



PROJECT DOCUMENT REVIEW RECORD

DOCUMENT TITLE/DESCRIPTION:

Groundwater Monitoring Plan for the Waste Area Group 5 Remedial Action

DATE: March 25, 2003

REVIEWER: State of Idaho Department of Environmental Quality

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
General Comments				
1	General		<p>The recent transmittal of the Waste Area Group 5 Fiscal Year 2003 Groundwater Monitoring Analytical Data indicates that tetrachloroethene was detected in the groundwater samples from wells ARA-MON-A-004 and PBF-MON-A-004 at concentrations of 5.1 µg/L and 5.4 µg/L, respectively. This may or may not indicate a new contaminant of concern, only future monitoring will be able to determine this fact. There is a general concern that the current WAG 5 monitoring wells are not positioned to accurately capture contaminants that may migrate from the known release sites in WAG 5. If for some reason additional monitoring wells are required, this document should include that possibility and provide some information regarding the decision logic in locating these new wells.</p>	<p>The INEEL is in the process of doing an evaluation of the groundwater monitoring network for WAG 5 in addition to that originally performed when establishing the current sampling plan. This will include the creation of rosette diagrams used to assess the groundwater flow, as well as new borehole deviation surveys performed concurrently with planned well maintenance activities at WAG 5. The results of this evaluation will be presented in the annual groundwater monitoring report rather than in this groundwater monitoring plan.</p>
Specific Comments				
1	2	2-7	<p>Paragraph 4: This paragraph incorrectly states a concentration for "the MCL and Idaho standard of 50 µg/L" for arsenic. The value is 0.01 mg/L or 10 µg/L for arsenic.</p>	<p>The current MCL is 50 µg/L for arsenic. The change to 10 µg/L is scheduled to take effect on January 23, 2006. The text has been modified to reflect this information.</p>
2	2.3	2-7	<p>The wells being used for ground water elevation measurements should be evaluated to assess the need for additional or new borehole deviation surveys. Refined data may lead to a different interpretation of isocontours and hence ground water flow paths. After this evaluation, the appropriateness of the existing monitoring wells should be assessed. The current understanding of ground water flow directions indicates that some contaminated sites may not be adequately covered by existing monitoring wells. This understanding by IDEQ is based on assumed longitudinal and transverse dispersivities and analytical modeling to assess the potential portion of contaminant plume(s) that might be intercepted by the monitoring wells in relation to the locations of the waste sites. Post remediation data pertaining to the effectiveness of the remedial actions will factor into this evaluation of the efficacy of the current</p>	<p>The INEEL is in the process of doing an evaluation of the groundwater monitoring network for WAG 5 in addition to that originally performed when establishing the current sampling plan. This will include the creation of rosette diagrams used to assess the groundwater flow, as well as new borehole deviation surveys performed concurrently with planned well maintenance activities at WAG 5. The results of this evaluation will be presented</p>

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			monitoring well locations as will an assessment of the need for new or additional borehole deviation surveys.	in the annual groundwater monitoring report rather than in this groundwater monitoring plan.
3	3.1.4.2	3-5	Last Sentence: Given that sufficient data are collected to demonstrate that lead levels are constant or decreasing and that no other contaminants pose a potential threat to the groundwater, the monitoring frequency may be modified or discontinued.	The text has been reworded as suggested.
4	3.1.5	3-6	Second Sentence: There are five decision statements and five decision rules. Please correct the sentence.	The text has been corrected.
5	Table 3-4	3-7	Decision rules 2, 4, and 5 should include the wording in specific comment 3; i.e. monitoring may be modified or discontinued.	The text has been reworded as suggested.
6	6.1.3	6-3	Table 6-2: This table indicates samples collected for NO ₂ , NO ₃ , and PO ₄ analysis will not be acidified which results in a 48-hour holding time. Because some samples collected at WAG 3 exceeded the 48-hour holding time, sample acidification is recommended to extend the holding time. Please consider acidifying these samples.	The collection of speciated nitrite and nitrate information is important to the groundwater monitoring effort. Sample acidification for purposes of preservation does not allow for the speciation; therefore, no change will be made to the plan. To note, the 48-hour holding time does require additional coordination with the laboratory. In the past year, the INEEL Environmental Restoration program has implemented a groundwater coordinator position that oversees the scheduling of groundwater monitoring for many of the projects. This has aided in correcting some of these problems that have been inherent in the past.
7	Appendix B	B-11	As noted in the text, this well is not really suitable for use as a monitoring well. All data obtained from sampling this well should be used with discretion because of the multiple perforated sections of casing that extend over 100 feet of the aquifer below the water table. Sample results are very apt to be diluted and detections, if they occur, of contaminants should be viewed with concern. The lack of detections should not	True, SPERT-I may not be the best well for monitoring purposes. The preparation of the annual groundwater monitoring report and review of the data presented therein is under the purview of a

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			be construed, as indicating the ground water is free of contaminants at that location.	hydrogeologist. This coupled with the internal peer reviews used at the INEEL, as well as reviews by Agency counterparts, will ensure that the data are properly assessed.