

Technical Basis For Schedule Extension OU 1 CMS/FS

Preliminary work on the OU 1 Corrective Measure Study/Feasibility Study (CMS/FS) has been completed. At this juncture, detailed work on the development and screening of alternatives must begin as soon as stable information is available from the Draft Phase III OU 1 RFI/RI Report. This work involves advancing from the generic to site specific in terms of the contaminated media and specific chemical compounds requiring remediation.

The first step toward identifying and screening remedial action alternatives is to establish Remedial Action Objectives (RAOs) so that the engineering team has clear direction of what the problems are and what the remediation goals should be. Regulatory agency guidance presented in Section 4.2.1 of *Guidance for Conducting Remedial Investigation and Feasibility Studies Under CERCLA* (OSWER Directive 9355.3-01, 1988) indicates that RAOs should specify

- o The contaminant(s) of concern
- o Exposure route(s) and receptor(s) and
- o An acceptable contaminant level or range of levels for each exposure route (i.e., preliminary remediation goals [PRGs])

The information necessary to address these questions arises principally from the Draft Phase III OU 1 RFI/RI Report. However, as was pointed out in the November 13, 1992 meeting, formal regulatory agency feedback and resolution of comments on the Draft Phase III OU 1 RFI/RI Report is necessary to ensure a stable foundation from which to proceed.

Major issues confronting progress on the Draft CMS/FS deal mainly with defining RAOs, PRGs, and several site definition aspects. Expansion on each of these issues parallel to the presentation on November 13, 1992 follow:

- 1 **Contaminants of concern (COCs)** are fundamental to the Baseline Risk Assessment (BRA) and subsequently the Draft CMS/FS. Although DOE, EPA, and CDH worked closely in development of the BRA, it is possible that comments could require revision to the COCs¹ and rework of the BRA. This rework, when propagated through the Draft CMS/FS, could easily introduce new groups of contaminants for consideration. Treatment technologies tend to be chemical group specific (i.e., volatile organic compounds (VOCs), metals, heavy hydrocarbons, etc.). It is possible that alternatives developed under an initial set

¹ For example, throughout working group meetings, a COC listing that addressed 99 percent of the risk was consistently discussed as a Toxicity Based screening for potentially carcinogenic substances (RAGS Section 5.9). In an October 13, 1992 letter commenting on Technical Memorandum No. 8, Identification of Contaminants of Concern, it was suggested that the screening criteria be raised to 99.9 percent. Given the date of receipt of this comment, DOE was unable to make modifications for the October 28, 1992 milestone. Such an increase would clearly introduce additional COCs to the current list of 22 and would require revision of the BRA.

of RAOs would have to be reconfigured to match revised RAOs following receipt of EPA and CDH comment on the BRA

- 2 Exposure routes presented and quantitatively assessed in the BRA are based on a physical pathway analysis. This analysis does not include domestic use of groundwater. Receipt of agency comments on the BRA requesting analysis of a groundwater pathway would require rework of the BRA and would introduce new COCs as well as additional pathways. Similar to 1 (above) this could require a revision to RAOs. In turn, any alternative development and screening efforts would be subject to reconfiguration.
- 3 Preliminary remediation goals² are necessary to permit an engineering evaluation of the effectiveness of candidate technologies. As was pointed out in the November 13, 1992 meeting, assumptions embodied in the BRA can make a difference 2 to 3 orders of magnitude difference in PRGs. PRGs revised (by 2 to 3 orders of magnitude) owing to altering RAOs would necessitate reconfiguration of the alternative development and screening work.
- 4 Examples of additional Draft Phase III OU 1 RFI/RI Report issues that EPA and CDH comment could impact development of remedial action alternatives as well as the detailed screening of alternatives include: (i) delegation of localized radionuclide surface soil contamination and groundwater contamination reported on the eastern portion of the site³; (ii) groundwater flow patterns near the western terminus of the French Drain⁴; and (iii) the significance of residual vadose zone contamination.

In summary, proceeding with development and screening of alternatives without RAOs that are based on a well defined BRA could result in a major false start. Such a false start would lead to costly expenditure and contamination of resources.

The currently approved schedule would have DOE submitting Technical Memoranda No. 10 detailing RAOs, Preliminary Remediation Goals, and ARARs before EPA and CDH have completed review of the Draft Phase III OU 1 RFI/RI Report. It is unsound to anticipate specific direction on a successor document (the Draft CMS/FS) before EPA and CDH have reviewed and established the technical merits of the predecessor document (the Draft RFI/RI).

² PRGs establish remediation goals for evaluating remediation requirements for EPA's 1E.6 risk based Point of Departure. They basically represent the first assessment of how clean is clean.

³ Surface radionuclide and localized groundwater contamination on the eastern portion of the site appear to emanate from OU 2. It is expected that remediation of these two situations is most efficiently through the remediation efforts anticipated for OU 2.

⁴ Groundwater flow in the vicinity of the terminus of the French Drain is important in an the assessment of the French Drain as an effective management of migration/removal process technology option. EPA and CDH have expressed interest in evaluating the system's effectiveness.

The following page is the detailed production schedule developed to guide preparation of the Draft CMS/FS by June 29 1992 and the Final CMS/FS by December 23 1992. Review of the schedule indicates a logical progression of the CMS/FS tasks starting with Technical Memorandum No. 10 immediately following receipt of EPA and CDH comments on the Draft Phase III OU 1 RF/RI Report. The schedule is ambitious but achievable provided EPA and CDH work together with DOE at a staff level to resolve technical issues as they arise.

Name	Dur. tlo	Sched. Start	Scheduled Finish	4th Quarter				1st Quarter			2nd Quarter			3rd Quarter			4th Quarter		
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
OU1 FS/CMS PROD SCHEDULE	0w	10/28/92 8 00am	10/28/92 8 00am																
Review Draft BRA	12w	10/28/92 8 00am	1/19/93 5 00pm				1/19												
Receipt RFI/RI BRA Com	0d	1/19/93 5 00pm	1/19/93 5 00pm				1/26												
T M 10 (RAO PRG ARAR)	1w	1/20/93 8 00am	1/26/93 5 00pm				2/2												
Agency R view	1w	1/27/93 8 00am	2/2/93 5 00pm				2/23												
Vol. Scene Techs EMI/	3w	2/3/93 8 00am	2/23/93 5 00pm																
<< Rev Rem Goals >>	0w	2/23/93 5 00pm	2/23/93 5 00pm																
Assemble Alts & Screen	6w	2/24/93 8 00am	4/6/93 5 00pm																
T M 11 (Alts Array)	1w	4/7/93 8 00am	4/13/93 5 00pm																
<< Rev Rem Goals >>	0w	4/13/93 5 00pm	4/13/93 5 00pm																
Agency R view	1w	4/14/93 8 00am	4/20/93 5 00pm																
Detailed Analysis	4w	4/21/93 8 00am	5/18/93 5 00pm																
Write Report	4w	4/29/93 8 00am	5/26/93 5 00pm																
Internal Review	2w	5/27/93 8 00am	6/9/93 5 00pm																
Revise & Submit	2 7w	6/10/93 8 00am	6/29/93 12 00pm																
Agency Review	12 7w	6/29/93 1 00pm	9/24/93 5 00pm																
Submit Final CMS/FS	12 7w	9/27/93 8 00am	12/23/93 12 00pm																

Project
 Date 11/16/92

Critical  **Progress**  **Summary** 
Noncritical  **Milestone**  **Roll d Up** 