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**ENGINEERING EVALUATION/COST ANALYSIS
WASTE PIT AREA STORM WATER RUN-OFF
CONTROL**

06/28/90

PADDYS RUN ROAD SITE PROJECT
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June 28, 1990

Mr. Gerald W. Westerbeck
Site Manager
U.S. Department of Energy
Feed Materials Production Center
P.O. Box 398705
Cincinnati, Ohio 45239-8705

Re: Engineering Evaluation/Cost Analysis
Waste Pit Area
Storm Water Run-Off Control

Dear Mr. Westerbeck:

On May 30, 1990, the United States Department of Energy ("DOE") announced the availability of a draft Engineering Evaluation/Cost Analysis ("Waste Pit EE/CA") intended to evaluate the removal alternatives considered in connection with contamination of the Waste Pit Area with hazardous substances, pollutants, contaminants, or hazardous constituents generated by operations at the Feed Materials Production Center ("FMPC") site in Fernald, Ohio. The public comment period is scheduled to close on June 30, 1990. This letter constitutes the comments on the Waste Pit EE/CA by Albright & Wilson Americas Inc., Mobil Mining and Minerals Company, and Ruetgers-Nease Chemical Company, collectively known as the Paddys Run Road Site ("PRRS") Companies.

The Companies' concerns with the Waste Pit EE/CA parallel concerns they have previously expressed regarding the FMPC Consent Agreement and the South Plume EE/CA. These concerns arise because contamination from the Waste Pit

¹ The PRRS Companies have entered into an Administrative Order on Consent with the Ohio Environmental Protection Agency ("OEPA") to perform a remedial investigation/feasibility study ("RI/FS") for the PRRS. The PRRS lies within DOE's South Plume Removal Action Study Area, as defined in the Engineering Evaluation/Cost Analysis for the South Plume ("South Plume EE/CA"). Additionally, two of the PRRS Companies currently have manufacturing operations within the South Plume EE/CA study area.

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Area, either through storm water run-off or leaching, enters Paddys Run and the regional aquifer, (Waste Pit EE/CA Section 2.4.1.), affecting the groundwater quality in the South Plume study area.² Specifically, the Companies' two overriding concerns are (i) that DOE has not performed sufficient testing for contaminants other than uranium and (ii) that the capacity and treatment capability of the proposed wastewater treatment plant is insufficient to treat contaminated water from both the Waste Pit removal action and the South Plume removal action.

1. Other Contaminants

In Waste Pit EE/CA Section 2.4.3.1, DOE concludes that uranium is the only contaminant that "represents a potential concern to public health or the environment." DOE excluded all other contaminants from consideration even though the Waste Pit EE/CA recognizes that "[s]everal of the parameters exceed established concentration guidelines or limits." DOE considers these "exceedances [to be] sporadic and within the range of uncertainty in data." A careful review, however, of the background of the DOE sampling program as well as the data presented in the Waste Pit EE/CA itself reveals that DOE has not adequately tested for contaminants other than uranium. Its conclusion that uranium is the only contaminant of concern, therefore, is unsubstantiated.

The inadequacy of DOE's testing for contaminants other than uranium is addressed in the Companies' comments on the FMPC Consent Agreement and the South Plume EE/CA. To avoid undue repetition, those comments are attached and incorporated by reference. They will not be repeated here, except to note that the possibility of contaminants other than uranium migrating from the Waste Pit Areas was documented in great detail on in Section II of the Companies' General Comments on the South Plume EE/CA and that those comments apply equally to the Waste Pit EE/CA.

² DOE does not address the uranium present in the sediments of Paddys Run Creek in either the Waste Pit EE/CA or the South Plume EE/CA. Nor does DOE address the extent to which contaminants from the ponds in the Waste Pit Area are leaching into groundwater or surface water, its plans to fully identify the extent of such leaching, or removal or remedial alternatives to abate, minimize, stabilize, mitigate, or eliminate such leaching. Each of these subjects should be fully addressed by DOE in either the Waste Pit EE/CA, the South Plume EE/CA, or the applicable Operable Unit.

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The data presented in the Waste Pit EE/CA itself also fails to support DOE's conclusion that uranium is the only contaminant of concern.³ Of the four contractors performing sampling, only two sampled for non-radioactive contaminants. Waste Pit EE/CA Section 2.3.1. Only eight of the seventeen wells sampled by those two contractors were tested for non-radioactive contaminants. The three wells tested by Advance Sciences Inc./International Technology for such contaminants were all located in the northern portion of the Waste Pit Area near Waste Pit No. 5, which, according to DOE, is the origination point of "no storm water runoff of concern to this removal action." Waste Pit EE/CA Section 2.1. Additionally, DOE presented no basis for the selection of which wells would be tested for non-radioactive contaminants. None of the wells were tested for the entire Hazardous Substances List ("HSL").

Turning to individual chemicals, DOE correctly states that no MCL or other standard exists for total organic carbon ("TOC") or total organic halogen ("TOX") concentrations in water samples. DOE fails to note, however, that while the TOC and TOX concentrations could represent relatively benign organic chemicals, they could also represent the presence of organic compounds contained in "oils, sludges, spent degreasing solvents, and PCB-contaminated solvents" that are and have been historically generated by FMPC operations. South Plume EE/CA Section 2.1; Waste Pit EE/CA Section 2.1.

For example, a common chemical used in solvents is benzene, which has an MCL of 5 ug/l. Similarly, trichloroethylene (TCE), which has been detected under FMPC Building 6, has a proposed MCL of 5 ug/l. Either of these two chemicals could make up a portion of the TOC and TOX concentration in amounts that clearly exceed established or proposed standards. Moreover, compounds such as oils, degreasing agents, and solvents contributing to the TOC and TOX concentrations may be contaminated with PCBs. Additionally, in Section 2.3.2.2, DOE admits that several other non-radioactive parameters exceed stated limits but

³ Besides being unsupportive of DOE's conclusions, the data is also difficult to interpret because both the data and the established contaminant standards are inconsistently expressed in Tables and Sections of the Waste Pit EE/CA in milligrams per liter, micrograms per liter, and picocuries per liter. DOE should eliminate this confusion by consistently reporting data and establish standards in the same unit of measurement.

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fails to consider them as possible contaminants of concern in the proposed removal action.

In order to ensure that the full range of potential contaminants released by the FMPC are addressed by the removal action proposed in the Waste Pit EE/CA, DOE should test groundwater samples from all existing and future wells in the Waste Pit Area for all HSL substances identified or expected to be present within FMPC boundaries. These substances should specifically include any substances identified or suspected to be present in the production area since the storm water drainage course originates south of the production area. Waste Pit EE/CA Section 2.2.2. Adequate testing for contaminants other than uranium is essential for DOE to fully identify all contaminants present in the Waste Pit Area.

2. Treatment Capacity

DOE concludes in the Waste Pit EE/CA that collection and treatment of drainage in the Waste Pit Area is the preferred removal alternative. While the Companies have no comment on the merits of that selection itself, the Companies are concerned about the capacity and treatment of the proposed Advanced Wastewater Treatment ("AWWT") facility. In Section 4.2.4 of the Waste Pit EE/CA, DOE states that once the AWWT facility is completed, it will treat storm water run-off that originates in the Waste Pit Area. DOE, however, mentions the AWWT only briefly and fails to provide data regarding its design, capacity, and effectiveness in removing potential contaminants. The South Plume EE/CA merely states that the AWWT will

process a nominal 700 gpm of water from either the storm water retention basin or the south plume/pumping system and will be designed to remove uranium such that the effluent concentration is less than [sic] 20 ug/l. The treatment program will be designed to ensure that the uranium discharged to the Great Miami River is not increased over current levels (South Plume EE/CA Section 4.2.4.6).

Since the AWWT is an important component of the treatment alternatives presented in both the South Plume and Waste Pit EE/CAs, details as to its design, capacity, and effectiveness should be presented so that the public can fully evaluate its role in the two removal actions. It is already apparent, for example, that the AWWT's "nominal"

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capacity of 700 gpm will be insufficient to treat more than one-eighth to one-fourth of the south plume extraction water. DOE presents no data to suggest that the AWWT will be capable of treating more than a similar fraction of the storm water from the Waste Pit Area. Additionally, DOE gives no indication of how the AWWT will achieve the 20 ug/l concentration limit. Without this information, independent evaluation of the proposed removal actions is impossible.

With respect to the treatment capabilities of the AWWT, DOE fails to consider the fact that contaminants other than uranium may enter the treatment system. No method of treatment for such other contaminants is proposed. Moreover, the potential impact of such other contaminants on the effectiveness of the uranium treatment system is not addressed. DOE should also address the effect of other contaminants on waste management issues such as sludge disposal.

3. Conclusion

We hope these comments will help DOE formulate a final removal strategy that will fulfill the removal objectives set forth in both the Waste Pit EE/CA and the FMPC Consent Agreement. Since these comments are detailed and significant, we respectfully request that DOE prepare a detailed responsiveness summary. Please also include a copy of these comments in the Administrative Record.

Sincerely yours,


Grove L. Higgins, Jr.
Project Coordinator

JKV/gkh

Attachments

cc Bobby Davis - DOE
Catherine A. McCord - USEPA
Graham Mitchell - OEPA

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