R-002-201.2

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DIRECTION TO START PUMPING WELLS IN PLANT 6

10/30/89

DOE-83-90
DOE-FMPC/WMCO
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LETTER

Department of Energy
FMPC Site Office
P.O. Box 398705
Cincinnati, Ohio 45239-8705
(513) 738-6319

October 30, 1989
DOE-83-90

M. B. Boswell
President
Westinghouse Materials Company
of Ohio
P. O. Box 398704
Cincinnati, Ohio 45239-8704

Dear Mr. Boswell:

DIRECTION TO START PUMPING WELLS IN PLANT 6

The purpose of this letter is to direct WMCO to proceed with the pumping of the wells located in Plant 6, as described in the attached Memorandum to File. Pumping should begin as soon as possible.

If you have any questions concerning this matter, please contact Andy Avel, of my staff, at 6322.

Sincerely,

James A. Reafsnyder
FMPC Site Manager

DP-84:Avel

Attachment: As stated

cc w/att.

D. Brettschneider, WMCO
J. P. Hopper, WMCO
R. Lenyk, ASI

United States Government

Department of Energy

Oak Ridge Operations

memorandum

DATE: October 30, 1989
DOE-84-90

REPLY TO ATTN OF: DP-84:Avel

SUBJECT: **PROPOSED REMOVAL ACTION FOR THE PLANT 6 CONTAMINATED PERCHED WATER, FEED MATERIALS PRODUCTION CENTER (FMPC) FERNALD, OHIO COMPLIANCE WITH THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)**

TO: Memorandum to File

PROJECT DESCRIPTION

Uranium contaminated perched water beneath the floor of Plant 6 was discovered in August 1988, during construction of the nitric acid fume scrubber facility. During construction activities, the wall of an abandoned clarifier pit, located adjacent to the nitric acid scrap pickling facility, was breached. Over a period of several days 20,000 gallons of water flowed into the clarifier pit. Sampling indicated that the water had elevated levels as high as 2060 milligrams per litre (mg/l) of uranium.

Perched water has continued to pass through the wall and collect on the floor of the clarifier pit. Approximately once a week the quantity of accumulated water is measured, sampled, and pumped out of the clarifier pit. The results indicate a relatively constant flow of water and average uranium concentrations of 1500 mg/l. The water is transferred to the Plant 6 Wastewater Treatment Facility (WTF) for uranium removal and subsequently to the Biodenitrification Facility (BDN) for nitrate treatment.

As a part of the sitewide Remedial Investigation/Feasibility Study, a subsurface testing program was developed for the Plant 6 area. The 14 borings completed in July, 1989 under this program discovered perched water approximately 50 feet to the southeast of the clarifier pit. These borings indicate that the source of uranium contamination is limited to the Plant 6 area. Initial water samples for the three wet boring holes indicate uranium concentrations ranging from 1.74 to 138 mg/l. The differences in the concentrations in the clarifier pit and the three wet boring holes are believed to be caused by different sources of contamination. The removal action will help clarify the reasons for these different concentrations. Consequently, it was decided that a time-critical removal action, pursuant to CERCLA Section 104, be undertaken to pump water from these borings. The removal action will be ongoing until final remediation is established through the Record of Decision for Operable Unit 3.

Under the removal action water will be transferred to the Plant 6 WTF, as is the water presently collected in the clarifier pit. The waste solids and liquids (routine oils and solvents phase separation from water) separated during treatment are normal to plant 6 WTF operations and will be handled in accordance with existing FMPC procedures which include processing filtered solids as a low level radioactive waste and drumming and handling decanted liquids as suspected RCRA waste until confirmed otherwise. All activities will be conducted in accordance with applicable environment, safety, and health requirements. The removal action will be conducted by FMPC maintenance personnel. These personnel will receive job specific training for these activities. The removal action is expected to cost $130,000 for construction and installation of the piping system to the Plant 6 WTF and will require approximately 400 man-hours. Operating costs are expected to amount to approximately $10,000 per year.

This removal action will not overburden the Plant 6 WTF or the BDN. The capacity of the existing Plant 6 WTF is 84,000 gal/week when operating three shifts per day, seven days per week. Since limited production has existed during the last year (FY-1989), the Plant 6 WTF is presently operating at less than one shift per day. This reduced operating mode is expected to continue in the near future. The flow from the perched water, inclusive of clarifier pit flow, is expected to be less than one batch per week (4,000 gal.). This additional amount of flow represents less than 5% of the capacity of the existing Plant 6 WTF and, therefore, will not be a significant impact. The contribution of perched water effluent to the BDN treatment system represents less than a 1% increase in flow. The contribution to flow and uranium mass discharged to the Great Miami River represents much less than a 1% increase.

ENVIRONMENTAL IMPACTS

Land clearing is not within the scope of work of this project and there will be no air emission or liquid releases requiring a permit. Temporary construction impacts such as noise, dust, fumes, and waste generation (e.g., piping installation and anchoring to the floor of Plant 6) will be controlled to a minimum. Flow to the Plant 6 WTF and the BDN will not impact normal operations. The impact to workers that could occur during pumping and treatment of the perched water is expected to be minimal.

NEPA Determination

The environmental impacts associated with the removal action have been reviewed in accordance with DOE requirements and FMPC directives and have been found to be clearly insignificant. This document is thus considered to be the appropriate document to satisfy the requirements of NEPA.

Ray Hansen for
James A. Reafsnyder
FMPC Site Manager