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**FMPC RI/FS OPERABLE UNIT WORKING
DEFINITIONS**

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ASI/WMCO

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MEMORANDUM

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TO: Pat Hopper
FROM: John Razor jrk
DATE: April 2, 1990
SUBJECT: FMPC RI/FS Operable Unit Working Definitions

Transmitted herein are the current working definitions we are using in the FMPC RI/FS. Please feel free to provide comments to me.

I am planning an integration meeting similar to our January 31 meeting for April 12. I have discussed this with Steve Shirley and he felt this was the best date. I desire to have it prior to the next ERA and TIE and I understand that neither you nor Steve will be available the following week.

Please give me a call so that we might discuss your thoughts on the meeting agenda. I assume that you might want to talk about the OU definitions. I am tentatively scheduling the meeting for IT-Knoxville at 10:30 on April 12.

OPERABLE UNIT 1 DEFINITION
WASTE STORAGE UNITS
(RADIOLOGICAL)

Operable Unit 1 includes those facilities utilized for the disposal of radiological and (to a lesser extent) chemical wastes from FMPC operations. Related facilities that now contain similar waste types are included. Within this context, the following facilities are included in Operable Unit 1:

- Waste Pits 1 through 6
- Burn Pit
- Clearwell

Although areas surrounding these facilities are not considered an integral part of Operable Unit 1, an exception could occur if it is decided that inclusion of a given area would lead to a more effective and efficient remedial action program. For example, the berms and the underlying soils may eventually be included under Operable Unit 1 within an overall source control action for a given waste storage unit.

Notes:

The FS team will be using the following assumptions for cost development:

- A five ft. wide remediation buffer will be considered as contaminated around the outer perimeter of the OU-1 pits and/or their respective berms. This buffer will be extended to 10 ft. on the S.W. side of the OU-1 area due to groundwater flow in the till.
- The areas between the various pits will be considered as contaminated soils.
- The soils to a depth of 5 ft. below the bottom of all pits and areas between the pits will be considered as contaminated.

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OPERABLE UNIT 2
OTHER WASTE UNITS
(SOLID)

Operable Unit 2 includes those facilities designed for the disposal of solid wastes into which low volumes of radiological or chemical wastes have been co-disposed. These units include:

- North and South Lime Sludge Ponds
- Active Flyash Pile
- Abandoned Flyash Pile
- Southfield Area
- Sanitary Landfill

Any perched water zones below these areas but above the regional aquifer will also be subject to treatment as part of Operable Unit 2.

Note:

The feasibility study will assess the need for remediation of any soils lying beneath the OU 2 waste units.

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**OPERABLE UNIT 3
PRODUCTION AND SUSPECT AREAS**

The intent of Operable Unit 3 is to include those facilities and suspect areas that are expected to involve localized clean-up actions using straightforward technologies. Three general types of units are involved, including:

- Any area or facility within the Production Area¹ that is identified, through the facilities testing program, to represent a past, current, or future source² of radionuclide or chemical releases to the environment.
- Suspect areas outside the Production Area¹. The following is a list of the suspect areas currently being considered:
 - Fire Training Area
 - Incinerator Area (East of the Production Area)
 - Area near the Flag Pole
 - K-65 Slurry Line Trench
 - Several Rubble Mounds at Different Locations
 - Main Effluent Line³
- Areas with elevated levels of uranium or other constituents in soil or perched groundwater within the FMPC property boundary above the regional aquifer.

Notes:

- ¹ The Production Area is defined as the area bounded by the security fence and the buffer zone. Suspect Areas include those areas outside the Production Area but within the FMPC property boundary but not contained in other operable units.
- ² As used here, future sources are to be considered only to the extent that sources identified through the facilities testing program may in the future impact the off-site environment. No effort will be made to evaluate the impact of future operations or waste management activities resulting from continuing site production operations. It is assumed that the plant operations contractor will maintain existing equipment in good condition and institute the spill prevention and control plan as necessary to contain surface spills from all production and storage activities.
- ³ The Main Effluent Line includes the line from the Clearwell to the General Sump, as well as the connecting line to Manhole 175 and the Great Miami River.

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**OPERABLE UNIT 4
WASTE STORAGE SILOS**

Operable Unit 4 has been established to include those facilities that represent unique technical problems and will likely involve specialized technologies. The four units included in Operable Unit 4 are the two K-65 silos (Silos 1 and 2), the metal oxide silo (Silo 3), and the empty silo (Silo 4). Also included in this operable unit are the contaminated silos which lie within or below the bermed area of the K-65 silos, contaminated soils directly beneath any of the four silos and perched water from the surface to the regional aquifer below these areas.

Notes:

Silo 4 was not included in the Operable Unit 4 definition described in old Task 12 or the FS work plan documents.

Due to the presence of water in silo 4 contaminated with 200 ppm uranium, additional handling and packaging methods will have to be developed by the FS staff.

Portions of the berm silos and silo subsoils will be assumed to be contaminated until such time as the field sampling program is completed and the actual extent of contamination determined.

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OPERABLE UNIT 5
ENVIRONMENTAL MEDIA

Operable Unit 5 includes those environmental media that represent pathways and/or environmental receptors presently or potentially affected by FMPC contaminants. Each of the individual environmental media are defined below:

- Soils: Includes all surface soils not specifically accounted for in other operable units.
- Groundwater: Limited to the Great Miami Aquifer (i.e., the regional aquifer) throughout the study area, with appropriate consideration given to the South Plume Area that is the subject of a separate removal action. Does not include source control, which is the focus of other operable units.
- Surface Water/Sediments:
 - Great Miami River: Addresses the sediments in the Great Miami River and their role as a potential source of contaminants to the overlying water column and the aquatic community. Does not include source control, which is the focus of other operable units.
 - Paddy's Run: Similar to the Great Miami, with the additional consideration of the effects of leakage from Paddy's Run into the regional aquifer.
 - Stormwater Outfall Ditch: Similar to Paddy's Run.
- Flora and Fauna: Involves the evaluation within the RI of the overall flora and fauna in the regional area, including terrestrial vegetation and animals, aquatic communities in the Great Miami River and Paddy's Run, locally grown produce and crops, cattle grazing on potentially affected land areas, wetlands, and threatened and endangered species.
- Air: Although air is still considered to be an integral part of Operable Unit 5 as per the FFA, it is anticipated that this media will be evaluated within the RI but will be eliminated as a separate component of the FS that could require direct remediation (as opposed to source controls).

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