

UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY  
REGION 4

IN THE MATTER OF:  
LCP-Holtrachem Superfund Site  
Riegelwood, Columbus County,  
North Carolina

Honeywell International Inc.,  
Respondent

ADMINISTRATIVE SETTLEMENT  
AGREEMENT AND ORDER ON  
CONSENT FOR REMEDIAL  
INVESTIGATION/FEASIBILITY STUDY

U.S. EPA Region 4  
Docket No.: CERCLA-04-2009-3980

Proceeding Under Sections 104, 107 and  
122 of the Comprehensive Environmental  
Response, Compensation, and Liability Act,  
as amended, 42 U.S.C. §§ 9604, 9607 and  
9622.



## TABLE OF CONTENTS

I.	JURISDICTION AND GENERAL PROVISIONS.....	1
II.	PARTIES BOUND .....	2
III.	STATEMENT OF PURPOSE .....	2
IV.	DEFINITIONS.....	3
V.	FINDINGS OF FACT.....	5
VI.	CONCLUSIONS OF LAW AND DETERMINATIONS .....	8
VII.	SETTLEMENT AGREEMENT AND ORDER.....	9
VIII.	DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS .....	9
IX.	WORK TO BE PERFORMED .....	11
X.	EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS.....	14
XI.	QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION .....	16
XII.	SITE ACCESS .....	18
XIII.	COMPLIANCE WITH OTHER LAWS .....	19
XIV.	RETENTION OF RECORDS .....	19
XV.	NATURAL RESOURCE DAMAGES.....	20
XVI.	DISPUTE RESOLUTION.....	20
XVII.	STIPULATED PENALTIES .....	20
XVIII.	FORCE MAJEURE .....	23
XIX.	PAYMENT OF RESPONSE COSTS.....	24
XX.	COVENANT NOT TO SUE BY EPA .....	25
XXI.	RESERVATIONS OF RIGHTS BY EPA.....	26
XXII.	COVENANT NOT TO SUE BY RESPONDENT .....	27
XXIII.	OTHER CLAIMS .....	28
XXIV.	CONTRIBUTION.....	28
XXV.	INDEMNIFICATION.....	29
XXVI.	INSURANCE.....	29
XXVII.	FINANCIAL ASSURANCE .....	30
XXVIII.	INTEGRATION/APPENDICES .....	31
XXIX.	ADMINISTRATIVE RECORD .....	32
XXX.	EFFECTIVE DATE AND SUBSEQUENT MODIFICATION.....	32
XXXI.	NOTICE OF COMPLETION OF WORK.....	33

### Appendices:

Appendix A	Statement of Work
Appendix B	Site Map
Appendix C	Criteria for Additional TAP Assistance

**ADMINISTRATIVE SETTLEMENT AND ORDER ON CONSENT  
FOR REMEDIAL INVESTIGATION/FEASIBILITY STUDY**

**I. JURISDICTION AND GENERAL PROVISIONS**

1. This Administrative Settlement Agreement and Order on Consent (“Settlement Agreement”) is entered into voluntarily by the United States Environmental Protection Agency (“EPA”) and Honeywell International Inc. (“Respondent”). The Settlement Agreement concerns the preparation and performance of a remedial investigation and feasibility study (“RI/FS”) and the reimbursement by Respondent of response costs incurred by EPA in connection with the RI/FS at the LCP-Holtrachem Superfund Site, located at 636 John Riegel Road, Riegelwood, Columbus County, North Carolina (“Site”).

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), as amended, 42 U.S.C. §§ 9604, 9607, and 9622. This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (Jan. 29, 1987), and further delegated to Regional Administrators on May 11, 1994, by EPA Delegation Nos. 14-14-C and 14-14-D. This authority was further redelegated by Regional Delegation 14-14-C, through the Director, Superfund Division, to the Chiefs of the Superfund Remedial and Site Evaluation Branch and the Superfund Remedial Branch.

3. In accordance with Sections 104(b)(2) and 122(j)(1) of CERCLA, 42 U.S.C. §§ 9604(b)(2) and 9622(j)(1), EPA notified the relevant Federal and State natural resource trustees on February 20, 2009, of negotiations with potentially responsible parties regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal and State trusteeship.

4. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of fact, conclusions of law, and determinations in Sections V and VI of this Settlement Agreement. Respondent agrees to comply with and be bound by the terms of this Settlement Agreement and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms.

5. EPA and Respondent recognize that, on June 8, 2004, EPA and Respondent entered into an Administrative Order on Consent for Removal Action, EPA Region 4 Docket No. CER-04-2004-3781 (“Order No. 3781”), in which Respondent agreed to conduct an Engineering Evaluation/Cost Analysis (“EE/CA”) at the Site under EPA oversight. In accordance with 40 C.F.R. § 300.415(g), EPA has determined that a removal action, selected at the conclusion of an EE/CA, would not fully address the threat posed by the release and that the release requires

remedial action. Specifically, sampling and analysis data collected during the EE/CA indicated contaminated ground water. Ground water remedies typically are beyond the scope of removal actions. Accordingly, EPA and Respondent acknowledge and agree that this Settlement Agreement shall supersede the existing Order No. 3781, and that Respondent's compliance with this Settlement Agreement shall be in lieu of that existing Order. It is recognized that significant work has been completed under Order No. 3781. Therefore, those items previously completed and meeting the substantive requirements of an RI will not be required under this Settlement Agreement. In addition, completion of the Work under this Settlement Agreement shall fulfill Respondent's work obligations under Order No. 3781, such that Order No. 3781 will be terminated upon the Effective Date of this Settlement Agreement.

## **II. PARTIES BOUND**

6. This Settlement Agreement applies to and is binding upon EPA and upon Respondent and its successors and assigns. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter Respondent's responsibilities under this Settlement Agreement.

7. Respondent shall ensure that its contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondent shall be responsible for any noncompliance with this Settlement Agreement.

8. Each undersigned representative of Respondent certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to execute and legally bind Respondent to this Settlement Agreement.

## **III. STATEMENT OF PURPOSE**

9. In entering into this Settlement Agreement, the objectives of EPA and Respondent are: (a) to determine the nature and extent of contamination and any threat to the public health, welfare, or the environment caused by the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site by completing a Remedial Investigation and associated Human Health and Ecological Risk Assessments, as more specifically set forth in the Statement of Work ("SOW") attached as Appendix A to this Settlement Agreement; (b) to identify and evaluate remedial alternatives to prevent, mitigate, or otherwise respond to or remedy any release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site, by conducting a Feasibility Study as more specifically set forth in the SOW; and (c) to recover response and oversight costs incurred by EPA with respect to this Settlement Agreement.

10. The Work conducted under this Settlement Agreement is subject to approval by EPA and shall provide all appropriate and necessary information to assess Site conditions and evaluate alternatives to the extent necessary to select a remedy that will be consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300

("NCP"). Respondent shall conduct all Work under this Settlement Agreement in compliance with CERCLA, the NCP, and all applicable EPA guidance, policies, and procedures.

#### IV. DEFINITIONS

11. Unless otherwise expressly provided herein, terms used in this Settlement Agreement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement Agreement or in the appendices attached hereto and incorporated hereunder, the following definitions shall apply:

a. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*

b. "Day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.

c. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Section XXX.

d. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.

e. "Engineering Controls" shall mean constructed containment barriers or systems that control one or more of the following: downward migration, infiltration or seepage of surface runoff or rain; or natural leaching migration of contaminants through the subsurface over time. Examples include caps, engineered bottom barriers, immobilization processes, and vertical barriers.

f. "Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Settlement Agreement, verifying the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, Agency for Toxic Substances and Disease Registry ("ATSDR") costs, the costs incurred pursuant to Paragraph 62 (costs and attorneys fees and any monies paid to secure access, including the amount of just compensation), Paragraph 48 (Emergency Response), and Paragraph 92 (Work Takeover). Future Response Costs shall also include all Interim Response Costs.

g. "Institutional controls" shall mean non-engineered instruments, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use. Examples of institutional controls include easements and covenants, zoning restrictions, special building permit requirements, and well drilling prohibitions.

h. "Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

i. "Interim Response Costs" shall mean all costs, including direct and indirect costs, (a) paid or incurred by the United States in connection with the Site between May 1, 2009, and the Effective Date, or (b) incurred prior to May 1, 2009, but not previously billed to or paid by Respondent pursuant to Administrative Order on Consent for Removal Action, EPA Region 4 Docket No. CER-04-2004-3781, dated June 8, 2004. Except, "Interim Response Costs" shall not include costs that Honeywell International Inc. or International Paper Company already have agreed to pay under Administrative Settlement Agreement and Order on Consent for Removal Action, EPA Docket No. CERCLA-04-2008-3769, dated May 20, 2008. The Parties intend the definition of "Interim Response Costs" to include, but not be limited to, all response costs incurred by the United States in connection with Administrative Order on Consent for Removal Action; EPA Region 4 Docket No. CER-04-2004-3781, dated June 8, 2004, that have not been billed to or paid by Respondent as of the Effective Date of this Settlement Agreement.

j. "National Contingency Plan" or "NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

k. "NC DENR" shall mean the North Carolina Department of Environment and Natural Resources and any predecessor or successor departments or agencies of the State.

l. "Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral.

m. "Parties" shall mean EPA and Respondent.

n. "RCRA" shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, *et seq.*

o. "Respondent" shall mean Honeywell International Inc., a corporation organized under the laws of the State of Delaware and doing business in the State of North Carolina.

p. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral.

q. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent, the SOW, all appendices attached hereto (listed in Section XXVIII) and all documents incorporated by reference into this document including, without limitation, EPA-

approved submissions. EPA-approved submissions (other than progress reports) are incorporated into and become a part of the Settlement Agreement upon approval by EPA. In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.

r. "Site" shall mean the LCP-Holtrachem Superfund Site, encompassing approximately 24 acres located at 636 John Riegel Road in Riegelwood, Columbus County, North Carolina, which encompasses the former LCP-Holtrachem chlor alkali manufacturing plant, and all areas where hazardous substances, pollutants, or contaminants released from the facility, or released as a result of operations thereon, have come to be located. The Site is depicted generally on the map attached as Appendix B. The Site boundaries may be further defined based on the findings of the Remedial Investigation.

s. "State" shall mean the State of North Carolina.

t. "Statement of Work" or "SOW" shall mean the Statement of Work for development of an RI/FS for the Site, as set forth in Appendix A to this Settlement Agreement. The Statement of Work is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement, as are any modifications made thereto in accordance with this Settlement Agreement.

u. "Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (4) any "hazardous material" under a relevant State statute or regulation.

v. "Work" shall mean all activities Respondent is required to perform under this Settlement Agreement, except those required by Section XIV (Retention of Records).

## **V. FINDINGS OF FACT**

12. Respondent, Honeywell International Inc., is a Delaware corporation with headquarters in Morristown, New Jersey.

13. Honeywell International Inc. is the successor to Honeywell Inc. and AlliedSignal Inc. by merger of Honeywell Inc. and AlliedSignal Inc. in 1999.

14. AlliedSignal Inc. was the successor to Allied Chemical Corp., which owned and operated the chlor alkali manufacturing plant that operated on the Site property from 1963 to 1979.

15. The chlor alkali manufacturing plant that formerly operated at the Site produced chlorine, sodium hydroxide, sodium hypochlorite, and hydrochloric acid using the mercury cell process. The plant was constructed in 1963 and operated until 2000. The plant was located on

approximately 24 acres, situated in an industrial setting at 636 John Riegel Road, Riegelwood, Columbus County, North Carolina. Property owned by the International Paper Company borders the Site property on all sides except the north-northeast, which is bordered by the Cape Fear River.

16. The Site is located in the Atlantic Coastal Plain region. Ground water has been measured from 0-feet to 14.25-feet below ground surface. Shallow ground water flow is northerly toward the Cape Fear River, at a rate of approximately 1.5-feet per year. Surface seeps have been observed in ravines near the northern Site boundary.

17. The Site contains two retention basins, which collect storm water runoff from the Site and portions of the adjacent industrial facilities. The Site contains three Solid Waste Management Units identified as the North, South, and Roberts Ponds. The North and South Ponds were closed in 1987 under the RCRA program and are subject to required post-closure monitoring. Roberts Pond has not completed final closure and will be addressed through the RI/FS.

18. Hurricane Floyd and associated flooding caused an overtopping/breach in one storm water collection basin at the Site in September 1999. Results of surface soil sampling performed by NC DENR in June 2001 indicated that mercury may have been transported out of the storm water collection basin on the Site and into surface soils adjacent to it.

19. After sampling events in 2001 by NC DENR indicated elevated levels of mercury, NC DENR referred the Site to the EPA Emergency Response and Removal Branch ("ERRB") in January 2002.

20. In April 2002, NC DENR performed an integrated Expanded Site Inspection/Removal Assessment ("IESI/RA"), investigating soil, sediment, surface water, and ground water. A summary of relevant results is as follows:

a. Soil constituents with concentrations exceeding the lower of the two EPA residential soil exposure benchmarks, Reference Dose Screening Concentration or Cancer Risk Screening Concentration, as found in the Superfund Chemical Data Matrix-Data Manager User's Guide (EPA/540/R-96/029) in one or more samples included: mercury, hexachlorobenzene, PCB Aroclor 1254, 2,3,4,7,8-Pentachlorodibenzofuran, and 1,2,3,4,6,7,8-Heptachlorodibenzofuran. Samples were not analyzed for PCB Aroclor 1268.

b. Analysis of one or more samples of sediment from areas adjacent to the Cape Fear River showed concentrations of the following constituents, exceeding three times background concentrations or detection limits when the background was non-detect: cadmium, mercury, sodium, calcium, 1,2,3,5,6,7,8-Hexachlorodibenzofuran, 1,2,3,4,6,7,8-Heptachlorodibenzofuran, and Octachlorodibenzofuran. Samples were not analyzed for PCB Aroclor 1268.



Aroclor 1268. As of the Effective Date of this Settlement Agreement, the work required under AOC #3 is complete, with the exception of the ultimate treatment or disposal of material placed in temporary stockpiles and future maintenance, monitoring, and reporting. AOC #3 requires final disposal or treatment of the stockpiled material by May 20, 2013, five years after the effective date of AOC #3, or sooner if EPA issues a decision document prior to November 2011. AOC #3 includes an option for a time extension if Respondent is working in good faith with EPA towards selection and implementation of the final cleanup for soils at the Site.

## VI. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, EPA has determined that:

28. The LCP-Holtrachem Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

29. The contamination found at the Site, as identified in the Findings of Fact above, includes "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

30. The conditions described in the Findings of Fact above constitute an actual and/or threatened "release" of a hazardous substance from the facility as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

31. Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

32. Respondent is a responsible party under Sections 104, 107 and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607 and 9622. Respondent is the "owner" and/or "operator" of the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1). Respondent or its corporate predecessors were the "owners" and/or "operators" of the facility at the time of disposal of hazardous substances at the facility, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(2) of CERCLA, 42 U.S.C. § 9607(a)(2).

33. The actions required by this Settlement Agreement are necessary to protect the public health, welfare, or the environment, are in the public interest, 42 U.S.C. § 9622(a), are consistent with CERCLA and the NCP, 42 U.S.C. §§ 9604(a)(1), 9622(a), and will expedite effective remedial action and minimize litigation, 42 U.S.C. § 9622(a).

34. EPA has determined that Respondent is qualified to conduct the RI/FS within the meaning of Section 104(a) of CERCLA, 42 U.S.C. § 9604(a), and will carry out the Work properly and promptly, in accordance with Sections 104(a) and 122(a) of CERCLA, 42 U.S.C. §§ 9604(a) and 9622(a), if Respondent complies with the terms of this Settlement Agreement.

## VII. SETTLEMENT AGREEMENT AND ORDER

35. Based upon the foregoing Findings of Fact and Conclusions of Law and Determinations, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement, including, but not limited to, all appendices to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

## VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS

36. Selection of Contractors, Personnel. All Work performed under this Settlement Agreement shall be under the direction and supervision of qualified personnel. Within 30 days of the Effective Date of this Settlement Agreement, Respondent shall notify EPA in writing of the names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants and laboratories to be used in carrying out the Work. With respect to any proposed contractor, Respondent shall demonstrate that the proposed contractor has a quality system which complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995, or most recent version), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001 or subsequently issued guidance) or equivalent documentation as determined by EPA. The qualifications of the persons undertaking the Work for Respondent shall be subject to EPA's review for verification that such persons meet minimum technical background and experience requirements. This Settlement Agreement is contingent on Respondent's demonstration to EPA's satisfaction that Respondent is qualified to perform properly and promptly the actions set forth in this Settlement Agreement. If EPA disapproves in writing of any person's technical qualifications, Respondent shall notify EPA of the identity and qualifications of the replacements within 30 days of the written notice. If EPA subsequently disapproves of the replacement, EPA reserves the right to terminate this Settlement Agreement and to conduct a complete RI/FS, and to seek reimbursement for costs and penalties from Respondent. During the course of the RI/FS, Respondent shall notify EPA in writing of any changes or additions in the personnel used to carry out such Work, providing their names, titles, and qualifications. EPA shall have the same right to disapprove changes and additions to personnel as it has hereunder regarding the initial notification.

37. The Respondent has designated Prashant Gupta, of Honeywell International, as its Project Coordinator. The Project Coordinator shall be responsible for administration of all actions by Respondent required by this Settlement Agreement. To the greatest extent possible, the Project Coordinator, or his designee, shall be present on Site or readily available during Site Work. If the project coordinator will not be readily available during a period of Site Work, he shall notify EPA of his designee's name and contact information. Respondent shall have the right to change its Project Coordinator, subject to EPA's right to disapprove. Respondent shall notify EPA 10 days before such a change is made. The initial notification may be made orally, but shall promptly be followed by a written notification. EPA retains the right to disapprove of

the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within 10 days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondent. Documents to be submitted to the Respondent shall be sent to Prashant Gupta, Remediation Manager, Honeywell International Inc., Building 1-1-21, 4101 Bermuda Hundred Road, Chester, Virginia 23836.

38. EPA has designated Samantha Urquhart-Foster of the Superfund Remedial and Site Evaluation Branch, Region 4, as its Project Coordinator. EPA will notify Respondent of a change of its designated Project Coordinator. Except as otherwise provided in this Settlement Agreement, Respondent shall direct all submissions required by this Settlement Agreement to the Project Coordinator via regular certified mail, express mail, e-mail, or a nationally reputable overnight delivery service at the below address:

Samantha Urquhart-Foster  
United States Environmental Protection Agency, Region 4  
Superfund Remedial and Site Evaluation Branch  
61 Forsyth Street, S.W.  
Atlanta, Georgia 30303-8960  
e-mail: urquhart-foster.samantha@epa.gov

One copy of all deliverables shall also be sent to the State of North Carolina's representative:

David Mattison  
NC DENR Superfund Section  
401 Oberlin Road, Suite 150  
Raleigh, North Carolina 27605  
e-mail: david.mattison@ncdenr.gov

39. EPA's Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager ("RPM") and On-Scene Coordinator ("OSC") by the NCP. In addition, EPA's Project Coordinator shall have the authority, consistent with the NCP, to halt any Work required by this Settlement Agreement, and to take any necessary response action when she determines that conditions at the Site may present an immediate endangerment to public health or welfare, or the environment. The absence of the EPA Project Coordinator from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of Work.

40. EPA shall arrange for a qualified person to assist in its oversight and review of the conduct of the RI/FS, as required by Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). Such person shall have the authority to observe Work and make inquiries in the absence of EPA, but not to modify the RI/FS Work Plan.

## IX. WORK TO BE PERFORMED

41. Respondent shall conduct the RI/FS in accordance with the provisions of this Order, the SOW, CERCLA, the NCP, and EPA guidance, including, but not limited to, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" (OSWER Directive # 9355.3-01, October 1988 or subsequently issued guidance), "Guidance for Data Useability in Risk Assessment" (OSWER Directive #9285.7-05, October 1990 or subsequently issued guidance), and guidance referenced therein, and guidance referenced in the SOW, as may be amended or modified by EPA.

a. The Remedial Investigation ("RI") shall consist of collecting data to characterize site conditions, determining the nature and extent of the contamination at or from the Site, assessing risk to human health and the environment, and conducting treatability testing as necessary to evaluate the potential performance and cost of the treatment technologies that are being considered. The risk characterizations performed and data collected during the EE/CA, performed pursuant to AOC #2, to characterize the nature and extent of contamination at the Site are equivalent to what would be required in an RI and therefore may be used in this RI. The only additional data collection requirement known at this time is the need for an additional round of ground water samples and the need to conduct additional sampling to complete the ecological risk assessment. However, EPA reserves the right to require any additional data collection or sampling that is necessary to satisfy the requirements of the RI.

b. The Feasibility Study ("FS") shall determine and evaluate (based on treatability testing, where appropriate) alternatives for remedial action to prevent, mitigate, or otherwise respond to or remedy the release or threatened release of hazardous substances, pollutants, or contaminants at or from the Site. The alternatives evaluated must include, but shall not be limited to, the range of alternatives described in the NCP, and shall include remedial actions that utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In evaluating the alternatives, Respondent shall address the factors required to be taken into account by Section 121 of CERCLA, 42 U.S.C. § 9621, and Section 300.430(e) of the NCP, 40 C.F.R. § 300.430(e).

c. Upon request by EPA, Respondent shall submit in electronic form all portions of any plan, report, or other deliverable Respondent is required to submit pursuant to provisions of this Settlement Agreement.

42. Upon receipt of the draft FS report, EPA will evaluate, as necessary, the estimates of the risk to the public and environment that are expected to remain after a particular remedial alternative has been completed and will evaluate the durability, reliability, and effectiveness of any proposed Institutional Controls.

### 43. Modification of the RI/FS Work Plan.

a. If at any time during the RI/FS process, Respondent identifies a need for additional data, Respondent shall submit a memorandum documenting the need for additional

data to the EPA Project Coordinator within 30 days of identification. EPA in its discretion will determine whether the additional data will be collected by Respondent and whether it will be incorporated into plans, reports, and other deliverables.

b. In the event of unanticipated or changed circumstances at the Site, Respondent shall notify the EPA Project Coordinator by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In the event that EPA determines that the immediate threat or the unanticipated or changed circumstances warrant changes in the RI/FS Work Plan, EPA shall modify or amend the RI/FS Work Plan in writing accordingly. Respondent shall perform the RI/FS Work Plan as modified or amended.

c. EPA may determine that in addition to tasks defined in the initially approved RI/FS Work Plan, other additional Work may be necessary to accomplish the objectives of the RI/FS. Respondent agrees to perform these response actions in addition to those required by the initially approved RI/FS Work Plan, including any approved modifications, to the extent EPA determines that such actions are necessary to meet the requirements for an RI/FS set forth in CERCLA and the NCP.

d. Respondent shall confirm its willingness to perform the additional Work in writing to EPA within 7 days of receipt of the EPA request. If Respondent objects to any modification determined by EPA to be necessary pursuant to this Paragraph, Respondent may seek dispute resolution pursuant to Section XVI (Dispute Resolution). The SOW and RI/FS Work Plan shall be modified in accordance with the final resolution of the dispute.

e. Respondent shall complete the additional Work according to the standards, specifications, and schedule set forth or approved by EPA in a written modification to the RI/FS Work Plan or written RI/FS Work Plan supplement. EPA reserves the right to conduct the Work itself at any point, to seek reimbursement from Respondent, and to seek any other appropriate relief.

f. Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions at the Site.

44. Community Relations Plan and Technical Assistance Plan. EPA will prepare a community relations plan, in accordance with EPA guidance and the NCP. As requested by EPA, Respondent shall provide information supporting EPA's community relations plan and shall participate in the preparation of such information for dissemination to the public and in public meetings which may be held or sponsored by EPA to explain activities at or concerning the Site. By entering into this Settlement Agreement, Respondent is not waiving any of its rights under the First Amendment of the U.S. Constitution, and nothing in this Settlement Agreement shall be interpreted or construed as limiting Respondent's First Amendment rights. Within 30 days of a request by EPA, Respondent shall provide EPA with a Technical Assistance Plan (TAP) for providing and administering up to \$50,000 of Respondent's funds to be used by a qualified community group to hire independent technical advisers during the Work conducted pursuant to this Settlement Agreement. The TAP shall state that Respondent will provide and

arrange for any additional services needed if the selected community group demonstrates such a need pursuant to EPA's criteria, attached as Appendix C, prior to EPA's issuance of the Record of Decision contemplated by this Settlement Agreement. Upon its approval by EPA pursuant to Section X (EPA Approval of Plans and Other Submissions), the TAP shall be incorporated into and become enforceable under this Settlement Agreement.

45. Off-Site Shipment of Waste Material. Respondent shall, prior to any off-site shipment of Waste Material from the Site to an out-of-state waste management facility, provide written notification of such shipment of Waste Material to the appropriate state environmental official in the receiving facility's state and to EPA's designated Project Coordinator. However, this notification requirement shall not apply to any off-site shipments when the total volume of all such shipments will not exceed 10 cubic yards.

a. Respondent shall include in the written notification the following information: (1) the name and location of the facility to which the Waste Material is to be shipped; (2) the type and quantity of the Waste Material to be shipped; (3) the expected schedule for the shipment of the Waste Material; and (4) the method of transportation. Respondent shall notify the state in which the planned receiving facility is located of major changes in the shipment plan, such as a decision to ship the Waste Material to another facility within the same state or to a facility in another state.

b. The identity of the receiving facility and state will be determined by Respondent following the award of the contract for the disposal of Waste Material. Respondent shall provide the information required by Subparagraph 45.a and 45.c as soon as practicable after the award of the contract and before the Waste Material is actually shipped.

c. Before shipping any hazardous substances, pollutants, or contaminants from the Site to an off-site location, Respondent shall obtain EPA's certification that the proposed receiving facility is operating in compliance with the requirements of CERCLA Section 121(d)(3), 42 U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440. Respondent shall only send hazardous substances, pollutants, or contaminants from the Site to an off-site facility that complies with the requirements of the statutory provision and regulation cited in the preceding sentence.

46. Meetings. Respondent shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct, and completion of the RI/FS. In addition to discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new issues. EPA will schedule meetings at its discretion and will provide Respondent with reasonable notice under the circumstances.

47. Progress Reports. In addition to the plans, reports and other deliverables set forth in this Settlement Agreement, Respondent shall provide to EPA and NC DENR monthly progress reports by the tenth day of the following month. At a minimum, with respect to the preceding month, these progress reports shall (1) describe the actions which have been taken to comply with this Settlement Agreement during that month, (2) include all results of sampling and tests

and all other data received by Respondent during that month, (3) describe Work planned for the next two months with schedules relating such Work to the overall project schedule for RI/FS completion, and (4) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

**48. Emergency Response and Notification of Releases.**

a. In the event of any action or occurrence during performance of the Work which causes or threatens to cause a release of Waste Material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action. Respondent shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan, in order to prevent, abate, or minimize such release or endangerment caused or threatened by the release. Respondent shall also immediately notify the EPA Project Coordinator at (404) 562-8760 or, in the event of her unavailability, shall notify the National Response Center at (800) 424-8802 of the incident or Site conditions. In the event that Respondent fails to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondent shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XIX (Payment of Response Costs).

b. In addition, in the event of any release of a hazardous substance from the Site, Respondent shall immediately notify the EPA Project Coordinator and the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within 7 days after each release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004, *et seq.*

**X. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS**

49. After review of any plan, report, or other item that is required to be submitted for approval pursuant to this Settlement Agreement, in a notice to Respondent EPA shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondent modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Respondent at least one notice of deficiency and an opportunity to cure within 30 days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects.

50. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Subparagraph 49(a), (b), (c) or (e), Respondent shall proceed to take any action required by

such plan, report, or deliverable as corrected, modified or developed by EPA, subject only to Respondent's right to invoke the procedures set forth in Section XVI (Dispute Resolution).

53. If upon resubmission, a plan, report, or other deliverable is disapproved or modified by EPA due to a material defect identified in EPA's initial notice of disapproval, Respondent shall be deemed to have failed to submit such plan, report, or other deliverable timely and adequately unless Respondent invokes the dispute resolution procedures in accordance with Section XVI (Dispute Resolution) and EPA's action is revoked or substantially modified pursuant to a Dispute Resolution decision issued by EPA or superseded by an agreement reached pursuant to that Section. The provisions of Section XVI (Dispute Resolution) and Section XVII (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If EPA's disapproval or modification is not otherwise revoked, substantially modified or superseded as a result of a decision or agreement reached pursuant to the Dispute Resolution process set forth in Section XVI, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XVII.

54. In the event that EPA takes over some of the tasks, but not the preparation of the RI Report or the FS Report, Respondent shall incorporate and integrate information supplied by EPA into the final reports.

55. All plans, reports, and other deliverables submitted to EPA under this Settlement Agreement shall, upon approval or modification by EPA, be incorporated into and enforceable under this Settlement Agreement. In the event EPA approves or modifies a portion of a plan, report, or other deliverable submitted to EPA under this Settlement Agreement, the approved or modified portion shall be incorporated into and enforceable under this Settlement Agreement.

56. Neither failure of EPA to expressly approve or disapprove of Respondent's submissions within a specified time period, nor the absence of comments, shall be construed as approval by EPA.

## **XI. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION**

57. Quality Assurance. Respondent shall assure that Work performed, samples taken, and analyses conducted conform to the requirements of the SOW, the QAPP and guidance identified therein. Respondent will assure that field personnel used by Respondent are properly trained in the use of field equipment and in chain of custody procedures. Respondent shall only use laboratories which have a documented quality system that complies with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA.

### **58. Sampling.**

a. All results of sampling, tests, modeling, or other data (including raw data) generated by Respondent, or on Respondent's behalf, during the period that this Settlement



d. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at or around the Site, provided, however, that Respondent retains the right to assert that any such document is privileged under the attorney-client privilege or any other privilege recognized by federal law in accordance with the procedure set forth in Paragraph 59.c.

60. In entering into this Settlement Agreement, Respondent waives any objections to any data gathered, generated, or evaluated by EPA, the State, or Respondent in the performance or oversight of the Work that has been verified according to the quality assurance/quality control ("QA/QC") procedures required by the Settlement Agreement or any EPA-approved RI/FS Work Plans or Sampling and Analysis Plans, provided, however, that Respondent retains the right to dispute EPA's interpretation of any such data. If Respondent objects to any other data relating to the RI/FS, Respondent shall submit to EPA a report that specifically identifies and explains its objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. The report must be submitted to EPA within 30 days of the monthly progress report containing the data.

## **XII. SITE ACCESS**

61. If the Site, or any other property where access is needed to implement this Settlement Agreement, is owned or controlled by Respondent, such Respondent shall, commencing on the Effective Date, provide EPA employees, contractors, agents, consultants, designees, representatives, and the State and its representatives, with access at all reasonable times to the Site, or such other property, for the purpose of conducting any activity related to this Settlement Agreement.

62. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondent, Respondent shall use its best efforts to obtain all necessary access agreements within 30 days after the Effective Date, or as otherwise specified in writing by the EPA Project Coordinator. Respondent shall immediately notify EPA if after using its best efforts it is unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondent shall describe in writing its efforts to obtain access. If Respondent cannot obtain access agreements, EPA may obtain access for Respondent or assist Respondent in gaining access, to the extent necessary to effectuate the response actions described herein, using such means as EPA deems appropriate. Respondent shall reimburse EPA for all costs and attorneys' fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XIX (Payment of Response Costs). If EPA performs those tasks or activities with EPA contractors and does not terminate the Settlement Agreement, Respondent shall perform all other tasks or activities not requiring access to that property, and shall reimburse EPA for all costs incurred in performing such tasks or activities. Respondent shall integrate the results of any such tasks or activities undertaken by EPA into its plans, reports and other deliverables.

63. Notwithstanding any provision of this Settlement Agreement, EPA and the State retain all of their access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

### **XIII. COMPLIANCE WITH OTHER LAWS**

64. Respondent shall comply with all applicable local, state, and federal laws and regulations when performing the RI/FS. No local, state, or federal permit shall be required for any portion of any action conducted entirely on-site, including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work is to be conducted off-site and requires a federal or state permit or approval, Respondent shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

### **XIV. RETENTION OF RECORDS**

65. During the pendency of this Settlement Agreement and for a minimum of 10 years after commencement of construction of any remedial action, Respondent shall preserve and retain all non-identical copies of documents, records, and other information (including documents, records, or other information in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until 10 years after commencement of construction of any remedial action, Respondent shall also instruct its contractors and agents to preserve all documents, records, and other information of whatever kind, nature or description relating to performance of the Work.

66. At the conclusion of this document retention period, Respondent shall notify EPA at least 90 days prior to the destruction of any such documents, records or other information, and, upon request by EPA, Respondent shall deliver any such documents, records, or other information to EPA. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, it shall provide EPA with the following: 1) the title of the document, record, or other information; 2) the date of the document, record, or other information; 3) the name and title of the author of the document, record, or other information; 4) the name and title of each addressee and recipient; 5) a description of the subject of the document, record, or other information; and 6) the privilege asserted by Respondent. However, no documents, records, or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.

67. Respondent hereby certifies that to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed or otherwise disposed of any

records, documents or other information (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by EPA or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

#### **XV. NATURAL RESOURCE DAMAGES**

68. For the purposes of Section 113(g)(1) of CERCLA, the Parties agree that, upon the Effective Date of this Settlement Agreement for performance of an RI/FS at the Site, remedial action under CERCLA shall be deemed to be scheduled and an action for damages (as defined in 42 U.S.C. § 9601(6)) must be commenced within 3 years after the completion of the remedial action.

#### **XVI. DISPUTE RESOLUTION**

69. Unless otherwise expressly provided for in this Settlement Agreement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

70. If Respondent objects to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, it shall notify EPA in writing of its objection(s) within 30 days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondent shall have 14 days from EPA's receipt of Respondent's written objection(s) to resolve the dispute (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA. Such extension may be granted verbally but must be confirmed in writing.

71. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the Division Director level or higher will issue a written decision. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondent's obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs, and regardless of whether Respondent agrees with the decision.

#### **XVII. STIPULATED PENALTIES**

72. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 73 and 74 for failure to comply with any of the requirements of this Settlement Agreement specified below unless excused under Section XVIII (Force Majeure). "Compliance"

by Respondent shall include completion of the Work under this Settlement Agreement or any activities contemplated under any RI/FS Work Plan or other plan approved under this Settlement Agreement identified below, in accordance with all applicable requirements of law, this Settlement Agreement, the SOW, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

**73. Stipulated Penalty Amounts - Work.**

a. The following stipulated penalties shall accrue per day for any noncompliance identified in Subparagraph 73.b:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 1,000.00	1 <sup>st</sup> through 14 <sup>th</sup> day
\$ 3,000.00	15 <sup>th</sup> through 30 <sup>th</sup> day
\$ 7,500.00	31 <sup>st</sup> day and beyond

b. Compliance Milestones: The stipulated penalties contained in Paragraph 73.a shall accrue as a result of any of the following activities:

(1) Failure to timely submit the draft Work Plan, draft Sampling and Analysis Plan, draft RI Report, draft Ecological Risk Assessment, and draft FS Report as required under this Settlement Agreement;

(2) Failure to timely submit any modifications requested by EPA or its representatives to the Work Plan, the Sampling and Analysis Plan, draft RI Report, draft Ecological Risk Assessment, and draft FS Report as required under this Settlement Agreement;

(3) Failure to timely submit payment of future costs as provided in Section XIX; and

(4) Failure to comply with the schedule set forth in the EPA-approved Work Plan.

**74. Stipulated Penalty Amounts - Reports.** The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports, or other written documents, pursuant to the RI/FS Work Plan, or pursuant to Paragraphs 41 and 47, other than those documents and reports specifically referenced in Paragraph 73.b:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 500.00	1 <sup>st</sup> through 14 <sup>th</sup> day
\$ 1,000.00	15 <sup>th</sup> through 30 <sup>th</sup> day
\$ 3,000.00	31 <sup>st</sup> day and beyond

75. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 92 of Section XXI (Reservation of Rights by EPA), Respondent shall be liable for a stipulated penalty in the amount of \$200,000.

76. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (1) with respect to a deficient submission under Section X (EPA Approval of Plans and Other Submissions), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and (2) with respect to a decision by the EPA Management Official designated in Paragraph 70 of Section XVI (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA Management Official issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

77. Following EPA's determination that Respondent has failed to comply with a requirement of this Settlement Agreement, EPA may give Respondent written notification of the same and describe the noncompliance. EPA may send Respondent a written demand for the payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondent of a violation.

78. All penalties accruing under this Section shall be due and payable to EPA within 30 days of Respondent's receipt from EPA of a demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures in accordance with Section XVI (Dispute Resolution). All payments to EPA under this Section shall be paid by certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," shall be mailed to United States Environmental Protection Agency - Fines and Penalties, Cincinnati Finance Center, P.O. Box 979077, St. Louis, Missouri 63197-9000, shall indicate that the payment is for stipulated penalties, and shall reference EPA Region 4 and Site/Spill ID Number A47J, the EPA Docket Number CERCLA-04-2009-3980, and the name and address of the party making payment. Copies of checks paid pursuant to this Section, and any accompanying transmittal letters, shall be sent to EPA as provided in Paragraph 38, and to Paula Painter, U.S. EPA, 61 Forsyth Street, SW, Atlanta, Georgia 30303.

79. The payment of penalties shall not alter in any way Respondent's obligation to complete performance of the Work required under this Settlement Agreement.

80. Penalties shall continue to accrue as provided in Paragraph 76 during any dispute resolution period, but need not be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

81. If Respondent fails to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 78.

82. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C. § 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XXI (Reservation of Rights by EPA), Paragraph 92. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

#### **XVIII. FORCE MAJEURE**

83. Respondent agrees to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, *force majeure* is defined as any event arising from causes beyond the control of Respondent or of any entity controlled by Respondent, including but not limited to their contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work or increased cost of performance.

84. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondent shall notify EPA orally within 7 days of when Respondent first knew that the event might cause a delay. Within 10 days thereafter, Respondent shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a *force majeure* event if it intends to assert such a claim; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare or the environment. Failure to comply with the

Interest shall accrue on any unpaid balance. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section, including but not limited to payments of stipulated penalties pursuant to Section XVII. Respondent shall make all payments required by this Paragraph in the manner described in Paragraph 86.

88. Respondent may contest payment of any Future Response Costs under Paragraph 86 if it determines that EPA has made an accounting error or if it believes EPA incurred costs as a result of an EPA action that was inconsistent with the NCP. Such objection shall be made in writing within 30 days of receipt of the bill and must be sent to the EPA Project Coordinator. Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Respondent shall within the 30 day period pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 86. Simultaneously, Respondent shall establish an interest-bearing escrow account in a federally-insured bank and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Respondent shall send to the EPA Project Coordinator a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, Respondent shall initiate the Dispute Resolution procedures in Section XVI (Dispute Resolution). If EPA prevails in the dispute, within 5 days of the resolution of the dispute, Respondent shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 86. If Respondent prevails concerning any aspect of the contested costs, Respondent shall pay that portion of the costs (plus associated accrued interest) for which it did not prevail to EPA in the manner described in Paragraph 86. Respondent shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XVI (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondent's obligation to reimburse EPA for its Future Response Costs.

## **XX. COVENANT NOT TO SUE BY EPA**

89. In consideration of the actions that will be performed and the payments that will be made by Respondent under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon the complete and satisfactory performance by Respondent of all obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Section XIX. This covenant not to sue extends only to Respondent and does not extend to any other person.

## XXI. RESERVATIONS OF RIGHTS BY EPA

90. Except as specifically provided in this Settlement Agreement, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law.

91. The covenant not to sue set forth in Section XX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:

- a. claims based on a failure by Respondent to meet a requirement of this Settlement Agreement;
- b. liability for costs not included within the definition of Future Response Costs;
- c. liability for performance of response action other than the Work;
- d. criminal liability;
- e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
- f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and
- g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site.

92. Work Takeover. In the event EPA determines that Respondent has ceased implementation of any portion of the Work, is seriously or repeatedly deficient or late in its performance of the Work, or is implementing the Work in a manner which may cause an endangerment to human health or the environment, EPA may assume the performance of all or any portion of the Work as EPA determines necessary. Respondent may invoke the procedures set forth in Section XVI (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by EPA in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondent shall pay pursuant to Section XIX (Payment of Response Costs). Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.



## XXII. COVENANT NOT TO SUE BY RESPONDENT

93. Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Future Response Costs, or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of the Work or arising out of the response actions for which the Future Response Costs have or will be incurred, including any claim under the United States Constitution, the North Carolina Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or

c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Work or payment of Future Response Costs.

94. These covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to the reservations set forth in Paragraphs 91(b), (c), and (e)-(g), but only to the extent that Respondent's claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

95. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

96. Respondent agrees not to assert any claims and to waive all claims or causes of action that it may have for all matters relating to the Site, including for contribution, against any person where the person's liability to Respondent with respect to the Site is based solely on having arranged for disposal or treatment, or for transport for disposal or treatment, of hazardous substances at the Site, or having accepted for transport for disposal or treatment of hazardous substances at the Site, if all or part of the disposal, treatment, or transport occurred before April 1, 2001, and the total amount of material containing hazardous substances contributed by such person to the Site was less than 110 gallons of liquid materials or 200 pounds of solid materials.

97. The waiver in Paragraph 96 shall not apply with respect to any defense, claim, or cause of action that Respondent may have against any person meeting the above criteria if such person asserts a claim or cause of action relating to the Site against such Respondent. This waiver also shall not apply to any claim or cause of action against any person meeting the above criteria if EPA determines:

a. that such person has failed to comply with any EPA requests for information or

administrative subpoenas issued pursuant to Section 104(e) or 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) or 9622(e), or Section 3007 of the Solid Waste Disposal Act (also known as the Resource Conservation and Recovery Act or "RCRA"), 42 U.S.C. § 6927, or has impeded or is impeding, through action or inaction, the performance of a response action or natural resource restoration with respect to the Site, or has been convicted of a criminal violation for the conduct to which this waiver would apply and that conviction has not been vitiated on appeal or otherwise; or

b. that the materials containing hazardous substances contributed to the Site by such person have contributed significantly, or could contribute significantly, either individually or in the aggregate, to the cost of response action or natural resource restoration at the Site.

### **XXIII. OTHER CLAIMS**

98. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent.

99. Except as expressly provided in Section XX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondent or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

100. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

### **XXIV. CONTRIBUTION**

101. a. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), and that Respondent is entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), or as may be otherwise provided by law, for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work and Future Response Costs.

b. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondent has, as of the Effective Date, resolved its liability to the United States for the Work and Future Response Costs.

c. Nothing in this Settlement Agreement precludes the United States or

Respondent from asserting any claims, causes of action, or demands for indemnification, contribution, or cost recovery against any persons not parties to this Settlement Agreement. Nothing in this Settlement Agreement diminishes the right of the United States, pursuant to Section 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

## **XXV. INDEMNIFICATION**

102. Respondent shall indemnify, save, and hold harmless the United States, its officials, agents, contractors, subcontractors, employees, and representatives from any and all claims or causes of action arising from, or on account of negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including but not limited to attorneys fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on its behalf or under its control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States.

103. The United States shall give Respondent notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondent prior to settling such claim.

104. Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between Respondent and any person for performance of Work on or relating to the Site.

## **XXVI. INSURANCE**

105. At least 15 days prior to commencing any on-Site Work under this Settlement Agreement, Respondent shall secure, and shall maintain for the duration of this Settlement Agreement, comprehensive general liability insurance and automobile insurance with limits of 1 million dollars, combined single limit, naming the EPA as an additional insured. Within the same period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy,

all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

## XXVII. FINANCIAL ASSURANCE

106. Within 30 days of the Effective Date, Respondent shall establish and maintain financial security for the benefit of EPA in the amount of \$200,000 in one or more of the following forms, in order to secure the full and final completion of Work by Respondent:

- a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;
- b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA equaling the total estimated cost of the Work;
- c. a trust fund administered by a trustee acceptable in all respects to EPA;
- d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work;
- e. a corporate guarantee to perform the Work provided by one or more parent corporations or subsidiaries of Respondent, or by one or more unrelated corporations that have a substantial business relationship with the Respondent, including a demonstration that any such company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f); and/or
- f. a corporate guarantee to perform the Work by Respondent, including a demonstration that Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f).

Respondent shall send all documents guaranteeing financial assurance directly to the Superfund Records Program Manager at:

Debbie Jourdan  
U.S. Environmental Protection Agency – Region 4  
61 Forsyth St., S.W.  
Atlanta, GA 30303-8960

Such documents must contain notification or a cover letter identifying the Site name, EPA Site/Spill ID number A47J, and the EPA docket number for this action. A copy of the transmittal letter shall also be sent to Samantha Urquhart-Foster at the above address.

107. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondent shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 106, above. In addition, if at any time EPA notifies Respondent that the anticipated cost of completing the Work has increased, then, within 30 days of such notification, Respondent shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondent's inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.

108. If Respondent seeks to ensure completion of the Work through a guarantee pursuant to Subparagraph 106.e. or 106.f. of this Settlement Agreement, Respondent shall (i) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (ii) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the current cost estimate of \$200,000 for the Work at the Site shall be used in relevant financial test calculations.

109. If, after the Effective Date, Respondent can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 106 of this Section, Respondent may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondent shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security after receiving written approval from EPA. In the event of a dispute, Respondent may seek dispute resolution pursuant to Section XVI (Dispute Resolution). Respondent may reduce the amount of security in accordance with EPA's written decision resolving the dispute.

110. Respondent may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section. In the event of a dispute, Respondent may change the form of the financial assurance only in accordance with the written decision resolving the dispute.

## **XXVIII. INTEGRATION/APPENDICES**

111. This Settlement Agreement and its appendices and any deliverables, technical memoranda, specifications, schedules, documents, plans, reports (other than progress reports),

### **XXXI. NOTICE OF COMPLETION OF WORK**

116. When EPA determines that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including but not limited to record retention and payment of Future Response Costs, EPA will provide written notice to Respondent. If EPA determines that any such Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the RI/FS Work Plan, if appropriate, in order to correct such deficiencies, in accordance with Paragraph 43 (Modification of the Work Plan). Failure by Respondent to implement the approved modified RI/FS Work Plan shall be a violation of this Settlement Agreement.

IN THE MATTER OF: LCP-Holtrachem Superfund Site; Riegelwood, Columbus County,  
North Carolina; Honeywell International Inc., Respondent

Agreed this 3<sup>rd</sup> day of September, 2009.

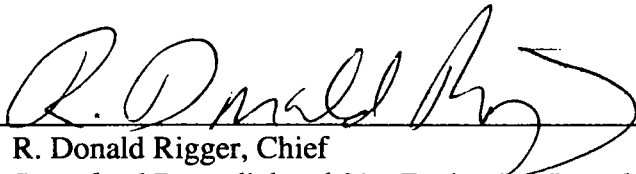
For Respondent Honeywell

By: John J. Morris John J. Morris

Title: Remediation Portfolio Dir

IN THE MATTER OF: LCP-Holtrachem Superfund Site; Riegelwood, Columbus County,  
North Carolina; Honeywell International Inc., Respondent

It is so ORDERED AND AGREED this 15<sup>TH</sup> day of September, 2009.

BY:  DATE: 9/15/09  
R. Donald Rigger, Chief  
Superfund Remedial and Site Evaluation Branch  
U.S. Environmental Protection Agency, Region 4

EFFECTIVE DATE: 15-SEP-2009



**APPENDIX A**  
**STATEMENT OF WORK**

**STATEMENT OF WORK FOR THE  
REMEDIAL INVESTIGATION, FEASIBILITY STUDY  
& BASELINE RISK ASSESSMENT**

**LCP-HOLTRACHEM SITE  
RIEGELWOOD, COLUMBUS COUNTY, NORTH CAROLINA**

**INTRODUCTION**

The purpose of this Remedial Investigation/Feasibility Study (RI/FS) and Baseline Risk Assessment (BRA) is to investigate the nature and extent of contamination, assess the current and potential risk to public health, welfare, and the environment, and to develop and evaluate potential Remedial Action Alternatives for the LCP-HoltraChem Site in Riegelwood, Columbus County, North Carolina (the Site). The RI and FS are interactive and shall be conducted concurrently so that the data collected in the RI influences the development of Remedial Action Alternatives in the FS, which in turn affects the data needs and the scope of Treatability Studies. As discussed in greater detail below, the RI will be focused in nature in that it will build on existing data collected during the Engineering Evaluation/Cost Analysis (EE/CA), the Integrated Expanded Site Investigation/Removal Assessment (iESI/RA), prior removal actions, and data collected during the facility's historical operation.

Honeywell International Inc. (Respondent) shall conduct an RI/FS, including a BRA, and shall produce an RI/FS Report that is in accordance with this Statement of Work (SOW), the *Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA<sup>1</sup>, (Interim Final)* (U.S. EPA Office of Emergency and Remedial Response, October 1988) (the RI/FS Guidance), the *National Oil and Hazardous Substances Pollution Contingency Plan<sup>2</sup>* (March 8, 1990) and other guidance used by EPA in conducting an RI/FS. The RI/FS Guidance describes the report format and the required report content. The Respondent shall furnish all necessary personnel, materials, and services needed, or incidental to, performing the RI/FS.

It is recognized that the Respondent prepared a Human Health Risk Assessment (HHRA) during the EE/CA, which was approved by EPA in May 2007. Therefore, that portion of the risk assessment is considered complete. It is also recognized that the Respondent completed Steps 1 through 3a of the Ecological Risk Assessment (ERA) during the EE/CA, which were approved by the EPA. Therefore, only the continuance to completion of the ERA is required. The approved HHRA and Steps 1 through 3a completed under the EE/CA shall be incorporated by reference and used in preparation of the RI/FS.

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<sup>1</sup> This document can be found on the Internet at:

<http://www.epa.gov/superfund/policy/remedy/pdfs/540g-89004-s.pdf>

<sup>2</sup> This regulation can be found on the Internet at:

[http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title40/40cfr300\\_main\\_02.tpl](http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?c=ecfr&tpl=/ecfrbrowse/Title40/40cfr300_main_02.tpl)

The purpose of this SOW is to set forth the requirements for conducting an RI/FS to aid EPA in the selection of a remedy to eliminate, reduce, or control risks to human health and the environment. This SOW is designed to provide the framework for conducting the RI/FS activities at the Site. The goal is to develop the minimum amount of data necessary to support the selection of an approach for site remediation and then to use this data to create a well-supported Record of Decision (ROD) within the schedule set forth in the approved RI/FS Work Plan.

The Respondent is expected to develop an RI/FS Work Plan that builds on the Site characterization work conducted during the EE/CA, iESI/RA, prior removal actions, and data collected during facility operations.

At the completion of the RI/FS, EPA shall be responsible for the selection of a remedy to be implemented at the Site. EPA will document this selection of a remedy in a Record of Decision. The Remedial Action Alternative selected by EPA will meet the cleanup standards specified in §121 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA). That is, the selected remedial action will be protective of human health and the environment, will be cost-effective, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable, will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements of other laws or regulations, and will address the statutory preference for on-site treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants as a principal element. The Final RI/FS Report, as adopted by EPA, with the remainder of the Administrative Record, will form the basis for the selection of the remedy to be implemented at the Site, and will provide the information necessary to support the development of the ROD.

A summary of the major deliverables that the Respondent shall submit for the RI/FS is attached (Attachment A). The Respondent shall incorporate those deliverables into a schedule of RI/FS activities and include the schedule in the RI/FS Work Plan.

## **TASK 1 - SCOPING**

The scoping and project planning phase will focus on a review and assessment of data collected through prior studies conducted at the LCP-HoltraChem Site. The results of this review should serve as a basis for the development of a plan of investigation to fully assess the horizontal and lateral nature and extent of contamination at the facility, site-specific geology and hydrogeology, potential impacts to nearby areas, and other relevant information to complete the RI/FS and Risk Assessment. A large amount of data collection already has occurred at the Site. Therefore, as discussed in the January 12, 2009, scoping meeting between EPA, the North Carolina Department of Environment and Natural Resources (NCDENR), Respondent, and Respondent's contractors, additional data needs are anticipated to be limited to additional ground water sampling, as well as data needed to complete the ERA.

The Sampling and Analysis Plan, Quality Assurance Project Plan, and Health and Safety Plans that were submitted during the EE/CA were prepared according to current guidance documents. To avoid duplication of efforts, concise technical memorandums or plans should be prepared for future data collection, referencing the approved documents to the maximum extent possible.

a. Site Background

As necessary, the Respondent shall gather and analyze the existing background information regarding the Site and shall conduct a visit to the Site to assist in planning the scope of the RI/FS. (The site visit for scoping the RI/FS occurred on January 12, 2009.)

Collect and Analyze Existing Data and Document the Need for Additional Data

All existing Site data shall be thoroughly compiled and reviewed. Specifically, this compilation and review shall include currently available data relating to the varieties and quantities of hazardous substances at the Site and past disposal practices (what type of contaminants were dumped where, when, and by whom). This compilation and review shall also include results from any previous sampling or other investigations that may have been conducted.

Conduct Site Visit

As mentioned previously, a site visit was conducted on January 12, 2009, with the EPA Remedial Project Manager (RPM), NCDENR, Respondent, and Respondent's contractors during the project scoping phase to assist in developing a conceptual understanding of sources and areas of contamination, as well as potential exposure pathways and receptors at the Site.

b. Project Planning

Once the Respondent has collected and analyzed existing data and visited the Site, the specific project scope shall be planned. Project planning activities include those tasks described below, as well as the development of specific deliverables as described in paragraph c. The Respondent shall meet with EPA, as necessary, regarding the following activities and before the drafting of the scoping deliverables.

Refine the Site Objectives and Develop Preliminary Remedial Action Objectives and Alternatives

Once existing information about the Site has been analyzed and a conceptual understanding of the potential risks posed by the Site has been developed, the Respondent shall review with EPA and, if necessary, refine the Site Objectives and develop preliminary remedial action objectives for each actually or potentially contaminated medium. Such remedial action objectives shall include objectives for engineering and institutional controls. Any revised Site Objectives shall be documented in a technical

### Field Operations Plan

A Sampling and Analysis Plan (SAP) and a Quality Assurance Project Plan (QAPP) exist for this Site and were approved by EPA during the EE/CA. The Respondent shall prepare supplemental SAPs, if necessary, that refer to the existing approved SAP and QAPP to ensure that future sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the established data quality objectives (DQOs).

The supplemental SAP shall define in detail the sampling and data-gathering methods that shall be used on the project. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. If the QAPP needs to be updated, it shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The DQOs will, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the National Contingency Plan. In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, and data reduction, validation, and reporting. These procedures must be consistent with the Region 4 Field Branches Quality System and Technical Procedures,<sup>3</sup> which supersede the *"Environmental Investigations Standard Operating Procedures and Quality Assurance Manual" (EISOPQAM), November 2001*, and the *"Ecological Assessment Standard Operating Procedures and Quality Assurance Manual" (EASOPQAM), January 2002*.

### Health and Safety Plan

A Health and Safety Plan (HASP) exists for this Site. The Respondent shall review the existing Health and Safety Plan, and either submit a letter to EPA stating that no updates are needed, or provide a revised HASP to EPA if the Respondent believes an update is needed. It should be noted that EPA does not "approve" the Respondent's Health and Safety Plan, but rather EPA reviews it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment.

## **TASK 2 - COMMUNITY RELATIONS AND TECHNICAL ASSISTANCE**

The development and implementation of community relations activities are the responsibility of EPA. The critical community relations planning steps performed by EPA include conducting community interviews and developing a community relations plan. Although implementation of the community relations plan is the responsibility of EPA, the Respondent, if directed by EPA, shall assist by providing information regarding the site's history, participating in public meetings, or by preparing fact sheets for distribution to the general public. In addition, the

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<sup>3</sup> These procedures can be found at: <http://www.epa.gov/region4/sesd/fbqstp/index.html>

Respondent may be directed by EPA to establish a community information repository, at or near the site, to house one copy of the administrative record. The extent of the PRP's role in community relations is left to the discretion of EPA. The Respondent's community relations responsibilities, if any, are specified in the community relations plan. All PRP-conducted community relations activities will be subject to oversight by EPA.

In addition to the community relations activities, within 30 days of a request by EPA, Respondent shall provide EPA with a Technical Assistance Plan (TAP) for providing and administering up to \$50,000 worth of services to a qualified Community Group for independent technical advisors and information sharing during the Work conducted pursuant to the Settlement Agreement and Order on Consent (AOC) and SOW. Respondent also will provide and arrange for any additional services needed if the Community Group demonstrates such a need prior to EPA's issuance of the ROD contemplated by the AOC. The Community Group will use this assistance to:

(1) obtain the services of a technical advisor(s), independent from the Respondent, who can help group members understand site cleanup issues. The technical advisor(s) will help interpret and comment on Site-related documents developed under this SOW and through EPA's issuance of the ROD based upon the RI/FS conducted pursuant to this SOW; and

(2) share this information with others in the community.

a. Criteria for a Qualified Community Group

To be eligible for TAP assistance, a Community Group shall be: 1) comprised of people who are affected by a release or threatened release at the Site; and 2) able to demonstrate its ability to adequately and responsibly manage TAP responsibilities. A group is ineligible if it is: 1) a potentially responsible party (PRP) at the Site, represents such a PRP, or receives money or services from a PRP; 2) affiliated with a national organization; 3) an academic institution; 4) a political subdivision; 5) a tribal government; or 6) a group established or presently sustained by any of the entities listed above or if members of the group represent any of these entities.

If more than one eligible group applies in a timely manner, then their applications should be evaluated according to: 1) which group is more representative of those most affected by the site; 2) each group's proposed system for managing TAP responsibilities, including its plans for working with its technical advisor and for sharing site-related information with other members of the community. TAP assistance may be awarded to only one qualified group at a time for purposes of this AOC and SOW.

b. EPA's Responsibilities relating to the TAP

EPA should ensure that its Community Relations Plan for the site includes a discussion of the TAP. EPA shall coordinate with the Respondent in soliciting interest in the TAP from community groups. In its sole discretion (ordinarily not until receipt of a Letter of Intent (LOI) to apply from a community group that appears eligible), EPA can request that Respondent prepare a TAP workplan. EPA will review the Respondent's draft workplan and either approve it, disapprove it, or require revisions. EPA will oversee the Respondent's implementation of the

TAP workplan. This includes Agency monitoring of the Respondent's solicitation of applications from community groups, its determination of groups' eligibility, and its review of applications. If Respondent and the selected community group opt to negotiate an agreement, EPA will review a draft of the agreement and provide comments. EPA will also oversee the Respondent's evaluation of any request by the selected community group for additional assistance beyond the initial \$50,000.

c. Respondent's Responsibilities relating to the TAP

Upon request by EPA, Respondent shall coordinate with EPA in soliciting interest in the TAP from community groups. Upon request by EPA, Respondent shall draft a TAP workplan consistent with this SOW, related Consent Order, and relevant EPA policy and guidance. Within 30 days of EPA's request, Respondent will submit a draft workplan for EPA's review and approval. If EPA disapproves or requires revisions to the TAP workplan, in whole or in part, Respondent shall amend and submit to EPA a revised TAP workplan that is responsive to EPA's comments, within 30 days of receiving EPA's comments. Once approved, Respondent will implement the TAP workplan.

After EPA approves the TAP workplan, Respondent shall arrange for publication of a notice in local media that a LOI to submit an application for TAP assistance has been received. The notice should explain how other interested groups could also submit an application, by a reasonable specified deadline.

Respondent shall review the application(s) received and determine the Community Group's eligibility pursuant to the criteria in section a. above. Respondent shall notify the applicant, with a copy to EPA, of its determination on eligibility. If more than one eligible group applies in a timely manner, then the Respondent shall review each application and evaluate them according to the criteria specified in section a. above. Respondent shall document its evaluation and its selection of a qualified Community Group and notify the applicant(s) and EPA about its decision.

Within 15 days of EPA's request, the Respondent shall designate a point of contact to be the primary contact with the selected Community Group. The point of contact also may respond to the public's inquiries and questions about the TAP and/or any other aspect of the Site. The Respondent may hire a third party to act as the point of contact. If the Respondent opts to hire a third party, it shall submit in writing that person's name, title, and qualifications to EPA within 15 days of EPA's request for a TAP workplan.

Respondent shall negotiate an agreement with the selected Community Group that specifies the duties of Respondent and Community Group, respectively. As part of the negotiations, Respondent shall inform the selected group of the activities that it can and cannot receive or undertake pursuant to the TAP. The list of allowable activities should generally be consistent with 40 CFR 35.4070 (e.g., obtaining the services of an advisor to help the group understand the nature of the environmental and public health hazards at the site and the various stages of the response action, and, to a lesser extent, communicating site information to others in the community), and the list of prohibited activities should generally be consistent with 40 CFR

35.4075 (e.g., activities related to litigation, political lobbying, etc).

The agreement shall also provide that Respondent's review of the Community Group's recommended choice for Technical Advisor will be limited, consistent with 40 CFR 35.4190 and 35.4195, to criteria such as whether the advisor has relevant knowledge, academic training, and experience as well as the ability to translate technical information into terms the community can understand. The agreement shall also establish the process for the Community Group to seek additional TAP funds, pursuant to the criteria specified below. Respondent shall submit the draft agreement to EPA for its review.

Respondent shall review any request from the selected Community Group for additional TAP assistance, consistent with the criteria specified in 40 CFR 35.4065, as follows:

- A) The Community Group must demonstrate that it has effectively managed its TAP responsibilities to date; and
- B) The Community Group must show that at least three of the ten factors below are met:
  - a. EPA expects that more than eight years (beginning with the initiation of the RI/FS) will pass before construction completion will be achieved;
  - b. EPA requires treatability studies or evaluation of new and innovative technologies;
  - c. EPA reopens its Record of Decision;
  - d. After the PRP's selection of the Community Group, EPA designates additional Operable Units;
  - e. EPA issues an Explanation of Significant Differences for its ROD;
  - f. After the PRP's selection of the Community Group, a legislative or regulatory change results in significant new site information;
  - g. Significant public concern about the site exists, as evidenced by, e.g., relatively large turnout at meetings, the need for multiple meetings, the need for numerous copies of documents to inform community members, etc.;
  - h. Any other factor that, in EPA's judgment, indicates that this response action is unusually complex;
  - i. A Remedial Investigation/Feasibility Study costing at least \$2 million is performed;
  - j. The public health assessment (or related activities) for the site indicates the need for further health investigations and/or health-related activities.

If the Community Group demonstrates a need for additional TAP assistance, then Respondent will arrange to provide the additional services or monies needed. Any unobligated TAP funds shall be retained by the Respondent upon EPA's issuance of the ROD.

The TAP shall state that the Respondent shall provide EPA quarterly progress reports regarding the implementation of the TAP.



### **TASK 3 - SITE CHARACTERIZATION AND REUSE ASSESSMENT**

As part of the RI, the Respondent shall perform the activities described in this task, including the preparation of a Site Characterization Summary (which was completed during the EE/CA) and an RI Report. The overall objective of Site Characterization is to describe areas of the Site that may pose a threat to human health or the environment. This objective is accomplished by first determining physiography, geology, and hydrology of the Site. Surface and subsurface pathways of migration shall also be defined. The Respondent shall identify the sources of contamination and define the nature, extent, and volume of the sources of contamination, including their physical and chemical constituents as well as their concentrations at incremental locations in the affected media. The Respondent shall also investigate the extent of migration of this contamination as well as its volume and any changes in its physical or chemical characteristics. This investigation will provide for a comprehensive understanding of the nature and extent of contamination at the Site. Using this information, contaminant fate and transport shall be determined and projected.

During this phase of the RI/FS, the Work Plan, SAP, and HASP shall be implemented. Field data shall be collected and analyzed to provide the information required to accomplish the objectives of the study. The Respondent shall notify EPA at least two weeks in advance of the field work regarding the planned dates for field activities, including installation of monitoring wells, installation and calibration of equipment, pump tests, field lay out of any sampling grid, excavation, sampling and analysis activities, and other field investigation activities.

#### **a. Field Investigation**

The field investigation includes the gathering of data to define physical characteristics, sources of contamination, and the nature and extent of contamination at the Site. These activities shall be performed by the Respondent in accordance with the Work Plan and SAP. At a minimum, this investigation shall include the following activities:

##### Access

The Respondent shall have the primary responsibility for obtaining access in support of field activities, including but not limited to staging of field activities, installation of monitoring wells, and the collection of samples. In the case of recalcitrant parties, EPA will provide the necessary enforcement support to secure access.

##### Implementing and Documenting Field Support Activities

The Respondent shall initiate field support activities following approval of the Work Plan and Field Operations Plan. Field support activities may include obtaining access to the Site, property surveys, scheduling, and procuring equipment, office space, laboratory services, utility services and/or contractors. The Respondent shall notify EPA at least two weeks prior to initiating field support activities so that EPA may adequately schedule oversight tasks.

### Investigating and Defining Site Physical and Biological Characteristics

The Respondent shall collect data on the physical and biological characteristics of the Site and its surrounding areas including the physiography, geology, and hydrology, and specific physical characteristics of the Site. This information shall be ascertained through a combination of physical measurements, observations, and sampling efforts and shall be utilized to define potential transport pathways and receptor populations. In defining the physical characteristics of the Site, the Respondent shall also obtain sufficient engineering data (such as pumping characteristics, soil particle size, permeability, etc.) for the projection of contaminant fate and transport and the development and screening of Remedial Action Alternatives, including information necessary to evaluate treatment technologies.

### Defining Sources of Contamination

The Respondent shall locate each source of contamination. For each location, the lateral and vertical extent of contamination shall be determined by sampling at incremental depths on a sampling grid or in another organized fashion approved by EPA. The physical characteristics and chemical constituents and their concentrations shall be determined for all known and discovered sources of contamination. The Respondent shall conduct sufficient sampling to define the boundaries of the contaminant sources to the level established in the QAPP and DQOs. Sources of contamination shall be analyzed for the potential of contaminant release (e.g., long-term leaching from soil), contaminant mobility and persistence, and characteristics important for evaluating remedial actions, including information necessary to evaluate treatment technologies.

### Describing the Nature and Extent of Contamination

The Respondent shall gather information to describe the nature and extent of contamination as a final step during the field investigation. To describe the nature and extent of contamination, the Respondent shall utilize the information on Site physical characteristics and sources of contamination to give a preliminary estimate of the contaminants that may have migrated. The Respondent shall then implement an iterative monitoring program and any study program identified in the Work Plan or FOP such that, by using analytical techniques sufficient to detect and quantify the concentration of contaminants, the migration of contaminants through the various media at the Site can be determined. In addition, the Respondent shall gather data for calculations of contaminant fate and transport. This process is continued until the lateral and vertical extent of contamination has been determined to the contaminant concentrations consistent with the established DQOs set forth in the QAPP. EPA shall use the information on the nature and extent of contamination to determine the level of risk presented by the Site. Respondent shall use this information to help to determine aspects of the appropriate Remedial Action Alternatives to be evaluated.

b. Data Analyses

Evaluate Site Characteristics

The Respondent shall analyze and evaluate the data to describe: (1) physical and biological characteristics of the Site; (2) contaminant source characteristics; (3) nature and extent of contamination; and (4) contaminant fate and transport. The information on physical and biological characteristics, source characteristics, and nature and extent of contamination shall be used in the analysis of contaminant fate and transport. The evaluation shall include the actual and potential magnitude of releases from the sources and lateral and vertical spread of contamination as well as mobility and persistence of contaminants. Where modeling is appropriate, such models shall be identified to EPA in a technical memorandum prior to their use. All data and programming, including any proprietary programs, shall be made available to EPA together with a sensitivity analysis. All models shall be approved by EPA prior to their use.

The Respondent shall collect any data identified by EPA as necessary to fill data gaps that EPA determines are present during preparation of the Baseline Risk Assessment (see *Guidance for Data Usability in Risk Assessment, Final*<sup>4</sup>, U.S. EPA, Office of Emergency and Remedial Response, April 1992, OSWER Directive No. 9285.7-09A). Also, this evaluation shall provide any information relevant to characteristics of the Site necessary for the development and evaluation of Remedial Action Alternatives and the refinement and identification of ARARs. Analyses of data collected for Site Characterization shall meet the DQOs developed in the QAPP.

c. Data Management Procedures

The Respondent shall consistently document the quality and validity of field and laboratory data compiled during the RI. At a minimum, this documentation shall include the following activities:

Documenting Field Activities

Information gathered during characterization of the Site shall be consistently documented and adequately recorded by the Respondent in well maintained field logs and laboratory reports. The method(s) of documentation must be specified in the Work Plan Memorandum and/or the FOP. Field logs must be utilized to document observations, calibrations, measurements, and significant events that have occurred during field activities. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies.

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<sup>4</sup> This document can be found on the Internet at: <http://www.epa.gov/oswer/riskassessment/datause/parta.htm>

### Maintaining Sample Management and Tracking

The Respondent shall maintain field reports, sample shipment records, analytical results, and QA/QC reports to ensure that only validated analytical data are reported and utilized in the development and evaluation of the Baseline Risk Assessment and Remedial Action Alternatives.

d. Site Characterization Deliverables

The Respondent shall prepare the Preliminary Site Characterization Summary (*completed during the EE/CA*) and the Remedial Investigation Report.

#### Preliminary Site Characterization Summary (*completed during the EE/CA*)

The Site Characterization Summary was prepared during the EE/CA. Additional data collected since the time of that document, shall be submitted to EPA and NCDENR via Technical Memorandums or in the Monthly Progress Reports and incorporated into the Remedial Investigation Report.

#### Remedial Investigation (RI) Report

The Respondent shall prepare and submit a Draft RI Report to EPA for review and approval. This report shall summarize results of field activities to characterize the Site, sources of contamination, nature and extent of contamination, and the fate and transport of contaminants. The Respondent shall refer to the RI/FS Guidance for an outline of the report format and contents. Following comment by EPA, the Respondent shall prepare a Final RI Report which satisfactorily addresses EPA's comments.

e. Reuse Assessment

If EPA determines that a Reuse Assessment is necessary, Respondent will perform such a Reuse Assessment in accordance with EPA guidance, including *Reuse Assessments: A Tool To Implement The Superfund Land Use Directive*<sup>5</sup>, OSWER Directive 9355.7-06P, June 4, 2001, or subsequently issued guidance. The Reuse Assessment should provide sufficient information to develop realistic assumptions of the reasonably anticipated future uses for the Site.

## **TASK 4 - TREATABILITY STUDIES**

As necessary, Treatability Studies shall be performed by the Respondent to assist in the detailed analysis of alternatives. If applicable, study results and operating conditions will later be used in the detailed design of the selected remedial technology. The following activities shall be performed by the Respondent.

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<sup>5</sup> This document can be found on the Internet at:  
<http://www.epa.gov/superfund/programs/recycle/pdf/reusefinal.pdf>

a. Determination of Candidate Technologies and the Need for Treatability Studies

The Respondent shall identify in a technical memorandum, for EPA review and comment, candidate technologies for a Treatability Studies program during project planning (Task 1). The listing of candidate technologies shall cover the range of technologies required for alternatives analysis (Task 6.a). The specific data requirements for the Treatability Studies program shall be determined and refined during Site Characterization and the development and screening of Remedial Action Alternatives (Tasks 3 and 6, respectively).

Conduct Literature Survey and Determine the Need for Treatability Studies

The Respondent shall conduct a literature survey to gather information on performance, relative costs, applicability, removal efficiencies, operation and maintenance (O&M) requirements, and implementability of candidate technologies. If practical candidate technologies have not been sufficiently demonstrated, or cannot be adequately evaluated for the Site on the basis of available information, Treatability Studies shall be conducted. EPA shall determine whether Treatability Studies will be required.

Evaluate Treatability Studies

Where EPA has determined that Treatability Studies are required, the Respondent and EPA shall decide on the type of Treatability Studies to use (e.g., bench versus pilot). Because of the time required to design, fabricate, and install pilot scale equipment, as well as to perform testing for various operating conditions, the decision to perform pilot testing shall be made as early in the process as possible to minimize potential delays of the FS. To assure that a Treatability Study program is completed on time, and with accurate results, the Respondent shall either submit a separate Treatability Study Work Plan, or an amendment to the original RI/FS Work Plan, for EPA review and approval.

b. Treatability Study Deliverables

In addition to the memorandum identifying candidate technologies, the deliverables that are required when Treatability Studies are to be conducted include a Treatability Study Work Plan, a Treatability Study Sampling and Analysis Plan, and a Final Treatability Study Evaluation Report. EPA may also require a Treatability Study Health and Safety Plan, where appropriate.

Treatability Study Work Plan Memorandum

The Respondent shall prepare a Treatability Study Work Plan Memorandum or amendment to the original RI/FS Work Plan memorandum for EPA review and approval. This Plan shall describe the background of the Site, remedial technologies to be tested, test objectives, experimental procedures, treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and residual waste management. The DQOs for Treatability Studies shall be

documented as well. If pilot-scale Treatability Studies are to be performed, the Treatability Study Work Plan shall describe pilot plant installation and start-up, pilot plant operation and maintenance procedures, and operating conditions to be tested. If testing is to be performed off-site, permitting requirements must be addressed.

#### Treatability Study Sampling and Analysis Plan

If the original QAPP or SAP is not adequate for defining the activities to be performed during the Treatability Studies, a separate Treatability Study SAP or amendment to the original RI/FS SAP shall be prepared by the Respondent for EPA review and approval. It shall be designed to monitor pilot plant performance. Task 1.c of this Statement of Work provides additional information on the requirements of the SAP.

#### Treatability Study Health and Safety Plan

If the original RI/FS Health and Safety Plan is not adequate for defining the activities to be performed during the Treatability Studies, a separate or amended Health and Safety Plan shall be developed by the Respondent. Task 1.c of this Statement of Work provides additional information on the requirements of the Health and Safety Plan. EPA reviews, but does not "approve," the Treatability Study Health and Safety Plan.

#### Treatability Study Evaluation Report

Following completion of the Treatability Studies, the Respondent shall analyze and interpret the testing results in a technical report to EPA. Depending on the sequence of activities, this report may be a part of the RI/FS Report or a separate deliverable. The report shall evaluate each technology's effectiveness, implementability, cost, and actual results as compared with predicted results. The report shall also evaluate full-scale application of the technology, including a sensitivity analysis identifying the key parameters affecting full-scale operation.

### **TASK 5 - BASELINE RISK ASSESSMENT**

Section 300.430(d)(4) of the National Contingency Plan states that a site-specific Baseline Risk Assessment (BRA) be conducted as part of the Remedial Investigation (RI). The BRA is an analysis of the potential adverse health effects (current and future) caused by hazardous substance releases from a site in the absence of any actions to control or mitigate these releases (i.e., an assumption of no action). This analysis includes identifying and characterizing the toxicity and effects of hazardous substances present, describing contaminant fate and transport, evaluating the potential for human exposure, and assessing the risk of potential impacts or threats on human health. An additional component of the BRA is the Environmental Assessment which assesses the risk of potential impacts or threats to the ecological environment (including both flora and fauna). The BRA provides the basis for determining whether or not remedial action is necessary at a site and a justification for performing any remedial action that may be required.

a. Development of Baseline Risk Assessment

The Baseline Risk Assessment (BRA) consists of three separate components: the Human Health Risk Assessment, the Ecological Risk Assessment, and Remedial Goal Options. These are further described below.

1. Human Health Risk Assessment

During the EE/CA, the Respondent developed the human health portion of the BRA in accordance with the Environmental Protection Agency's (EPA's) guidance on conducting human health risk assessments. EPA approved the *Human Health Risk Assessment* in May 2007. The approved HHRA shall be used in the RI/FS process.

2. Ecological Risk Assessment

In addition to the human health component of the Baseline Risk Assessment, the risk to the environment (non-human receptors) from exposure to the contaminants must be addressed. The ecological assessment is comprised of eight steps identified in the June 1997 OSWER document titled, *Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments - Interim Final*<sup>6</sup>. The Respondent completed Steps 1 through 3b as part of the EE/CA. The Respondent shall continue the ecological risk assessment process from the EE/CA and carry it over into the RI/FS for completion.

3. Remedial Goal Options

The third component of the BRA outlines the Remedial Goal Options (RGOs) for the chemicals and media of concern that are protective of human health, the ecology and ground water. This component should include both ARARs and risk-based cleanup goals. This component should contain a table with media cleanup levels for each chemical that contributes to a pathway that exceeds a  $10^{-6}$  risk, a Hazard Index (HI) of 0.1, or a state or federal chemical-specific ARAR for each scenario evaluated in the BRA. The table should include the  $10^{-4}$ ,  $10^{-5}$ , and  $10^{-6}$  risk levels, the HI of 0.1, 1 and 10 levels for non-carcinogenic compounds, as well as any chemical-specific ARAR values (state and federal) for each chemical, media and land use scenario. The values should be developed by combining the exposure levels to each chemical by a receptor from all appropriate routes of exposure (i.e. inhalation, ingestion and dermal) within a pathway and rearranging the site-specific average-dose equations used in the BRA to solve for the concentration term. The resulting table should present one set of RGOs for each media and each land use (e.g., residential (child and adult), industrial, flora and fauna). The results of the ecological risk assessment should be the identification of remediation goals for the ecological COCs that would be protective for the receptors. These remediation goal options should be presented for the relevant environmental media.

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<sup>6</sup> This document can be found on the Internet at:  
<http://www.epa.gov/oswer/riskassessment/ecorisk/ecorisk.htm>

The purpose is to provide the RPM with the maximum risk-related media level options on which to develop remediation aspects of the Feasibility Study and Proposed Plan.

c. Report Preparation

The three components listed above shall form the basis of the Baseline Risk Assessment. The reports shall be submitted no later than concurrently with the Respondent's Draft RI Report. The report shall be revised, as necessary, based on EPA's comments and submitted to EPA for approval.

**TASK 6 - DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES**

The development and screening of Remedial Action Alternatives is performed to select an appropriate range of waste management options to be evaluated. This range of options shall include, at a minimum, alternatives in which treatment is used to reduce the toxicity, mobility, or volume of the waste, but varying in the types of treatment, the amount treated, and the manner in which long-term residuals or untreated wastes are managed; alternatives that involve containment and treatment components; alternatives that involve containment with little or no treatment; and a no-action alternative for each contaminated media. For example there should be a full range of options evaluated for ground water, a full range of options for soil, a full range of options for sediment, etc. Some media, such as soil, may be even further divided based on land type. For example, the upland area may need to be evaluated separately than the wooded bottomland area. Any alternative that will not allow the property to be used for residential purposes shall also have an Institutional Controls component. Moreover, the Respondent shall give consideration to the identification, development, and implementation of interim or early remedial actions to stabilize the source and further mitigate the impact of the release on the aquifer until such time as a final remedy can be implemented.

The following activities shall be performed by the Respondent as a function of the development and screening of Remedial Action Alternatives.

a. Development and Screening of Remedial Action Alternatives

The Respondent shall begin to develop and evaluate a range of appropriate waste management options that, at a minimum, ensure protection of human health and the environment and comply with all ARARs (or be eligible for a waiver for non-compliance with an ARAR).

Refine and Document Remedial Action Objectives

The Respondent shall review and, if necessary, propose refinement of the Site Objectives and preliminary remedial action objectives that were established during the Scoping phase (Task 1). Any revised Site Objectives or revised remedial action objectives shall be documented in a technical memorandum as discussed in Task 1.b. These objectives shall specify the contaminants and media of interest, exposure pathways and receptors, an



Risk Assessment Report. Additionally, action-specific ARARs shall be updated as the Remedial Action Alternatives are refined.

#### Conduct and Document Screening Evaluation of Each Alternative

The Respondent may perform a final screening process based on short- and long-term aspects of effectiveness, implementability, and relative cost. Note that the evaluation of effectiveness involves evaluating the long-term and short-term risks, among other factors, associated with a remedial alternative. Generally, this screening process is only necessary when there are many feasible alternatives available for detailed analysis. If necessary, the screening of alternatives shall be conducted to assure that only the alternatives with the most favorable composite evaluation of all factors are retained for further analysis.

As appropriate, the screening shall preserve the range of treatment and containment alternatives that was initially developed. The range of remaining alternatives shall include options that use treatment technologies and permanent solutions to the maximum extent practicable. The Respondent shall prepare a technical memorandum summarizing the results and reasoning employed in screening, arraying alternatives that remain after screening, and identifying the action-specific ARARs for the alternatives that remain after screening.

#### b. Alternatives Development and Screening Deliverables

The Respondent shall prepare a technical memorandum summarizing the work performed and the results of each task above, including an alternatives array summary. This alternatives array shall be modified by the Respondent when conducting Task 7 if required by EPA's comments to assure identification of a complete and appropriate range of viable alternatives to be considered in the detailed analysis. This deliverable shall document the methods, rationale, and results of the alternatives screening process.

### **TASK 7 - DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES**

The detailed analysis shall be conducted by the Respondent to provide EPA with the information needed to allow for the selection of a remedy for the Site.

#### a. Detailed Analysis of Alternatives

The Respondent shall conduct a detailed analysis of remaining alternatives. This analysis shall consist of an assessment of each option against a set of nine evaluation criteria and a comparative review of all options using the same nine evaluation criteria as a basis for comparison. The Respondent's analysis shall also include an assessment of the specific types of Institutional Controls being considered, including an evaluation of each option against the nine evaluation criteria.

### Apply Nine Criteria and Document Analysis

The Respondent shall apply nine evaluation criteria to the assembled Remedial Action Alternatives to ensure that the selected Remedial Action Alternative will be protective of human health and the environment; will be in compliance with, or include a waiver of, ARARs; will be cost-effective; will utilize permanent solutions and alternative treatment technologies, or resource recovery technologies, to the maximum extent practicable; and will address the statutory preference for treatment as a principal element. The evaluation criteria include: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) State acceptance; and (9) community acceptance. For each alternative, the Respondent shall provide: (1) a description of the alternative that outlines the waste management strategy involved and identifies the key ARARs associated with that alternative; and (2) a discussion of the individual criterion assessment.

Criteria 8 and 9 are considered after the RI/FS Report has been released to the general public. Therefore, when evaluating against the 9 criteria, simply state that criteria 8 and 9 will be addressed in the Record of Decision, after the public comment period. However, if the State comments regarding their acceptance or rejection of an alternative prior to the report being released to the general public, that information may be incorporated into the final RI/FS.

### Compare Alternatives Against Each Other and Document the Comparison of Alternatives

The Respondent shall perform a comparative analysis among the Remedial Action Alternatives. That is, each alternative shall be compared against the others using the nine evaluation criteria as a basis of comparison. The Respondent may identify their preferred alternative in the Feasibility Study. However, EPA will make the final decision regarding which alternative will be presented as the preferred alternative in the Proposed Plan for the Record of Decision.

#### b. Detailed Analysis Deliverables

The Respondent shall prepare a Draft FS Report for EPA review and comment. This report, as ultimately adopted or amended by EPA, provides a basis for remedy selection by EPA and documents the development and analysis of Remedial Action Alternatives. The Respondent shall refer to the RI/FS Guidance for an outline of the report format and the required report content. The Respondent shall prepare a Final FS Report which satisfactorily addresses EPA's comments. Once EPA's comments have been addressed by the Respondent to EPA's satisfaction and EPA approval has been obtained or an amendment has been furnished by EPA, the Final FS Report may be bound with the Final RI Report.

**ATTACHMENT A**  
**SUMMARY OF THE MAJOR DELIVERABLES**  
**RI/FS AND RISK ASSESSMENT**  
**LCP-HOLTRACHEM SITE**  
**RIEGELWOOD, NORTH CAROLINA**

**TASK 1 – SCOPING**

- RI/FS Work Plan
- Field Sampling and Analysis Plan (or amendment to EE/CA FSAP)
- QAPP amendment (if needed)
- HASP amendment or revision (if needed)

**TASK 2 – COMMUNITY RELATIONS AND TECHNICAL ASSISTANCE**

- Technical Assistance Plan (upon EPA's request)

**TASK 3 – SITE CHARACTERIZATION**

- Technical Memorandum on Contaminant Fate and Transport Modeling (if appropriate)
- Remedial Investigation Report
- Reuse Assessment (if needed)

**TASK 4 – TREATABILITY STUDIES (if needed)**

- Technical Memorandum Identifying Candidate Technologies
- Treatability Study Work Plan (or amendment to original Work Plan)
- Treatability Study SAP (or amendment to original SAP)
- Treatability Study Evaluation Report

**TASK 5 – BASELINE RISK ASSESSMENT**

- Human Health Risk Assessment (completed and approved during the EE/CA)
- Ecological Risk Assessment (multiple deliverables as required in the guidance)
- Remedial Goal Options

**TASK 6 – DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES**

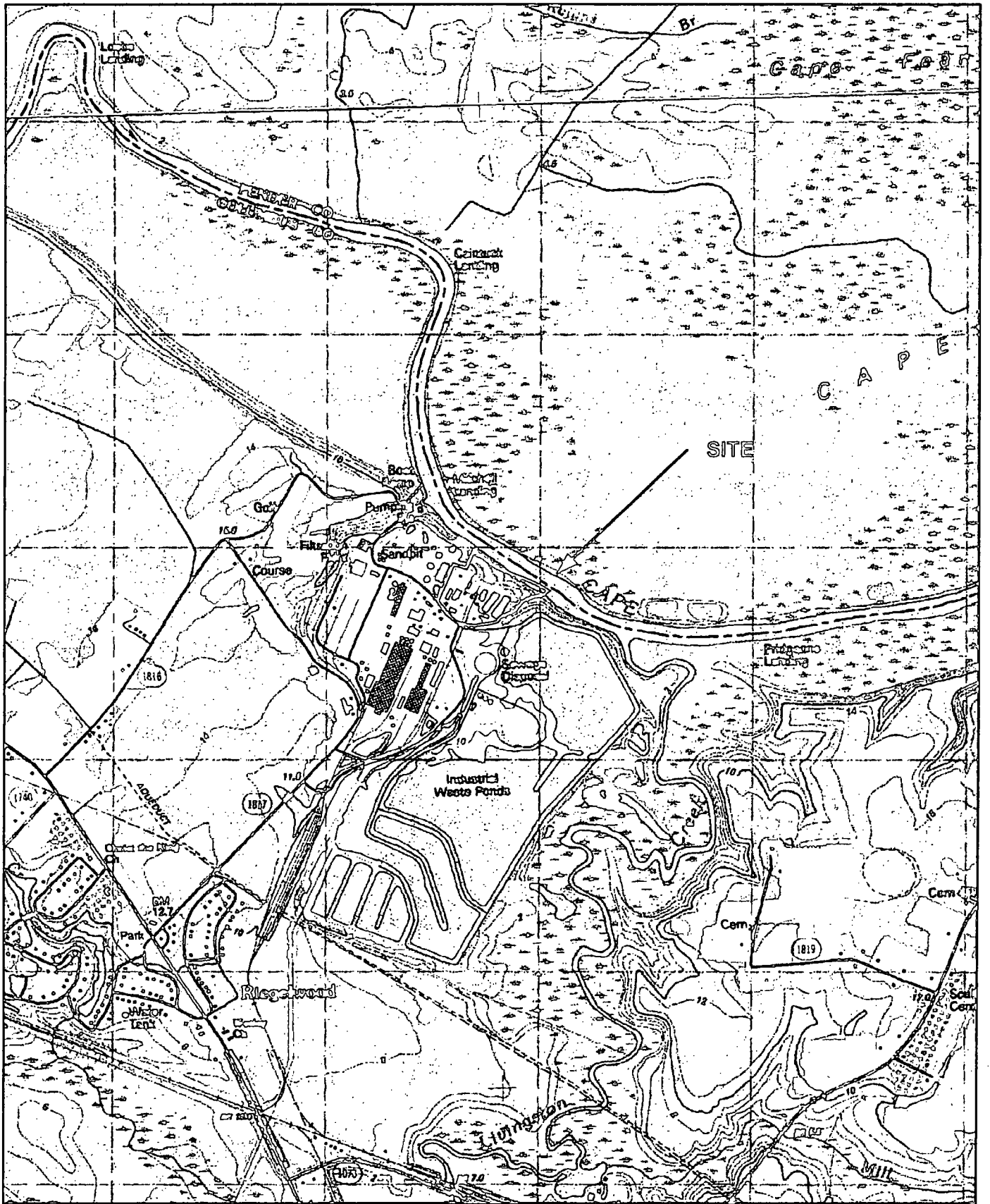
- Technical Memorandum documenting revised Remedial Action Objectives
- Technical Memorandum on Remedial Technologies, Alternatives, and Screening

**TASK 7 – DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES**

- Feasibility Study Report

**APPENDIX B**

**SITE MAP**



Property Boundary

\*Topographic Contours in Meters



0 1,000 2,000

Feet

Background: USGS 7.5 Minute Series Topographic Maps  
 Source Quads: Point Caswell, NC and Acme, NC

GM2MHILL

File Path: \\boomer\G\projects2\Honeywell\_Acme\MXD\Site\_Map.mxd, Date: 05/14/2007, User: DDickman

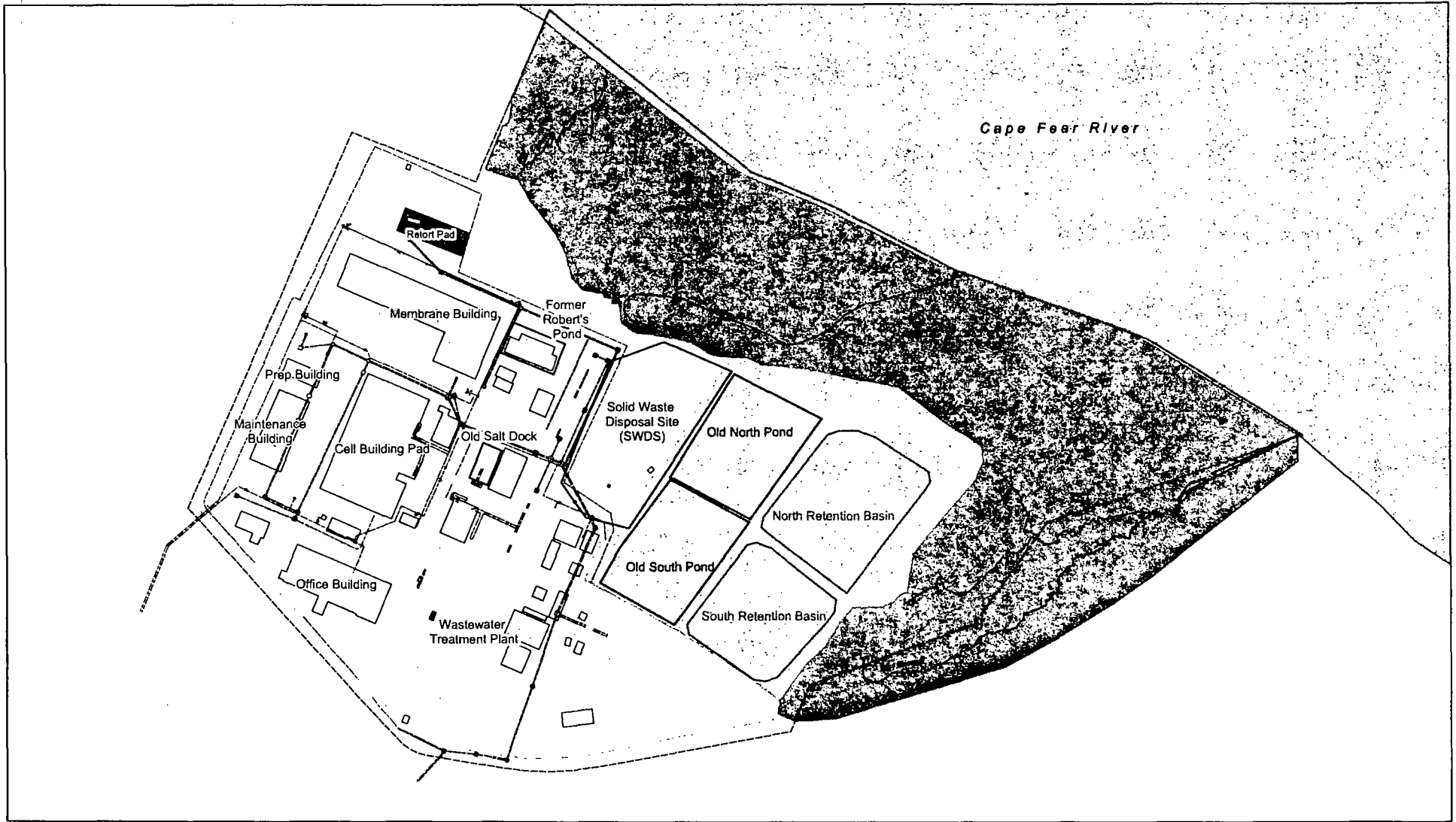
DRAFT

Figure 1-1

General Site Location

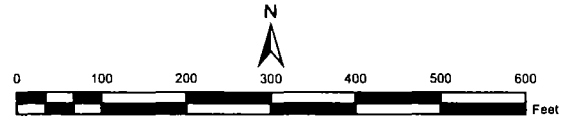
EE/CA Report

LCP-Holtrachem Site, Riegelwood, NC



- |                             |                   |                                   |
|-----------------------------|-------------------|-----------------------------------|
| — Drainage Channels         | - - - Sewer Lines | <b>General Functional Areas</b>   |
| - - - Intermittent Drainage | — Retention Pond  | □ Upland Process Area             |
| - - - Property Boundary     | □ Buildings       | ▨ Upland Non Process Area         |
|                             | □ Cape Fear River | ■ Wooded Bottomland Area Terraces |

**CH2MHILL**



*DRAFT*  
**Figure 1-2**  
 Site Map  
 EE/CA Report  
 LCP - Holtrachem Site, Riegelwood, NC

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**APPENDIX C**  
**CRITERIA FOR ADDITIONAL TAP ASSISTANCE**

## **Criteria for Additional TAP Assistance**

Respondent shall review any request from the selected Community Group for additional TAP assistance, consistent with the criteria specified in 40 CFR 35.4065, as follows:

- A) The Community Group must demonstrate that it has effectively managed its TAP responsibilities to date; and
- B) The Community Group must show that at least three of the ten factors below are met:
  - a. EPA expects that more than eight years (beginning with the initiation of the RI/FS) will pass before construction completion will be achieved;
  - b. EPA requires treatability studies or evaluation of new and innovative technologies;
  - c. EPA reopens its Record of Decision;
  - d. After the PRP's selection of the Community Group, EPA designates additional Operable Units;
  - e. EPA issues an Explanation of Significant Differences for its ROD;
  - f. After the PRP's selection of the Community Group, a legislative or regulatory change results in significant new site information;
  - g. Significant public concern about the site exists, as evidenced by, e.g., relatively large turnout at meetings, the need for multiple meetings, the need for numerous copies of documents to inform community members, etc.;
  - h. Any other factor that, in EPA's judgment, indicates that this response action is unusually complex;
  - i. A Remedial Investigation/Feasibility Study costing at least \$2 million is performed;
  - j. The public health assessment (or related activities) for the site indicates the need for further health investigations and/or health-related activities.

If the Community Group demonstrates a need for additional TAP assistance, then Respondent will arrange to provide the additional services or monies needed. Any unobligated TAP funds shall be retained by the Respondent upon EPA's issuance of the ROD.