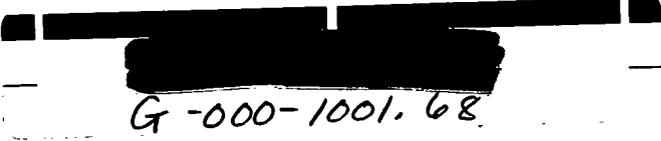


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**RESPONSES TO QUESTIONS DURING RI/FS
COMMUNITY MEETING**

05/15/89

**DOE-FMPC/PUBLIC
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TRANSCRIPT**

RESPONSES TO QUESTIONS DURING RI/FS COMMUNITY MEETING

Conducted by U. S. Department of Energy
May 15, 1989
Ross Middle School

The May 15 community meeting at Ross Middle School included three technical presentations on various aspects of the Remedial Investigation/Feasibility Study being conducted at the Feed Materials Production Center.

A question-and-answer session followed each of the briefings, followed by a general discussion to close the meeting. While most of the questions asked during the meeting were answered, there were some questions for which the panel of presenters did not have specific data. In addition, several persons who attended the meeting filled out comment cards with additional questions.

The following is a brief summary of the questions. Those who filled out comment cards received more detailed responses via letter. Any other questions about the RI/FS or about FMPC operations should be directed to the U.S. Department of Energy, P. O. Box 398705, Cincinnati, Ohio 45239.

Q. When were biological samples taken for the Remedial Investigation?

A. Remedial Investigation sampling began in 1987. At various times in the past two years RI/FS biologists have collected more than 235 samples from mammals, fish, streambed bottom dwellers, vegetation, endangered species, and local ecosystems.

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Q. Are birds -- because they drink cistern water and leave droppings in yards where children play -- included in the RI biological sampling program? If not, why not?

A. Birds were not originally included in the biological sampling program because they are not considered to have a significant link to the human population. In addition, the mobility and migratory nature of birds make sampling results difficult to assess because it would not be clear how long birds had actually been in the area surrounding the FMPC. However, the inclusion of birds in future biological sampling is being reviewed.

Q. Explain the meat testing program.

A. Meat testing has been conducted by both the Department of Energy and the U. S. Department of Agriculture. The sampling conducted by DOE tested for the following elements: Cesium 137, Strontium 90, and Uranium 234, 235 and 236, and 238. None of these elements was detected. The USDA testing of animals from farms in the vicinity of the FMPC has confirmed that the meat is safe for human consumption.

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Q. Is milk from the cows raised on the nearby dairy farm tested for uranium content?

A. Random sampling of milk produced by dairy cattle near the FMPC is conducted monthly as part of the environmental monitoring program. The milk is tested for the presence of various radionuclides and the results are compared with samples taken from a dairy farm located 22 miles west of the FMPC. These comparisons have consistently shown no difference between milk samples taken near the FMPC and those taken at the farm located several miles away. The milk sampling results are reported annually in the FMPC's Environmental Monitoring Reports. In addition, milk is tested by various government agencies before being sold to the public.

Q. How does the laboratory analyze samples for isotopes?

A. The techniques for isotope analysis vary according to the isotope and the medium (soil, water, etc.) being tested. The Remedial Investigation tests samples for radionuclides historically used, stored, or produced at the FMPC. These include: total uranium, Uranium 234, 235, 236, and 238; Technetium 99; Thorium 230 and 232. Samples are also analyzed for the following isotopes potentially present in trace quantities in FMPC feed materials: Cesium 137; Strontium 90; Ruthenium 106; Neptunium 237; and Plutonium 238, 239, and 240.

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Laboratory techniques used include: internal yield monitors to identify alpha emitters of uranium, thorium, and plutonium; spike determination for Neptunium 237, Radium 226 and 228, and Technetium 99; and gravimetric analysis to recover Strontium 90. Direct determinations are made to recover Cesium 137 and Ruthenium 146. The analytical techniques used are discussed in the work plan for the RI/FS. The Work Plan is available for review in the public reading rooms at the plant and at Lane Public Library in Hamilton.

Q. When were groundwater samples collected for the Remedial Investigation?

A. Dates for five rounds of groundwater sampling conducted as part of the Remedial Investigation are: March-June, 1988; July-September, 1988; October, 1988,-January, 1989; January-April, 1989; April-June, 1989. These sampling periods were selected to determine if the seasons affect the quality of local groundwater and sediment. In addition to the RI sampling, groundwater monitoring and sediment sampling have been conducted at the FMPC for several years. Results are reported annually in the FMPC Environmental Monitoring Report.

Q. What is the content of uranium in groundwater, and how does that compare to "background" values?

A. The background level for uranium in groundwater in southwestern Ohio is about 1 microgram per liter. As has been reported in FMPC Environmental Monitoring Reports since 1983, three wells in the South Plume area contain above background concentrations of uranium. The highest concentrations, found in one of those wells, range from 200 to 300 micrograms per liter.

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Q. Does the content of uranium in groundwater in the South Plume exceed proposed standards?

A. The groundwater in the South Plume has values of as high as 200 to 300 micrograms per liter of water. The derived concentration guideline, based on the U.S. EPA's proposed drinking water standards, is 32.5 micrograms per liter.

Q. Do you have any records of past instances of water consumption (from wells) in the South Plume area?

A. Yes. Of the three off-site wells in the South Plume having elevated concentrations of uranium, one was replaced in 1985 and is no longer used for drinking water. The other two wells are used for industrial purposes, and the DOE does not have records on past use of these wells.

Q. Why aren't signs posted to warn people about the uranium in Paddy's Run?

A. Concentrations of uranium that are above background for Southwestern Ohio have been detected in water at isolated locations along Paddy's Run, but concentrations found in sediment off site do not exceed background levels. The uranium concentrations found along Paddy's Run do not justify warnings.

Q. Have health studies been done on people drinking water near the plant in the past?

A. To the best of the DOE's knowledge, no health studies of persons drinking from water supplies near the FMPC have been made. The U. S. Centers for Disease Control is currently investigating the need for an epidemiological study of residents who live near the FMPC.

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Q. What are the health benefits of discharging the water from the South Plume to the river?

A. Health benefits are a key factor in determining what actions will be taken to address the groundwater contamination present in the South Plume area. Several options are being considered, including removing the groundwater, treating it at the FMPC, and then discharging it to the Great Miami River.

The benefit of pumping water from the South Plume to the river is that groundwater is considered a direct water source for industrial and residential use, while water discharged to surface water provides for significant mixing and additional treatment prior to possible consumption.

Q. Why are trenches being considered to help control stormwater runoff?

A. The trenches are designed to prevent stormwater runoff in the area of the FMPC waste pits from draining into Paddy's Run. This system will prevent potentially-contaminated water from seeping into the regional aquifer south of the FMPC. The trenches, engineered ditches that will be dug along the boundary of the waste pit area, will direct water to a central pumping station. This runoff will be treated before it is released to the Great Miami River through the existing, permitted discharge line.

Q. Has U. S. EPA approved the interim cleanup plans discussed at the meeting?

A. U. S. EPA has concurred with the approaches being considered for interim cleanup actions. The FMPC is preparing documentation for U. S. EPA to provide additional details of the proposed actions.

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Q. Are manholes along the FMPC effluent line used to clean the line? Was the overflow at Manhole 180 on the effluent line the first time this ever occurred. On whose property is Manhole 180 located? Is this area used as grazing land for cattle? What is the path of the effluent line? Does it discharge into the river? Why wasn't the community notified about the overflow immediately?

A. On April 4, the FMPC was notified that Manhole 180 on the plant's effluent discharge line overflowed, spilling contaminated water onto farmland adjacent to the plant. The land is not used for grazing. This was the first time that such an overflow had been reported, but it has been learned that such overflows had occurred in the past.

Manhole 180 is located east of the FMPC in an area of bottom land immediately west of U. S. Rte. 128. This manhole is one in a series of manholes that serve as maintenance access to the permitted effluent line which eventually discharges into the Great Miami River. The effluent line was last cleaned and inspected in the fall of 1987.

The public was not notified immediately because the nature and extent of contamination was not initially known. The owner of the property, William Knollman, was immediately contacted and gave approval for the investigation. State and federal regulatory agencies were notified May 2 when initial sampling results were available. It was determined that the May 15 Community Meeting would be the proper forum in which to discuss the occurrence.

Q. Was there a stormwater retention basin overflow on April 28 and/or April 30? There were torrential rains, perhaps the worst this area has seen in quite a while.

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A. The stormwater retention basin did not overflow at the end of April. Heavy rains did cause overflows on March 31 and April 4.

Q. How many HEPA filters are in use at the FMPC?

A. HEPA filters -- high-efficiency particulate air filters -- at the FMPC include about 100 portable vacuum units used in various locations in the production area, as well as systems serving operating equipment in various plants. Currently systems in Plant 9 and Plant 1 are operational, three new systems serving operations in Plant 5 are about to go on line, and installation of another HEPA filter system is under way in Plant 6. HEPA filters are part of an overall air pollution control system which is designed to capture 99 percent of particulates generated on site.

Q. Explain the difference between perched water and water contained in the local aquifer. Where and at what depth has contaminated perched water been found at the FMPC?

A. Several layers of different types of materials underlay the FMPC and surrounding area. Immediately beneath the earth's surface is a 50-foot layer of clay-rich till. It includes pockets of sand which can trap water that infiltrates from the surface for long periods of time. This trapped water is called perched water. Below this layer of till is the aquifer, a 150-foot layer of sand and gravel deposits from which water supplies are drawn for both individuals and communities for several miles along the Great Miami River.

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Perched water containing above background levels of uranium has been found beneath Plant 6 at the FMPC. This water is being pumped out of the ground and treated to prevent it from reaching the aquifer. The depth and extent of this perched water zone is being investigated.

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