



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Schmidt - SED

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Madison, Wisconsin 53707

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Certified Mail  
Return Receipt Requested

September 21, 1990

IN REPLY REFER TO: 8300

Mr. Raymond R. Krueger  
Charney, Clancy & Taitelman S.C.  
100 East Wisconsin Avenue, Suite 2400  
Milwaukee, WI 53202-4113

SUBJECT: Contract #SF-90-02  
Delavan Well #4 Superfund Site

Dear Mr. Krueger:

Enclosed is one copy of the executed contract with Sta-Rite Industries, Inc. to conduct an investigation and remediation at the Delavan Municipal Well #4 Superfund Site and the Sta-Rite Industries facility at 293 Wright Street in Delavan.

As per Section XXIII. of the contract, the effective date of this contract is September 28, 1990.

If you should have any questions, please contact me at (608) 266-9972.

Sincerely,

*S. Bangert*

Patricia M. Hanz  
Attorney at Law  
Bureau of Legal Services

Enclosure

cc: T. Savage - Sta-Rite Industries, Inc.  
C. Beveridge - Sta-Rite Industries, Inc.  
R. Karnauskas - Hydro-Search, Inc.  
M. Giesfeldt/S. Bangert - SW/3  
→ J. Schmidt - SED

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**STATE OF WISCONSIN**  
**DEPARTMENT OF NATURAL RESOURCES**

**Section 144.442, Wis. Stats.**

**CONTRACT**

**#SF-90-02**

**IN THE MATTER OF**

**Delavan Municipal Well # 4**

TABLE OF CONTENTS

Section	Page
I. PARTIES BOUND .....	1
II. STATEMENT OF PURPOSE .....	1
III. SITE DESCRIPTION .....	2
IV. WORK TO BE PERFORMED .....	3
V. PLANS AND REPORTS .....	8
VI. SUBMISSION OF DOCUMENTS AND CORRESPONDENCE .....	9
VII. MODIFICATION OF WORK .....	9
VIII. COMPLIANCE WITH APPLICABLE OR RELEVANT AND APPROPRIATE LAWS .....	10
IX. COMPLIANCE WITH THE RECORD OF DECISION .....	10
X. ACCESS .....	10
XI. PROJECT COORDINATORS .....	11
XII. SAMPLING .....	12
XIII. QUALITY ASSURANCE .....	12
XIV. FORCE MAJEURE .....	13
XV. LIQUIDATED DAMAGES .....	13
XVI. DISPUTE RESOLUTION .....	14
XVII. COMMUNITY RELATIONS AND PUBLIC COMMENT .....	15
XVIII. ADMINISTRATIVE RECORD REQUIREMENTS .....	15
XIX. RECORD PRESERVATION .....	16
XX. RESERVATION OF RIGHTS .....	16
XXI. REIMBURSEMENT OF COSTS .....	17
XXII. INDEMNIFICATION .....	17
XXIII. EFFECTIVE DATE .....	18
XXIV. SUBSEQUENT AMENDMENT .....	18
XXV. TERMINATION AND SATISFACTION .....	18
XXVI. COVENANT NOT TO SUE .....	18
XXVII. INTERVENTION BY U.S. EPA .....	19



STATE OF WISCONSIN  
DEPARTMENT OF NATURAL RESOURCES

IN THE MATTER OF:

CONTRACT

Delavan Municipal Well # 4 Site  
Delavan, Wisconsin

with Sta-Rite Industries, Inc.  
#SF-90-02

I. PARTIES BOUND

- A. The Wisconsin Department of Natural Resources (WDNR) and Sta-Rite Industries, Inc., the settling potentially responsible party (referred to herein as Sta-Rite or the PRP), have each consented to the following contract, entered into pursuant to section 144.442, Wis. Stats., and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. ss 9601 et seq., as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA).
- B. This contract shall apply to and be binding upon the undersigned parties and their respective agents, successors and assigns. The undersigned representative of each party certifies that he or she is fully authorized by the party whom he or she represents to enter into this contract and execute and legally bind such party to the terms of this document.
- C. No change in ownership or corporate or partnership status shall in any way alter the status or responsibility of the PRP under this contract. The PRP shall be responsible for insuring by contract that all contractors, consultants, firms and other persons or entities acting under or for them with respect to matters included herein comply with the terms of this contract, and with all applicable laws and regulations. The PRP shall provide a copy of this contract to the contractor(s) and consultant(s) hired to perform the work required by this contract and shall require the contractor(s) to provide written notice of this contract to any subcontractor retained to perform any part of the work.

II. STATEMENT OF PURPOSE

- A. In consideration of each of the promises, covenants and undertakings of WDNR and the PRP under this contract, WDNR and the PRP hereby agree that the PRP shall:
1. Complete a remedial investigation (RI) to fully determine the nature and extent of the release or threatened release of hazardous substances, pollutants or contaminants from the site described in Section III of this contract (the Site) and, as may be appropriate, to identify and evaluate operable units and interim remedies;
  2. Complete a feasibility study (FS) to identify and evaluate alternatives for appropriate remedial action to prevent, mitigate, or otherwise remedy any release or threatened release of hazardous substances, pollutants or contaminants from the Site including as may be appropriate, a focused feasibility study to identify and evaluate operable units and interim remedies;



3. Prepare plans and specifications for continuation or modification of existing remedial actions or construction of new or additional remedies, if any, which are selected and approved by WDNR (remedial design - RD);
  4. Implement new or additional remedies, if any, (remedial action - RA) approved by the WDNR which may include continuation or modification of the existing remedial actions; and
  5. Reimburse WDNR for all past response costs, and all oversight costs, incurred by WDNR for the Site.
- B. The activities conducted pursuant to this contract are subject to approval by the WDNR. Such activities shall employ sound scientific, engineering and construction practices and shall be consistent with the National Contingency Plan, 40 CFR part 300, as amended by Federal Register 8666 (March 8, 1990), and the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendment and Reauthorization Act of 1986 (SARA).
- C. If the PRP, or its consultants, contractors or subcontractors, fail to comply with any of the requirements of this contract, the WDNR shall have the right to seek recovery from the PRP for any costs incurred by WDNR to undertake work that is the responsibility of the PRP under this contract, and the right to seek enforcement of the terms of this contract.
- D. Sta-Rite does not admit any liability under federal, state or local law, whether statutory or common law, for contamination at the Delavan Municipal Well #4 site, however Sta-Rite agrees to undertake all actions required by the terms and conditions hereunder and consents to and will not contest or legally challenge the validity of this contract or WDNR's authority to enter into this contract. This contract is not, and shall not be construed as admission or adjudication of any fact or conclusion of law. Sta-Rite does not waive any right or defense available to it under law. This contract may not be used as and shall not constitute evidence of any wrongdoing, misconduct or liability on the part of Sta-Rite, its officers, directors, agents, servants, employees, successors, predecessors, contractors, assigns and any persons, firms subsidiaries, divisions and corporations acting under or for Sta-Rite. Nothing in this section shall prohibit the use of this contract by any party as evidence to establish its existence or its terms.
- E. The WDNR understands that the PRP has installed, with notice to WDNR, and presently operates several environmental remediation systems on its premises. Subject to continuing evaluation of the systems' design and performance, the WDNR and the PRP agree that the PRP may continue to operate and maintain those remediation systems. The PRP shall either continue to operate those systems or modify the design or adjust or cease operation of those systems as approved or directed by WDNR.

### III. SITE DESCRIPTION

Site Name: Delavan Municipal Well # 4

Site Location: The Site is located in the NW1/4 of the SE1/4, Section 17, T2N, R16E, City of Delavan, Walworth County, Wisconsin.

Site Geology/Hydrogeology: The general geology of the area consists of approximately 400 feet of glacial drift filling a dolomite valley. The uppermost bedrock unit consists of the Galena-Platteville dolomite. The dolomite is underlain by a sandstone aquifer which consists of both sandstone and dolomite.



The sandstone aquifer overlies Pre-Cambrian igneous and metamorphic rocks.

The uppermost glacial till layer at the Site consists of about 1 to 6 feet of brown silty clay/clayey silt. This layer overlies a brown silty sand with some fines and gravel extending down 18 to 34 feet. Below the sand unit is a sand and gravel deposit extending past the depth of most boring on the Sta-Rite property. The boring log for Municipal Well # 4, which was installed in 1968, is much less precise in its description of the glacial deposits. The log indicates predominately sands and gravels to the end of the boring at 115 feet.

The water table in the vicinity of the Site is approximately 30 feet from the ground surface. However, there are fluctuations due to drought conditions and the pumping of Municipal Well # 4 as well as drawdown from groundwater extraction wells on the Sta-Rite property. Groundwater generally flows to the northwest outside of the influence of Municipal Well # 4. Vertical gradients measured at the property were very slight. Flow at the Site appears to be predominately horizontal.

**Physical Conditions:**

The topography in the vicinity of Municipal Well # 4 is generally flat due to the ground moraine deposits covering the area. The area in the vicinity of Municipal Well # 4 is generally classified as light industrial and residential. Sta-Rite, a manufacturer of well pump equipment since 1958, consists of two buildings located approximately 450 feet east (building #2) and 1000 feet northeast (building #1) of Municipal Well # 4. During 1983 and 1984 groundwater and soil sampling for volatile organic compounds identified several impacted locations at the Sta-Rite facility.

**Known Substances of Concern:**

Trichloroethylene (TCE), Tetrachloroethylene (PCE), 1,1,1,Trichloroethane (TCA)

**IV. WORK TO BE PERFORMED**

- A. All work to be performed by the PRP pursuant to this contract shall be under the direction and supervision of a qualified professional engineer and a qualified hydrogeologist, as defined in s. NR 550.31(1)(e), Wis. Adm. Code. Within 10 business days after the effective date of this contract, the PRP shall notify the WDNR, in writing, of the name, title, and qualifications of the proposed engineer(s) and hydrogeologist(s) (hereinafter the Consultant(s)), including staff names, titles and responsibilities for work to be performed under this contract, and of the names of principal contractors and subcontractors proposed to be used in carrying out the RI/FS to be performed pursuant to this contract. Within thirty (30) days after the effective date of this contract, WDNR shall specify which of the Consultants' staff are key personnel for the purposes of Section V.E. 5.
- B. In connection with the performance of work under this contract, the PRP agrees that the PRP will not discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in section 51.01(5), Wis. Stats., sexual orientation or national origin. This provision shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. Except with respect to sexual orientation, the PRP further agrees that the PRP will take affirmative action to ensure equal employment opportunities. The



PRP agrees that the PRP shall require in its contracts with its Consultants and contractors, and the PRP's Consultant and contractors shall require in their contracts with subcontractors, that the Consultants and contractors, and their subcontractors, shall not discriminate against any employee or applicant for employment because of age, race, religion, color, handicap, sex, physical condition, developmental disability as defined in section 51.01(5), Wis. Stats., sexual orientation or national origin, shall take affirmative action to ensure equal employment opportunities and shall post in conspicuous places, available for employees and applicants for employment, notices to be provided by the Department of Administration setting forth the provisions of this nondiscrimination clause. Failure of the PRP to comply with the conditions of this clause may result in the PRP being declared an "ineligible" contractor and termination of the contract.

- C.
1. Attachment A to this contract provides a Statement of Work (SOW) for the completion of a remedial investigation/feasibility study and remedial design/remedial action for the Site. The SOW is incorporated into and made a part of this contract.
  2. The work to be performed under this contract and the statement of work shall be the completion of an investigation of the degree and extent of contamination at the Municipal Well #4 Site and the Sta-Rite property located at 293 Wright Street, Delavan, Wisconsin, the completion of a study to identify and evaluate remedial alternatives necessary to remediate conditions at Municipal Well #4 Site and the Sta-Rite property and the operation of the existing or modified remedial systems or the design, construction and operation of new or additional remedies for the Delavan Municipal Well #4 Site and the Sta-Rite property.
- D. The following work shall be performed:
1. Within thirty (30) calendar days after the effective date of this contract, the PRP shall submit a Site Evaluation Report (SER) to the WDNR. The SER shall be developed in conformance with the requirements of this contract, the SOW, the NCP, U.S. Environmental Protection Agency (EPA) "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA", dated Oct. 1988 (OSWER Directive 9355.3-01), and any additional guidance documents provided to the PRP by the WDNR. Guidance which is published after the effective date of this contract shall be applied prospectively to work tasks which have not yet begun. If either an applicable guidance document is changed or new written guidance is issued which requires modification of the SER, the WDNR shall provide notice, in writing, of the required modifications to the SER. Within thirty (30) calendar days of receipt of such notice, the PRP shall submit a revised SER which incorporates the modifications required by WDNR. The PRP may request an extension of the deadline if additional time is needed for any action required of the PRP based upon a fully approved SER. WDNR approval of such an extension request shall not be unreasonably withheld.
  2. The SER shall be subject to review, modification and approval by WDNR in accordance with the terms of this contract and applicable statutes and rules under which WDNR has independent review authority.
  3. Within sixty (60) calendar days of its receipt of the SER, WDNR shall notify the PRP in writing of its approval, conditional approval or disapproval of the SER, or any part thereof. In the event that a longer review period is required, WDNR shall notify the PRP of that fact within sixty (60) calendar days of its receipt of the SER. In the event of any disapproval, WDNR shall specify in writing any deficiency and any required modifications to the SER.



4. Within thirty (30) calendar days of receipt of WDNR's conditional approval or disapproval of the SER, or any part thereof, the PRP shall submit a revised SER to WDNR which incorporates modifications required by WDNR.
5. Within forty-five (45) calendar days after the approval of the SER, the PRP shall submit a work plan to the WDNR for a complete remedial investigation and feasibility study (hereinafter referred to as the RI/FS work plan). The RI/FS work plan shall be developed in conformance with the requirements of this contract, the SOW, the NCP, U.S. Environmental Protection Agency (EPA) "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," dated Oct. 1988 (OSWER Directive 9355.3-01), and any additional guidance documents provided to the PRP by the WDNR. Guidance which is published after the effective date of this contract shall be applied prospectively to work tasks which have not yet begun. If either an applicable guidance document is changed or new written guidance is issued which requires modification of the RI/FS Work Plan, the WDNR shall provide notice, in writing, of the required modifications to the RI/FS work plan. Within thirty (30) calendar days of receipt of such notice, the PRP shall submit a revised RI/FS work plan which incorporates the modifications required by WDNR. The PRP may request an extension of the deadline if additional time is needed for any action required of the PRP based upon a fully approved RI/FS work plan. WDNR approval of such an extension request shall not be unreasonably withheld.
6. In addition to an introduction, site background, scope, management plan and schedule, the following deliverables shall be included in the RI/FS work plan submittal:
  - a. Sampling and Analysis Plan (SAP), which shall include a discussion of how permitting and licensing requirements, if any, will be satisfied;
  - b. Health and Safety Plan (HSP);
  - c. Quality Assurance Project Plan (QAPP);
  - d. Data Management Plan;
  - e. Schedule for implementation of RI/FS tasks and submission of RI/FS reports, including, at a minimum, a preliminary and final remedial investigation report, and a preliminary and final feasibility study report.
7. The RI/FS work plan shall be subject to review, modification and approval by the WDNR in accordance with this contract and applicable statutes and rules under which WDNR has independent review authority.
8. Within sixty (60) calendar days of receipt of the RI/FS work plan, the WDNR shall notify the PRP, in writing, of approval, conditional approval or disapproval of the RI/FS work plan, or any part thereof. In the event that a longer review period is required, the WDNR shall notify the PRP of that fact within sixty (60) calendar days of receipt of the work plan. In the event of any disapproval, the WDNR shall specify, in writing, any deficiency and any required modifications to the RI/FS work plan.
9. Within thirty (30) calendar days of receipt of any RI/FS work plan conditional approval or disapproval, the PRP shall submit a revised RI/FS work plan to WDNR which incorporates modifications required by WDNR.
10. In the event of subsequent WDNR disapproval of the modified RI/FS work plan, the WDNR retains the right, pursuant to Section XX., to amend such documents (subject to Section XVI), to conduct a partial or complete RI/FS (subject to Section XVI), to enforce the terms of this contract (not subject to Section XVI), and refer the Site to EPA for action pursuant to CERCLA (not subject to Section XVI).



11. The PRP shall proceed with the work detailed in the RI/FS work plan, or any approved part thereof, within thirty (30) calendar days after the RI/FS work plan, or any part of the RI/FS work plan, is fully approved by the WDNR. Unless otherwise directed by the WDNR and except as provided in Section II. E., the PRP shall not commence field activities until approval by the WDNR of a work plan for the work that is proposed to be done. The fully approved RI/FS work plan shall be deemed incorporated into and made an enforceable part of this contract. All RI/FS work shall be conducted in accordance with the requirements of this contract, including the SOW, and the standards, specifications and schedule contained in the RI/FS work plan.
12. Following submittal of the FS report, with the PRP's conceptual proposal for remedial action(s), and review and approval of said report by WDNR, WDNR shall prepare a Proposed Plan which indicates WDNR's preferred remedial alternative(s). WDNR shall announce the availability of the documents to the public for review and comment, and provide the opportunity for a public meeting and hearing on the Proposed Plan and RI/FS reports. WDNR shall accept comments from the public for a period of not less than thirty (30) calendar days after such announcement. The comment period may be extended an additional thirty (30) calendar days upon WDNR's receipt of a timely request for such an extension. At the end of the comment period, WDNR shall review such comments and determine if the preferred alternative presented in the Proposed Plan shall be accepted in its present form or if modifications are necessary. If the Proposed Plan is deemed acceptable, WDNR will determine the appropriate extent of the remedy and will notify the PRP of its decision within sixty (60) days after the end of the comment period. The WDNR's decision on which alternative should be the selected remedy will be based on the documents and information contained in the administrative record file for the Site. The WDNR will prepare a Record of Decision (ROD) for the Site, which documents the WDNR's selected remedy. The EPA will be provided the opportunity to concur with the remedy selected in the ROD. The PRP shall design and implement the response action documented in the ROD.
13. A remedial design and remedial action work plan (hereinafter referred to as the RD/RA work plan), including a schedule for the implementation of the remedial action, shall be developed by the PRP and shall be appended to this contract and made an integral and enforceable part hereof, after the RD/RA work plan is approved by WDNR. The RD/RA work plan shall be submitted within ninety (90) calendar days after the Record of Decision is signed by WDNR. Within ten (10) business days after the signing of the ROD for the Site, the PRP shall notify the WDNR, in writing, of the name, and qualifications of the proposed Consultant(s), including staff names, titles and responsibilities for work performed under this contract and the names of the principal contractors and subcontractors proposed to be used in preparing the RD/RA work plan pursuant to this contract. Within thirty (30) calendar days after receipt of the names of the Consultants, WDNR shall specify which of the Consultants' staff are key personnel for the purposes of Section V.E.5. The RD/RA work plan shall be developed in conformance with all of the requirements of this contract, the ROD, the SOW, standards set forth in section 121 of CERCLA, the NCP in effect at the time that the work is commenced, EPA Superfund Remedial Design and Remedial Action Guidance, dated June, 1986, and any other applicable EPA or state guidance documents that are provided to the PRP by WDNR. Guidance documents which are published after the effective date of this contract shall be applied prospectively to work tasks which have not yet begun. If either an applicable guidance document is changed or new written guidance is issued which requires modification of the RD/RA work plan, the WDNR shall provide notice, in writing, of the required modifications to the RD/RA work plan. Within thirty (30) calendar days of receipt of such notice, the PRP shall submit a revised RD/RA work plan which incorporates the modifications required by WDNR. The PRP may request an extension of the deadline if additional time is needed for any action.



required of the PRP based upon a fully approved RD/RA work plan. WDNR's approval of such an extension request shall not be unreasonably withheld.

14. The RD/RA work plan submittals shall include, but not be limited to, the following project plans:
  - a. Health and Safety Plan (HSP);
  - b. Plan for Satisfaction of Permitting and Licensing Requirements;
  - c. Quality Assurance Project Plan (QAPP);
  - d. Monitoring Plan and Reporting Schedule;
  - e. Design Plans;
  - f. Construction Assurance Plans;
  - g. Operation and Maintenance Plan, if needed.
  - h. Description and Qualification of Personnel
15. The RD/RA work plan shall be subject to review, modification and approval by the WDNR in accordance with this contract and applicable statutes and rules under which WDNR has independent review authority.
16. Within sixty (60) calendar days of receipt of the RD/RA work plan, the WDNR shall notify the PRP in writing, of approval, conditional approval or disapproval of the RD/RA work plan, or any part thereof. In the event that a longer review period is required, the WDNR shall notify the PRP of that fact within sixty (60) calendar days of receipt of the work plan. In the event of any disapproval, the WDNR shall specify, in writing, any deficiency and any required modifications to the final RD/RA work plan.
17. Within fifteen (15) calendar days of receipt of RD/RA work plan conditional approval or disapproval, the PRP shall submit a revised RD/RA work plan to WDNR which incorporates modifications required by the WDNR.
18. In the event of subsequent WDNR disapproval of the RD/RA work plan, the WDNR retains the right to conduct the remedial action work and the right to enforce the terms of this contract.
19. The PRP shall conduct the RD/RA work in accordance with all requirements of this contract, the ROD, the SOW, the RD/RA Work Plan, and all other plans or schedules submitted by the PRP and approved by WDNR under this contract.
20. All RA work performed under this contract shall meet the performance and cleanup standards set forth in the ROD. At least 14 calendar days prior to the commencement of construction, the PRP shall notify WDNR, in writing of the name and qualifications of the proposed Consultants, including staff names, titles and responsibilities for work performed under this contract and the names of the principal contractors and subcontractors proposed to be used in performing the RA. It is the intent of the parties that the construction of the approved remedial action, if any, will begin as soon as practicable upon WDNR approval of the design. In any event, construction shall begin no later than three (3) months after completion of design.
21. The parties acknowledge and agree that neither the SOW nor any work plan approval constitutes a warranty or representation of any kind that the SOW or the work plan will achieve compliance with state or federal applicable or relevant and appropriate requirements (ARARs) as defined in CERCLA and the NCP.



## V. PLANS AND REPORTS

- A. The PRP shall provide a preliminary and final RI report, a preliminary and final FS report and any other plans or reports required by the RI/FS or RD/RA work plans to the WDNR according to the schedule contained in the RI/FS work plan and the RD/RA work plan.
- B. The WDNR shall review and approve, conditionally approve, or disapprove of the preliminary and final RI report, the preliminary and final FS report and any other preliminary or final plans or reports specified in the RI/FS or RD/RA work plan as required by WDNR. The WDNR shall use its best efforts to review such plans and reports within sixty (60) calendar days of receipt. In the event more time is required for review, WDNR will notify the PRP within sixty (60) calendar days of receipt of the plan or report.
- C. If the WDNR disapproves any preliminary, draft or final plan or report, or part thereof, the WDNR shall specify, in writing, any deficiencies and required modifications and the PRP shall submit a revised plan or report which shall incorporate any modifications or additions required by WDNR to the WDNR within forty-five (45) calendar days of receipt.
- D. In the event of subsequent disapproval of any revised plan or report, the WDNR retains the right, pursuant to Section XX., to amend such plans or reports (subject to Section XVI), to perform additional studies (subject to Section XVI), to conduct a complete or partial RI/FS or RD/RA (subject to Section XVI), to enforce the terms of this contract (not subject to Section XVI) and to refer this Site to the EPA for action pursuant to CERCLA Section 104 or 106 (not subject to Section XVI).
- E. The PRP shall provide written progress reports to the WDNR according to the schedule contained in the RI/FS and RD/RA work plans. At a minimum, these written progress reports shall include the following:
1. A summary of validated sampling data and the results of tests relating to the Site produced during the reporting period pursuant this contract;
  2. A description of activities completed during the past reporting period, as well as such actions, data and plans which are scheduled for the next reporting period;
  3. Target date and actual completion date for each element of activity, including the project completion, and an explanation of any deviation from the schedule in the RI/FS or RD/RA work plans.
  4. A description of difficulties encountered during the reporting period and the actions taken to rectify the problems; and,
  5. Changes in Key Personnel
- F. Unless otherwise specified in the RI/FS or RD/RA work plan approved by WDNR, the written progress reports shall be submitted to the WDNR by the tenth business day of each month following the date of commencement of the work detailed in the RI/FS work plan and again in the RD/RA work plan.
- G. WDNR shall provide copies of all validated sampling data and the results of tests relating to the Site pursuant to this contract to the PRP within thirty (30) calendar days of the date the record is generated as a public document.

## VI. SUBMISSION OF DOCUMENTS AND CORRESPONDENCE

Documents, including reports, approvals, conditional approvals, disapprovals and other correspondence to be submitted pursuant to this contract shall be sent to the following addresses, or to such other address as the PRP or the WDNR may hereafter designate in writing:

A. Documents to be submitted to WDNR shall be sent to:

Section Chief  
Environmental Response and Repair Section (SW/3)  
Wisconsin Department of Natural Resources  
P.O. Box 7921  
Madison, Wisconsin 53707 (5 copies)

Southeast District Solid and Hazardous Waste Program Supervisor  
Wisconsin Department of Natural Resources  
2300 North Martin Luther King Dr.  
Box 12436  
Milwaukee, WI 53212 (3 copies)

B. Documents to be submitted to the PRP shall be sent to:

Colin Beveridge  
Sta-Rite Industries, Inc.  
293 Wright Street  
Delavan, WI 53115 (1 copy)

Raymond R. Krueger  
Charne, Clancy & Taitelman, S.C.  
100 East Wisconsin Avenue, Suite 2400  
Milwaukee, Wisconsin 53202-4113 (1 copy)

Robert J. Karnauskas  
Hydro-Search, Inc.  
175 North Corporate Drive, Suite 100  
Brookfield, Wisconsin 53045 (1 copy)

## VII. MODIFICATION OF WORK

- A. In the event that the WDNR or the PRP determines that either a modification to planned work or additional work, including remedial investigation work and/or engineering evaluation, is necessary to accomplish the objectives of the RI/FS or RD/RA, notification of such modified or additional work shall be provided to the other party. In the event that either party determines that a modification to planned work or additional work is necessary during the course of field work, oral notice may be given by the party making the determination to the other party. The party giving oral notice shall confirm the circumstances under which the determination was made and the modification or additional work performed in writing within five (5) working days of the oral notice.



- B. Any modified or additional work determined to be necessary by the PRP shall be subject to approval by the WDNR, such approval not to be unreasonably withheld by WDNR.
- C. During the term of this contract, any modified or additional work determined to be necessary by the PRP or the WDNR shall be completed by the PRP in accordance with the standards, specifications and schedule determined by or approved by the WDNR, pursuant to this contract and applicable state statutes and rules under which WDNR has independent review authority.

#### VIII. COMPLIANCE WITH APPLICABLE OR RELEVANT AND APPROPRIATE LAWS

- A. The RD/RA activities undertaken by the PRP pursuant to this contract shall be performed in compliance with applicable or relevant and appropriate (ARARs) federal and State laws, whichever is more stringent. The policies and procedures established in the NCP shall be followed in identifying and complying with ARARs. The WDNR may consider and require compliance with any advisories, criteria or guidance (i.e., to-be-considered) in the review of the PRP's RI/FS work plan activities and in the selection of the remedy as documented in the ROD.
- B. During the RI/FS, the PRP shall store, treat, or dispose of investigation-derived waste that is to be handled on-site, in compliance with all federal and State ARARs, to the extent practicable, considering the exigencies of the situation. The PRP shall ensure that RI/FS- and RD/RA-derived waste that is taken off-site shall be transported in compliance with applicable laws and taken to a facility in compliance with applicable laws. The PRP shall be responsible for obtaining all federal, State, or local permits or licenses which are necessary for the performance hereunder.

#### IX. COMPLIANCE WITH THE RECORD OF DECISION

The PRP shall carry out the RD/RA activities for the Site in conformance with the remedy selected in the ROD. During the RD/RA, the PRP shall be responsible for conforming with the ROD. The PRP shall comply with ARARs that are promulgated or modified after ROD signature only when compliance is necessary to ensure that the remedy is protective of human health and the environment. Where there is a significant change to the ROD which requires the issuance of an Explanation of Significant Differences or a ROD Amendment (as provided in "Interim Final Guidance on Preparing Superfund Decision Documents: The Proposed Plan; the Record of Decision; Explanation of Significant Differences; The Record of Decision Amendment" OSWER Directive 9355.3-02, dated June 1989), the PRP shall comply with any laws that are applicable or relevant and appropriate to that significant change.

#### X. ACCESS

- A. To the extent that the Site or other areas where work is to be performed hereunder is presently owned by parties other than those bound by this contract, the PRP shall use its best efforts to obtain access permission from the present owners within thirty (30) calendar days of the date it becomes apparent that access to such property is necessary. Such permission shall provide access for the WDNR, the EPA, and all authorized representatives of the WDNR, and EPA, and shall be included as attachments to this contract. The permission does not have to be obtained prior to signing of this contract. In the event that such access permission is not obtained within the time referenced above, the PRP shall so notify the WDNR. That notification shall include a description of the "best efforts" undertaken to gain access.



- B. The employees and authorized representatives of the WDNR and EPA shall have the authority to enter the Site at all reasonable times, after oral or written notice, except that prior notice is not required when the delay required to provide this notice is likely to result in an imminent risk to public health, welfare or the environment, for the purpose of inspecting records, operating logs, contracts and other documents relevant to the implementation of this contract; reviewing the progress of the PRP in implementing this contract; conducting such tests as the WDNR project coordinator deems necessary; and verifying the data submitted to the WDNR by the PRP. The PRP shall permit such authorized representatives to inspect and copy all records, files, photographs, documents, and other writings, including all sampling and monitoring data, which pertain to this contract and use camera, sound or video recording, or other documentary type equipment, subject to Paragraph D of this Section regarding confidentiality. All persons with access to the Site pursuant to this contract shall comply with the health and safety plans prepared for this Site. The PRP shall honor all reasonable requests for such access by the WDNR conditioned only upon presentation of proper credentials. The PRP may request that access by WDNR representatives be in accordance with the HSPs prepared for this Site and, if compliance is not obtained, notification of such non-compliance may be provided to the WDNR representative and his/her appropriate supervisor. Upon such notification, the PRP shall have no obligation to indemnify WDNR, its officers, employees or authorized representatives under Section XXII of this contract or otherwise for claims or causes of action that may arise out of noncompliance with the WDNR HSP.
- C. Nothing herein shall be construed as restricting the inspection or access authority of the WDNR under any law or rule.
- D. The PRP may request, in accordance with s. NR 2.19, Wis. Adm. Code, that information in the WDNR's possession or being requested by WDNR, under the terms of this contract, be treated as confidential.

#### XI. PROJECT COORDINATORS

- A. The WDNR and the PRP shall each designate a project coordinator within ten (10) business days after the effective date of the contract. Any party may change its designated project coordinator by notifying the other parties, in writing, at least ten (10) business days prior to the change. To the maximum extent possible, communications between the PRP and the WDNR concerning the Site shall be directed through the project coordinators. Each project coordinator shall be responsible for assuring that communications are appropriately disseminated and processed among the respective parties.
- B. The WDNR project coordinator or a designee shall have the authority, pursuant to this contract, to (1) agree to minor changes in the extent of soils to be removed, if any; (2) take samples or direct that samples be taken; (3) direct that work stop whenever the WDNR project coordinator determines that activities at the Site may create danger to public health or welfare or the environment; (4) observe, take photographs and make such other reports on the progress on the work as deemed appropriate; (5) review records, files and documents relevant to this contract; and (6) make or authorize minor field modifications to the RI/FS or RD/RA in the techniques, procedures or design utilized in carrying out this contract. Any field modifications shall be approved orally by both project coordinators. Within 72 hours following the modification, the project coordinator who requested the modification shall prepare a memorandum detailing the modification and the reasons therefore and shall provide and mail a copy of the memorandum to other project coordinators.



- C. The project coordinator for the PRP or a designee shall be on site during performance of all work undertaken pursuant to this contract at the Site.
- D. The absence of the WDNR project coordinator from the Site shall not be cause for stoppage of work.

## XII. SAMPLING

- A. The WDNR and the PRP shall make available to each other the results of all sampling, tests and other data generated by them, or on their behalf, with respect to the implementation of this contract, including raw data and data which has not been validated, and the PRP shall submit validated sampling data and the results of tests in written monthly progress reports as required by Section V. of this contract.
- B. At the request of the WDNR project coordinator, the PRP shall allow split or duplicate samples to be taken by the WDNR during sample collection conducted during the implementation of this contract. The PRP project coordinator shall endeavor to notify the WDNR project coordinator not less than five (5) working days in advance of any sample collection. At the request of the PRP project coordinator, WDNR shall allow split or duplicate samples to be taken by the PRP during sample collection conducted pursuant to this contract. The WDNR project coordinator shall endeavor to provide reasonable notice to the PRP project coordinator in advance of any sample collection.

## XIII. QUALITY ASSURANCE

- A. The PRP shall use quality assurance, quality control and chain of custody procedures in accordance with EPA "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans" QAMS-005-80 (EPA, 1989), and any EPA updates to these procedures, throughout all data collection activities. Guidance or updates which are published after the effective date of this contract shall be applied prospectively to work tasks which have not yet begun. If either an applicable guidance document is changed or new written guidance is issued which require modification of the QAPP, WDNR shall provide notice to the PRP, in writing, of the required modifications to the plan. Within thirty (30) calendar days of its receipt of such notice, the PRP shall submit a revised QAPP to WDNR which incorporates the modifications required by WDNR. The PRP may request WDNR approval for an extension if additional time is needed to revise the QAPP to take into account the new or changed guidance. WDNR's approval of such an extension request shall not be unreasonably withheld.
- B. The PRP shall consult with the WDNR and WDNR project coordinator in planning for, and prior to, all sampling and analysis as detailed in the RI/FS work plan. In order to provide quality assurance and maintain quality control with respect to all samples collected pursuant to this contract, the PRP shall:
  - 1. Ensure that the WDNR employees and authorized representatives of WDNR are allowed access to any laboratory and personnel utilized by the PRP for analyses;
  - 2. Ensure that all sampling and analyses are performed according to EPA methods or other methods deemed satisfactory by the WDNR and include all protocols to be used for analyses in the Quality Assurance Project Plan;



3. Ensure that any laboratories utilized by the PRP for analyses participate in a quality assurance/quality control program equivalent to that which is followed by the EPA, and which is consistent with EPA document QAMS-005-80. As part of such a program, and upon request by the WDNR, such laboratories shall perform analyses of samples provided by the WDNR, or by EPA at WDNR's request, to demonstrate the quality of analytical data for each such laboratory.

#### XIV. FORCE MAJEURE

- A. The PRP shall cause all work to be performed within the time limits set forth in this contract, unless performance is delayed by events that constitute a force majeure. For purposes of this contract, a "force majeure" is an event beyond the control of the PRP which delays performance of any obligations under this contract. Increases in cost or changes in economic circumstances shall not be considered circumstances beyond the control of the PRP, provided, however, that an event or series of events that would otherwise constitute a force majeure shall be deemed force majeure even though such events or series of events results in increased costs or changed economic circumstances.
- B. The PRP shall notify the WDNR in writing no later than seven (7) calendar days after any event which the PRP contends is a force majeure. Such notification shall describe the anticipated length of the delay, the cause or causes of the delay, the measures taken and to be taken by the PRP to minimize the delay, and the timetable by which these measures will be implemented. The PRP shall have the burden of demonstrating that the event is a force majeure. WDNR shall promptly provide the PRP with a written decision as to whether the event constitutes a force majeure after receiving notification from the PRP.
- C. If the WDNR agrees that a delay is attributable to a force majeure, the time period for a performance under this contract shall be extended for a time period attributable to the event constituting a force majeure unless WDNR determines that it will terminate this contract because the PRP is unable to proceed to fulfill its material obligations under this contract within a reasonable time period acceptable to WDNR.

#### XV. LIQUIDATED DAMAGES

- A. The PRP shall be liable for payment into the Environmental Fund administered by the WDNR of the sums set forth below as liquidated damages for each week, or any part thereof, that the PRP fails to submit a plan, report or other document or fails to complete the RI, the FS, the RD or the RA action in accordance with the requirements of this contract, unless WDNR determines that such delay is attributable to a force majeure as defined in Section XIV. Such sums shall be due and payable within fifteen (15) business days of receipt of notification from the WDNR assessing the liquidated damages. These liquidated damages shall accrue in the following amounts:

1. For failure to submit any plan, report or other document --  
(except as identified in paragraph A.2. of this Section)

Amount	Period
\$500 per week, or any part thereof	1 to 2 weeks
\$1000 per week, or any part thereof	3 to 4 weeks
\$2000 per week, or any part thereof	5 or more weeks



2. For failure to complete the RI, the FS, the RD or the RA action --  
(in accordance with the RI/FS and RD/RA work plans approved by WDNR)

Amount	Period
\$750 per week, or any part thereof	1 to 2 weeks
\$2000 per week, or any part thereof	3 to 4 weeks
\$5000 per week, or any part thereof	5 or more weeks

- B. Liquidated damages set forth in paragraph A. of this Section shall not preclude the WDNR from electing to pursue any other remedy or sanction because of the PRP's failure to comply with any of the terms of this contract, including a lawsuit to enforce the terms of this contract.
- C. In the event that the PRP believes that a deadline may not be met because of a legitimate dispute which has arisen between the parties concerning any material term under or subject to this contract, the PRP may request approval of an extension of the deadline from WDNR. WDNR approval of such a request shall not be unreasonably withheld.

#### XVI. DISPUTE RESOLUTION

- A. The parties shall use their best efforts to in good faith resolve all disputes or differences of opinion informally through the project coordinators. If, however, any dispute arises concerning any matter under or subject to this contract, including additional work determined by WDNR to be necessary pursuant to Section VII., notwithstanding that a particular provision or section of this contract is not made expressly subject to dispute resolution, which dispute the parties are unable to resolve informally, the PRP shall present a written notice of such dispute to the WDNR, which shall set forth specific points of dispute, the position of the PRP and the technical basis therefore, and any actions which the PRP considers necessary.
- B. Within ten (10) business days of receipt of such a written notice, the WDNR shall provide a written response to the PRP setting forth its position and the basis therefore. During the five (5) business days following receipt of WDNR's response to the PRP's stated position, the parties shall attempt to negotiate, in good faith, a resolution of the differences.
- C. Following the expiration of the time periods described in paragraph B of this Section, if the WDNR concurs with the position of the PRP, the PRP shall be so notified in writing and this contract shall be modified to include any necessary extensions of time or variances of work. If the WDNR does not concur with the position of the PRP, the WDNR shall resolve the dispute in good faith, taking due account of the position of the PRP, and, based upon and consistent with the terms of this contract, and shall provide written notification of such resolution to the PRP. If the PRP believes that WDNR's resolution of the dispute is not in accordance with the terms and conditions of this contract, the PRP may seek to enforce the terms of the contract as provided by law, except that any evidence used in such an action shall be limited to the administrative record for this Site.
- D. The pendency of dispute resolution under this section shall not affect the time period for completion of work or obligations to be performed under this contract, except that, upon mutual agreement of the WDNR and the PRP, any time period may be extended not to exceed the actual time taken to resolve the dispute. Elements of work and obligations not affected by the dispute shall be completed in accordance with the schedule contained in the RI/FS and RD/RA work plans.



- E. Upon resolution of any dispute, whether informally or using the procedures in this section, any additions or modifications required as a result of such dispute resolution shall immediately be incorporated, if necessary, into the appropriate plan or procedure and to this contract. The PRP shall proceed with all remaining work according to the modified plan or procedure.
- F. In any proceeding to enforce the terms of this contract or to collect liquidated damages for violations thereof, the PRP may defend on the basis that WDNR's resolution of any properly invoked dispute was arbitrary and capricious, not in accordance with the material terms and conditions of this contract or not in accordance with applicable law. If the court finds against WDNR, the court may exercise such legal and equitable powers as it deems appropriate.

#### XVII. COMMUNITY RELATIONS AND PUBLIC COMMENT

The WDNR shall be responsible for conducting the Community Relations activities at this Site. The WDNR will prepare and implement a community relations plan for the Site which defines how information will be disseminated to the public. WDNR will prepare the Community Relations documents, as specified in the NCP, CERCLA, and the EPA guidance "Community Relations in Superfund: A Handbook", dated June 1988, (OSWER Directive 9230.0-3B), and any subsequent updates. The PRP shall cooperate in these efforts by providing any finding of the RI/FS and RD/RA to the WDNR. As requested, the PRP may prepare appropriate information to be disseminated to the public by the WDNR.

#### XVIII. ADMINISTRATIVE RECORD REQUIREMENTS

- A. The WDNR shall compile and maintain the administrative record file(s) for the Site. The PRP shall provide to the WDNR, at a minimum, those documents which are generated by the PRP pursuant to this contract and which are listed in section 300.810(a)(1) of the NCP and in the appropriate sections of the "Interim Guidance on Administrative Records for Selection of CERCLA Response Actions" (OSWER Directive No. 9833.3A). The information that comprises the administrative record file(s) for the Site will be made available to the public by the WDNR, once the RI/FS work plan is approved by WDNR. Once the work plan is approved, the PRP shall submit to WDNR, at quarterly intervals, all of the information that is generated during the RI/FS that is related to the selection of the remedy. No later than thirty (30) working days before the scheduled public comment period for the Proposed Plan and the RI/FS, the PRP shall provide the WDNR with all administrative record-related documents that have been generated to date by the PRP, if they have not already been submitted.
- B. The PRP shall provide the WDNR with any relevant documents that were generated before or after the RI/FS process that relate to the selection of the response action at the Site. The PRP shall provide the WDNR with documents and information relating to previous studies conducted under federal, State or local authorities, or on a voluntary basis by the PRP. The PRP shall provide the WDNR with management documents held by the PRP or known of by the PRP, such as hazardous waste shipping manifests, CERCLA 103(c) notifications, and any other information about site characteristics or conditions not contained in any of the above documents.
- C. In the event that the WDNR determines that the administrative record file will be supplemented after the signature of the ROD, the PRP shall provide the WDNR with all relevant documents requested by the WDNR.



## XIX. RECORD PRESERVATION

The PRP agrees to preserve, during the pendency of this contract, and for a minimum of ten (10) years after termination of this contract, one original or one legible copy of all records and documents of the PRP which are in the possession of the PRP, or in the possession of any division, employee, agent, accountant, or contractor, or any attorney of the PRP, which are generated pursuant to this contract, the SOW or the RI/FS and RD/RA work plans. After this ten year period, the PRP shall notify the WDNR, in writing, within thirty (30) calendar days prior to the destruction or disposal of any such documents. Upon request of the WDNR, the PRP shall make available to the WDNR such records, or copies of any such records. This section is intended to preserve PRP records, or copies of any such records and is not intended nor shall be construed to be a waiver of, or in any other way to diminish the full availability to the PRP, of any attorney-client or other privilege which may apply.

## XX. RESERVATION OF RIGHTS

- A. Except as otherwise provided in Section XXVI of this contract, nothing herein shall waive the right of the WDNR to enforce this contract, or to take any other action pursuant to CERCLA, Chapter 144, Wis. Stats., or any other available legal authority. In addition, WDNR reserves the right, following thirty (30) calendar days written notice to the PRP, to undertake the work that is the responsibility of the PRP under this contract, to refer the Site to EPA for action pursuant to CERCLA Section 104 or 106, or to enforce the terms of the contract, if the PRP materially fails to satisfactorily perform the tasks required under this contract by the end of the thirty (30) calendar day notice period. If WDNR conducts any work that is the responsibility of the PRP under this contract, it cannot also commence or maintain an action to compel the PRP to conduct work already completed by WDNR in a manner consistent with this contract. However, the WDNR shall have the right to seek recovery from the settling PRP for any costs incurred in undertaking such actions upon the failure of the PRP, its agents, contractors or subcontractors to proceed according to the requirements of this contract. WDNR will not undertake the work that is the responsibility of the PRP under this contract without a material failure of the PRP to satisfactorily perform the tasks required of them under this contract.
- B. Nothing herein is intended to release, discharge or in any way affect any claims, causes of action or demands in law or equity which each party may have 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 materials, hazardous substances, solid or hazardous waste, contaminants or pollutants at, to or from the Site. The parties to this contract expressly reserve all rights, claims, demands and causes of action they may have against any and all other persons and entities.
- C. The WDNR recognizes that the PRP may have the right to seek contribution, indemnity and/or any other available remedy against any person found to be responsible or liable for contribution indemnity or otherwise for any amounts which have been or will be expended by the PRP in connection with the Site. The parties to this contract believe that this contract is an administrative settlement with the State in accordance with s. 113(f)(2) of CERCLA, 42 U.S.C. ss. 9613(f)(2), which provides protection for claims for contribution regarding matters addressed in this contract.
- D. Nothing herein shall be construed to release the PRP from any liability for failure of the PRP to perform the RI/FS or RD/RA in accordance with the RI/FS or RD/RA work plans which will be incorporated herein. The parties expressly recognize that the signing of this contract and the successful completion and approval of the RI/FS and RD/RA do not represent satisfaction, waiver, release or a covenant not to sue (except as provided in Section XXVI below) of any claim of the



State of Wisconsin against the PRP related to the Site (including claims to require the PRP to undertake further response actions and claims to seek reimbursement of response costs pursuant to section 144.442, Wis. Stats., or Section 107 of CERCLA), except that, upon receipt of written notice of satisfaction as provided in Section XXVI of this contract, the PRP shall have no further obligations under this contract. The parties further expressly recognize that this contract does not represent a waiver of any claim of the United States or the EPA against the PRP relating to the Site (including claims to require the PRP to undertake further response actions and claims to seek reimbursement of response costs pursuant to Section 107 of CERCLA).

- E. Nothing herein is intended to be a release or settlement of any claim for personal injury or property damage to any person not a party to this contract.

#### XXI. REIMBURSEMENT OF COSTS

- A. The WDNR shall provide the PRP with an itemized cost summary of all past response costs incurred by WDNR which were related to the Site, including costs incurred in negotiating this contract, within (90) calendar days after the effective date of this contract. The WDNR itemized cost summary shall include documents which describe the work performed by contractors, if contractors were used. Within sixty (60) calendar days of receipt of the itemized cost summary, the PRP shall pay to WDNR all past response costs incurred by WDNR for the Site, subject to the dispute resolution provisions of Section XVI.
- B. Shortly after the end of each state fiscal year following the effective date of this contract, the WDNR shall submit an itemized cost summary to the PRP of the costs incurred by WDNR in development of the Baseline Risk Assessment Plan and of all oversight costs incurred by the WDNR with respect to this contract during the previous fiscal year, including, but not limited to, the costs incurred by the WDNR, if any, in having a qualified person oversee the conduct of the RI/FS and the implementation of the RA. Within sixty (60) calendar days of receipt of the itemized cost summary, the PRP shall pay to WDNR the full amount of the oversight costs incurred during the preceding year, subject to the dispute resolution provisions of Section XVI.
- C. Payments to the WDNR for past response costs and oversight costs incurred by the WDNR shall be made payable to the Wisconsin Department of Natural Resources and shall be mailed or delivered to: Wisconsin Department of Natural Resources, Bureau of Solid and Hazardous Waste Management, Environmental Response and Repair Section, Attn: Section Chief, P.O. Box 7921, Madison, Wisconsin 53707-7921. A copy of the transmittal letter and the check shall be sent to the WDNR project coordinator.

#### XXII. INDEMNIFICATION

- A. The PRP agrees to indemnify and save and hold the State of Wisconsin, the WDNR and its officers, employees and authorized representatives, harmless from any and all claims or causes of action arising from, or on account of, acts or omissions of the PRP, its officers, employees, receivers, trustees, agents, assigns or authorized representatives, in carrying out the activities pursuant to this contract. However, the PRP shall not be responsible for indemnification for claims or causes of action arising out of acts or omissions of the State of Wisconsin, the WDNR, or its employees or authorized representatives.
- B. The WDNR is not a party to any other contract entered into by the PRP concerning the Site.
- C. If an entity indemnified under this section receives notice of a claim or action covered by this indemnity, it shall notify the PRP immediately of any such claim or action. Further, the indemnified entity shall keep the PRP apprised of how the claim or action is proceeding through its resolution. The PRP, at its discretion, may participate in the defense of all claims or actions



within the scope of this indemnification. The indemnified entity shall notify the PRP, in advance, of any intention to settle a claim covered by this section.

#### XXIII. EFFECTIVE DATE

This contract shall be executed by the PRP before being executed by WDNR. When WDNR executes the document, the WDNR shall enter an effective date immediately below the WDNR signature which shall be a minimum of five (5) business days after the date of mailing (first class postage prepaid) by WDNR to the PRP of a fully executed copy of the contract.

#### XXIV. SUBSEQUENT AMENDMENT

In addition to the procedures set forth in Sections VII, XI and XIV of this contract, this contract may be amended by mutual agreement of the WDNR and PRP. Any amendment of this contract shall be in writing, signed by the WDNR and the PRP, and shall have as the effective date that date on which the last party signed such amendment.

#### XXV. TERMINATION AND SATISFACTION

The provisions of this contract shall be deemed satisfied upon receipt by the PRP of written notice from the WDNR that the PRP has documented that all of the terms of this contract, including any modified or additional work, or amendments, have been completed in accordance with the terms hereof to the satisfaction of the WDNR. Upon such demonstration by the PRP, said written notice shall not be unreasonably withheld or delayed by WDNR. Upon issuance of such written notice by WDNR to the PRP, WDNR shall request, in writing, that EPA propose deletion of the Site from the National Priorities List and provide any additional information requested by EPA for delisting of the Site, and WDNR shall take the actions necessary to delete the Site from Wisconsin's Inventory of sites or facilities which may cause or threaten to cause environmental pollution in accordance with applicable EPA and State of Wisconsin guidance and procedures in effect at the time of the written notice.

#### XXVI. COVENANT NOT TO SUE

- A. Except as otherwise provided herein, from the effective date of this contract, for as long as the terms herein are complied with, and upon or after termination of this contract pursuant to the provisions of Section XXV (Termination and Satisfaction) and payment to WDNR of amounts due as liquidated damages or oversight costs under this contract, WDNR and the State of Wisconsin covenant not to sue or take any action against the PRP or its officers, directors, employees and agents: regarding work satisfactorily performed by the PRP hereunder; for amounts actually paid to WDNR by the PRP hereunder. Work shall be deemed to have been satisfactorily performed if it was performed in accordance with all applicable requirements as contained in Section IV (Work to Be Performed) in effect at the time of the performance of the work.
- B. WDNR and the State of Wisconsin covenant not to sue or take any action against the PRP or its officers, directors, employees and agents for any and all claims and any liability, if any, under sections 106 and 107 of CERCLA, 42 U.S.C. ss 9606 and 9607, section 7003 of RCRA, 42 U.S.C. s. 6973, ss. 144.442 and 144.76, Wis. Stats., or under the Wisconsin common law relating to



contamination at the Delavan Municipal Well #4 Site and the Sta-Rite property as that contamination is described in the SER and the RI report prepared in accordance with this contract. Notwithstanding any other provision in this contract, the State of Wisconsin and WDNR reserve the right to institute proceedings in this action or in a new action, to issue an order seeking to compel the performance of any additional investigation or remediation work at the Delavan Municipal Well #4 Site or the Sta-Rite property and/or the reimbursement of the State of Wisconsin and the WDNR for its response costs for any investigative or remediation action undertaken by WDNR at the Delavan Municipal Well #4 Site or the Sta-Rite property under CERCLA or state law if:

1. For proceedings prior to WDNR's issuance of a Notice of Satisfaction to the PRP under Section XXV. of this contract: conditions at the Delavan Municipal Well #4 Site or the Sta-Rite property, previously unknown to the WDNR, are discovered after the signing of this contract or information is received, previously unknown to WDNR, in whole or in part, after the signing of this contract; and these previously unknown conditions or this information indicates that the remedial action required under this contract is not protective of human health and the environment.
2. For proceedings subsequent to WDNR's issuance of a Notice of Satisfaction under Section XXV. of this contract: conditions at the Delavan Municipal Well #4 Site or the Sta-Rite property, previously unknown to and undetected by WDNR, are discovered after WDNR issues the Notice of Satisfaction to the PRP or information is received, previously unknown to WDNR, in whole or in part, after WDNR issues the Notice of Satisfaction to the PRP; and such conditions or information indicates that the remedial action is not protective of human health and the environment.

#### XXVII. INTERVENTION BY U.S. EPA

A. For purposes of this contract, intervention by U.S. EPA means:

1. Entry into these proceedings as a participating entity and signatory to this contract; or
2. Formal action by which U.S. EPA objects to any material provision of this contract. Such action is constituted by:
  - a. Invocation of any sanction against the PRP under CERCLA, as amended by SARA, applicable to the environmental contamination at the Site for actions taken or planned to be taken pursuant to this contract or invocation of any requirement under applicable environmental laws that is inconsistent with the requirements of this contract, prior to the termination of this contract;
  - b. Institution of any administrative or judicial proceeding against the PRP prior to termination of this contract which seeks legal or equitable relief for any activity at the Site pursuant to this contract; or
  - c. Institution of any administrative or judicial proceeding against WDNR, the effect or purpose of such proceeding being to limit the power or capacity of WDNR to administer the provisions of this contract.

B. Any act of intervention by U.S. EPA as defined in Section XXVII.A. shall automatically allow the PRP to invoke Section XVI. (Dispute Resolution) unless the PRP and WDNR agree that the particular act of intervention in that instance does not cause a dispute resulting in a delay or interruption of work to be performed or deadlines to be met. The WDNR shall use its best

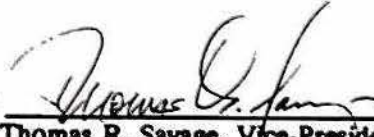


efforts to resolve any administrative or legal proceedings or disputes or differences of opinion between WDNR and U.S. EPA. If the pendency or resolution of any such proceeding, dispute or difference of opinion between WDNR and U.S. EPA makes necessary an extension of time or results in a modification of work planned or additional work for the PRP, WDNR shall promptly notify the PRP in writing and Sections VII. and XIV. shall apply. This section shall not limit the ability of the PRP to invoke the dispute resolution provisions of Section XVI.

- C. In the event that the WDNR and U.S. EPA are unable, within a reasonable amount of time, to resolve a dispute or difference of opinion as to any material obligation of the PRP under this contract relating to the Delavan Municipal Well #4 Site (such as the work to be performed, the remedy selected or the remediation to be achieved), the PRP may terminate this contract and the PRP shall have no further responsibility to perform under this contract.

IT IS SO AGREED:

PRP

By:   
Thomas R. Savage, Vice-President  
Sta-Rite Industries, Inc.

Date: 9/20/90

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

By:   
Carroll D. Besa, Secretary  
Department of Natural Resources

Date: 9-21-90

EFFECTIVE DATE: SEP 28 1990

**STATEMENT OF WORK FOR COMPLETION OF A  
REMEDIAL INVESTIGATION AND FEASIBILITY STUDY (RI/FS) AND  
REMEDIAL DESIGN AND REMEDIAL ACTION (RD/RA) AT THE**

**Delavan MUNICIPAL WELL # 4 SITE  
Delavan, WI**

This document presents the Statement of Work (SOW) for conducting a Remedial Investigation and Feasibility Study (RI/FS); Remedial Design (RD); and Remedial Action (RA) in sequence for the Delavan Municipal Well # 4 Site and the Sta-Rite Industries, Inc., property located in the City of Delavan, Walworth County, Wisconsin ("the Site"). Following the schedule given in the contract, Work Plans will be prepared and submitted for each major component which will provide more detailed guidance on the execution of the response activities at the Site.

The purpose of the RI is to determine the nature and extent of contamination at the site. The purpose of the FS is to develop and evaluate appropriate remedial action alternatives based on the RI data and report.

The purpose of the RD/RA is to implement the remedial design/remedial action for the Site, as documented in the Superfund Record of Decision (ROD) prepared by the WDNR.

This SOW generally addresses items needed to fulfill the requirements for an RI/FS and RD/RA. The RI/FS Work Plan to be developed pursuant to this SOW will present a phased approach that recognizes the interdependency of the RI and FS. The data collected in the RI influences the development of remedial alternatives in the FS, which in turn affects the data needs and scope of treatability studies and additional field investigations. The RI/FS component shall be conducted in a manner that will minimize the need for data collection or performance assessments in the RD phase.

In the following sections, brief discussions of the major response tasks are presented, by four major topical categories:

- \* I. RI/FS Plans and Management
- \* II. Remedial Investigation (RI);
- \* III. Feasibility Study (FS);
- \* IV. Remedial Design and Remedial Action (RD/RA)

**I. RI/FS PLANS AND MANAGEMENT**

**TASK 1**

**DESCRIPTION OF CURRENT SITUATION AND INVESTIGATIVE SUPPORT**

**1. Information and Data Gathering**

The following activities will be initiated and conducted prior to or concurrent with the preparation of the RI/FS work plan.

**a. Site Mapping**

An accurate topographic map of appropriate working scale and contour interval will be prepared and submitted to WDNR. The base map of the Site will be prepared from this topographic map and will have a scale of one inch to 100 feet (1":100') and two-foot contour intervals. The base map will illustrate the locations of wetlands, floodplains, water features, drainage patterns, tanks, buildings, utilities, property boundaries, paved areas, easements, rights-of-way, and other pertinent features. Larger scale maps will be produced from the base mapping, as necessary.



Surveying is required to establish horizontal and vertical controls for the Site relative to the National Geodetic Vertical Datum of 1929. In addition to the topographic map, a grid plan will be prepared using the base map and grid overlay at a nominal scale of the map. This grid plan will show the location of existing monitoring wells, additional wells installed, all sampling locations, and water supply wells and borings. The topographic map and grid plan will be submitted to WDNR with the sampling and analysis plan for the Site.

A legal description of the property will be reviewed and field checked. The intent is not to perform a boundary survey, but to locate the boundaries so that the future activities do not carry over onto adjacent properties without obtaining proper permission.

b. Metes and Bounds

A legal description of the Site will be assembled from existing county and township records and results of the Site survey.

c. Access Permission

The necessary permission will be obtained, using best efforts, to obtain access to the Site and surrounding parcels. These arrangements will include negotiating access permission with the appropriate landowners, the demarcation of all buried utilities, and construction of access roads. Access permission will be obtained following WDNR approval of the sampling and analysis plan.

d. Preparation of Support Facilities

Arrangements will be made to construct the appropriate support facilities and procure the equipment necessary to perform a hazardous Site investigation. This includes preparation of decontamination facilities, utility hookups and Site access control stations. Such arrangements will be completed prior to the mobilization for the RI.

2. Preparation of Site Evaluation Report

Information and data that are gathered during these initial steps will be used to generate a Site Evaluation Report (SER) that will address the following:

a. Description of Current Situation

The background information pertinent to the Site and to human health and environmental concerns will be described, and the purpose of the RI will be further detailed. The data gathered during previous investigations will be reviewed and evaluated. Regional information will be obtained from available USGS and Wisconsin Geologic Survey reports. The existing Site information that will be reviewed may include but will not necessarily be limited to:

- \* WDNR and EPA files;
- \* Walworth County Soils Conservation Service reports;
- \* Aerial photographs;

- Historical water quality data;
- U.S. and Wisconsin Geological Survey files;
- Disposal records (if available).

In addition to this literature search, on-site activities may be used to confirm and update certain information. For example, existing monitoring wells may be inspected to determine if they are functional. Also, the location and status of selected water supply wells may be field verified.

b. Site Summary Background

A summary of the Site background that includes pertinent boundary conditions, general site physiography, hydrology and geology, as well as complete history of waste disposal activities and ownership transfer for the Site. The PRPs shall make available to WDNR, upon request, any records of solid and hazardous waste management activities, manifests, 103(c) records and other relevant information.

c. Summary of Health and Environmental Effects

The nature and extent of the problem that includes a summary of actual or potential on-site and off-site health and environmental effects. Threats or potential threats to human health and the environment will be emphasized.

d. History of Response Actions

The history of response actions that includes a summary of investigations and response actions conducted by local, state, federal or private parties.

e. Areas of Investigation

Site boundary conditions will be established to limit the areas of investigation. The boundaries will be set so that the on-site activities will cover the contaminated media in sufficient detail to support the FS. Boundaries for site access control and site boundary security will also be identified. The boundaries of the study area may or may not correspond to the property boundaries.

f. Identification of Receptors

Actual and potential receptors, human and environmental, will be identified and used in the development of the site conceptual model, migration pathway assessment, and baseline risk assessment. Included will be the identification of private and public water supply wells within a two-mile radius of the site. If possible, well construction details for these wells and other private water supply wells, which may have been previously sampled, will be obtained. A table summarizing the known construction details will be prepared and submitted with the original drilling logs, as available.

g. Development of a Conceptual Model

Information on the waste sources, pathways and receptors at the site will be used to develop a conceptual site model to evaluate potential risks to human health and the environment. The conceptual site model will include all known and suspected sources of contamination, types of



contaminants and affected media, known and potential routes of migrations, and all known or potential human and environmental receptors. If exact data are unavailable for components of the model, the possible range of contaminant migrations and the potential effects on receptors will be identified to the extent possible. This effort, in addition to assisting in identifying where samples need to be taken, will also assist in identifying appropriate remedial technologies.

h. Identification of Operable Units and Sampling Needs

The SER will identify appropriate operable units and sampling needs.

The Investigative Support will be conducted prior to, or concurrent with, the RI/FS Work Plan Preparation. The SER will be submitted for review and approval by WDNR prior to submittal of the final RI/FS Work Plan.

TASK 2

RI/FS WORK PLAN PREPARATION

A RI/FS Work Plan (RI/FS WP) will be prepared for the Site that details the technical approach, personnel requirements, and schedule for each task described in this SOW. The schedule will show the implementation of tasks and proposed dates for submittal of draft and final reports summarizing the findings of the tasks. Dates will be in weeks subsequent to WDNR approval and acceptance of prior deliverables. A Baseline Risk Assessment Plan (BRAP) will be developed by WDNR for this Site. Failure of WDNR to provide the BRAP within a reasonable time period shall not limit the PRP's right to submit an RI/FS work plan to WDNR. A recommended Work Plan format is presented in the "Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA, October 1988, (EPA/540/G-89/004, OSWER Directive 9355.3-01). Incorporated into the WP will be the following specific plans addressing sampling, quality assurance/quality control (QA/QC), and health and safety:

TASK 2/A

Sampling and Analysis Plan

A Sampling and Analysis Plan (SAP) that addresses all data acquisition activities will be prepared and submitted to WDNR for its approval. The SAP will contain a statement of sampling objectives, specification of equipment, required analyses, sample types, and sample locations and frequency. The SAP will address specific hydrologic, hydrogeologic and air transport characterization methods including, but not limited to, geologic mapping, geophysics, field screening, drilling and well installation, ground water flow determination and sampling. The application of these methods will be described for each major subtask within the Site investigation (e.g., waste characterization).

The SAP will also identify the data requirements of specific remedial technologies which may be necessary to evaluate remedial alternatives in the FS. The SAP will include an evaluation explaining what additional data are required to adequately characterize the Site, evaluate the risk posed by the Site if no action is taken, and support the development and evaluation of alternatives. The SAP will provide a schedule stating when events will take place and when deliverables will be ready. "A Compendium of Superfund Field Operations Method" (EPA/540/P-87/001a, OSWER Directive 9355.0-14, Sept. 1987) will be utilized in the selection and definition of field methods, sampling procedures, and custody.

TASK 2/B

Quality Assurance Project Plan

A Quality Assurance Project Plan (QAPP), prepared in accordance with current EPA guidance, will be appended to the SAP. The purpose of the QAPP is to ensure that formal procedures are available for all activities affecting the quality of data collected.

The QAPP will be prepared according to EPA guidance documents, and will include the following 16 elements:

1. Title page with provisions for approval signatures;
2. Table of contents;
3. Project description;
4. Project Personnel organization and responsibility;
5. QA objectives for measurement data in terms of precision, accuracy, completeness, representativeness, comparability & intended use (for each parameter);
6. Sampling procedures, locations, parameters, number of samples;
7. Chain of custody procedures;
8. Calibration procedures and frequency for field & laboratory instruments;
9. Analytical procedures;
10. Data reduction, validation, and reporting;
11. Internal quality control checks;
12. Type of QA Performance and system audits and frequency;
13. Preventive maintenance procedures and schedules;
14. Specific routine procedures to be used to assess data precision, accuracy, representativeness, comparability and completeness of specific measurement parameters involved;
15. Corrective action procedures for field and laboratory instruments; and
16. Quality assurance reports to management.

The QAPP will also describe how the data will be documented and tracked, including documentation materials and procedures and financial reporting procedures. A pre-QAPP meeting will be held to review and discuss the details needed in the QAPP.

TASK 2/C

Health and Safety Plan

A Health and Safety Plan (HSP) will be prepared and submitted to WDNR. The WDNR will review and comment on the HSP, however it will not issue an approval for the HSP. The HSP will be designed to protect the health of personnel involved in site activities and the surrounding community. The HSP will be developed on the basis of site conditions and be consistent with appropriate regulations and guidance including the following, at a minimum:

- \* 20 CFR 1910.120 (i) (2) - Occupational Health and Safety Administration: Hazardous Waste Operations and Emergency Response, Interim Rule, December 19, 1986.
- \* EPA Order 1440.2 - Health and Safety Requirements for Employees Engaged in Field Activities.
- \* EPA Order 1440.3 - Respiratory Protection.
- \* EPA Occupational Health and Safety Manual.



- \* EPA Interim Standard Operating Procedures (September, 1982).

The HSP shall provide information on provisions to protect site visitors, personnel responsibilities, protective equipment, procedures, protocols, decontamination methods, and medical surveillance, routes and maps to local hospitals and phone numbers of emergency personnel.

#### TASK 2/D

##### Data Management Plan

A Data Management Plan (DMP) will be developed to document and track investigation data and results. The DMP will identify and establish laboratory and data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents.

#### TASK 2/E

##### ATSDR Health Assessment

The RI/FS WP for the Site shall also provide for collection of adequate information to support the Agency of Toxic Substances and Disease Registry (ATSDR) health assessment which is required by SARA. Since the health assessment will be prepared by ATSDR, all draft Work Plans and support documents will be submitted for ATSDR or State Department of Health and Social Services, Division of Health (DOH), if so designated, review and comment to ensure that their needs and requirements are being met. In the event that the health assessment has already been completed by ATSDR or the DOH, the RI report will include and address the findings of the health assessment. Failure of ATSDR or DOH to respond to a request for review and comment within a reasonable time after receipt shall not limit the PRP's right to submit and RI/FS work plan to WDNR without ATSDR or DOH review and comment.

#### TASK 2/F

##### Preparation and Submission of Plans

The preparation of the project plans will be preceded by an evaluation of the existing information and initiation of investigative support activities (Task 1).

The RI/FS Work Plan will be submitted in accordance with the schedule defined in Section IV (Work to be Performed) of the contract. Specifically, the RI/FS WP will be developed and implemented in conformance with all provisions of the contract, this SOW, and the standards set forth in the following statutes, regulations, and guidance:

- \* CERCLA, as amended, especially Section 121
- \* National Contingency Plan, as amended;
- \* EPA "RI/FS Guidance, Oct 1988" (EPA/540/G-89/004);
- \* NR 141, Wis. Adm. Code; Groundwater Monitoring Well Requirements; and

- \* Additional guidance documents provided by the WDNR.

Should the results of a RI or FS indicate that additional data collection or performance assessments are required to select a defensible remedy, a supplemental work plan will be prepared and submitted for WDNR approval within 30 days of the submittal of the draft RI or FS Report to WDNR. The ancillary plans described in Task 2/A through 2/E will also be modified to reflect the additional work requirements.

## II. REMEDIAL INVESTIGATION

### SCOPE

The objectives of the RI are to:

- \* Characterize the source(s) of actual and potential contamination including groundwater, surface water, air, soil, sediment and debris;
- \* Characterize the hydrogeologic and physical setting to determine the most likely contaminant migration pathways and physical features that could affect potential remedial actions;
- \* Determine the migration rates, extent, and characteristics of contamination that may be present at the Site;
- \* Gather data and information to the extent necessary and sufficient to quantify risk to public health and the environment and to support the development and evaluation of viable remedial alternatives in the FS.

The scope of the remedial investigation consists of five tasks:

Task 3:	Site Investigations
Task 4:	Site Investigation Analyses
Task 5:	Treatability Studies and Supplemental Remedial Investigations
Task 6:	RI Related Reports
Task 7:	Community Relations Support

Each of these tasks is described in the following sections.

### TASK 3

#### SITE INVESTIGATIONS

Investigations necessary to characterize the site and its actual or potential hazard to public health and the environment will be conducted. The investigations will result in data of adequate technical content to support the development and evaluation of remedial alternatives during the FS. Investigation activities will focus on problem definition and data to support the screening of remedial technologies, alternative development and screening, and detailed evaluation of alternatives.

The site investigation activities will follow the RI/FS work plans set forth in Task 2. All sample analyses will be conducted at laboratories following EPA protocols or their equivalents. Strict chain-of-custody



procedures will be followed, and all samples will be located on the site map (and grid system) established under Tasks 1 and 2. A description of the types of investigations that will be conducted is presented below.

#### TASK 3/A

##### Source Characterization and Preparation of Technical Memorandum

An investigation will be carried out to characterize the physical and chemical aspects of the waste material and the materials in which they are contained. The investigation of these source areas will involve obtaining data related to:

- \* Waste characteristics (type, quantity, chemical and physical properties, and concentrations); and
- \* Facility characteristics (type and integrity of containment and drainage control).

This information will be obtained from a combination of existing site information, field inspections, and site sampling activities. Field investigations are needed to determine the integrity of the existing source control structures.

The source characterization will culminate in the preparation and submittal of a technical memorandum to WDNR. This memorandum will summarize the findings of the source characterization and will recommend parameters, or classes of parameters, which will be the focus of subsequent contaminant characterization studies.

#### TASK 3/B

##### Migration Pathway Assessment and Preparation of Technical Memorandum

The migration pathways at the Site will be identified and characterized through the following types of investigations. Each investigation will follow at a minimum the standards as stated in the approved SAP for this Site.

##### Hydrogeologic:

A hydrogeologic study will be performed to further evaluate the subsurface geology and characteristics of the water bearing formations. This study will define the site hydrostratigraphy, controlling geologic features, zones of preferential groundwater transmission, and the distribution of hydraulic heads within the water bearing formations. The results of this study will be combined with the existing site data described in the preliminary Site Evaluation Report and the results of the source characterization to define the groundwater flow patterns and to examine the vertical and lateral extent of contaminant migration. These data will form the rationale for locating and designing monitoring wells and the subsequent contaminant characterization. There shall be a sufficient number of monitoring wells and well nests to define the aquifer characteristics on-site and off-site. The wells shall be located to provide information on the direction of groundwater flow and extent of groundwater contamination.

**Hydrologic:**

Drainage patterns and runoff characteristics will be evaluated for the potential erosional transport. Surface water features such as streams, ponds, and lakes will also be evaluated. Staff gauges may also be used to evaluate the potential of hydraulic connection between surface water bodies and the groundwater flow system, and to determine the potential for sediment transport.

**Soils and Sediments:**

The physical characteristics of the site soils and aquatic sediments will be evaluated. Some elements of this investigation may overlap with the above described investigations. Where soil conditions permit, soil samples shall be collected utilizing standard undisturbed soil sample techniques. All soil drilling should allow for continuous soil sampling, or as otherwise approved by WDNR in the SAP for the Site. Soil samples shall be collected from each soil layer encountered with a maximum of 5-foot intervals, or as otherwise approved by the WDNR in the work plan. All soil samples shall be described using the Unified Soil Classification System (USCS). A soil gas survey may be conducted using a PID or FID for the purpose of assisting in the determination of the extent of contamination migration from the site.

**Air:**

The potential for airborne particle and vapor transport will be evaluated to determine if an atmospheric testing program (over and above that required for assuring the personal protection of the site workers and surrounding community) should be initiated at later project stages. Meteorological data may be required to characterize the atmospheric transport. VOC emissions will be evaluated to determine if rates of emission dictate higher levels of protection.

**Human Population:**

Information will be collected to identify, enumerate, and characterize human populations actually and potentially exposed to contaminants released from the site. Information will be collected on population size and location. Reasonable efforts should be made to identify sensitive sub-populations such as children, pregnant women, infants, and the chronically ill (including schools, hospitals and nursing homes). The identification of these high-risk sub-populations should be linked with the contaminants of concern. Census and other survey data may be used to identify and describe the population exposed to various contaminated media. Information may also be available from USGS maps, land use plans, zoning maps, and regional planning authorities. Copies of the water supply well logs within a ½ mile proximity to the site will be submitted if available.

**Ecological Investigations**

Biological and ecological information will be collected for use in the baseline risk assessment. It will aid in the evaluation of actual and potential impacts to the environment associated with the Site and also help to identify effects with regard to the implementation of remedial actions. The information collected will include a general identification of flora and fauna in and around the site, endangered and threatened species, and any species consumed by humans or found in human food chains as well as the identification of critical habitats. Bioassay information may be needed for species that are known to be consumed by humans. Chapter 12 of "A Compendium of Superfund Field Operations Methods," the EPA "Guidance Remedial Investigations and Feasibility Studies Under CERCLA" (EPA/540/G-89/004) and the "Interim Final Risk Assessment Guidance for Superfund, Volume II, Evaluation Manual" (EPA/540/1-89/001)(March 1989), provide a summary of both environmental information that may be



needed and potential collection methods. The Natural Resources Trustee for the site will be contacted to determine if other ecological data are available that may be relevant to the investigation.

It is anticipated that this information will be derived from a combination of existing data information and data resulting from the field investigations.

The Migration Pathway Assessment will culminate in the preparation and submittal of a technical memorandum describing the findings of the assessment. This memorandum will also contain specific recommendations for the location and design of monitoring stations (i.e., wells, air quality sampling points, surface water sampling points, soil sampling points, etc.) to be sampled during the Contaminant Characterization.

#### TASK 3/C

##### Contaminant Characterization

Data generated from the Source Characterization and Migration Pathway Assessments will be used to design an environmental sampling and analysis program. The objective of this program is to evaluate the extent and magnitude of contaminant migration along the pathways of concerns in the five media of groundwater, surface water, soil, sediments and air, at the Site.

For migration pathways identified as actual or potential routes of exposure, monitoring points will be installed in each appropriate media. This monitoring network may incorporate several of the piezometers and staff gauges installed during the Migration Pathway Assessment.

The analytical parameters list used in this subtask will be based on the data collected during the source characterization and review of background information. The selection of parameters or classes of parameters (i.e., volatile organics, metals, etc.) will be based upon their source concentration and their persistence and mobility within the most likely pathway of migration. Provisions will be made for conducting full Target Compound List (TCL) analyses at those monitoring stations where there is a reasonable anticipation of detecting a complex contaminant profile. All samples will be collected, handled, and analyzed in accordance with the protocols and procedures described in the Site SAP and QAPP. An addendum to the SAP and QAPP may be required for this additional sample collection and analyses.

Provisions will be made for conducting additional site investigation activities after completion of Task 9: Remedial Alternatives Screenings. Task 10 outlines these supplemental investigations which are intended to further characterize the sources, pathways, and contaminants and to satisfy the specific data requirements of the applicable remedial actions. The RI/FS work plans for these investigations and the bench/pilot studies (Task 5/B) will be prepared and submitted for WDNR comment and approval after completion of Task 8.

#### TASK 4

##### SITE INVESTIGATION ANALYSES/EVALUATION

An analysis of all data collected during this investigation will be made to assure that the quality (e.g., QA/QC procedures have been followed) and quantity of data adequately support the Baseline Risk Assessment and FS. A technical Memorandum entitled Preliminary Data Transmittal will be prepared and submitted presenting the data from the site investigations in an organized manner. A summary of

the type and extent of contamination at the site will be presented and the analysis of the data will be included.

#### TASK 5

##### TREATABILITY STUDIES AND SUPPLEMENTAL REMEDIAL INVESTIGATIONS

Data requirements not already available through the Remedial Investigation that are specific to the remedial alternatives identified for detailed analysis in Task 9 will be identified. These additional data needs may involve the collection of site characterization data, supplemental remedial investigations, or treatability studies to better evaluate technology performance at this Site. All treatability studies conducted and the technical memoranda documenting them shall be done in compliance with the NCP and relevant EPA and state guidance. A camera-ready copy of the treatability study report will be sent to:

U.S. EPA Superfund Treatability Data Base  
ORD/REEL  
26 W. Martin Luther King Dr.  
Cincinnati, Ohio 45268

#### TASK 5/A

##### Determination of Data Requirements

Additional data needs may be identified by conducting a more exhaustive literature survey than was originally conducted when potential technologies were initially being identified. The objectives of a literature survey are as follows:

- \* Determine whether the performance of those technologies under consideration have been sufficiently documented on similar wastes considering the scale and the number of times the technologies have been used.
- \* Gather information on relative costs, applicability, removal efficiencies, O&M requirements, and implementability of the candidate technologies.
- \* Determine testing requirements for bench or pilot studies, if required.

#### TASK 5/B

##### Bench\Pilot Testing Studies

As necessary, bench and/or pilot scale testing studies will be performed to determine the feasibility of remedial technologies to site specific conditions. The studies may include treatability and cover studies, aquifer testing, and/or material compatibility testing. These studies will be conducted in the later stages of the RI after the initial screening of the remedial technologies (Task 8). If required, supplements to the appropriate plans (i.e., SAP, QAPP) will be prepared and submitted to the WDNR for review and approval prior to initiation of Task 5/B.



**TASK 5/C**

**Treatability Testing**

Treatability testing performed during an RI/FS may be used to adequately evaluate a specific technology, including evaluating short and long term effectiveness, determining process sizing and estimating costs in sufficient detail to support the remedy-selection process. It is not meant to be used solely to develop detailed design or operating parameters that are more appropriately developed during the remedial design phase. Bench-scale or pilot-scale techniques may be utilized but, in general, treatability studies shall include the following steps:

- \* Preparing a work plan (or modifying the existing RI/FS work plan) for the bench or pilot studies;
- \* Performing field sampling, and/or bench testing, and/or pilot testing;
- \* Evaluating data from field studies, and/or bench testing, and/or pilot testing;
- \* Preparing a brief report documenting the results of the testing.

The "Interim Final Guidance for Conducting RI/FS under CERCLA" (Oct. 1988) provides information regarding Task 5/C.

A technical memorandum will be prepared and submitted to the WDNR detailing the results from Task 5.

**TASK 6**

**REPORTS**

**TASK 6/A**

**Progress Reports**

Progress Reports will be prepared and submitted to the WDNR on a monthly basis as stated in Section V of this contract unless otherwise authorized in advance by the WDNR. Each report will summarize the technical progress of the RI/FS. The progress reports shall include the following information:

- \* A summary of validated sampling data and the results of tests relating to the Site data produced during the month, pursuant to the implementation of the contract;
- \* A description of activities completed during the past month, pursuant to the contract, as well as such actions and plans which are scheduled for the next month, pursuant to the contract;
- \* Target and actual completions dates for each element of activity, including the project completion, and an explanation of any deviation from the schedules provided in the Work Plan;
- \* Changes in key personnel;
- \* Problems encountered during the reporting period and how they were resolved; and
- \* Anticipated problems and recommended solutions.

TASK 6/B

Technical Memoranda

The results of specific remedial investigation activities such as the Migration Pathway Assessment, Source Characterization, etc., will be prepared and submitted as draft technical memoranda to the WDNR throughout the RI process. All PRP responses to WDNR comments concerning the technical memoranda will be included in the draft RI report. The specific technical memorandum(s) and its associated schedule will be identified in the Project Work Plan. (Task 2).

TASK 6/C

Remedial Investigation Report

A draft RI report covering the remedial investigation(s) activities outlined in tasks 1, 3, 4 and 5 of this SOW, will be prepared and submitted to the WDNR. The format for the RI Report is presented in the EPA Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA (October 1988). A meeting may be scheduled to discuss WDNR's comments on the draft RI report. Upon receipt of WDNR comments, a draft final RI Report will be prepared and submitted to the WDNR. The RI Report will not be considered draft final until a letter of approval is issued by the WDNR Remedial Project Coordinator.

TASK 7

COMMUNITY RELATIONS SUPPORT

A community relations program will be conducted by WDNR. The PRP will cooperate with the WDNR by providing RI/FS information to the State. The PRP will, at the request of the WDNR, prepare necessary information to be distributed to the public. They may be requested to participate in public meetings which may be held or sponsored by the WDNR to explain activities at the Site, including the findings of the RI and FS.

Community relations support will be consistent with Superfund's community relations policies, as described in the interim version of the "Community Relations in Superfund - A Handbook" (June 1988) CERCLA, and the NCP.

TASK 8

OPERABLE UNITS AND INTERIM REMEDIAL ACTIONS

At any time during the RI, WDNR may determine, based on sufficient data to support such a decision, that an operable unit or interim remedial action is appropriate and will so notify the PRP. Upon receipt of such notice the PRP will prepare a Focused Feasibility Study (FFS) which will develop and evaluate a limited number of alternatives, if appropriate, for the operable unit or interim remedial action. While the alternatives may be limited, the evaluation of the alternatives will be made in accordance with Section III. Tasks 9, 10 and 11 of this SOW.



### III. FEASIBILITY STUDY

#### SCOPE

The purpose of the Feasibility Study (FS) for the Site is to develop and evaluate alternative remedial actions, based upon the results of the RI, that will mitigate impacts to human health and welfare and the environment, and present the relevant information needed to allow for the selection of a site remedy which will be protective of human health and welfare and the environment.

The FS will conform with CERCLA, as amended, the NCP, and the RI/FS Guidance. The FS is comprised of the following tasks:

- Task 9: Remedial Alternatives Development and Screening
- Task 10: Detailed Evaluation of Remedial Alternatives
- Task 11: Feasibility Study Report
- Task 12: Additional Requirements

The intent and purpose of each of these tasks is outlined in the following sections. The technical approach and schedule for each of these tasks will be detailed in the RI/FS Work Plan (Task 1). Because the Baseline Risk Assessment, which will be prepared by WDNR, is an integral component of the Feasibility Study, the schedule for work on the FS will begin following release of the Risk Assessment by WDNR.

#### TASK 9

##### REMEDIAL ALTERNATIVES AND SCREENING

This task constitutes the first stage of the FS and is comprised of four interrelated Sub-tasks. The goal is to develop and evaluate remedial alternatives for additional screening and evaluation. The Baseline Risk Assessment results will be considered throughout the evaluation process.

#### TASK 9/A

##### Preliminary Remedial Technologies

A list of potentially feasible technologies will be developed which is consistent with the NCP, CERCLA and EPA guidance. The list will be screened according each alternatives effectiveness, implementability and cost, in order to eliminate or modify those technologies that may prove extremely difficult to implement, require unreasonable time periods, or rely on insufficiently developed technology. Emerging technologies being evaluated through the EPA's SITE Program will also be considered if that information is available. The results of this task will be summarized in a Technical Memorandum that will be submitted to the WDNR.

#### TASK 9/B

##### Development of Alternatives

1. Developing Remedial Action Objectives

Site-specific objectives for remedial action will be developed for the Site based on existing site information and the information gathered during the RI. The development of the remedial action objectives shall be done in conformance with the policies and procedures established in Section 430(d) of the NCP, EPA RI/FS guidance, and the requirements of federal and Wisconsin environmental and health standards, guidance, and advisories, as specified in Section 121 of CERCLA and the NCP. Preliminary cleanup objectives will be developed under formal consultation with the WDNR and submitted to the WDNR as part of the Alternatives Array document for this Site.

These objectives consist of medium-specific or operable unit-specific goals for protecting human health and the environment. They will specify: the contaminant(s) of concern; exposure route(s); and receptor(s); and an acceptable contaminant level or range of levels for each exposure route. The preliminary remediation goals may be modified, as new information is obtained in the process, to ensure that the exposure pathways are protective of human health and the environment.

Acceptable exposure levels which are protective of human health and the environment shall be developed by considering the following:

- The applicable or relevant and appropriate requirements (ARARs) under federal environmental or State environmental, or facility siting, laws, if available;
- For systemic toxicants, acceptable exposure levels shall represent concentration levels to which the human population, including subgroups, may be exposed to without adverse effect during a lifetime or part of a lifetime, incorporating an adequate margin of safety;
- For known or suspected carcinogens, acceptable exposure levels are generally concentration levels that represent an excess upper bound lifetime cancer risk to an individual of between  $10^{-4}$  and  $10^{-6}$ , using information on the relationship between dose and response. The  $10^{-6}$  risk level shall be used as the point of departure for determining remediation goals for alternatives when ARARs are not available or are not sufficiently protective because of the presence of multiple contaminants at a site or multiple pathways of exposure;
- Factors relating to technical limitations such as detection/quantification limits for contaminants;
- Factors related to uncertainty; and
- The environmental and ecological threats posed by the site, particularly to sensitive habitats and critical habitats of species protected under the Endangered Species Act. Environmental ARARs, where they exist, or levels based on site-specific determinations shall be chosen which are protective of the environment.

If an ARAR is determined to be protective, given the aforementioned considerations, it shall generally be used to establish acceptable exposure levels. If an ARAR is determined not to be protective of human health and the environment (e.g., multiple pathways, contaminants, or sensitive receptors) or an ARAR does not exist for a specific chemical or exposure pathway, acceptable exposure levels will be determined through the risk assessment process. The policies and procedures established in the NCP and EPA's Risk Assessment Guidance shall be followed in determining the acceptable exposure levels at this Site. The final remedial action goals shall be subject to approval by the WDNR in the final FS report. Emerging technologies will also be considered if sufficient information is available concerning these technologies. The results of this task will be summarized in a Technical Memorandum that will be submitted to the WDNR for approval, or conditional approval.



2. Assemble Alternatives for Remedial Actions

- a. For source control: a range of alternatives will be developed in which treatment that reduces toxicity, mobility or volume of the hazardous substances, pollutants, or contaminants is a principal element. As appropriate, this range shall include:
  - (1) Treatment alternative(s) for source control that eliminate, reduce or mitigate the need for long-term management (including monitoring);
  - (2) An alternative(s) involving treatment as a principal element to reduce the toxicity, mobility, or volume of waste;
  - (3) One or more alternatives that involve containment of waste with little or no treatment but provides protection of human health and the environment, primarily by preventing exposure or reducing the mobility of the waste;
  - (4) An innovative technology(ies) if that technology offers the potential for comparable or superior performance or implementability; fewer or lesser adverse impacts than other available approaches; or lower costs for similar levels of performance than demonstrated treatment technologies.
  - (5) A no action alternative.
- b. For groundwater response actions: a limited number of remedial alternatives shall be developed that attain site-specific remediation levels within different restoration time periods utilizing one or more different technologies. The targeted remediation level is the risk range of  $10^{-4}$  to  $10^{-6}$  for maximum lifetime risk and includes different rates of restoration. If feasible, one alternative that would restore groundwater quality to a  $10^{-6}$  risk for maximum lifetime risk level within five years will be configured.

The remedial action alternatives developed for the Site may involve both source control and groundwater response actions. In these instances, the groundwater alternatives should be evaluated separately from the source control alternatives in order to simplify the analysis. As appropriate, interdependencies between the source control and groundwater alternatives should be identified.

TASK 9/C

Initial Screening of Alternatives

1. Initial Screening Considerations

The alternatives developed under Task 9/B will be subjected to an initial screening to narrow the list of potential remedial actions for detailed analyses; the rationale for eliminating alternatives will be included. Initial screening considerations include:

- a. Effectiveness - degree to which the alternative protects human health and the environment; attains Federal and State ARARs or other applicable criteria, advisories, or guidance; significantly and permanently reduces the toxicity, mobility, or volume of the hazardous constituents and are technically reliable and effective in other respects. Reliability considerations include the potential for failure and the need to replace the remedy.

- b. **Implementability** - degree to which the alternatives are technically feasible and employs available technologies; the technical and institutional ability to monitor, maintain, and replace the technology over time, and the administrative feasibility of implementing the alternative.
- c. **Cost** - evaluation of construction and long-term costs to operate and maintain the alternative based on conceptual costing information. At this stage of the FS, cost will be used as a factor when comparing alternatives that provide similar results, but not when comparing treatment and non-treatment alternatives. Cost will, however, be a factor in the final remedial selection process, as described in Task 10B, Section 1, paragraphs (c) and (d).

## 2. Intent of Alternatives Screening

The initial screening of alternatives incorporating treatment will be conducted with the intent of preserving the most promising alternatives as determined by their likely effectiveness and implementability further analyses. The screening should result in a range of alternatives remaining for further analyses as described previously in Task 9/B(2).

Innovative alternative technologies will be carried through the screening if there is a reasonable belief they offer either the potential for better treatment performance or implementability, fewer or less adverse impacts than other available approaches, or lower costs for similar performance than the demonstrated technologies.

The no-action alternatives will be carried through the screening process to the detailed analyses.

### TASK 9/D

#### Remedial Alternatives Array Document

To obtain ARARs from the WDNR, a detailed description of the remedial alternatives (including the extent of remediation, contaminant levels to be addressed, and method of treatment containment) will be prepared. This document will also include a brief site history and background, a site characterization that indicates the contaminants of concern, migration pathways, receptors, and other pertinent site information. A copy of this Alternative Array Document will be submitted to the WDNR, along with the request for a notification of ARARs.

### TASK 9/E

#### Data Requirements

Data requirements specific to the relevant and applicable technologies will be identified. These requirements will focus on providing data needed for the detailed evaluation and development of a preferred alternative.



TASK 10

DETAILED EVALUATION OF REMEDIAL ALTERNATIVES

The overall goal of developing and evaluating alternatives is to select a remedy for this Site which is consistent with the clean-up mandates and preferences established in section 121 of CERCLA, as amended. The remedy selected at this Site must:

Be protective of human health and the environment;

Comply with ARARs (or justify an ARAR waiver);

Be cost-effective;

Utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable; and

Satisfy the preference for treatment that reduced toxicity, mobility, or volume as a principal element, or provide an explanation as to why this preference is not satisfied.

The alternatives which are identified and developed for this Site shall take into consideration the program goal, program expectations and program management principles listed below:

**Program Goal**

- \* The goal of the remedy selection process is to select remedial actions that are protective of human health and the environment, that maintain protection over time, and that minimize untreated waste.

**Program Expectations**

- \* Treatment of principal threats will be used, wherever practicable; principal threats may include liquids and highly mobile or highly toxic materials.
- \* Engineering controls may be used for waste that poses a low long-term threat or where treatment is impracticable.
- \* Institutional controls will be used to mitigate short-term impacts or to supplement engineering controls; they will not serve as a sole remedy unless active response measures are found to be impracticable, after the balancing of tradeoffs is conducted during the selection of the remedy.
- \* Remedies will often combine treatment of principal threats with engineering and institutional controls for treatment residuals and untreated wastes.
- \* Innovative technologies should be considered if they offer the potential for comparable or superior treatment performance, fewer/lesser adverse impacts, or lower costs for a similar level of performance than demonstrated technologies.
- \* Ground water will be returned to its beneficial uses within a timeframe that is reasonable, where practicable.

**Program Management Principles**

The following general principles of program management shall be considered during the feasibility study:

- \* Sites should generally be remediated in operable units when early actions are necessary or appropriate to achieve significant risk reduction quickly, when phased analysis and response is necessary or appropriate given the size or complexity of the site, or to expedite the completion of total site cleanup.
- \* Operable units, including interim action operable units, should not be inconsistent nor preclude implementation of the expected final remedy.
- \* Site-specific data needs, the evaluation of alternatives and the documentation of the selected remedy should reflect the scope and complexity of the site problems being addressed.

Given the statutory requirements of section 121 of CERCLA and the aforementioned program goals and expectations and management principles, a detailed analysis of alternatives shall be conducted which consists of an individual analysis of each alternative against a set of nine evaluation criteria and a comparative analysis of all options against the nine evaluation criteria with respect to one another. This shall be conducted in a manner consistent with the NCP and the EPA's RI/FS guidance. The nine evaluation criteria, as established in the NCP, are as follows:

a. Threshold Criteria:

Overall Protection of Human Health and the Environment addresses whether or not a remedy provides adequate protection and describes how risks posed through each pathway are eliminated, reduced, or controlled through treatment, engineering controls, or institutional controls.

Compliance with ARARs addresses whether or not a remedy will meet all of the applicable or relevant and appropriate requirements of other Federal, State and Tribal environmental statutes and/or provide grounds for invoking a waiver.

b. Primary Balancing Criteria:

Long-Term Effectiveness and Permanence refers to the ability of a remedy to maintain reliable protection of human health and the environment over time once cleanup goals have been met.

Reduction of Toxicity, Mobility, or Volume Through Treatment is the anticipated performance of the treatment technologies a remedy may employ.

Short-Term Effectiveness addresses the period of time needed to achieve protection and any adverse impacts on human health and the environment that may be posed during the construction and implementation period until cleanup goals are achieved.

Implementability is the technical and administrative feasibility of a remedy, including the availability of materials and services needed to implement a particular option.

Cost includes estimated capital and operation and maintenance costs, and net present worth costs.

c. Considerations:

Support Agency Acceptance addresses the technical or administrative issues and concerns the support agency may have regarding each alternative.



Community Acceptance addresses the issues and concerns the public may have to each of the alternatives.

Each alternative shall be described in sufficient detail, which includes: (1) a technical description of each alternative that outlines the waste management strategy involved and (2) identifies the key ARARs or risk-based clean-up goals associated with each alternative. Next, a discussion that individually evaluates the performance of each alternative with respect to the threshold and primary balancing criteria should be conducted. A table summarizing the results of this individual alternative analysis shall also be prepared.

After each alternative has been individually assessed against the first seven criteria, a comparative analysis will be conducted. The purpose of this analysis is to compare the relative performance of all the alternatives under each of the primary balancing criteria. The narrative discussion will describe whether the alternatives satisfied the threshold criteria of protectiveness and compliance with ARARs, strengths and weaknesses of the alternatives relative to one another with respect to each of the primary balancing criteria, and how reasonable variations of key uncertainties could change the expectation of their relative performance. If innovative technologies are being considered, their potential advantages in cost or performance and the degree of uncertainty in their expected performance (as compared with more demonstrated technologies) will also be discussed.

The evaluation of alternatives to select the appropriate remedy will satisfy the statutory mandates established in section 121 of CERCLA, as well as the sections 300.430(a)(i) and (ii) and (e) of the NCP. From this analysis, or information from which this analysis was based on, the WDNR will identify a preferred alternative.

#### TASK 11

##### FEASIBILITY STUDY REPORT

The results of specific Feasibility Study activities as described in Tasks 9 and 10 will be prepared by the PRP and submitted to the WDNR throughout the RI/FS process. Reports and memorandums will be submitted in draft form for review and comment. Upon receipt of comments, a final form of these memorandums will be prepared and submitted, unless otherwise agreed upon. The PRP shall not include a preferred alternative in the FS. If the PRP should want to identify a preferred alternative, it should be done in a separate letter to the WDNR.

A draft Feasibility Study (FS) Report covering the activities performed and conclusions drawn from Tasks 5, 9 and 10 will be completed and submitted for the WDNR's comments and approval. Upon WDNR approval (or conditional approval), the PRP will prepare a draft final FS report and submit it to WDNR. The FS report will not be considered "draft final" until a letter of approval is issued by the WDNR project coordinator. Technical memorandums prepared previously will be summarized and referenced in order to limit the size of the report. However, the report will completely document the FS. The approved draft final FS report will be placed by the WDNR in public information repository(ies) and administrative record file(s) for public review and comment as per the Community Relations Plan for this Site. With respect to a conditionally approved FS, the WDNR reserves the right to prepare addenda to the FS for this Site.

Following the public comment period, WDNR may determine that, based on the public comments, the PRP will prepare and submit to the WDNR additional information concerning this Site.

TASK 12

ADDITIONAL REQUIREMENTS

In addition to such task reports (i.e. alternatives array document) required by the WDNR, monthly reports shall be prepared to describe the technical progress of the project during the FS. These reports should discuss the following items:

1. Identification of site activity.
2. Status of work at the site and progress to date.
3. Percentage of completion.
4. Difficulties encountered during the reporting period.
5. Actions being taken to rectify the problem
6. Activities planned for the next month.
7. Changes in personnel.

The monthly progress report will list target and actual completion dates for each element of activity including project completion and provide an explanation of any deviation from the milestones in the Work Plan. Copies of the monthly progress report should be sent to the WDNR according to the procedures outlined in the consent order.

**IV. REMEDIAL DESIGN (RD) AND REMEDIAL ACTION (RA)**

The purpose of the RD/RA for the Site is to design and implement the selected remedy for the site. The PRP shall utilize the EPA Superfund Remedial Design and Remedial Action Guidance, the Record of Decision (as well as any explanations of differences or ROD amendments issued), the approved final RD/RA work plan, any additional guidance provided by WDNR and this Scope of Work in designing and implementing the remedy at the Site.

The RD/RA is comprised of the following interrelated tasks:

- Task 13: RD/RA Project Plans
- Task 14: Remedial Design
- Task 15: Remedy Construction
- Task 16: Reports

TASK 13

RD/RA PROJECT PLANS

The PRP shall prepare and submit, according to the schedule set forth, RD/RA Project Plans which shall describe and document the overall management strategy for performing the design, construction, operation, maintenance and monitoring of the remedy, as described in Tasks 14, 15, and 16 shall be prepared and submitted to the WDNR according to the schedule set forth. The RD/RA Project Plans shall include:



**TASK 13/A**

**Description and Qualifications of Personnel**

PRP shall describe and document the responsibility and authority of all organizations and personnel involved with the remedy implementation, including a description of qualifications of personnel directing the design and construction of the remedy, including contractors and contractor personnel, and documented in the RD/RA work plan.

**TASK 13/B**

**Health and Safety Plan (HSP)**

A HSP to address the activities to be performed at the site to implement the remedy shall be submitted to the WDNR. The WDNR will review and comment on the HSP, however it will not issue an approval for the HSP. At a minimum, the safety plan shall incorporate and be consistent with the requirements of:

1. Section 111(c)(6) of CERCLA;
2. EPA Order 1440.3 -- Respiratory Protection
3. EPA Order 1440.2 -- Health and Safety Requirements for Employees Engaged in Field Activities;
4. EPA Occupational Health and Safety Manual;
5. OSHA Requirements (29 CFR 1910 and 1926); and
6. Interim Standards Operating Safety Guide (Revised September 1982) by the Office of Emergency and Remedial Response.

**TASK 13/C**

**Quality Assurance Project Plan (QAPP)**

A QAPP for remedy sampling analysis and data handling shall be prepared and submitted to the WDNR. The QAPP shall be consistent with the requirements of the EPA Contract Lab Program (CLP) for laboratories proposed outside the CLP. At a minimum, the QAPP shall include the following:

1. Statement of Purpose
2. Project Description
3. Project Organization and Responsibility
4. Sampling Procedures and Objectives
5. Sample Custody and Document Control

6. Calibration Procedures and Frequency
7. Analytical Procedures Data Reduction, Validation, Assessment and Reporting
8. Internal Quality Control Checks and Frequency
9. Performance system Checks and Frequency
10. Preventive Maintenance Procedures and Frequency
11. Data Precision, Accuracy and Completeness Assessment Procedures
12. Corrective Action
13. Quality Assurance Reporting

**TASK 13/D**

**Monitoring Program Plan**

A detailed Monitoring Program Plan describing the type, frequency and schedule for monitoring of the remedy shall be submitted to the WDNR. The monitoring plan shall address any groundwater, soil gas, air or other monitoring requirement for each component of the remedy.

As part of the RD report, PRP shall submit a monitoring plan which will specify all short- and long-term monitoring requirements, necessary to assess the status and effectiveness of the Site remedy. The monitoring plan shall, at a minimum, contain the following:

- \* Monitoring device design
- \* Analytical parameter list;
- \* Analytical methodologies;
- \* Monitoring schedule; and
- \* Reporting requirements.
- \* Specified Performance Standards, Level, Location

As part of the RD report, PRP shall submit a plan which defines the procedures which will be implemented if the remedial performance monitoring data indicates that the remedy or a specific remedial component is not attaining the design objective. This plan shall define notification requirements and implementation schedules.

**TASK 13/E**

**Project Schedule for Completion of Tasks**



A Project Schedule for construction and implementation of the remedy which identifies timing for initiation and completion of all tasks shall be developed. The dates for completion of the remedy and major interim milestones shall be specified.

**TASK 14**

**REMEDIAL DESIGN**

The RD/RA plans and specifications listed below shall be submitted to the WDNR, in order to implement the remedy(ies) at the Site, according to the schedule in Task 17 of this SOW. General correlation shall be assured between drawings and technical specifications, such being a basic requirement of any set of working construction plans and specifications. Before submitting the design plans and specifications, at the 30%, 60%, if required by WDNR, and 95% pre-final design submittal, the PRP shall:

- \* Coordinate and cross-check the specifications and drawings; and
- \* Perform complete proofing of the edited specifications and required cross-checking of all drawings and specifications.

Additionally, technical specifications, and contractor requirements for providing appropriate service visits by experienced, qualified personnel to supervise the installation, adjustment, start-up and operation of the treatment systems, and training covering appropriate operational procedures once the start-up has been successfully accomplished shall be included in the design submittals to WDNR.

**TASK 14/A**

**Contents of Design Plans**

The remedial Design Plans and specifications shall include, at a minimum:

**1. Design Plans and Specifications**

Clear and comprehensive design plans and specifications shall be developed which include but are not limited to the following:

- a. Discussion of the design strategy and the design basis, including:
  - (1) Compliance with all applicable or relevant and appropriate environmental and public health requirements; and
  - (2) Minimization of environmental and public impacts associated with the design and construction of the remedy.
- b. Discussion of relevant technical factors including:
  - (1) Use of currently accepted environmental control measures and technology;
  - (2) The constructability of the design; and
  - (3) Use of currently acceptable construction practices and techniques.

- c. Description of assumptions made and detailed justification of time assumptions;
- d. Discussion of the possible sources of error and listing and discussion of possible operation and maintenance problems;
- e. Detailed drawings of the proposed design including:
  - (1) Qualitative flow sheets; and
  - (2) Quantitative flow sheets.
- f. Tables listing equipment and specifications;
- g. Tables giving material and energy balances; and
- h. Appendices including:
  - (1) Sample calculations (one example presented and explained clearly for significant or unique design calculations);
  - (2) Derivation of equations essential to understanding the report; and
  - (3) Results of laboratory and field tests.

PRP shall submit to WDNR pre-Final Design Plans and Specifications, completed to the degree of completion, at each of: 1. 30% completion of design; 2. 60% of completion (if required by WDNR); 3. 95% of completion; and 4. Final Design Plans and Specifications at 100% of completion.

2. Operation and Maintenance Plan (O&M Plan)

An O&M plan will be prepared and submitted to WDNR with the final RD report. In addition, the final RD report shall include long-term care plan which defines the schedule and procedures to be utilized for the inspection of the remedial components. A final use plan for the Site shall be outlined and discussed. At a minimum, the O&M plan shall be composed of the following elements:

- a. Description of normal operation and maintenance (O&M), including:
  - (1) Description of tasks for operation;
  - (2) Description of tasks for maintenance;
  - (3) Description of prescribed treatment or operation conditions; and
  - (4) Schedule showing frequency of each O&M task.
- b. Description of potential O&M problems, including:
  - (1) Description and analysis of potential O&M problems;
  - (2) Sources of information regarding problems; and



- (3) Description of remedies to be implemented to resolve O&M problems.
- c. Description of routine monitoring and laboratory testing, including;
  - (1) Description of monitoring tasks;
  - (2) Description of required laboratory tests and their interpretation;
  - (3) Required Data Collection, Quality Assurance Plan; and
  - (4) Schedule of monitoring frequency and dates;
- d. Description of alternate O&M, including;
  - (1) In event of failure of partial or total failure of the remedies, alternate procedures which shall be implemented to prevent undue hazard; and
  - (2) Analysis of vulnerability and additional resource requirements should partial or total failure occur.
- e. Corrective Action;
  - (1) Description of corrective actions to be implemented in the event that the final remedy fails in part or whole, and/or if groundwater action levels are exceeded; and
  - (2) Schedule for implementing these corrective actions;
- f. Safety plan;
  - (1) Description of precautions, of necessary equipment, etc., for site personnel; and
  - (2) Safety tasks required in event of systems failure.
- g. Description of equipment; and
  - (1) Equipment identification;
  - (2) Installation of monitoring components;
  - (3) Maintenance of site equipment; and
  - (4) Replacement schedule for equipment and installed components.
- h. Records and reporting mechanisms required.
  - (1) Daily operating logs;
  - (2) Laboratory records;
  - (3) Records for operating costs;
  - (4) Mechanisms for reporting emergencies;

- (5) Personnel and maintenance records; and
- (6) Monthly/annual reports to State agencies.

A Draft Operation and Maintenance Plan shall be submitted simultaneously with the pre-Final Design submittal (95% completion of Design). The Draft Plan shall be revised as directed by WDNR and a Final Operation and Maintenance Plan shall be submitted with the Final Design (at 100% completion of design) for WDNR approval.

3. Cost Estimate

Cost estimates shall be developed for the purpose of assuring that the PRP have the financial resources necessary to construct and implement the remedy. The cost estimate developed in the approved draft final Feasibility Study shall be refined to reflect the more detailed/accurate design plans and specifications being developed. The cost estimate shall include both capital and operation and maintenance costs.

4. Construction and Operation Schedule

A Construction and Operation Schedule for construction and implementation of the remedy which identifies timing for initiation and completion of all tasks shall be compiled and submitted to the WDNR. Dates for construction and operation of the remedy and shall specify major interim milestones shall be specified.

A Draft Schedule shall be submitted with the Pre-final Design submittal (95% completion of design) and a revised Final Schedule shall be submitted with the Final Design submittal (100% completion).

5. Construction Quality Assurance Objectives

The objectives and framework for the development of a construction quality assurance program including, but not limited to the following: responsibility and authority; personnel qualifications; inspection activities; sampling requirements; and documentation shall be identified and documented. These objectives shall be discussed in the Pre-final and Final Design Submittals.

TASK 14/B

Design Phases

The PRP shall prepare and submit to WDNR the plans outlined in Task 14/A as follows:

1. Preliminary Design Plan Submittal

The Preliminary Design Plan shall be submitted when the design effort is 30% complete. At this stage, the existing conditions of the Site shall have been verified. The Preliminary Design submittal shall reflect a level of effort such that the technical requirements of the project have been addressed and outlined so that they may be reviewed to determine if the final Design will provide an operable and usable final remedy. Supporting data and documentation shall be provided with the design documents defining the functional aspects of the program. The preliminary construction drawings shall be organized and clear. The scope of the technical



specifications shall be outlined in a manner reflecting the final specifications. The Preliminary Design Plan shall include design calculations reflecting the same percentage of completions the design they support.

2. Intermediate Design Plan Submittal

At the discretion of the WDNR, a design review may be required at the 60% completion of the project. An Intermediate Design Plan which includes the same elements as the Pre-final Design Plan shall be prepared and submitted to the WDNR.

3. Pre-final Design and Final Design Submittal

a. Pre-final Design Submittal

The Pre-final Design Submittal at 95% completion of design shall be submitted. The Pre-final Design submittal shall consist of the Design Plans and Specifications, Draft Operation and Maintenance Plan, Initial Capital and Operating and Maintenance Cost Estimate, Draft Construction and Operations Schedule, Draft Construction Quality Objectives, Draft Quality Assurance Project Plan and Draft Health and Safety Plan. After WDNR approves or conditionally approves of the Pre-final Design submittal, the PRP shall incorporate the required revisions into a Pre-final Design Submittal, including reproducible drawings and specifications.

b. Final Design Submittal

The PRP shall submit the Final Design Submittal at 100% completion of design to WDNR for review and approval. The Final Design submittal shall consist of the Final Design Plans and Specifications, the Final Construction Cost Estimate, the Final Operation and Maintenance Plan, Final Quality Assurance Project Plan, the Final Project Schedule and Final Health and Safety Plan.

The quality of the design documents shall be such that it could be included in a bid package for the construction project.

TASK 14/C

Additional Studies

The remedy may require additional studies to supplement the available technical data. At the direction of the WDNR, for any such studies required by WDNR, all services shall be furnished by the PRP, including field work as required, materials, supplies, physical plant, labor, equipment, investigations, studies and superintendence. Sufficient sampling, testing and analysis shall be performed to optimize the required treatment and/or disposal operations and systems. There shall be an initial meeting of all principal personnel involved in the development of the program. The purpose will be to discuss objectives, resources, communication channel, role of personnel involved and orientation of the site, etc. An interim report shall be submitted by the PRP which shall present the results of the testing with the recommended configuration of the final remedy (including alternative options). A review shall be scheduled after the interim report has been reviewed by WDNR and all interested parties. A final report of the testing which shall include all data taken during the testing, a summary of the results of the studies, and a discussion of the results shall be submitted by the PRP.

TASK 14/D

Community Relations Support

A community relations program will be continued by the WDNR through the RD/RA process. The PRP shall cooperate with the WDNR, and participate as requested in the preparation of appropriate information to be disseminated to the public by the WDNR. The PRP may be asked to formally participate in presentations to be held or sponsored by the WDNR to explain activities at or concerning the site including the final remedial design, planned or existing RA activities, the schedule, or any minor changes to the remedy.

Community relations support will be consistent with Superfund community relations policies as described in the "Guidance for Implementing the Superfund Program" and "Community Relations in Superfund - A Handbook," the NCP, and CERCLA section 117.

TASK 15

REMEDY CONSTRUCTION

TASK 15/A

Preparation of Construction Quality Assurance Program Plan

Following WDNR approval of the Final Design submittal, a construction quality assurance (CQA) program that ensures the completed final remedy meets or exceeds all design criteria, plans and specifications shall be developed and implemented by the PRP. The CQA Plan is a site specific document which shall be submitted to the WDNR for approval prior to the start of the construction. At a minimum, the CQA plan shall include the elements which are summarized below:

1. Responsibility and Authority

The responsibility and authority of all organizations (i.e. technical consultants, construction firms, etc.) and key personnel involved in the construction of the final remedy shall be described fully in the CQA Plan. The Plan shall identify a CQA officer and the necessary supporting inspection staff.

2. Construction Quality Assurance Personnel Qualifications

The qualifications of the CQA officer and supporting inspection personnel shall be presented in the CQA Plan and shall demonstrate that they possess the training and experience necessary to fulfill their identified responsibilities.

3. Inspection Activities

The observations, tests and inspections that will be used to monitor the construction and/or installation of the components of the final remedy shall be summarized in the CQA Plan. The Plan shall include the scope and frequency of each type of inspection. Inspections shall verify compliance with the environmental requirements and include, but not be limited to, inspection of air quality and emissions monitoring records, solid and hazardous waste disposal records (including RCRA transportation manifests), etc. The inspections shall also ensure compliance with all health



and safety procedures. In addition to oversight inspections, the following activities shall be conducted:

a. Preconstruction Inspection and Meeting

Prior to initiation of construction activities and as requested by WDNR, a preconstruction inspection and meeting shall be held to:

- (1) Review methods for documenting and reporting inspection data;
- (2) Review methods for distributing and storing documents and reports;
- (3) Review work area security and safety protocol;
- (4) Discuss any proposed modifications of the construction quality assurance plan to ensure that site-specific considerations are addressed; and
- (5) Conduct a site walk-around to verify that the design criteria, plans and specifications are understood and to review material and equipment storage locations.

The Preconstruction Inspection and Meeting shall be documented by a designated person and minutes shall be transmitted to all parties to the contract.

b. Pre-final Inspection

Upon preliminary construction completion, WDNR shall be notified in order to conduct a Pre-final Inspection. The Pre-final Inspection shall consist of a walk-through inspection of the entire site area. The inspection is to determine whether the remedy construction is complete and consistent with the contract documents and the WDNR approved ROD. Any outstanding, incorrect or incomplete construction items discovered during the inspection shall be identified, noted, and rectified.

Additionally, equipment shall be operationally tested. The PRP shall certify that the equipment will function as designed and that all specifications have been met.

All deficiencies shall be corrected and retesting shall be initiated, as directed by WDNR. A Pre-final Inspection Report shall be submitted within thirty (30) days of the pre-final inspection, documenting all outstanding, incorrect, or incomplete construction items, actions required to resolve these items, completion date for these items, and setting a date for the Final Inspection.

c. Final Inspection

Upon completion of all outstanding construction items, the WDNR shall be notified in order to conduct a Final Inspection. The Final inspection shall consist of a walk-through inspection of the site area. The Pre-final Inspection Report shall be used as a checklist for the Final Inspection, including the outstanding construction items identified in the Pre-final Inspection. The PRP shall certify that all outstanding items have been resolved. Another walk-through inspection may be required based on the findings of the final inspection.

4. Documentation

Reporting requirements for CQA activities shall be described in detail in the CQA Plan. This shall include such items as daily summary reports, inspection data sheets, problem identification

and corrective measures reports, design acceptance reports, and final documentation. Provisions for the final storage of all records shall be presented in the CQA Plan.

**TASK 15/B**

**Implementation of CQA Program Plan**

Upon WDNR approval of the CQA Plan, the remedy shall be constructed and implemented in accordance with the approved ROD, design, schedule, and the CQA Plan.

**TASK 16**

**REPORTS**

Plans, specifications, and reports shall be prepared as set forth in Tasks 13 through 15 to document the design, construction, operation, maintenance, and monitoring of the remedy. The documentation shall include, but not be limited to, the following:

**TASK 16/A**

**Progress Reports**

At a minimum, the WDNR shall be provided with signed, monthly progress reports during the design and construction phases and monthly progress reports for operation and maintenance activities containing:

1. A description and estimate of the percentage of the remedy completed;
2. Summaries of all findings;
3. Summaries of all approved changes made in the remedy during the reporting period;
4. Summaries of all contacts with representative of the local community, public interest groups or State government during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in personnel during the reporting period;
8. Projected work for the next reporting period; and
9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.



**TASK 16/B**

**Draft Plans and Reports**

Draft plans and reports to be submitted during the RD/RA phase including the following, at a minimum:

1. RD/RA Word Plan as outlined in Task 13;
2. The Draft Construction Plans and Specifications, Design Reports, Cost Estimates, Schedules, Operation and Maintenance plans, and Study Reports as outlined in Task 14;
3. The Draft Construction Quality Assurance Program Plan and Documentation as outlined in Task 15; and,
4. The Draft Construction Completion Report to the WDNR. The Construction Completion Report which shall document that the remedy construction is consistent with the ROD and design specifications. The Report shall include, but not be limited to the following elements:
  - a. Synopsis of the remedy and certification of the design and construction;
  - b. Explanation of any proposed and/or WDNR approved minor changes to the plans and why these are/were necessary for the project;
  - c. Results of all pilot and field tests/studies, site monitoring, and certification that the remedy will meet or exceed the Performance Standards.
  - d. Listing of the Performance and Clean-up Standards.
  - e. Explanation of the operation and maintenance and monitoring to be undertaken at the site.

**TASK 16/C**

**Final Plans and Reports**

1. Finalization of Plans and Reports

As directed by WDNR, the RD/RA Work Plan, Construction Plans and Specifications, Design Reports, Cost Estimates, Project Schedule, Operation and Maintenance Plan, Study Reports, Construction Quality Assurance Program Plan/Documentation and the Construction Completion Report, shall be finalized by incorporating WDNR comments received on draft submissions.

2. Draft Completion of Final Remedy Report

For the time period specified by WDNR, from start-up of the final remedy, the PRP shall submit a Draft Completion of Final Remedy Report, which shall document the completion of the final remedy. At a minimum, the Draft Report shall document that all Performance and Clean-up Standards have been achieved by the remedy. Any additional activities needed to complete the remedy shall be conducted, as directed by WDNR.

3. Final Completion of Final Remedy Report

The PRP shall incorporate WDNR comments and modifications to the Draft Completion of Final Remedy Report, and shall perform all required additional activities as directed by WDNR. Upon completion of these additional activities and as directed by WDNR, the PRP shall submit a Final Completion of Final Remedy Report, which shall document that the final remedy for the site has been fully completed.

4. WDNR Periodic Review


To the extent required by section 121(c) of CERCLA, and any applicable regulations, the WDNR shall review the remedial action at the Site at least every five (5) years after the initiation of the remedial action to assure that human health and the environment are being protected by the remedial action being implemented or operated at the Site. If upon such review, The WDNR determines that a significant change, as defined in the NCP, is needed to ensure that the remedial action(s) undertaken at the Site is protective, the WDNR shall take or require the PRP to undertake such a change.

The PRP shall be provided with an opportunity to confer with the WDNR on any proposed significant changes that are a direct result of the five-year review for this Site. The PRP shall be provided with the opportunity to submit comments to the administrative record file if the WDNR is proposing to require or undertake a significant change, based on the five-year review for this Site.

Agreed to by:

  
\_\_\_\_\_  
Thomas R. Savage, Vice-President  
Sta-Rite Industries, Inc.

9/20/90  
Date

  
\_\_\_\_\_  
Carroll D. Besadny, Secretary  
Wisconsin Department of Natural Resources

9-21-90  
Date