

United States Government

Department of Energy

# memorandum

Oak Ridge Operations

DATE: DEC 28 2001

REPLY TO:  
ATTN OF: EM-95

SUBJECT: **PILOT TEST WORK PLAN IN-SITU CHEMICAL OXIDATION (ICO) OF TRICHLOROETHENE (TCE) IN GROUNDWATER**

TO: **Robert Poe, Assistant Manager for Environmental Safety and Health, SE-30**

In September 2000, the U.S. Department of Energy (DOE) issued an interim record of decision to present the selected interim remedial action to address groundwater contaminated by trichloroethene (TCE), at the Weldon Spring Site Remedial Action Project (WSSRAP). To address the TCE contaminated groundwater at the Chemical Plant Area, south and southwest of the former locations of Raffinate Pits 3 and 4, in-situ chemical oxidation (ICO) was selected from a review of several alternatives. Ferguson Corporation (MK-F) conducted bench tests of ICO in May 2001 to evaluate factors such as effectiveness on TCE, oxidant demand and associated effects of treatment on other groundwater quality parameters such as metal concentrations. Based upon bench test results by several vendors demonstrating effectiveness of chemical oxidation to address the TCE and its associated natural degradation products, cis-1, 2-dichloroethene (CIS), nominal effects on associated groundwater quality, and cost analysis of the treatment, MK-F solicited proposals and work plans for a field test. Uncertainties remain associated with the effectiveness of in-situ chemical oxidation at WSSRAP due to complexities imposed by site geology and hydrology.

WSSRAP is reviewing these documents for the field test of the in-situ chemical oxidation of TCE in groundwater. In light of the serious burns which an employee received during an ICO operation at the Portsmouth Gaseous Diffusion Plant (PORTS), the WSSRAP Site Office is requesting the assistance of Brenda Hawks and Jenny Mullins to review the pilot test work plan prepared by ATC Associates, Inc. and Geo-Cleanse International, Inc. (copies will be send to them). We also request that Ms. Hawks and Ms. Mullins make a trip to the site to review the operations sometime in January 2002.

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**GW-300-304-1.08**

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*Technical and Commercial Proposal – In Situ Chemical Oxidation of TCE in  
Groundwater, ATC Associates, Inc.*

This document presents the subcontractor's (ATC Associates, Inc. and Geo-Cleanse International, Inc.) approach for the design, build, and performance of the Pilot Scale In-Situ Chemical Oxidation project at the Weldon Spring Site.



Technical and Commercial Proposal  
RFP No. 3589-SC-WP568  
For

MK-Ferguson, WSSRAP  
In Situ Chemical Oxidation of TCE in Groundwater  
7295 Highway 94 South  
St. Charles, Missouri

# Pilot Test Work Plan

## In-Situ Chemical Oxidation of TCE in Groundwater

### Weldon Spring Site Remedial Action Project

*Prepared for:* MK Ferguson  
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November 2, 2001

This proposal includes data that shall not be disclosed outside the Contractor and shall not be duplicated, used, or disclosed—in whole or in part—for any purpose other than to evaluate this proposal. If, however, a contract is awarded to this offeror as a result of—or in connection with—the submission of this data, the Contractor shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting contract. This restriction does not limit the Contractor's right to use information contained in this data if it is obtained from another source without restriction. The data subject to this restriction are contained in all sheets in this proposal.

WELDON SPRING SITE REMEDIATION PROJECT  
In-Situ Chemical Oxidation Pilot Test Work Plan

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