34	7	16	14	8	46	10	1558	213.9	0.01	0.02	0.03	CONTROL

AVERAGE BLANK CANISTER ANALYSIS FOR THE CELL 2 COVER REGION: 0.01 pCi/m²s

Appendix D

Sample Locations Map (Figure 2)



WHITE MESA MILL

BLANDING, UTAH

NESHAPS 2014

JULY 2014 SAMPLING
7/14/14-7/15/14

CELL 2

PREPARED FOR
ENERGY FUELS RESOURCES

LEGEND

K01 = SAMPLE LOCATION ON COVERED AREAS 7/14/14-7/15/14

FIGURE 2

N

SCALE IN FEET
200 100 0 200 400

TELLCO
ENVIRONMENTAL, LLC

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National Emission Standards for Hazardous Air Pollutants
2014 Radon Flux Measurement Program

White Mesa Mill
6425 South Highway 191
Blanding, Utah 84511

September 2014 Sampling Results
Cell 2

Prepared for: Energy Fuels Resources (USA) Inc.
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Prepared by: Tellco Environmental
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Appendix A. Charcoal Canister Analyses Support Documents

Appendix B. Recount Data Analyses

Appendix C. Radon Flux Sample Laboratory Data, Including Blanks

Appendix D. Sample Locations Map (Figure 2)

1. INTRODUCTION

During September 13-14, 2014 Tellco Environmental, LLC (Tellco) of Grand Junction, Colorado, provided support to Energy Fuels Resources (USA) Inc. (Energy Fuels) to conduct radon flux measurements at its White Mesa Mill site regarding the required National Emission Standards for Hazardous Air Pollutants (NESHAPs) Radon Flux Measurements. These measurements are required of Energy Fuels to show compliance with Federal Regulations (further discussed in Section 3 below). The standard is not an average per facility, but is an average per radon source. The standard allows mill owners or operators the option of either making a single set of measurements to represent the year or making multiple measurements over a one year period (e.g., weekly, monthly, or quarterly intervals).

Energy Fuels is presently performing radon flux measurements on a monthly basis at Cell 2. Prior to 2012, Energy Fuels had been making a single set of measurements to represent the radon flux each year; however, as the radon flux levels began exceeding the regulatory standard of 20 picoCuries per square meter per second (pCi/m^2-s) in 2012, Energy Fuels responded by opting to make the radon flux measurements on a more frequent basis.

Energy Fuels began placing additional material at selected areas on Cell 2 during June 2013. In March 2014, the placement of additional cover materials was suspended because the average flux rate had been below the regulatory standard for several months. However, the average flux rate again exceeded the regulatory standard in July 2014 and Energy Fuels resumed the placement of additional cover materials at Cell 2 during August 2014.

Tellco was contracted to provide radon canisters, equipment, and canister-placement personnel as well as lab analysis of samples collected. Energy Fuels personnel provided support for loading and unloading charcoal from the canisters. This report details the procedures employed by Energy Fuels and Tellco to obtain the results presented in Section 9.0 of this report. This report presents the radon flux measurements results only for Cell 2 for September 2014; the results of the radon flux measurements performed for Cell 3 during September 2014 are presented in a separate report.

2. SITE DESCRIPTION

The White Mesa Mill facility is located in San Juan County in southeastern Utah, six miles south of Blanding, Utah. The mill began operations in 1980 for the purpose of extracting uranium and vanadium from feed stocks. Processing effluents from the operation are deposited in lined cells, which vary in depth. Cell 1, Cell 4A, and Cell 4B did not require radon flux sampling, as explained in Section 3 below.

Cell 2, which has a total area of approximately 270,624 m^2, has been filled and covered with interim cover. This cell is comprised of one region, an interim soil cover of varying thickness, which requires NESHAPs radon flux monitoring. There were no apparent exposed tailings within Cell 2 during the September 2014 sampling.

Cell 3, which has a total area of approximately 288,858 m^2, is nearly filled with tailings sand and is undergoing pre-closure activities. This cell is comprised of two source regions that require NESHAPs radon monitoring: a soil cover region of varying thickness and an exposed tailings "beaches" region. The remaining area of Cell 3 is covered by standing liquid in lower elevation areas.

3. REGULATORY REQUIREMENTS FOR THE SITE

Radon emissions from the uranium mill tailings at this site are regulated by the State of Utah's Division of Radiation Control and administered by the Utah Division of Air Quality under generally applicable standards set by the U.S. Environmental Protection Agency (EPA) for Operating Mills. Applicable regulations are specified in 40 CFR Part 61, Subpart W, National Emission Standards for Radon Emissions from Operating Mill Tailings, with technical procedures in Appendix B. At present, there are no Subpart T uranium mill tailings at this site. These regulations are a subset of the NESHAPs. According to subsection 61.252 Standard, (a) radon-222 emissions to ambient air from an existing uranium mill tailings pile shall not exceed an average of 20 pCi/m^2-s for each pile (or cell). Subsection 61.253, Determining Compliance, states that: "Compliance with the emission standard in this subpart shall be determined annually through the use of Method 115 of Appendix B." Cell 1 is completely covered with standing liquid and therefore no radon flux measurements are required on Cell 1. The repaired Cell 4A, and newly constructed Cell 4B, were both constructed after December 15, 1989 and each was constructed with less than 40 acres surface area. Cell 4A and 4B comply with the requirements of 40 CFR 61.252(b), therefore no radon flux measurements are required on either Cell 4A or 4B.

4. SAMPLING METHODOLOGY

Radon emissions were measured using Large Area Activated Charcoal Canisters (canisters) in conformance with 40 CFR, Part 61, Appendix B, Method 115, Restrictions to Radon Flux Measurements, (EPA, 2014). These are passive gas adsorption sampling devices used to determine the flux rate of radon-222 gas from a surface. The canisters were constructed using a 10-inch diameter PVC end cap containing a bed of 180 grams of activated, granular charcoal. The prepared charcoal was placed in the canisters on a support grid on top of a ½ inch thick layer of foam and secured with a retaining ring under 1½ inches of foam (see Figure 1, page 10).

One hundred sampling locations were distributed throughout Cell 2 (consisting of one region) as depicted on the Sample Locations Map (see Figure 2, Appendix D). Each charged canister was placed directly onto the surface (open face down) and exposed to the surface for 24 hours. Radon gas adsorbed onto the charcoal and the subsequent radioactive decay of the entrained radon resulted in radioactive lead-214 and bismuth-214. These radon progeny isotopes emit characteristic gamma photons that can be detected through gamma spectroscopy. The original total activity of the adsorbed radon was calculated from these gamma ray measurements using calibration factors derived from cross-calibration of standard sources containing known total activities of radium-226 with geometry identical to the counted samples and from the principles of radioactive decay.

After approximately 24 hours, the exposed charcoal was transferred to a sealed plastic sample container (to prevent radon loss and/or further exposure during transport), identified and labeled, and transported to the Tellco laboratory in Grand Junction, Colorado for analysis. Upon completion of on-site activities, the field equipment was alpha and beta-gamma scanned by Energy Fuels Radiation Safety personnel for possible contamination resulting from fieldwork activities. All of the field

equipment used was subsequently released for unrestricted use. Tellco personnel maintained custody of the samples from collection through analysis.

5. FIELD OPERATIONS

5.1 Equipment Preparation

All charcoal was dried at 110°C before use in the field. Unused charcoal and recycled charcoal were treated the same. 180-gram aliquots of dried charcoal were weighed and placed in sample containers.

Proper balance operation was verified daily by checking a standard weight. The balance readout agreed with the known standard weight to within ± 0.1 percent.

After acceptable balance check, empty containers were individually placed on the balance and the scale was re-zeroed with the container on the balance. Unexposed and dried charcoal was carefully added to the container until the readout registered 180 grams. The lid was immediately placed on the container and sealed with plastic tape. The balance was checked for readout drift between readings.

Sealed containers with unexposed charcoal were placed individually in the shielded counting well, with the bottom of the container centered over the detector, and the background count rate was documented. Three five-minute background counts were conducted on ten percent of the containers, selected at random to represent the "batch". If the background counts were too high to achieve an acceptable lower limit of detection (LLD), the entire charcoal batch was labeled non-conforming and recycled through the heating/drying process.

5.2 Sample Locations, Identification, and Placement

On September 13, 2014, 100 sampling locations were spread out throughout the Cell 2 covered region. The same sampling locations that were established for previous samplings of Cell 2 were used for the placement of the canisters, although the actual sample identification numbers (IDs) are different. An individual ID was assigned to each sample point, using a sequential alphanumeric system indicating the charcoal batch and physical location within the region (e.g., P01…P100). This ID was written on an adhesive label and affixed to the top of the canister. The sample ID, date, and time of placement were recorded on the radon flux measurements data sheets for the set of one hundred measurements.

Prior to placing a canister at each sample location, the retaining ring, screen, and foam pad of each canister were removed to expose the charcoal support grid. A pre-measured charcoal charge was selected from a batch, opened and distributed evenly across the support grid. The canister was then reassembled and placed face down on the surface at each sampling location. Care was exercised not to push the device into the soil surface. The canister rim was “sealed” to the surface using a berm of local borrow material.

Five canisters (blanks) were similarly processed and these canisters were kept inside an airtight plastic bag during the 24-hour testing period.

5.3 Sample Retrieval

On September 14, 2014 at the end of the 24-hour testing period, all canisters were retrieved, disassembled and each charcoal sample was individually poured through a funnel into a container. Identification numbers were transferred to the appropriate container, which was sealed and placed in a box for transport. Retrieval date and time were recorded on the same data sheets as the sample placement information. The blank samples were similarly processed.

All 100 charcoal samples from Cell 2 covered region were successfully retrieved and containerized during the retrieval and unloading process.

Tellco personnel maintained custody of the samples from collection through lab analysis.

5.4 Environmental Conditions

A rain gauge and thermometer were placed at Cell 2 to monitor rainfall and air temperatures during sampling; additionally, Energy Fuels maintains an onsite rain gauge.

In accordance with 40 CFR, Part 61, Appendix B, Method 115:

- Measurements were not initiated within 24 hours of rainfall at the site.
- There was no rainfall during the 24-hour sampling period at Cell 2.
- None of the canister seals were affected during the 24-hour sampling period.
- The criteria regarding minimum ambient air temperature and frozen ground do not apply when performing sampling on a monthly basis; however, the minimum air temperature during the 24-hour sampling period was 53 degrees F, and the ground was not frozen.

6. SAMPLE ANALYSIS

6.1 Apparatus

Apparatus used for the analysis:

- Single- or multi-channel pulse height analysis system, Ludlum Model 2200 with a Teledyne 3" x 3" sodium iodide, thallium-activated (NaI(Tl)) detector.
- Lead shielded counting well approximately 40 cm deep with 5-cm thick lead walls and a 7-cm thick base and 5 cm thick top.
- National Institute of Standards and Technology (NIST) traceable aqueous solution radium-226 absorbed onto 180 grams of activated charcoal.
- Ohaus Model C501 balance with 0.1-gram sensitivity.

6.2 Sample Inspection and Documentation

Once in the laboratory, the integrity of each charcoal container was verified by visual inspection of the plastic container. Laboratory personnel checked for damaged or unsealed containers and verified that the data sheet was complete.

All of the 100 sample containers and 5 blank containers received and inspected at the Tellco analytical laboratory were ultimately verified as valid and no damaged or unsealed containers were observed.

6.3 Background and Sample Counting

The gamma ray counting system was checked daily, including background and radium-226 source measurements prior to and after each counting session. Based on calibration statistics, using two sources with known radium-226 content, background and source control limits were established for each Ludlum/Teledyne system with shielded counting well (see Appendix A).

Gamma ray counting of exposed charcoal samples included the following steps:

- The length of count time was determined by the activity of the sample being analyzed, according to a data quality objective of a minimum of 1,000 accrued counts for any given sample.
- The sample container was centered on the NaI gamma detector and the shielded well door was closed.
- The sample was counted over a determined count length and then the mid-sample count time, date, and gross counts were documented on the radon flux measurements data sheet and used in the calculations.
- The above steps were repeated for each exposed charcoal sample.
- Approximately 10 percent of the containers counted were selected for recounting. These containers were recounted on the next day following the original count.

7. QUALITY CONTROL (QC) AND DATA VALIDATION

Charcoal flux measurement QC samples included the following intra-laboratory analytical frequency objectives:

- Blanks, 5 percent, and
- Recounts, 10 percent

All sample data were subjected to validation protocols that included assessments of sensitivity, precision, accuracy, and completeness. All method-required data quality objectives (EPA, 2014) were attained.

7.1 Sensitivity

A total of five blanks were analyzed by measuring the radon progeny activity in samples subjected to all aspects of the measurement process, excepting exposure to the source region. These blank sample measurements comprised approximately 5 percent of the field measurements. Analysis of the five blank samples measured radon flux rates ranging from approximately 0.01 to 0.03 pCi/m^2-s, with an average of approximately 0.02 pCi/m^2-s. The lower limit of detection (LLD) was approximately 0.03 pCi/m^2-s.

7.2 Precision

Ten recount measurements, distributed throughout the sample set, were performed by replicating analyses of individual field samples (see Appendix B). These recount measurements comprised approximately 10 percent of the total number of samples analyzed. The precision of all recount measurements, expressed as relative percent difference (RPD), ranged from less than 0.1 percent to 3.7 percent with an overall average precision of approximately 1.3 percent RPD.

7.3 Accuracy

Accuracy of field measurements was assessed daily by counting two laboratory control samples with known Ra-226 content. Accuracy of these lab control sample measurements, expressed as percent bias, ranged from approximately -0.9 percent to +1.3 percent. The arithmetic average bias of the lab control sample measurements was approximately +0.2 percent (see Appendix A).

7.4 Completeness

All 100 of the samples from the Cell 2 cover region were verified, representing 100 percent completeness.

8. CALCULATIONS

Radon flux rates were calculated for charcoal collection samples using calibration factors derived from cross-calibration to sources with known total activity with identical geometry as the charcoal containers. A yield efficiency factor was used to calculate the total activity of the sample charcoal containers. Individual field sample result values presented were not reduced by the results of the field blank analyses.

In practice, radon flux rates were calculated by a database computer program. The algorithms utilized by the data base program were as follows:

Equation 8.1:

$$\text{pCi Rn-222/m}^2\text{sec} = \frac{N}{[Ts*A*b*0.5^{(d/91.75)}]}$$

where: N = net sample count rate, cpm under 220-662 keV peak
Ts = sample duration, seconds
b = instrument calibration factor, cpm per pCi; values used:

0.1698, for M-01/D-21 and
0.1703, for M-02/D-20

d = decay time, elapsed hours between sample mid-time and count mid-time

A = area of the canister, m^2

Equation 8.2:

$$\text{Error}, 2\sigma = 2 \times \frac{\sqrt{\dfrac{\text{Gross Sample, cpm}}{\text{Sample Count, t, min}} + \dfrac{\text{Background Sample, cpm}}{\text{Background Count, t, min}}}}{\text{Net, cpm}} \times \text{Sample Concentration}$$

Equation 8.3:

$$\text{LLD} = \frac{2.71 + (4.65)(S_b)}{[Ts*A*b*0.5^{(d/91.75)}]}$$

where: 2.71 = constant

4.65 = confidence interval factor

S_b = standard deviation of the background count rate

Ts = sample duration, seconds

b = instrument calibration factor, cpm per pCi; values used:
0.1698, for M-01/D-21 and
0.1703, for M-02/D-20

d = decay time, elapsed hours between sample mid-time and count mid-time

A = area of the canister, m^2

9. RESULTS

9.1 Mean Radon Flux

Referencing 40 CFR, Part 61, Subpart W, Appendix B, Method 115 - Monitoring for Radon-222 Emissions, Subsection 2.1.7 - Calculations, "the mean radon flux for each region of the pile and for the total pile shall be calculated and reported as follows:

(a) The individual radon flux calculations shall be made as provided in Appendix A EPA 86(1). The mean radon flux for each region of the pile shall be calculated by summing all individual flux measurements for the region and dividing by the total number of flux measurements for the region.

(b) The mean radon flux for the total uranium mill tailings pile shall be calculated as follows:

$$J_s = \frac{J_1A_1 + \ldots J_2A_2 [+] \ldots J_iA_i}{A_t}$$

Where: J_s = Mean flux for the total pile (pCi/m^2-s)
J_i = Mean flux measured in region i (pCi/m^2-s)
A_i = Area of region i (m^2)
A_t = Total area of the pile (m^2)"

40 CFR 61, Subpart W, Appendix B, Method 115, Subsection 2.1.8, Reporting states "The results of individual flux measurements, the approximate locations on the pile, and the mean radon flux for each

region and the mean radon flux for the total stack [pile] shall be included in the emission test report. Any condition or unusual event that occurred during the measurements that could significantly affect the results should be reported."

9.2 Site Results

Site Specific Sample Results (reference Appendix C)

(a) The mean radon flux for the Cell 2 region at the site is as follows:

Cell 2 - Cover Region = 15.8 pCi/m^2-s (based on 270,624 m^2 area)

Note: Reference Appendix C of this report for the entire summary of individual measurement results.

(b) Using the data presented above, the calculated mean radon flux for Cell 2 is as follows:

Cell 2 = 15.8 pCi/m^2-s

$$\frac{(15.8)(270{,}624)}{270{,}624} = 15.8$$

As shown above, the arithmetic mean radon flux of the samples for Cell 2 at Energy Fuels' White Mesa milling facility slightly exceeds the U.S. Nuclear Regulatory Commission and EPA standard of 20 pCi/m^2-s. The September 2014 sampling results for Cell 2 are lower than the July 2014 results.

Appendix C presents the summary of individual measurement results, including blank sample analysis.

Sample locations are depicted on Figure 2, which is included in Appendix D. The map was produced by Tellco.

References

U. S. Environmental Protection Agency, *Radon Flux Measurements on Gardinier and Royster Phosphogypsum Piles Near Tampa and Mulberry, Florida*, EPA 520/5-85-029, NTIS #PB86-161874, January 1986.

U. S. Environmental Protection Agency, *Title 40, Code of Federal Regulations*, July 2014.

U. S. Nuclear Regulatory Commission, *Radiological Effluent and Environmental Monitoring at Uranium Mills*, Regulatory Guide 4.14, April 1980.

U. S. Nuclear Regulatory Commission, *Title 10, Code of Federal Regulations*, Part 40, Appendix A, January 2014.

Figure 1

Large Area Activated Charcoal Canisters Diagram

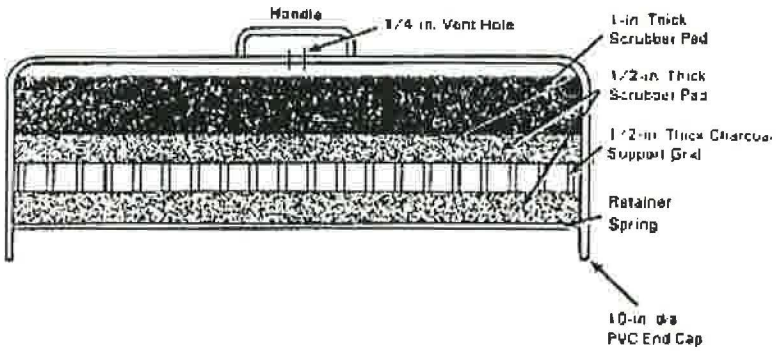


FIGURE 1 Large-Area Radon Collector

Appendix A

Charcoal Canister Analyses Support Documents

ACCURACY APPRAISAL TABLE
SEPTEMBER 2014 SAMPLING

ENERGY FUELS RESOURCES
WHITE MESA MILL, BLANDING, UTAH
2014 NESHAPs RADON FLUX MEASUREMENTS
CELL 2
SAMPLING DATES: 9/13/14-9/14/14

SYSTEM I.D.	COUNT DATE	Bkg Counts (1 min. each) #1	#2	#3	Source Counts (1 min. each) #1	#2	#3	AVG NET cpm	YIELD cpm/pCi	FOUND pCi	SOURCE ID	KNOWN pCi	% BIAS
M-01/D-21	9/15/2014	159	149	143	10184	10155	10214	10034	0.1698	59093	GS-04	59300	-0.3%
M-01/D-21	9/15/2014	153	138	159	10240	10191	10136	10039	0.1698	59122	GS-04	59300	-0.3%
M-01/D-21	9/16/2014	147	132	142	10156	10200	10039	9991	0.1698	58842	GS-04	59300	-0.8%
M-01/D-21	9/16/2014	154	158	149	10134	10077	10189	9980	0.1698	58773	GS-04	59300	-0.9%
M-01/D-21	9/15/2014	159	149	143	10133	10218	10295	10065	0.1698	59276	GS-05	59300	0.0%
M-01/D-21	9/15/2014	153	138	159	10210	10217	10280	10086	0.1698	59397	GS-05	59300	0.2%
M-01/D-21	9/16/2014	147	132	142	10019	10258	10139	9998	0.1698	58883	GS-05	59300	-0.7%
M-01/D-21	9/16/2014	154	158	149	10193	10168	10468	10123	0.1698	59615	GS-05	59300	0.5%
M-02/D-20	9/15/2014	153	150	151	10123	10322	10127	10039	0.1703	58951	GS-04	59300	-0.6%
M-02/D-20	9/15/2014	137	152	154	10361	10194	10256	10123	0.1703	59440	GS-04	59300	0.2%
M-02/D-20	9/16/2014	138	149	133	10317	10307	10248	10151	0.1703	59605	GS-04	59300	0.5%
M-02/D-20	9/16/2014	132	131	126	10229	10392	10296	10176	0.1703	59753	GS-04	59300	0.8%
M-02/D-20	9/15/2014	153	150	151	10400	10392	10303	10214	0.1703	59975	GS-05	59300	1.1%
M-02/D-20	9/15/2014	137	152	154	10324	10286	10417	10195	0.1703	59863	GS-05	59300	0.9%
M-02/D-20	9/16/2014	138	149	133	10435	10327	10286	10209	0.1703	59949	GS-05	59300	1.1%
M-02/D-20	9/16/2014	132	131	126	10432	10341	10316	10233	0.1703	60090	GS-05	59300	1.3%
AVERAGE PERCENT BIAS FOR ALL ANALYTICAL SESSIONS:													0.2%

CHARCOAL CANISTER ANALYSIS SYSTEM

SITE LOCATION: White Mesa Mill, Blanding, UT

CLIENT: Energy Fuels Resources (USA)

Calibration Check Log

System ID: M-01/D-21 Calibration Date: 6/27/14 Due Date: 6/27/15

Scaler S/N: 51572 High Voltage: 1137 Window: 4.42 Thrshld: 2.20

Detector S/N: 041533 Source ID/SN: Ra^{226}/GS-04 Source Activity: 59.3 KpCi

Blank Canister Bkgd. Range, cpm: 2 σ = 98 to 161 3 σ = 83 to 176

Gross Source Range, cpm: 2 σ = 9801 to 10587 3 σ = 9604 to 10783

Technician: DL Cooper

All counts times are one minute.

	Date	By	Background Counts (1 min. each)				Source Counts (1 min. each)				ok?
			#1	#2	#3	Avg.	#1	#2	#3	Average	Y/N
Pre	9/15/14	DLC	159	149	143	150	10184	10155	10214	10184	Y
Post	9/15/14	DLC	153	138	159	150	10240	10191	10136	10189	Y
Pre	9/16/14	DLC	147	132	142	140	10156	10200	10039	10132	Y
Post	9/16/14	DLC	154	158	149	154	10134	10077	10189	10133	Y

Y/N: Y = average background and source cpm falls within the control limits.
N = average background and source cpm does not fall within the control limits.

The acceptable ranges were determined from prior background and source check data.

CHARCOAL CANISTER ANALYSIS SYSTEM

SITE LOCATION: White Mesa Mill, Blanding, UT

CLIENT: Energy Fuels Resources, (USA)

Calibration Check Log

System ID: M-01 / D-21 Calibration Date: 6/27/14 Due Date: 6/27/15

Scaler S/N: 51572 High Voltage: 1137 Window: 4.42 Thrshld: 2.20

Detector S/N: 041533 Source ID/SN: Ra^{226}/GS-05 Source Activity: 59.3KpCi

Blank Canister Bkgd. Range, cpm: 2 σ = 98 to 161 3 σ = 83 to 176

Gross Source Range, cpm: 2 σ = 9811 to 10585 3 σ = 9618 to 10779

Technician: DL Cogan

All counts times are one minute.

	Date	By	Background Counts (1 min. each)				Source Counts (1 min. each)				ok?
			#1	#2	#3	Avg.	#1	#2	#3	Average	Y/N
Pre	9/15/14	DLC	159	149	143	150	10133	10218	10295	10215	Y
Post	9/15/14	DLC	153	138	159	150	10210	10217	10280	10236	Y
Pre	9/16/14	DLC	147	132	142	140	10019	10258	10139	10139	Y
Post	9/16/14	DLC	154	158	149	154	10193	10168	10468	10276	Y

Y/N: Y = average background and source cpm falls within the control limits.
N = average background and source cpm does not fall within the control limits.

The acceptable ranges were determined from prior background and source check data.

CHARCOAL CANISTER ANALYSIS SYSTEM

SITE LOCATION: White Mesa Mill, Blanding, UT

CLIENT: Energy Fuels Resources (USA)

Calibration Check Log

System ID: M-02/D-20 Calibration Date: 6/27/14 Due Date: 6/27/15

Scaler S/N: 51563 High Voltage: 850 Window: 4.42 Thrshld: 2.20

Detector S/N: 041532 Source ID/SN: Ra^{226}/GS-04 Source Activity: 59.3 KpCi

Blank Canister Bkgd. Range, cpm: 2 σ = 93 to 155 3 σ = 77 to 171

Gross Source Range, cpm: 2 σ = 9806 to 10635 3 σ = 9599 to 10843

Technician: DL Cooper

All counts times are one minute.

	Date	By	Background Counts (1 min. each)				Source Counts (1 min. each)				ok?
			#1	#2	#3	Avg.	#1	#2	#3	Average	Y/N
Pre	9/15/14	DLC	153	150	151	151	10123	10322	10127	10191	Y
Post	9/15/14	DLC	137	152	154	148	10361	10194	10256	10270	Y
Pre	9/16/14	DLC	138	149	133	140	10317	10307	10248	10291	Y
Post	9/16/14	DLC	132	131	126	130	10229	10392	10296	10306	Y

Y/N: Y = average background and source cpm falls within the control limits.
N = average background and source cpm does not fall within the control limits.

The acceptable ranges were determined from prior background and source check data.

CHARCOAL CANISTER ANALYSIS SYSTEM

SITE LOCATION: White Mesa Mill, Blanding, UT

CLIENT: Energy Fuels Resources (USA)

Calibration Check Log

System ID: M-02/D-20 Calibration Date: 6/27/14 Due Date: 6/27/15

Scaler S/N: 51563 High Voltage: 850 Window: 4.42 Thrshld: 2.20

Detector S/N: 041532 Source ID/SN: Ra^{226}/GS-05 Source Activity: 59.3kpCi

Blank Canister Bkgd. Range, cpm: 2 σ = 93 to 155 3 σ = 77 to 171

Gross Source Range, cpm: 2 σ = 9915 to 10545 3 σ = 9757 to 10702

Technician: DL Cox

All counts times are one minute.

	Date	By	Background Counts (1 min. each)				Source Counts (1 min. each)				ok?
			#1	#2	#3	Avg.	#1	#2	#3	Average	Y/N
Pre	9/15/14	DLC	153	150	151	151	10400	10392	10303	10365	Y
Post	9/15/14	DLC	137	152	154	148	10324	10286	10417	10342	Y
Pre	9/16/14	DLC	138	149	133	140	10435	10327	10286	10349	Y
Post	9/16/14	DLC	132	131	126	130	10432	10341	10316	10363	Y

Y/N: Y = average background and source cpm falls within the control limits.
N = average background and source cpm does not fall within the control limits.

The acceptable ranges were determined from prior background and source check data.

BALANCE OPERATION DAILY CHECK

Balance Model: Ohaus Port-o-gram SN: 12307

Standard Weight (g): 200.0 grams

Date	Pre-check (g)	Post-check (g)	O.K. ± 0.1 % ?	By
9/15/14	200.0	200.0	yes	DLCoop
9/16/14	200.0	200.0	yes	DLCoop

Appendix B

Recount Data Analyses

CLIENT: ENERGY FUELS RESOURCES PROJECT: RADON FLUX MEASUREMENTS, WHITE MESA MILL PROJECT NO.: 14004.09

PILE: 2 BATCH: P SURFACE: SOIL AIR TEMP MIN: 53°F WEATHER: CLEAR, NO RAIN
AREA: COVER DEPLOYED: 9 13 14 RETRIEVED: 9 14 14 CHARCOAL BKG: 156 cpm Wt. Out: 180.0 g.
FIELD TECHNICIANS: CE,DLC, CS, TE COUNTED BY: DLC DATA ENTRY BY: DLC TARE WEIGHT: 29.2 g.
COUNTING SYSTEM I.D.: M01/D21, M02/D20 CAL. DUE: 6/27/15

RECOUNT CANISTER ANALYSIS:

GRID LOCATION	SAMPLE I. D.	HR	MIN	RETRIV HR	RETRIV MIN	ANALYSIS MO	ANALYSIS DA	ANALYSIS YR	MID-TIME HR	MID-TIME MIN	CNT (MIN)	GROSS COUNTS	GROSS WT IN	RADON pCi/m²s	± pCi/m²s	LLD pCi/m²s	PRECISION % RPD
P10	P10	11	51	11	52	9	15	14	16	1	1	13193	230.8	22.8	2.3	0.03	
RECOUNT	P10	11	51	11	52	9	16	14	8	37	1	11588	230.8	22.7	2.3	0.04	0.4%
P20	P20	12	12	12	2	9	15	14	16	8	1	15748	225.3	27.4	2.7	0.03	
RECOUNT	P20	12	12	12	2	9	16	14	8	37	1	14223	225.3	28.0	2.8	0.04	2.2%
P30	P30	11	53	11	53	9	15	14	16	16	1	5218	221.6	8.9	0.9	0.03	
RECOUNT	P30	11	53	11	53	9	16	14	8	38	1	4565	221.6	8.8	0.9	0.04	1.1%
P40	P40	11	33	11	43	9	15	14	16	23	1	1185	234.3	1.8	0.2	0.03	
RECOUNT	P40	11	33	11	43	9	16	14	8	38	1	1078	234.3	1.8	0.2	0.04	0.0%
P50	P50	11	51	11	52	9	15	14	16	33	1	6399	225.7	11.0	1.1	0.03	
RECOUNT	P50	11	51	11	52	9	16	14	8	39	1	5476	225.7	10.6	1.1	0.04	3.7%
P60	P60	12	12	12	7	9	15	14	16	41	1	17004	226.4	29.7	3.0	0.03	
RECOUNT	P60	12	12	12	7	9	16	14	8	39	1	15209	226.4	29.9	3.0	0.04	0.7%
P70	P70	12	35	12	25	9	15	14	16	49	1	5912	226.0	10.2	1.0	0.03	
RECOUNT	P70	12	35	12	25	9	16	14	8	41	1	5170	226.0	10.0	1.0	0.04	2.0%
P80	P80	12	20	12	15	9	15	14	16	57	1	1210	226.9	1.9	0.2	0.03	
RECOUNT	P80	12	20	12	15	9	16	14	8	41	1	1117	226.9	1.9	0.2	0.04	0.0%
P90	P90	12	30	12	20	9	15	14	17	4	1	4833	230.5	8.3	0.8	0.03	
RECOUNT	P90	12	30	12	20	9	16	14	8	42	1	4191	230.5	8.1	0.8	0.04	2.4%
P100	P100	12	46	12	30	9	15	14	17	17	2	1684	227.0	1.2	0.1	0.03	
RECOUNT	P100	12	46	12	30	9	16	14	8	42	2	1472	227.0	1.2	0.1	0.04	0.0%
																AVERAGE PERCENT PRECISION FOR THE CELL 2 COVER REGION:	1.3%

Appendix C

Radon Flux Sample Laboratory Data (including Blanks)

CLIENT: ENERGY FUELS RESOURCES PROJECT: RADON FLUX MEASUREMENTS, WHITE MESA MILL PROJECT NO.: 14004.09

PILE: 2 BATCH: P SURFACE: SOIL AIR TEMP MIN: 53°F WEATHER: CLEAR, NO RAIN
AREA: COVER DEPLOYED: 9 13 14 RETRIEVED: 9 14 14 CHARCOAL BKG: 156 cpm Wt. Out: 180.0 g.
FIELD TECHNICIANS: CE,DLC, CS, TE COUNTED BY: DLC DATA ENTRY BY: DLC TARE WEIGHT: 29.2 g.
COUNTING SYSTEM I.D.: M01/D21, M02/D20 CAL. DUE: 6/27/15

GRID LOCATION	SAMPLE I. D.	DEPLOY HR	DEPLOY MIN	RETRIV HR	RETRIV MIN	ANALYSIS MO	ANALYSIS DA	ANALYSIS YR	MID-TIME HR	MID-TIME MIN	CNT (MIN)	GROSS COUNTS	GROSS WT IN	RADON pCi/m²s	± pCi/m²s	LLD pCi/m²s	COMMENTS:
P01	P01	11	33	11	43	9	15	14	15	54	1	1959	233.3	3.1	0.3	0.03	
P02	P02	11	35	11	44	9	15	14	15	54	1	7343	228.7	12.5	1.3	0.03	
P03	P03	11	37	11	45	9	15	14	15	55	1	1876	230.0	3.0	0.3	0.03	
P04	P04	11	39	11	46	9	15	14	15	55	1	24567	233.2	42.5	4.3	0.03	
P05	P05	11	41	11	47	9	15	14	15	57	2	1681	231.9	1.2	0.1	0.03	
P06	P06	11	43	11	48	9	15	14	15	57	1	1439	232.2	2.2	0.2	0.03	
P07	P07	11	45	11	49	9	15	14	15	59	1	1604	234.0	2.5	0.3	0.03	
P08	P08	11	47	11	50	9	15	14	15	59	1	7211	233.4	12.3	1.2	0.03	
P09	P09	11	49	11	51	9	15	14	16	1	2	1050	233.3	0.6	0.1	0.03	Offset 15' E
P10	P10	11	51	11	52	9	15	14	16	1	1	13193	230.8	22.8	2.3	0.03	
P11	P11	11	53	11	53	9	15	14	16	2	1	4285	232.1	7.2	0.7	0.03	
P12	P12	11	55	11	54	9	15	14	16	2	1	33756	229.9	58.8	5.9	0.03	
P13	P13	11	57	11	55	9	15	14	16	4	1	7217	235.1	12.4	1.2	0.03	
P14	P14	11	59	11	56	9	15	14	16	4	1	11062	229.5	19.1	1.9	0.03	
P15	P15	12	1	11	57	9	15	14	16	5	1	4929	226.4	8.4	0.8	0.03	
P16	P16	12	3	11	58	9	15	14	16	5	1	2735	226.9	4.5	0.5	0.03	
P17	P17	12	5	11	59	9	15	14	16	7	1	16332	228.5	28.5	2.8	0.03	
P18	P18	12	7	12	0	9	15	14	16	7	1	21036	224.8	36.7	3.7	0.03	
P19	P19	12	9	12	1	9	15	14	16	8	1	15435	225.0	26.9	2.7	0.03	
P20	P20	12	12	12	2	9	15	14	16	8	1	15748	225.3	27.4	2.7	0.03	
P21	P21	12	12	12	7	9	15	14	16	10	1	9474	227.5	16.4	1.6	0.03	
P22	P22	12	9	12	6	9	15	14	16	10	1	11499	227.3	19.9	2.0	0.03	
P23	P23	12	7	12	5	9	15	14	16	11	1	13287	224.7	23.1	2.3	0.03	
P24	P24	12	5	12	4	9	15	14	16	11	1	19596	227.8	34.0	3.4	0.03	
P25	P25	12	3	12	3	9	15	14	16	13	1	20441	230.5	35.6	3.6	0.03	
P26	P26	12	1	12	2	9	15	14	16	13	1	1009	226.7	1.5	0.1	0.03	
P27	P27	11	59	12	1	9	15	14	16	14	1	10317	227.9	17.8	1.8	0.03	
P28	P28	11	57	12	0	9	15	14	16	14	1	9130	226.7	15.7	1.6	0.03	
P29	P29	11	55	11	59	9	15	14	16	16	1	13004	230.1	22.5	2.3	0.03	
P30	P30	11	53	11	53	9	15	14	16	16	1	5218	221.6	8.9	0.9	0.03	
P31	P31	11	51	11	52	9	15	14	16	17	1	18880	233.0	32.9	3.3	0.03	
P32	P32	11	49	11	21	9	15	14	16	17	1	12947	228.3	22.9	2.3	0.03	
P33	P33	11	47	11	50	9	15	14	16	19	1	6951	232.4	11.9	1.2	0.03	
P34	P34	11	45	11	49	9	15	14	16	19	1	3105	234.3	5.2	0.5	0.03	
P35	P35	11	43	11	48	9	15	14	16	20	1	16600	232.9	28.9	2.9	0.03	
P36	P36	11	41	11	47	9	15	14	16	20	1	27157	236.5	47.2	4.7	0.03	
P37	P37	11	39	11	46	9	15	14	16	22	1	16386	234.5	28.5	2.8	0.03	

CLIENT: ENERGY FUELS RESOURCES PROJECT: RADON FLUX MEASUREMENTS, WHITE MESA MILL PROJECT NO.: 14004.09

PILE: 2 BATCH: P SURFACE: SOIL AIR TEMP MIN: 53°F WEATHER: CLEAR, NO RAIN
AREA: COVER DEPLOYED: 9 13 14 RETRIEVED: 9 14 14 CHARCOAL BKG: 156 cpm Wt. Out: 180.0 g.
FIELD TECHNICIANS: CE,DLC, CS, TE COUNTED BY: DLC DATA ENTRY BY: DLC TARE WEIGHT: 29.2 g.
COUNTING SYSTEM I.D.: M01/D21, M02/D20 CAL. DUE: 6/27/15

GRID LOCATION	SAMPLE I. D.	DEPLOY HR	DEPLOY MIN	RETRIV HR	RETRIV MIN	ANALYSIS MO	ANALYSIS DA	ANALYSIS YR	MID-TIME HR	MID-TIME MIN	CNT (MIN)	GROSS COUNTS	GROSS WT IN	RADON pCi/m²s	± pCi/m²s	LLD pCi/m²s	COMMENTS:
P38	P38	11	37	11	45	9	15	14	16	22	1	1143	223.4	1.7	0.2	0.03	
P39	P39	11	35	11	44	9	15	14	16	23	1	15043	230.2	26.1	2.6	0.03	
P40	P40	11	33	11	43	9	15	14	16	23	1	1185	234.3	1.8	0.2	0.03	
P41	P41	11	33	11	43	9	15	14	16	25	1	1585	230.3	2.5	0.3	0.03	
P42	P42	11	35	11	44	9	15	14	16	26	2	1238	231.2	0.8	0.1	0.03	
P43	P43	11	37	11	45	9	15	14	16	28	2	1161	225.3	0.7	0.1	0.03	
P44	P44	11	39	11	46	9	15	14	16	28	1	6711	237.3	11.5	1.1	0.03	
P45	P45	11	41	11	47	9	15	14	16	30	1	18369	220.0	32.0	3.2	0.03	
P46	P46	11	43	11	48	9	15	14	16	30	1	29329	232.8	51.1	5.1	0.03	
P47	P47	11	45	11	49	9	15	14	16	31	1	22436	228.8	39.2	3.9	0.03	
P48	P48	11	47	11	50	9	15	14	16	31	1	18495	229.6	32.2	3.2	0.03	
P49	P49	11	49	11	51	9	15	14	16	33	1	9570	231.2	16.6	1.7	0.03	
P50	P50	11	51	11	52	9	15	14	16	33	1	6399	225.7	11.0	1.1	0.03	
P51	P51	11	53	11	53	9	15	14	16	34	1	9099	229.1	15.8	1.6	0.03	
P52	P52	11	55	11	59	9	15	14	16	34	1	10200	224.6	17.6	1.8	0.03	
P53	P53	11	57	12	0	9	15	14	16	36	1	10627	218.9	18.4	1.8	0.03	
P54	P54	11	59	12	1	9	15	14	16	36	1	13813	225.9	23.9	2.4	0.03	
P55	P55	12	1	12	2	9	15	14	16	38	2	1461	236.4	1.0	0.1	0.03	
P56	P56	12	3	12	3	9	15	14	16	37	1	35905	231.8	62.8	6.3	0.03	
P57	P57	12	5	12	4	9	15	14	16	40	1	22226	228.4	38.9	3.9	0.03	
P58	P58	12	7	12	5	9	15	14	16	40	1	9283	227.6	16.0	1.6	0.03	
P59	P59	12	9	12	6	9	15	14	16	41	1	6465	224.6	11.1	1.1	0.03	
P60	P60	12	12	12	7	9	15	14	16	41	1	17004	226.4	29.7	3.0	0.03	
P61	P61	12	14	12	9	9	15	14	16	43	1	2366	234.1	3.9	0.4	0.03	
P62	P62	12	16	12	10	9	15	14	16	43	1	2273	227.9	3.7	0.4	0.03	
P63	P63	12	18	12	11	9	15	14	16	44	1	2628	231.7	4.4	0.4	0.03	
P64	P64	12	20	12	12	9	15	14	16	44	1	28924	229.1	50.7	5.1	0.03	
P65	P65	12	22	12	13	9	15	14	16	46	1	9585	234.7	16.7	1.7	0.03	
P66	P66	12	24	12	14	9	15	14	16	46	1	18855	215.3	33.0	3.3	0.03	
P67	P67	12	26	12	15	9	15	14	16	47	1	19476	226.4	34.2	3.4	0.03	
P68	P68	12	28	12	16	9	15	14	16	47	1	1286	223.1	2.0	0.2	0.03	
P69	P69	12	37	12	26	9	15	14	16	49	1	4278	226.7	7.3	0.7	0.03	
P70	P70	12	35	12	25	9	15	14	16	49	1	5912	226.0	10.2	1.0	0.03	
P71	P71	12	33	12	24	9	15	14	16	50	1	10944	224.4	19.1	1.9	0.03	
P72	P72	12	31	12	23	9	15	14	16	50	1	19771	228.6	34.6	3.5	0.03	
P73	P73	12	29	12	22	9	15	14	16	52	1	11773	226.5	20.5	2.1	0.03	
P74	P74	12	27	12	21	9	15	14	16	52	1	4152	223.9	7.0	0.7	0.03	

CLIENT: ENERGY FUELS RESOURCES PROJECT: RADON FLUX MEASUREMENTS, WHITE MESA MILL PROJECT NO.: 14004.09

PILE: 2 BATCH: P SURFACE: SOIL AIR TEMP MIN: 53°F WEATHER: CLEAR, NO RAIN
AREA: COVER DEPLOYED: 9 13 14 RETRIEVED: 9 14 14 CHARCOAL BKG: 156 cpm Wt. Out: 180.0 g.
FIELD TECHNICIANS: CE,DLC, CS, TE COUNTED BY: DLC DATA ENTRY BY: DLC TARE WEIGHT: 29.2 g.
COUNTING SYSTEM I.D.: M01/D21, M02/D20 CAL. DUE: 6/27/15

GRID LOCATION	SAMPLE I. D.	DEPLOY HR	DEPLOY MIN	RETRIV HR	RETRIV MIN	ANALYSIS MO	ANALYSIS DA	ANALYSIS YR	MID-TIME HR	MID-TIME MIN	CNT (MIN)	GROSS COUNTS	GROSS WT IN	RADON pCi/m²s	± pCi/m²s	LLD pCi/m²s	COMMENTS:
P75	P75	12	25	12	20	9	15	14	16	53	1	3728	230.9	6.3	0.6	0.03	
P76	P76	12	23	12	19	9	15	14	16	53	1	1373	228.8	2.1	0.2	0.03	
P77	P77	12	14	12	12	9	15	14	16	55	2	1144	232.0	0.7	0.1	0.03	
P78	P78	12	16	12	13	9	15	14	16	55	2	1188	228.5	0.8	0.1	0.03	
P79	P79	12	18	12	14	9	15	14	16	57	1	2237	229.9	3.7	0.4	0.03	
P80	P80	12	20	12	15	9	15	14	16	57	1	1210	226.9	1.9	0.2	0.03	
P81	P81	12	22	12	16	9	15	14	16	58	1	4731	224.1	8.1	0.8	0.03	
P82	P82	12	24	12	17	9	15	14	16	58	1	9196	229.5	16.0	1.6	0.03	
P83	P83	12	26	12	18	9	15	14	17	0	1	10467	229.8	18.3	1.8	0.03	
P84	P84	12	28	12	19	9	15	14	17	0	1	1832	224.1	3.0	0.3	0.03	
P85	P85	12	38	12	26	9	15	14	17	1	1	3572	225.7	6.1	0.6	0.03	
P86	P86	12	40	12	27	9	15	14	17	1	1	5512	229.7	9.5	0.9	0.03	
P87	P87	12	42	12	28	9	15	14	17	3	1	2420	226.2	4.0	0.4	0.03	
P88	P88	12	44	12	29	9	15	14	17	3	1	6297	221.3	10.9	1.1	0.03	
P89	P89	12	46	12	30	9	15	14	17	4	1	17940	221.0	31.6	3.2	0.03	
P90	P90	12	30	12	20	9	15	14	17	4	1	4833	230.5	8.3	0.8	0.03	
P91	P91	12	32	12	21	9	15	14	17	6	1	1739	226.3	2.8	0.3	0.03	
P92	P92	12	34	12	22	9	15	14	17	6	1	3820	227.6	6.5	0.6	0.03	
P93	P93	12	36	12	23	9	15	14	17	7	1	7095	231.6	12.3	1.2	0.03	
P94	P94	12	38	12	24	9	15	14	17	8	2	1625	233.9	1.2	0.1	0.03	Offset 15' E
P95	P95	12	40	12	25	9	15	14	17	11	2	1020	232.2	0.6	0.1	0.03	
P96	P96	12	42	12	26	9	15	14	17	12	3	1041	229.9	0.3	0.0	0.03	
P97	P97	12	44	12	27	9	15	14	17	14	1	2618	223.2	4.4	0.4	0.03	
P98	P98	12	46	12	28	9	15	14	17	14	1	2535	225.6	4.2	0.4	0.03	
P99	P99	12	44	12	29	9	15	14	17	17	3	1077	234.9	0.4	0.0	0.03	
P100	P100	12	46	12	30	9	15	14	17	17	2	1684	227.0	1.2	0.1	0.03	

AVERAGE RADON FLUX RATE FOR THE CELL 2 COVER REGION: 15.8 pCi/m²s

0.3 MIN
62.8 MAX

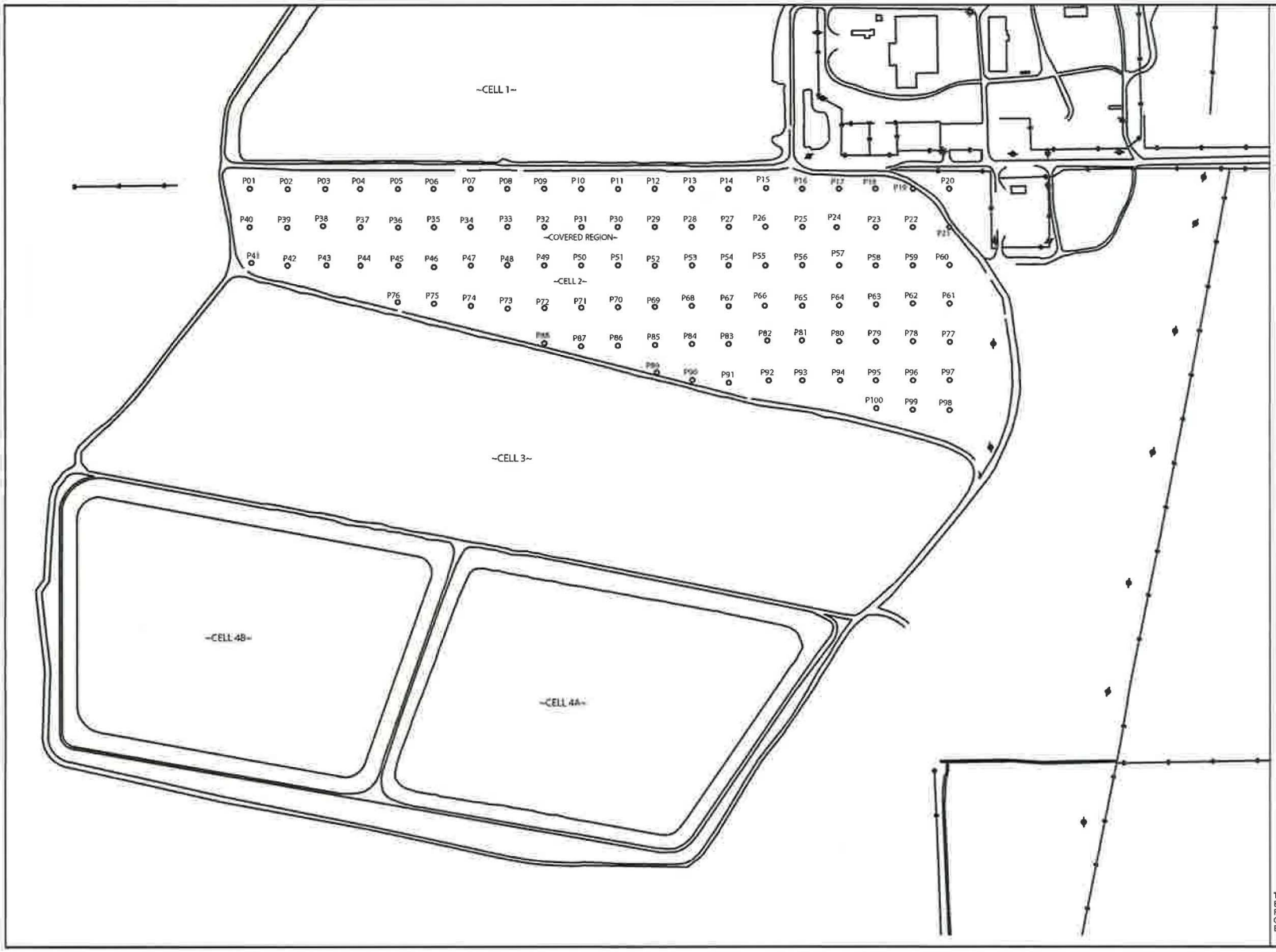
BLANK CANISTER ANALYSIS:

GRID LOCATION	SAMPLE I. D.	DEPLOY HR	DEPLOY MIN	RETRIV HR	RETRIV MIN	ANALYSIS MO	ANALYSIS DA	ANALYSIS YR	MID-TIME HR	MID-TIME MIN	CNT (MIN)	GROSS COUNTS	GROSS WT IN	RADON pCi/m²s	± pCi/m²s	LLD pCi/m²s	COMMENTS:
P BLANK 1	P BLANK 1	11	23	11	56	9	15	14	10	51	10	1672	211.9	0.02	0.02	0.03	CONTROL
P BLANK 2	P BLANK 2	11	23	11	56	9	15	14	10	51	10	1717	210.9	0.03	0.02	0.03	CONTROL
P BLANK 3	P BLANK 3	11	23	11	56	9	15	14	11	2	10	1724	210.0	0.03	0.02	0.03	CONTROL
P BLANK 4	P BLANK 4	11	23	11	56	9	15	14	11	2	10	1702	210.7	0.02	0.02	0.03	CONTROL
P BLANK 5	P BLANK 5	11	23	11	56	9	15	14	11	14	10	1628	208.5	0.01	0.02	0.03	CONTROL

AVERAGE BLANK CANISTER ANALYSIS FOR THE CELL 2 COVER REGION: 0.02 pCi/m²s

Appendix D

Sample Locations Map (Figure 2)



WHITE MESA MILL

BLANDING, UTAH

NESHAPS 2014

SEPTEMBER 2014 SAMPLING
9/13/14-9/14/14

CELL 2

PREPARED FOR
ENERGY FUELS RESOURCES

LEGEND

P01 = SAMPLE LOCATION ON COVERED AREAS 9/13/14-9/14/14

FIGURE 2

N

SCALE IN FEET
200 100 0 200 400

TELLCO
ENVIRONMENTAL, LLC

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