TECHNICAL ASSISTANCE REQUEST
COLUMBUS CLOSURE PROJECT
CCP 02-08-3-F

PLAN FOR DISPOSITION OF ABANDONED FILTER BED AFTER WIDE™ REMEDIATION

SECTION 1 -- APPROVALS FOR TECHNICAL ASSISTANCE

_____	_____
Contractor Site Representative	OST/HQ Program Manager
_____	_____
DOE Site Manager	OST/HQ Office Director
_____	
DOE OH Manager	

SECTION 2 -- BACKGROUND AND PROBLEM DESCRIPTION:

This Technical Assistance (TA) Team will be requested to focus on independently reviewing the baseline plan for disposition of an abandoned filter bed area located on the Battelle West Jefferson site. The site is located near a residential area and is used as an industrial site concurrently with the clean-up activities.

The Battelle Columbus Laboratories Decommissioning Project (BCLDP) is in the process of remediating Battelle-owned facilities and grounds at the West Jefferson North site located near West Jefferson, Ohio. When the abandoned filter beds were remediated for particulate contamination, the tiles and much of the contaminated sand were removed, leaving only the soluble isotopes, mainly Cesium-137, as the major contaminant. The natural clay area was then graded and capped with a one-foot clay layer to prevent storm water from entering or percolating through the area. Based on sampling during CY 2000, the abandoned filter bed area contains Cesium-137 contamination above release criteria.

An area approximately 60 ft by 120 ft has been selected for the initial Cs-137 remediation step using the WIDE™ system. At the present time, equipment from the WIDE™ technology demonstration, initially used at Ashtabula, has been moved to West Jefferson for reuse. Approximately 2,000 wells have been installed in the abandoned filter bed area to provide avenues for pressurized injection of a citric acid based lixiviant solution into the *in situ* soil concurrent with vacuum extraction for removal of Cs-137 in solution. After pumping liquid through the Cs-137 contaminated clay / sand mixture to transfer the Cs-137 to the liquid, this liquid will then be collected and processed through filters and a Selective Separation Cartridge™ which will retain the Cs-137. The goal of the WIDE™ process (including the Selective Separation Cartridge™) is to reduce the Cs-137 contamination level to below the NRC regulated release level of 15 pCi/g.

The current BCLDP baseline technical approach involves processing using the WIDE™ system followed by excavation of significant quantities of Cs-137 contaminated soil. The proposed TA Team study is requested to recommend the most effective plan for disposition of the abandoned filter bed area.

SECTION 3 -- SCOPE:
The purpose of this TA Team is to recommend improvements to the proposed baseline plan for disposition of the abandoned filter bed area in compliance with regulatory limits. The Team will also be expected to identify opportunities for cost and schedule savings and risk reduction.

The TA Team will be provided with background information concerning the problems being addressed and the presently proposed technical solutions prior to arrival at the site. Upon arrival, the Team will be given the scope of the study and expectations of management. The contractor will provide a briefing on the current baseline technology and plan for disposition of the abandoned filter bed area. The Team will tour the site with the contractor and have questions answered before the development of possible alternatives begins.

After the baseline briefing and tour, the team will determine if more effective alternatives are available to achieve the closure objectives with improved cost and schedule. While the BCLDP has a plan for disposition of the abandoned filter bed area, the TA Team should independently develop and recommend any technologies or different technical approaches currently available which can improve the proposed approach both from an acceleration as well as regulatory compliance standpoint. In addition to reduction in risk, the alternatives proposed should offer improvements over the cost and schedule resulting from the baseline methodology.

SECTION 4 -- SCHEDULING REQUIREMENTS:
Consistent with the present site D&D schedule for the abandoned filter bed area and the sequence of work, it will be helpful if the requested TA can be accomplished by September 2003.

SECTION 5 -- BENEFITS:
The primary benefits of the TA Team is to improve the BCLDP plan by identifying better technologies and processes for disposition of the abandoned filter bed area. Specific areas to be addressed by the Technical Assistance Team include:

a. Review the Baseline Revision 3 approach for disposition of the abandoned filter bed area. Plan how to monitor and evaluate the Cs-137 reduction (e.g. sampling / mass balances) in the soil during and on termination of operation of the WIDE™ system.
b. Plan how to use the Cs-137 reduction information for decisions including when to terminate operation of the WIDE™ system and what the final disposition of the abandoned filter bed area could be.
c. Identify and evaluate alternatives to the baseline (excavation) plan for disposition of the abandoned filter bed area.
d. Recommend improved disposition techniques / technologies / regulatory compliance strategies.

The cost estimate to complete this TA is about $50,000, and it is anticipated that a cost avoidance of $500,000 or more could result from TA recommendations in one or more of the areas listed above.

SECTION 6 -- DELIVERABLES:
Any recommended alternatives will be developed to the extent possible and presented to DOE and Contractor management as a draft final report prior to leaving the site. It is anticipated that

after completion of the final report, some portion of the team will be made available for consultation during implementation of the plan for disposition of the abandoned filter bed area. The consultation may range from phone calls to site visits either individually or as part of a team.