INEEL
Idaho National Engineering & Environmental Laboratory

PROJECT DOCUMENT REVIEW RECORD

DOCUMENT TITLE/DESCRIPTION: Waste Area Group 10, Operable Unit 10-08, Remedial Investigation/Feasibility Study Work Plan (DRAFT), DOE/ID-10902, Rev. 0, March 2002

DATE: July 16, 2002 **REVIEWER:** IDEQ

ITEM NUMBER	SECTION NUMBER	PAGE NUMBER	COMMENT	RESOLUTION
COMMENTS				
1	1	1-2	Bullet 2: The bullet states "Update existing groundwater models, perform limited additional modeling, analyze existing sitewide....." It is not clear what ground water models are included in this statement. It is IDEQ's understanding that the regional WAG 10 ground water flow model will be revisited and at a minimum recalibrated. The particle track option for MODFLOW probably will be implemented to assist in understanding regional flow patterns and preferential flow paths. Bullet 6 refers to a subregional model with the goal of looking at "contaminant flux through the site" and is assumed to tie into this approach. Please clarify the model that will be upgraded and discuss with the agencies if more than one model is planned for implementation. Also, there is a fundamental issue that needs to be addressed before it is reasonable to proceed with further, extensive ground water flow modeling. That issue is the lack of accurate ground water elevations in the wells at the INEEL. In the last few months, it has become evident that most wells at the INEEL lack accurate borehole deviation surveys such that the depths to water measurements can be converted to accurate elevations. It is understood that an effort is underway to rectify this gap but it will take time. It therefore seems problematic to pursue ground water flow model development until accurate ground water elevations are available for model calibration. This issue requires discussion between the agencies to ensure adequate and appropriate data are available to support any modeling effort.	The reviewers' understanding is correct. Only one WAG 10 model is planned. The text for bullet 6 is somewhat misleading and will be clarified. Accept: A planned activity to be part of the OU 10-08 RI/FS work that will be added to the work plan tasks will be the verification of correct water level measuring points, casing stickups, and well surveys for all the wells to be utilized for the sitewide groundwater monitoring and sampling. Also, all wells with known or suspected deviations will be checked using the current USGS digital gyro instrument. When wells that are part of the sitewide groundwater monitoring and sampling schedule have routine well maintenance done on them during which the pump will be pulled form the well, these wells will also be evaluated using the USGS digital gyro instrument even if they are not know to be deviated.

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2	1	1-2	Bullet 6: This bullet refers to the development of a subregional scale ground water model for evaluating contaminant flux through the site. As noted above, it is not clear how this model ties into the second bullet. Also, the terminology used implies intent to conduct contaminant transport modeling. At this time, IDEQ does not support WAG 10 conducting contaminant transport modeling. The task for tracking contaminant plumes is the responsibility of the individual WAGs. IDEQ does support a regional or a subregional calibrated flow model that can be used to assess the distribution of average linear ground water flow velocities across the INEEL and can assist WAG 10 in understanding preferential ground water flow paths. Please clarify this statement and discuss with the agencies any other planned modeling activity.	The text for bullet 6 is misleading and will be clarified. WAG 10 is not planning to perform transport modeling. The WAG 10-08 sub-regional advective flow model will be used to evaluate the potential for offsite contamination moving into and across the site. If such offsite contamination (such as NO3 from agricultural areas) appears significant, a recommendation for further analysis will be presented for approval to the agencies.
3	1	1-2	Last Bullet: This bullet is not needed and can be deleted.	Accept: the last bullet will be eliminated but part of the statement from the bullet will be combined with the bullet above based on comments by other reviewers.
4	2.9.2.1	2-19	An important component needed for the assessment of commingling plumes from the various WAGs is field data to support the description of the vertical dimensions and locations of the hydrostratigraphic units across the INEEL and in particular, where the plumes may commingle or appear to commingle in an areal sense. The vertical distribution of contaminants in the hydrostratigraphic units is needed to assess commingling as plumes of different origins may commingle if in the same hydrostratigraphic units but may not commingle or the commingling may be minimized if there is vertical separation between the plumes. Every opportunity should be taken to gather vertical profiling data from hydrostratigraphic unit and hydrochemical viewpoints.	Accept: Boreholes and wells that evaluate hydrostratigraphic units and sample vertically segregated hydrogeochemical locations in these boreholes and wells will be incorporated into the OU 10-08 work plan. Existing open hole wells may be sampled vertically using spot samples collected via low-flow sampling techniques. New wells will be sampled at specific intervals during the course of drilling the bore hole.

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5	2.9.2.2	2-19	It is suggested that additional rationale be presented to warrant this collection of data, as the information presented does not tie the activity to the CERCLA action. For instance, additional up-gradient hydrochemical data will assist WAG 10 in understanding the existence and location of potential preferential ground water flow paths. Similarly, contaminants moving on-site can be used as tracers to estimate travel times in the aquifer and to help locate preferential pathways. Please add more rationale to this section to support the objectives.	Accept: Additional discussion will be added that addresses the evaluation of "background" levels of contaminants that may be moving onto the site from upgradient and that may also be used as tracers for potential flow pathways.
6	3.1.4	3-6	Last Paragraph: This paragraph summarizes the OU 1-10 ROD commitment to remediate the TSF-08 site as necessary (mercury spill) under WAG 1 after WAG 10 has completed a phytoremediation study. At this time, it appears that the OU 1-10 ROD Amendment will shift the remediation commitment to WAG 10 without reverting back to WAG 1. The OU 10-08 Work Plan should reflect this change if this change in commitment comes to pass.	Agreed – the text will be modified to indicate the mercury site is a 10-08 obligation for remediation.
7	3.2.1	3-7	Paragraph 6: The paragraph refers to "unacceptable concentrations of TCE, PCE, DCE, Sr-90, Cs-137, V-234, and H-3…." It is assumed the correct isotope is U-234; please correct as needed.	Accept: That is a correct assumption, and the paragraph will be corrected.
8	3.2.2	3-9	Bullet 1: The third sentence is incomplete. Please complete the thought.	Accept: The sentence will be rewritten to complete the thought.
9	3.2.6	3-14	Paragraph 1: The third sentence is missing a few commas. Please place commas where needed to clarify the intent of the sentence.	Accept: The recommended changes will be incorporated.
10	3.2.7	3-14	Paragraph 2: The last sentence refers to "contaminating from past or current activities at NRF." The correct word is contaminants not "contaminating". Please correct.	Accept: The recommended changes will be incorporated.

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11	3.3	3-16	Paragraph 3: The paragraph states "For OU 10-08 groundwater, the use of MCLs instead of the traditional risk assessment approach used at the INEEL is defensible because the National Primary Drinking Water Regulations (NPDWRs or primary standards) are legally enforceable standards that apply to public water systems." This statement and the following discussion are misleading because not all contaminants of concern have MCL values and the singular use of MCLs does not account for cumulative effects of contaminants such as the radioactive contaminants. WAG 10 must consider MCLs where applicable but it also must consider acceptable risk based concentrations or the acceptable cumulative risk from multiple constituents. Please revise this section to reflect the need to consider risk-based concentrations.	Agreed – the text will be revised to explain that risk-based levels for protectiveness will be defined that result in a risk number of 10-6 and 10-4 or a HQ less than 1 and evaluated against ARARs (i.e., MCLs) to determine preliminary remediation goals for screening and detailed evaluations.
12	3.4.1	3-17	Last Bullet: As noted in comment #11, WAG 10 must consider MCLs; risk based concentrations, and cumulative risk from multiple constituents. Please revise accordingly.	Agreed – the text will be revised to explain that risk-based levels for protectiveness will be defined that result in a risk number of 10-6 and 10-4 or a HQ less than 1 and evaluated against ARARs (i.e., MCLs) to determine preliminary remediation goals for screening and detailed evaluations.
13	3.5.1.2	3-21	Paragraph 1: The wording convention used by IDEQ for the Idaho Ground Water Quality Plan and Rule is to spell out ground water as two words, not one word. Please correct the spelling in this citation.	Accept: The recommended changes will be incorporated.
14	3.5.1	3-22	Table 2: Please see comment #13.	Accept: The recommended changes will be incorporated.

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15	4.1.1	4-2	Paragraphs 2 and 3: Please see comment #11.	Agreed – the text will be revised to explain that risk-based levels for protectiveness will be defined that result in a risk number of 10-6 and 10-4 or a HQ less than 1 and evaluated against ARARs (I.e., MCLs) to determine preliminary remediation goals for screening and detailed evaluations.
16	4.1.2	4-4	Table 4-2: Please see comment #11.	The text will be revised to indicate other risk-based concentrations will be considered in addition to MCLs.
17	4.1.3	4-5	Table 4-3: A value of 2.0 mg/L (SDWS) is stated as being the MCL for fluoride but the primary drinking water standard of 4 mg/L is not noted. Please include both values in this table for completeness.	Comment incorporated as suggested.
18	4.1.5	4-7 &-8	Please see comment #11.	The text will be revised to indicate other risk-based concentrations will be considered in addition to MCLs.
19	4.1.7.1	4-9	Bullets 1 and 3: Both bullet items imply that WAG 10 will conduct contaminant transport modeling. As noted previously, IDEQ does not concur with this approach, especially with respect to modeling the transport of possible contaminants coming onto the site. This concept if correctly interpreted needs to be discussed with the agencies.	The text will be clarified to avoid the implication of transport modeling.

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20	4.2	4-9	Paragraph 1: The paragraph states "There is not sufficient time to construct new wells and obtain data for the RI/FS. Limited new data from groundwater sampling from downgradient and perimeter wells is obtainable during FY-02 and 03." WAG 10 should participate at every opportunity when any new wells are drilled on the INEEL to obtain useful information from that drilling to address outstanding issues such as the existence and location of preferential pathways. Other WAGs periodically drill wells for their specific purposes that may benefit WAG 10 with minimal cost to WAG 10. All such opportunities should be explored for cross-WAG benefits.	Text will be added describing coordination efforts with other WAGs and USGS to obtain information as wells are constructed. Every effort will be made to participate in and utilize the groundwater and subsurface data generated by other WAGs. Data from the work by other WAGs will be integrated into the OU 10-08 data and sitewide data base. Wells drilled and sampled by others WAGs will be also sampled for WAG 10 purposes when possible.
21	4.3.1	4-9 & -10	Task #2, 4, & 5: Please see comment #11.	The text will be revised to indicate other risk-based concentrations will be considered in addition to MCLs.
22	4.3.1	4-10	Task #6: The last sentence of this task is not clear. It appears the intent is to state a methodology will be developed in the OU 10-08 ROD that will facilitate conducting Track 1 and 2 investigations of new sites after the signing of the ROD but it is not clear how "remedy selection" fits into this discussion. Please rephrase so the intent is clearer.	Comment incorporated as suggested. the last sentence now reads, "A method will be developed in the OU 10-08 ROD by which these new sites can follow the Track 1 and Track 2 process in OU 10-08 post-ROD."
23	4.4	4-11	Bullet 4: Please see comment #11.	This statement will be deleted as an assumption.
24	4.4	4-11	Bullet 9: Although this assumption, "New ordnance sites will be considered as part of the OU 10-04 ROD", is logical it is not clear how this can be accomplished. This assumption requires further discussion with the agencies.	Comment noted. We are interested in the results of the Agency discussions.

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25	4.4	4-12	Bullet 3: This statement is all encompassing; it implies WAG 10 will install automated water level monitoring instrumentation across the whole site. It is assumed the intent is to selectively pick sites where such data are needed and then to install the automated equipment. Please clarify this assumption.	Accept: Your assumption is correct. Selected sites will have automated water level monitoring and data transmittal. The statement in the work plan will be expanded and clarified.
26	5.1.1	5-1	Bullet 4: Because the focus of this OU is site-wide ground water, it appears reasonable to limit this review of other WAG's remedies to those that affect ground water quality. Please provide some bounds on what will be reviewed.	Accept: The bullet will be revised to reflect that the review of other WAGs data and remedies will be associated with the review of groundwater related data. The may have to be expanded if new sites at these wags are turned over to WAG 10.
27	6	6-1	Paragraph 1: The schedule was outlined in the OU 10-04 RI/FS Work Plan as noted and also was tied to the OU 7-13/14 ROD schedule. The later schedule was recently pushed back until December 2006 which raises the question of revisiting the OU 10-08 schedule. The agencies need to discuss the schedule for OU 10-08.	Comment noted. We agree that the agencies should discuss the OU 10-08 schedule and are awaiting the outcome of the agency discussion.
28	A10	A-26	Figures A-11 & -12: Please provide units on these figures.	The units will be added to the figures.
29	A10	A-27	Table A-1: Please add the unit for the thicknesses presented in this table.	Accept: The units for the thickness will be added to the table.
30	B2	B-20	Figure B-8: The figure presumably presents both uranium and strontium isotope ratio data but only uranium isotope data appears to be presented. Please check this figure and either correct the figure or the figure description.	Accept: A figure which shows the strontium isotope data will also be added.

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31	G2	G-7	Table G-1: The second row of information, "Contaminated investigative- or remediation-derived media (purge water, development water, drill cuttings, nonhazardous decontamination fluids and slurries)", refers to a "Disposition Pathway" of "TAN PWTF or the ICDF EP". Neither "TAN PWTF" nor "ICDF EP" is defined in the acronym list. Assuming "TAN PWTF" refers to TAN NPTF, a WAC does not exist for this facility which is designed to handle the TCE plume at TAN. ICDF EP is assumed to be the Evaporation Pond at ICDF. At this time, there is no agreement from IDEQ that the ICDF EP can be used for any purge water, development water, nonhazardous decontamination fluids and slurries that are not generated as a result of operating the ICDF complex or investigation derived waste from OU 3-13 RD/RA activities and OU 3-14 investigations. Remediation derived media and drill cuttings from WAG 10 are likewise not acceptable in the ICDF EP but are intended for disposal in the ICDF landfill after appropriate treatment.	Accept: This section of the table will be corrected to indicate disposition pathways with waste acceptance criteria consistent with the identified waste types. The possibility that waste treatment may be required to satisfy waste acceptance criteria will be noted. Limitations on waste type and contamination levels will also be noted as appropriate.
32	G3	G-7	Paragraph 2: Please provide a copy of the cited document entitled Idaho National Engineering and Environmental Laboratory Management Standard for Disposal of Wastewater, DOE-ID 2001.	Reject: This document is still not approved by DOE at this time. A copy cannot be forwarded until the document has been approved. The reference to the document will be removed.
33			Attached document Field Sampling Plan for Groundwater Under Operable Unit 10-08 for Fiscal Years 2002, 2003, and 2004 (INEEL/EXT-01-01529, Rev. 0) This document was reviewed separately and comments were provided to DOE on April 8, 2002, and will not be repeated here.	Comment noted. We have attached the April 8 comments to the end of this table.

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34			Attached document Health and Safety Plan for the Environmental Restoration Long-Term Sitewide Groundwater Monitoring (INEEL/EXT-01-01644, Rev. 0). IDEQ chooses to not review this document.	Comment noted.

INEEL W RECORD

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DOCUMENT TITLE/DESCRIPTION: Field Sampling Plan for Groundwater Monitoring Under Operable Unit 10-08 for Fiscal Years 2002, 2003, and 2004, March 2002, INEEL/EXT-01-01529, Revision 0

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1	Section 2.2, Table 2-1,	Page 2-3	The last footnote to the table states "TNT and RDX will be collected from well Highway 3 only." From the title of the plan it appears that only this well will be sampled for RDX and TNT analysis during the period of 2002 through 2004. The intent of the original discussion was to select key wells that appear to be down gradient of ordnance areas such as the mass detonation area, in order to get a snapshot view of whether explosives are migrating to the ground water. It is certainly recognized that there are few wells located in the explosives testing areas but a better spatial distribution is needed than the one well indicated in the plan.	Accept: In conjunction with and with the approval of the agencies, several additional wells will be sampled during a single sampling event to evaluate the potential for TNT and RDX impacts in the groundwater. If these constituents are not detected during the single sampling event, it will be assumed that TNT and RDX are not present in the groundwater and no further groundwater sampling for these constituents will be needed and none will be undertaken.
2	Section 5.1.3, Table 5-2	Page 5-5	The table states a holding time of 48 hours for nitrate without preservative. Recently, INTEC experienced exceedances of holding times for nitrate samples that are assumed to be caused by the lack of preservative and consequent short holding time noted in this table. It is recommended that this occurrence be confirmed and investigated if correct. Should the possibility exist that this short holding time might be exceeded, it is recommended the samples be acidified to gain a 30-day holding time to avoid the loss of a validated result.	Accept: This suggestion will be reviewed with the Sample Management Office to look for alternatives to the short holding time for the analysis of nitrates.
3	Section 7,	Page 7-1	The sample logbook should include entries for the depth setting of the sample pump, especially if a temporary installation is used. Pump placement should be consistent from sampling event to event to ensure consistent sampling results. In fact, should the	Comment incorporated as suggested. Pump placement in each well will be noted in the field logbooks and on results tables for the field parameters collected for each site.

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3. continued			discharge line length be altered between sampling events, sampling should not occur unless the pump can be placed at the routine sampling depth unless there are specific objectives requiring an alternative sampling depth. This variable is very important unless there is well specific depth profiling data available that indicates the depth setting is a minor contributor to variations in concentration data.	
4	Appendix A, Figures A-1, A-2, and A-3	Pages A-3 through A-5	These three figures show two locations identified as "ANL-W". The eastern location is correct but the second location is by BORAX and is probably intended to identify EBR-1, which is not consistent with Figure 1-1 on page 1-2. Please correct these three figures.	Comment incorporated as suggested. We have corrected the figures.