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**CONDITIONAL APPROVAL OF K-65 REMOVAL
WORK PLAN**

12-5-90

**OEPA/DOE
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LETTER**



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To	Jack Craig	From	Graham Mitchell
Co	OS DOE FMPC	Co	Ohio EPA
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December 5, 1990

Re: **CONDITIONAL APPROVAL
 OF K-65 REMOVAL
 WORK PLAN**

Mr. Andrew P. Avel
 U.S. DOE-FMPC
 P.O. Box 398705
 Cincinnati, Ohio 45069

Dear Mr. Avel:

The purpose of this letter is to conditionally approve the K-65 silo removal work plan. Ohio EPA is in concurrence with the modifications made in U.S. EPA's approval dated November 30. In addition, the EPA's condition for approval is that DOE shall provide acceptable responses to the attached comments. If you have any questions about these comments, please contact me.

Sincerely,

Graham E. Mitchell
 DOE Coordinator

GEM/mlf

Encl.

cc: Tom Winston, Ohio EPA
 Jack VanKley, Ohio Attorney General's Office
 Catherine McCord, U.S. EPA
 Robert Owen, ODH
 Lisa August, Geotrans

ATTACHMENT
OHIO EPA COMMENTS ON K-65 SILOS REMOVAL ACTION WORK PLAN
AND HEALTH AND SAFETY PLAN

Comments on the K-65 Removal Action Work Plan

1. Page 2, last paragraph: Additional isotopes which should be included as primary contaminants of concern are: Pb-210, Po-210, and Th-232. The Operable Unit 4 RI discusses the potential accumulation of Pb-210 and Po-210 in the berm soils of the K-65 silos as a result of radon decay. Thus, until sampling can show these contaminants are not present, it should be assumed they are and appropriate actions taken. The Operable Unit 4 RI also discusses a sample location to the east of the K-65 silos with Th-232 concentrations between 5 and 15 pCi/g. Measures should be taken to include these isotopes in the sampling as well as in health and safety plan associated with this removal action.
2. Page 5, second bullet: This statement is somewhat confusing and seems to be suggesting that a one-foot layer of bentonite will perform better from a radon attenuation standpoint than will 4 feet of bentonite. This statement does not appear to have much credibility. DOE should mention in the work plan that the need for tornado protectiveness was deleted and the goal of waste minimization coupled with radon attenuation was considered in this evaluation, resulting in the selection of one foot.
3. Page 7, second to last paragraph: DOE's submittal of design documents to Ohio EPA on an informational and request-only basis is unacceptable. Ohio EPA must be given the opportunity to review the K-65 silo removal action design plans particularly for such key items as the Test and Inspection Plan, Operational Procedures, Performance Specifications, and Installation and Construction QA/QC. Ohio EPA's review of these documents will insure that the substantive requirements of state law are complied with. In addition, the consent decree between the state of Ohio and Westinghouse (Section 3.5 December, 1988) states that DOE and Westinghouse will comply with the terms and conditions of the PTO issued for the K-65 silos. Any modification to these sources must be reviewed and approved by Ohio EPA.

4. Page 10, Section 3.0, Item a: The work plan should state what levels of radon will be considered "acceptable" within the head space of the respective silos for operation of the radon treatment system. It may be appropriate to reference Table 3-2 in the Health and Safety Plan.
5. Page 11: Steps "j" and "k" appear to be reversed. It would seem more appropriate to remove the glove bag and sprayhead prior to reinstalling the manway cover.
6. Page 12, Section 4.0, Dismantling and Removal of Equipment: This section should include a discussion of what actions will be taken with respect to the handling of disturbed surface soil, which is potentially contaminated. The fact that contaminated surface soil may generate radioactively contaminated waste is brought up in the Waste section of the Health and Safety Plan but not sufficiently discussed. Considerable surface soil contamination by U-234, U-238, Th-230, Th-232, and Ra-226 within Operable Unit 4 is reported in the OU-4 RI report.
7. Page 12, Section V, item 3: The work plan should provide the compass direction and distance from the FMPC of the continuous radon concentration monitoring station at Westwood, Ohio.
8. Page 13, third paragraph: It is not clear upon what the radon performance goal of 0.015 pCi/l above background is based. Since this work plan will be a public document once finalized, the basis for this number should be given in the text.

Comments on Health and Safety Plan for the K-65 Removal Action

1. Page 7, Table 3-1: The table fails to include the inhalation of particulate bound radio-isotopes including Pb-210, Po-210, Th-232, Th-230 etc., as radiological hazards associated with the construction and installation of the bentonite system. Since sufficient surface soil sampling has not been completed in the K-65 silo area, particulate-bound hazardous substances such as lead and cadmium should be assumed present until sampling indicates otherwise. The construction activities associated with this removal action present the opportunity for re-suspension of surface soil particles as well as any contaminants which may be bound to the soil.
2. Page 8, Section 3.2: A third chemical/radiological hazard should include the re-suspension of contaminated particles during construction of the bentonite system. Potential contaminants include both radiological and hazardous constituents, since no surface soil sampling for hazardous substances has occurred in Operable Unit 4 according to the

draft RI report for this operable unit.

3. Page 8, Table 3-2: Additional hazards which should be added to this table include isotopes Th-232, Pb-210 and Po-210. See comment #1, on the work plan.
4. Page 10, Section 4.2.4: Sampling for nonradiological parameters in surface soils has not been completed in the area of the removal action, thus insufficient data is available for stating that chemical hazards are unexpected. Nonradiological sampling needs to be conducted in order to support such statements in the health and safety plan (HSP).
5. Page 17, Section 10.0, Wastes: This section states that "Any disturbed uncontaminated soil will be regraded into the area of disturbance." The work plan should provide details as to what will be done with soil which is contaminated and disturbed. At what level of contamination will actions other than regrading occur? This section of the document should include a more in-depth discussion of these issues.
6. Page 17, 11.0, Contingency Plans: DOE failed to include the existing FMPC Standard Operation Procedure (SOP) 65-C-201: "K-65 Silo numbers 1 & 2 Area Emergencies" as an enclosure to either the work plan or the HSP. In an undated DOE response to comments letter from Andy Avel to Graham Mitchell and Catherine McCord of Ohio EPA and USEPA, respectively, DOE stated (see response to Ohio EPA Comment #7 on the EE/CA for the K-65 silos) that it would include this SOP in the "...K-65 Removal Action Work Plan as an enclosure to the task specific Health and Safety Plan." DOE needs to detail the emergency response procedures that will be taken in the event of dome failure. (It is also noted that SOP-65-C-201 as listed on page 21 of the HSP no longer appears to pertain to Silo 1 & 2 area emergencies but instead pertains to the operation of the K-65 silos radon treatment system.)