

I hereby certify that this  
within is a true and correct copy  
of the original Order  
filed in this matter.

ENVIRONMENTAL PROTECTION AGENCY

REGION III

  
Attorney for EPA

IN THE MATTER OF:

UTI Corporation  
200 West Seventh Ave.  
Trappe, Pennsylvania 19426

)  
) FINAL ADMINISTRATIVE ORDER ON  
) CONSENT  
) U.S. EPA Docket No.  
) RCRA-III-055-CA

EPA I.D. No. PAD 00 234 4463

RESPONDENT

) Proceeding under Section  
) 3008(h) of the Resource  
) Conservation and Recovery  
) Act, as amended, 42 U.S.C.  
) Section 6928(h).

**FINAL ADMINISTRATIVE ORDER ON CONSENT**

The Parties to this Administrative Order on Consent ("Consent Order"), the United States Environmental Protection Agency ("EPA") and UTI Corporation ("Respondent"), having agreed to entry of this Consent Order, it is therefore Ordered and Agreed that:

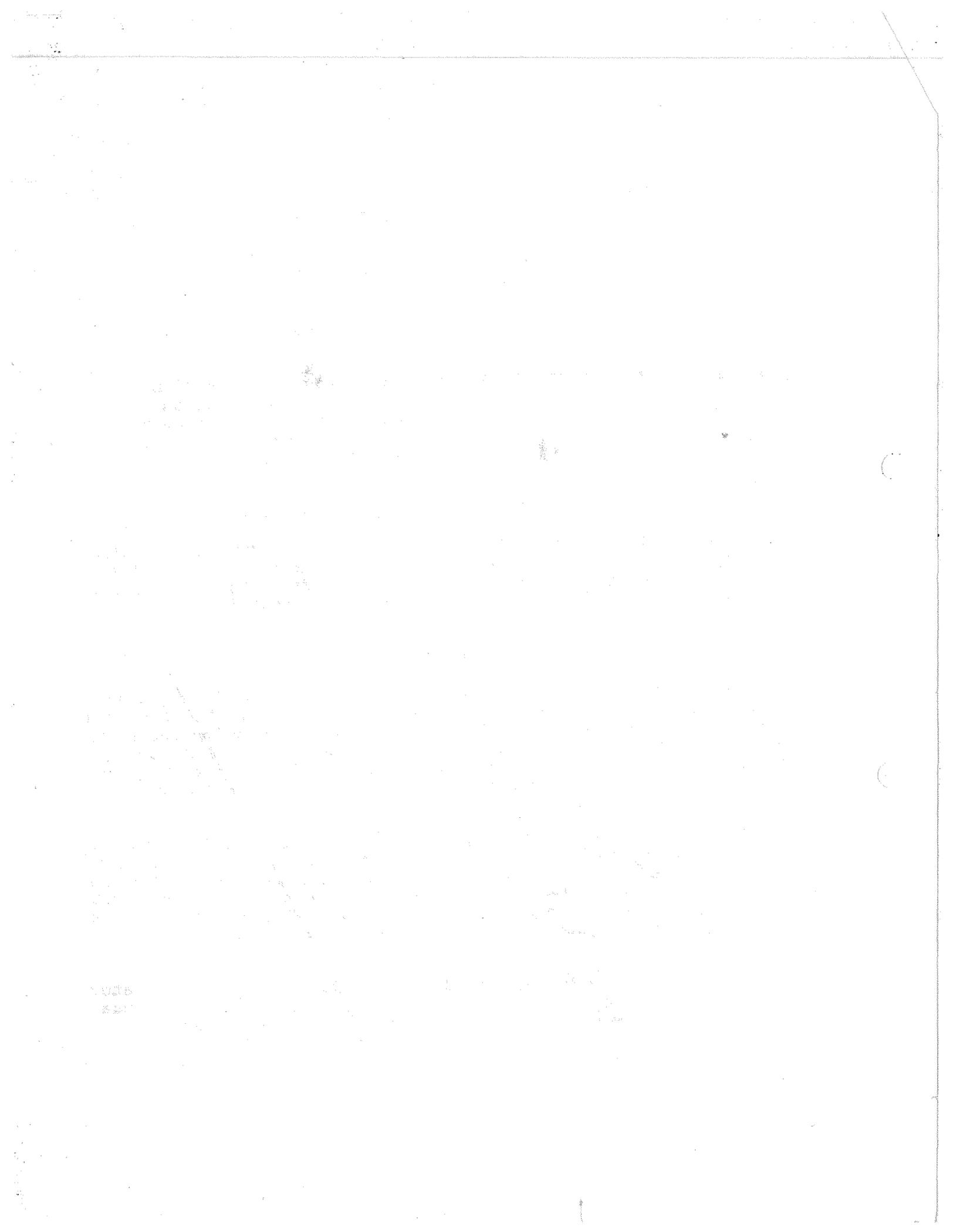
**I. JURISDICTION**

This Consent Order is issued pursuant to the authority vested in the Administrator of EPA by Section 3008(h) of the Resource Conservation and Recovery Act of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984 ("RCRA"), 42 U.S.C. Section 6928(h). The authority vested in the Administrator has been delegated to the Regional Administrators by EPA Delegation Nos. 8-31 and 8-32 dated March 6, 1986.

Effective January 30, 1986, the EPA granted the Commonwealth of Pennsylvania (the "State") authorization to operate a hazardous waste program in lieu of EPA, pursuant to Section 3006(b) of RCRA, 42 U.S.C. Section 6926(b). The State, however, does not have authority to enforce Section 3008(h) of RCRA. EPA is notifying the State that this Consent Order is being issued by providing a copy to the State.

This Consent Order is issued to Respondent, the owner/operator of a manufacturing facility located at 200 West Seventh Avenue, Trappe, Montgomery County, Pennsylvania. Respondent consents to and agrees not to contest EPA's jurisdiction to issue this Consent Order and to enforce its terms.

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## II. PARTIES BOUND

1. This Consent Order shall apply to and be binding upon EPA, Respondent, their successors and assigns, and, in their representative capacities only, Respondent's officers, directors, and employees.

2. No change in ownership of any property covered by this Consent Order, or in corporate status of Respondent shall in any way alter, diminish or otherwise affect Respondent's obligations under this Consent Order, unless, upon request by Respondent in accordance with paragraph 4, below, EPA, in its sole discretion approves of the transfer to a new owner or operator of Respondent's obligations under this Consent Order. Factors to be considered by EPA in reviewing a request to transfer obligations under this Consent Order may include, among other things, the economic viability of the transferee, the transferee's history of compliance with environmental laws, regulations, and administrative and judicial orders, and the transferee's ability to comply with the terms and conditions of this Consent Order. EPA's decision with respect to the transfer of obligations shall not be subject to review under Section XV of this Consent Order ("Dispute Resolution") or otherwise.

3. Respondent shall provide a copy of this Consent Order to all supervisory personnel responsible for the implementation of the work under this Consent Order, and all contractors, subcontractors, laboratories, and consultants retained by Respondent to conduct or monitor the work required by this Consent Order within seven (7) calendar days of the effective date of this Consent Order or date of such retention, whichever is later. All contracts, agreements or other arrangements with such persons shall require such persons to conduct or monitor the work in accordance with the requirements of this Consent Order. The existence of any provision or term of any contract, agreement or other arrangement requiring a contractor, subcontractor, laboratory or consultant to conduct or monitor the work in accordance with the requirements of this Consent Order shall not excuse or otherwise relieve Respondent of its obligation to comply with this Consent Order.

4. Respondent shall provide a copy of this Consent Order to any successor in interest at least fifteen (15) days prior to transfer of ownership or operation of the Facility. Respondent shall notify EPA at least sixty (60) days prior to such transfer of the nature of such transfer and the name and address of such successor and whether Respondent proposes to transfer its obligations under this Consent Order.

## III. STATEMENT OF PURPOSE

In entering into this Consent Order, the mutual objective of EPA and Respondent is the protection of human health and the environment through the implementation of (1) the corrective measures selected by EPA in the RCRA Statement of Basis dated

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August 5, 1991 and the Final Decision and Response to Comments dated September 30, 1991 (collectively referred to herein as the "FDRTC"), as described in the Statement of Work attached hereto as Attachment A ("Corrective Measures"), and (2) the Interim Measures described in Section VI.A of this Consent Order and Attachment B ("IM").

#### IV. EPA'S FINDINGS OF FACT

1. Respondent is a corporation doing business in the Commonwealth of Pennsylvania and is a "person" as defined in Section 1004(15) of RCRA, 42 Section U.S.C. 6903(15).

2. Respondent owns and operates a facility that manufactures specialty metal products located on approximately forty (40) acres between West Seventh Avenue and West Fifth Avenue in Trappe, Pennsylvania. This property is referred to herein as the "Facility".

3. On August 14, 1980, Respondent submitted to EPA a Notification of Hazardous Waste Activity ("Notification") for the Facility pursuant to Section 3010 of RCRA, 42 U.S.C. Section 6930. In the Notification, Respondent identified itself as a generator of hazardous waste and as an owner and operator of a hazardous waste treatment and storage facility. EPA assigned the Facility the EPA Identification Number PAD 00 234 4463.

4. Respondent submitted to EPA a Part A permit application on November 12, 1980, and an amended Part A permit application on September 27, 1982. In its amended Part A permit application, Respondent indicated that it stored hazardous wastes bearing the EPA hazardous waste numbers F002, U043, U154, and D001, and that it treated hazardous waste bearing the EPA hazardous waste number K062.

5. On November 10, 1982, EPA sent to Respondent a letter acknowledging that the Facility had qualified for interim status under Section 3005(e) of RCRA, 42 U.S.C. Section 6925(e).

6. On April 25, 1983, Respondent submitted to EPA a Part B permit application for the Facility.

7. On October 29, 1984, Respondent submitted a revised Notification to EPA and the Pennsylvania Department of Environmental Resources ("PADER") which indicated that Respondent no longer stored hazardous wastes at the Facility for greater than ninety (90) days, and stored such wastes in accordance with 40 C.F.R. § 262.34(a).

8. On November 8, 1985, Respondent submitted a letter to EPA requesting withdrawal of its Part B permit application.

9. The hazardous waste bearing the EPA hazardous waste number K062 was treated by Respondent in a wastewater pretreatment system

*K062 =  
spat pickle  
dig w/*

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which included two concrete-lined surface impoundments used as settling basins.

10. In accordance with the groundwater monitoring requirements set forth at 25 Pa. Code Section 75.265(n), Respondent implemented a groundwater monitoring program with respect to the concrete-lined surface impoundments in 1985. In October 1985, Respondent submitted a report to EPA and PADER summarizing the history of the groundwater investigation and remediation program which began in 1978 and the data regarding the presence of trichloroethylene ("TCE") and 1,1,1 trichloroethane ("TCA") in groundwater samples from wells installed as part of the RCRA groundwater monitoring program in addition to other wells previously installed.

11. Respondent conducted supplemental groundwater sampling and additional investigations in order to further characterize the source(s) and extent of the TCE/TCA contamination. In November 1985, Respondent submitted a report to EPA and PADER summarizing the results of the supplemental investigation and recommending that additional investigation be conducted.

12. In May, 1986, pursuant to 25 Pa. Code Section 75.265(n)(15)(i), Respondent conducted additional subsurface investigations as part of an expanded groundwater assessment program. The results of the additional investigation were set forth in the "Subsurface Investigation and Groundwater Assessment Report" completed by Respondent in March 1987.

13. In April, 1986, in accordance with 25 Pa. Code Section 75.265(o), Respondent submitted a closure plan with respect to the concrete-lined surface impoundments, which was approved by PADER on May 29, 1986. Respondent removed these concrete-lined surface impoundments from service on March 5, 1987. In a letter to Respondent dated November 26, 1990, PADER acknowledged that Respondent had satisfactorily completed closure of the surface impoundments, and that no further RCRA post-closure activity was necessary.

14. On June 30, 1988, EPA and Respondent entered into a corrective action Consent Order (the "RFI/CMS Order"), Docket Number RCRA-III-005-CA, pursuant to RCRA Section 3008(h), 42 U.S.C. Section 6928(h). The RFI/CMS Order required Respondent to conduct a RCRA Facility Investigation ("RFI") and a Corrective Measure Study ("CMS") for the Facility. The RFI was a further expansion of the investigation of the nature and extent of on-site and off-site contamination. The CMS provided an evaluation of various clean-up alternatives based on criteria set forth in the RFI/CMS Order. Respondent has complied with the requirements of the RFI/CMS Order to the satisfaction of EPA.

15. In September, 1990, Respondent submitted a final RFI Report to EPA, which EPA approved on October 19, 1990. EPA sent to PADER a copy of its letter approving the final RFI on October 19, 1990. The RFI Report concluded that elevated concentrations of

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TCE, TCA and chromium were present in soil and groundwater beneath the Facility.

16. The RFI Report also concluded that the primary source of the TCE and TCA found in the groundwater at the Facility was three 550-gallon underground solvent storage tanks located beneath Plant 1 at the Facility. Respondent emptied the tanks and took them out of service in 1977, and filled the tanks with inert material in 1978. The RFI Report also indicated that a secondary source of contaminants was the intermittent, historic discharge of water from a drainage sump located beneath Plant 1 in the immediate vicinity of the closed tanks. Water containing TCE, TCA and chromium was discharged from the sump to the area of a drainage swale located adjacent to the concrete-lined surface impoundments that are now closed.

17. The Facility is located approximately 700 feet northwest of a public drinking water well (designated CT-8) operated by the Colleeville-Trappe Joint Water System ("CTJWS"). There are a number of private drinking water wells located within a quarter-mile radius of the Facility, some of which contain TCE/TCA that migrated from the Facility. All impacted residences were either connected to the municipal water supply system or were provided bottled water by Respondent. None of the private drinking water wells now in use are known to have levels of TCE/TCA in excess of applicable Maximum Contaminant Levels set forth in 40 CFR § 141.61.

18. Originating at the Facility is a swale which drains into Donny Brook, a tributary of Perkiomen Creek. Perkiomen Creek is located about two miles east of the Facility and is used for recreational purposes which include fishing.

19. The human health effects of TCE, TCA and chromium are described in the Administrative Record supporting the issuance of this Consent Order.

20. On June 18, 1991, Respondent submitted to EPA a final CMS Report, which was approved by EPA on August 6, 1991. The CMS Report identified and evaluated seven (7) Corrective Measure Alternatives. Respondent submitted a copy of the final CMS Report to PADER in June, 1991.

21. On August 6, 1991, EPA issued for public comment a Statement of Basis, which described the various clean-up alternatives for the Facility evaluated by Respondent in the Final CMS Report and contained EPA's preliminary determination as to the recommended corrective measures. The Statement of Basis also concluded that actual or threatened releases of hazardous constituents from the Facility, if not addressed by corrective action, may present a current or potential threat to human health or the environment. EPA sent to DER a copy of the Statement of Basis on August 5, 1991. The Statement of Basis, and the administrative record file for the Facility were made available to the public for a forty-five (45) day comment period. A public

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meeting was held on September 5, 1991 and the public comment period ended on September 20, 1991.

22. On September 30, 1991, EPA issued a Final Decision and Response to Comments which identified the remedy it selected for implementation at the Facility, and provided responses to all of the comments received at the public meeting and all written comments received during the public comment period. A copy of this document was sent to PADER on September 30, 1991.

23. Respondent discontinued the use of TCE in 1975, replacing it with the use of TCA.

24. In response to a request by the EPA Administrator and as part of a nationwide initiative under the Clean Air Act Amendments of 1990, 42 U.S.C. §7401 et seq., to limit the emission of selected substances, Respondent volunteered to participate in EPA's "33/50 Program" committing resources in an effort to reduce the emissions of TCA from its manufacturing operations.

25. Respondent has informed EPA that, as of the effective date of this Consent Order, it has already completed certain actions that have reduced the use of TCA from its manufacturing operations by 26% when compared to total TCA use in the peak year of 1990. Respondent has informed EPA that there is currently no known substitute for the use of TCA in Respondent's manufacturing operations and that changes in product mix and manufacturing technology at the Facility resulted in an increased use of TCA by approximately 64% in 1990 over a base year of 1988.

#### V. EPA'S CONCLUSIONS OF LAW AND DETERMINATIONS

Based on EPA's Findings of Fact set out above, and after consideration of the Administrative Record supporting the issuance of this Consent Order, EPA has made the following Conclusions of Law and Determinations:

1. Respondent is a person within the meaning of Section 1004(15) of RCRA, 42 U.S.C. Section 6903(15).

2. Respondent is an owner or operator of a facility authorized to operate pursuant to Section 3005(e) of RCRA, 42 U.S.C. Section 6925(e).

3. TCE, TCA and chromium found at the Facility are hazardous wastes within the meaning of Section 3008(h) of RCRA, 42 U.S.C. Section 6928(h).

4. There is or has been a release of hazardous wastes into the environment from the Facility within the meaning of Section 3008(h) of RCRA, 42 U.S.C. Section 6928(h).

5. The actions required by this Consent Order are necessary to protect human health or the environment.

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## VI. WORK TO BE PERFORMED

Pursuant to Section 3008(h) of RCRA, 42 U.S.C. Section 6928(h), Respondent agrees to and is hereby ordered to perform the following acts in the manner and by the dates specified herein. All work undertaken pursuant to this Consent Order shall be developed and performed in accordance with the Scope of Work for the Corrective Measure Implementation ("CMI") set forth in Attachment A; the Description of Interim Measures set forth in Attachment B; the Scope of Work for a Health and Safety Plan set forth in Attachment C; and RCRA and its implementing regulations, as applicable, and, to the extent appropriate, relevant EPA guidance documents. (All attachments to this Consent Order are incorporated herein by reference.)

### A. Interim Measures

1. Within forty-five (45) calendar days of the effective date of this Consent Order, Respondent shall install a bridge plug in well UTM-18 to prevent the potential cross-flow of contaminants identified in the upper zone of the aquifer, and shall reconfigure the existing air stripper to exhaust emissions vertically at a height of at least twenty feet. A description of this work is set forth in Attachment B.

2. Respondent shall continue the current program of groundwater extraction and treatment at the Facility until such time as the program is superseded by the implementation of the Corrective Measures required by this Consent Order. This work shall consist of groundwater extraction from well UTM-1 at a flow rate of approximately 75 gallons per minute and from the Plant 1 sump, and groundwater treatment by the existing air stripper and surface water discharge to the swale or, weather permitting, discharge via the existing spray field.

3. Respondent shall continue the monthly and quarterly sampling which is currently being performed in accordance with Section V.2 of the RFI/CMS Order. Sampling and analysis shall be conducted according to the protocols set forth in the Quality Assurance Project Plan, August 1988 and the Ground Water Sampling and Analysis Plan, October 1988, which were submitted to and approved by EPA and PADER. The number and location of wells to be sampled are set forth in the above-referenced plans, as subsequently modified to address improving site conditions by letter dated November 29, 1989, from Weston to PADER, a copy of which was sent to EPA. Respondent shall include the sampling results in the Annual Report required by Section VI.D.5. of this Consent Order.

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## B. Corrective Measure Implementation ("CMI")

1. Within ninety (90) calendar days of the effective date of this Consent Order, Respondent shall submit a **Corrective Measures Design and Implementation Program Plan** ("CMDI Program Plan") to EPA in accordance with Section VI.D of this Consent Order. The CMDI Program Plan shall be designed to facilitate the design, construction, operation, maintenance and monitoring of the Corrective Measures at the Facility. In accordance with Task I of Attachment A, the CMDI Program Plan shall include a Program Management Plan, a Community Relations Plan, a Sampling and Analysis Plan, a Groundwater Corrective Measures Conceptual Design Plan, a Corrective Measures Permitting Plan, an In Situ Vapor Extraction ("ISV") Pilot Study Plan, a Supplemental Field Investigation Work Plan, and plans and schedules for the preparation and submission to EPA of Preliminary and Final Design Submittals. The CMDI Program Plan shall include a reasonably expeditious schedule for completion of all components of Corrective Measures design. Concurrent with the submission of the CMDI Program Plan, Respondent shall submit to EPA a Health and Safety Plan in accordance with Attachment C of this Consent Order.

2. In accordance with Task II.A of Attachment A, the Preliminary Design Submittal required under Paragraph B.1, above, shall include, at a minimum, the following: (a) design criteria, (b) results of the ISV Pilot Study, (c) results of additional field sampling and/or investigation, (d) preliminary plans, drawings and sketches, including required specifications in outline form, and (e) preliminary construction schedule. The Preliminary Design Submittal shall also include a Groundwater Reuse Plan addressing the practicality of reusing all or a portion of the treated groundwater in an effort to minimize the loss of such water from the regional aquifer as a result of discharges to Donny Brook.

3. In accordance with Task II.B of Attachment A, the Final Design Submittal required under Paragraph B.1, above, shall include, at a minimum, the following plans, as well as reasonably expeditious schedules and specific methodologies for implementation of these plans: (a) final designs and specifications for the Corrective Measures, (b) an Operation and Maintenance Plan, (c) a Corrective Measures Construction Quality Assurance Plan, (d) a revision to the Sampling and Analysis Plan to reflect sampling during construction activities, (e) a revision to the Health and Safety Plan to reflect construction activities, (f) a cost estimate, and (g) procedures and plans for the decontamination of equipment and disposal of contaminated materials. The Final Design Submittal shall also include a Final Groundwater Reuse Plan.

4. Upon approval of all components of the Final Design Submittal (with the exception of the Groundwater Reuse Plan and the Health and Safety Plan which shall be submitted to EPA for informational purposes only), the Final Design Submittal shall be incorporated into and become enforceable under this Consent Order and Respondent shall implement the activities required under the

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Final Design Submittal in accordance with the schedules and methodologies contained therein.

5. Within ninety (90) calendar days of completion of construction as specified in the EPA-approved Final Design Submittal, Respondent shall submit a Corrective Measure Implementation Report ("CMI Report") to EPA for approval in accordance with Section VI.D of this Consent Order. The CMI Report shall indicate whether the project is consistent with the Final Design Submittal. The CMI Report shall include, but not necessarily be limited to, the following elements:

- a. synopsis of the Corrective Measures and a statement that the system was inspected and conformed to the construction and/or design plans;
- b. explanation of any modifications to the EPA-approved construction and/or design plans and why these were necessary for the project;
- c. an explanation of any modifications to the criteria, established before the Corrective Measure was initiated, for evaluating the effectiveness of the Corrective Measures;
- d. results of Facility monitoring, including an assessment whether the Corrective Measures are performing as planned; and
- e. an explanation of any necessary modifications to the operation and maintenance program (including monitoring) established in the Final Design Submittal and a brief summary of the operation and maintenance activities already undertaken at the Facility for the Corrective Measure addressed in this Consent Order.

6. If, on the basis of the CMI Report and other relevant information, EPA determines that the constructed project is consistent with the Final Design Submittal, EPA shall notify Respondent in writing that construction of the Corrective Measures is complete. If EPA determines that the constructed project is inconsistent with the Final Design Submittal, EPA shall notify Respondent in writing of the deficiencies and those activities that must be undertaken to complete the construction of the Corrective Measures in a manner that is consistent with the terms and conditions of this Consent Order and shall set forth a reasonably expeditious schedule for the completion of those activities. Respondent shall complete the activities in accordance with the schedule set forth in the EPA notification. If Respondent completes the activities as required by EPA in accordance with the specified schedule, Respondent shall not be subject to the imposition of stipulated penalties as set forth in Section XIV of this Consent Order with respect to the specific deficiencies identified in EPA's notification.

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### C. Corrective Measure Five Year Assessment Report

1. On February 15th of the fifth year after the effective date of this Consent Order, and every five (5) years thereafter until receipt of approval by EPA of a Certification of Completion submitted pursuant to Section VI.C.7 of this Consent Order, Respondent shall submit a **Corrective Measure Five Year Assessment Report**. Such Report shall contain an evaluation of the past and projected future effectiveness of the Corrective Measures in attaining the cleanup goals set forth in Attachment A to this Consent Order ("Cleanup Goals") at the Points of Compliance identified therein.

2. If, on the basis of appropriate statistical analysis (e.g., a least squares fit line having a slope which is not statistically different from zero within a 99% confidence interval) of the groundwater monitoring data relating to one or more Points of Compliance generated over the immediately preceding five (5) years, Respondent believes that (a) an equilibrium concentration with respect to one or more of the Cleanup Goals for such Point(s) of Compliance has been reached and (b) the attainment of the Cleanup Goals through continued implementation of the Corrective Measures is technically impracticable, then Respondent may, as part of a Corrective Measure Five Year Assessment Report or at any other time, request that EPA establish Alternate Performance Standards for such Point(s) of Compliance. In addition, if at any time Respondent believes that the attainment of the Cleanup Goals through continued implementation of the Corrective Measures is technically impracticable, whether or not equilibrium concentrations have been reached, Respondent may request that EPA establish Alternate Performance Standards for such Point(s) of Compliance.

3. If EPA determines based on any Five Year Assessment Report or any other relevant information, including a request by Respondent under paragraph C.2, that one or more Cleanup Goals have not been met and that the continued implementation of the Corrective Measures is not likely to achieve those Cleanup Goals, EPA may establish Alternate Performance Standards which are less stringent than the Cleanup Goals and/or select an Alternative and/or Supplemental Corrective Measure(s) pursuant to applicable EPA regulations and/or guidance regarding selection of corrective measures under RCRA Section 3008(h).

4. In the event that the Cleanup Goals or Alternate Performance Standards are achieved at all Points of Compliance other than those in the upper groundwater zone (i.e., monitoring well RCRA-2 and the Plant 1 Sump) and Respondent believes that the levels of contaminants in the upper groundwater zone are such that potential vertical migration of those contaminants will not cause exceedence of the Cleanup Goals or Alternate Performance Standards in the lower groundwater zone, Respondent may, as part of a Corrective Measure Five Year Assessment Report or at any other

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time, request that EPA select an Alternative and/or Supplemental Corrective Measure(s) (which may include the modification of the Cleanup Goals for those Points of Compliance in the upper zone and/or institutional controls) pursuant to applicable EPA regulations and/or guidance regarding selection of corrective measures under RCRA Section 3008(h).

5. In the event EPA selects an Alternative and/or Supplemental Corrective Measure(s) either in response to a request by Respondent pursuant to Paragraphs 2 or 4, above, or on its own initiative, EPA may provide Respondent with a period of sixty (60) calendar days from the date Respondent receives written notice from EPA of the selection of an Alternative and/or Supplemental Corrective Measure(s) within which to reach an agreement with EPA regarding modification of this Consent Order under Section XXI (Subsequent Modification) for performance of the Alternative and/or Supplemental Corrective Measure(s) in lieu of, or in addition to, the Corrective Measures. Respondent is not obligated by this Consent Order to implement any Alternative and/or Supplemental Measure(s) as requested by EPA unless Respondent enters into a modification of this Consent Order specifically agreeing to perform such additional work. If Respondent declines to implement any Alternative and/or Supplemental Corrective Measure(s) requested by EPA, such action or inaction shall not constitute a violation of this Consent Order and shall not subject Respondent to the stipulated penalties set forth in Section XIV of this Consent Order.

6. Nothing in this Section VI.C shall limit whatever authority EPA may have to implement the Alternative or Supplemental Corrective Measure(s) or to take any other appropriate action under RCRA, the Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act of 1986, 42 U.S.C. Section 9601 et seq. ("CERCLA"), or any other legal authority, including the issuance of a unilateral administrative order or the filing of a civil action. Respondent reserves the right to fully defend any such action by EPA.

7. In the event Respondent concludes that the Corrective Measures have been fully implemented and the Cleanup Goals (and/or the Alternative Performance Standards, if any) have been met, Respondent shall submit a Certification of Completion to EPA for approval in accordance with Section VI.D of this Consent Order. The Certification of Completion shall explain the basis for Respondent's conclusion and include all available documentation supporting such conclusion.

#### D. SUBMISSIONS/EPA APPROVAL/ADDITIONAL WORK

1. EPA will review Respondent's submissions and, with the exception of Health and Safety Plans, the Groundwater Reuse Plan and the Air Emission Reduction Plan (each of which will be submitted for review, but not approval, by EPA pursuant to this Consent Order), will notify Respondent in writing of EPA's approval or disapproval of the submissions. In the event of EPA's disapproval of a submission, EPA shall provide written comments and

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shall specify any deficiencies in the submission(s). Such disapproval shall not be subject to the dispute resolution procedures of Section XV, below. EPA may, at its discretion, direct Respondent to implement non-deficient portions of a submission, if such implementation is practical and feasible.

2. Unless otherwise expressly specified in this Consent Order, within forty-five (45) calendar days of receipt of EPA's disapproval and comments on a submission, Respondent shall submit to EPA for approval a revised submission, which responds to any comments made by EPA and/or remedies any deficiencies identified by EPA. In the event that EPA disapproves of the revised submission, Respondent shall either invoke the dispute resolution procedures of Section XV, below, or shall revise the submission to remedy any remaining deficiencies identified by EPA. In the event that EPA disapproves the revised submission, EPA reserves the right to revise or prepare the submission in lieu of Respondent and reserves whatever rights it may have to seek to recover from Respondent the costs thereof in accordance with CERCLA or any other applicable law. Respondent is not obligated by this Consent Order to perform any work set forth in a submission revised by EPA or prepared by EPA in lieu of Respondent unless Respondent enters into a modification of this Consent Order specifically agreeing to perform such additional work. If Respondent declines to implement the work set forth in a submission revised by EPA or prepared by EPA in lieu of Respondent, such action or inaction shall not constitute a violation of this Consent Order and shall not subject Respondent to the stipulated penalties set forth in Section XIV of this Consent Order. Respondent reserves the right to fully defend any action initiated by EPA pursuant to this paragraph. Any submission prepared by Respondent that is approved by EPA under this Consent Order shall be deemed incorporated into and made an enforceable part of this Consent Order.

3. In the event EPA approves a submission made by Respondent, Respondent shall take such action, if any, as is required by the approved submission in accordance with the schedule set forth therein.

4. On May 15th, August 15th and November 15th of each year or part of a year during which this Consent Order is effective, Respondent shall submit to EPA a Quarterly Status Report for the first, second and third calendar quarters, respectively, which contains the information required in Task III.A. of Attachment A and the information required by Section VII (Air Emission Reduction Program).

5. On February 15th of each year during which this Consent Order is effective, Respondent shall submit to EPA an Annual Progress Report which contains the information described in Task IV.B. of Attachment A for the previous calendar year and the information required by Section VII (Air Emission Reduction Program). Respondent shall not be required to submit an Annual Progress Report in any year a Corrective Measure Five Year

Assessment Report is submitted pursuant to Section VI.C. of this Consent Order.

6. EPA may determine that certain tasks and deliverables including, but not limited to, investigatory work or engineering evaluation, require additional work beyond that required under this Consent Order or the relevant approved program or design work plan. If EPA determines that additional work is necessary, EPA shall request, in writing, that Respondent perform the additional work and shall specify the basis and reasons for EPA's determination that such additional work is necessary. Within thirty (30) calendar days after the receipt of EPA's request, Respondent shall have the opportunity to meet with EPA to discuss the additional work EPA has requested. In the event that Respondent agrees to perform the additional work, this Consent Order shall be modified in accordance with Section XXI (Subsequent Modification) of this Consent Order and such work shall be performed in accordance with this Consent Order. Respondent is not obligated under this Consent Order to perform any additional work requested by EPA pursuant to this paragraph unless Respondent enters into a modification of this Consent Order specifically agreeing to perform such additional work. In the event Respondent declines to perform the additional work, EPA reserves whatever rights it may have to order Respondent to perform such additional work, or to perform such additional work itself and to seek to recover from Respondent all costs of performing such additional work. Respondent reserves the right to fully defend any action initiated by EPA pursuant to this paragraph. If Respondent declines to perform the additional work requested by EPA, such an action or inaction shall not constitute a violation of this Consent Order and shall not subject Respondent to the stipulated penalties set forth in Section XIV of this Consent Order.

#### E. CONTRACTOR REVIEW

1. All work performed pursuant to this Consent Order shall be under the direction and supervision of a professional engineer or geologist who has experience in hazardous waste site investigation and/or remediation. Within ten (10) calendar days after the effective date of this Consent Order, Respondent shall submit to EPA, in writing, the names, titles and qualifications of the supervising professional engineer or geologist and, to the extent known by Respondent at that time, of any contractors or subcontractors to be used in carrying out the terms of this Consent Order. Within ten (10) calendar days of retaining any other contractors or subcontractors to be used in carrying out the terms of this Consent Order, Respondent shall submit to EPA, in writing, the names, titles and qualifications of those additional contractors or subcontractors. Notwithstanding Respondent's selection of a professional engineer, geologist, contractor or subcontractor, nothing herein shall relieve Respondent of its obligation to comply with the terms and conditions of this Consent Order.

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2. EPA shall have the right to disapprove at any time the use of any professional engineer, geologist, contractor or subcontractor selected by Respondent. EPA's disapproval shall not be subject to review under Section XV of this Consent Order (Dispute Resolution) or otherwise. Within thirty (30) calendar days of receipt from EPA of written notice disapproving the use of any professional engineer, geologist, contractor or subcontractor, Respondent shall notify EPA, in writing, of the name, title and qualifications of the personnel who will replace the personnel disapproved by EPA.

3. Respondent shall notify EPA ten (10) calendar days prior to changing voluntarily its professional engineer or geologist, and/or major contractors or subcontractors to be used in carrying out the terms of this Consent Order, and shall submit to EPA in writing, the name, title, and qualifications of replacement personnel.

#### VII. AIR EMISSION REDUCTION PROGRAM

1. Respondent shall make a good faith effort to reduce the emissions (annualized monthly) of TCA from its manufacturing operations by 33% by December 31, 1992 when compared to emissions for 1988 and to zero by December 31, 1993. These commitments are set forth herein only as goals and are not in any way enforceable by EPA under the terms of this Consent Order.

2. Respondent shall implement the following measures in accordance with the dates set forth below, which measures are enforceable requirements of this Consent Order:

a. As of the effective date of this Consent Order, eliminate cleaning of the internal surfaces ("ID") of coil drawn tubing currently fabricated in Plant 1.

b. As of the effective date of this Consent Order, reduce the use of TCA as a floor cleaner by 95%, and by December 31, 1992 eliminate the use of TCA as a floor cleaner.

c. As of the effective date of this Consent Order, reduce emissions from the Plant 2 degreaser by increasing the total freeboard and improving the efficiency of the refrigeration unit and lid closure mechanism by installing automatic sliding lids.

3. Within sixty (60) calendar days of the effective date of this Consent Order, Respondent shall submit to EPA for review and comment a plan describing in detail the actions taken or to be taken in an effort to reach the goals set forth in Section VII.1 above, and to implement or maintain the measures described in Section VII.2 above (the "Air Emission Reduction Plan"). EPA's comments on the Air Emission Reduction Plan shall be provided to Respondent for information only and are not binding or in any way enforceable under this Consent Order. The Air Emission Reduction Plan shall specifically set forth the measures previously taken and those measures to be taken by Respondent in an effort to reduce TCA

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emissions to zero by December 31, 1993, through the development of alternative processes for the manufacture of tubing and fabricated parts for use in medical, aerospace, electronic and analytical applications based on new lubricant and cleaning materials and on changes in manufacturing operations.

4. Within thirty (30) calendar days of receipt of EPA's comments on the Air Emission Reduction Plan, Respondent shall resubmit to EPA an Air Emission Reduction Plan addressing EPA's nonbinding comments. Respondent shall implement the Air Emission Reduction Plan in accordance with the program and schedule contained therein.

5. As part of the Quarterly Status Report required by Section VI.D.4 of this Consent Order for the years 1992 and 1993, Respondent shall report to EPA on the progress of its air emission reduction program and any modifications to such program. The report shall describe the actions taken in the previous quarter to achieve the goals set forth in Paragraph 1 of this Section. The report shall also state the number of pounds of TCA used in the Facility in the first, second and third quarters of each year, and compare the amounts to the comparable results of the previous quarters from 1988 through the latest current quarter.

6. As part of the Annual Progress Report required by Section VI.D.5 of this Consent Order, Respondent shall report to EPA on the status of its air emission reduction program as set forth above. Respondent's obligation to report such information shall terminate with the submission of the Annual Progress Report due on April 10, 1994, covering activities undertaken during calendar year 1993.

#### VIII. QUALITY ASSURANCE

1. Throughout all sample collection and analysis activities undertaken by Respondent pursuant to this Consent Order and excluding sampling undertaken solely to comply with any federal, state, interstate or local permits, Respondent shall use EPA-approved quality assurance, quality control, and chain-of-custody procedures as specified in the approved Program Plans, Design Work Plans, and/or Design and Construction Quality Assurance Program Plans. In addition, Respondent shall:

- a. Ensure that laboratories used for analyses by Respondent perform such analyses according to the EPA methods included in "Test Methods for Evaluating Solid Waste" (SW-846, November 1986) or other methods deemed satisfactory to EPA. If methods other than EPA methods are to be used, Respondent shall submit all protocols to be used for analyses to EPA for approval either as part of the Sampling and Analysis Plan required in Paragraph VI.B.1, or as part of the Final Design Submittal, Revised Sampling and Analysis Plan required in Section VI.B.3(d), or at least thirty (30) calendar days prior to the commencement of

analyses and shall not use such analytical protocols without prior EPA approval.

- b. Ensure that laboratories used by Respondent for analyses participate in a quality assurance/quality control program equivalent to that which is followed by EPA. As part of such a program, and upon request by EPA, such laboratories shall perform analyses of samples provided by EPA to demonstrate the quality of the analytical data.
- c. Inform the EPA Project Coordinator of the laboratory to be used by Respondent in the Sampling and Analysis Plan required in Paragraph VI.B.1, or as part of the Final Design Submittal, Revised Sampling and Analysis Plan required in Section VI.B.3, or inform the EPA Project Coordinator at least fourteen (14) calendar days in advance of any change regarding which laboratory will be used by Respondent. Respondent shall ensure that EPA personnel and EPA authorized representatives have reasonable access to the laboratories and personnel used for analysis for the purpose of reviewing laboratory operations.

#### IX. PUBLIC REVIEW OF ADMINISTRATIVE RECORD

The Administrative Record supporting the issuance of this Consent Order will be available for public review Monday through Friday, from 9:00 a.m. to 5:00 p.m., by contacting:

John G. Nevius  
U.S. Environmental Protection Agency (3HW64)  
841 Chestnut Building  
Philadelphia, Pennsylvania 19107  
Telephone # (215) 597-2381

#### X. ONSITE AND OFFSITE ACCESS

1. EPA and/or its authorized representatives shall have the authority to the extent provided by law and also as expressly provided herein, to enter and freely move about all property at the Facility, at reasonable times and in a reasonable manner, during the effective dates of this Consent Order for the purposes of determining compliance with the requirements of this Consent Order by: interviewing authorized representatives of Respondent; inspecting records, operating logs, and contracts related to work required by this Consent Order; reviewing the progress of Respondent in carrying out the terms of this Consent Order; conducting such tests, sampling or monitoring as EPA or its Project Coordinator deem necessary; using a camera, sound recording, or other documentary type equipment; and verifying the reports and data submitted to EPA by Respondent. Respondent retains the right to assert a business confidentiality claim pursuant to Section X.3

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of this Consent Order (Sampling and Data/Document Availability) with respect to any photographs, video or sound recordings or other documentary type records taken pursuant to this Section. Subject to Section X.4 of this Consent Order regarding the assertion of privileges (Sampling and Data/Document Availability), Respondent shall permit such persons to inspect and copy all records, files, photographs, documents, and other writings, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Consent Order. While on Respondent's property, EPA and its authorized representatives shall, to the extent appropriate, comply with all applicable health and safety plans.

2. To the extent that work required by this Consent Order, or by any approved plan(s) or document prepared pursuant hereto, must be done on property not owned or controlled by Respondent, Respondent shall use its best efforts to obtain access agreements from the present owner(s) and/or lessee(s), as appropriate, of such property within thirty (30) calendar days of receipt of EPA approval of any plan or document which requires work on such property. Best efforts as used in this paragraph shall include a certified letter from Respondent to the present owner(s) and/or lessee(s) of such property requesting agreements to permit Respondent, EPA and their authorized representatives access to such property. In the event that such agreements for access are not obtained within the thirty (30) day period set forth in this paragraph, Respondent shall notify EPA, in writing, within seven (7) calendar days after failure to obtain such agreements regarding both the efforts undertaken to obtain access and the failure to obtain such agreements. In the event that Respondent is unable to obtain off-site access, despite the exercise of best efforts, EPA, in its discretion, may assist Respondent in obtaining off-site access for Respondent.

3. Nothing in this Consent Order limits, affects or, except as expressly provided herein, expands EPA's right of access and entry pursuant to applicable law, including, but not limited to, RCRA and CERCLA.

#### X. SAMPLING AND DATA/DOCUMENT AVAILABILITY

1. Respondent shall submit to EPA the final results of all sampling and/or tests or other data generated by or on behalf of the Respondent pursuant to the requirements of this Consent Order and the Attachments appended hereto and incorporated herein.

2. Respondent shall notify EPA in each Quarterly Status and/or Annual Progress Report of any significant future field activities related to the implementation and monitoring of the Corrective Measures addressed in this Consent Order such as well drilling, installation of equipment, or sampling. At the request of EPA, Respondent shall provide or allow EPA or its authorized representative to take split and/or duplicate samples of all samples collected by Respondent pursuant to this Consent Order. Similarly, at the request of Respondent, EPA shall allow Respondent or its authorized representatives to take split and/or duplicate

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samples of all samples collected by EPA under this Consent Order. Nothing in this Consent Order shall limit, affect or, except as expressly provided herein, expand EPA's authority to collect samples pursuant to applicable law, including, but not limited to, RCRA and CERCLA.

3. Respondent may assert a business confidentiality claim in the manner described in 40 C.F.R. Section 2.203(b) covering all or part of any information submitted to by EPA pursuant to this Consent Order. Any assertion of confidentiality shall contain the information required by 40 C.F.R. Section 2.204(e)(4). Information subject to a confidentiality claim shall be disclosed only to the extent, and by the means of the procedures, set forth in 40 C.F.R. Part 2, Subpart B. If no such confidentiality claim accompanies the information when it is submitted to by EPA, the information may be made available to the public by EPA without further notice to the Respondent. Respondent shall not assert any confidentiality claim with regard to any sampling, monitoring or analytical data.

4. If Respondent wishes to assert a privilege with respect to any document which EPA wishes to inspect or copy pursuant to this Consent Order, Respondent shall identify the document, the privilege claimed and the basis therefore in writing within fourteen (14) calendar days from the date of EPA's request to inspect or copy such document. For the purposes of this Consent Order, privileged documents are those documents exempt from discovery in litigation in federal court in cases in which the United States is a party. Respondent shall not assert as privileged any analytical, sampling or monitoring data.

## XII. RECORD PRESERVATION

Respondent shall preserve, during the pendency of this Consent Order and for six (6) years after its termination, all data, records and documents in its possession or in the possession of its divisions, officers, directors, employees, agents, contractors, successors, and assigns which relate to work performed pursuant to this Consent Order. If, after the termination of the six (6) year period described above, Respondent intends to destroy any such records, Respondent shall notify EPA at least thirty (30) calendar days prior to such destruction, and, subject to Section X.4 of this Consent Order with respect to the assertion of privileges, shall provide EPA with the opportunity to inspect, copy and/or take possession of any such records. Respondent shall not destroy any record to which EPA has in writing requested access for inspection and/or copying until EPA has obtained such access or withdrawn its request for such access. Nothing in this Section XII shall in any way limit, affect or, except as expressly provided herein, expand the authority of EPA under Section 3007 of RCRA, 42 U.S.C. Section 6927, Section 104(e) of CERCLA, 42 U.S.C. Section 9604(e), or any other access or information-gathering authority.

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**XIII. PROJECT COORDINATORS AND NOTIFICATIONS**

1. EPA designates the following Project Coordinator:

John G. Nevius  
U.S. EPA (3HW64)  
841 Chestnut Street  
Philadelphia, PA 19107  
(215) 597-2381

2. Respondent designates the following Project Coordinator:

Richard Thren  
UTI Corporation  
200 West Seventh Avenue  
Collegeville, PA 19426  
(215) 539-0700

3. Each Project Coordinator shall be responsible for overseeing the implementation of this Consent Order. The EPA Project Coordinator will be EPA's primary designated representative at the Facility. The absence of the EPA Project Coordinator from the Facility shall not be cause for the delay or stoppage of work.

4. The parties agree to provide at least seven (7) calendar days written notice prior to changing Project Coordinators.

5. To the maximum extent possible, all communications between Respondent and EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Consent Order, shall be directed through the Project Coordinators as follows:

- a. Four (4) copies of any document required to be submitted to EPA by Respondent pursuant to this Consent Order, including program plans, design plans, draft and final reports, progress reports and other submissions, shall be hand-delivered; or sent by Certified Mail, Return Receipt Requested, by Registered Mail, or by Controlled Overnight Delivery to the EPA Project Coordinator designated pursuant to paragraph 1 of this Section. Submittal of any document by Respondent shall be deemed to have occurred on the date it is postmarked or given to an overnight delivery service, or the date it is hand-delivered to EPA, whatever is earlier.

- b. Documents sent to Respondent shall be sent to Respondent's Project Coordinator. For purposes of calculating time periods prescribed under this Consent Order, receipt of a document from EPA shall mean the actual date of receipt by Respondent of such document.

- c. One copy of each document required to be submitted to EPA shall also be sent to the following State contact:

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Mr. Bruce Beitler  
Operations Manager  
Pennsylvania Department of Environmental Resources  
555 North Lane  
Suite 6010  
Conshohocken, PA 19428

d. One copy of any document submitted to Respondent by EPA shall also be sent to:

Marc E. Gold, Esquire  
Manko, Gold & Katcher  
401 City Avenue  
Suite 500  
Bala Cynwyd, PA 19004

Richard C. Johnson  
Roy F. Weston Inc.  
Weston Way  
Building 5-2  
West Chester, PA 19380

6. Any notice, report, certification, data presentation, or other document submitted by Respondent pursuant to this Consent Order which discusses, describes, demonstrates, or supports any finding or makes any representation concerning Respondent's compliance or noncompliance with any requirement of this Consent Order shall be certified, in the form set forth in Paragraph 7 of this Section by either the Chairman of the Board, President or Vice President for Finance of Respondent or a "duly authorized representative" (as that term is defined at 40 CFR § 270.11(b)) of such responsible corporate official.

7. The certification required by paragraph 6, above, shall be in the following form:

I certify that the information contained in or accompanying this [type of submission] is true, accurate, and complete.

As to [the/those identified portion(s)] of this [type of submission] for which I cannot personally verify [its/their] accuracy, I certify under penalty of law that this [type of submission] and all attachments were prepared in accordance with procedures designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, or the immediate supervisor of such person(s), the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Signature: \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_

**XIV. STIPULATED PENALTIES**

1. Subject to Sections VI.B.6 (regarding correction of deficiencies identified by EPA in reviewing constructed project), VI.C.5. (regarding implementation of Alternative and/or Supplemental Corrective Measures), VI.D.2 (regarding revision or preparation of a submission by EPA in lieu of Respondent), and VI.D.6 (regarding additional work), Section XVI (Force Majeure and Excusable Delay), and Section XXI (Subsequent Modification) of this Consent Order, in the event Respondent fails to comply with any requirement set forth in this Consent Order, Respondent shall be liable for the payment of stipulated penalties, as set forth below, upon written demand by EPA. Compliance by Respondent shall mean the commencement or completion of any activity, plan, study or report required by this Consent Order and in a manner consistent with, and within the specified time schedules in and approved under, this Consent Order. Stipulated penalties shall accrue as follows:

- a. For failure to commence, perform or complete work as required by this Consent Order: \$2,000 per day for one to ten days, or part thereof, of noncompliance and \$3,000 per day for each day, or part thereof, of noncompliance, thereafter;
- b. For failure to submit any draft or final plan, report, or other submission required by this Consent Order: \$2,000 per day for one to ten days, or part thereof, of noncompliance and \$3,000 per day for each day, or part thereof, of noncompliance, thereafter;
- c. For failure to comply with the provisions of this Consent Order not otherwise described in Subparagraph a or b, above: \$750 per day for one to ten days, or part thereof, of noncompliance and \$1,500 per day for each day, or part thereof, of noncompliance, thereafter;

2. All penalties shall begin to accrue on the date that complete performance is due or a violation occurs, and shall continue to accrue through the final day of the noncompliance. Nothing herein shall prevent the simultaneous accrual of separate stipulated penalties for separate violations of this Consent Order.

3. Except as provided in paragraph 5, below, all penalties owed to EPA under this Section XIV shall be payable within thirty (30) calendar days of receipt of a written notification of noncompliance from EPA. Such written notification shall describe the noncompliance and shall indicate the amount of penalties due. Interest shall begin to accrue on the unpaid balance at the end of the thirty calendar day period after receipt by Respondent of EPA's written notification of noncompliance and shall accrue at the then prevailing United States Treasury Tax and Loan Rate.

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4. All stipulated penalty payments shall be made by corporate check payable to the "Treasurer of the United States of America" and shall be remitted to:

Regional Hearing Clerk  
U. S. Environmental Protection Agency, Region III  
P.O. Box 360515  
Pittsburgh, Pennsylvania 15251-6515

All payments shall reference the name of the Facility, the Respondent's name and address, and the EPA docket number of this Consent Order. Copies of the transmittal of payment shall be sent simultaneously to the EPA Project Coordinator and the Regional Hearing Clerk (3RC00), U.S. Environmental Protection Agency, Region III, 841 Chestnut Building, Philadelphia, Pennsylvania 19107.

5. Respondent may dispute EPA's right to stipulated penalties and the stated amount of penalties by invoking the dispute resolution procedures of Section XV of this Consent Order (Dispute Resolution). Stipulated penalties shall continue to accrue without interest, but need not be paid, during the pendency of any dispute resolution proceedings relating to the alleged noncompliance which is the subject of such stipulated penalties. To the extent that Respondent does not prevail upon resolution of the dispute, Respondent shall remit to EPA, within fourteen (14) calendar days of such resolution, any outstanding stipulated penalty payment in the manner described in Paragraph 4, above. To the extent Respondent prevails upon resolution of the dispute, no stipulated penalties for the alleged noncompliance which was the subject of the dispute shall be payable.

6. Neither the filing of a petition to resolve a dispute, nor the payment of penalties, shall alter in any way Respondent's obligation to comply with the requirements of this Consent Order.

7. Payment of stipulated penalties set forth in this Section XIV does not preclude EPA from pursuing any other remedies or sanctions which may be available to EPA by reason of Respondent's failure to comply with any of the requirements of this Consent Order. However, in the event that statutory penalties are sought by EPA for a noncompliance for which Respondent is concurrently liable for stipulated penalties pursuant to this Consent Order, Respondent is entitled to an offset against the total amount of such statutory penalties equal to the total amount of stipulated penalties, not including interest, actually paid by Respondent with respect to that noncompliance.

8. Any stipulated penalty assessed for failure to meet an interim requirement stated in a work plan or other submission may, in EPA's sole, unreviewable discretion, be forgiven in the event that the corresponding final schedule date in the work plan or other submission for the requirement is met. In addition, EPA may at any time waive any payment of stipulated penalties and/or interest at its sole, unreviewable discretion.

#### XV. DISPUTE RESOLUTION

1. If Respondent disagrees, in whole or in part, with any EPA disapproval, document revision, document preparation, or other decision or directive made by EPA pursuant to this Consent Order, Respondent shall notify EPA in writing of its objections, and the basis therefor, within fourteen (14) calendar days of receipt of EPA's disapproval, document revision, document preparation, decision or directive. Such notice shall set forth the specific points of the dispute, the position which Respondent asserts should be adopted as consistent with the requirements of this Consent Order, the basis for Respondent's position, and any matters which it considers necessary for EPA's determination. EPA and Respondent shall have an additional fourteen (14) calendar days from the receipt by EPA of Respondent's notification of objection, during which time representatives of EPA and Respondent may confer in person or by telephone to resolve any disagreement. If an agreement is reached, the resolution shall be written and signed by representatives of each party. In the event that resolution is not reached within this fourteen (14) calendar day period, EPA shall provide Respondent its decision on the pending dispute and, subject to the limitations set forth in Sections VI.C.5. (regarding implementation of Alternative and/or Supplemental Corrective Measures), VI.D.2 (regarding revision or preparation of a submission by EPA in lieu of Respondent), and VI.D.6 (regarding additional work) of this Consent Order, Respondent shall implement such decision in accordance with the schedule set forth therein. Upon mutual written agreement, EPA and Respondent may extend the time periods set forth in this paragraph.

2. Except as provided in Section XIV.5 of this Consent Order, the existence of a dispute, as defined in this Section XV, and EPA's consideration and resolution of matters placed into dispute shall not excuse, toll or suspend any compliance obligation or deadline required pursuant to this Consent Order during the pendency of the dispute resolution process.

3. Notwithstanding any other provisions of this Consent Order, no action or decision by EPA pursuant to this Consent Order, including, but without limitation to, decisions of the Regional Administrator, Region III pursuant to this Consent Order, shall constitute final agency action giving rise to any rights to judicial review prior to EPA's initiation of judicial action to compel Respondent's compliance with this Consent Order.

#### XVI. FORCE MAJEURE AND EXCUSABLE DELAY

1. Respondent shall perform the requirements of this Consent Order in the manner and within the time limits set forth herein, unless the performance is prevented or delayed by events which constitute a force majeure. Respondent shall have the burden of proving such a force majeure. A force majeure is defined as any event arising from causes not reasonably foreseeable by and beyond the control of Respondent, which cannot be overcome by due

diligence and which delays or prevents performance by a date required by this Consent Order. Such events do not include increased costs of performance, changed economic circumstances (except as provided by Section XXII.3 (Financial Assurances)), or reasonably foreseeable weather conditions. Respondent's inability to obtain federal, interstate, state, or local permits which are necessary to perform any portion of the Corrective Measures or Interim Measures may be a force majeure provided Respondent demonstrates that timely application for such permits has been made in accordance with applicable statutory and regulatory requirements and that such application has been diligently pursued.

2. Except as provided below, Respondent shall notify EPA, in writing, within seven (7) calendar days after it becomes aware or reasonably should have become aware of any event which causes or may cause a delay in complying with any requirement of this Consent Order or which prevents or may prevent compliance in the manner required by this Consent Order. Notwithstanding the above sentence, if at any time the groundwater extraction and/or groundwater treatment operation is or may be disrupted for other than planned or scheduled activities of which EPA has received prior written notice for a period greater than two (2) calendar days, Respondent shall notify EPA of such disruption or potential disruption by telephone within forty-eight (48) hours, and in writing within three (3) calendar days thereafter, after Respondent becomes aware or reasonably should have become aware of the disruption or potential disruption. The written notices required by this Section XVI.2 shall estimate the anticipated length of delay or disruption, including necessary demobilization and remobilization, and shall describe its cause, the measures taken or to be taken to prevent or minimize the delay or disruption, an estimated timetable for implementation of these measures, the threat or potential threat, if any, to human health or the environment caused by the delay or disruption, and if Respondent asserts that the event is a force majeure, the facts and reasoning supporting that assertion. Failure to comply with the notice provision of this Section XVI shall constitute a waiver of Respondent's right to assert a force majeure claim with respect to such event. Respondent shall undertake all reasonable actions to prevent or to minimize the delay or disruption.

3. If EPA determines that the failure to comply or the delay or disruption has been or will be caused by a force majeure, Respondent shall not be liable for the stipulated penalties set forth in Section XIV (Stipulated Penalties) of this Consent Order directly related to such delay, disruption or failure to comply. Additionally, the time for performance for that requirement of this Consent Order may be extended, upon EPA approval, for a period not to exceed the length of the delay resulting from the force majeure. Such an extension shall not alter the schedule for performance or completion of any other tasks required by this Consent Order, unless those tasks are also specifically altered by amendment of this Consent Order.

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4. In the event that EPA and Respondent cannot agree that any delay, disruption or failure to comply has been or will be caused by a force majeure, or if there is no agreement on the length of the extension, Respondent may invoke the dispute resolution procedures set forth in Section XV of this Consent Order.

#### XVII. EPA'S RESERVATION OF RIGHTS

1. EPA expressly reserves all rights and defenses that it may have, including the right both to disapprove of work performed by Respondent pursuant to this Consent Order, to require that Respondent correct and/or reperform any work disapproved by EPA, and to request that Respondent perform tasks in addition to those stated in the Scope(s) of Work, plans, or this Consent Order.

2. EPA hereby reserves all of its statutory and regulatory powers, authorities, rights, remedies, both legal and equitable, which may pertain to Respondent's failure to comply with any of the requirements of this Consent Order, specifically including, without limitation, the assessment of penalties under Section 3008(h)(2) of RCRA, 42 U.S.C. Section 6928(h)(2). Except as expressly provided in Section XXIII (Covenant Not to Sue) of this Consent Order, nothing in this Consent Order shall be construed as a covenant not to sue, or as a release, waiver or limitation of any rights, remedies, powers and/or authorities, civil or criminal, which EPA has under RCRA, CERCLA, or any other statutory, regulatory or common law authority.

3. The signing of this Consent Order and Respondent's consent to comply shall not limit or otherwise preclude EPA from taking additional enforcement action pursuant to Section 3008(h) of RCRA, 42 U.S.C. Section 6928(h), or any other authority should EPA determine that such actions are warranted.

4. Compliance by Respondent with the terms of this Consent Order shall not relieve Respondent of its obligations to comply with any applicable provisions of RCRA or any other applicable local, state, interstate, or federal laws and regulations.

5. EPA reserves any and all rights it may have to perform any portion of the work consented to herein or any additional site characterization, feasibility study, and response/corrective actions as it deems necessary to protect public health or the environment. EPA reserves any and all rights it may have to exercise its authority under Section 7003 of RCRA, 42 U.S.C. Section 6973, and Sections 104 and 106 of CERCLA, 42 U.S.C. Sections 9604 and 9606, to undertake removal actions or remedial actions at any time. EPA reserves any and all rights it may have to seek reimbursement from Respondent for costs incurred by the United States with respect to any response actions taken by the United States with respect to the Facility.

6. EPA reserves any and all rights it may have under CERCLA

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or any other statutory or common law, or in equity, to recover from Respondent any costs incurred by EPA in overseeing the implementation of this Consent Order.

7. If EPA determines that Respondent's activities, whether or not in compliance with this Consent Order, have caused or may cause a release or threatened release of hazardous wastes, hazardous constituents, hazardous substances, pollutants, or contaminants, which threaten or may pose a threat to the public health or welfare or to the environment, EPA reserves the right to direct Respondent to stop further implementation of this Consent Order for such period of time as may be needed to abate any such release or threatened release and/or to undertake any action which EPA determines is necessary to abate such release or threatened release. With the exception of its obligation to cease further implementation of this Consent Order at EPA's direction, Respondent shall not be obligated under this Consent Order to take any action to abate any such release and Respondent's failure to do so shall not be a violation of this Consent Order.

8. Because this Consent Order was entered with the consent of both parties, Respondent waives its right to request a public hearing pursuant to Section 3008(b) of RCRA, 42 U.S.C. Section 6928(b).

9. This Consent Order is not intended to be, nor shall it be construed as, a permit.

10. Except as otherwise provided in Section I (Jurisdiction), Section XV.3 (Dispute Resolution), Section XVII.8 (EPA's Reservation of Rights), Section XX (Indemnification of the United States), Section XXIV (Notice of Non-Liability of EPA), and Section XXVI (Attorney's Fees) of this Consent Order, Respondent reserves any and all rights it may have to appeal, oppose, contest or defend against any action taken by EPA and to assert any and all claims including, without limitation, the right to challenge any factual or legal allegation, finding or conclusion set forth in this Consent Order.

#### XVIII. OTHER CLAIMS

Except as expressly provided in Section XXIII (Covenant Not to Sue) of this Consent Order, nothing in this Consent Order shall constitute or be construed as a release from any claim, cause of action or demand at law or in equity against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or taken from the Facility.

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### XIX. OTHER APPLICABLE LAWS

1. All actions required to be taken pursuant to this Consent Order shall be undertaken in accordance with the requirements of all applicable local, state, interstate, and federal laws and regulations.

2. This Consent Order shall not relieve Respondent of its obligations to obtain and comply with any applicable local, state, interstate, or federal permit.

### XX. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

Respondent agrees to indemnify and/or save and hold harmless the United States Government, its agencies, departments, agents, and employees, from any and all claims or causes of action arising from or on account of acts or omissions of Respondent or its agents, independent contractors, receivers, trustees, and assigns in carrying out activities required by this Consent Order. This indemnification shall not be construed in any way as affecting or limiting the rights or obligations of Respondent or the United States under their various contracts.

### XXI. SUBSEQUENT MODIFICATION

1. This Consent Order may only be amended by mutual agreement of EPA and Respondent. Except as provided in Paragraph 3 of this Section XXI, any such amendment shall be in writing, shall be signed by both parties, shall have as its effective date the date on which Respondent receives a fully executed copy of the amendment, and shall be incorporated into and enforceable as part of this Consent Order.

2. Any reports, plans, specifications, schedules, and other submissions required of Respondent pursuant to this Consent Order are, upon written approval by EPA, incorporated into and enforceable as part of this Consent Order. Any noncompliance with such EPA-approved reports, plans, specifications, schedules, other submissions shall be considered a violation of this Consent Order and shall subject Respondent to the stipulated penalty provisions included in Section XIV of this Consent Order (Stipulated Penalties).

3. Minor modifications in the studies, techniques, procedures, designs or schedules utilized in carrying out this Consent Order and necessary for the completion of the work may be made by written agreement of the Project Coordinators. Such modifications shall have as an effective date the date on which the agreement is signed by the EPA Project Coordinator.

4. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other writing submitted by Respondent will be construed as

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relieving Respondent of its obligation to obtain written approval, if and when required by this Consent Order.

### XXII. FINANCIAL RESPONSIBILITY

1. Within thirty (30) calendar days after approval of the Final Design Submittal, Respondent shall submit to EPA for approval an assurance of its ability to complete the Corrective Measures in one of the following forms:

- a. A surety bond guaranteeing performance of the Corrective Measures;
- b. One or more letters of credit equalling the total current estimated cost of the Corrective Measures;
- c. A trust agreement establishing a trust fund equalling the total current estimated cost of the Corrective Measures;
- d. A guarantee to perform the Corrective Measures by one or more parent corporations or subsidiaries, or by one or more unrelated corporations that have a substantial business relationship with the Respondent; or
- e. A demonstration that the Respondent satisfies the requirements of the financial test set forth in Paragraph 2 of this Section.

2. If the Respondent seeks to demonstrate the ability to complete the Corrective Measures through the financial test, it shall provide EPA with a letter from its chief financial officer (supported by its most recent annual audited financial statements prepared in accordance with Generally Accepted Accounting Principles ("GAAP")) certifying that Respondent has:

- a. Either a ratio of total liabilities to net worth of less than 1.5; or a ratio of the sum of net income plus depreciation, depletion and amortization, minus \$10 million, to total liabilities greater than 0.10; and
- b. Tangible net worth greater than the sum of the current estimated cost of the Corrective Measures plus \$10 million; and
- c. Assets located in the United States amounting to at least 90 percent of total assets or at least six times the current estimated cost of the Corrective Measures.

3. If the Respondent seeks to demonstrate the ability to complete the Corrective Measures through a guarantee by a third

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party pursuant to Subparagraph 1.d of this Section, the Respondent shall demonstrate that the guarantor satisfies the requirements of Subparagraph 1.e of this Section. If the Respondent seeks to demonstrate its ability to complete the Corrective Measures by means of the financial test or the corporate guarantee pursuant to Subparagraphs 1.d or 1.e, it shall resubmit the information required under Paragraph 2 of this Section as part of each May 15 Quarterly Status Report required under Section VI.D.4 of this Consent Order.

4. In the event that Respondent determines at any time that it is unable, or reasonably expects that it will be unable, to maintain the financial assurance provided pursuant to this Section, Respondent shall obtain and submit to EPA for approval one (or a combination of) the other forms of financial assurance listed in Paragraph 1 of this Section within thirty (30) calendar days of the earlier of (a) the event that causes such inability, or (2) receipt of information that gives rise to the reasonable expectation of such inability. In such event, Respondent may assert that the event causing its failure to maintain the financial assurance is a force majeure pursuant to Section XVI of this Consent Order; provided, however, that Respondent shall be required to establish pursuant to Section XVI that such event constitutes a force majeure within the meaning of Section XVI and that the requirements of Section XVI.2 (regarding notification of EPA of potential force majeure event) have been met.

5. In the event that EPA determines at any time that the financial assurances provided by Respondent are not in compliance with the requirements of this Section, Respondent shall, within thirty (30) days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 1 of this Section.

6. The Respondent's inability to demonstrate financial ability to complete the Corrective Measures shall not excuse performance of any activities required under this Consent Order.

#### XXIII. COVENANT NOT TO SUE

1. Upon termination of this Consent Order pursuant to Section XXVIII (Effective Date and Termination), EPA agrees not to sue or take administrative action against Respondent pursuant to RCRA seeking performance of the specific work which was performed by Respondent under the terms of this Consent Order. Nothing in this paragraph shall be construed to limit the rights otherwise reserved by EPA or Respondent in this Consent Order. Nothing herein shall be deemed to grant any rights to any person not a party to this Consent Order.

2. Notwithstanding Section XXIII.1 or any other provision of this Consent Order, EPA reserves, and this Consent Order is without prejudice to, the right to sue or take administrative action against Respondent seeking performance of the specific work

which was performed by Respondent under the terms of this Consent Order if:

- (i) conditions at the Facility, previously unknown to EPA, are discovered after the termination of this Consent Order pursuant to Section XXVIII, or
- (ii) information is received, in whole or in part, after the termination of this Consent Order pursuant to Section XXVIII,

and these previously unknown conditions or this information together with any other relevant information indicates that the work performed by Respondent under this Consent Order is not protective of human health and the environment. For these purposes, information and conditions known to EPA shall include only that information and those conditions set forth in the FDRTC, the administrative record supporting the FDRTC, and any information received by EPA pursuant to any requirements of this Consent Order prior to its termination under Section XXVIII.

#### XXIV. NOTICE OF NON-LIABILITY OF EPA

EPA shall not be deemed a party to any contract involving Respondent and relating to activities at the Facility and shall not be liable for any claim or cause of action arising from or on account of any act, or the omission of Respondent, its officers, employees, contractors, receivers, trustees, agents or assigns, in carrying out the activities required by this Consent Order.

#### XXV. SEVERABILITY

If any provision or authority of this Consent Order or the application of this Consent Order to any party or circumstance is held by any judicial or administrative authority to be invalid, the application of such provision to other parties or circumstances and the remainder of this Consent Order shall not be affected thereby and shall remain in full force.

#### XXVI. ATTORNEY'S FEES

Respondent shall bear its own costs and attorneys' fees.

#### XXVII. NONADMISSIONS BY RESPONDENT

1. By entering into this Consent Order, or by taking any action in accordance with it, Respondent does not admit any of the findings of fact, conclusions of law, determinations or any of the allegations contained in this Consent Order, nor does Respondent admit liability for any purpose or admit any issues of law or fact or any responsibility for the alleged release or threat of release of any hazardous waste, hazardous constituent or hazardous substance into the environment.

2. Nothing in this Section XXVII shall be deemed to preclude EPA from offering into evidence any information, fact or opinion developed by Respondent or its contractors pursuant to this Consent

Order at any proceeding initiated by EPA to enforce this Consent Order, nor the use of such information, fact or opinion for any purpose.

3. The terms of this Consent Order, including any allegation, finding, conclusion or determination set forth herein and Respondent's participation in this Consent Order, shall not be used against Respondent in any other proceeding as a collateral estoppel or res judicata, except that the participation of Respondent in this Consent Order shall be admissible by EPA in an action by EPA seeking to enforce the terms of this Consent Order or to recover costs incurred by the United States with respect to this Consent Order, or actions to which the United States or EPA is a party and the United States or EPA asserts a claim, defense or argument based upon the terms of this Consent Order.

4. By signing and consenting to this Consent Order or by taking any actions pursuant to this Consent Order, Respondent does not concede that any investigation or other work required by this Consent Order at the Facility is necessary to protect the public health or welfare or the environment, or for any other reason; that the methodologies or protocols prescribed by EPA described or referenced herein or otherwise required by EPA for performance of work pursuant to this Consent Order are the only ones appropriate for the proper conduct of the work required herein; or that a release or threatened release of a hazardous waste or substance at or from the Facility, or any disposal of a hazardous waste or substance at the Facility, has occurred, or may present an imminent and substantial or other endangerment to the public health or welfare or the environment. Respondent has agreed to this Consent Order to avoid unnecessary conflict and litigation.

#### XXVII. EFFECTIVE DATE AND TERMINATION

1. This Consent Order shall become effective on the date on which a true and correct fully executed copy of this Consent Order is received by Respondent.

2. The provisions of this Consent Order shall be deemed satisfied, and this Consent Order shall terminate, upon Respondent's receipt of a written termination notice from EPA that Respondent has demonstrated, to the satisfaction of EPA, that the terms of this Consent Order have been satisfactorily completed. This termination notice shall not, however, terminate the obligations of EPA and Respondent with respect to the following provisions: Section XII (Record Preservation), Section XVII (EPA's Reservation of Rights), Section XVIII (Other Claims), Section XIX (Other Applicable Laws), Section XX (Indemnification of the United States Government), Section XXIII (Covenant Not To Sue), Section XXVI (Attorney's Fees), and Section XXVII (Nonadmissions by Respondent).

3. No requirement of this Consent Order shall terminate upon the issuance of a RCRA permit to Respondent for the Facility unless

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such requirement is expressly replaced by a requirement in a RCRA corrective action permit.

IT IS SO AGREED AND ORDERED:

DATE: 3/31/92 BY: *Gordon B. Hattersley, Jr.*  
Gordon B. Hattersley, Jr.  
President  
UTI Corporation

DATE: 3/31/92 BY: *Edwin B. Erickson*  
Edwin B. Erickson  
Regional Administrator  
United States Environmental  
Protection Agency, Region III

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ATTACHMENT A

SCOPE OF WORK FOR THE  
CORRECTIVE MEASURES IMPLEMENTATION  
AT  
UTI Corporation  
Trappe, Pennsylvania

PURPOSE

This Statement of Work ("SOW") sets forth the requirements for the design, construction, operation, maintenance, and monitoring of the Corrective Measures selected by EPA in the RCRA Statement of Basis dated August 5, 1991 and the Final Decision and Response to Comments dated September 30, 1991 (collectively referred to herein as the "FDRTC") for the UTI Corporation Facility located between West Seventh Avenue and West Fifth Avenue in Trappe, Pennsylvania (the "Facility"). These Corrective Measures are being implemented by Respondent pursuant to this Consent Order to which this SOW is attached as Attachment A.

DESCRIPTION OF THE CORRECTIVE MEASURES

The Corrective Measures selected by EPA for implementation by Respondent at the Facility include the recovery and treatment of contaminated groundwater from both shallow and deep wells located on-site. Another source area in the vicinity of former solvent storage tanks will be further evaluated to determine the feasibility of in-situ vapor extraction (venting) and/or additional shallow groundwater recovery.

1. Groundwater Extraction

Groundwater will be recovered from existing on-site deep and shallow wells in accordance with Table 2, Scenario 3 (set forth in

*since area had / a source under by EPA but was handled / check into this with photo  
A. Butler*

*residual soil contains from tanks in UTMA disc w/ 3rd 2/2/93*

Respondent's Corrective Measures Study for the Facility ("CMS")) and from the Plant 1 sump. Recovery wells will be brought on line in a phased manner. During the start-up period, the effects of pumping each recovery well shall be monitored thereby establishing the relationships between individual pumping wells and the cumulative effects of drawdown from pumping multiple wells. This start-up drawdown information will also be useful in evaluating the amount of drawdown in each area and the value of pulse pumping as a soil flushing technique for areas that have been dewatered. In addition, the system's performance will be carefully monitored on a regular basis during the operation of the extraction program. The monitoring program shall include, but not be limited to, assessment of the following:

1. Variations in pumping well water quality and constituent loading to the treatment system;
2. Change in water quality at the Points of Compliance;
3. Hydraulic effects to the Facility from off-site water supply wells; and
4. Quality of off-site well water to assess the possibility of (discontinuing) the use of bottled water by residents and resuming residential well use.

The extraction system may be adjusted on the basis of performance data collected during start up and operation. Modifications to system operations may include any or all of the following:

- a) at individual extraction wells where Cleanup Goals

have been attained, conversion of such wells to monitoring wells;

- b) where cleanup has been achieved in certain areas, reduction of pumping rates at individual wells to maintain a smaller capture zone around the smaller plume and thereby achieve conservation of water resources;
- c) alternating pumping at wells to eliminate stagnation points;
- d) cycle pumping to provide flushing of dewatered soil and bedrock zones and to induce flow in hydrologic divide areas;
- e) pulse pumping to allow aquifer equilibration and encourage adsorbed contaminants to partition into ground water; and
- f) installation of additional extraction wells to facilitate or accelerate cleanup of the contaminant plume, if necessary.

To ensure that Cleanup Goals continue to be maintained, the aquifer will be monitored at those wells where pumping has ceased every two years following total discontinuation of groundwater extraction for a period of ten years.

If EPA determines on the basis of the system performance data that certain portions of the aquifer cannot be restored to their beneficial use, any or all of the following measures involving long-term management may be implemented as modifications to the

**existing system:**

- a) engineering controls such as long-term gradient control provided by low level pumping, as containment measures;
- b) institutional controls to restrict access to those portions of the aquifer which remain above Cleanup Goals;
- c) continued monitoring of specified wells; and
- d) periodic reevaluation of remedial technologies for groundwater restoration.

The decision to implement any or all of these measures may be made by EPA pursuant to Section VI.C. of this Consent Order.

**2. Groundwater Treatment**

Treatment of the recovered groundwater to remove volatile organic compounds shall be accomplished via air stripping. Modification of the existing air stripper is required to ensure that the recovered groundwater is appropriately treated. Treatment of the air stripper off-gases is required if necessary to meet applicable regulatory requirements identified in the FDRTC. Respondent shall not be obligated to use emissions controls on air stripper off-gases or may discontinue its use if (1) prior to the initial start-up of the modified air stripper, Respondent demonstrates to EPA's satisfaction that, based on an assumed VOC removal rate of 100%, the concentrations of contaminants which are to be emitted from the air stripper are reasonably projected to be

*air  
emission  
control*

below applicable regulatory requirements, and (2) after start-up of the modified air stripper, analysis of the performance of the recovery system and air stripper confirm such projections and demonstrate to EPA's satisfaction that the emissions remain below applicable regulatory requirements during each phase of recovery well start-up. If actual performance data indicate that emissions from the air stripper are or will be above the applicable regulatory requirements, the recovery well flows will be adjusted temporarily as necessary so that such requirements are met and Respondent shall promptly install emission controls on the air stripper. If necessary to meet relevant regulatory standards, chromium shall be removed from the recovered groundwater using ion-exchange treatment.

*Chromium  
Treatment*

The treated groundwater will be reused, to the extent practical, or discharged to the swale which drains into Donny Brook in accordance with applicable federal and state regulations.

3. In-Situ Volatilization at the Underground Storage Tank Source Area

A pilot in-situ volatilization (ISV) system will be installed in the vicinity of the former solvent storage tanks in order to evaluate the viability of ISV in both soil and bedrock. ISV is a volatile organic compound ("VOC") recovery process in which air is introduced in the subsurface. VOCs volatilize out of groundwater and soil and are recovered via suction at extraction vents. The VOCs are then removed from the air using an emission

control device. Microbial breakdown of VOCs in the subsurface can also be enhanced as a result of the introduction of additional oxygen via the ISV process. On the basis of the results of the pilot-scale test and criteria discussed in Section F of this Scope of Work, EPA will determine whether a full-scale ISV system is effective and practical or whether additional enhanced groundwater recovery, described below, must be implemented instead.

4. Enhanced Groundwater Recovery at the Underground Storage Tank Source Area

In the event the full-scale ISV system is not implemented, Respondent will install and operate additional shallow recovery wells in the vicinity of the former solvent storage tanks. Respondent will gather additional information during design of the Corrective Measures with regard to optimal well and well screen location. Groundwater recovered from the new wells will be combined with groundwater recovered from other extraction wells and treated in the air stripper.

5. Institutional Controls

Continued monitoring of groundwater quality (including residential well sampling), upgrading of security on monitoring wells, development of a community relations and contingency plan, and efforts to obtain well permit restrictions in contaminated groundwater management zones are also required as part of the Corrective Measures.

## CLEANUP GOALS/POINTS OF COMPLIANCE

Cleanup Goals have been selected that are equal to the Maximum Contaminant Levels ("MCLs") promulgated by EPA under the Safe Drinking Water Act as safe levels for public water supplies and are established in order to determine when the groundwater remediation is complete. The Cleanup Goals and Points of Compliance established in the FDRTC are set forth in the table below. (Concentrations are expressed in parts per billion.)

Points of Compliance	1,1,1-TCA	TCE	Chromium (total)
Well UTM-1	200	5	100
Well UTM-14	200	5	100
Well UTM-18	200	5	100
Well RCRA-2	200	5	100
Plant 1 Sump	200	5	100
Well CT-8	200	5	100

In the event that additional constituents related to the contamination addressed by the selected Corrective Measure(s) (particularly, TCE and/or TCA breakdown products 1,1 and 1,2 - dichloroethylene) are detected during future groundwater sampling activities, these constituents must meet clean-up goals at designated Points of Compliance (MCL's or a cancer risk  $10^{-6}$  if an MCL does not exist).

UTM-1 is the primary recovery well in the vicinity of the former storage tank source area. UTM-18 and UTM-14 shall be used to monitor potential off-site migration, residual contamination levels, contaminant recovery rates and the effectiveness of the

hydraulic control established as a result of pumping. RCRA-2 and the Plant 1 Sump shall be used to evaluate the effectiveness of the Corrective Measures. CT-8 also shall be used to evaluate the effectiveness of the Corrective Measures.

The ability of the Corrective Measures to achieve the Cleanup Goals at all Points of Compliance cannot be determined until the groundwater extraction system has been implemented, modified as necessary, and plume response monitored over time. EPA acknowledges that due to the high concentration of VOCs in the groundwater in the area of the closed concrete-lined surface impoundments and the closed underground storage tanks, the diffuse nature and poorly defined source of chromium contamination, and the kinetics of chemical and physical desorption of contaminants in soils and groundwater, it may be technically impracticable to attain the Cleanup Goals at all Points of Compliance. Respondent may, at any time, request that EPA establish an Alternative Performance Standard with respect to any Cleanup Goal for any Point of Compliance in accordance with the procedure and standards set forth in Section VI.C of this Consent Order.

#### SCOPE OF WORK

The Corrective Measures Implementation Program consists of three tasks:

Task I: Corrective Measures Design and Implementation Work Plan

- A. Program Management Plan
- B. Community Relations Plan

- C. Sampling and Analysis Plan
- D. Groundwater Corrective Measures Conceptual Design
- E. Corrective Measures Permitting Plan
- F. In Situ Vapor Extraction Pilot Study Plan
- G. Supplemental Field Investigation Work Plan
- H. Health and Safety Plan

Task II: Design Submittals

- A. Preliminary Design Submittal
- B. Final Design Submittal

Task III: Reporting and Recordkeeping

- A. Quarterly Status Report
- B. Annual Progress Report
- C. Corrective Measures Implementation Report
- D. Corrective Measures Five Year Assessment Report

TASK I: CORRECTIVE MEASURES DESIGN AND IMPLEMENTATION WORK PLAN

The Corrective Measures Design and Implementation Work Plan (the "CMDI Work Plan"), which shall outline the design, construction, operation, maintenance and monitoring of the Corrective Measures at the Facility, shall be prepared by Respondent and submitted to EPA in the manner and within the timeframe set forth in this Consent Order. The CMDI Work Plan shall include the seven plans described in A through G, below. The CMDI Work Plan shall include a reasonably expeditious schedule for completion of all major components and submittals describing

Corrective Measures design and permitting.

A. Program Management Plan

Respondent shall prepare a Program Management Plan that describes the overall management strategy for obtaining permits and approvals and performing the design, construction, operation, maintenance and monitoring of the Corrective Measures. The plan shall include a description of the responsibility and authority of key organizations and personnel involved with the implementation, and overview of the Corrective Measures to be implemented, and an outline of proposed activities necessary to complete the design. It shall also describe the activities to be undertaken by Respondent to evaluate the practicality of reusing treated groundwater generated during the implementation of the Corrective Measures to minimize the loss of such water from the regional aquifer as a result of discharges to Donny Brook. The plan shall include a discussion, with supporting documentation, of the relevant technical and regulatory issues that currently exist with respect to reuse.

B. Community Relations Plan

Respondent shall prepare and submit to EPA a Community Relations Plan, as described below, to address the information needs of the community during design, construction and operation and maintenance activities using as a reference the EPA "Region III RCRA Corrective Action Community Relations Guide," dated August 1, 1990.

1. During the design stage, Respondent shall prepare

and either distribute or have published in a local newspaper a general notice describing the status of the project.

2. (2) During the construction stage, Respondent shall prepare and either distribute or have published in a local newspaper a general notice describing the technical status of the project and, depending on citizen interest, establish an internal corporate procedure for responding to inquiries from the public regarding the work being performed under this Consent Order.

The Community Relations Plan shall also (3) set forth the methods by which Respondent will notify members of the community and appropriate local officials of the results of residential well sampling conducted under this Consent Order, and will respond to citizen inquiries, comments and requests with respect to such sampling.

C. Sampling and Analysis Plan

Respondent shall submit a Sampling and Analysis Plan describing work to be performed during Corrective Measures design, including sampling of residential wells, and comprised of:

1. Data quality objectives for design phase activities,
2. A Quality Assurance Project Plan (QAPP), and
3. A Field Sampling Plan.
4. a Data Management Plan describing the steps to be followed in compiling, organizing, and reviewing data collected in accordance with the Sampling and

Analysis Plan and identifying the frequency of

⑤ periodic data reviews and evaluations.

The plan may incorporate the existing residential well sampling and analysis program, with appropriate revisions as necessary.

D. Groundwater Corrective Measures Conceptual Design

Respondent shall submit ① a conceptual process flow diagram indicating the major components of the groundwater extraction and treatment system. Information included with this flow diagram shall be of sufficient detail to demonstrate the adequacy of the system capacity and treatment efficiency. Where appropriate, ② sample calculations and derivations of equations shall also be submitted to facilitate EPA's review of the design.

E. Corrective Measures Permitting Plan

Respondent shall submit a Corrective Measures Permitting Plan ① identifying all federal, state, interstate and local permits and approvals required for the implementation of the Corrective Measures required by this Consent Order, including any such permits and approvals necessary if the treated groundwater is proposed to be reused, and for the implementation of any institutional controls required by this Consent Order. The plan shall also ② identify all agreements or other arrangements with adjoining landowners, if any, known by Respondent to be necessary for the implementation of the Corrective Measures, including, but not limited to, site access and easement agreements. The plan ③ shall include a schedule indicating the time needed to obtain all such approvals and permits and to enter into such agreements and arrangements (this may be integrated

with the design/implementation schedule items).

F. ISV Pilot Study Plan

Respondent shall submit an ISV Pilot Study Plan for a pilot-scale ISV study at the Facility. The plan shall set forth the protocols and methodologies for the study as well as a reasonably expeditious schedule for completion of the study, and shall establish appropriate criteria for EPA's evaluation of the effectiveness and practicality of implementing a full-scale in-situ vapor extraction system in the soils found at the Facility. The study shall provide sufficient information from which final design and performance criteria may be established in the event EPA determines that a full-scale program will be effective and is practical.

The pilot ISV system shall include two vents installed in the soil beneath the building and two installed in the bedrock at a depth so that groundwater is intercepted (approximately 30 feet). During the installation of vents, a sample of the soil from each boring will be collected and analyzed for TCE and TCA. The Pilot Study shall also be designed to provide hydrologic data for the shallow groundwater zone (including, inter alia, measurements of the yield of groundwater extracted from the pilot test vents under vacuum and non-vacuum conditions) to provide for the implementation of enhanced groundwater recovery at the underground storage tank source area in the event that ISV is determined not to be effective and practical. The standards applicable to the ISV Pilot Study are set forth below.

1. The pilot test shall be considered successful if the radius of influence is at least 5 feet for a soil ISV system or at least 12 feet for a bedrock ISV system. The radius of influence will be measured by pressure monitoring probes during the pilot test.

2. Based upon the VOC removal estimates set forth in the CMS, the projected average VOC removal rate at this area via groundwater pumping from UTM-1 is 0.072 pounds per hour. The pilot ISV system must provide this rate of VOC removal at a minimum.

**G. Supplemental Field Investigation Work Plan**

Respondent shall submit a work plan setting forth the protocols and methodologies for any additional hydrogeologic investigations or other field work, if any such additional investigation or field work is necessary for the proper design of the groundwater extraction and treatment system. The work plan shall include a reasonably expeditious schedule for the completion of any such supplemental field work. If no additional hydrogeologic investigations or other field work is necessary at the time of submittal, Respondent shall so state.

**H. Health and Safety Plan**

Respondent shall submit a Health and Safety Plan for implementation of the Corrective Measures consistent with Attachment C to this Consent Order.

**TASK II: DESIGN SUBMITTALS**

A. Preliminary Design Submittal

Respondent shall prepare and submit to EPA a Preliminary Design Submittal in accordance with the schedule set forth in the CMDI Work Plan. The Preliminary Design Submittal shall include the following:

1. Design criteria for the extraction, treatment, and any discharge of the groundwater and for the full scale in situ vapor extraction system (or, if in situ vapor extraction is not effective and practical, the additional shallow groundwater recovery network in the vicinity of the closed underground storage tanks at the Facility);
2. Results of the ISV Pilot Study, including a presentation and evaluation of all relevant data collected during the pilot study and a discussion, with supporting documentation and based on the criteria set forth in the ISV Study Plan and this Consent Order of whether full scale implementation of in-situ vapor extraction will be effective and practical;
3. A Preliminary Groundwater Reuse Plan setting forth a discussion of technical and regulatory issues regarding the reuse of treated groundwater to minimize the loss of such water from the regional aquifer as a result of discharge to Donny Brook, and a discussion, with supporting documentation, of whether reuse of some or all of the treated groundwater is practical;
4. Results of additional field sampling or

investigation conducted during the design stage, if any;

5. Preliminary plans, drawings and sketches for construction of the Corrective Measures, including required specifications in outline form; and

6. A preliminary construction schedule.

**B. Final Design Submittal**

Respondent shall prepare and submit to EPA a Final Design Submittal in accordance with the schedule set forth in the CMDI Work Plan. The Final Design Submittal shall include the following plans, as well as reasonably expeditious schedules and specific methodologies for implementation of these plans:

1. Final designs and specifications for the Corrective Measures of a quality such that the Respondent would be able to include them in a bid package and invite contractors to submit bids for the construction project;

2. An Operation and Maintenance ("O&M") Plan setting forth the O&M activities, submissions during O&M, and schedule for O&M activities consistent with requirements of this Consent Order. The O&M Plan shall include a revision of the Sampling and Analysis Plan to address the systematic, periodic sampling and analytical program to monitor the progress of the Corrective Measures over time during O&M;

3. A Final Groundwater Reuse Plan based on the Preliminary Groundwater Reuse Plan and either incorporating EPA's comments or describing in detail the

reasons such comments were not incorporated.

4. A Corrective Measures Construction Quality Assurance Plan (CMCQAP) designed to ensure that the completed Corrective Measures meet or exceed all design criteria, plans, and specifications. The CMCQAP shall include a description of:

a. the responsibilities and authority of all organizations (i.e., technical consultants, construction firms, etc.) and key personnel involved in the construction of the corrective measures,

b. the identity and qualifications of the Quality Assurance officer and the necessary supporting inspection staff to demonstrate that they possess the training and experience necessary to fulfill their identified responsibilities,

c. observations and tests that will be used to monitor the construction and/or installation of all components of the Corrective Measures,

d. the scope and frequency of each type of inspection, including a final inspection to be conducted by EPA upon completion of construction and prior to submission of the CMI Report,

e. the reporting requirements for quality assurance and quality control activities, (e.g., inspection data sheets and final documentation of

construction completion), and

f. storage and maintenance of all design and construction records upon completion of construction.

5. A revision to the Sampling and Analysis Plan to address sampling activities to be performed during the Corrective Measures start-up;

6. A revision to the Health and Safety Plan for field activities required by the final design;

7. Procedures and plans for the decontamination of equipment and disposal of contaminated materials;

8. A revised cost estimate for the construction and operation of the Corrective Measures. The cost estimate developed in the CMS shall be refined to reflect the final design plans and specifications. The cost estimate shall include both capital and operation and maintenance costs; and

9. A reasonably expeditious schedule for the completion of construction and start-up of the Corrective Measures.

Upon EPA approval of all components of the Final Design Submittal (with the exception of the Groundwater Reuse Plan and the Health and Safety Plan which shall be submitted to EPA for informational purposes only), the Final Design Submittal shall be incorporated into and become enforceable under this Consent Order and Respondent shall implement the activities required under that Final Design Submittal in accordance with the schedules and

methodologies contained therein.

TASK III: REPORTING AND RECORDKEEPING

Respondent shall maintain records relating to the implementation and operation of the Corrective Measures. These records shall include the following reports to be submitted to EPA in accordance with this Consent Order. These requirements are in addition to any other requirements specified for each report as set forth in this Consent Order.

A. Quarterly Status Report

The Quarterly Status Report shall contain a summary of the previous quarter's activities, significant departures from scheduled activities as described in this Scope of Work or the relevant work plan, and actions being taken to rectify these departures. It shall also include a listing of any significant field activities such as well installation, pump testing, and other construction activities to be performed in the following three month period.

B. Annual Progress Report

Annual progress reports shall contain a narrative summary of principal activities conducted during the reporting period and graphical or tabular presentations of monitoring data, including but not limited to average monthly system pumping rates and throughput, efficiency, groundwater levels and flow direction, and groundwater quality. The Annual Progress Report shall also include

a schedule of sampling and field activities to be performed in the following year. An Annual Progress Report shall not be required for any year in which the Respondent is required to submit a Corrective Measures Five Year Assessment Report.

C. Corrective Measures Implementation Report

The Corrective Measures Implementation Report ("CMI Report") shall indicate whether the project is consistent with the Final Design Submittal. The CMI Report shall include, but not necessarily be limited to, the following elements:

1. a synopsis of the Corrective Measures and a statement that the system was inspected and conformed to the construction and/or design plans,
2. an explanation of any modifications to the EPA-approved construction and/or design plans and why these were necessary for the project,
3. an explanation of any modifications to the criteria, established before the Corrective Measures were initiated, for evaluating the effectiveness of the Corrective Measures,
4. results of facility monitoring, including an assessment of whether the Corrective Measures are performing as planned, and
5. an explanation of any necessary modifications to the operation and maintenance program (including monitoring) established in the Final Design Submittal and a brief summary of the operation and maintenance activities

already undertaken at the Facility for the Corrective Measure addressed in this Consent Order.

D. Corrective Measures Five Year Assessment Report

The Corrective Measure Five Year Assessment Report shall summarize data obtained during the preceding five years of systems operation and shall evaluate trends in the system operating conditions and groundwater and soil remediation. This report shall also include an evaluation of the effectiveness of the Corrective Measures in achieving the Cleanup Goals set forth in this Consent Order. Evaluation of trends in the system operating conditions and groundwater remediation shall incorporate all previously submitted data. In addition, the Corrective Measures Five Year Assessment Report may contain the information set forth in Section VI.C of this Consent Order.

## ATTACHMENT B

### DESCRIPTION OF THE BOREHOLE PACKER SYSTEM FOR UTM-18

Two temporary borehole packers will be set in the open borehole well UTM-18 at depths of approximately 148 feet and 240 feet below ground surface. These settings will duplicate the zones which were isolated during the packer test on UTM-18. The packers to be set in intervals of the borehole which were shown to be relatively smooth and unfractured by the borehole caliper log and the other geophysical logs previously run in UTM-18.

The borehole packer system will consist of commercially available vulcanized rubber packers which are 18 inches long and 6 $\frac{1}{2}$  inches in diameter. These packers will be attached to a continuous length of 4 inch diameter schedule 40 PVC. The base of the PVC pipe will remain partially open so that the riser pipe will serve as a piezometer for the zone below the lower packer. The entire system will be lowered into the well so that the two packers seat at the proposed depths. If borehole conditions prevent an effective seal of the lower packer (as indicated by the water levels in the piezometer), the upper packer will be removed and 3-5 feet of Portland cement grout will be tremied to the top of the packer to complete the seal of the lower packer. The upper packer will then be installed separately in the same manner. When the well is ready to be activated as a pumping well for the groundwater recovery system the packer system will be withdrawn from the well, or drilled out, whichever is practical.

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## CONSTRUCTION OF AIR STRIPPER STACK

A stack will be installed at the UTI air stripper to vertically vent the existing blower exhaust at a height of at least 20 feet. The stack will be designed to reroute the air emissions from the existing exhaust point which is currently located near ground level. The stack will be connected to exhaust emissions from the stripper blower through a transition piece that leads to the vertical stack. The stack will be located adjacent to the air stripper and will be as tall as the air stripper (20 feet tall from the foundation, 21.5 feet tall from ground level). The stack diameter will be 16 inches and will narrow at the top to a four inch exit diameter. The stack will be a permanent fixture constructed such that the height can be extended in the future, if necessary. The exit velocity of air through the stack is designed to be 550 feet per second (based on 2900 cfm air flow through the stripper).

### REPORT

Within thirty (30) calendar days of completion of the installation of the borehole packer system and the air stripper construction activity, Respondent shall submit to EPA a brief report regarding the installation of both systems and any problems or technical issues encountered during such activities. The report shall also set forth a description of, and a schedule for, periodic (i.e., at least quarterly) monitoring of the efficacy of the borehole packer system.

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## Attachment C

### HEALTH AND SAFETY PLAN

The Respondent shall prepare a facility Health and Safety Plan.

1. Major elements of the Health and Safety Plan shall include:
  - a. Facility description including availability of resources such as roads, water supply, electricity, and telephone service;
  - b. Description of the known hazards and evaluations of the risks associated with the incident and with each activity conducted, including, but not limited to on and off-site exposure to contaminants;
  - c. List of key personnel and alternates responsible for site safety, response operations, and for protection of public health;
  - d. Delineation of work area;
  - e. Description of levels of protection to be worn by personnel in work area;
  - f. Establishment of procedures to control site access;
  - g. Description of decontamination procedures for personnel and equipment;
  - h. Establishment of site emergency procedures;
  - i. Emergency medical care for injuries and toxicological problems;
  - j. Description of requirements for an environmental surveillance program;
  - k. Routine and special training required for responders; and
  - l. Establishment of procedures for protecting workers from weather-related problems.
2. The Facility Health and Safety Plan shall be consistent with:
  - a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
  - b. EPA Order 1440.3 - Respiratory Protection;

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- c. EPA Order 1440.2 - Health and Safety Requirements for Employees engaged in Field Activities;
  - d. Facility Contingency Plan or PPC Plan;
  - e. EPA Standard Operating Safety Guide (1984);
  - f. OSHA regulations particularly in 29 C.F.R. 1910 and 1926;
  - g. State and local regulations; and
  - h. Other EPA guidance as provided.
3. The Health and Safety Plan must be revised to address any additions and/or changes in planned activities.

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