

**RFETS Response to Joint EPA/CDPHE Letter
to DOE-RFFO dated December 18, 1996
on Action Levels for Groundwater in Tier II Wells**

This document responds to the joint letter from Mr. Tim Rehder of the EPA and Mr. Steve Tarlton of the CDPHE to Mr. Steve Slaten of the DOE-RFFO dated December 18, 1996 regarding action levels for groundwater. The EPA/CDPHE letter clarifies their position(s) on exceedances of Tier I and Tier II wells, and the scope of the evaluations that are required under Rocky Flats Cleanup Agreement (RFCA). Attached is the RFETS response to the EPA/CDPHE position(s).

Tier I wells:

1. *An exceedance in a plume definition well triggers an evaluation to determine the impact to surface water.*

Response: We agree. Plume definition wells are located so as to detect Tier I exceedances of action levels from contaminant plume sources. An evaluation of impact to surface water is required under RFCA if a Tier I exceedance has occurred.

2. *The evaluation determines whether action is required; and (3) the required action is placed in the ER ranking for prioritization.*

Response: We agree that the impact evaluation will determine if an action is required. If an action is required, the ER Ranking will be reviewed to establish whether the priority should be changed for accelerated action. If the area of concern is not on the ER Ranking, it will be added to the ER Ranking. Accelerated action priority will be given to those areas of concern which show no decreasing trend(s) over a two-year period and which will ultimately cause a surface water standard exceedance.

Tier II Wells:

1. *An exceedance triggers monthly sampling (unless adequate data already exists)*

Response: We agree. If an exceedance of Tier II Action Levels in wells monitoring plume extent, drainage or boundary occurs, monthly confirmation sampling will be done unless adequate historical (pre-July 19, 1996) data exists. The definition of "adequate" data is that data necessary to establish a threshold (a reasonable mean) or trend for the contaminant of interest.

2. *A specified evaluation is required to determine the impact to surface water.*

Response: We agree. A specified evaluation is required if three monthly samplings confirm an exceedance of Tier II action levels. In the case where sufficient historic (pre-July 19, 1996) data exists and monthly sampling was not performed, a specified evaluation will also be required.

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3. *The evaluation determines whether action is required and (4) the required action is placed in the ER ranking for prioritization.*

Response: We agree. Once an evaluation has determined that an actual or potential groundwater impact to surface water exists, and that an action is required, the action will be placed on the ER ranking for prioritization. Actions will be determined on a case-by-case basis and may include both institutional and engineering controls.

Additional areas of clarification:

- a) *Action Levels in groundwater apply to all parameters or contaminants, not just organic compounds.*

Response: We agree that action levels apply to all parameters or contaminants. However, the placement of wells in the monitoring program by the Groundwater Working Group was primarily based on the known extent of volatile organic compound (VOC) plumes, but also considered inorganic constituents. This decision was made because the Working Group believed that organic contamination represents the most significant problem in groundwater at the Site. We will continue to sample and report any exceedances of action levels that have been detected, but we believe that the evaluations performed and subsequent actions proposed must consider the relative risk to the public of the contaminants in question.

- b) *The evaluation is triggered immediately when the exceedance is noted, not when environmental monitoring results are presented to the public.*

Response: We do not agree that evaluations can be performed immediately upon determination of an exceedance in groundwater. In the case where an exceedance is detected in a well with no previous history of exceedance for a particular contaminant, three monthly sample events are required under the Action Level and Standards Framework (Attachment 5 of the RFCA) [ALF]. Evaluations need to be performed after all the data is in and validated. In the case where recent sampling confirms exceedances for which confirmatory historic data exist, the evaluation must be designed to provide the proper data that is necessary for impact evaluation. This process can involve scoping meetings with Working Group members, preparation of work plans for field activities and allocation of budget resources. Groundwater is moving relatively slowly in the subsurface environment at RFETS, and many of the exceedances are chronic problems that monitoring has shown are not changing in concentration to any great degree. Because of this, an immediate response is not necessary, and the quality of the evaluation will be enhanced if time is spent to develop the data quality objective for the evaluations.

- c) *Existing Tier II exceedances should have a completed evaluation, or these evaluations should be ongoing. Currently the North Walnut Creek plume (wells 1386 and 1786)*

should be under evaluation.

Response: We agree that evaluations should be completed for existing Tier II exceedances. Evaluation activities for groundwater have been coordinated with the ER Ranking process. In areas where an evaluation of impact to surface water has not been completed, evaluations will be conducted through the groundwater portion of the Integrated Monitoring Plan.

Evaluations are planned for areas where drainage, plume extent or boundary wells in the current network are showing exceedances above Tier II action levels. The scoping document for these evaluations will be presented to the groundwater Working Group upon completion. The SW59 seep area near well 3586 is currently undergoing characterization to establish the extent of the contaminant plume thought to emanate from the Mound VOC plume. Areas being scoped for field evaluation include the PU&D Yard plume, the VOC contamination north of Building 771, and the VOC contamination in well 23296. In addition, funding is being sought to conduct a alternatives analysis for the Solar Ponds Plume (North Walnut Creek Plume).

d) *The evaluation scope would be determined in collaboration with all parties, but at a minimum includes each of the following to some degree:*

potentiometric mapping

flow balance

i) *mass loading estimates*

ii) *surface water flow, quality and mixing*

iii) *potential changes to regime and effects on the above evaluation*

Response: The ALF references the need to establish impacts through the use of mass balancing, flux calculations and multiple source contributions. Section 3.6.4 of the draft Groundwater Section of the IMP outlines possible components to an evaluation of impact to surface water from groundwater. In addition, a scoping document will be provided which outlines evaluation activities. However, the ALF states, and Groundwater Working Group has agreed, that each evaluation will be scoped on a case-by-case basis. Therefore, each evaluation will be planned based on historic knowledge, and the particular data quality objectives necessary to establish impact to surface water. Prescriptive remedies will be avoided in deference to the needs of each specific evaluation.

e) *The lead agency for a given plume may be determined on the basis of the location of the source of the plume or its extent. Until specific lead roles are defined at the time of the ER Ranking, both CDPHE and EPA are expected to be involved in evaluation scoping and review.*

Response: The Groundwater Working Group as it currently exists is composed of technical staff from CDPHE, EPA, DOE, Kaiser-Hill, and RMRS. It is our intent to maintain this group as a representative team for review and approval of ongoing

groundwater decisions. In addition, it is RFETS's intent to consider the lead regulatory agency for a given plume based on the downgradient extent of the plume, though we will keep both agencies apprised of groundwater activities.

In summary, these clarifications will be incorporated into the Groundwater Portion of the Integrated Monitoring Plan and into future plume-specific remedial decisions. Further discussion of the Final Revised Groundwater Conceptual Plan will be submitted to you in a separate letter currently under preparation. As part of the April 22, 1997 Groundwater Working Group meeting the scope of the Solar Ponds Plume will be discussed.