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Department of Energy

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DOE-0132-98

**Mr. James A. Saric, Remedial Project Manager
U.S. Environmental Protection Agency
Region V-SRF-5J
77 West Jackson Boulevard
Chicago, Illinois 60604-3590**

**Mr. Tom Schneider, Project Manager
Ohio Environmental Protection Agency
401 East 5th Street
Dayton, Ohio 45402-2911**

Dear Mr. Saric and Mr. Schneider:

**TRANSMITTAL OF THE FINAL "OPERATIONS AND MAINTENANCE MASTER PLAN FOR THE
AQUIFER RESTORATION AND WASTEWATER TREATMENT PROJECT"**

- References:
- 1) Letter, Reising to Saric and Schneider, "Transmittal of: Draft Final Operations and Maintenance Master Plan for the Aquifer Restoration and Wastewater Treatment Project," dated September 19, 1997.
 - 2) Letter, Saric to Reising, "O&M Master Plan," dated October 22, 1997.
 - 3) Letter, Schneider to Reising, "DOE-FEMP Approval: Draft Final O&M Master Plan for Aquifer Restoration," dated November 4, 1997.

The draft final Operations and Maintenance Master Plan (OMMP), (Reference 1) was approved in References 2 and 3, therefore, reissuing the entire document in final form is not necessary; only new covers and a change page (Page 4-4) to address the U.S. Environmental Protection Agency (U.S. EPA) requested revisions. Enclosed is the change page and new covers indicating the "final" status of the document. The draft final covers and Page 4-4 of the draft final document should be discarded and replaced with the enclosures.

The Department of Energy (DOE) looks forward to the implementation of this plan, the successful construction and operation of the Great Miami Aquifer groundwater remedy, and the continued operation of the Fernald Environmental Management Project's (FEMP) wastewater treatment systems in accordance with the protocols outlined in this document.

If you have any questions regarding the OMMP, please contact John Kappa (513) 648-3149, or Robert Janke at (513) 648-3124.

Sincerely,



Johnny W. Reising
Fernald Remedial Action
Project Manager

FEMP:Kappa

Enclosure: As Stated

cc w/enc:

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EDC, FDF/52-7

**OPERATIONS AND MAINTENANCE MASTER PLAN
FOR THE AQUIFER RESTORATION
AND WASTEWATER TREATMENT PROJECT**

**FERNALD ENVIRONMENTAL MANAGEMENT PROJECT
FERNALD, OHIO**

NOVEMBER 1997

**U.S. DEPARTMENT OF ENERGY
FERNALD AREA OFFICE**

FINAL

Southern Waste Unit Storm Water Runoff

Storm water runoff will be collected from the excavation activities at South Field area. Three storm water management ponds will be constructed to collect runoff. Collected water will be pumped to the SWRB.

Flow: Anticipated to average 7.9 mgly (15 gpm) with an intermittent combined pumping rate of 600 gpm.

Duration: July 1998 through September 1999.

Lime Sludge Pond Storm Water Runoff

Storm water runoff from the lime sludge pond remediation is anticipated to be sent to the SWRB for treatment in AWWT Phase I (not shown on Figure 4-6). Detailed design of this remediation effort is not complete at this time, but flows are anticipated to be insignificant because of the lime sludge pond's relatively small area.

Flow: Anticipated to average 2.6 mgly (5 gpm)

Duration: October 2000 through December 2002

Solid Waste Landfill Storm Water Runoff

Storm water runoff from the solid waste landfill remediation is anticipated to be sent to SWRB for treatment in AWWT Phase I (not shown on Figure 4-6). Flows from this facility are anticipated to be insignificant because of its relatively small area:

Flow: Anticipated to average 2.6 mgly (5 gpm)

Duration: January 2003 through December 2003

To compensate for this increase, a project to divert approximately 11 acres of uncontaminated parking lot runoff from the SWRB was implemented (see Figure 4-4). The decrease in runoff to the SWRB from the parking lot (see Appendix B calculations) will more than compensate for the increased runoff from these and other foreseeable perimeter remediation activities.

Completion of soil remediation of the former production area is planned in segments. Soil remediation will start in Area 3 and progress southward to Area 5. As each segment of the former production area is remediated, storm water runoff influents will diminish, and the associated storm water collection systems will be progressively decommissioned and removed.

DOE The estimated average yearly quantities of storm water runoff (including perched groundwater infiltration to the storm sewers) from existing and planned changes are detailed in Appendix B and summarized as follows:

15 **SUMMARY OF ESTIMATED AVERAGE YEARLY QUANTITIES OF STORM WATER RUNOFF**

Area	Projected Average Annual Flow	
	Million Gallons	GPM
SWRB 165 acre collection area	142	270
- Removal of Parking Lot	11	20
- Net collection area remaining	131	250
• Sub-Area 3	53	100
• Sub-Area 4	32	60
• Sub-Area 5	47	90
A1PI stockpiles area	5	10
Southern Waste Units	8	15

4.2.2 Impacts on Treatment Operations

It is projected that contamination in storm water will be dependent upon the contamination levels of the area(s) being remediated. The operation of treatment facilities could be significantly affected by increased solids in the SWRB and increased colloidal loading to treatment. Additional clean out of sediment collected in the SWRB will be addressed by the sludge removal systems described in detail in Section 3.4.1.4. Increased process control testing will assure proper chemical dosage in primary clarification, thereby addressing the increase of colloids being sent to treatment facilities. Measures will be taken by the SCEP to minimize these solid loadings in runoff.

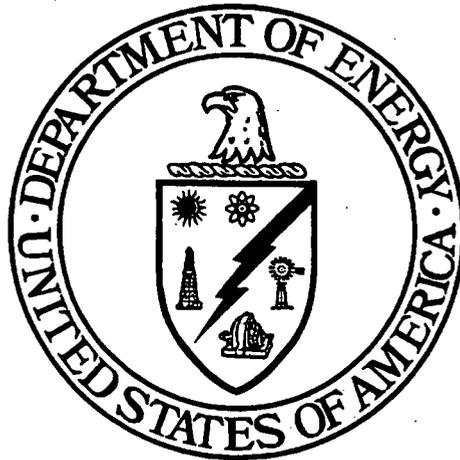
4.2.3 Projected Storm Water Yearly Average Flow Summary

Figure 4-5 presents a graphic presentation of the projected yearly average storm water flow discharged from the SWRB, which is anticipated from the information presented above and calculations presented in Appendix B. The flow of water to treatment will decrease as remediated areas are cleaned up. It should be noted that this figure is not intended to show the short-term peak flows that will be encountered as a result of excessive stormwater flow but is intended to show the annual average flows from the SWRB headworks to treatment.

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