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COMMENTS OF FINAL O.U. 2 ISA

06-28-91

OEPA/DOE-FMPC

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LETTER



State of Ohio Environmental Protection Agency

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George V. Voinovich
Governor

June 28, 1991

Re: COMMENTS ON FINAL
O.U. 2 ISA

Mr. Jack Craig
U.S. DOE FMPC
P.O. Box 398705
Cincinnati, Ohio 45239

Dear Mr. Craig:

Attached are Ohio EPA's comments on the final O.U. 2 ISA report. The majority of these comments are risk assessment related in that Ohio still does not believe that DOE is following NCP guidance. During the next several months, it is critical that all risk issues be resolved between all parties. We do not want to expend all this effort on developing new schedules only to be in dispute resolution over risk issues six months from now.

If you have any questions about these comments please contact me.

Sincerely,

Graham E. Mitchell
DOE Coordinator

GEM/ycr

cc: Kathy Davidson, Ohio EPA
Jack Van Kley, Ohio AGO
Catherine McCord/Jim Saric, USEPA
Robert Owen, ODH
Lisa August, GeoTrans
Ed Schuessler, PRC

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OHIO EPA COMMENTS
FINAL ISA O.U. 2

COMMENTS ON DOE RESPONSES TO OEPA COMMENTS

1. Ohio EPA Comment #15: DOE's response to this comment referred to USEPA Comment #1. Ohio EPA maintains that preliminary remediation goals (PRGs) must be developed as stated in Comment #15. DOE must incorporate the NCP requirements for developing PRGs, as stated in Ohio EPA Comment #15, into the proposed addenda to the RI and FS work objectives (RAOs) being proposed in the addenda to the RI and FS work plans must include the development of a table as outline in USEPA Comment #1(c).
2. Ohio EPA Comment #16: Non-zero MCLGs must be considered as RAOs as suggested in Ohio EPA Comment #16. The use of non-zero MCLGs as RAOs should be incorporated into the text of Section 2.2.3, second paragraph of the ISA report.
3. Ohio EPA Comment #55: Figures 3-16 and 3-17 were not revised to be consistent with each other as was noted in the DOE response. These figures should be revised per Ohio EPA Comment #55.

COMMENTS ON THE FINAL O.U. 2 ISA

GENERAL COMMENT

1. Ohio EPA maintains that preliminary remediation goals must be developed as outlined in the NCP. DOE must consider the methodology presented in the NCP in the development of the addenda to the RI and FS work plans. Ohio EPA looks forward to the expedient development and delivery of the addenda as well as the DOE position papers for our review and approval. All risk issues need to be resolved in the next several months to minimize future disputes and schedule delays.
2. DOE continues to use a 100-year current land-use scenario in the risk assessment. Ohio EPA, in its comment letter to DOE dated February 11, 1991 concerning the January 1991 draft ISA report, stated that DOE must provide sufficient documentation to the agency as to the appropriateness of using a 100 year scenario along with assurance that access can be strictly controlled for that period of time. DOE responded first by stating that it is reasonable to assume that custodial care will be provided by the government for 100 years, then noting, however, that this period is not absolute. This latter comment is precisely what causes Ohio EPA to be concerned. Typical risk assessments consider the future to essentially be "tomorrow," not 25, 50, or 100 years into the future. If DOE bases the risk assessment on a 100-year scenario and calculates risks and compliance boundaries based on this scenario, then shortening the scenario down the road will change the compliance boundaries and increase the "baseline" risks associated with the site.

From recent discussions it is clear that there are misunderstandings among all parties as to what is meant by the concept of "institutional controls". This is an issue that needs to be addressed in risk meetings in the near future.

SPECIFIC COMMENTS

1. Page 2-1, last paragraph: As noted by Ohio EPA several times in the past, DOE's statement that "Where ARARs or to be considered (TBCs) are not available, preliminary remediation goals will be developed based on a 1×10^{-6} risk level" is inaccurate and inconsistent with the NCP. TBCs do not determine when the 10^{-6} risk level is to be used; the 10^{-6} risk level is a TBC. The NCP states that the 10^{-6} risk level shall be used as the point of departure for determining remediation goals for alternatives when ARARs are not available or are not sufficiently protective because of the presence of multiple contaminants at a site or multiple pathways of exposure. The availability of TBCs has nothing to do with determining when the use of a 10^{-6} cancer risk is appropriate. Basing preliminary remediation goals in the ISA Report on ARARs, other criteria, advisories, or guidance also requires the use of risk-based levels (i.e., TBCs) where ARARs do not exist. Ohio EPA strongly believes that, consistent with the NCP and absent ARARs, risk-based levels must be used to calculate preliminary remediation goals. The ISA report should be corrected accordingly.
2. Page 2-5, Table 2-2, "Chemicals or Radionuclides in Drinking Water": An additional ARAR which must be added to this portion of Table 2-2 is OAC 3745-81-16. This ARAR includes an MCL for Strontium-90 at 8 pCi/l. OAC 3745-81-16 also states, "...If two or more radionuclides are present, the sum of their annual dose equivalent to the total body or to any organ shall not exceed four millirem/year." The ARAR "OAC 3645-81-11" listed in Table 2-2 should be corrected to read OAC 3745-81-11.
3. Page 2-6, Table 2-2: Ohio's surface water quality standards cited under OAC 3745-1-07 constitute state ARARs, not TBCs as stated in the table. These standards are promulgated and are fully enforceable. The table should be corrected.
4. Page 2-7, fourth bullet and Section 2.2.5, second paragraph: As mentioned in Ohio EPA comments on previous drafts of the OU-2 ISA report, the NCP does not consider the 10^{-4} to 10^{-6} risk range to necessarily constitute an acceptable level of risk for carcinogens. The NCP also requires the use of a 10^{-6} risk point of departure for determining acceptable

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risks when ARARs are not available or are not sufficiently protective because of the presence of multiple contaminants at a site or multiple pathways or exposure. The text here needs to be revised appropriately to reflect the full context of the NCP with regard to this issue.

5. Table 2-3: Contrary to what is stated in footnote "a," the table must list both the RfD and the CSF for chemicals for which they have been developed since carcinogens and non-carcinogens behave differently in their effects on human populations. Risks for carcinogens and non-carcinogens must be calculated and totalled separately. Presenting only the lowest concentration (irrespective of whether the effect is carcinogenic or non-carcinogenic) will result in underestimating the total risks posed by each group. There are 6 chemicals that have reference doses in addition to cancer slope factors which should be listed in the table. These compounds are: Bis (2-ethylhexyl) phthalate (RfD = 0.02 mg/kg/d); Chlordane (RfD = 0.00006 mg/kg/d); Methylene chloride (RfD = 0.06 mg/kg/d); Tetrachloroethene (RfD = 0.01 mg/kg/d); Arsenic (RfD = 0.001 mg/kg/d); and Beryllium (RfD = 0.005 mg/kg/d). Also, for carcinogens listed on this table, a footnote should be added as to whether the given "acceptable soil concentrations" represent the 10^{-6} lifetime cancer risk level or some other risk level.
6. Table 2-4: The Ohio water quality criteria for the majority of the inorganic compounds listed in the table are incorrect despite previous agency comments where specific criteria were provided. This table must be corrected consistent with the criteria provided in OAC 3745-1-07 as follows:

| <u>COMPOUND</u> | <u>OHIO WATER QUALITY CRITERIA (ug/l) *</u> |
|-----------------|---|
| Beryllium | 2.6 (Table 7 of OAC 3745-1-07) |
| Cadmium | 0.6 (Table 7 of OAC 3745-1-07) |
| Lead | 30 (Table 2 of OAC 3745-1-07) |
| Nickel | 115 (Table 7 of OAC 3745-1-07) |
| Selenium | 34 (Table 2 of OAC 3745-1-07) |
| Zinc | 73 (Table 7 of OAC 3745-1-07) |

* Assuming a water hardness of 100 mg/l as CaCO₃

In addition, it is unclear why a number of compounds listed in earlier drafts of this table are no longer listed (e.g., pentachlorophenol, trichloroethene, etc.) while a few that were not previously listed were added (e.g., benzene, selenium, etc.). An explanation for these changes should be provided.

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7. Table 2-6: For carcinogens where only a CSF is listed, a footnote should be added as to whether the given "acceptable soil concentration" represents the 10^{-6} lifetime cancer risk level or some other risk level.
8. Page 2-17, Table 2-7: The MCL for Strontium-90 (OAC 3745-81-16) of 8 pCi/l must be included in this table.
9. Appendix B-11: The description for the location-specific Ohio ARAR, OAC 3745-27-07, should be revised to more correctly state that this regulation governs the location of solid waste disposal facilities with respect to floodplains and sole source aquifers.

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