

FACT SHEET

Fernald Closure Project

Revised Approach to a Smaller AWWT Facility for Long-Term Groundwater Restoration March 2004

1. At the February 18th afternoon meeting with the U.S. EPA and the Ohio EPA, and the follow-up February 18th evening Fernald Citizens Advisory Board Groundwater “Toolbox” meeting, DOE and Fluor Fernald presented the concepts behind a smaller replacement water treatment facility to replace the AWWT facility for use over the long term. The replacement facility consisted of the existing South Plume Interim Treatment (SPIT) facility (200 gpm capacity), the existing Interim Advanced Waste Water Treatment (IAWWT) facility (300 gpm capacity), and a new 600 gpm groundwater module to be installed adjacent to the SPIT and IAWWT facilities.
2. The replacement facility would provide up to 1,100 gpm of water treatment capacity of which 800 gpm would be dedicated to groundwater treatment over the long term. Up to 500 gpm capacity would be made available for storm water treatment, to handle the last remaining storm water flows after the replacement system would be brought on line. Modeling projections indicated that aquifer restoration timeframes would likely be extended by about 3 years (1 year in the off property area) due primarily to the necessary cessation of reinjection and the subsequent reduction in pumping rates that would be consequential to the shutdown of the larger AWWT facility.
3. As a result of comments received on the replacement plant proposal – which included a request by U.S. and Ohio EPA to provide an additional capacity of 600 gpm to address long-term uncertainties in water treatment needs – DOE and Fluor Fernald have decided to move to an alternate “additional capacity” approach that would permit carving down AWWT in place, resulting in the retaining of the 1,800 gpm AWWT Phase III Expansion system to serve as the long-term groundwater restoration facility. In concept, this decision provides the following advantages: 1) boosts capacity to 1,800 gpm (up from the 1,100 gpm proposed with the replacement plant); 2) provides about 600 gpm of storm water capacity (including carbon treatment) to handle the last remaining storm water flows; and 3) would likely permit effective continued groundwater reinjection if a surface water infiltration approach is utilized through the SSOD and its tributaries. While it will be somewhat challenging to carve down the AWWT in place, overall the advantages and additional capacities should alleviate the concerns raised by the commentors with the original replacement plant approach. Therefore, DOE and Fluor Fernald are willing to take on the challenges to reap the benefits requested by the commentors.
4. The attached table compares the revised concept with the proposed approach discussed at the February 18th meetings, and the existing facilities (AWWT, SPIT, and IAWWT) in place today.
5. The revised approach will permit the D&D and onsite disposal of upwards of 90 percent of the current AWWT footprint plus the SPIT and IAWWT facilities per the original baseline closure schedule.

COMPARISON OF APPROACHES

For an AWWT Replacement Facility

Fernald Closure Project

5384

882

TREATMENT CAPACITY

CURRENT FACILITIES		REPLACEMENT PLANT (Upgraded SPIT/IAWWT) Presented at 2/18/04 Meeting		REVISED APPROACH (AWWT CARVE DOWN)	
System	Capacity (gpm)	System	Capacity (gpm)	System	Capacity (gpm)
SPIT	~200	SPIT	~200		
IAWWT	~300	IAWWT	~300		
AWWT Phase I	~500	New Groundwater Treatment Module	~600		
AWWT Phase II	~300				
AWWT Phase III	~1800			Modified AWWT Phase III	~1800
Total Capacity	~3100¹		~1100²		~1800³

¹2000 gpm dedicated to groundwater. Up to 1100 gpm dedicated to storm water and remediation wastewater.

²600 gpm dedicated to groundwater. Up to 500 gpm dedicated to storm water and remediation wastewater. After OSDF closure, 800 gpm would be dedicated to groundwater.

³1200 gpm dedicated to groundwater. Up to 600 gpm dedicated to storm water and remediation wastewater. After OSDF closure the entire capacity could be dedicated to groundwater.

FOOTPRINT COMPARISON

CURRENT FACILITIES	REPLACEMENT PLANT (Upgraded SPIT/IAWWT)	REVISED APPROACH (AWWT CARVE DOWN)
~114,300 square feet	~16,500 square feet	~13,000 square feet

D&D VOLUME

CURRENT FACILITIES	REPLACEMENT PLANT (Upgraded SPIT/IAWWT)	REVISED APPROACH (AWWT CARVE DOWN)
~85,000 cubic yards	~5,000 cubic yards	<5,000 cubic yards of debris. Sampling underway to pin down subsoil volume. We anticipate the total volume will be < 10,000 cubic yards