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PROPOSED INTERIM REMEDIAL ACTIONS

03/29/89

**DOE-853-89
DOE-FMPC/USEPA
9
LETTER**

10-1049
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DOE-853-89
DATE: March 29, 1989

SUBJECT: Proposed Interim Remedial Actions

TO: Basil G. Constantelos

Attached please find the actions we will propose in the meeting tomorrow. Hopefully these will provide you information from a conceptual standpoint. We will suggest a technical work session to be held in April to discuss these further.


James A. Reafsnyder
Site Manager

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W-1049

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**FEED MATERIALS PRODUCTION CENTER
PROPOSED INTERIM REMEDIAL ACTIONS**

ITEM NO.	<u>INTERIM ACTION DESCRIPTION</u>
1	K-65 Silo Sand Fill
2	South Plume Area Groundwater
3	Accelerated South Plume Area Groundwater
4	Plant 6 Perched Groundwater Collection and Treatment
5	Other Facilities Perched Groundwater Collection and Treatment
6	Underground Storage Tank Testing / Removal
7	Phase II Stormwater Runoff Control

**FEED MATERIALS PRODUCTION CENTER
PROPOSED INTERIM REMEDIAL ACTIONS**

K-65 SILO SAND FILL

OPERABLE UNIT: No. 4 - SPECIAL FACILITIES

STATEMENT OF ACTION: Place a four foot layer of sand over the K-65 Silo Residues to reduce radon emissions and gamma radiation levels plus provide containment cover over the residues.

REGULATORY BASIS: Federal Facilities Compliance Agreement: CERCLA Actions 1B and 1C; radon control.

BENEFITS: Reduce radon emanations from K-65 Silos; reduce radiation levels, thereby reducing radiation exposure risks to FMPC workers. Provide a protective barrier in the unlikely event of silo failure.

POTENTIAL ADVERSE IMPACTS: Increased waste handling and disposal costs during final remediation due to the additional volume of inert material to remediate.

REQUIRED PRIOR ACTIVITIES: Obtain approvals of federal and state EPAs and obtain a qualified vendor to perform the proposed work.

CONSISTENCY WITH FINAL REMEDIAL ACTIONS: The action specified herein will, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the Operable Unit. The action will not preclude other potential remedial action alternatives.

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**FEED MATERIALS PRODUCTION CENTER
PROPOSED INTERIM REMEDIAL ACTIONS**

SOUTH PLUME AREA GROUNDWATER

OPERABLE UNIT: No. 6 - SOUTH PLUME

STATE OF ACTION:

1. Groundwater Recovery and Transportation - design and install groundwater recovery wells, pumphouse and transfer piping to transport groundwater to the FMPC Manhole 175. Pumping to Manhole 175 will be initiated upon completion of the recovery/transport system.
2. Groundwater Treatment - The Advanced Wastewater Treatment (AWWT) Facility full scale operation for treatment of current FMPC discharges to the Great Miami River is scheduled for FY 1993. This facility is designed to greatly reduce the amount of uranium discharge to the river from existing wastewaters. While the untreated groundwater will add to the level of uranium discharged, the decrease provided by treatment of current wastewaters will still provide a net overall decrease in Uranium discharges.

REGULATORY BASIS: Removal action provided for under Section 300.415 [b][2] of the proposed National Contingency Plan (NCA) due to the actual or potential contamination of drinking water supplies.

BENEFITS: Reduce migration of offsite groundwater containing above groundwater levels of contamination.

POTENTIAL ADVERSE IMPACTS: Treatment of contaminated groundwater will result in the generation of low-level solid wastes. Depletion of the aquifer could occur, but is extremely unlikely.

REQUIRED PRIOR ACTIVITIES: A determination of locations for the recovery wells must be conducted using groundwater modeling results. Permission to install wells and the proposed pipeline must be granted.

CONSISTENCY WITH FINAL REMEDIAL ACTIONS: The action specified herein will, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the Operable Unit. The action will not preclude other potential remedial action alternatives.

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**FEED MATERIALS PRODUCTION CENTER
PROPOSED INTERIM REMEDIAL ACTIONS**

ACCELERATED SOUTH PLUME AREA GROUNDWATER

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OPERABLE UNIT: No. 6 - SOUTH PLUME

STATEMENT OF ACTION:

Groundwater Recovery and Transportation - design and install a groundwater recovery well and install temporary piping to transport groundwater to the FMPC Manhole 175. Pumping at a nominal 300 gpm rate to Manhole 175 will be initiated upon completion of the recovery/transport system.

REGULATORY BASIS: Removal action provided for under Section 300.415 [b][2] of the proposed National Contingency Plan (NCP) due to the actual or potential contamination of drinking water supplies.

BENEFITS: Reduce migration of offsite groundwater containing above background levels of contamination.

POTENTIAL ADVERSE IMPACTS: Some leakage is likely to occur at joints in the temporary pipeline. Operation must be suspended during cold weather months.

REQUIRED PRIOR ACTIVITIES: FMPC must obtain permission to install pipeline in highway and railway right-of-ways (R/W).

CONSISTENCY WITH FINAL REMEDIAL ACTIONS: The action specified herein will, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the Operable Unit. The action will not preclude other potential remedial action alternatives.

ADDITIONAL COMMENTS: This is a good faith effort focused on the area of maximum plume contamination.

RECOMMENDATION: This action is not recommended since the pumping rate is limited and seasonally constrained. The use of temporary piping is unacceptable for long-term pumping operations. Refer to alternate schedule which allows for permanent installation in 9/91.

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PLANT 6 PERCHED GROUNDWATER COLLECTION AND TREATMENT

STATEMENT OF ACTION: This Interim Action will remove and treat perched groundwater that has been discovered beneath the foundation of Plant 6. Borings will be made into the floor of Plant 6 consistent with the Facilities Testing Work Plan of the RI/FS documentation, as transmitted to the EPA on November 17, 1988.

REGULATORY BASIS: Removal actions provided for under Section 300.415 [b][2] of the proposed National Contingency Plan due to "....potential contamination of drinking water or sensitive ecological systems."

BENEFITS: This action will remove a potential source of soluble uranium, that could migrate to the underlying aquifer, reduce the piezometric head on the aquifer, and prevent additional dispersion of the contaminated water.

POTENTIAL ADVERSE IMPACTS: Periodic pumping may have to continue well into the future. There may be some disruption to Plant 6 operations during initial installation

REQUIRED PRIOR ACTIVITIES: Installation of borings and piezometers as specified in the Facilities Testing Work Plan of the RI/FS, as referenced above.

CONSISTENCY WITH FINAL REMEDIAL ACTIONS: The action specified herein will, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the Operable Unit. The action will not preclude other potential remedial action alternatives.

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**FEED MATERIALS PRODUCTION CENTER
PROPOSED INTERIM REMEDIAL ACTIONS**

OTHER FACILITIES PERCHED GROUNDWATER COLLECTION & TREATMENT

STATEMENT OF ACTION: This Interim Action will remove and treat perched groundwater containing elevated concentrations of uranium or hazardous materials that might be discovered beneath other operational facilities or areas. The underlying assumption for this interim action is that any other perched groundwater areas found will be handled in the same manner as the situation with Plant 6.

REGULATORY BASIS: Removal actions provided for under Section 300.415 [b][2] of the proposed National Contingency Plan due to "...potential contamination of drinking water or sensitive ecological systems."

BENEFITS: This action will remove a potential source of soluble uranium, that could migrate to the underlying aquifer, reduce the piezometric head on the aquifer, and prevent additional dispersion of the contaminated water.

POTENTIAL ADVERSE IMPACTS: Periodic pumping may have to continue well into the future. There may be some disruption to other facilities operations.

REQUIRED PRIOR ACTIVITIES: Installation of borings and piezometers under the Facilities Testing Work Plan of the RI/FS, as transmitted to the EPA on November 17, 1988. Additional borings and piezometers will be necessary where ever perched water is discovered.

CONSISTENCY WITH FINAL REMEDIAL ACTIONS: The action specified herein will, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the Operable Unit. The action will not preclude other potential remedial action alternatives.

**FEED MATERIALS PRODUCTION CENTER
PROPOSED INTERIM REMEDIAL ACTIONS**

UNDERGROUND STORAGE TANK TESTING/REMOVAL

OPERABLE UNIT: No. 3 - FACILITIES AND SUSPECT AREAS

STATEMENT OF ACTION: Remove and dispose of 13 abandoned underground storage tanks.

REGULATORY BASIS: Federal Regulations implemented through the Ohio State Fire Marshall, require removal of underground tanks that are out of service longer than 12 months.

BENEFITS: Compliance with the Federal Regulations.

POTENTIAL ADVERSE IMPACTS: Generation of potentially large quantities of waste, including contaminated soil, the tanks, and other equipment.

REQUIRED PRIOR ACTIVITIES: Obtain Fire Marshall approval of removal plan.

CONSISTENCY WITH FINAL REMEDIAL ACTIONS: The action specified herein will, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the Operable Unit. The action will not preclude other potential remedial action alternatives.

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PHASE II STORMWATER RUNOFF CONTROL

OPERABLE UNIT: No 5 - ENVIRONMENTAL MEDIA

STATEMENT OF ACTION: Waste Pit Area Runoff Control will provide for the redirection of stormwater runoff flow from the waste pit perimeter area through the use of berms, ditches, and collection devised to minimize contamination of Paddy's Run.

REGULATORY BASIS: This remedial action is provided for under Section 300.415 [b][2] of the proposed National Contingency Plan due to "...potential contamination of drinking water or sensitive ecological system."

BENEFITS: This proposed action will eliminate intermittent discharges to Paddy's Run.

POTENTIAL ADVERSE IMPACTS: The generation of large quantities of contaminated soil will result from completion of this project.

REQUIRED PRIOR ACTIVITIES: Initiate the design scope for diversion, collection, and ultimate disposition of runoff from the waste pit area.

CONSISTENCY WITH FINAL REMEDIAL ACTIONS: The action specified herein will, to the extent practicable, contribute to the efficient performance of any anticipated long-term remedial action with respect to the Operable Unit. The action will not preclude other potential remedial action alternatives.

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