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**EPA Comments on the Phase I RFI/RI Workplan
for Operable Unit 9, the Original Process
Waste Lines (OPWL)**

General Comments

In general, this document is inadequate and incapable of meeting the objectives of a Phase I field investigation. This results in part from problems in the contents, but in a broader sense the Workplan's failures originate with the complete lack of coordination with site-wide activities documents such as Standard Operating Procedures (SOPs), and the Quality Assurance Project Plan (QAPjP), or with other Workplans. Major problems identified within this Workplan include: 1) lack of consistency with the Interagency Agreement (IAG); 2) absence of discussion of the Applicable and Relevant and Appropriate requirements (ARARs) process; 3) absence of discussion on the development of Data Quality Objectives; 4) inadequate Field Sampling Plan (FSP); and 5) inadequate Baseline Risk Assessment Plan.

The IAG describes the process for closure of Interim Status Closure Units external to buildings. The closure of these units is designed to be conducted in two phases. Phase I must focus on characterization of sources of contamination. Phase II will address the nature, extent, fate and transport of contamination. This basic approach and objectives in this workplan must be modified to reflect consistency with the IAG.

The categories of ARARs and the ARARs process must be discussed in detail. Identification of chemical specific ARARs consistent with available data or contaminants expected based on site history needs to be presented in this workplan. In addition this workplan must discuss the regulatory basis for attainment of ARARs by selected remedies.

The Data Quality Objectives process must be described in detail. This must include a discussion on the identification of decision types, data uses/needs and data collection programs.

The FSP must focus on presenting detailed information on the process and rationale for selecting sample media and locations, and the types, locations, number and frequency of samples scheduled. Sampling methods should be described in the SOPs. Where specific sampling methods are to be used because of the nature of the site (such as the hand sampling from within test pits called for here) then new/modified SOP's or appropriate SOPA's must be submitted for EPA and CDH approval.

The Baseline Risk Assessment for Phase I consists of a Human Health Risk Assessment and Environmental Evaluation at the source of contamination. This is only part of the overall risk

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assessment process, and the plan should make this clear. More comprehensive studies will be performed during Phase II as more information on the nature, extent, fate and transport of contamination is available.

Specific Comments

Section 1.1.1, Regulatory Background, page 2. This section must be updated to show that the Interagency Agreement (IAG) was signed on January 22, 1991 and that this workplan corresponds to Operable Unit 9.

Section 1.1.2, Technical objectives. The IAG states that the Interim Closure Units would be approached in two phases. Phase I would address characterization of soils/sources of contamination and Phase II would address nature, extent, fate and transport of contamination. This needs to be corrected.

Section 2.1.2.1, Pipeline Network, Disposition of Lines, page 11. This section mentions that all the original process waste lines were built to drain by gravity. It must also specify where pipe contents drained to, what (if any) treatment they received, and if the contents were collected or discharged to the ground. Although the pipe lines were built to drain by gravity, a portion of the liquids are expected to remain inside the pipes.

In addition, this section mentions that lines beneath buildings were decontaminated by flushing with water. The plan should explain if this water was collected or discharged to the ground. If it was discharged to the ground, where were the locations? This needs to be explained.

Section 3.1.1, Sources, page 25. If it is a fact that not all the leaks were detected, using a sampling spacing approach to account just for the leaks is inappropriate. Sampling locations must be chosen using a better approach which will fully characterized the sources of contamination. It is important to utilize all the records and information on location of pipes, date of installation, materials, assembling of pipes, leaks etc. in order to identify sampling locations which will best represent and characterize contamination in soils attributable to the process waste lines.

A variety of non-invasive techniques are available for examination of buried pipes. These methods should be thoroughly evaluated to determine their usefulness in ascertaining the condition and contents of the process waste lines. Promising methods should be employed in support of sampling plan design, not afterward. DOE's own discussion indicates areas of settlement, breaks, and other circumstances conducive to soil contamination exist along the alignments. This is good information. It should be used in designing a sampling scheme,

which it apparently was not, since the samples were arbitrarily placed at fixed intervals.

Section 3.1.3, Groundwater, page 28. The last sentence of this section does not make sense. This sentence needs to be rewritten.

Section 3.3, Potential ARARs, page 30. This section must describe in detail the ARAR process. This will include the following: development of ARARs, categories of ARARs, identification of ARARs, and discussion on regulations for attainment of ARARs. The site-wide list of ARARs have not been developed yet. Therefore, the identification of ARARs must be included in this document.

Section 3.4, Baseline Risk Assessment Plan, page 31. This section must mention that the Baseline Risk Assessment Plan for Phase I activities would consist of a Baseline Human Health Risk Assessment and Environmental Evaluation at the source of contamination. The Baseline Human Health Risk Assessment must address potential public health risks. This would provide a basis for determining whether remedial actions are necessary for the site, but it is not necessarily a decisive factor for conducting Interim Measures/Interim remedial Actions (IM/IRAs). IM/IRAs activities for the site can be justified by other reasons such as the necessity to stop migration of contaminants from highly contaminated areas to less contaminated areas or to expedite the closure of the unit.

Section 3.5, Data Needs and Sampling Objectives, page 31. This section must identify data needs and sampling objectives needed to fully characterize the sources of contamination in soils and to ensure that collected data is comprehensive to assess human health risks at the source. Data needs and sampling objectives for determination of the nature, extent, transport and fate of contaminants will be addressed in Phase II.

Section 3.5, Data Quality Objectives, page 31. This section must describe the data quality objectives development process. This must include a discussion and identification of decision types, and data uses and needs. In addition, a design data collection program must be included.

Section 4.0, Field Sampling Plan, page 32.

Please reference the plans prepared for OU's 1, 2, 5, & 6, and our comments on those documents, for some examples of what this plan should look like when completed. Drawing an arrow every 300 feet on a map of pipeline alignments does not constitute designing a sampling plan.

The Field Sampling Plan must describe in detail the location, number, and frequency of samples needed to meet the

objectives of this Phase I field investigation. Special care should be taken in choosing the locations and number of samples, so as to avoid unnecessary, useless and costly sample collection activities. EPA recommends careful researching of the site history such as location of pipes, date of installation, materials which are likely to be corroded, records of leaks, discharge locations, and any other information which will justify the need for sampling in a particular location. Soil sampling plan maps must be updated to show new sampling locations.

Section 4.4, Soil Sampling, page 37. Sampling procedures must be consistent with the SOPs. If different sampling methods are needed because of the nature of the site, then appropriate SOPA's must be submitted for EPA and CDH approval. Several procedures mentioned here are not currently covered in the SOP's, although it is not clear which ones will actually be used since reference is made to sampling by "appropriate means". If more than one procedure is required based on field conditions, the criteria, process, and persons by which and whom procedures are chosen must be presented here. This is where the field crew will look for instructions, and there are none.

Section 4.4.2, Number of Soil Samples, page 39. This section needs to specify the depth intervals of the samples to be taken in each location when characterizing the soils around the pipes.

Section 4.5.3.1, Chemicals and Radionuclides, page 41. The chemical analysis program must be coordinated with the QAPjP and the other workplans. It must describe what chemicals will be analyzed for and by what methods, to the extent that they deviate from the standard Phase I list. Any such deviation must be justified based on site use and history.