United States Department of the Interior

GEOLOGICAL SURVEY

Water Resources Division
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April 29, 1987

Mr. Wayne Pierre
U.S. Environmental Protection Agency
Region X
1200 Sixth Avenue
Seattle, Washington 98101

Subject: REPORT: USGS comments on: "Closure plan for CPP-55, Mercury contaminated area (South of ICPP T-15)"

Dear Mr. Pierre:

Transmitted herewith are our comments for the subject report prepared by WINCO dated March 1987. Comments are keyed to the report by section and paragraph number unless otherwise noted.

If there are questions, please contact me at your convenience.

With best regards,

Larry D. Mann

cc: [redacted]
District Chief, USGS, ID-NV

USGS review comments for "Closure plan for CPP-55, Mercury contaminated area (South of ICPP T-15)"

Section 1.1:

Par. 2 Paleozoic rocks in the Lost River Range contain 10-40 ppb of Hg and a rhyolitic welded ash-flow tuff sample collected at INEL may have contained 147 ppm of Hg. Therefore, alluvium along the Big Lost River may have a notable background of Hg.

It would help to list mercury levels for the seven samples in a table rather than just show a range. Per telecon with Joan Poland on 04/16/1987 the results are as follows:

Sample no.	Mercury in ppb
1	48
2	72
3	92
4	97
5	124
6	176
7	236
Average	121

Six of the samples are less than 200 ppb EP-Toxicity limit. The question is: Is one of seven samples statistically significant given the possible range of background levels?

Section 2.1:

Define mineral spirits. By the name implication, if a solvent that contained mineral spirits evaporated wouldn't a precipitated residue remain that could be transported into the subsurface?

Section 2.3:

Par. 1 Whether the solvents evaporated depends on the soil and climatic conditions present at the time of disposal.

If mercury was specifically sampled and analyzed for, why wouldn't the analyses be reliable for mercury?

Section 7.1:

The drilling of one well to detect minute quantities of metals/organics is a technically awkward and, perhaps, impossible situation. If the soil is to be removed to

eliminate contamination, then the metals/organics will no longer be available for transport. Those metals/organics disposed of prior to 1985, have either been transported, are still in the soil column, or have evaporated. Given that there may be one or more perched-water zones and a regional aquifer, it is extremely unlikely that if metals/organics were found in water that it could be attributed to CPP-55 owing to the many complexities of the flow systems and the apparent small quantities of disposal. Drilling should be limited to the surficial alluvium for purposes of characterization; the need for ground-water monitoring, although possible, may well be impractical because of dilution, geohydrologic complexities and the waste quantities involved.

Which ground-water body would the well be completed in, perched or regional? Ground-water contamination studies start at the uppermost saturated zone and work down.