



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

January 7, 1994

Ms. Lisa Green
Environmental Restoration
U.S. Department of Energy
Idaho Operations Office
785 DOE Place
Idaho Falls, Idaho 83402

Re: Review Comments on Draft Scope of Work for the ICPP North
Area Remedial Investigation/Feasibility Study

Dear Ms. Green:

The enclosed comments pertaining to the above-referenced
document are offered for your consideration.

If you have any questions or comments, I may be contacted at
206/553-1752.

Sincerely,

A handwritten signature in black ink, appearing to read "Earl Liverman".

Earl Liverman

Enclosure

cc: Tom Stoops, DEQ-IF
Talley Jenkins, DOE-ID

**U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 10, SEATTLE, WASHINGTON**

**REVIEW COMMENTS
DRAFT SCOPE OF WORK FOR THE ICPP NORTH AREA
REMEDIAL INVESTIGATION/FEASIBILITY STUDY**

GENERAL COMMENTS

1. Insofar that a Work Plan (WP) will not be prepared for the RI/FS, it is necessary to provide a level of detail not ordinarily expected for the SOW. Therefore, the SOW should be reviewed and amended to include information typically included in a WP. For example, the following sections should be revised as indicated:
 - Section 4.0 - DQOs should be established, and in those instances where it is expected that the results from ongoing investigations will address DQOs, a clear relationship between objectives, data needs, and field activities should be evident.
 - Section 8.0 - Preliminary remediation goals and general response actions and preliminary identification and screening of remedial technologies should be presented.
 - Section 14.1 - A more comprehensive overview of the community relations plan (i.e., community relations planned for the ICPP North Area [INA] RI/FS) should be presented.
2. Concise summaries on site background, geology, and hydrogeology should be included. The hydrogeology section should present a site conceptual model that forms the basis for contaminant fate and transport modeling, and should describe:
 - Contaminant sources including their type, areal extent, and dimensions, as well as contaminant characteristics.
 - Unsaturated zone characteristics including stratigraphy, physical and chemical properties of porous and fractured media (soil, interbeds, and basalt), and vertical hydraulic and solute transport characteristics.
 - Aquifer flow and solute transport characteristics including aquifer hydraulic properties, groundwater flow patterns and flow net analysis, scale factors for fractured media flow or equivalent porous media flow, and dominant contaminant transport directions.
3. The contaminant fate and transport model is not explained adequately. For example, the four technical criteria have not been justified based on a site hydrogeological conceptual

model. Most importantly, data requirements and data availability do not appear to have been considered in the model selection. The following issues should be addressed before the technical criteria are determined and the model(s) selected.

- Describe whether the multiple sources of contamination will be simulated as one source in a single model, as multiple sources in a single model, or treated separately using different models.
 - Discuss whether the modeling will simulate three zones (i.e., source, unsaturated zone, and aquifer) as a single simulation field (one unified partial differential equation) or three zones separately with a mass balance to connect the three models.
4. The risk assessment should be revised to establish an assessment framework for estimating and presenting human health risks associated with the multiple sites and to include an ecological risk assessment.

SPECIFIC COMMENTS

5. Section 4.0, page 4-1, paragraph 2

Explain why contamination from CPP-34 (OU3-06), CPP-37 (OU3-02), and CPP-65 (OU3-02) will be included only in evaluation of the groundwater pathway. Also explain what the impact may be of not considering these sites in the evaluation of all contaminant pathways.

In addition, these three sites should be included with the other sites listed in Table 2-1 and Attachment B.

6. Section 6.0, page 6-1

The discussion of ARARs should be revised to include only a concise tabular summary of ARARs with columns for action, substantive requirement, prerequisite for applicability, and citation.

In addition, in States with an authorized RCRA program, the State's promulgated RCRA requirements will replace the equivalent Federal requirements as potentially ARARs.

7. Section 6.1.1, page 6-2

MCLs are relevant and appropriate as in situ cleanup standards where groundwater is or may be used for drinking water. Thus, the reference to MCLs as applicable should be revised accordingly.

8. Table 6-1, page 6-4

The abbreviations "DCG" and "TBD" should be defined and included in the acronym list.

In addition, include a footnote explaining that the "level of concern" for gross alpha and gross beta emitters were derived assuming that the named radionuclide is the only one present.

Note that the level of concern for gross beta should be 8 Pci/L, as opposed to 80 Pci/L (refer to paragraph 4, page 4-9).

9. Section 6.3.1, page 6-6

OSHA is mistakenly listed as an ARAR. OSHA standards apply directly to CERCLA response actions. OSHA is more properly viewed as an employee protection law rather than an environmental law, and thus the process in CERCLA for the attainment or waiver of ARARs would not apply to OSHA standards.

10. Section 7.2, page 7-1, paragraph 2

The need to evaluate the groundwater pathway using a more sophisticated and accurate model is problematic. A more sophisticated model will not necessarily be more accurate. If the database cannot support the data requirements and the model calibration is inadequate, a sophisticated model would likely not be more meaningful.

In addition, a more sophisticated model would probably require more data and extensive calibration. If the same database that can support only a screening model for the preliminary assessment is used to support a more sophisticated model, the modeling results would not necessarily be meaningfully improved.

11. Section 7.2.3, page 7-4, paragraph 4

Explain how a detailed study will be accomplished when additional data collection is not proposed for this RI/FS.

In addition, hydrogeologic data, not screening models, should be used to establish site physical conditions and to validate results from a more complex model. Assumptions associated with screening and sophisticated models are different, thus minimizing the meaningfulness of the comparison.

12. Section 7.2.4, page 7-6, first paragraph

Clarify whether the groundwater flow system, the solute transport system, or both were evaluated following the technical criterion.

The need for and implementability of a three-dimensional flow and transport model for this RI/FS is questionable. Modeling efforts in the TRA and the RWMC using TARGET and PORFLOW models demonstrate the difficulty in implementing three-dimensional models. In both cases, the configuration was changed to a two-dimensional vertical profile model even though there were relatively large databases (both spatial and temporal distribution) available for these two sites.

13. Section 8.1, page 8-2

Alternative 2 should be revised to "Limited Action." Alternative 3 should be revised to "Excavation," and Alternative 4 should be revised to "Excavation/Treatment."

In addition, since this RI/FS does not include a MP, it would be appropriate to briefly describe the alternatives.

14. Section 9.1, page 9-1

Suppositions regarding future land use are inappropriate for inclusion in the SOW; this issue falls clearly within the realm of risk management.

In addition, a 100-year exposure factor is also inappropriate for Superfund human health assessments. Revise to use the 30-year exposure duration factor for residential scenarios. For purposes of comparison, an alternate exposure factor of 100 years may be used.

15. Section 9.2.1, page 9-3

The discussion of the data collection and evaluation should describe procedures for review of the validity of the assumptions made during the analysis of Track 1 and Track 2 sites, and for assimilating Track 1 and Track 2 risk estimates.

16. Section 9.2.2, page 9-3

The discussion of exposure assessment should describe procedures for evaluating receptor exposure from multiples sites over the INA area.

17. Section 9.2.2, page 9-4, paragraph 2

The list of potential receptors should also include: intrusive and nonintrusive (assuming the same default residential exposure parameters as the intrusion, but limiting the evaluation to the top 6 inches of soil for inhalation and ingestion, and the top 4 feet for external exposure) for the onsite residential scenario; trespasser and visitor for the recreational scenario (including justification for the

exposure frequency of 2 weeks for hunting); and subsistence farming (including justification for excluding intrusion).

18. 9.2.4, page 9-5

The discussion of risk characterization should describe the presentation of risk. For example, how will the individual and/or cumulative risk estimates be presented (i.e., tables or graphics such as risk surfaces).

19. Section 9.3, page 9-5

An ecological assessment (qualitative or quantitative) should be performed to evaluate the potential for the INA to act as a continuing source of contamination with potential impact to ecological receptors.

Deferral to the site-wide assessment is inappropriate because the site-wide ecological assessment is designed to evaluate past releases from multiple source areas to determine the need for additional remediation of secondary sources once the individual sources have been addressed.

20. Section 15.0, page 15-1

Revise the working schedule to identify:

- Deadlines for submission of supporting documents such as the perched water investigation technical memorandum and treatability study;
- Working versus enforceable schedules (while also taking into consideration OU 3-13); and
- Milestones where decisions must be made regarding progress of the RI/FS (i.e., where it would be determined whether or not additional investigations would be required).