



Department of Energy

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Mr. Wayne Pierre, Team Leader
Environmental Cleanup Office
U.S. Environmental Protection Agency
Region X
1200 Sixth Avenue
Seattle, Washington 98101

Mr. Dean Nygard, Site Remediation Manager
Waste Management and Remediation Division
Idaho Department of Environmental Quality
1410 N. Hilton
Boise, Idaho 83706

SUBJECT: Contract No. DE-AC07-99ID13727 - Transmittal of Waste Area Group 5 Fiscal Year 2001 Groundwater Monitoring Analytical Data (EM-ER-01-036)

- References:**
- (a) DOE-ID, December 1999, *Federal Facility Agreement and Consent Order*, U.S. Department of Energy Idaho Operations Office; Idaho Department of Health and Welfare, and U.S. Environmental Protection Agency.
 - (b) DOE-ID, October 2000, *Groundwater Monitoring Plan for the Waste Area Group 5 Remedial Action*, DOE/ID-10779, Rev. 0, Idaho National Engineering and Environmental Laboratory, Idaho Falls, Idaho.
 - (c) 40 CFR 141, *Code of Federal Regulations*, Title 40, Protection of the Environment, Part 141, "National Primary Drinking Water Regulations."

Dear Mr. Pierre and Mr. Nygard:

This letter transmits copies of the fiscal year 2001 groundwater monitoring analytical data conducted at Waste Area Group (WAG) 5 in November 2000. These data are being delivered in compliance with the provisions set forth in the *Federal Facility Agreement and Consent Order* (DOE-ID1991). The samples were collected in accordance with the *Groundwater Monitoring Plan for the Waste Area Group 5, Remedial Action* (DOE/ID-10779). A table summarizing the analytical data from the reports is included with each data set.

Samples were collected from eight groundwater-monitoring wells and the Special Power Excursion Reactor Test (SPERT)-I production well. The samples were analyzed for gross alpha/beta isotopes, gamma emitting isotopes, tritium, I-129, metals, volatile organic compounds (VOCs), and anions. If either the gross alpha or gross beta results for a given well

sample exceeded 5 pCi/L, the sample from that well was to undergo further analyses for specific alpha and/or beta isotopes. However, none of the gross alpha or gross beta results exceeded this concentration. Therefore, no additional isotopic analyses were required.

The gross alpha and gross beta analytical results were below 5 pCi/L for all samples and below the maximum contaminant levels (MCLs) for drinking water as defined by the National Primary Drinking Water Regulations promulgated in 40 CFR 141. Neither tritium nor any manmade gamma-emitting isotopes were detected in any of the samples. Iodine-129 was detected in the sample from well PBF-MON-001 at a concentration of 1.02 ± 0.26 pCi/L. However, the analyte was also detected in the field rinsate sample with a result of 0.981 ± 0.253 pCi/L. To note, the MCL for I-129 is 1 pCi/L and the minimum detectable activity for the analysis was approximately 0.8 pCi/L. Both the analytical result for the well sample and that for the rinsate were flagged "UJ" during the method data validation process to indicate laboratory blank contamination. The sample results were statistically equivalent to the results for the laboratory blank. For future sampling rounds, a different laboratory that has recently obtained the capability of performing the I-129 analysis with detection limits approaching 0.1 to 0.2 pCi/L will be used.

The sample results for VOCs and anions were below the MCLs for all detected analytes. With the exception of the lead result for the PBF-MON-004 well sample, all analytical results for metals were below concentrations of regulatory concern. The lead result for the PBF-MON-004 well sample was 17.5 µg/L, as compared to EPA's action level of 15 µg/L. Lead has been detected in this well previously, but at concentrations below the action level. Lead was also detected in the laboratory preparation blank, field blank, and field rinsate samples at concentrations of 2.18 µg/L, 2.6 µg/L, and 2.4 µg/L, respectively. The field blank and field rinsate sample results were subsequently flagged "U" as nondetect to indicate the presence of lead in the laboratory preparation blank. While the presence of lead in the blanks is not at high enough concentrations to account for the well sample exceeding the EPA action level, this singular result is not an immediate cause for concern. The groundwater-monitoring requirement was mandated by the WAG 5 Record of Decision primarily because of the concern with the presence of lead. Subsequent rounds of groundwater sampling are needed to fully establish an analytical database and any trends in the analyte concentrations.

If you have any questions or comments regarding this document, please contact Carol Hathaway at 208-526-4049 or myself at 208-526-4392.

Sincerely,



Kathleen E. Hain, Director
Environmental Restoration Division

Enclosures

cc: Rick Poeton, EPA, 1200 Sixth Avenue, Seattle, WA 98101; 2 copies
Ted Livieratos, IDHW DEQ; 2 copies